Knowledge, Attitudes, and Self-Efficacy Changes in Advance Care Planning with a High-Fidelity Simulation: Conversations Had at Trying Times (CHATT)

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Background: Advance care planning (ACP) conversations aim to ensure the articulation and documentation of patients’ health care goals. These conversations should occur early and longitudinally. However, they are often not done or not done iteratively. Clinicians lack training and knowledge in ACP to have effective conversations. Therefore, a simulation was developed and tested among registered nurses (RN).

Aim: This study aimed to examine the feasibility of an ACP simulation called Conversations Had at Trying Times (CHATT) among RNs, and to explore changes in knowledge, attitudes, and self-efficacy.

Theoretical Framework: A framework was developed with the National League of Nursing Jeffries Simulation Theory and Bandura’s Self-Efficacy Theory.

Method: The study consisted of two phases: a) simulation development, and b) simulation testing. Construct and content validity guided the development of the simulation using DeVellis’s (2017) scale development guidelines and the International Association of Clinical Simulation in Learning Standards of Best Practice: Simulation DesignSM. Simulation testing consisted of a pilot one-group pre/posttest design. The Caring Efficacy Scale and the Advance Care Planning Knowledge, Attitudes, and Practice Behaviors Scale were used to assess knowledge, attitudes, and self-efficacy among RNs. Evaluation of the simulation was done with the Simulation Design
Scale and the Student Satisfaction and Self Confidence in Learning Scale. Data analysis consisted of statistical analysis of mean change from pre-to-post simulation, and calculations of correlations between variables and demographics.

Results: A researcher-designed high-fidelity simulation enhanced nurses’ skills with CHATT. Thirty-six RNs completed the simulation in groups of four to eight in six simulation sessions. Knowledge, attitudes, and self-efficacy increased pre-to posttest. Evaluations post-simulation confirmed the feasibility of the simulation. The largest variation in results was found among the scores and experiences of the graduate nurse resident groups who worked as RNs for less than one year.

Significance and Conclusions: This is the first high-fidelity simulation that was developed and validated for RN education in ACP conversations. Newer nurses with less than one year of experience had the lowest scores, which suggests a need for professional development in hospice and palliative care, curriculum development among nursing schools, and strong mentorship in caring for seriously ill patients.
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Doctor of Philosophy Dissertation

The Development and Testing of a High-Fidelity Simulation in Advanced Care Planning Communication: Conversations Had at Trying Times (CHATT)

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Chapter 1: Introduction

Chapter one provides an overview of Conversations Had at Trying Times (CHATT), a study that consisted of the development and administration of a high-fidelity simulation in advance care planning (ACP) among registered nurses (RNs). This chapter consists of background information on ACP, palliative care, and simulation. The research questions explored in this study were: a) Is a simulation in ACP communication among RNs feasible? and b) How does a standardized simulation impact RNs’ knowledge, attitudes, and self-efficacy in ACP communication? Finally, the chapter describes a theoretical framework that guided the study, which addressed knowledge, attitudes, and self-efficacy of RNs in ACP communication using the National League of Nursing (NLN)/Jeffries Simulation Theory and Albert Bandura’s Self-Efficacy Theory.

According to the World Health Organization, the world’s population of people aged 60 and older will nearly double from 12% to 22% between 2015-2050 (Victor, 2010). The growth of those with chronic diseases is also significant, with the global number expected to increase to 57% by 2020 (World Health Organization, n.d). In the United States (U.S.), people with serious illness and chronic diseases are often hospitalized with symptoms or complications, and undergo invasive procedures. The cost for hospital-based critical care in the U.S. is estimated to exceed $82 billion annually, which accounts for 13% of all inpatient costs. Although the number of Intensive Care Unit (ICU) beds has grown in the past decade, the overall number of hospital beds has decreased (Khandelwal et al., 2017). ICU utilization at the end-of-life (EOL) has increased, even though research indicates that aggressive care is not consistent with the preferences of most patients in the terminal phase of their illness (Teno et al., 2013). An aging population, an increase in chronic disease, and the discrepancy between patient’s wishes and EOL outcomes
highlight a need for conversations about planning for the future (Ke et al., 2017). ACP can assist patients to become more informed about their illness, advocate for their choices, reduce unwanted procedures, and improve the culture around end-of-life care discussions (Walczak et al., 2015).

**Palliative Care and Advance Care Planning**

Palliative care is defined as care that is patient- and family-centered, goal-focused, and addresses physical, intellectual, emotional, social, and spiritual needs to promote patient autonomy, access to information, and choice (National Hospice and Palliative Care Organization [NHPCO], n.d.-b). The emphasis is on quality of life, and palliative care can be provided concurrently with a medical plan of care. In palliative care, it is recognized that patients and families have unique situations and social structures that require interdisciplinary support. Clinicians have conversations and provide interventions with patients and families while factoring in aspects of culture, values, strengths of the unit, goals, and preferences of the patients (Dahlin, 2015). The goal of palliative care is to provide interventions early, and to be proactive, rather than reactive, to a crisis. Many studies have shown that palliative care consultations and integrated care planning have improved patient symptom management, better-aligned outcomes with goals of care, improved quality of life, provided cost savings, decreased hospital readmissions and, at times, extended length of life (Bhatraju et al., 2014; May et al., 2015; Mehta et al., 2018; O’Connor et al., 2015; Temel et al., 2010).

ACP has evolved from palliative care. The process of ACP aims to ensure the articulation and documentation of a patient’s health care goals in the context of a patient’s age, environment, culture, and medical condition. It is reviewed and updated through the duration of a patient’s
illness trajectory, discussed between the patient, family, and healthcare support team (Montoya, 2017). ACP determines what is essential to a patient if they are diagnosed with a serious illness (NHPCO, n.d.-a). It works to align patient's wishes and preferences with health treatment options (Center for Disease Control and Prevention, n.d.). It also aims to clarify a patient’s understanding of their disease, health status, and options for future care (Ke et al., 2015). When a patient is not capable of making their own decisions, ACP assists with continued autonomy in medical decisions (Bailoor et al., 2018).

**Advance Directives and ACP**

One component of ACP is the completion of advance directives (AD), which are documents that explicitly indicate a person’s preferences in the event of incapacity (National Institute on Aging, n.d.). Frequently, ACP is erroneously interchanged with AD. AD consist of living wills and the designation of persons to make decisions. The living will documents the patient’s preferences for life-sustaining treatments and resuscitation. The durable power of attorney or health care representative documents the patient’s choice of a surrogate decision-maker in the event the patient is unable to make decisions regarding his or her care (Montoya, 2017). Both documents are critical for ACP, but only represent a small part of ACP conversations.

All patients benefit from early conversations in ACP, but too often, ACP conversations occur in the later stages of the disease. Earlier conversations have been shown to lead to improved quality of life, decreased use of unwanted medical interventions and hospitalizations, plus reduced stress, anxiety, and depression among family members, and earlier utilization of services (Lum & Sudore, 2016). Patients who have expressed their wishes to their healthcare
provider and family are likely to receive care that is consistent with their preferences (Agarwal & Epstein, 2018). This alignment of wishes with preferences has led to the prevention of unwanted procedures and hospitalizations. Researchers have found that ACP conversations documented greater than three months before death showed a strong association between improved EOL outcomes. Another study of cancer patients found that those that have received palliative care consults, which included ACP conversations more than two weeks before death, had fewer ICU admissions and emergency department visits (Amano et al., 2015). The burden of EOL decision-making among families has been documented to cause stress and anxiety. Without a plan in place, families have to determine a patient’s preferences based on assumptions. If preferences are directly addressed, families are more comfortable making decisions and fulfilling patient wishes. A study that examined ACP communication revealed that family members regretted not talking about death, expressed frustration at the lack of ACP conversations by healthcare personnel, and described frustrations about unwanted aggressive treatment given to patients. Those in the intervention group discussed peaceful deaths, clear plans, and open dialogue with the patient. In addition, the family members of patients who died in the intervention group had fewer symptoms of post-traumatic stress, depression, and anxiety, and were more likely to be satisfied with the quality of death (Detering et al., 2010; Mignani et al., 2017). Finally, another issue preventing early ACP conversations is late referrals to hospice services, and the underutilization of hospice services (Diamond et al., 2016).

Researchers found that the most significant reason for late referrals was fear and stigma about hospice care. Healthcare systems, clinicians and the public have incorrectly assumed that hospice is associated with imminent death (Allsop et al., 2018). In the U.S., patients with a prognosis of six months or less are eligible for the benefits of hospice care, yet the average
length of stay is slightly over two months (NHPCO, 2019). This suggests that the option of hospice care is not introduced early in a patient’s serious illness trajectory. ACP conversations early in a patient’s serious illness diagnosis could enable patients to make informed decisions about the care they receive and also introduce the concept of hospice as an eventual option.

Lack of Trained Clinicians in ACP

Given the aging population and increasing demand for ACP, there is a significant deficit in trained clinicians to deliver and moderate these conversations (Chan et al., 2019). ACP conversations between patients, families, and healthcare providers allow the opportunity to clarify individual goals of care and symptom management preferences, identify decision-makers, complete advance directives, and manage changes along the disease trajectory (Baer & Weinstein, 2013; Lum et al., 2015). Currently, the majority of ACP conversations occur through palliative care specialists. Palliative care experts are often consulted to communicate with patients about goals of care and EOL decisions due to clinician discomfort with ACP conversations (Ranganathan et al., 2014). For example, the American Society of Clinical Oncology has recognized that collaboration between oncologists and palliative care specialists can benefit patients, which has led to improved quality of life, less aggressive care at EOL, and improved survival (Ranganathan et al., 2014; Temel et al., 2010). The American Medical Association has endorsed palliative care to support a range of medical specialties, including internal medicine, anesthesiology, emergency medicine, and family medicine (American Medical Association, n.d.).

The prevalence of palliative care programs has increased significantly from 15% to 67% of hospitals with more than 50 beds in the past 20 years (Dumanovsky et al., 2016). More than
50% of U.S. states have palliative care programs; larger, academic, or religious-based health systems are more likely to have a palliative care team. Almost all (98%) cancer centers within the National Cancer Institute have a palliative care program including inpatient teams and outpatient clinics (Hughes & Smith, 2014). Even with this substantial increase in palliative care services, national staffing recommendations are not met for palliative care needs in the U.S. This indicates that there are not enough trained clinicians in palliative care and palliative care specialists to meet the needs of the aging population. According to the Centers for Palliative Care (CAPC) Registry, in hospitals that have palliative services, an average of 7.5-8.0% of patients admitted need palliative care. However, only 3.4% of patients receive palliative care (CAPC, n.d.). There is an unmet need for specialized palliative clinicians. Therefore, palliative care training, including ACP communication, needs to expand to other clinicians (Kamal, Wolf et al., 2019; Quill & Abernethy, 2013). Every clinician can be trained to have these conversations and promote planning through all stages of a serious illness (Arnett et al., 2017).

**Statement of Problem**

Although patient-centered conversations should occur early and longitudinally in the context of an existing patient-clinician relationship (Dingfield & Kayser, 2017), ACP conversations are often not done or not done iteratively (Dunlay & Strand, 2016; Gutierrez, 2012; Kalowes, 2015). Many clinicians struggle with ACP conversations due to a lack of training, time, and comfort, which can result in low self-efficacy (Waldrop & Meeker, 2012). RNs are positioned to use their knowledge and clinical judgment to initiate and promote ACP conversations with patients and families (American Association of Colleges of Nursing, 1998). The discipline of nursing is caring in the human health experience (Willis et al., 2008), which
facilitates humanization, meaning, choice, quality of life, and healing in the living and dying (Chinn, 2019). This care involves developing relationships with patients, guiding them through treatment choices, advocating for quality of life, and promoting the process of healing through discussions of living fully and preparing for death. The American Nursing Association (ANA) and the Hospice and Palliative Nurses Association (HPNA) promote this belief and issued a position statement in 2017, which urged nurses to take the lead in promoting ACP (Hospice and Palliative Nurses Association [HPNA], 2018). The problem is that although RNs are competent and capable to have ACP conversations, research has shown that they lack training and knowledge (Rietze et al., 2018). RNs may benefit from educational interventions to improve self-efficacy, increase knowledge, and change attitudes about these often-difficult discussions.

**ACP Education Through Simulation**

A method to enhance skills in ACP conversations is simulation. It provides interactive, hands-on experiences and incorporates best practices from adult learning theory in knowledge, skills, attitudes, and behaviors demonstrated in cognitive, affective, and psychomotor domains of learning (INACSL Standards Committee, 2016d). An evaluation of the effect of simulation on ACP communication has not been conducted among nurses at the bedside. Currently, the focus of communication strategies in ACP in palliative care has focused on physicians and advanced practice registered nurses (APRN). However, with an aging population and a need for more interdisciplinary collaboration, training bedside nurses is essential to ensure the delivery of patient-centered, goal-oriented care.

Standardized simulation provides the structure for practical skill development for learners and observers. It also addresses competencies, improvements in care quality and patient safety,
and promotes readiness for clinical practice. Simulations are formative or summative. Formative simulations provide constructive feedback for an individual or group to improve. Summative simulations evaluate competencies at the end of a learning period and are often associated with a grade (INACSL Standards Committee, 2016d). Simulation can consist of simple role-playing scenarios to complex high-fidelity manikins. As an effective pedagogy for difficult communication (Awdish et al., 2017), simulation could be a method for nurses to practice ACP communication skills in a comfortable, risk-free setting where they can debrief about their experiences and discuss with other nurses (Ignacio, 2012). The literature on ACP, simulation, and RNs is sparse. Many studies that do exist focus on the actively dying patient, and do not focus on communication (Doyle et al., 2011; Fabro et al., 2014; Grabow, 2017; Little & Bolick, 2014).

Simulation studies of ACP communication with physicians and APRNs (Chan et al., 2016; Detering et al., 2014) have shown positive outcomes, including increases in self-reported confidence and improvements in ACP discussion comfort levels. These studies demonstrate that simulation communication interventions in ACP can be useful with some providers. However, there is no standardized simulation for ACP communication among RNs specifically.

**Purpose of the Study**

The focus of nursing is caring for the patient’s health experience (Chinn, 2019). Therefore, RNs must be comfortable with and educated about ACP (Baer & Weinstein, 2013). This study intends to assess changes in knowledge, attitudes, and self-efficacy of RNs through the use of a researcher-developed standardized simulation in ACP communication, and concurrently determine the feasibility of the simulation.
Research Questions

The research questions for this study are designed to address the aims. They are:

(1) Is a simulation in ACP communication among RNs feasible?

(2) How does a standardized simulation impact RNs’ knowledge, attitudes, and self-efficacy in ACP communication?

A theoretical framework was developed to guide the study and address the knowledge, attitudes, and self-efficacy of RNs in ACP communication.

Theoretical Framework

Theoretical frameworks provide structure to describe a theory that explains a particular problem. They form the basis to establish context between concepts, variables, and relationships in a study (Creswell, 2005). In nursing, Polit and Beck (2017) have described theoretical frameworks as platforms for researchers to identify, predict, and control phenomena. Theoretical frameworks allow nursing knowledge to be translated into practice (Rourke et al., 2010). For this simulation study, a theoretical framework, called Conversations Had at Trying Times (CHATT) Simulation Framework (Figure 1), was developed, which incorporates the NLN/Jeffries Simulation Theory and Albert Bandura’s Self-Efficacy Theory.

NLN/Jeffries Simulation Theory

The National League of Nursing (NLN) developed a framework called the NLN/Jeffries Simulation Theory to guide simulation design and implementation, and assess learner outcomes. The framework developed was initially based on observations from the theoretical and empirical literature related to simulations in nursing, medicine, other health care disciplines, and non-
health related disciplines (Jeffries, 2015). The framework has five components: (a) the facilitator, (b) the participant, (c) educational practices that need to be incorporated into the instruction, (d) simulation design characteristics, and (e) expected student outcomes. The conceptual concepts were revised in 2011, and the framework became a theory.

**Facilitator**

The facilitator guides, critiques, and evaluates learner performances. The facilitator may provide support and encouragement, and promote understanding by further questioning the participant’s understanding. The debrief is managed by the facilitator to encourage exploration of the important points of the simulation and critical thinking about the learner’s experience. The facilitator’s demographics, such as years of experience, age, and clinical experience, are thought to influence role, experience, comfort, and overall use of the simulation (Jeffries, 2015).

**Participant**

Participants are expected to be self-directed, motivated, and responsible for their learning. Cioffi (2001) describes two types of participant roles: response-based, and process-based (Cioffi, 2001). In a response-based role, the participant is not actively involved and has no control over the material presented (e.g., the role of an observer). The participant still gains valuable experience but does not make decisions, or problem-solve. The process-based learner is an active participant who makes decisions and is involved as a participant in the scenario. To progress through the scenario, the participant has to ask questions and organize information to make decisions about patient care. The response-based participant will be referred to as the *observer* and the process-based participant as *learner*. External variables, such as the participant’s age or
nursing experience, also play a role in their experience, performance, and outcome in a simulation (Jeffries, 2015).

**Educational Practices**

Educational practices include active learning, feedback, and acknowledgment of diverse learning styles. Malcolm Knowles, an adult educator and theorist, explained the conditions for adult learning. Adult learners are self-directed, draw on accumulated experiences, want to apply new knowledge immediately, and are motivated by internal factors. Adult learners also lose interest in activities without active engagement (Knowles et al., 2014; Spies et al., 2015). An educational activity that addresses these criteria for effective adult learning is simulation. Simulations have shown enhancements in critical thinking skills, and competency in problem-solving. (Jeffries, 2015) Simulation also allows for participant collaboration, environmental interaction, and practical application of knowledge (Spies et al., 2015). Participants can apply their knowledge immediately in a simulation, and be provided with feedback, which is another factor that aids in adult learning.

A secondary analysis that explored postgraduate adult learners’ learning experience with simulation found that they needed immediate and frequent feedback. Participants stated that the most important part of the simulation was the reflective discussions, and the feedback they received to improve their performances (Spies et al., 2015). In delivering feedback, Jeffries (2015) has stated that the timing and amount of feedback are important elements in knowledge gained in a simulation. Excessive feedback can create anxiety for the participant and frequent interruptions would distract from the objectives (Jeffries, 2015). Therefore, feedback should be given after the end of the simulation scenario in the debrief. The final consideration in adult
learning is the participants’ unique learning styles. Each participant comes with a different set of experiences, personal influences, and professional backgrounds. Participant’s learning styles reflect how they perceive, interact with, and respond to the learning environment. According to the Felder-Silverman learning style model, adult learners have behaviors that include four dimensions: a) active vs. reflective, b) sensing vs. intuitive, c) visual vs. verbal, and d) sequential vs. global (Felder & Spurlin, 2005; Gonzales et al., 2017). These behaviors pose numerous learning styles that necessitate a variety of education delivery (Felder & Spurlin, 2005). In simulation, participants have the opportunity to be learners or observers, reflect on their experiences through debriefing, and learn through styles that incorporate visual (e.g., realistic room setup with equipment), auditory (e.g., alarms for cardiac monitoring, verbal cues through the manikin), and tactile mediums (e.g., auscultation of breath sounds) (Jeffries, 2015).

**Participant-Facilitator Relationship**

Facilitators need to identify the needs of participants to foster a collaborative environment for information exchange. Constructive feedback from the facilitator that is specific and discusses decision-making has been shown to aid participant performance. Simultaneously, participant feedback encouraged by the facilitator will help refine the simulation process (Jeffries, 2015). The facilitator and participant become partners, rather than a traditional teacher-student role. To accomplish this partnership, facilitators need to give clear objectives and expectations to the participants. In addition, the facilitator has the responsibility to support participants, identify the appropriate method of learning, and foster enthusiasm (INACSL Standards Committee, 2016c). Participants should be comfortable and empowered to ask questions, understand all aspects of the simulation scenario, and receive adequate information.
As a result, the relationship that develops between the facilitator and participant should contain trust, and allow participants to feel empowered to learn and reflect on their experiences (Jeffries, 2015).

**Simulation Design Characteristics.** Based on the NLN/Jeffries Simulation Theory, design characteristics should involve objectives, fidelity, problem-solving, participant support, and reflective thinking. The objectives must indicate the intended outcome of the simulation experience, specify expectations of the participants, and provide enough detail for the participant to be able to complete the simulation effectively. Fidelity, categorized as high, medium, or low, is associated with the extent to which the simulation is reflective of reality. High-fidelity simulations may involve a computerized manikin that produces chest and breath sounds, and mechanisms to make the chest rise and fall. Moderate-fidelity simulations may have less sophisticated manikins with sounds for auscultation, but not options for voice or vitals monitoring. Low-fidelity may include parts of manikins to assist with skills such as IV insertion or wound care (Jeffries, 2015). Higher fidelity simulations are associated with more complex situations, such as care for multiple patients, performing complex symptom assessment, and having standardized patients (SP or hired actors) in the scenario that represent friends or family (INACSL Standards Committee, 2016d). The more complex a simulation, the more the participant needs to problem-solve. Simulations should promote prioritization and safe care and be based on the knowledge and skill level of the participant (Jeffries, 2015). Participant support is provided through pre-brief information, cues from the facilitator, props in the simulation such as lab results, cues from a SP in the simulation, or a phone call from a healthcare provider. The simulation is a scripted, structured scenario; therefore, participants need direction. However, the
participant should also be able to naturally navigate through the scenario and meet the objectives of the simulation. If the participant begins to focus on another area of the simulation that is not relevant, multiple methods should be in place to redirect the participant back to the objectives such as cues by the SP or an intervention by the facilitator. A balance needs to be established between flexibility in the simulation and ensuring that participants can progress through the scenario (INACSL Standards Committee, 2016d; Jeffries, 2015).

The last component of simulation design is reflective thinking which takes place in the debrief at the end of the simulation scenario. Debriefing and feedback have been identified as the most important part of a simulation, where participants have the most significant learning gains through communication and self-reflection. A key part of reflective practice, also referred to reflection-on-action per Kolb’s experiential learning theory (2014), is how experience provides a primary source of learning and development. The experience alone does not lead to learning, but the intentional reflection of that experience does (Jeffries, 2015; Kolb, 2014).

**Outcome Measures**

Outcomes are the final component of the NLN/Jeffries Simulation Theory, which includes variables such as knowledge gained, skills performed, learner satisfaction, and self-confidence. Outcomes need to be established in the development of the simulation design, and tools need to be created or identified in advance. Evaluation of outcomes is essential to determine what learners have gained (Jeffries, 2015). In this simulation study, Albert Bandura’s Self-Efficacy Theory was combined with the NLN/Jeffries Theory to address learners’ self-efficacy, knowledge, and attitudes in an ACP simulation.

**Albert Bandura’s Self-Efficacy Theory**
Albert Bandura’s Self-Efficacy Theory (1977b), derived from Social Learning Theory, posited that self-efficacy increases with mastery of activities that are subjectively threatening. Self-efficacy also increases when defensive behaviors of individuals are reduced. Due to fear, individuals tend to avoid threatening situations because they are unable to cope. Therefore, they will get involved in situations that they find less threatening. If coping strategies are developed, perceived self-efficacy will increase. In addition, the less fear individuals have, the less defensive they are, which can lead to increases in self-efficacy. Bandura describes personal experiences, time, and defensive behaviors as essential factors to increase self-efficacy. Personal experiences influence a participant’s approach to learning tasks that affect their performance. These experiences create perspectives that are unique to each participant and result in different learning outcomes. Another factor is time and dose. Bandura states that repeated successful encounters with a task will increase an individual’s self-efficacy. Finally, Bandura emphasizes that a reduction in defensive behavior increases mastery of tasks. Methods to reduce defensive behavior to master tasks includes four sources of efficacy expectations: (a) performance accomplishments, (b) vicarious experience, (c) verbal persuasion, and (d) emotional arousal (Figure 2) (Bandura, 1977b).

In performance accomplishments, Bandura found that successful performance of tasks raised mastery levels and lowered defensive behavior. Vicarious experience refers to the observation of others perform activities without adverse consequences. In verbal persuasion, participants are encouraged and motivated to believe they can cope successfully with a task. Finally, emotional arousal, which includes an individual's physiological state impacted by anxiety, fear, or stress levels, will impede the success of task mastery (Bandura, 1977b).

In a simulation, participants are learners that engage directly in a scenario (e.g.,
performance accomplishments), or observers (e.g., vicarious experience). In Self-Efficacy Theory, the experiences of the learner and observer result in the development of a new pattern of behavior (Bandura, 1977a). Based on this new information, they adopt a new communication strategy with ACP. Combining the NLN/Jeffries Simulation Theory (2015) and Albert Bandura’s Self-Efficacy Theory (1977b), a theoretical framework was designed (Appendix A).

**CHATT Simulation Framework**

The simulation was developed in the Background and Design elements of the NLN/Jeffries Simulation Theory (Figure 1). In this stage of the study, the simulation was created, reviewed by experts and standardized through templates and guidelines. The second stage of the study was administering it to participants. In the Simulation Experience, the simulation setting encouraged an environment of trust, promoted collaboration, provided interactive experiences, and was focused on the participant. This setting promoted trust between facilitator and participant, thus encouraging a partnership. Within the simulation experience, a dynamic interaction occurred between facilitator and participant, and the facilitator adjusted education strategies based on the interaction.

The participants’ attributes also affected the simulation-based experience due to differences in age, gender, level of anxiety, and self-confidence, as well as how prepared the participant was for the simulation. Outcomes were separated into three areas: participant, patient (or care recipient), and systems outcomes (Jeffries, 2015; Jeffries et al., 2015). The focus of this study was on participant outcomes which included reaction and learning. Specifically, this study aimed to increase knowledge, attitudes, and self-efficacy of participants. Based on Bandura’s Self-Efficacy Theory, if participants experienced increased self-efficacy as a result of increased
knowledge and changes in attitude from the simulation, then their defensive behaviors about ACP communication would decrease and their ACP conversations would improve.

**Efficacy Expectations & CHATT**

The four efficacy expectations of Bandura’s Self-Efficacy Theory were integrated into the simulation. Through performance accomplishments, participants entered the simulation and successfully performed an ACP conversation as it was designed. The reduction of defensive behaviors occurred when participants learned that the experiences in the simulation were confidential and the goal was to promote trust in a safe environment. Participants engaged in vicarious experiences as observers who watched the simulation in another room while the learner actively participated. The goal was to have observers imagine themselves in the simulation and debrief about their thoughts related to the experience. The facilitator contributed to verbal persuasion by ensuring a positive group environment in the simulation. Additional verbal persuasion came from observers. They encouraged and cheered on learners who volunteered to actively participate in the simulation. Observer support also aided in reducing emotional arousal. When RNs felt trust and support from their group and the facilitator, their anxiety and fear decreased, resulting in successful ACP simulation experiences. Even the nurses that did not initially feel comfortable stated that they felt a sense of ease in the debrief.

With the predicted increase in the aging population and the need to align patient’s wishes and outcomes, ACP communication is a necessary skill of all clinicians. The lack of trained clinicians in ACP communication is a significant barrier, and many struggle with the initiation or continuation of discussions about goals of care and EOL. RNs are ideal clinicians to have these discussions with patients and families. Based on the NLN/Jeffries Simulation Theory and Albert
Bandura’s Theory of Self-Efficacy, a standardized and validated simulation was created for RNs in ACP communication examining knowledge, attitudes, and self-efficacy. Specifically, the questions explored were: a) is a simulation in ACP communication among RNs feasible, and b) how does a standardized simulation impact RN’s knowledge, attitudes, and self-efficacy in ACP communication? These questions were examined among 36 RNs who participated in a pilot interventional one-group pretest-posttest design in October 2019. The following chapters will describe a comprehensive review of the literature in ACP and simulation, explicit details of the simulation study method and design, the development and implementation of the CHATT simulation study, the results of the intervention, and a discussion on its implications to nursing.

This chapter included an overview of the CHATT simulation study and the CHATT Simulation Framework which is the foundation for the study. Palliative care, ACP, and AD were defined. The lack of trained clinicians in ACP was also identified, specifically the lack of training among RNs. Therefore, the purpose of this study was to assess nurse’s knowledge, attitudes, and self-efficacy in a standardized ACP simulation and determine if this educational modality is feasible in enhancing nurses’ skills in ACP communication. The next chapter is a comprehensive review of the literature on ACP. The concept of ACP has evolved in the last few decades and the definition of ACP has changed as a result. Barriers to ACP communication are addressed on multiple levels including societal, cultural, provider and patient-based factors. The roles of healthcare clinicians are discussed, and more specifically the role of the RN. ACP interventions are reviewed along with simulation studies and nursing-specific studies.
Chapter 2: Literature Review

This chapter consists of a comprehensive literature review of advance care planning (ACP) and simulation. In this chapter, the history and development of the concept of ACP will be discussed, along with the role of providers. Next, the multi-faceted barriers that prevent the initiation and continuation of conversations will be explored. The impact of ACP interventions on skills, knowledge, attitudes, and self-efficacy among healthcare workers will be described. Specific studies related to nurses will be discussed, along with their role in ACP communication. Finally, the use of simulation as an education modality and its integration into ACP interventions among nurses will be explored.

The Evolution of ACP

In 1991, the U.S. Congress enacted the Patient Self-Determination Act (PSDA), which advised patients of their rights to medical care decisions and encouraged competent adults to document treatment preferences and decision-makers through advance directives (AD). The PSDA was intended to encourage individuals to establish and document their wishes (Office of the Assistant Secretary for Planning and Evaluation, 2015).

In the past thirty years, it has been recognized that the documentation of AD is not the sole factor in medical decision-making and patient autonomy. These complex decisions surrounding medical care required continuous communication and reassessment of a patient’s goals of care and treatment options. The main reason for this shift in thinking was increased evidence that the treatment people chose at end-of-life (EOL) differed from the treatment they received (Brinkman-Stoppelenburg et al., 2014; Health and Human Services, 2015). Over 80% of adults in the U.S. have stated they wanted to die at home, yet over 65% of deaths have
occurred in hospitals or nursing facilities (Cross & Warraich, 2019; Ishikawa et al., 2018). As a result of discrepancies such as this, palliative care leaders have strongly promoted the concept of ACP, which includes repeated conversations about goals of care, treatment options, and location of death, as well as encouraging AD completion.

When the PSDA was first put forward, legislators believed that this law would increase the completion of AD. After the initial momentum, the completion of AD increased only slightly. In the early 1990s, 20% of the U.S. adults over 18 had completed AD; by 2007, the number had increased to 29% (Sabatino, 2010). More recently, a 2017 study, reported that AD completion had only risen to 37% after 10 years (Yadav et al.). The limited completion of AD is attributed to minimal guidance with forms, confusing legal terms, an absence of communication with healthcare providers, and a lack of understanding about the health care representative’s role (Sabatino, 2010).

Health care providers have expressed their dissatisfaction with AD due to their inability to capture fluctuations in a patients’ illness trajectory. AD completion was found to be slightly higher among patients with serious illness (38%) compared with healthy adults (32%), but the findings were not statistically significant. This suggests that patients were not guided to complete AD, and providers did not address ACP even among seriously ill patients. Patients also stated that they were unsure about the requirements needed to complete AD forms, and that the forms were lengthy with complicated language. AD documentation may require multiple witnesses or a notary. However, requirements vary state-by-state which adds to the confusion (Yadav et al., 2017). In addition, the language in AD documents are very technical and often interchanged or used incorrectly. For example, the living will often is confused with estate-based wills. Or,
medical power of attorney, correctly associated with AD, is erroneously substituted for the legal power of attorney.

Finally, patients may not understand the purpose of a health care representative or their responsibilities. The terms health care agent, health care representative, surrogate, power of attorney and health care proxy have all been used to signify a patient’s representative if they are no longer able to represent themselves. The variety of terms can be unclear to patients who may not understand why they have to assign a decision-maker. Many assume that a patient’s next of kin will be able to make decisions, yet studies have shown that next-of-kin decision-makers have inaccurately represented a patient’s treatment wishes (Kuehlmeyer et al., 2012).

To encourage patients to complete AD and living wills, additional provisions were established, such as the Uniform Health Care Decision Act (UHCDA) and the addition of “end-of-life planning” to provider exams (Sabatino, 2010). The UHCDA, a comprehensive document similar to PSDA but designed to provide uniformity across the U.S., was established in 1993. The aim of the document was to assist individuals and healthcare professionals in ensuring that a patient has and understands the right to choose or reject a course of treatment. The UHCDA built upon the PSDA and attempted to create consistency among states (Galambos, 1998). However, wide variation still remains. In 2008, Congress added “end-of-life planning” to the initial exam of newly enrolled Medicare beneficiaries to encourage ACP discussions and AD documentation. This provision only lasted one year; it was not extended after 2009 (Sabatino, 2010). Despite the UHCDA and the provision to increase AD completion by providers, compliance was not guaranteed. A health care provider still had the right to decline honoring an AD in two situations: a) for reasons of conscience, if the directive conflicts with institution policy or values, and b) if the instruction is contrary to accepted health care standards (Galambos, 1998). These exceptions
were ambiguous, allowed for several possible interpretations, and discouraged AD discussions by providers. The provisions are still currently in effect. AD are legally recognized documents that providers should respect. However, providers can refuse to comply with these wishes if they have an objection of conscience or consider the wishes medically inappropriate. If they do not comply with AD, providers have an obligation to help transfer the patient to another healthcare provider (Sabatino, 2015).

In 1997, the Institute of Medicine released a report that called for effective, reliable, and compassionate care at the EOL. The approach was less about AD documentation but more on how to provide good care for the dying. This landmark publication led to changes in the definition of ACP. It was broadened and described as an iterative discussion of patients’ views and perceptions of their healthcare with family and health care providers. This description also promoted discussions about patients’ financial arrangements, social and spiritual supports, and details on the preparation of legal documents (Committee on Care at the End of Life & Institute of Medicine, 1997).

Gillick (1995), a leader in EOL care research from Harvard University, expanded the concept of ACP further. He stated that in ACP, a patients’ understanding of their medical condition, and short- and long-term prognosis, were necessary to develop goals. Gillick recognized that physicians needed to be involved with and have periodic discussions about goals of care with patients. Only with a patient’s understanding of their physical and mental condition, and a physician’s input, would patients be able to make informed decisions. Gillick also emphasized that physicians have to ensure patients comprehend all of their treatment options, including their ability to tolerate a medical intervention.
Teno et al. (2001) incorporated the family in the definition of ACP. Families often felt that they alone were responsible for decisions at the EOL. Teno’s study revealed that an essential part of ACP was family involvement. Specifically, families needed education, assistance, and emotional support so they felt confident to care for their loved ones both before and after the patient’s death.

An additional measure to increase the number of ACP conversations was the creation of an ACP billing code for physicians, advanced practice registered nurses, and physician assistants. The code, established by the Centers for Medicare and Medicaid in 2016, gave an incentive for every time an ACP conversation was initiated or discussed. Initial ACP visits included the explanation and discussion of AD in a 30-minute, face-to-face interaction with the patient, family member, or surrogate. Additional ACP visits were authorized for visits related to changes in disease progression and ongoing conversations about care goals (Montoya, 2017).

Initial analysis of the effects of these codes, released in 2019, showed an increase in ACP claims nationally since 2016. However, the overall rate reported was low at 5.8% among all U.S. providers. Researchers found that two-thirds of hospice and palliative medicine specialists did not use the codes despite working with seriously ill patients; the use of codes is even lower among other specialties. Currently, ACP billing is not a reliable indicator of actual ACP practice (Belanger et al., 2019). With new research generated on ACP and the development of multiple interpretations, an agreement was needed on its definition. A multidisciplinary panel of experts achieved a consensus on the definition of ACP in 2017:

A process that supports adults at any age or stage of health in understanding and sharing their personal values, life goals, and preferences regarding future medical care. The goal of advance care planning is to help ensure that people receive future medical care that is
consistent with their values, goals, and preferences during serious and chronic illness.

(Sudore et al., 2017, p. 826)

The definition provides expert agreement on ACP which can be beneficial in clearing misconceptions and confusion. In addition to the definition, the panel included strategies to support the process of ACP, including coordination with family and healthcare professionals, flexibility as the disease progresses, and documentation of preferences based on shared conversations (Sudore et al., 2017). ACP conversations allow patients to understand their specific health conditions, options for care, and how these options fit with their preferences and wishes. These conversations are iterative, involve healthcare personnel and family, and allow for constant appraisal of optimizing quality of life and choices (Fulmer et al., 2018). Although there has been consensus from leaders on the definition of ACP, many barriers remain to the implementation of this definition.

**Barriers in ACP Communication**

Numerous barriers to ACP are described in the literature, including inconsistent research, a lack of societal acceptance of ACP, and racial disparities. Additional barriers are specific to systems, providers, and patients. System-based problems include an absence of leadership support and a shortage and turnover of staff. Providers face time-constraints, inadequate training, and discomfort with ACP conversations. Patient-based factors include cognition, confusion about ACP documentation, and the desire for aggressive treatment due to advances in technology (Dudley et al., 2018; Ludwick et al., 2018). Each barrier will be presented in further detail below.

Research in ACP has been described as inconsistent and difficult to systematically synthesize. Studies have included varied outcome measures, have ACP grouped within wider
EOL communication, and have focused on specific groups of patients or specific settings. Due to the heterogeneity of intervention studies, the development and implementation of a reliable and standard model of ACP with a clear structure has proven difficult (Jimenez et al., 2018; Lunder et al., 2017). Reviews of EOL care communication studies among providers revealed poor reporting and weak methodology for interventions (Brighton et al., 2017; Selman et al., 2017). Specifically, interventions consisted of a one-group design, had subjective outcome assessments, contained self-reported data, and few assessed the impact of training on patients and/or families (Lunder et al., 2017). The lack of homogeneity in the available research, due to varied methodologies, mixed outcome measures, and assorted populations, has presented a challenge in the development of a model or framework (Jimenez et al., 2018).

**Global-based Factors**

Individual interventions may show positive perceptions about AD and ACP from patients, caregivers, and health care professionals. However, there is a general collective avoidance of EOL discussions in the U.S. People are reluctant to publicly and personally engage in discussions about living with serious illness, and how they want to be cared for at the EOL. Conversely, death awareness has become a public health priority internationally, and many countries have integrated conversations and awareness about death into communities. The concept of death literacy, which is knowledge or skills that help people gain access to, understand, and then act upon EOL care, is widespread internationally (Prince-Paul & DiFranco, 2017). For example, in the United Kingdom the term “Compassionate Communities”, started in 2013, has become synonymous with public health and palliative care initiatives that promote ACP in wellness planning (Noonan et al., 2016). The U.S. does not promote planning for death
with public health or prevention, but rather with medical care and treatment. It is centralized to
the healthcare system and the burden of discussions has been placed on healthcare providers
(Prince-Paul & DiFranco, 2017).

**Cultural-based Factors**

The diversity in culture, race, and religion in the U.S. means differences in beliefs,
values, and preferences for individual autonomy (Prince-Paul & DiFranco, 2017). ACP
interventions cannot be generalized to all cultures and populations, and need to be customized to
individual groups. Evidence suggests that there is a low engagement of ACP among minorities in
the U.S. (Hong et al., 2018). Studies also show that racial and cultural disparities exist among the
U.S. population in access to EOL care and ACP (Kulkarni et al., 2011; Rao et al., 2014). A
national study reported that 18% of ethnic minorities, defined as anyone other than non-Hispanic
White, completed AD compared to 34% of White respondents (Rao et al., 2014). Another study
showed that physicians discussed ACP at lower rates with minority patients compared to White
patients (Kulkarni et al., 2011). This corresponds with studies indicating that ethnic minorities
receive more intensive life-sustaining interventions at EOL (Clark et al., 2018). There is also a
discrepancy among hospice beneficiaries. Over 80% of patients on hospice are White, while
Latinos and Blacks only compose 15% of patients. This suggests considerable deficiencies in
ACP and discussions on EOL care among minority populations (NHPCO, n.d.-c).

Health literacy also plays a factor in low ACP engagement. A systematic review of
barriers in ACP found that ethnic minorities consistently lacked proper knowledge about what
ACP was and how to complete AD documents. Black, Latino and Asian Americans commonly
showed a lack of awareness and knowledge about ACP. Researchers found that these minorities
had limited experience with health care systems, which led to difficulties in locating, understanding, and documenting ACP. There was also an association found between poor health status and greater AD completion. Those that had a significant decline in health were more likely to have AD in place; however, many believed that AD were a standard part of insurance or part of healthcare financing, and were not aware of the purpose of AD. Studies showed that these populations also viewed ACP as unnecessary for healthy people (Hong et al., 2018).

Studies that examined ACP communication among the Black population have been conducted more than with other minorities. Racial discrimination or biases in the health system have contributed to poor ACP participation among Blacks. Black patients have reported poor communication with physicians about their preferences. Even if APC and EOL care have been discussed with providers, differences in the delivery of actual treatment preferences has been reported. A study exploring do-not-resuscitate (DNR) orders and actual care showed that Blacks with DNR orders are no less likely to get life-prolonging care than Black patients without DNR orders (Belisomo, 2018). In addition to systemic barriers, the lack of ACP participation among Blacks is due to various factors. A systematic review of ACP related to race revealed that Blacks were more likely to informally discuss EOL than document their preferences in AD, and assumed that family would make decisions (Carr & Luth, 2017; Sanders et al., 2016). Participants reported that if they chose one person as a health care proxy, it would upset other members of the family. Therefore, they decided not to choose anyone (Carr & Luth, 2017). Blacks participants also stated a historical distrust of physicians and the medical system. Mistrust among the Black population dates back to medical experimentation and racism which impacted education and health literacy, access to care, and outcomes (Sanders et al., 2016). In addition, Blacks and other ethnic minorities have expressed their belief that decisions about EOL are made
by a higher power. Their faith in God or a higher spiritual being was believed to heal or allow death. These beliefs are also understood to be forms of deliverance from sickness (Hong et al., 2018; Sanders et al., 2016).

**System-based Factors**

In the U.S., leaders from national healthcare organizations, academic medical centers, and community health organizations found inconsistencies with palliative care training programs, including how to communicate ACP (Dudley et al., 2018). The findings showed barriers at the institutional and operational levels. Specifically, leaders stated that organizations did not support ACP or palliative care, did not want protocols in place, were opposed to having ACP embedded into routine care, and did not believe that ACP training was worthwhile (Dudley et al., 2018; Jimenez et al., 2018). Leadership’s attitudes and viewpoints play a vital role in the operations of a healthcare system. If the leadership team does not prioritize ACP as a valuable resource for a health system, then clinicians will not believe in its value either, which can directly impact patient care (Dudley et al., 2018; Jimenez et al., 2018; Travers & Taylor, 2016).

Another systemic barrier is a shortage of trained palliative care workers. A nationwide assessment showed that there is a shortage of palliative care specialists across the U.S. in relation to the growing number of patients facing serious and life-threatening illness (Center to Advance Palliative Care, 2019; Coats et al., 2017). In 2019, researchers reported that over 7,600 physicians were board-certified in hospice and palliative medicine, and the projected number would decrease, due to retirement and turnover, to 6,600 by 2033 (Kamal, Bull et al., 2019). The National Quality Forum recommends that a palliative care program provides access 24 hours a day, seven days a week. However, there are not enough physicians to support palliative care
programs throughout the country. On average, there are 13.3 hospice and palliative medicine physicians per 100,000 people aged 65 and older across the U.S. (Lupu et al., 2018). Researchers also found that physicians, nurses, and social workers in palliative care reported a 1.4 times higher rate of burnout compared to that in other specialties. This rate of burnout is concerning, as burnout has been strongly correlated with clinicians leaving a specialty (Kamal, Bull et al., 2019).

**Physician-based Factors**

Physicians most frequently cited lack of time as a barrier to ACP communication. On average, it is estimated that goals of care conversations take 30-60 minutes (Schulman-Green et al., 2018). In these conversations, providers are responsible to introduce ACP to patients and caregivers, facilitate discussions, complete documentation, revise goals and treatment plans, and update ACP-related documents (Fulmer et al., 2018; Schulman-Green et al., 2018; Udo et al., 2018). Physicians have stated that the amount of work necessary to conduct effective ACP discussions was not manageable in a physician’s typical 15-20-minute office visit or during brief hospital rounds (Linzer et al., 2015). Physicians found it difficult to dedicate additional time with patients, develop a relationship to broach ACP, and follow up. Instead, physicians have stated that they avoided ACP discussions altogether (Tilburgs et al., 2018; Travers & Taylor, 2016).

Another factor reported among physicians was that they were not adequately trained in communication skills in ACP. A nationwide study that explored attitudes and perceptions of ACP with medical specialists found that 99% agreed that it is essential to have EOL conversations, yet only 14% had conducted these types of conversations and 29% of physicians had received training (Montoya, 2017; Tilburgs et al., 2018). Physicians newly out of medical
school also expressed discomfort due to the absence of training programs. Residents in family medicine have stated that they are uncomfortable with ACP discussions and less than half of those surveyed thought they were prepared to guide patients (Fulmer et al., 2018; Montoya, 2017).

Even physicians who may have completed ACP training may not perform them well. Training sessions have been described as one-time lectures, single role-playing scenarios, or online modules (Bestvina & Polite, 2017). Limited training can result in poor conversations that lack emotion, empathy, and compassion. An analysis of interactions among oncologists and patients showed that genuine dialogue related to treatment preferences was only observed with 50% of patients, and even those discussions were composed of single statements lacking follow-up (Henselmans et al., 2017). Physicians also had difficulty showing reassurance or empathy with EOL discussions. Instead, they would give scientific medical responses focused on symptom cause and treatment (Estacio et al., 2017).

Physicians reported a large burden of responsibility in the initiation of ACP conversations and feared that their advisement would result in incorrect decisions. Some physicians have reported that they perceive ACP conversations as discussions about the withdrawal and restriction of therapies and viewed it as ethically and legally wrong (Schulman-Green et al., 2018; Travers & Taylor, 2016; Wichmann et al., 2018). Another factor that has added to physicians’ fears was their belief that they were destroying a patient’s and family’s sense of hope. This fear has prevented physicians from initiating ACP discussions in the hope that a more definitive prognosis would present over time (Travers & Taylor, 2016). These avoidances of ACP conversations may have had a negative impact on a patient’s course of illness, prolonging unwanted treatment.
An additional challenge voiced by physicians was the navigation of complex prognostication with multiple comorbidities (Harrington et al., 2017; Montoya, 2017; Wichmann et al., 2018) and the care for patients unwilling to discuss ACP (Travers & Taylor, 2016). Physicians stated that the initiation and timing of ACP conversations with chronically ill patients were difficult to calculate due to the unpredictability of their disease trajectory (Wichmann et al., 2018). Patients with chronic diseases tended to have a progressive decline with bouts of potentially life-threatening exacerbations. Due to the erratic progression of the disease, a clear transition to the terminal stage is not apparent even though each exacerbation resulted in poorer health (Harrington et al., 2017). In these states of exacerbation, patients with chronic illness were focused on recovery instead of decline, making it difficult for physicians to initiate ACP discussions (Wichmann et al., 2018).

**Patient-based Factors**

From a patient and family perspective, barriers in ACP communication include issues with cognition, confusion about documentation, and beliefs that technology would lead to potential cures (Jimenez et al., 2018; Schulman-Green et al., 2018). Cognitive function decline among the elderly due to disease progression makes ACP decision-making difficult. In the U.S., clinicians are caring for an increasing number of older adults with cognitive impairment. By 2050, it is projected that the population of adults 65 and older will be 83.7 million and that 22% will have cognitive impairment without dementia (deLima Thomas et al., 2018; Schulman-Green et al., 2018). Patients may become more confused as their disease progresses and struggle with decision-making about their medical care. Therefore, it is vital for patients to complete AD and ACP conversations early in the trajectory of illness. Another barrier specific to patients is the
completion of AD forms. If a patient elects to document a living will and designate a health care representative, many forms have complicated, technical language, and are lengthy (Solis et al., 2018). The required documentation alone may dissuade patients from discussing ACP with their family or healthcare provider. Also, as mentioned previously, documentation varies state-to-state with different requirements, such as multiple witnesses or notaries. This adds another obstacle in document execution (Solis et al., 2018; Yadav et al., 2017).

Technological advances in medicine and treatments have complicated ACP discussions and prevented the initiation of discussions among patients. In the past few decades, technology and medicine have advanced, and intensive interventions have been able to keep people alive longer. As a result, when providers discuss treatment options with patients and include descriptions of high doses of medications, clinical trials, and breathing and feeding tubes, a patient’s hope for a cure becomes the central part of the conversation (Institute of Medicine, 2015). Tang and others (2014) found that patients were reluctant to engage in ACP discussions because it was often presented as abstinence from aggressive treatments, and meant “giving up” (Tang et al., 2014). A similar study found that patients hesitated to participate in ACP because their perception was that it was planning for death. Therefore, they did not want to discuss ACP unless they felt death was imminent (Hanratty et al., 2013; Spelten et al., 2019). Without healthcare professionals directing patients, this perception of ACP can lead to unwanted medical treatment, aggressive therapies, and crisis situations at EOL (Heyland et al., 2013; Spelten et al., 2019).

There is no single factor that poses a barrier to effective ACP communication and documentation. Instead, a combination of social, cultural, system, provider, and patient elements provide numerous barriers for ACP. Interventions to promote impactful ACP communication
have to address ACP through multiple approaches. In addition, clinicians from various
disciplines need to be trained in communication and collaboration to have these conversations
effectively (Jimenez et al., 2018).

Provider Roles

Physicians

Historically, ACP communication has been designated as the responsibility of the
physician. However, through research and practice, it is recognized that all clinicians need to
promote ACP communication. The number of physicians who have specialized training in
hospice and palliative medicine falls short of the current and projected future needs of the U.S.
population. Physician certification in hospice and palliative care was first available in 1997, and
the most recent estimates show that there are about 7,900 certified physicians in the U.S. (Kamal,
Bull et al., 2019). The projected 65-year and older population are expected to double the current
population of 83.7 million by 2050, suggesting a severe shortage of providers for anticipated
patient needs (Kamal, Bull et al., 2019; Kamal, Wolf et al., 2019; Montoya, 2017). A U.S. study
on physician provider views towards ACP showed that they believed it was important to initiate,
but few documented these discussions (Chandar et al., 2017). Due to the shortage of palliative
physicians and barriers mentioned previously, advanced practice registered nurses (APRNs) have
been sought to deliver ACP conversations.

Advanced Practice Registered Nurses
APRNs are prepared at the graduate level to build on nursing knowledge, synthesize complex data, and develop holistic, patient-centered plans of care. Their practice addresses care by maximizing health, quality of life, and functional capacities of patients (Hospice and Palliative Nursing Association, 2018). With the need for more providers to conduct ACP discussions, the utilization of APRNs has been supported by leaders in palliative care to serve the needs of patients (Dahlin et al., 2016). APRNs work collaboratively with physicians and play a fundamental role in caring for patients with serious illness. They have been recognized as a resource for goals of care and ACP conversations, and many are certified in palliative care or geriatrics (Hayes et al., 2017). Many have also expanded their role to function as consultants, provide care in homes and skilled nursing facilities, and increase their roles as researchers, program administrators, and educators (Montoya, 2017). APRNs are well-suited to mediate ACP discussions because they have the knowledge and clinical judgment to provide primary palliative care in all settings (Hospice and Palliative Nursing Association, 2018). APRNs are being recognized as assets in ACP communication.

Registered Nurses

Increasingly, registered nurses (RN) are also called upon to have ACP conversations with patients. Nurses have expressed frustration seeing family members struggle to make end-of-life decisions for their loved ones and witnessing patients opt for unwanted treatment. It is recognized that ACP is a responsibility of all members of a health team including the bedside nurse, and RNs are ideally suited to facilitate decision-making conversations and advocate for patients (Hospice and Palliative Nursing Association, 2018; Izumi, 2017).
The current focus of ACP training has been on providers such as physicians and APRNs (Brown et al., 2018; Corcoran et al., 2013). However, training for these conversations should occur with all members of an interdisciplinary healthcare team, including the bedside nurse (Brighton et al., 2018; Low et al., 2014). Nurses spend a considerable amount of time with patients and families at the bedside, and should know the most about them. When confronted with challenging questions by patients regarding ACP, nurses often feel that they do not know how to talk to patients, they struggle with finding the correct words to answer questions, and fear they may say something wrong (Betcher, 2010; Izumi, 2017). While there have been several studies focusing on communication strategies for providers on ACP conversations, little has been done to examine ACP skills and educational strategies among nurses at the bedside (Brown et al., 2018; Corcoran et al., 2013; Izumi, 2017).

**Role of the Registered/Bedside Nurse**

Nurses require specialized knowledge and skills to make independent decisions to benefit patients (Russell, 2012, 2017). RNs are granted the right to practice nursing to protect those who need nursing care. The nurse practice acts of each state ensure that nurses are safe, competent, and caring individuals (Russell, 2012). According to the American Nursing Association (ANA), the purpose of nursing is to protect, promote, and optimize a patient’s health and abilities; prevent illness and injury; alleviate suffering; and advocate for individuals, families, communities, and populations (American Nurses Association, n.d.). In ACP communication, nurses assess, educate, communicate, and advocate, which embody many facets of the ANA-defined purpose of nursing. During patient assessment, nurses gather information about the patient’s perception of their illness; their values, beliefs and goals; and their psycho-social,
cultural, and spiritual needs. As an educator and communicator, nurses answer questions, discuss treatment options, and guide the patient and family through a medical plan suited for their needs. Nurses act as advocates by protecting the rights of patients which includes the acknowledgment of wishes and patient autonomy. Nurses also empower patients with decision-making control, establish trust and minimize unwanted treatment and patient suffering (American Nurses Association, n.d.). All of these facets of nursing practice indicate that RNs should be communicating, advocating, and educating patients and families in ACP.

Professional nursing organizations agree that a pivotal role of nurses is helping individuals understand, explore, and communicate their preferences regarding future medical decisions and end-of-life care (Briggs & Colvin, 2002; Hospice and Palliative Nursing Association [HPNA], 2018). Evidence indicates that patients and families value this level of involvement from nurses because they felt more included in discussions about treatment options, and changes in the plan of care (Reblin et al., 2017; Rietze et al., 2018). Families have stated that they entrust nurses with their loved one’s care because they perceive that nurses involve the family in decisions more than other disciplines. Patients have relayed that they find more comfort in discussing ACP with nurses due to a stronger focus on relationship-building and problem identification and solving, rather than disease and death (Reblin et al., 2017). Nurses have the foundational skills and opportunities to engage in ACP conversations. However, research shows that they do not, due to a lack of experience and comfort (Rietze et al., 2018).

Jeong et al. (2011) developed a conceptual framework, and described the process of transition with registered nurse’s (RN) experiences with ACP and AD. The framework includes pre-transition, transition, and post-transition phases, along with enhancing and inhibiting factors (Figure 3). In pre-transition, RNs expressed a range of feelings and emotions described by words
such as discomfort, sad, difficult, awful, cruel, confronting, resentful, and were reluctant to initiate EOL care wishes. In the transition phase, the nurses’ reluctance was eased by influences from enhancing and inhibiting factors. Enhancing factors included personal beliefs that they were promoting dignity and comfort, relief when patients and families were receptive to conversations, and support when an interdisciplinary team was involved. Inhibitory factors included a lack of time, the culture of ‘do everything’, and family conflict. The enhancing factors promoted the transition to the post-transition phase. The inhibitory factors were obstacles that RNs had to overcome before they could reach the post-transition phase with the patient. Once the transition was achieved, RNs reported changes in their emotions and feelings about ACP conversations. RNs described the change from negative feelings to positive with words such as satisfied, relief, comfort, happiness, and positive (Jeong et al., 2011). Based on this framework, inhibitory factors can be overcome with RN training and support to progress from the pre-transition phase to the post-transition phase. This aligns with the nurse practice acts that state that nurses require specialized knowledge and skills, obtained through training and support, to make independent decisions to benefit patients (Russell, 2012, 2017). For nurses to provide quality nursing care, skills in ACP are essential for practice.

An integrative review showed that RNs believe that ACP conversations are a vital part of their work, but they often do not engage in it (Rietze et al., 2018). Approximately half of the nurses sampled stated they had not participated in an ACP discussion (Rietze & Stajduhar, 2015). Rietez & Stajduhar (2015) described RN barriers to ACP communication at the organizational level, and personal level. One organizational barrier reported was a lack of uninterrupted time in a private setting. Similar to physicians, nurses reported difficulty finding time to engage in ACP conversations due to large patient assignments, demands of real-time
charting, and difficulty coordinating with patient procedure timings (Yen et al., 2018). The concern for lack of time was also associated with inadequate training and education. When nurses felt comfortable, and their self-confidence increased, they felt that they were able to complete ACP discussions without being hurried; many realized that these conversations took less time than they had anticipated (Mishelmovich et al., 2016; Randall et al., 2018). At the organizational level, nurses also had to manage physician concerns about their involvement in ACP discussions. Although part of an RN’s scope of practice, many physicians believe that RNs are not capable of having these conversations (Izumi, 2017; Yen et al., 2018). Moreover, some nurses did not think that ACP was part of their role (Ludwick et al., 2018; Rietze & Stajduhar, 2015). Finally, nurses believed that their organizations were not supportive of ACP conversations due to a lack of policies, institutionally endorsed tools to guide discussions, and opportunities for education and training (Rietze & Stajduhar, 2015).

At the personal level, nurses expressed discomfort addressing ACP due to limited education and personal experience with death and loss, and fear that their patients would lose hope (Rietze & Stajduhar, 2015). Most nursing programs do not prepare nurses in palliative care or ACP communication (Ferrell et al., 2018). Without personal experience with a seriously ill patient, nurses are poorly prepared to provide adequate care for these patients. Nurses also conversations would be more detrimental than beneficial (Rietze et al., 2018; Rietze & Stajduhar, 2015). One of the largest cited barriers among RNs is the physician. Their resistance to an RN’s involvement in ACP discussions has caused confusion about the nurse’s role in ACP (Izumi, 2017; Ludwick et al., 2018; Rietze & Stajduhar, 2015).

**Physician Resistance to Nurse ACP**
Studies have shown that physicians have the misconception that ACP is the same as EOL decision-making, and believe nurses should not facilitate ACP because it involves prognostication and treatment decision-making. Uncertainty about the clinician’s role in ACP communication has resulted in missed opportunities for RNs. Too often, clinicians assume that someone else will have an ACP conversation (Izumi, 2017).

The Code of Ethics for Nurses, provision 1.4, directly addresses the role of nursing in ACP communication. In 2001, the ANA declared that,

Patients have a moral and legal right to determine what will be done with their own person; to be given accurate, complete, and understandable information in a manner that facilitates an informed judgment; to be assisted with weighing benefits, burdens, and the available options in their treatment, including the choice of no treatment. To accept, refuse, or terminate treatment without deceit, undue influence, duress, coercion, or penalty; and to be given the necessary support throughout the decision-making and treatment process. Such support would include the opportunity to make decisions with family and significant others and the provision of advice and support from knowledgeable nurses and other healthcare professionals (Fowler, 2015, p. 13).

Although this clarification of a nurse’s role was established in 2001, twenty years later, many nurses do not think ACP is part of their scope of practice or their responsibility. Nurses have stated that they lacked training, and when asked about discussing AD in intake or admission processes, many see it as a box to check rather than a prompt to start an ACP conversation (Izumi, 2017).

**Empowering Nurses**
The ANA and the Hospice and Palliative Nursing Association (HPNA) have called upon all nurses, regardless of their field of nursing, to take a leading role in ACP. The ANA and HPNA wrote the 2017 Call for Action: Nurses Lead and Transform Palliative Care, which supported the nurse’s role as a patient advocate. Communication and discussion are essential in the development of a therapeutic relationship, which is a vital part of nursing. Therefore, nurses should conduct ACP with all patients (HPNA, 2018). Interventions that integrate ACP into a nurse’s daily practice and care of patients showed increased confidence and observed competence among nurses (Randall et al., 2018; Rietze & Stajduhar, 2015). Further discussion of nursing interventions will be discussed below.

**National, Cultural and Health System ACP Interventions**

ACP initiatives and interventions have been created to assist families with difficult conversations. Interventions that will be addressed include nationwide initiatives, interventions that address cultural barriers, and studies conducted among healthcare systems and clinicians.

**Nationwide Initiatives**

Public awareness initiatives in ACP have been promoted throughout the U.S. since the late 1990s. One of the first was a campaign called *Five Wishes* that was launched in 1996 by a nonprofit organization to assist with AD documentation. The document, available online, is written in lay language to identify healthcare proxies and assess preferences for treatment options, comfort care, and spiritual and interpersonal needs (Five Wishes, n.d.). In 2010, *The Conversation Project* began when a Pulitzer Prize-winning author and a group of media, clergy, and medical professionals shared personal stories of “good deaths” and “hard deaths.” *The*
Conversation Project is a non-technical guide to help start ACP conversations with families and friends. The goal was to have people state their wishes aloud (The Conversation Project, n.d.). Other projects, such as the Go Wish and Hello games, aim to introduce difficult conversations with interactive sharing and prompts to start discussions about preferences (Common Practice, n.d.; Lankarani-Fard et al., 2010).

Simultaneous to nationwide initiatives, popular books and television shows have promoted EOL planning, such as Atul Gawande’s (2014) best-selling book, Being Mortal, and award-winning documentaries such as Defining Hope, End Game, and Extremis (Epstein & Friedman, 2018; Jones, 2017; Krauss, 2016). These books and movies were created to show the realities of ineffective communication and consequences, promote ACP conversations among family members and health care providers, and decrease the stigma surrounding death and dying in the U.S.

**Culture-Related Interventions**

Studies have shown that lower engagement in ACP conversations was common among ethnic minorities, especially among Black, Latino, and Asian American populations. Healthcare professionals need training in cultural awareness and cultural intelligence to become sensitive to the diverse needs of patients. A large survey of physicians showed that 86% found it to be “very challenging” to conduct EOL discussions with patients whose ethnicity was different than their own (Belisomo, 2018). Training and information about cultural sensitivity can assist healthcare providers’ comfort conducting ACP conversations and help create therapeutic relationships with patients.
Health literacy was found to be a factor in awareness of ACP and AD documentation. Interventions to improve awareness and knowledge about ACP were achieved when health literacy concepts were integrated into interventions that were tailored to the needs of specific cultural populations. Community outreach programs, delivered in native languages, were found to have a higher AD completion rate compared to those delivered exclusively in English (Hong et al., 2018). Volandes and others (2008) developed video decision aids that helped Latino and Black patients significantly decrease educational barriers to ACP. These videos, delivered in multiple languages, were effective because they showed people of similar backgrounds and characteristics having APC conversations in relatable situations (Loomer et al., 2019; Volandes et al., 2008). Researchers in California developed an interactive, online ACP program for the Latino population called PREPARE for your Care. To address health literacy, the program has video, audio, and closed captioning in English and Spanish, along with integrated narratives and testimonials based on real-life scenarios to mitigate cultural barriers (Sudore et al., 2018).

Researchers discovered success in ACP communication and documentation among Blacks when they incorporated theory-based approaches such as faith and family engagement in discussions rather than a focus on AD completion (Sanders et al., 2016). Studies have reported that Black patients do have discussions about ACP informally, and patients assume that family members will make decisions. However, formal AD completion remains low. Interventions to promote patient/surrogate communication included the use of semi-structured interviews with AD coaching, guided ACP discussions, and self-reflection and storytelling. These have been found to result in positive outcomes in goal and surrogate decision-making and an increase in AD completion (Bonner et al., 2014; Huang et al., 2016; Song et al., 2009). Spirituality also played a large role in ACP engagement among Blacks. Those who believe in God expressed
reluctance toward ACP because they did not believe in planning for things beyond their control. In addition, religion was found to be a guiding factor in EOL decisions, in contrast to Whites who considered religion one factor but relied heavily on the opinion of health care professionals (Bullock, 2011). Cultural competency in ACP is a growing area of research. There is a recognition that cultural context in EOL can be essential to facilitate effective communication with patients and families.

**Healthcare Clinician Interventions**

Systematic reviews have been published to report ACP interventions among providers, clinicians, patients, and families. These interventions have been found to decrease patient hospitalizations, reduce the use of resources, improve patient and family satisfaction scores, and increase the use of AD (Jimenez et al., 2018; Land et al., 2019; Solis et al., 2018; Weathers et al., 2015). The most effective interventions used more than one approach, were personalized and tailored, and utilized a team of multidisciplinary professionals (Land et al., 2019). Interventions that focused on both AD and communication at EOL increased the completion of AD and the occurrence of EOL conversations. These interventions also improved concordance between patient preferences and care delivered (Houben et al., 2014). ACP communication interventions have shown to be effective and improve outcomes on a systemic, organization and patient level.

Jimenez et al. (2018) reported on a synthesis of systematic reviews and classified interventions into five categories: a) interventions that provided information or educational content; b) those that tested decision aids or communication strategies; c) those that explored a subtype of ACP; d) those that used specific tools for ACP; and e) those that sought to improve patient and family satisfaction with palliative or EOL care. The first category consisted of
interventions that were informational or educational and focused on specific groups of patients or specific settings. The most successful educational interventions combined computer, video, and discussion; were done multiple times; and taught patients and providers collectively rather than each group individually (Jimenez et al., 2018).

The second category focused on the creation and/or implementation of decision aids to improve decision making. Interventions that used decision aids improved knowledge about AD, ACP, treatment options, and goals of care; increased AD completion and ACP discussions; decreased decisional conflict; and promoted less aggressive care interventions. The most successful ACP interventions used decision aids in video format (Jimenez et al., 2018).

Interventions that specifically dealt with subtypes of ACP (e.g., Do-Not-Resuscitate (DNR) orders; Do-Not-Hospitalize (DNH) orders) showed increases in AD completion and EOL care discussions between patients and clinicians. Patients who had DNR/DNH orders were associated with the increased use of hospice and palliative care and decreases in life-sustaining treatments. Additionally, DNR orders were related to decreased use of cardiopulmonary resuscitation (CPR); DNH orders with a decrease in hospitalization (Jimenez et al., 2018).

In the fourth category, specific forms of ACP were used for interventions that involved programs through the health system. The implementation of specific methods of ACP (e.g., validated instruments or tools), were associated with lower rates of hospitalization and hospital deaths, and increased documentation of ACP. The final category focused on the improvement of patient and family satisfaction. These interventions showed increased DNR orders, ACP discussions, and AD documentation, and higher patient and family satisfaction ratings with EOL care (Jimenez et al., 2018). In summary, ACP interventions were separated into education interventions, decision aid interventions, interventions that explored a piece of ACP or used a
tool, and interventions to improve patient and family satisfaction. Results showed increases in AD knowledge and completion, alignment of DNR and DNH orders with patient preferences, lower rates of hospitalizations, and increases in ACP discussions. The review showed the positive impact of interventions, but the authors noted that studies lacked standardization or were of poor quality in intervention methodology, reporting, or execution (Houben et al., 2014; Jimenez et al., 2018; Weathers et al., 2015).

There are a wide variety of interventions that address ACP to enhance education and training among clinicians and improve patient outcomes. An organized approach in ACP communication is necessary to engage patients and impact changes to promote thoughtful discussions about EOL care.

**Communication-specific Interventions**

The ability to communicate effectively plays a major role in ACP communication. In discussions with patients who are seriously ill and their families, healthcare clinicians have to relay realistic outcomes of the patient’s prognosis, present options for treatment or forgoing treatment, and promote factual understanding to prepare patients for EOL. The most common barrier to EOL care has been identified as ineffective communication due to a lack of skills or the inability to effectively discuss ACP (Boyle et al., 2017). Serious illness requires complex decision-making and can produce anxiety for patients and families. Healthcare clinicians must acknowledge the emotions surrounding these decisions and relay information in a simple manner (Sanders et al., 2018). Sanders et al. (2018) presented a model for serious illness communication, which focuses on goal-concordant care. The model consists of four mutually reinforcing processes based on the goals of patients: information gathering; information sharing; responding
to emotion; and fostering relationships. When each component is addressed in a conversation, patients feel known, informed, in control, and satisfied with their experience. The words used by clinicians are also significant for effective communication. Researchers identified that the word ‘treatable’ in ACP communication can relay different meanings for the provider and the patient. Providers may discuss a condition as ‘treatable’, but it may not be curative, or the treatment may significantly impact quality of life. Patients may hear the word ‘treatable’ and perceive it as good news for prognosis and quality of life (Batten et al., 2019). These aspects of communication are not inherent in a clinician’s training. Many may not realize the words they are saying have an impact on their patient’s perceptions. Therefore, communication training is crucial in conversations about ACP or EOL.

A study with hospice/palliative care nurses revealed key steps to establish trust with patients and assist with the navigation of difficult conversations. The five steps included establishing context, attentive listening, creating a safe space for EOL, goals of care planning, and delivering honest information. The first step, establishing context, included the exploration of the patient and family’s history, identification of the key players, and the creation of a time and place to have a private conversation. The nurses stated that specific phrases helped start an ACP conversation which included ‘tell me what you know about your illness’, or ‘how did you get to this point’. The next step is attentive listening. Nurses were able to gain a holistic view of their patients with assessments of their physical, spiritual, and emotional wellbeing, and incorporating family members into the plan of care. Using these techniques, the nurse was able to understand the patient’s perspective which allowed the patient to feel safe in discussing EOL and preferences. Next, goals of care planning was done with education, advisement, and advocacy for ACP, AD, palliative care, and EOL decision-making. Finally, nurses provided
honest conversations with patients using facts about their disease progression, but also allowed sharing and discussion (Isaacson & Minton, 2018).

**Decision Aids**

To facilitate conversations, ACP decision aids have been created and implemented in healthcare settings. Fahner, et al. (2019) constructed a four-phase framework which examined decision aids in ACP. In the preparation phase, eligible patients are identified and logistics are established. The initiation phase introduces ACP, clarifies goals of the conversation, establishes trust, and starts the conversation. The patient’s views are discussed in the exploration phase, which includes their views on their illness, how they define living well, and how to plan and set goals. The last phase consists of a summary of the conversation, initial AD documentation, and action (Fahner et al., 2019). This framework guides the initiation of ACP conversations using structured communication techniques. The focus is not on the patient’s prognosis, EOL, or giving up hope, but rather about how the patient would like to live their life despite their illness. Decision aids can assist greatly in ACP communication strategies. A study conducted at a large U.S. tertiary center examined the effect of a decision aid use among oncology nurses. The center had reported a low percent of AD completion among patients and urgent referrals to hospice care in the last few weeks of life. The decision aid was a question-prompt list which showed improved patient-clinician communication. After the question-prompt list was utilized, the percentage of patients with an active DNR order increased from 24% to 39%, and hospice referrals increased from 13% to 22% (McLawhorn et al., 2016). Similarly, nurses at the Mayo Clinic piloted decision aid tools in 2017. This tool included education in ACP and questions scripted in a structured approach. The researchers found that 85% of patients completed AD, and
100% identified a healthcare agent after they initiated the use of the decision aid (Holland et al., 2017). Decision aid tools and focused communication strategies in ACP are effective interventions to guide clinicians through organized conversations with patients.

**Nursing-Specific Interventions in ACP**

One of the earliest interventions that promoted ACP communication among nurses was *Respecting Choices*. This program was one of the earliest examples of ACP communication intervention at the patient, clinician, and health system levels. It was also one of the only studies, at that time that encouraged nurses to participate in ACP communication with patients.

*Respecting Choices* started in 1991, is now an internationally recognized, evidence-based system for ACP. *Respecting Choices* is a conceptual framework that provides a foundation to integrate ACP into health programs. The program provides assistance and resources for health system redesign, ACP education and facilitator training, community engagement and continuous quality improvement (Hammes et al., 2012; Respecting Choices, n.d.). The results of the integration of *Respecting Choices* into a health system were reported four years after the program began. The program provided education and professional training to healthcare professionals, created new documentation tools, changed patient education, and adjusted to the healthcare system’s organizational practice. After ACP became an embedded part of the health system, significant results showed a large increase in AD completion. Among the patients that died during the study period, 85% had documented advance directives. In addition, decisions made at the end of life were consistent with the written directives in 98% of the cases (Briggs & Colvin, 2002).
Ensuing studies that focused on interventions with ACP communication and nurses began to examine proximal and long-term outcomes of ACP discussions among patients (Chan et al., 2018; Hilgeman et al., 2018; Rabow et al., 2019). Researchers in California engaged patients and caregivers in a two-session, nurse-led ACP workshop that discussed ACP concepts, introduced *Five Wishes*, and promoted dialogue about personal thoughts and experiences. The participants were given tasks to complete before the start of the second session, such as answering questions about their definition of quality of life and playing the *Go Wish* game with their families. The goal was to have questions that promoted thoughtful and structured discussions using a card game. Patients and caregivers reported that they valued the group nature of the workshop and the information delivered by nurses. As a result, those that attended the workshop were found to have a higher rate of AD completion, compared to those who did not attend (Rabow et al., 2019).

A study examined the effect of an ACP discussion guide with patients who were recently discharged from the hospital. The study explored the congruence between EOL care preferences of patients and families and documentation. The discussions were led by an ACP-trained nurse, and researchers found that after six months, an increase in congruence between EOL care preferences and documentation was found among patients, specifically in AD completion and DNR orders. The intervention consisted of an ACP communication-trained nurse who used a discussion guide to talk about ACP with patients after hospital discharge (Chan et al., 2018). Hilgeman et al. (2018) conducted a study among Veterans Administration participants that examined the effect of a new patient-centered nurse-supported ACP intervention. The intervention, a discussion guide, focused on providing information on the risk, benefits, or alternatives to life-sustaining medical procedures. Findings indicated that those in an ACP intervention group had an AD completion rate of 94%, as opposed to 29% in the usual care
group. Participants in the intervention group also made more decisions to decline life-sustaining
treatment (Hilgeman et al., 2018).

Another study focused on RNs’ communication in a palliative care team. A specific
discussion guide on ACP was added to the nurses’ communication strategies to facilitate
discussions among the patient and family. Qualitative results showed that nurses preferred a
structured approach to ACP communication, because it allowed the discussion to be routine, and
it still provided flexibility. The nurses found that the time needed for conversations was shorter
due to the efficiency of the guide (Ólafsdóttir et al., 2018). A similar study was conducted among
nurses in primary care, and results showed that 85% of patients who received care from nurses
who had the structure ACP communication guide, completed AD, and 100% identified a
healthcare representative (Holland et al., 2017).

Integrating ACP communication into intensive care units (ICUs) has been a focus of
research due to the increased need to discuss ACP with critically ill patients and offer choices
about treatment options (Anderson et al., 2017; Boyle et al., 2017). Nurses in the ICU of the
University of California San Francisco Medical Center (UCSF) completed an eight-hour
workshop on communication skills. The training’s four-step process consisted of: a) the
coordination of communication between the patient, family, and interprofessional team; b) a
check-in to ensure understanding of the discussion; c) acknowledgment of emotions; and d)
follow-up to ensure support and clarification. Results of the workshop among ICU nurses
revealed a two- to threefold increase in confidence and skills in palliative care and ACP
communication (Boyle et al., 2017). In another university medical system, ICU bedside nurses
completed an eight-hour communication course and one year of structured rounds with a
palliative care specialist. Results demonstrated a significant increase in communication skills
pre- and post-intervention, and an increasing trend in identifying patients’ palliative care needs from the start of the interventions to 19 months later. For example, researchers stated there was a 55% increase from the start of the intervention to 19 months later in nurses identifying concerns about prognosis and goals of care (Anderson et al., 2017).

One of the most extensive and most recent studies conducted among RNs in the U.S. focused on the fluidity of conversations. The COMFORT Model integrated the concepts of communication, opportunity, mindfulness, family, openings, relating, adaptation, and team in a patient-centered model. RNs underwent instruction through lecture, group discussion, role-play and demonstrated skills, and showed a significant increase in confidence and satisfaction in communicating difficult conversations directly after the intervention and three months later. Explicitly, nurses stated that they had increased awareness and preparation in their daily practice for EOL discussions in the three-month follow-up (Fuoto & Turner, 2019).

The common feature of all of these interventions is the use of structured communication techniques, such as discussion guides. Nurses that used these guides reported increased comfort with ACP conversations. In addition, patient outcomes showed significant improvement. Another method to introduce ACP communication in a structured manner is simulation. Simulation has been used extensively in nursing, but not specifically for ACP communication with practicing nurses.

**Simulation**

Simulation is an educational modality that is widely accepted in nursing (Jeffries, 2015). Simulation is a strategy to create a clinical situation to engage a group of clinicians/students in the care of a patient who is represented by a manikin or a standardized patient (SP). These
simulated clinical situations consist of patient-case scenarios followed by a reflection (International Nursing Association of Clinical Simulation and Learning Standards Committee, 2016d). Before the simulation, the participants are pre-briefed with a report on the patient and specific details of the simulation. The simulation may be video-broadcasted to a group of observers while one or a group of participants, the learners, actively participates in the simulation scenario. After the simulation ends, the group will reflect on the situation, called the debriefing, and evaluate the experience (Jeffries, 2015).

In nursing education, the uses of simulation have been reported for over a century. Some of the earliest uses of simulation date back to Florence Nightingale, who recorded the use of simulation to demonstrate proper methods for infection control. Other recorded instances of simulation include the use of jointed skeletons and mechanical dummies to teach bandaging. These body-specific parts led to the use of full anatomical models such as the pelvis and pelvic machines that were used to train midwives in the late 1700s. The most famous full-body manikin, Mrs. Chase, was introduced in the early 1900s. Mrs. Chase has realistic jointed hips, elbows, and knees, and was used to train nurses to turn, dress, and transfer patients. Her maker, Martha Chase, was a children’s doll maker who was asked by the principal of the Hartford Hospital Training School to make an alternative to the straw-filled “dummies” used for training (Sanko, 2017).

**Simulation Laboratories & Patient Simulators**

Simulation laboratories were adopted in schools of nursing in the mid-1930s, with the first located at Indiana University. The laboratory at Indiana University was used as a space for skills assessment. Thereafter many schools of nursing designated spaces for simulation
laboratories in their buildings (Sanko, 2017). Simulator manikins, also known as human patient simulators, were adopted in nursing education in the mid-1990s with the use of SimOne, Harvey and Resusci Anne (Jeffries, 2014; Sanko, 2017). Simulators were widely used in medical education prior to nursing. SimOne, developed at the University of California, was a high-technology, computer-controlled simulator that was created to look like a realistic male patient. Features included a simulated heartbeat, pulses, and blood pressure, and the ability of the manikin to receive IV fluids and injections. Harvey, developed at the University of Miami, was created to teach cardiology. Harvey had findings related to the cardiopulmonary system and was the first simulator to have an associated curriculum (Sanko, 2017). Resusci Anne was developed for cardiopulmonary resuscitation (CPR) and had sensors that were connected to a videodisc player. Learners received immediate feedback as they practiced. Resusci Anne was approved by the American Heart Association and the American Red Cross, and became the standard for CPR training (Jeffries, 2014).

Simulation as Nursing Modality

By 1970, universities were collaborating about ideas to improve simulation in nursing education. These collaborations eventually lead to the development of the International Nursing Association for Clinical Simulation and Learning (INACSL). Simulation gained momentum as a widely accepted valid teaching modality in the early 2000s (Sanko, 2017). Many education programs and healthcare institutions have utilized simulation to address safety in patient care, to measure nursing competencies, to assist in the nursing shortage, and to compensate for the increased number of nursing education programs (Jeffries, 2015). Specifically for nursing education, in the early 2000s, a nationwide survey assessed the use of simulation in pre-licensure
program in the U.S. Universities, colleges, and technical schools of urban and suburban areas were represented, and results showed that 87% reported using high- or mid-fidelity simulation experiences in their programs, with half using it in five or more courses (Hayden, 2010). Current statistics show that almost all schools of nursing have simulation-based experiences for students. The replacement of clinical hours with simulation has also been researched. Students who had either one-quarter or half of their clinical hours replaced with simulation had no difference in NCLEX pass rates or end-of-program education outcomes when compared with students with more clinical time (Hayden et al., 2018).

With the success of simulation in nursing education, healthcare professionals have begun to adopt it into professional development programs. Educators from hospitals, clinics, long-term care centers, and community settings have utilized simulation to meet the needs of nursing staff. These simulations have provided nurses with opportunities to care for clients with unexpected occurrences, practice issues in patient safety, and improve the quality of care. Hospitals also incorporated the use of simulation in annual skills checks or competencies to allow a setting where nurses could demonstrate their skills, ask questions, and learn from nurse educators (Parsons, 2017). Simulation has also been used among interdisciplinary teams in health care settings to facilitate teamwork and communication (Jeffries, 2015).

**Simulation Methods**

Simulations consist of low-, medium-, and high-fidelity manikins that speak, breathe, and deliver babies. These manikins can be as simple as task trainers used to demonstrate specific skills, such as a catheter insertion, to sophisticated manikins with complex heart rhythms and experience seizures (Jeffries, 2015). There are many modalities that can be used for nursing
simulations. The INACSL Standards recommends selecting the appropriate modality that provides the optimal situation to achieve the objectives. Modalities include simulated clinical immersion, in situ simulation, computer-assisted simulation, virtual reality, procedural simulation, and/or hybrid simulation. These modalities are achieved with standardized patients, manikins, haptic devices, avatars, and partial task trainers (INACSL Standards Committee, 2016d, p.S7). There are numerous methods to deliver a simulated-based experience. Therefore, it is important to select a modality that is feasible, practical, and applicable to the population undergoing the simulation. The challenge for educators is choosing the most appropriate methods. Aebersoled and Titler (2014) stated that the key to selecting the technology or method in simulation is ensuring that it provides for active engagement with the participant and refers back to the theoretical models upon which simulation is based.

In addition to manikins and devices, SPs are widely utilized in simulation-based experiences. SPs are hired and trained actors to play the roles of a patient, a family member, or any additional role that aids in completing the objectives of the simulation. SPs are often used for simulations involving communication, health teaching, and assessment (Jeffries, 2015). They can provide a holistic influence to the simulation by contributing physical, psychological and emotional aspects of clinical practice. A systematic review of the use of SPs in nursing curricula found that SPs included professional actors, theater and communication students, registered nurses, nursing students, or volunteers. They participated as a patient or a patient and evaluator and had training ranging from one hour to two months (Rutherford-Hemming et al., 2019). The development and training of an SP are important in simulation. Therefore, simulations utilizing SPs must have a plan for recruitment and training (Jeffries, 2015; Lewis, 2017).
In nursing, the majority of simulations consist of a pre-brief, the simulation scenario, and debrief. The recommended number of participants in a simulation group is six to eight. However, numbers can vary based on the goals of the simulation (Jeffries, 2015). The pre-brief consists of preparing the participants with detailed information on the simulation, roles, and objectives; discussion of the expectations of the simulation-based experience; rules to create and maintain a safe learning environment; and orientation to the environment, modality, and equipment (INACSL Standards Committee, 2016d). At the pre-brief, a participant is chosen or volunteers to take part in the simulation as the learner. The rest of the group watch the learner through a live stream in another room. After the learner participates in the simulation, the group meets to debrief. Learning in simulation occurs primarily during the debriefing period where participants discuss their experience and are provided feedback (Cheng et al., 2014; Eppich & Cheng, 2015). The debrief also allows for open discussion from all members of the group.

Simulation-based education often prioritizes active participation in simulations; however, research suggests that learning outcomes for observers are as good as hands-on/learners’ roles in simulation (Bullard et al., 2019; O’Regan et al., 2016). Studies have shown that scores of pretest-posttest testing in knowledge were not significantly different between learner and observer, suggesting that both learner and observer gained the same amount of knowledge even though one was actively involved in the simulation while the other observed externally. A key factor that promotes similar outcomes in both roles is high-quality debriefing and standardized simulation (Bullard et al., 2019; Johnson, 2019). The method, development, and structure of the CHATT simulation for this study will be described in Chapter Four.

ACP and Simulation
In ACP training, simulations have varied from videotaped consultations to patient situations with SPs (Barnato et al., 2014; Bays et al., 2014; Betcher, 2010; Brown et al., 2018). Training has ranged from a one-time two-hour session in a simulation lab to multiple days of simulation combined with clinical training and education (Baer & Weinstein, 2013). The majority of the literature on ACP communication and simulation has been among providers. University of Washington researchers conducted a study of a simulation-based workshop to improve palliative care communication skills, called Codetalk, among internal medicine residents, medicine subspecialty fellows, APRN students, and community-based APRNs using SPs. The simulation showed improved communication skills, specifically expressing empathy, discussing spiritual issues, and eliciting goals of care (Bays et al., 2014; Brown et al., 2018). At the University of Pittsburgh, researchers explored variations in patient who were at EOL in ICUs through physician-grouped simulations. They learned that although physicians did not differ in prognosis or treatment, there were differing perceptions of ACP norms, which affected how they made decisions in EOL care (Barnato et al., 2014). Researchers in Chicago conducted an ACP simulation among medical residents and found significant improvements in their understanding of patients’ health and prognosis, ability to navigate EOL care based on patient values, and initiating discussions on AD and medical power of attorney (Chan et al., 2016).

A growing area of simulation research is with interprofessional, or multi-professional, education. Interprofessional simulation is the pedagogical approach in which two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes (Sørensen et al., 2018). Interprofessional collaboration is important to meet the palliative care needs of older adults living with chronic or serious illness. Lippe et al. conducted an interprofessional simulation among students in medicine, nursing, and social work on team
communication and the impact of a withdrawal of life-sustaining measures, and found gaps in engaging the patient and family’s perspective (Lippe et al., 2019). A simulation-based interprofessional communication workshop focused on team discussions with SPs of an older adult with chronic illness was conducted by the University of Pennsylvania researchers. Students in nursing, physical therapy, pharmacy, and medicine participated, and had significant improvements in confidence in interprofessional and palliative care communication, even though the simulation was short, one-time, and low-fidelity (Bradway et al., 2018).

These studies show the effective use of ACP communication training through simulation. Although effective, it is not used widely among RNs. As discussed earlier, a guided approach to ACP conversations is important for nurse and patient outcomes. Therefore simulation, an education modality that utilizes a guided approach, would be ideal to train nurses in ACP communication.

**Simulation and Nursing Interventions**

As stated previously most simulation-related ACP education in healthcare is done among providers such as physicians and APRNs (Bays et al., 2014; Brown et al., 2018; Grabow, 2017; Little & Bolick, 2014). The few studies on ACP, simulation, and RNs have shown positive outcomes in nurses’ knowledge, confidence, attitudes, and behaviors (Bond et al., 2017; Pereira-Salgado et al., 2019). However, a gap identified is the lack of validity among ACP simulations. Smith and others (2018) conducted a systematic review of the use of simulation in palliative care and EOL and ACP communication and found a limited number of studies that were not standardized and had poor evaluation methods. The researchers recommended that simulation-
based learning experiences apply standards, specify goals and objectives, integrate externally validated scenarios, and employ rigorous evaluation methods and measures (Smith et al., 2018).

To address these gaps, this study created a valid ACP simulation through standardized and international accepted guidelines. RNs have expressed discomfort, a lack of knowledge, and a misunderstanding of ACP and their role in communication with patients. This study created the simulation to improve nurses’ knowledge, increase positive attitudes about ACP communication, and increase self-efficacy to empower them to have ACP conversations with patients and families.

In summary, the concept of ACP has evolved from documentation of AD to iterative conversations about goals and preferences. Barriers to effective ACP communication arise at many levels including societal, cultural, system, clinician, and patient. It has been recognized that the responsibility of ACP is not just of physicians, but includes all clinicians, the patient, and families. ACP interventions have aimed to address many of the multi-faceted barriers that prevent productive conversations. Communication plays a large role in these interventions, which can be facilitated by the RN. However, many have expressed discomfort in having these conversations due to a lack of knowledge, insufficient training, and low self-efficacy. Figure 3 shows the transition that RNs need to make to gain comfort in ACP communication. Simulation as an educational modality provides a method to practice these conversations. Therefore, a study was conducted to examine the feasibility of an ACP simulation study among RNs and assess for changes in knowledge, attitudes, and self-efficacy. Figure 1 shows the CHATT Simulation Framework that formed the basis of the study. This framework was based on the NLN/Jeffries Simulation Framework (2012) and Bandura’s Self-Efficacy Theory (1977).
The next chapter will describe the design and method used for the simulation study. The study was conducted in two stages: simulation development and simulation testing. The development of the simulation used standardized guidelines and underwent a rigorous validation process. The testing phase was conducted through a pilot, quasi-experimental one-group pretest-posttest design which will be described in further detail in the next chapter.
Chapter 3: Design and Methods

This chapter describes the design and methods used for this study, which is a two-stage multi-phase study with several parts. The stages are: a) simulation development; and b) simulation testing. Simulation development will be described briefly; more specific details of the CHATT study will be described in Chapter Four. The simulation testing phase had three purposes: a) to pilot test a simulation in advance care planning (ACP) communication among registered nurses (RN); b) to determine the feasibility of the simulation; and c) to assess changes in knowledge, attitudes, and self-efficacy of nurses who participated. This was achieved through a pilot, quasi-experimental one-group pretest-posttest study design. This chapter will discuss the criteria, strengths, and weaknesses for a quasi-experimental design, a description of pilot and feasibility studies, and specific details of the administration of the simulation to RN participants.

Quasi-Experimental Study

Quantitative research seeks to examine relationships among variables to test theories. Empirical information is systematically collected and analyzed using statistical procedures (Polit & Hungler, 1993). Within quantitative design are studies that can examine the effects of an intervention, describe observations, or explore relationships. Among those that examine the effects of an intervention, study designs are divided into experimental and quasi-experimental designs. This study used a quasi-experimental study design. Quasi-experimental designs use methods and protocols to make observations in a study that are structured similarly to an experiment, but the conditions of the participants lack control. These designs may not include randomization of participants, lack a comparison/control group, or include a preexisting factor.
Quasi-experiments are often referred to as controlled trials without randomization (Polit & Beck, 2017).

There are many types of quasi-experimental designs that use comparison groups outside the study site, or only examine posttest measures. Others are time-series designs that do not have a control group for comparison. The one-group pretest-posttest design explores the effects of an intervention and compares post-intervention measures to baseline measurements (Polit & Beck, 2017). According to Polit & Beck (2017), a one-group pretest-posttest design can be adequate if a researcher is testing a brief teaching intervention with baseline knowledge measured immediately before the intervention and changes in knowledge measured immediately after the intervention. In this approach, an independent variable is manipulated by the administration of a treatment or an intervention to observe the effect on the outcome. A one-group pretest-posttest design was chosen to assess the change in knowledge, attitude, and self-efficacy scores among RNs when a simulation intervention is instituted. Figure 4 depicts a schematic diagram of the one-group pretest-posttest design. The dependent variable (O), which is knowledge, attitudes, and self-efficacy, is measured prior to the simulation and after the completion of the simulation. The simulation is the intervention represented by X.

**Strengths & Limitations of Quasi-Experimental Design**

Polit and Beck recommend that researchers who use a quasi-experimental approach should develop strong interventions and protocols. In a one-group pretest-posttest design, researchers should understand the conditions prior to the intervention, and account for a lack of comparison and randomization. The biggest strength of a quasi-experimental design is its practicality in a clinical setting. A randomized-controlled trial may be difficult to conduct in a
clinical setting where experimental control is challenging. In a pilot study, a quasi-experimental design may be the most feasible method due to constraints in recruitment and sample size. Another benefit of the quasi-experimental design is the lack of randomization which may be more appealing to a larger number of people. Since the intervention is guaranteed to all participants, they may be more inclined to be involved in the study (Polit & Beck, 2017).

Limitations of quasi-experimental design include a lack of a comparison group to contrast results with participants who did not undergo the intervention. Also, as there is no randomization, results may be less conclusive. One of the biggest issues with a one-group pretest-posttest is threats to internal validity. Internal validity states that in a relationship between two variables, the independent variable caused the outcome. A threat to this is if another factor caused the outcome instead of the independent variable. Some of these other factors include history, maturation, and testing. History is the influence of external factors that cause a change from pretest to posttest. In this simulation study, participants received the pretests up to three weeks before the simulation and then were required to return posttests two weeks after the simulation. Participant’s knowledge, attitudes, or self-efficacy about ACP conversations could have been influenced by discussions they had with co-workers, independent research, an experience with a patient or family member that changed their views, or a personal experience with friends or family. Maturation refers to personal changes the participant experiences from pretest to posttest. Examples include permanent changes such as growing and learning, and temporary ones such as fatigue. This change may affect the way a participant would react to the independent variable and indirectly alter results. Maturation is more common in studies that last for months to years; it is less likely to have occurred in this study, which spanned five weeks. Finally, testing is another threat to the internal validity in a one-group pretest-posttest design.
Testing refers to when the measurement of the dependent variables in the pretest affects participants’ responses in the posttest (Polit & Beck, 2017). For this simulation study, the time between the pretest and posttest was short. Some participants completed the pretest and posttest within an hour. This short timeframe may have influenced participants’ posttest responses due to familiarity with their pretests’ answers.

**Feasibility Studies**

One of the aims of this study was to determine the feasibility of an ACP simulation among RNs. Feasibility studies can assess the practicality of an intervention, and give information on ways to improve the design or process of the study. In nursing research, feasibility studies are important to test a study’s effectiveness and how it applies to nursing practice. The information from feasibility studies can be used to implement the study to a larger scale. Feasibility studies can also be categorized as pilot studies. One definition of a pilot study is a small-scale feasibility study, without randomization, which evaluates the practicality to carry out the intervention and assess for variable changes (Morris & Rosenbloom, 2017). For the purpose of this dissertation, to determine the feasibility of the ACP simulation, a pilot test was conducted among RNs.

**Benefits of Feasibility & Pilot Studies**

The benefits of feasibility studies include the testing of processes and study components to determine improvements or changes. This information can be used to demonstrate that the study can be conducted at a larger scale and that the design is reasonable. Feasibility studies allow for the identification of logistical issues or limitations in resources in data collection,
recruitment, and protocol implementation. In a pilot study that looks at feasibility, full interventions or components of studies can be examined such as recruitment, data collection, data management, pre-testing of instruments, or resource utilization. Pilot studies do not guarantee the success of a larger-scaled study, but do increase the likelihood of its success (Morris & Rosenbloom, 2017). In this simulation study, the pilot consisted of all aspects of a full-scale study to determine strengths and limitations.

The International Nursing Association for Clinical Simulation and Learning (INACSL) standards indicate that pilot testing of an entire simulation ensures that it accomplishes its intended purpose, provides the opportunity to achieve objectives, and shows its effectiveness among participants. The pilot for this study provides opportunities to identify confusing, missing, or underdeveloped elements of the simulation (INACSL Standards Committee, 2016d). This pilot simulation study was conducted in two stages: a) simulation development; and b) simulation testing. The process of simulation development underwent a seven-step process, adhered to standardized guidelines, and was reviewed by an expert panel. The details of the simulation development will be discussed in Chapter Four. The last step of the seven-step process was administering the simulation to a sample of subjects. This was done through a one-group pretest-posttest design among six groups of RNs.

Methods

The following section describes the methods in administering the simulation to RNs. A description will be given on the participants, setting, recruitment methods, the intervention, and the plan to analyze variable outcomes.

Subjects and Setting
The site for the study was a hospital health system in Connecticut with a 300-bed hospital and a large outpatient campus. The health system has a well-established hospice homecare program that has been in place for approximately 40 years. In 2017, the need for supportive services for seriously ill patients was recognized and the department of palliative medicine was established. The palliative medicine program consists of an inpatient consult team, an outpatient clinic, and homecare services. The palliative care team consists of a program director, medical director, two advance-practice registered nurses, a licensed medical social worker, a chaplain, and an RN resource nurse. The inpatient team performs an average of 84 consults monthly, which consist of goals of care discussion, symptom management, and completion of advance directives. The outpatient team has had more than 100 referrals to date, and has consulted on symptom management, psychosocial support, advance care planning, and caregiver support. ACP is not a part of the continuing education or competency requirements of staff in the health system. Therefore, conversations with patients and families are usually deferred to the palliative care team.

RNs were the target group for this study. Approximately 800 RNs work in departments of the main hospital and satellite locations, including emergency departments, clinics, homecare, and outpatient centers. RNs constitute the majority of nursing in this health system, and are the clinicians that spend the most time with patients. Therefore, RNs were chosen as the target sample. All RNs, from all areas of the health system, were eligible to participate in this study. Inclusion criteria included RNs 18 years and older, who worked at the hospital, spoke and understood English, and could spend two hours in a simulation.

**Sample size justification.** In consultation with a university statistician (S. Walsh, personal communication, July 2, 2019), a sample size for this pilot was calculated at 40
participants. A full study sample size was calculated through G Power, using the study’s instruments and a review of similar studies. With an 85% power to detect a medium standardized mean change (d = 0.05) in the instruments used for knowledge, attitudes, and self-efficacy, 81 nurses would need to be recruited. However, in consideration of the practicality of recruitment and timeframe of the intervention, the sample was lowered to 40 nurses, which is acceptable for a pilot study. Hertzog (2008) suggested a range of 20-25 participants for pilot studies that aimed to demonstrate intervention efficacy (Hertzog, 2008). Billingham et al., (2013) reviewed sample sizes for pilot studies and found that most studies had approximately 30-35 participants for each group. These pilots showed feasibility for larger-scale studies and substantial preliminary data. Based on their findings, the researchers recommended that pilot studies should have sample size justifications but formal calculations may not be appropriate (Billingham et al., 2013).

**Recruitment**

In collaboration with the Director of Professional Practice & Research and the Outcome Specialist at the study site (K. Nicholson & B. Molle, personal communication, September 5, 2019), methods of recruitment were established. Recruitment was performed through active methods which included: a) distribution of flyers through an all-user email to all employees of the health system; b) notice in the health system’s weekly newsletter STAT; c) attendance of committee meetings, which included the Professional Development/Education Council, Unit-based Councils, and meetings and huddles for homecare and nurse residents. Meetings were requested with individual nurse managers of units in the hospital with limited response. Flyers and notices contained instructions to call or email the researcher for further information about the study or to participate. The researcher checked email and voicemail accounts daily.
Intervention

The simulation intervention took place a total of six times with four to eight participants in each group. The participants arrived at the simulation center on their designated day and time; the total length of the intervention was one-hour. Once all participants had arrived, the facilitator introduced the simulation study, concepts of simulation, and reviewed the pre-brief script which took approximately 15-20 minutes (further details in Chapter Four). The participants were given the opportunity to ask for clarification or ask questions at that point. The facilitator asked one participant to volunteer as the learner, who actively participated in the simulation. Four of the six groups had participants that volunteered; two groups required the facilitator to pick the participants to be learners. The two groups that had no volunteer consisted of nurse residents, who were five months out of nursing school. In collaboration with their instructor, it was decided that two participants would actively participate in the simulation to reduce anxiety and promote psychological safety, due to the nurse residents’ limited training in ACP communication (see Limitations). The remaining (observers) viewed the simulation by livestream video in the debriefing room.

Intervention Administration

The pilot test among RNs took place in the health system’s simulation laboratory. After Institutional Board Approval was obtained through the health system and the University of Connecticut, recruitment of participants, simulation intervention implementation, data collection, and data analysis took five months. The simulations took place in October 2019.

Time allotment for the simulation was two hours, which included answering surveys before and after the simulation and one hour of the simulation-based experience. The survey
questions were tested prior to recruitment to determine the length of time necessary for completion. The pretest and posttest surveys were given to five people who included RNs and non-nursing clinicians. The pre-simulation instruments were completed in 6-8 minutes. Therefore, to accommodate all participants, the time allotted for completion was doubled to 15 minutes. The post-simulation instruments were completed in 10-16 minutes. Therefore, the time was doubled to 30 minutes.

**Screening questionnaire.** After recruitment methods were initiated, interested participants emailed the researcher. The researcher then sent a pre-screening form (Appendix A) to determine the participant’s eligibility for the simulation study. Once participants were deemed eligible, an information sheet (Appendix B) was sent to the participant with options to ask further questions or sign up for a simulation time slot.

**Pre-simulation.** After recruitment, participants were emailed a Qualtrics link for three instruments: a researcher-developed demographic questionnaire, an instrument measuring ACP knowledge and attitudes, and an instrument measuring ACP self-efficacy. In order to participate in the simulation, participants had to complete all instruments. A reminder about their simulation date and time sign-up was sent after completion of the surveys and one day prior to the simulation.

**Simulation.** Participants entered the study site simulation center at their assigned times. All simulations took place at noon and refreshments were provided. The researcher facilitated all parts of the simulation including pre-brief, managing the SPs (see SP Training in Chapter 4), and debrief. The director of the simulation laboratory assisted in the setup of the room and all technological functions of the simulation, including streaming live video into the debriefing room. An outside observer, an RN from the hospice homecare team, was present at all parts of
each simulation to ensure fidelity and adherence to protocol. Her role was to observe the simulation, take notes, and give feedback on any differences between simulations to the facilitator. The facilitator started each simulation session by reading the pre-brief script, in which all components of the simulation were explained (Appendix C). Questions from the participants were then answered, and then the SPs in the simulation were instructed to begin. Ten minutes were allotted for the simulation with the facilitator designating start and stop times by stating, “begin simulation” and “end simulation”. Observers watched a live stream of the simulation in the debriefing room. At the end of each simulation, the facilitator would meet with the external observer to discuss the simulation and any differences in its administration. Independently, the facilitator verbally recorded notes on ways to improve the simulation, limitations observed, and also personally debrief on any emotions felt after facilitating the simulation experience.

**Debrief.** At the end of the simulation, the learner joined the observers, and the group debriefed for approximately 20 minutes. The facilitator conducted all debriefs using the Promoting Excellence and Reflective Learning in Simulation (PEARLS) method to ensure structure and fidelity. The PEARLS method uses a structured approach that allows participants to reflect on the events in the simulation, identify performance gaps, and use past clinical and simulation experiences to improve future clinical performance (Appendix D) (Eppich & Cheng, 2015). At the end of each debrief, the facilitator provided resources to assist the RNs in ACP conversations. These included information on: a) Center to Advance Palliative Care (CAPC) Modules; b) VitalTalk Mobile application derived from the VitalTalk program; c) Health Care Decisions Guide (ADs) prepared by the Connecticut Department of Public Health and Department of Social Services; d) the Serious Illness Conversation Guide created by Ariadne Labs; and e) Medical Orders for Life-Sustaining Treatment (Appendix E).
**Post-simulation.** After the debrief, the participants were informed that the same surveys measuring knowledge, attitudes, and self-efficacy would be sent to their email accounts through Qualtrics. An additional survey to evaluate the feasibility of the simulation study would also be sent through a separate link. Participants had two weeks to complete post-simulation survey questions and were sent a reminder after one week. After the two-week deadline, those participants who completed all components of the simulation study were entered into a raffle for a $50 Amazon gift card. The participants’ names were entered into a bag on equal-sized pieces of paper, and drawings were performed randomly by an individual not related to the study on November 24, 2019. The drawing of names was video-recorded and saved to a password-protected file to ensure fidelity.

**Instruments.** Pre-simulation instruments (defined as pretest surveys) included a researcher-designed demographic instrument, the Advance Care Planning Knowledge, Attitudes, and Practice Behaviors survey (ACPKAP), and the Caring Efficacy Scale (CES). The post-simulation instruments (posttest surveys) consisted of the knowledge, attitudes, and self-efficacy instruments, plus two evaluation instruments, the Simulation Design Scale (SDS) and the Student Satisfaction and Self-Confidence in Learning Scale (SCLS).

**Demographics.** A brief 10-item, researcher-designed demographic questionnaire (Appendix F) assessed personal variables (age, gender, race/ethnicity, religion, spiritual beliefs, level of education in nursing and other education, years of experience in nursing, years and experience in palliative and/or hospice care and prior training in ACP).

**The Advance Care Planning Knowledge, Attitudes, and Practice Scale** (Appendix G). The ACPKAP, a 27-item instrument, measured knowledge and attitudes in ACP. The instrument was developed based on the Theory of Planned Behavior, which is represented by questions that
reflect the theory’s three core concepts: attitudes, subjective norms, and perceived behavior towards ACP discussions. Clinical practice behavior items were eliminated for the CHATT study due to the lack of training and education in ACP communication reported by the study site. Many RNs do not perform ACP conversations regularly. Therefore, an assessment of clinical practice behaviors may not produce substantial results. With the instrument author’s permission, “oncology APN” was changed to “nurse”, and “advanced cancer” was changed to “serious illness” to apply to the study population. To calculate the reliability and validity, the instrument was tested on 53 nurses in a study by Zhou et al. in 2010. The Cronbach’s alpha was not calculated for the knowledge questions, but was calculated for attitudes. The questions related to attitudes were divided into four factors: a) comfort level in discussing ACP; b) nurse’s professional responsibility in discussing ACP; c) attitudes about meeting patient and family needs with ACP; and d) attitudes about ACP and patient responses. The Cronbach’s alpha for the attitudes factors averaged 0.72, which is in an acceptable range. Test-retest reliability was calculated after the 53 individuals completed the retest one month after the initial test. Results revealed a statistically significant correlation between the two surveys (r=0.74, p< 0.0001) (Zhou et al., 2010). The Cronbach alpha calculated for this study was 0.76 and 0.81 for the pretest and posttest for attitudes, which are acceptable ranges. The Cronbach alpha for knowledge was low at 0.30 and 0.64 for the pretest and posttest for knowledge (see ACP Knowledge in Chapter Six).

**Caring Efficacy Scale.** The Caring Efficacy Scale (Appendix H), based on Watson’s Theory of Transpersonal Caring, was used to assess RNs’ self-efficacy in ACP. It is a 28-item, 6-point, Likert-type, self-report instrument which assesses nurses’ efficacy to express a caring orientation and develop caring relationships with patients. A cross-sectional survey was completed by 639 RNs to assess the tool’s reliability and validity. The principal factorial analysis
showed that 28 of the original 30 items described the caring efficacy subscales. Therefore, two items were excluded from the original instrument. Two subscales identified in the instrument included Confidence to Care (14 items) and Doubts and Concerns (14 items). A Cronbach’s alpha was calculated for each subscale at 0.86 for Confidence to Care, and 0.78 for Doubts and Concerns. The overall Cronbach’s alpha for the scale was 0.86 (Reid et al., 2015). The Cronbach alpha calculated for this study was 0.87 and 0.91 for the pretest and posttest for self-efficacy, which show good and excellent ranges in internal consistency.

In the posttest, knowledge, attitudes, and self-efficacy were re-measured with the same instruments, the ACPKAP and the CES, discussed above. The simulation design and process, and feasibility of the study, were evaluated with two additional instruments.

*The Simulation Design Scale (student version) (SDS).* (Appendix I). This scale was developed by the NLN to evaluate the design features of a simulation. This 20-item instrument, with a five-point scale, evaluated the five design features of a simulation. This includes: a) objectives/information; b) support; c) problem solving; d) feedback; and e) fidelity. The instrument has two parts: one asks about the presence of specific features in the simulation, the other questions the importance of those features to the learner. Ten content experts established the content validity of the instrument (Jeffries & Rizzolo, 2006). Psychometric testing among 2,200 nursing students showed that the instrument was valid and reliable. All items had similar standard deviations and inter-item correlations. For reliability, the researchers examined item discrimination by comparing item difficulty scores between participants with total scores in the top and bottom thirds of the distribution. The goal discrimination score was 30% or higher. The results showed discrimination scores that ranged from 79-93%. Cronbach’s alpha overall was 0.96. Each subscale was at acceptable Cronbach’s alpha levels: objectives & information (0.92),
support (0.92), problem solving (0.86), feedback (0.90), and fidelity (0.87). The SDS conceptual model accounted for 85% of the variance in the SDS instrument and correlations among theoretical factors were all significant (p<0.001) (Franklin et al., 2014). For this study, the SDS Cronbach alpha was acceptable at 0.86.

**Student Satisfaction and Self-Confidence in Learning (SCLS).** (Appendix J). This 13-item scale, by NLN, was developed to measure student satisfaction with the simulation activity and self-confidence in learning. Reliability was tested using Cronbach's alpha: satisfaction = 0.94; self-confidence = 0.87 (Jeffries & Rizzolo, 2006). In psychometric testing conducted with 2,200 nursing students, the instrument was found to be reliable and valid. Discrimination scores were calculated similarly to the SDS and were found to be acceptable at ranges of 67-94%. Overall, the Cronbach alpha was 0.92. The Cronbach alpha was greater for the satisfaction questions at 0.92, and 0.83 for the self-confidence subscales. The conceptual model of the SCLS structure accounted for 76% of the variance in the overall SCLS, and correlations among theoretical factors were all significant (p<0.001) (Franklin et al., 2014). In this study, the SCLS Cronbach alpha was 0.87.

The SDS and the SCLS were developed initially for student learners in simulations. Although the participants of this study are not student learners, the NLN recommends the use of these two instruments for simulation evaluation of all new simulation programs (Jeffries & Rizzolo, 2006; National League of Nursing, n.d.-a). These instruments were chosen for evaluation because this study piloted a novel ACP simulation among RNs.

**Data Analysis Plan**
After the simulation was completed, pretest and posttest data were downloaded to SPSS v26. Participants data was de-identified with a code that was assigned to their simulation group. This enabled the linking of pre-and posttest data. Frequencies were calculated for all questions to assess for missing data. Descriptive statistics were used to analyze demographic data. One open-ended question in the demographics was analyzed separately which examined prior training in ACP. Scores had to be recoded in SPSS, based on positive or negative wording of items. Paired t-tests and Analysis of Variance (ANOVA) were used to compare knowledge, attitudes, and self-efficacy mean scores, from pretest to posttest. The difference between post-simulation scores and pre-simulation scores was calculated for correlation analysis. These scores were correlated with demographic variables using Pearson’s and Spearman Rho’s correlation coefficient. Correlations between knowledge, attitudes, and self-efficacy were also calculated. The evaluation instruments, SDS and SCLS scores were analyzed through descriptive statistics to determine the feasibility of the study.

Simulation & Grouping

One unique element of this study was that the simulations were conducted in groups of four to eight people. When participants are grouped together in studies, common group-level characteristics can affect outcomes. To correct for this and improve the estimation of data, random-effects models were used to eliminate bias and improve the understanding of outcomes. Random effects models account for the effect of clusters in simulation groups, as well as the random variability among the participants. This model allowed the generalizability of changes in knowledge, attitudes, and self-efficacy from pretest to posttest among all participants, regardless of grouping (Dieleman & Templin, 2016). For this study, a descriptive analysis of each
simulation group was performed and scores pretest to posttest were calculated with linear mixed models to determine within and between group differences. The evaluations were done in groups as well, therefore linear mixed models were needed to account for the grouping effect.

In summary, this simulation study had three purposes. The first was to pilot test an ACP simulation among RNs at a community health system. This was done through a quasi-experimental one-group pretest-posttest design. The second was to determine the feasibility of the simulation which was measured through two instruments, the SDS and SCLS, to determine participant self-confidence and satisfaction with the design and process of the simulation. The third was to assess participant changes in knowledge, attitudes, and self-efficacy through two instruments, ACPKAP and CES, pre-simulation, and post-simulation. The next chapter, Chapter Four, will provide a full description of the development of the simulation. Chapter Five will discuss the results of the pre-post test data based on the data analysis plan.
Chapter 4: The CHATT Simulation

The purpose of this chapter is to describe the development of the Conversations Had at Trying Times (CHATT) simulation. This simulation was created through a rigorous seven-step process with strict adherence to the INACSL standards. Included in the steps are the scenario development, review by experts, creation of pre-brief and debrief scripts, and SP recruitment and training. The final step was the administration of the simulation to RN participants which was described in Chapter Three.

Simulation Development

Standardized simulation design establishes a framework to develop effective simulation scenarios, and incorporates practices from adult learning, clinical standards of care and evaluation, and simulation pedagogy (Jeffries, 2015). To maximize and encourage the learning of clinical staff, the facilitator needs to understand the optimal conditions for adult learners. Important aspects of adult learning are the creation of a safe, active, and collaborative learning environment. In addition, adult learners need to be able to draw from prior experiences and be able to reflect. To optimize learning, adult learners do not want to be evaluated but rather focus on techniques that can improve practice (Clapper, 2010). These preferences for adult learning are all incorporated into the structure of a simulation. Simulation also provides the opportunity to assess and teach clinical standards of care by practicing a task and then discussing the outcome and experiences in the debrief. It allows participants to think through a situation to use their knowledge and skills in completing the objective of the simulation.

The structure of this simulation titled Conversations Had at Trying Times (CHATT), followed the INACSL Standards (INACSL Standards Committee, 2016d; DeVellis, 2016).
According to the INACSL standards, simulation-based experiences should be designed to meet identified objectives and optimize the achievement of expected outcomes (INACSL Standards Committee, 2016d, p.S5). Using the standardized guidelines, the simulation was based on the NLN Jeffries Simulation Theory and Bandura’s Self-Efficacy Theory framework (Figure 1). Construct validity and content validity ensured that scenarios met objectives and outcomes.

**Construct Validity**

Construct validity refers to the strength of the correlation between a construct and an observable indicator or an outcome. Construct validity is important when constructs are studied through objective indicators and, in education, construct validity is necessary when a new measure is being developed (Posner, 1973). This study was a new simulation created to educate RNs on ACP communication. Therefore, to ensure that the design of the simulation reflected the correct variables, construct validity was assessed. Validation was achieved with rigorous adherence to DeVellis’s steps in scale development and the construction of the simulation, based on the previously mentioned NLN Jeffries & Self-Efficacy theoretical framework (Figure 1) (Bandura, 1977b; Jeffries, 2015). The constructs in this simulation are knowledge, attitudes, and self-efficacy of RNs. It is hypothesized that knowledge, attitudes, and self-efficacy will increase after the RNs undergo the simulation.

Although predominantly used for instrument development, DeVellis’s guidelines (2016) were chosen for construct validity because they are well-established, focus on phased construct creation, and use theoretical frameworks as a foundation for construct development to establish standardization. DeVellis stated that to measure constructs a tangible method needs to be used for assessment. For example, this tangible method could be a questionnaire or an instrument.
These methods of measurement serve as proxies for constructs we cannot observe. Similarly, in simulation, each section of the simulation scenario, the pre-brief script, and the debrief outline serve as “measurement tools” for construct validity. These parts of the simulation serve as proxies for constructs we cannot observe. In instrument development, the relationships between the measurements indirectly infer a relationship among constructs (DeVellis, 2016). Each section of the simulation has to be developed to ensure they relate to each other and address the constructs of knowledge, attitudes, and self-efficacy. Rutherford-Hemming (2015) has referenced the similarity of validating an instrument to the validation of a simulation.

**Content Validity**

The definition of content validity is the extent to which items or sections in a simulation scenario represent a concept (Polit & Beck, 2017). The Lynn (1986) method, which is a two-stage process, was used for content validity of the simulation. The first stage, development, identifies the overall content of the simulation, develops each section separately, and assesses how each section is refined into a usable form. To address this, a full literature review of the deficiencies and barriers in ACP among RNs was performed. The literature showed that knowledge, attitudes, and self-efficacy were the primary constructs that impeded effective ACP communication among RNs. The next two steps, section development and the refinement of sections, included the creation of the simulation outline for ACP communication. Experts in palliative care, case studies, and the National League of Nursing’s (NLN) Simulation Design Template© (National League for Nursing, 2019) guided the formation of each section of the simulation. The selection of experts and the case will be described in the Iterative Review by Experts section below. The next stage, judgment-quantification, consists of a review of each
simulation section and total content by experts to determine the relevancy of sections to a
construct. Lynn states that a minimum of three experts should be given specific instructions on
evaluating each section (Lynn, 1986). For the CHATT simulation, three palliative care content
and simulation experts were given the simulation outline, including the pre-brief and debrief
outline and questions. They were asked to use a content validity index to assess each section of
the simulation scenario (see Iterative Review by Experts section). Further description of the
expert panel, and steps of content validity and construct validity, are presented below.

**Simulation Development**

The seven steps used to develop the simulation were (Figure 5):

1. Performed a needs assessment;
2. Determined clearly what to measure;
3. Generated a scenario for simulation;
4. Determined a simulation format;
5. Performed an iterative review by experts;
6. Established inclusion of scenario items;
7. Administered the simulation to a sample of subjects.

1) **Performed a Needs Assessment**

Anecdotal evidence and a thorough review of the literature (see Chapter Two) have
revealed the need for ACP communication education among RNs. Existing simulations focus on
symptom management and the actively dying patient, with limited focus on communication
(Betcher, 2010; Doyle, et al., 2011; Fabro et al., 2014; Grabow, 2017; Little & Bolick, 2014).
None specifically address ACP discussions early in a patient’s serious illness diagnosis. Outcome data have revealed that RN's are uncomfortable having ACP conversations and lack the knowledge to initiate and continue ACP discussions (Anderson et al., 2018; Dixon & Knapp, 2018). Communication simulations have shown improvements in knowledge, attitudes, and self-efficacy among RNs, and simulation educators are in search of innovative simulations (Jeffries, 2015; MacLean et al., 2017). Therefore, a new simulation in ACP communication for RNs was needed (Betcher, 2010; Izumi, 2017).

2) Determined Clearly What to Measure

The INACSL Standards state that the structure and format of a simulation should be based on a theory (INACSL Standards Committee, 2016d). DeVellis also reiterates that the development of any scale should be well-grounded in substantive theories related to the phenomenon (DeVellis, 2016). The theoretical framework developed specifically for this study (Figure 1) postulates that RNs who undergo this simulation will have increased self-efficacy and knowledge and changed attitudes. This, in turn, would lead to enhanced ACP conversations, and empower RNs to have more ACP conversations with patients (Jeffries, 2015). Once the theoretical framework was established, it provided the foundation to create the scenario, develop the pre-brief and debrief scripts, and connect objectives to outcome measurements.

Broad and simulation-specific objectives were developed based on the INACSL Standards of Outcomes and Objectives. Objectives are tools to aid the achievement of simulation-based outcomes, and broad and specific objectives together provide a plan for the design of a simulation-based experience. Broad objectives reflect the purpose of the simulation (INASCL Standards Committee, 2016b). For CHATT, the NLN Simulation Design Template
supplied broad objectives that constituted essential skills in nursing practice: a) practice standard precautions; b) employ strategies to reduce risk of harm to the patient; c) perform priority nursing actions based on assessment and clinical data; d) reassess/monitor patient status following nursing interventions; e) communicate with patient and family in a manner that illustrates caring, reflects cultural awareness, and addresses psychosocial needs; f) communicate appropriately with other health care team members in a timely, organized, patient-specific manner; g) make clinical judgments and decisions that are evidence-based and practiced within a nursing scope of practice; and h) demonstrate knowledge of legal and ethical obligations (Jeffries, 2015; National League of Nursing, 2019).

Specific objectives of the simulation are related to participant performance measures. These measures must be specific, measurable, attainable, realistic, and time-phased (INACSL Standards Committee, 2016b). In CHATT, specific objectives included: a) ask permission and elicit the patient’s and family member’s understanding of the patient’s condition; b) engage the patient and family in a goals of care conversation; c) perform an ACP conversation; d) explain advanced directives and the reason initiation of this conversation is important; and e) guide them through this conversation in a compassionate manner. These objectives were measurable because the participant either performed the objective or did not during the simulation. They were realistic and attainable because the scenario was derived from an actual patient case and the tasks were within the scope of nursing practice. The time to complete the objectives was the duration of the simulation. These objectives directed the design, development, and the approach of the CHATT simulation (INACSL Standards Committee, 2016b).

Another important aspect to determine the achievement of outcome measurements is the selection of modality to conduct the simulation. Simulation modalities include computer-based
simulation, SP, simulated clinical immersion, and procedural simulation. The modality provides a platform for the simulation experience (INACSL Standards Committee, 2016d). Previous ACP communication studies utilized SPs because they are effective in delivering real-time feedback to participants and are better suited for simulations involving communication (Betcher, 2010; Chan et al., 2016). Participants have found that working with an SP also enables conversations that are more natural and mimic real-life experiences (Bosse et al., 2012; Jeffries, 2015).

The next step is generating a scenario for the simulation. The scenario was created with a specific start and endpoint, and each section of the scenario was marked by minute increments as per INACSL Standards (INACSL Standards Committee, 2016d).

3) Generated a Scenario for Simulation

The fourth criterion of the INACSL Standards is the creation of a scenario to provide the context for the simulation-based experience. The scenario should include a backstory to provide a realistic starting point and have progression and cues in response to the participant’s actions. The scenario also needs specific time frames, a script for consistency and standardization, and identification of critical actions to achieve scenario objectives (INACSL Standards Committee, 2016d). The scenario utilized a case study from the study site’s palliative care team and information from Conversations in Palliative Care: Questions and Answers with the Experts by the HPNA (Panke & Coyne, 2011). Members from the palliative care team included an APRN, a licensed medical social worker, a chaplain, and the director. After the researcher gave a brief description of the purpose of the simulation, the group described a common palliative care patient along with barriers and facilitators to ACP conversations (INACSL Standards Committee, 2016e). From this discussion, a case was selected to mirror a typical patient/family
situation. Also, the group determined that the scenario should consist of medication teaching, education on AD, and the initiation of ACP. The book, *Conversations in Palliative Care: Questions and Answers with the Experts* (Panke & Coyne, 2011), contained information on how to answer difficult conversations related to palliative care and ACP. Questions from this book were used for the SPs scripts to direct participants in the simulation scenario and cue them to the next task in the simulation.

The NLN Simulation Design Template (Appendix K) organized the structure and flow of the simulation. The template allowed for the scenario to evolve like a story, with a beginning, middle, and end (Jeffries, 2015). Jeffries recommends writing scenarios a few times to ensure constructs and objectives are being addressed adequately. Similarly, in scale development, DeVellis suggests developing a large pool of items that could potentially be a part of the instrument and then eliminating those that are not the most appropriate assessment of a construct (DeVellis, 2016). For this simulation, multiple scenarios were constructed. Some included patients with different illnesses, patients in specific age groups, and variations in environment and settings. After further discussion with the study site’s palliative care team, it was determined that the scenario most reflective of a patient situation at the study site was an elderly woman with Chronic Obstructive Pulmonary Disease (COPD) with an anxious family member.

4) **Determined the simulation format**

In addition to the simulation scenario, scripts for the SPs, questions, pre-brief and debrief guidelines and questions were developed.

**Simulation Scenario.** The NLN Simulation Design Template (Appendix K) facilitated the creation of an organized simulation. The use of a template ensured that critical elements of
the simulation were not excluded. The template was structured with descriptions of: a) the patient; b) the learning skills and objectives; c) the setting/environment; d) the equipment/supplies needed; e) the roles of SP and participants; f) pre-briefing; g) report; h) the scenario progression outline; and i) debriefing. The NLN template contains distinct sections that constitute a beginning, a middle, and an end, which is parallel to Jeffries’s recommendation to write “a story” when creating a scenario (Jeffries, 2015). The beginning of the CHATT simulation scenario has a brief description of the patient’s demographics, as well as the patient’s history and physical. The patient, modeled after an actual case cared for by the site’s palliative care team, was Jane Franklin, a 77-year-old woman who arrived at the emergency department with altered mental status and unresponsiveness. She arrived from a skilled nursing facility (SNF) after her oxygen saturation dropped to the low 80s. As a result, she became lethargic and less responsive. The SNF staff sent her to the emergency department, where her oxygen saturation improved after aggressive interventions. After a few days in the intensive care unit, she was transferred to a medical-surgical floor with improved oxygen saturation measurements and increased alertness.

The next part of the scenario was a description of the setting and the roles of the SPs. The setting consisted of a hospital room in a medical-surgical acute care unit. To ensure accuracy, the patient had an ID band, oxygen tubing, table with a water pitcher and tissues, a chair for the family member, an additional chair by the bed, and a simulated television producing noise. The roles, mentioned previously, consisted of two SPs. One was Jane, the patient, and the other was Emily, the daughter.

The next section, the scenario progression outline, described the timing for each section of the scenario. Jeffries refers to this portion as the middle of the story, where the learner works
through uncertainty in the situation (Jeffries, 2015). Each section was scripted to ensure consistency because variations from scripted dialogue can result in distractions, interfere with objectives, and affect the validity of the scenario (INACSL Standards Committee, 2016d). In addition, a cue was scripted for each section of the simulation scenario to keep learners focused on the objectives (INACSL Standards Committee, 2016b). From minutes zero to three, the learner engaged with the SPs and discussed the patient’s use of morphine. The patient, Jane, was scripted to calmly engage in discussion while the family member, Emily, interrupts and becomes distraught during the conversation. Through this first section of the scenario, the learner was expected to introduce themselves, recognize the distress between the patient and daughter, sit at eye level with patient and daughter, turn off the television, and provide education about morphine use. To aid the learner, the patient cues with the question, “will this morphine make me die?” The first three minutes also included auditory and visual diversions, such as noise from the television and the anxious family member. The chair located next to the bed was a prompt for the learner to sit at eye-level with the patient. From minutes three to six, Jane talked about a palliative care consult and asked clarifying questions. The learner’s expected intervention was to provide information on AD and clarify the differences between documents. In this section, the scripted cue from Jane was confusion about ADs and the statement “...something about a DNW…or something and a will...oh and that I had to pick someone to answer questions for me.” The final section, allotted minutes six to 10, focused on Emily, who was panicked about the palliative care consult and worried about the patient’s prognosis. At this point, the learner is expected to initiate a discussion on ACP. After that, Jane talked about her wishes, and Emily acknowledged her mother’s feelings. This last section is the ending of the story, where the learner processes the outcomes of their engagement (Jeffries, 2015). After the scenario
progression outline, the last section of the simulation template contains a brief outline of the debrief. Specific descriptions of scripts and outlines for the debrief are detailed below.

The pre-brief script, based on INACSL Standards, consisted of an introduction to the simulation and purpose of the study, expectations of the participants, roles of the SP and participants, time allotment of the simulation, report on the patient, and explanation of the objectives.

**Pre-brief.** The pre-brief script (Appendix C) was developed to introduce the purpose of the study and provide a description of the simulation. A video, created by the site’s simulation laboratory director, was embedded into the pre-brief script, which oriented the participants to details of the site’s simulation laboratory. The concepts of basic assumption, confidentiality, fiction contract, and psychological safety were explained next. The basic assumption was that all the participants were voluntarily enrolled in the study, were going to do their best, and had a willingness to learn. Participants were reassured that potential mistakes made during the simulation were learning opportunities, and they always had the opportunity for clarification or questions at any point during the simulation. A description of methods to ensure confidentiality was given. Participants were told that outcomes, performances, and discussions would be kept within the forum of the group. The concept of a fiction contract was explained, which is an agreement between the facilitator and the participant that the participant will immerse themselves fully in a realistic environment. In this fiction contract, the facilitator also commits to help participants achieve the objectives of the simulation. Psychological safety was addressed next. Participants were told that the simulation was a safe environment to practice skills, and excess criticism would not be tolerated (INACSL Standards Committee, 2016c). The logistics of participation were explained as well including the roles of the learner and the observers, the
length of the simulation which was 10 minutes, and objectives. For the learner, one to two participants were asked to volunteer; those groups with no volunteers were randomly selected. The pre-brief also had report on the patient which was relayed to the group. The learner was informed that the SPs have specific scripts (discussed later), and could only answer specific questions. The facilitator indicated when the simulation started and ended, and led the group in a debrief to discuss their experience (INACSL Standards Committee, 2016a, 2016d).

**Debrief.** INACSL Standards indicate that all simulation-based experiences should include a planned debriefing session aimed to improve future performance. During the debriefing, participants are able to associate experiences with reflection, which results in learning (INACSL Standards Committee, 2016a). Rudolph et al. (2006) stated that reflection is the conscious consideration of the meaning of an action. This includes the integration of participant’s knowledge, skills, and attitudes with pre-existing knowledge. Debriefing in simulation enhances participants’ self-efficacy and self-awareness because it promotes the transfer of knowledge, skills, and attitudes to patient care and its relevance to practice (INACSL Standards Committee, 2016a).

Debriefing should be based on a theoretical framework and align with the objectives of the simulation (INACSL Standards Committee, 2016b). The framework used in this simulation study was Promoting Excellence and Reflective Learning in Simulation (PEARLS) by Eppich and Cheng (2015). The goals of this framework were to encourage participants’ self-assessment and revisit objectives, promote reflection, and examine critical aspects of the simulation activity through discussion (Eppich & Cheng, 2015). The PEARLS debriefing script sets the stage for debriefing, organizes the debriefing structure, and creates questions to empower participants to share their perspectives honestly. The organization of the debriefing includes: a) a discussion of
the initial participant reactions, b) a description of the simulation scenario; c) an analysis of positive areas and areas in need of improvement; and d) a summary of lessons learned (Appendix L). The reaction phase begins with open-ended questions that allow participants to express their initial thoughts and feelings. The description phase summarizes the key events of the scenario to ensure that all participants agree. In the analysis phase, Eppich and Cheng emphasize the need for an organized discussion, but one that allows flexibility. The Plus (+)/Delta (Δ) method was used for this simulation, which identifies what went well in the simulation (+), and identifies opportunities for improvement (Δ) (Huba & Freed, 2000). This method prompts the discussion of strengths and weaknesses with open-ended discussion prompts. It also enables a discussion about opportunities rather than a criticism of the learner’s performance. In the summary phase, the facilitator and participants discuss enablers and barriers to achieve change in practice. In this section of the debrief, the facilitator can provide additional resources and strategies (Eppich & Cheng, 2015).

The debrief script developed for the CHATT simulation followed the PEARLS framework. It divided the discussion into five sections. In setting the scene, a reaction to the simulation experience was explored. Participants were encouraged to discuss their feelings and their initial thoughts on the experience. Then participants were asked to describe the parts of the simulation scenario, to ensure everyone interpreted the same information, and clarify facts. Next, the facilitator used the plus/delta method to analyze effective parts of the scenario and areas that could be improved. The participants were encouraged to bring their personal experiences into the discussion. The participants and the facilitator brought the discussion to broader implications of ACP conversations within the health system and with their patients (Appendix D). Finally, the
last part of the debrief was a summary of takeaways and a brief overview of resources available to assist with ACP conversations (Appendix E).

Physical, conceptual, and psychological fidelity need to be addressed in a simulation to establish realism and frame a scenario. Physical fidelity is how real the physical content of the simulation-based activity reflects the actual environment. In the simulation, physical fidelity was addressed with the room where the actual simulation occurred. The room was set up to mirror a medical-surgical room in the hospital and contained a hospital bed, bedside table, pitcher and water, and wall-mounted oxygen flowmeter. A portable television was available to create environmental noise. The patient, Jane, wore a hospital gown and grey wig, had an ID bracelet, and an oxygen nasal cannula setup. The SPs were instructed on their general appearance and affect during their training (see SP Training). Conceptual fidelity ensured that elements of the scenarios related to each other and were logical. This was determined by an expert panel which will be discussed in further detail in the next section. A practice run-through was conducted prior to the implementation of the simulation, which also confirmed conceptual fidelity. Psychological fidelity mimics the clinical environment as much as possible to provide realistic settings. It works synergistically with physical and conceptual fidelity to ensure an authentic simulation-based experience (INACSL Standards Committee, 2016d). In this simulation, the appearance and interaction of the patient and family member contributed to psychological fidelity, as well as the environment and flow of conversation.

5) Performed an Iterative Review by Experts

To ensure content validity, a review of each section of the simulation was performed by content experts to determine the relevancy of sections to a construct. A review by experts is vital
to confirm or invalidate a phenomenon of interest (INACSL Standards Committee, 2016b). The review incorporated how relevant each section of CHATT was to what was intended to be measured, the clarity and conciseness of each section, and provided the opportunity for feedback on omitted information (DeVellis, 2016). Experts selected for the review were instructed to make sure all essential elements were present (Jeffries, 2015). Experts were chosen because of their experience in hospice and palliative care and simulation. Per Lynn’s method, three to six content experts are suggested and were selected based on the following: a) have an interest in the project; and b) have at least five years of experience in ACP and are certified in hospice and/or palliative care and/or are in a leadership position in hospice and/or palliative care; or c) have at least five years of simulation development and implementation experience and/or are certified in healthcare simulation or are in a leadership position in simulation (Lynn, 1986). The experts were a) the director of the outpatient palliative care program at a major cancer center; b) the director of hospice homecare at the study site; and c) the director of simulation-based education at a major university. These experts provided a holistic viewpoint on simulation development based on simulation standards and ACP content expertise.

The expert panel utilized the Lynn method for content validity (Appendix M). In the Lynn method, a four-point ordinal scale is utilized to evaluate each section of the simulation. The experts have the option of answering 1-not relevant, 2-unable to assess relevance without item revision, 3-relevant but need minor alteration, and 4-very relevant and succinct with an opportunity to comment. There were 11 sections to evaluate in the simulation scenario, six sections in the pre-brief, and five in the debrief.

6) Established Inclusion of Scenario Items
Calculation of the content validity index (CVI) consisted of the number of experts giving a rating of 3 or 4 divided by the total number of experts. Lynn recommends that each item’s CVI is at least 0.78. An overall CVI for the entire simulation is calculated as an average of each item’s CVI. All three experts who reviewed each section of the CHATT simulation scored each section a 3 or 4 in the simulation scenario, the pre-brief script and the debrief script. This resulted in a CVI of 1 for all sections. Content validity was achieved for all sections of the simulation (Lynn, 1986). Experts commented throughout each section as well and added suggestions to enhance specific points of the simulation. Specific examples of suggestions included the clarification of an objective, the elimination of a confusing line in an SP’s script, and the simplification of the patient’s history and physical. An example of the CVI by an expert is shown in Appendix N.

**Standardized Patients**

SPs were first introduced in 1963 in health education to allow students to convert knowledge from didactic lectures to active engagement with a patient (Rutherford-Hemming et al., 2019). They have been used widely among nurses and nursing students to support the development of health assessment competence, to enhance the complexity of scenarios, and develop therapeutic communication skills (Oh et al., 2015). SPs are individuals who have been trained to present an illness or scenario in a systematic, scripted manner. SPs can be patients, but also can play roles as family members, friends, healthcare professionals, or another role that enhances the simulation-based experience. If trained, SPs can also give feedback to participants on communication and interpersonal skills, and participate in the debrief (Jeffries, 2015).

**SP Recruitment**
One of the biggest challenges to SP recruitment is finding individuals who are specifically trained for simulation-based experiences. SPs need to be trained to accurately and repeatedly convey the history, symptoms, physical findings, and emotions of the learner. As a result, untrained community partners, volunteers, or support staff may be substituted in place of a trained SP (Keiser & Turkelson, 2017).

For the CHATT simulation study, the University of Connecticut Standardized Participant Program was contacted to recruit SPs. This program screens potential SPs and helps coordinate roles to study needs. None of the SPs from the program were recruited for the CHATT study because the study site was approximately one hour from the university, which posed transportation problems. Next, the study site’s hospice volunteers were recruited. They were chosen because they have had ACP conversations and personal experiences navigating these discussions. The director of the volunteer program sent out an email to all 112 volunteers in the hospice program explaining the purpose of the study, the role of the SPs, the time commitment, and the compensation provided. Three volunteers were able to participate as SPs, and contacted the facilitator. Two additional SPs were recruited outside of the study site. One was a university student who had experience with simulation, and the other was a volunteer who was not associated with the hospice program. A total of five SPs, four with experience in ACP conversations and one without, were used for the roles of Jane and Emily.

**SP Training**

Training the SPs was essential to ensure standardized practice and script adherence. The researcher met individually with each SP to discuss the purpose of the simulation, to practice the script and stage the roles. The SPs were expected to memorize the script and arrive early on the
day of the simulation to practice with the other SP in the room. The facilitator directed the two roles. Compensation was given to each SP for assisting in the simulation study.

In summary, the CHATT simulation was developed because there is a lack of standardized simulations in research. This simulation was created in an approach that is replicable, practical and has construct and content validity. A theoretical framework from the NLN Jeffries Simulation Theory and Bandura’s Self-Efficacy Theory, guidelines from DeVellis’s scale development, and standards form INACSL were the foundation for the formation of this simulation. Chapter Five will discuss how the simulation was implemented and the results of the pretest-posttest data.
Chapter 5: Results

This chapter will give an overview of the results of the implementation of the CHATT simulation among RN participants and the results of the pretest and posttest surveys. First, the chapter will describe the execution of the simulation. Then results from the external observer and the debriefings will be discussed. Finally, the results of the pretests and posttests will be reported, which include feasibility results, descriptive demographic information, and correlations between demographics and knowledge, attitudes, and self-efficacy.

Pre-Post Simulation Results

The purpose of the simulation was to pilot test a new simulation in advance care planning (ACP) among registered nurses (RNs), determine its feasibility, and assess changes in knowledge, attitudes, and self-efficacy. The following sections will discuss the results of the simulation as a pilot study, the evaluation of the simulation process, and outcomes of knowledge, attitudes, and self-efficacy among RNs.

Demographic Characteristics

Forty RNs were recruited into the study, and 36 completed all components of the study. Three of the four did not come to the simulation session, and the remaining participant did not finish the post-simulation surveys. A demographic profile is presented in Table 1. A typical RN participant was female (97%) between the ages of 18-44 (77%). Most were White (90%), identified as Catholic (42%), and considered themselves spiritual (70%). The majority had a bachelor’s in nursing (77%), and some (35%) had an additional degree in non-nursing education. The RNs years of experience in nursing varied with 0-1=35%, 1-5=25%, 6-10=2%, 11-15=10%,...
and 20+ years=20%. Most had none to one year of experience in hospice and/or palliative care (67%). Those that had prior training were trained in ACP by lecture (40%), conference (17%), or intervention (10%). The nurses were from various parts of the health system, which included the cancer center, medical-surgical units, the emergency department, the graduate nurse residency program, homecare, and hospice.

The nurses participated in the simulation in six groups. Group one had five participants, group two had six participants, group three had six, group four had four, group five had eight, and group six had seven. It is important to note that two of the six groups of RN participants (groups five and six) were graduate nurse residents who just completed their bachelor’s in nursing, passed the NCLEX, and were five months into the site’s graduate nurse residency program. The graduate nurses rotate on various units of the hospital for one year, which includes medical-surgical, telemetry, labor and delivery, orthopedic, and comfort care units. They are also supported by monthly seminars and feedback from preceptors. As part of their monthly seminar in October, they were offered the opportunity to participate in the CHATT simulation study. All fifteen of the nurse residents agreed. All of the nurse residents underwent the simulation in two groups of eight and seven the same day, and pre-post questionnaires were done on paper for ease of completion. The surveys were collected together; therefore, results are indicated as one group (labeled #5), instead of two separate groups. The simulation groups with the nurse residents showed that most were between the ages of 18-24 (Table 2), had less than one year of experience in nursing (Table 3), and less than one year of experience in hospice and palliative care (Table 4).

**Simulation Results**
The simulations took place on October 14, 16, 28, 29, and 30 in 2019. They were one hour in length, from 12-1 p.m. each day. The simulation technician and SPs arrived 15 minutes before each session to practice staging and rehearse their scripts. The simulation technician assured audio and video systems were functioning properly. In the simulation progression outline of the NLN Simulation Template (Appendix K), a portable television was supposed to be used as a distraction for the participant. When testing the audio, it interfered with the voices of the SPs and was removed from the simulation scenario.

**External Observer Results**

Based on notes from the external observer, the pre-brief and debrief were conducted in the same manner. The only difference was that two learners actively participated in the simulation from the nurse resident groups (see Limitations), compared to one learner in the remaining groups. The facilitator started the simulation with the pre-brief script, conducted the simulation scenario with the SPs, and ended with the debrief session as outlined using the PEARLS method.

**Debriefing & Nurse Residents**

The results of debriefing discussions among the nurse resident groups were different from the other simulation groups. The nurse resident groups required clarification and teaching about the simulation components. For example, in one session, a nurse resident participant asked why morphine was being given to the COPD patient, since it causes respiratory depression. The facilitator initiated a group discussion on the uses of morphine for chronically ill patients. Other topics discussed included techniques to navigate family conflict, and the initiation of ACP
without causing a sense of lost hope. With the other simulation groups, debrief topics incorporated nurses’ past experiences with ACP, techniques they have used to initiate and navigate difficult conversations, the importance of continuing ACP with patients, and finding resources to help assist with ACP.

**Feasibility of the CHATT Simulation**

The feasibility of the simulation study was evaluated with the Simulation Design Scale (SDS) and the Student Satisfaction and Self-Confidence in Learning (SCLS) Scale. The SDS evaluated the following design features: a) objectives/information; b) support; c) problem solving; d) feedback; and e) fidelity, and each was scored from 1=strongly disagree to 5=strongly agree. The SCLS measures the participant’s satisfaction with the simulation and their self-confidence in learning on the same 1-5 Likert scale. There were no correlations found between the SDS and SCLS and demographic characteristics. The two instruments correlated with each other (p<0.001), indicated a relationship between both instruments. Overall, the SDS mean score was 4.70 (SD 0.30) and the SCLS mean score was 4.62 (SD 0.43). The means for both scales were high, which is comparable to other studies that have indicated that participants scores at 4s and 5’s on the SDS and SCLS (Franklin et al., 2014; Unver et al., 2017; Zapko et al., 2018). One group averaged a mean score below 4 for one of the questions on the SDS, “My need for help was recognized” (mean score=3.80). In the SCLS, one question had mean scores lower than 4 in three groups, “It is the facilitator’s responsibility to tell me what I need to learn of the simulation activity content during class time” (mean score=3.40, 3.83, 3.87). Findings from other simulation studies have reported that this question has shown lower scoring compared to other
questions. Researchers believe it is because it is the only reverse-coded item and was the most difficult for respondents to endorse (Franklin et al., 2014; Zapko et al., 2018).

In further analysis, the mean scores for SDS and SCLS were separated for each simulation group as shown in Table 5. In the SDS, the scores for simulation groups 1-4 were between 4.78-4.88, however, the mean score was lower in the nurse resident group at 4.52 (SD 0.33). The SCLS showed a similar pattern. The scores for simulation groups 1-4 ranged 4.73-4.88 and the mean score for nurse residents was 4.39 (SD 0.56). Although all the scores were above 4.0, there was a notable difference in scores from nurse residents.

The mean scores for each question of the SDS and the SCSL were analyzed by simulation group and showed differences in nurse residents’ responses compared to the other groups. There were nine questions in the SDS (Table 6) and nine on the SCLS (Table 7) where the mean scores for nurse residents were below the other groups. For the SDS, the largest mean score difference between the nurse residents and the other simulation groups was the question “There was enough information provided at the beginning of the simulation to provide direction and encouragement.” The mean score for nurse residents was 4.07 (SD 1.0), and the other groups scored 5.00, 4.88, 5.00, and 5.00. For the SCLS, the question the nurse residents scored the lowest compared to the other groups was, “I am confident that I am developing the skills and obtaining the required knowledge from this simulation to perform necessary tasks in a clinical setting”. The mean score for nurse residents was 4.07 (SD 0.80), and the other groups scored 5.00, 4.82, 5.00, and 5.00.

Knowledge, Attitudes, and Self-Efficacy Outcomes
Mean scores for knowledge, attitudes, and self-efficacy all increased post-simulation for all participants (Table 8). Mean knowledge increased from 0.72 to 0.83 (p=0.002), attitudes from 4.44 to 4.86 (p<0.001), and self-efficacy from 3.49 to 4.95 (p<0.001). All the variables were significant and positively correlated with each other, indicating that knowledge, attitudes, and self-efficacy about ACP have a causal relationship (Table 9). Knowledge and attitudes had the greatest correlation (0.54, p=0.001), while knowledge and self-efficacy had the lowest (0.36, p=0.031). Attitudes and self-efficacy had a correlation of 0.48 (p=0.003).

**Pre-simulation and Demographic Results**

Pre-simulation mean scores for knowledge, attitudes, and self-efficacy in ACP had significant correlations with participant demographic characteristics of age, years of experience in nursing, and years of experience in hospice and palliative care (Table 10). Age correlated with mean knowledge (0.36, p=0.023) and mean attitude scores (0.49, p=0.001), but not with self-efficacy (0.23, p=0.162). Years of experience in nursing correlated with mean scores for attitudes (0.53, p=<0.001), and self-efficacy (0.36, p=0.022), but not with knowledge (-0.19, p=0.244). Further correlation analysis did yield significance between years of nursing experience and knowledge using Spearman Rho’s correlation coefficient resulting in 0.33 (p=0.36). Years of experience in hospice and palliative care correlated with knowledge (0.40, p=0.011) and attitudes (0.44, p=0.005), but not with self-efficacy (0.01, p=0.963). In assessing differences in mean scores from pre- to post-simulation, the only variable that correlated with demographic characteristics was attitudes with age (-0.37, p=0.028).

**Knowledge, Attitudes, and Self-Efficacy Pretest and Posttest Results**
Scatter plots showed associations between the pre-post differences and mean post-simulation scores in knowledge, attitudes, and self-efficacy. A positive correlation was found among participant scores in knowledge (Figure 6) and attitudes (Figure 7), meaning that as pre-post differences increased, the mean scores of the posttest increased. A negative correlation was found in self-efficacy; as the pre-post differences increased, the mean scores of the posttest decreased (Figure 8). This suggests that participants that started with high self-efficacy scores pre-simulation, stayed at high scores post-simulation. Those that started with low self-efficacy scores pre-simulation, improved their self-efficacy scores to match those who also had high self-efficacy scores.

**Demographics and Associations with Pretest and Posttest Results**

Associations between pre-post simulation scores for knowledge, attitudes and self-efficacy were found with demographic variables of age, years of experience in nursing, and years of experience in hospice and palliative care. Of these, the largest change among participants was with attitudes. Younger participants with lesser years of experience in nursing and in hospice and palliative care had a greater change in attitude between pre-and post-simulation (slopes=$0.07$-$0.11$). Changes were minimal in pretest and posttest differences for knowledge in relation to age, years of experience, and years of experience in hospice and palliative care (slope=$<0.02$). Participant’s differences in self-efficacy scores showed similar trends for age (slope=$0.01$), years of nursing experience (slope=$0.02$) and years of hospice and palliative care (slope=$0.03$).

**Grouping Effects and Results**
Finally, grouping effects were accounted for by using random-effects models. First paired t-test calculations were performed accounting for grouping effect. Mean pre-posttest correlations remained significant for knowledge (p=0.040), attitudes (p<0.001), and self-efficacy (p<0.001). The nurse residents were grouped together in data analysis because their surveys were collected simultaneously. It is unclear which survey data corresponds to which simulation group for the nurse residents. Due to this, to assess biases in group effects, a further calculation was performed grouping the extremes of their mean scores. For each variable – knowledge, attitudes, and self-efficacy – nurse residents that had high mean scores were put into a group of eight, those that had the lowest mean scores were put into a group of seven. The reason for this grouping was to emphasize the biases that may occur in groups. Mean pre-posttest correlations remained significant for attitudes (p<0.001) and self-efficacy (p<0.001). However, mean pre-posttest scores for knowledge were not significant (p=0.057). When examining knowledge outcomes, a difference was found with nurse residents. In the other groups, 17 participants’ knowledge scores in ACP increased, while two stayed the same and two decreased. Among nurse residents, five increased, five stayed the same, and five decreased.

Summary of Results

In summary, thirty-six RNs completed the simulation study. The simulation was found to be feasible based on positive evaluation scores from the SDS and SCLS. However, in further analysis of the groups, nurse residents had lower scores compared to the other groups. Significant increases were found in pretest and posttest test scores in knowledge, attitudes, and self-efficacy of all RNs, including nurse residents. All the variables showed correlations meaning there was a relationship between knowledge, attitudes, and self-efficacy. As one variable
changed, it affected the other two variables. The demographic variables that showed associations with knowledge, attitudes, and self-efficacy were of age, years of nursing experience, and years of hospice and palliative experience. Random effects models were used to analyze the effects of grouping. Mean changes in attitudes and self-efficacy remained significant, but when grouping the nurse residents into the most extreme scoring structure, changes in knowledge were not significant. The final chapter will discuss the implications of these results, limitations of the study, how CHATT can be used for clinical settings, and how this study contributes to research in ACP.
Chapter 6: Discussion, Implications, and Conclusions

Patients with serious illness are increasing in the U.S. and are estimated to double in the next 30 years. Conversations about planning for the future are imperative for these patients, and advance care planning (ACP) communication is essential to ensure the expression and documentation of a patient’s health care goals. It is the responsibility of all clinicians to initiate and continue these conversations. However, healthcare clinicians have expressed their difficulty in having these conversations due to a lack of knowledge and discomfort. Nurses advocate, educate and empower patients, and they also spend a considerable amount of time with them. They are positioned to initiate and discuss ACP with patients and families if provided with adequate training and education.

In response, this pilot study focused on the creation of a standardized simulation in ACP communication for RNs. The questions explored were: a) is a simulation in ACP communication feasible; and b) how does this simulation impact RNs’ knowledge, attitudes, and self-efficacy in ACP communication? A pilot study was conducted among 36 nurses using a quasi-experimental, one-group, pretest-posttest design to examine knowledge, attitudes, and self-efficacy changes of the RNs pre-to post-simulation. All three variables had increased scores from pre-to post-simulation, which indicated that the simulation was effective in increasing knowledge, changing attitudes positively, and improving self-efficacy in ACP communication among RNs. Significant correlations with these improvements were the demographic characteristics of age, years of experience in nursing, and years of experience in hospice and palliative care. Of interest was the difference between the graduate nurse residents, who had less than one year of experience in nursing, and other RNs that participated in the simulation. The graduate nurses had lower scores for knowledge, attitudes, and self-efficacy and satisfaction with the simulation experience.
This chapter will first present a discussion of the results of the CHATT simulation. The role of newer nurses and ACP communication will be discussed next. The chapter will conclude with limitations, implications for nursing practice, and suggestions for future studies.

**Study Summary**

Thirty-six nurses participated in this quasi-experimental pre-posttest study. Forty nurses were recruited, and 36 completed all parts of the study. The study consisted of the development of the ACP simulation through standardized guidelines from the International Nursing Association for Clinical Simulation and Learning (INACSL). Validity was achieved through construct validation which consisted of adherence to DeVellis’s steps in scale development and the construction of the simulation based on the NLN Jeffries & Self-Efficacy theoretical framework. Content validity was achieved through a review by experts, and the instruments were found to be reliable. After the simulation was developed and validated, it was administered to RN participants through a quasi-experimental one-group pre-posttest design. Six simulation sessions took place in October 2019 over a three-week period. The RN participants who completed the simulation showed increased knowledge, attitudes, and self-efficacy. The evaluations post-simulation confirmed the feasibility of the simulation. The largest variation in results was found among the scores and experiences of the graduate nurse resident groups who worked as RNs for less than one year.

**Discussion of Findings**
This section will describe findings that include the impact of the CHATT simulation on knowledge, attitudes, and self-efficacy, and the differences in scores among graduate nurse residents and other RNs.

**Feasibility of the CHATT Simulation**

The findings of this study support the feasibility of the CHATT simulation in its development, practicality, and implementation among RN participants. Scores from the Simulation Design Scale and the Student Satisfaction and Self-Confidence in Learning Scale reached above 4, on a 1-5 scale, for almost all questions. The questions with scores below 4 were the same questions that scored lower in other studies that used the instruments. Researchers believe that this is due to the wording and reverse-coding of the items, making them more difficult to answer (Franklin et al., 2014). The scores below 4 were minimal; only two of the 33 evaluation questions had mean scores below 4. The participants reported positively to the presence and features of the simulation design. They also reported a high level of satisfaction and self-confidence with the simulation experience. The group of nurse residents also approved of the simulation design and were satisfied with the simulation, but scored lower in both evaluation measures compared to all the other participants. This indicates that, compared to the other RN participants, nurse residents were dissatisfied with parts of the simulation design, and did not gain the same level of satisfaction or self-confidence with the experience.

Results of pre- to posttest scores have shown that the CHATT simulation was feasible. As stated previously, the debriefing is where most of participant learning occurs in simulation (Cheng et al., 2014; Sawyer et al., 2016). Changes in attitudes and self-efficacy are a result of the reflection and discussion that occurred during the debriefings. Knowledge scores were impacted
as well but not to the same extent. According to Jeffries, the purpose of debriefing is to understand what occurred in the simulation and discuss alternative actions and decisions (Jeffries, 2015). In this study, the debrief environment allowed nurses to assess the simulation situation and previous experiences, offer suggestions, and constructively debate.

**Debriefings**

Information from the external observer provided valuable information about the discussions during the debriefings. Those that had more experience with ACP conversations were more vocal during the discussions, but provided valuable information to those in the group that had less experience with ACP. The themes of *Conversations should be had by everyone, early* and *How to have an ACP conversation* provided a strong foundation for the groups to discuss methods to have ACP conversations, which included techniques from experience and what they learned from the simulation. For example, some of the nurses gave examples of how they would start a conversation with a patient with simple phrases, such as “what is your understanding of what is going on”. Making ACP discussions simple was key in addressing the other nurses’ discomfort with these conversations. A nurse from the emergency department stated that she generally does not have ACP conversations, but after the simulation stated that she understood why these discussions should start in the emergency department.

In these discussions, barriers such as time, physicians, and patients were also addressed, which allowed the nurses to reflect on the obstacles they faced on a day-to-day basis that prevented them from having conversations. They also expressed their discomfort with ACP. A nurse from the study site’s cancer center was the active learner for her group. She met all the objectives for the simulation, and during the debrief stated that she was not completely
comfortable having goals of care conversations. After a facilitated discussion about her and the observer’s experience with the simulation, the observers gave positive feedback, which helped the learner accept that she performed well. Often, clinicians believe that ACP conversations are lengthy discussions that establish a complete plan for EOL. However, often they are simple conversations that initiate thoughts about planning (Prince-Paul & DiFranco, 2017).

Simulation Process & Implementation

The findings of this study showed that participants believed the simulation was feasible and overall, participants were satisfied with the simulation design and process. The recruitment, implementation, and follow-up of the simulation were straightforward with few disruptions. In recruitment efforts, there were six potential participants that could not attend any of the simulation sessions which could be reflective of the noontime simulation sessions. A more varied selection of time may have accommodated nurses that worked traditional shifts. Overall, the simulation sessions occurred when planned. Four participants did not show up as scheduled for the simulation. However, there was no disruption to the groups. Each simulation was conducted with the assistance of the simulation technician who coordinated the audiovisual components. The only change we made to the script was removing the television because the noise was interfering with the live stream video. SP coordination and timing proved to be a challenge as many were not available for all the sessions. Recruitment initially began with the site’s hospice program volunteers but had to be expanded to outside volunteers. Once that was established, training and coordination were manageable. Finally, the simulation’s length of time was taken into consideration due to the demands of survey questions, simulation attendance, and follow-up. The incentive of a $50 Amazon gift card was appealing to many of the participants, but an added
incentive was given to the RNs through the study site. The site has an incentive program called ATTAIN for RNs that encourages professional development, conference attendance, participation in research, continuing education, and opportunities in leadership activities. Each activity earns points for different levels that are associated with pay increases. The RNs received credit for their ATTAIN for participating in the CHATT study.

**Changes in Knowledge, Attitudes, and Self-Efficacy**

The findings of this study support the effectiveness of the CHATT simulation. RNs who completed the CHATT simulation showed a significant increase in knowledge, attitudes, and self-efficacy in ACP.

**ACP Knowledge**

For questions on ACP knowledge, the average percent of correct answers pre-simulation was 64%. This knowledge score is slightly lower than the reported mean of 67% for the 300 nurses who participated in Zhou et al.’s (2010) reliability and validity study of the instrument. After the simulation, the score increased to 73%. Zhou et al. also reported the number of nurses who achieved a score greater than 50%. In Zhou’s study, 88% of participants achieved more than 50%; in the CHATT study, 73% of participants achieved these scores pre-simulation and 82% post-simulation. Although nurses in the CHATT study achieved a higher percentage of correct answers, they had a lower percentage of nurses who achieved a score greater than 50%, compared to the study by Zhou et al. This suggests that nurses overall improved ACP knowledge from pre-to post-simulation, but still had a low percentage of correct answers. One factor in this result is that nurses, as indicated in their demographic data, had none to limited training in ACP,
and likely guessed the answers pre-simulation. This is also confirmed with a low Cronbach’s alpha of 0.30 for the knowledge portion of the instrument. Participants scored better in ACP knowledge post-simulation. However, the amount of change from pre-to posttest was small. The instrument’s Cronbach’s alpha increased but still was low at 0.64. This may be due to the structure of debriefing, which elicited discussions about the simulation and nurses’ experiences, and was not explicitly about answering the knowledge questions.

Mean knowledge scores pre- to posttest were significant. The group that varied the greatest in ACP knowledge outcomes was the nurse residents. In their group, one-third had increased scores post-simulation, one-third had no change, and one-third had lower post-simulation scores. This suggests that the simulation was not effective in improving nurse residents’ knowledge in ACP communication if two-thirds had no knowledge gains or became even more confused about ACP. Demographically, the nurse residents were younger, with less experience in nursing, and limited experience with hospice and palliative care. Further analysis showed that nurse residents had decreased knowledge scores compared to other RN participant in three questions: a) The Patient Self-Determination Act mandates that all competent individuals sign an advance directive; b) most Americans have implemented an advance directive; c) a notarized advance directive from one state is legal in all other states. The topic of advance directives (AD) was discussed during the debriefings; however, these specific questions were not explicitly answered. The debrief sessions were structured conversations that evolved from the simulation experience, and discussion surrounding AD was not specific to the knowledge questions. AD are difficult to understand and conceptualize if a nurse has not had exposure to the documents or the process.
**Advance Directives.** Requirements for advance directives vary state-by-state in the U.S. and are generally lengthy documents with complex language. Although nurses may routinely ask patients about AD, they may not understand what constitutes documentation of AD or the legal aspects of AD. Surveys among RNs found that nurses had knowledge about AD, but scored low on questions related to the Patient Self-Determination Act, legal knowledge, and specific state law. One study found that 77% of nurses from medical-surgical, rehabilitation oncology, intensive care unit, and recovery units scored poorly on knowledge questions related to AD implementation. In that same study, 20% of patients agreed that nurses did not spend enough time discussing ADs (Coffey et al., 2016). A study measuring RNs’ knowledge in AD found correlations with age, gender, years of experience in nursing, and type of practice area. Older, female nurses with greater years of experience scored higher on AD knowledge compared to other nurses. This finding parallels this study, with age and years of experience in nursing correlating with increased knowledge scores. The nurse residents may not have the experience or exposure to AD to understand its relation to state law, decision-making, and implementation, making it difficult to answer the questions mentioned above.

Additionally, the lower percentage of correct answers of the nurse residents, compared to other participants, may have been due to the teaching style of the facilitator, or the learning style of the nurse resident. New graduate nurses may still learn similarly to nursing students, who tend to be concrete thinkers and linear thinkers oriented towards facts (Gonzales et al., 2017). Also, as mentioned in the previous chapter, the structure of the debrief sessions differed with the nurse residents compared to the other simulation group. Discussions with the nurse residents tended to concentrate on the clarification of simulation components and teaching about ACP concepts,
which was more instructional. The other groups of nurses discussed past experiences with ACP, patient cases, clarification of techniques, and resources adoption which was more reflective.

**ACP Attitudes**

As seen with scores for ACP knowledge, nurse residents had different results compared with nurses in other groups. Significant correlations were found between age, years of experience in nursing, and years of experience in hospice and palliative care and attitudes towards ACP. Younger participants, with less experience in nursing and hospice and palliative care, had the largest change in attitude between pre-and post-simulation.

The mean pre-simulation scores were 3.44 among all the nurses, and increased to 4.86. In Zhou’s study, scores were reverse coded, and the mean for attitudes in ACP was 1.91 (Zhou et al., 2010). After reverse coding, the average was calculated at 3.09. Those that participated in the CHATT study started with more positive attitudes compared with Zhou’s study, but still showed a significant increase from pre-simulation to post-simulation. Post-simulation, participant’s attitudes about ACP improved for 13 of the 16 questions. Three questions that did not improve participant’s attitudes towards ACP included: a) ACP destroys a patient’s sense of hope; b) I feel comfortable discussing issues related to death and dying with patients and families; and c) I feel confident in my ability to communicate “bad news”. Hope, comfort, and confidence were discussed during the debriefings by the nurses. The nurses expressed that they would not necessarily initiate a conversation with patients and families if their course of treatment was positive. They would only consider it once it was certain that there were no other treatment options. Although not explicitly stated, the nurses feared that they would lose a patient’s sense of hope, especially if treatments are going well. Previous studies have indicated that nurses
expressed discomfort addressing ACP because they feared their patients would lose hope (AlFayyad et al., 2019; Beck et al., 2017; Rietze & Stajduhar, 2015).

**Hope Related to ACP.** Hope related to ACP has been researched extensively due to the phenomena’s complexity. Hope, for a seriously ill patient, is generally viewed as positive. Hope is also associated with “a cure”. Therefore, when ACP is suggested, there is a perception that “a cure” is no longer an option and death is imminent. This view is common among patients, families, and healthcare professionals (Mattes & Sloane, 2015). This view can compromise decision-making, result in negative emotional responses, and lead to a patient’s denial about expectations. Healthcare providers have expressed their concern about the disruption of hope, which has resulted in the avoidance of ACP conversations. Clinicians struggle with the balance between the maintenance of hope and providing factual, realistic information. Robinson (2012) examined hope in ACP among patients with advanced lung cancer and their families, and found that hope for a cure was consistent with values, beliefs, and past experiences. Patients chose to hope for a cure despite their acknowledgment of contradictory information from healthcare providers (Robinson, 2012). Mattes & Sloane (2015) questioned physicians’ training and the ability to have ACP conversations and reframe the meaning of hope. The researchers found that reframing hope to focus on fulfilling life goals instead of fixating on a cure resulted in improved goals of care discussions.

**Confidence and Comfort.** Nurses also scored lower in the two questions related to confidence and comfort: I feel comfortable discussing issues related to death and dying with patients and families, and I feel confident in my ability to communicate “bad news”. Participant’s mean scores decreased post-simulation. In comfort related to death and dying discussions, 58% of participants rated the question with strongly agree or agree pre-simulation.
After the simulation, answers dropped to 28% and increased for strongly disagree (55%). Specifically, mean attitude scores of nurse residents worsened, while three of the other four groups improved. Among the nurse residents, nine of the 15 stated they strongly agreed or agreed that they were comfortable having discussion about death and dying pre-simulation; post-simulation, only two stated agreement.

Professional confidence and comfort are attributes necessary for nurses to provide quality care to patients. Nursing education programs provide the foundation. However, many new graduate nurses report a disconnect between clinical knowledge in nursing school and application to nursing practice (Ortiz, 2016). A qualitative study among new graduate nurses showed that confidence fluctuated in their first year of nursing, and was situation-dependent. One area where new nurses expressed difficulty was communication with patients (Ortiz, 2016). In addition, the CHATT simulation was a one-time scenario that new nurses may not have encountered. These nurses may have had lectures, case studies or learned anecdotally about communication with seriously ill patients and ACP. Therefore, when they answered questions pre-simulation, they had higher mean scores. After the completion of the simulation, these new nurses may have realized that they are not equipped to handle these often-difficult conversations. A singular simulation may not be effective for new nurses. Instead, they may need a combination of multiple methods to facilitate communication strategies. Rhodes et al. (2016) found that knowledge and confidence increased for nurse residents who had a combination of clinical training and several simulations over 18 months (Rhodes et al., 2016). The CHATT simulation may not have been adequate to change attitudes about conversations surrounding death and dying and communication about poor prognosis.

**ACP Self-Efficacy**
Mean self-efficacy scores for nurses increased from 3.49 to 4.95 pre- to post-simulation, and years of experience were significantly correlated with self-efficacy. As years of experience increased, self-efficacy in ACP also increased. Questions with the largest change in self-efficacy scores among participants are listed in Table 11. There were not any noteworthy changes among simulation groups, including nurse residents.

According to Reid et al., (2015) scores greater than 3.0 indicated a high perceived caring efficacy. In psychometric testing of the Caring Efficacy Scale (CES), mean scores for 639 RNs were 5.07 (range 3.47-6.0). Nurses that participated in the CHATT study had overall lower self-efficacy scores compared with Reid’s study. However, Reid’s sample had a greater number of experienced nurses. The sample consisted of RNs between the ages of 40-50 who had worked as RNs for 21-30 years (Reid et al., 2015). Betcher (2010) examined nurses’ self-efficacy pre- and post-simulation in palliative care communication with the CES. She found an overall 11% increase in pre- and post-intervention scores. Increases in self-efficacy among participants in CHATT were comparable to Betcher’s simulation study. Examples of individual questions were reported and compared to the CHATT study (Table 2). Cronin et al. (2017) reported results of oncology nurses’ self-efficacy scores with the CES after undergoing the COMFORT communication curriculum. The COMFORT curriculum was designed to provide education and training in communication for EOL and palliative care. The mean scores did show improvement in nurses’ perception of being able to deliver competent and effective care, but were not significant.

The correlation between years of experience and self-efficacy in ACP has been documented in the literature. Parekh de Campos (2020) examined nurses’ comfort in palliative care, and found that nurses are comfortable with hospice and palliative care after approximately
five years of experience (Parekh de Campos, 2020). Moir and others (2015) found that ACP discussions with patients and families had a significant association with years of experience. Nurses with less than two years of experience had the lowest scores, while nurses with greater than ten years of experience frequently self-reported a moderate to high comfort level (Moir et al., 2015). A qualitative study of oncology nurses found that the concept of experience transcended all themes, and was essential for the nurses’ ability to optimize communication in palliative care (Montgomery et al., 2017). The CARES tool, developed to assist nurses to link evidence-based knowledge to clinical practice in end-of-life care, was found to be an essential resource for new nurses due to their inexperience caring for dying patients (Stacy et al., 2019).

As shown with previous studies, and the CHATT simulation, years of experience are a dominant factor that affects knowledge, attitudes, and self-efficacy among nurses in ACP.

**Limitations**

The limitations of this study included the quasi-experimental design; the sample and site; analysis of roles and characteristics within each simulation group; and resources given to the RN participants. The study lacked randomization, which can make the results less conclusive. For this study randomization was not possible due to recruitment limitations. The use of a one-group design restricted the generalizability of the results due to the absence of a control group. Another factor was the distribution of the questionnaires to assess knowledge, attitudes, and self-efficacy among participants. The questionnaires were completed anywhere from 0-21 days before the simulation and 0-14 days after the simulation. This may have resulted in threats to internal validity such as history, which is an external factor that affects outcomes other than the
intervention; or testing, which is the influence of pretests on posttests due to the short period of time between completions.

Although the sample was diverse, consisting of RNs from different departments of the health system, more than one-third of the sample consisted of graduate nurse residents. These nurses graduated from nursing programs five months prior, and most showed lower mean scores for knowledge, attitudes, and self-efficacy, and satisfaction with the simulation. The complexity of ACP communication may not have been appropriate for this group. In addition, the simulation was adjusted for this group. In agreement with the clinical instructor of the study site, in an effort to promote psychological safety and reduce anxiety, two participants actively participated in the simulation instead of one. This may have altered the outcomes and results of the simulation.

Within each simulation group, participants’ simulation experience was not explored. This data could have provided valuable information on outcome measures based on knowledge or proficiencies with simulation. Analysis within groups on participant roles, as an observer or learner, was also not performed, which could have provided information on interactions within groups and its effect on outcomes. Another limitation is the lack of analysis and comparison of the groups that had volunteers to play the role of active participant, and the groups who had active participants chosen by the facilitator, and two active participants in the scenario. The groups with the nurse residents had two active participants chosen by the facilitator to encourage psychological safety. However, this may have impacted outcome scores as well.

Finally, another limitation may be the resources provided at the end of the debriefing sessions. Five resources: a) Center to Advance Palliative Care (CAPC) Modules; b) VitalTalk Mobile application derived from the VitalTalk program; c) Health Care Decisions Guide (ADs) prepared by the Connecticut Department of Public Health and Department of Social Services; d)
the Serious Illness Conversation Guide created by Ariadne Labs; and e) Medical Orders for Life-Sustaining Treatment were discussed with all participants in the summary phase. The PEARLS method stated that in this section of the debrief, the facilitator could provide additional resources and strategies (Eppich & Cheng, 2015). However, these resources may impact the knowledge scores of participants because they were given at the end of the debrief as tools to promote ACP conversations. Information in these tools, rather than the simulation experience, may have influenced knowledge scores post-simulation. There are risks and benefits to using these resources. The risks included the impact of knowledge scores on post-simulation knowledge scores. It is difficult to discern if the increase in knowledge was due to the simulation process or the resources. The benefits included empowering the nurses with tools to have ACP conversations and information on AD in Connecticut. Pre-simulation knowledge scores and the low Cronbach’s alpha of the knowledge pretest showed that nurses need more information on ACP and AD, and many “guessed” when answering the knowledge questions. Therefore, although the resources at the end of the debrief may have influenced the results of the posttest, the benefit is that the nurses have the tools and information needed for ACP conversations.

Implications for Nursing Practice

Years of experience was a significant factor to change knowledge, attitudes, and self-efficacy in regard to ACP communication for this simulation. Younger, inexperienced nurses had positive outcomes, but not to the extent of other practicing nurses, which suggests that the simulation needs to be tailored for newer nurses, or alternative education modalities need to be explored for novice nurses. In addition, more training and education in ACP communication are needed for newer nurses through nurse residency programs, staff development, and mentorship.
ACP communication education also needs to be addressed in undergraduate education to better prepare new graduate nurses.

**Novice-to-Expert Theory**

ACP conversations require the development of knowledge, comfort, and experience in communication. According to Benner’s From Novice to Expert Theory, nurses develop skills and comfort with patient care over time from a foundation of education and personal experience. As nurses gain skills, they pass through five levels of ability: novice, advanced beginner, competent, proficient, and expert. Through these five levels, nurses transition from the use of abstract principles to the application of past, concrete experiences. In addition, the nurses’ views change from trying to connect parts of a situation to gaining a holistic perspective. Benner (1984) stated that novices and advanced beginners have limited acceptance of patient situations because of their novelty and unfamiliarity. In conducting ACP conversations, novice and advanced beginner nurses lack experience with the communication strategies with seriously ill patients, which requires flexibility, time, and confidence to initiate the conversation and readiness for unexpected responses (Andersson et al., 2016). This lack of experience can be problematic for new nurses learning complex critical thinking skills. It is through experience that nurses can transition from novice to expert (Benner, 1984). Therefore, new nurses attempting ACP conversations will not be comfortable until they gain experience.

The scores from knowledge, attitudes, and self-efficacy were lower overall for nurse residents who have less than one year of experience in nursing which corresponds to Benner’s Novice-to Expert Theory. At the novice level, nurses have limited acceptance of patient situations due to unfamiliarity. The nurse residents may not have been able to immerse
themselves completely in the simulation experience because they have never, personally or professionally, experienced ACP conversations or situations where an ACP conversation is needed. The concept of a fiction contract, an agreement between the facilitator and the participant that the participant will immerse themselves fully in a realistic environment, may have been difficult for the nurse residents. The nurse residents may have been more comfortable addressing the patient’s symptoms, performing an assessment, or practicing simpler communication techniques.

**Nurse Residency**

Nurse residency programs are designed for entry-level nurses to transition from student learners to practice. The goal is to develop nurses’ skills in leadership, assessment and critical thinking, and professional growth. Kramer (1975) first described “reality shock” experienced by new graduate nurses starting their career when discussing the gap between new graduate nurses’ comfort, confidence, and ability to deliver safe and adequate care. Graduate nurse residency programs were developed to assist new graduates to develop their knowledge and skills to deliver safe care (Institute of Medicine, 2010). These residency programs have shown improvement in job satisfaction and nursing retention (Walsh, 2018). The graduate nurse residency program at the study site was designed to support new graduates in the transition from student to professional in the acute hospital setting. Graduates have preceptors for the first 12 weeks of their orientation period, attend monthly seminars, develop critical thinking skills, participate in unit activities and nursing councils, complete an evidence-based practice project, and receive progress evaluations with members of the site’s health system. In regard to ACP communication, one hour is dedicated to lecture and discussion with the director of palliative
care to learn about palliative care concepts, including ACP, and services in the health system. This limited education during nurse residency is not sufficient to prepare new graduates to have these conversations. Many have stated that this lecture is the only time they have heard about or discussed palliative care, ACP, ADs, end-of-life, and hospice. Most have limited education in nursing school, and have not worked on communication strategies with seriously ill patients in simulation or clinical training.

Nurse residents are not prepared to have ACP conversations due to their limited experience, training, and education. This was reflected in the outcomes of the CHATT simulation. Expert nurses, in accordance with Benner, have a greater base of knowledge and experience accumulated through their years of work and experience. These nurses can use past patient situations experiences to interpret clinical situations. Benner clarifies the definition of experience as not just the passage of time, but the refinement of preconceived notions and theories that are altered by actual practical situations (Benner, 1984). Novice nurses do not have the ability to refine any preconceived beliefs because they are just beginning to form these concepts.

**Communication in ACP**

Communication is an important multifaceted skill, which is difficult to develop in school (Boyle et al., 2017). New graduate nurses need practice and experience to apply communication techniques to patient scenarios. A lack of experience makes it more difficult for nurses to communicate with seriously ill patients and families (Strang et al., 2014). In addition, many newer nurses work in medical-surgical or acute care units, and have reported difficulties addressing EOL care needs because they have to shift from the mindset of cure to comfort (Lee
et al., 2018). With the aging population and patients with multiple chronic diseases and comorbidities, new graduate nurses will need more education to care for patients with serious illness (Iwama, 2018). Research has shown that new nurses gain confidence and comfort through clinical practice, experience, and mentorship (Andersson et al., 2016).

Studies found that acute care, surgical, and outpatient nurses avoided difficult advance care planning conversations (ACP), felt anxious about death and dying, and often did not document communication (Caswell et al., 2015; Nia et al., 2016). Also, nurses believed that their role was to support families, instead of to initiate or continue ACP conversations, and viewed patients and families as passive recipients of information rather than an integrated part of the medical team (Caswell et al., 2015). Knowledge deficiencies found by researchers included ACP communication and emotional awareness to provide a holistic, patient- and family-centered approach to care (Caswell et al., 2015; Fahlberg, 2016; Moir et al., 2015; Nia et al., 2016). In the simulation, new graduate nurses expressed their inexperience with death and dying. One nurse stated that she has not had a patient die or experienced any deaths with family members. She could follow the simulation but could not empathize with the patient or family member. This feeling is not uncommon among new nurses. A review found that new graduates felt inadequate providing effective EOL care, including communicating, and had difficulty balancing compassion and fulfilling their role as a nurse. Emotionally, they did not have any expectations of what they would encounter or feel, and some disengaged to avoid taking care of dying patients (Zheng et al., 2016).

Staff development is essential for nurses. Interventions to develop practicing nurses’ skills and experience have shown increased knowledge and comfort in caring for patients at EOL. Researchers at the University of Pittsburgh used the CARES tool, which is based on End-
of-Life Nursing Consortium (ELNEC) curricula, to help staff nurses apply evidence-based practice in symptom management for dying patients. In addition to increases in knowledge and comfort, families of dying patients reported that their experiences with healthcare staff improved after the intervention (Stacy et al., 2019). In addition, organizations such as ELNEC, the Center to Advance Palliative Care, and the National Hospice and Palliative Care Organization offer interactive modules to support training and development (American Association of Colleges of Nursing, n.d.; Center to Advance Palliative Care, n.d.; National Hospice and Palliative Care Organization, n.d.-d).

**Mentorship**

Mentorship is essential for nurses uncomfortable with ACP conversations and newer nurses with limited experience. In nurse residency programs, mentoring has been associated with increased satisfaction, lowered turnover of nurses, and an enhancement in competencies development (Williams et al., 2018). Formats of mentoring in nurse residency programs vary by institution in regards to mentee-to-mentor ratio, preparation, and mentoring formats. A 2017 review found a lack of published, reliable findings related to the value of mentoring new nurses. In addition, studies have not compared types of mentoring or associations between skill acquisition and mentoring (Williams et al., 2018). Benner’s (1984) study stated that a method for nurses to transition from novice to expert is through support and mentorship in the clinical setting (Benner, 1984). Novices and advanced beginners need help to set priorities since they are only just beginning to notice meaningful patterns in their work (Benner, 1984). Mazanec and others stated that mentorship among new nurses can show improvements in communication skills (Mazanec et al., 2016). ACP communication mentorship may be difficult due to a lack of
comfort from nurses with these conversations. A model suggested by Fahlberg (2016) consisted of embedded palliative care specialists, or other clinicians that were trained in ACP communication, on units to educate and mentor nurses. These specialists can assist nurses with family meetings, provide advice on difficult situations such as family conflict, provide education, and be the resource nurses for units (Fahlberg, 2016).

Implications for Nursing Education

New nurses do not graduate with the knowledge and clinical training to equip them to care for patients with serious illness (Ferrell et al., 2018). These nurses reported negative emotions such as nervousness, helplessness, anger, and powerlessness when caring for dying patients (Barrere & Durkin, 2014; Zheng et al., 2016). New nurses also reported difficulty talking to family members, and felt that EOL conversations with families could be overwhelming (Anderson et al., 2015; Barrere & Durkin, 2014). Content of palliative care, ACP communication and EOL education at the undergraduate and graduate levels vary. There is little explicit palliative care content in undergraduate nursing education, and few graduate programs focus on communication strategies for seriously ill patients (White et al., 2014). The American Association of Colleges of Nursing (AACN) has put out essential curricular elements, which include communication and collaboration to deliver high quality and safe patient care. The ELNEC curricula has also been recommended to integrate into curricula. However, many nursing programs have not incorporated AACN or ELNEC nursing content into courses (Ferrell et al., 2018).

ELNEC
Palliative care education, including communication in ACP, has not been incorporated into the nursing curriculum and is also not integrated into the core competencies for ongoing staff nurse education. In response, the City of Hope Medical Center partnered with AACN to create the End-of-Life Nursing Education Consortium (ELNEC) in 2001 with a focus on educating nursing faculty in palliative care and prepare practicing nurses (Ferrell et al., 2018). ELNEC includes multiple evidence-based curricula geared toward care of specific patient subpopulations. There are more than 24,400 nurses from 100 different countries that have become ELNEC trainers, who have educated more than 732,000 nurses and other healthcare providers. Now, ELNEC is online to assist with barriers such as costs and time constraints (Bishop et al., 2019). To assist with palliative care integration into undergraduate curricula, the AACN approved the Palliative Competencies and Recommendations for Educating undergraduate nursing Students (CARES) in 2016, which contained curricular competencies and recommendations for preparing students to deliver palliative care. These competencies included EOL communication and ACP. This document also offered recommendations on the integration of palliative care nursing content into curricula at all schools of nursing, aligning with AACN’s Essentials of Baccalaureate Education for Nursing Practice. However, to date, many programs have not incorporated palliative care curricula citing barriers, such as the lack of trained faculty with expertise in palliative care and the already saturated curricula in nursing programs. In addition, palliative care specialists are limited in health systems, and ACP is not prioritized as a required competency of practicing nurses (Ferrell et al., 2018).

To address ACP communication, in 2017 ELNEC developed a communication curriculum to teach nurses palliative care communication skills, and train nurses on how to provide skills-based communication training to other health professionals at their institutions.
(Buller et al., 2019). The new curriculum for communication was created and piloted to prepare palliative care professionals with more focus on their role in the communication training of other health care professionals. The curriculum is organized by the eight domains: a) structure and processes of care; b) physical aspects of care; c) psychological and psychiatric aspects of care; d) social aspects of care; e) spiritual, religious, and existential aspects of care; f) cultural aspects of care; g) care of the patient nearing the end of life; and h) ethical and legal aspects of care. One version has been created for interdisciplinary teams (social work, chaplaincy, physicians, and nurse) (Buller et al., 2019). ELNEC modules can be essential for institutions that struggle to find appropriate curriculum for new nurses. The modules are interactive, easy-to-use, pose vignettes, and patient case studies, and can be incorporated into clinical practice and simulation.

Implications for Future Research

This simulation was a pilot study, but results show that it is feasible to implement it on a larger scale. There is a need for an ACP communication simulation for bedside nurses, and this simulation can be used as an effective method to practice these communication skills. The study needs to be replicated to a larger scale with a stronger design. Randomized participants and a control group would provide more conclusive results.

The next step is conducting more simulations with experienced nurses to replicate the findings. The largest differences in results were with experienced nurses and nurse residents. Therefore, conducting the simulations exclusively with experienced nurses would allow refinement of the study protocol, testing of instruments for sensitivity, and improve the process to administer the simulation to RNs. For nurse residents, another type of intervention to improved ACP communication should be explored. Simulation was not as effective with nurse
residents compared to experienced nurses. Curriculum combining didactic, case scenarios, and lecture may be necessary, as well as opportunities for clinical practice and mentorship.

Another opportunity to consider is adjusting the CHATT simulation to a multidisciplinary, collaborative ACP simulation which includes nurses and other disciplines. Land et al. (2019) stated that successful ACP interventions used a personalized tailored approach, and a team of multidisciplinary professionals. Few studies have been conducted on interdisciplinary simulations (Bradway et al., 2018; Lippe et al., 2019). They have revealed gaps in communication between disciplines, and a lack of engagement between healthcare clinicians and the patient and family, and improved outcomes in confidence and comfort. Guidelines have been put into place to develop multidisciplinary simulations. The Interprofessional Education Collaborative (IPEC) developed essential core competencies under four domains of interprofessional collaborative practice. In addition, the NLN and Society for Simulation in Healthcare have developed partnerships among stakeholders in education and healthcare who are interested in developing best practices for interprofessional education (Jeffries, 2015).

**Implications for Policy**

In 2017, HPNA created a forum called the Palliative Nursing Summit to gather nurse leaders and lead a discussion on how to improve patient and family outcomes in palliative care. One of the areas of focus was on communication and ACP. The group recognized that nurses needed empowerment and advocacy to initiate and have ACP conversations. Often, physicians have stated that nurses are not capable of having ACP discussion, and nurses do not recognize their role in these conversations (Izumi, 2017). In response, a position statement by HPNA and the American Nurses Association put a call to action for nurses to provide primary palliative care
and engage in ACP conversations (HPNA, 2018) The summit’s ACP project team also began a campaign specifically for nurses in 2018, called the #ISaidWhatIWant Initiative. This campaign encouraged nurses to lead by example and complete their own ACP. A task force was also created to focus on nurse-led ACP training models. The goal is to make recommendations on best models (Head et al., 2018). Policy recommendations from the summit included the universal availability of palliative care in all clinical settings and all payment systems. They also suggested removing barriers that prevent the full use of APRNs. APRNs play a vital role in ACP communication and have been called upon to have more discussions with patients due to the shortage of hospice and palliative physicians (Hayes et al., 2017). Depending on the state, practice acts may limit some APRN’s roles in ACP. The committee recommends a revision of these acts to facilitate access for patients to full palliative care services (Head et al., 2018).

In summary, the CHATT simulation was shown to be feasible and effective in increasing RNs’ knowledge, attitudes, and self-efficacy in ACP communication. The analysis showed that years of experience correlated with all outcome variables. Nurses with more years of experience, had increased knowledge, attitudes, and self-efficacy regarding ACP after undergoing the simulation. Graduate nursing residents, newer nurses, benefitted from the simulation but not to the same extent as practicing nurses. Many factors contribute to this discrepancy, which include clinical training and education from undergraduate studies, a lack of personal experiences with patients and families, and the need for stronger mentorship and professional development.

Conclusion

Simulation is an educational modality that is underutilized in ACP communication. The CHATT simulation was developed based on standardization through INACSL and DeVellis’s
scale development guidelines, and is one of the few validated simulations for RNs in ACP communication. Each component of the simulation was developed with a focus on an element of ACP communication, and allowed for thoughtful discourse and debriefing on past experiences and current barriers. The pre-brief, simulation, and debrief were established to meet the objectives of the simulation and encourage RN participants to prioritize the situation and use their critical thinking skills for effective communication. The positive outcomes and feedback from the practicing RNs at the study site showed that the simulation was a viable method to educate on ACP communication.

Effective communication among clinicians, patients, and families has been shown to positively impact patient health outcomes and minimize patient uncertainty about their diagnosis, prognosis, and treatment plan. Nurses are often on the frontlines of care, and play a key role in assisting with goals of care conversations, discussing barriers to care, and finding resources to help patients navigate their illness journey. Nurses have many opportunities to use ACP communication to improve patient care and promote patient advocacy. Nurses are responsible to educate patients and families about the diagnosis of a serious illness and develop relationships through empathy and support. In addition, when a diagnosis is given, nurses are often responsible for providing prognosis-related information and treatment options. Therefore, nursing education and training are vital to prepare and empower nurses to have ACP conversations.
References


American Association of Colleges of Nursing. (n. d.). *End-of-Life-Care (ELNEC)*. Retrieved February 8, 2020, from https://www.aacnnursing.org/ELNEC


Early utilization patterns of the new Medicare procedure codes for advance care planning. 
*JAMA Internal Medicine, 179*(6), 829-830.

Belisomo, R. (2018). Reversing racial inequities at the end of life: A call for health systems to 
create culturally competent advance care planning programs within African American 


Betcher, D. K. (2010). Elephant in the room project: improving caring efficacy through effective 
and compassionate communication with palliative care patients. *Medsurg Nursing, 19*(2), 
101-105.

utilization of an inpatient palliative care consultation service in an urban public hospital. 
*Journal of Hospice and Palliative Medicine, 31*(6), 641-644.

pilot and feasibility trials being undertaken in the United Kingdom registered in the United 

An education strategy to improve clinical practice. *Journal of Hospice and Palliative 
Nursing, 21*(6), 531-539.


setting: A qualitative study. *BMC Palliative Care, 14*(35).

Center to Advance Palliative Care. (2019). *America’s care of serious illness: A state-by-state report card on access to palliative care in our nation’s hospitals.*

https://reportcard.capc.org/

Center to Advance Palliative Care. (n. d.). *Tools and Training for Clinicians.* Retrieved February 8, 2020, from https://www.capc.org/


Epstein, R. & Friedman, J. (2018). *End Game is the documentary film America needs* [Film]. Netflix.


Gonzales, L. K., Glaser, D., Howland, L., Clark, M. J., Hutchins, S., Macauley, K., Close, J. F.,


Hammes, B. J., Rooney, B. L., Gundrum, J. D., Hickman, S. E., & Hager, N. (2012). The POLST program: A retrospective review of the demographics of use and outcomes in one community where advance directives are prevalent. *Journal of Palliative Medicine, 15*(1), 77-85.


National League for Nursing.


Kamal, A., Wolf, S. P., Troy, J., Leff, V., Dahlin, C., Rotella, J. D., Handzo, G., Rodgers, P. E.,


assumptions influence decision making for patients in the vegetative state: a qualitative interview study. *Journal of Medical Ethics, 38*(6), 332-337.


Lupu, D., Quigley, L., Mehfoud, N., & Salsberg, E. S. (2018). The growing demand for hospice


in long-term care facilities and of their family members toward advance care planning discussions: a systematic review and thematic synthesis. Clinical Interventions in Aging, 12, 475-484.


overview/explanation-of-palliative-care/


National Hospice and Palliative Care Organization (n. d.-d). *Resources.* Retrieved February 8, 2020, from https://www.nhpco.org/resources


Office of the Assistant Secretary for Planning and Evaluation. (2015). *Advance directives and*


Parsons, L. C. (2017). Clinical simulation for practicing labor and delivery nurses: Advancing competency through simulated nursing practice. POJ Nursing Practice & Research, 1(3), 1-
5.


https://www.americanbar.org/groups/law_aging/publications/bifocal/vol_37/issue_1_october2015/myths_and_facts_advance_directives/


Health 32(3), 260-273.


planning. *JAMA Internal Medicine*, 178(12), 1616.


Travers, A., & Taylor, V. (2016). What are the barriers to initiating end-of-life conversations with patients in the last year of life? *International Journal of Palliative Nursing*, 22(9), 454-

experiences of end-of-life communication: A focus group study. *European Journal of
Cancer Care, 27*(1), e12728.


The reliability and validity of three questionnaires: The Student Satisfaction and Self-

Confidence in Learning Scale, Simulation Design Scale, and Educational Practices

Questionnaire. *Contemporary Nurse, 53*(1), 60-74.


barriers for advance care planning in Latinos with video images. *Journal of Palliative
Medicine, 11*(5), 700-706.

Walczak, A., Henselmans, I., Tattersall, M., Clayton, J. M., Davidson, P. M., Young, J.,


responses to a question prompt list and prognosis and end-of-life care discussion prompts
delivered in a communication support program. *Psycho-Oncology 24*(3), 287–293.

https://doi.org/10.1002/pon.3635

care and end-of-life care. *Nursing Outlook, 60*(2012), 365-369.


*Pediatric Nursing, 44*(6), 275-279.

planning: A systematic review of randomised controlled trials conducted with older adults.


### Table 1

**Demographic Characteristics of Participants**

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<th>Category</th>
<th>Variable</th>
<th>Percent (n)</th>
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</thead>
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<tr>
<td>Age (years)</td>
<td>18-24</td>
<td>37.5 (15)</td>
</tr>
<tr>
<td></td>
<td>25-34</td>
<td>25.0 (10)</td>
</tr>
<tr>
<td></td>
<td>35-44</td>
<td>15.0 (6)</td>
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<tr>
<td></td>
<td>45-54</td>
<td>12.5 (5)</td>
</tr>
<tr>
<td></td>
<td>55-64</td>
<td>10.0 (4)</td>
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<tr>
<td>Gender</td>
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</tr>
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<td>Ethnicity</td>
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<tr>
<td></td>
<td>Hispanic or Latino</td>
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<tr>
<td>Religion</td>
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<td></td>
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<td></td>
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<tr>
<td></td>
<td>Buddhist</td>
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<tr>
<td></td>
<td>Unaffiliated</td>
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<tr>
<td></td>
<td>Prefer not to answer</td>
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<tr>
<td>Spirituality</td>
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<tr>
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<td>I do not consider myself spiritual</td>
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<tr>
<td></td>
<td>Prefer not to answer</td>
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<td>5.0 (2)</td>
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<td></td>
<td>11-15</td>
<td>2.5 (1)</td>
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<tr>
<td></td>
<td>20+</td>
<td>5.0 (2)</td>
</tr>
<tr>
<td>Prior training in advance care Planning (method)</td>
<td>Lecture</td>
<td>Intervention</td>
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<td>-----------------------------------------------</td>
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</tr>
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Table 2

Demographic Characteristics of Participant’s Age by Simulation Group

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<td>2</td>
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<td>0</td>
<td>4</td>
</tr>
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</table>

*Group 5 consisted of 15 nurse residents.
### Table 3

**Demographic Characteristics of Participant’s Years of Experience by Simulation Group**

<table>
<thead>
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<th>Experience in Nursing (Years)</th>
<th>Simulation Group</th>
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<tr>
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<td>6-10</td>
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<tr>
<td>20+</td>
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</table>

*Group 5 consisted of 15 nurse residents.*
Table 4

*Demographic Characteristics of Participant’s Years of Experience in Hospice and Palliative Care by Simulation Group*

<table>
<thead>
<tr>
<th>Experience in Hospice and/or Palliative Care (Years)</th>
<th>Simulation Group</th>
<th>Total</th>
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*Group 5 consisted of 15 nurse residents.
Table 5

*Mean evaluation scores of SDS and SCLS by simulation group*

<table>
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<tr>
<th>Simulation Group (n)</th>
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<tbody>
<tr>
<td>1(5)</td>
<td>4.88 (0.16)</td>
<td>4.73 (0.21)</td>
</tr>
<tr>
<td>2(6)</td>
<td>4.83 (0.17)</td>
<td>4.77 (0.18)</td>
</tr>
<tr>
<td>3(5)</td>
<td>4.83 (0.29)</td>
<td>4.75 (0.23)</td>
</tr>
<tr>
<td>4(4)</td>
<td>4.78 (0.25)</td>
<td>4.88 (0.16)</td>
</tr>
<tr>
<td>5*(15)</td>
<td>4.52 (0.33)</td>
<td>4.39 (0.56)</td>
</tr>
</tbody>
</table>

*Group 5 consisted of 15 nurse residents divided into two groups of 8 and 7.*
### Table 6

**Nurse Resident Mean Score Differences for the SDS by Question**

<table>
<thead>
<tr>
<th>SDS Questions</th>
<th>Simulation Groups Mean Scores (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>There was enough information provided at the beginning of the simulation to provide direction and encouragement.</td>
<td>4.80 4.75 4.67 5.00 4.20</td>
</tr>
<tr>
<td>(0.48) (0.70) (0.58) (0.00) (0.78)</td>
<td></td>
</tr>
<tr>
<td>I clearly understood the purpose and objectives of the simulation.</td>
<td>5.00 5.00 5.00 4.80 4.67</td>
</tr>
<tr>
<td>(0.00) (0.00) (0.00) (0.48) (0.49)</td>
<td></td>
</tr>
<tr>
<td>The simulation provided enough information in a clear matter for me to problem-solve the situation.</td>
<td>5.00 4.88 5.00 5.00 4.07</td>
</tr>
<tr>
<td>(0.00) (0.35) (0.00) (0.00) (1.03)</td>
<td></td>
</tr>
<tr>
<td>The simulation was designed for my specific level of knowledge and skills.</td>
<td>5.00 4.62 5.00 4.40 4.00</td>
</tr>
<tr>
<td>(0.00) (0.74) (0.00) (0.89) (0.93)</td>
<td></td>
</tr>
<tr>
<td>The simulation allowed me the opportunity to prioritize nursing assessment and care.</td>
<td>5.00 4.62 4.67 4.60 4.00</td>
</tr>
<tr>
<td>(0.00) (0.74) (0.58) (0.55) (1.07)</td>
<td></td>
</tr>
<tr>
<td>The simulation provided me an opportunity to goal set for my patient.</td>
<td>5.00 4.75 4.67 4.80 4.13</td>
</tr>
<tr>
<td>(0.00) (0.46) (0.58) (0.48) (0.64)</td>
<td></td>
</tr>
<tr>
<td>Feedback provided was constructive.</td>
<td>5.00 5.00 5.00 5.00 4.86</td>
</tr>
<tr>
<td>(0.00) (0.00) (0.00) (0.00) (0.49)</td>
<td></td>
</tr>
<tr>
<td>The scenario resembled a real-life situation.</td>
<td>5.00 5.00 5.00 5.00 4.87</td>
</tr>
<tr>
<td>(0.00) (0.00) (0.00) (0.00) (0.35)</td>
<td></td>
</tr>
<tr>
<td>Real life factors, situation, and variables were built into the simulation scenario.</td>
<td>5.00 5.00 5.00 5.00 4.87</td>
</tr>
<tr>
<td>(0.00) (0.00) (0.00) (0.00) (0.35)</td>
<td></td>
</tr>
</tbody>
</table>

*Group 5 consisted of 15 nurse residents divided into two groups of 8 and 7.*
**Table 7**

*Nurse Resident Mean Score Differences for the SCLS by Question*

<table>
<thead>
<tr>
<th>SCLS Questions</th>
<th>Simulation Groups Mean Scores (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teaching methods used in this simulation were helpful and effective.</td>
<td>5.00 (0.00)</td>
</tr>
<tr>
<td>The simulation provided me with a variety of learning materials and activities</td>
<td>4.80 (0.45) 4.83 (0.41) 4.60 (0.55)</td>
</tr>
<tr>
<td>to promote my learning.</td>
<td>4.80 (0.45) 5.00 (0.00) 5.00 (0.00)</td>
</tr>
<tr>
<td>I enjoyed how my facilitator taught the simulation.</td>
<td>4.80 (0.45) 5.00 (0.00) 5.00 (0.00)</td>
</tr>
<tr>
<td>The teaching materials used in this simulation were motivating and</td>
<td>4.80 (0.45) 4.83 (0.41) 5.00 (0.00)</td>
</tr>
<tr>
<td>helped me to learn.</td>
<td>4.80 (0.45) 5.00 (0.00) 5.00 (0.00)</td>
</tr>
<tr>
<td>The way my facilitator taught the simulation was suitable to the way I learn.</td>
<td>4.80 (0.45) 5.00 (0.00) 5.00 (0.00)</td>
</tr>
<tr>
<td>I am confident that I am mastering the content of the simulation activity</td>
<td>4.60 (0.55) 4.50 (0.55) 4.60 (0.55)</td>
</tr>
<tr>
<td>that my facilitator presented to me.</td>
<td>4.80 (0.45) 4.83 (0.41) 4.40 (0.55)</td>
</tr>
<tr>
<td>I am confident that this simulation covered critical content necessary</td>
<td>4.80 (0.45) 4.83 (0.41) 4.40 (0.55)</td>
</tr>
<tr>
<td>for the concept of advance care planning.</td>
<td>5.00 (0.00) 4.82 (0.41) 5.00 (0.00)</td>
</tr>
<tr>
<td>I am confident that I am developing the skills and obtaining the required</td>
<td>5.00 (0.00) 4.83 (0.41) 4.60 (0.55)</td>
</tr>
<tr>
<td>knowledge from this simulation to perform necessary tasks in a clinical setting.</td>
<td>5.00 (0.00) 4.83 (0.41) 4.60 (0.55)</td>
</tr>
<tr>
<td>I know how to use simulation activities to learn critical aspects of these</td>
<td>5.00 (0.00) 4.83 (0.41) 4.60 (0.55)</td>
</tr>
<tr>
<td>skills.</td>
<td>5.00 (0.00) 4.83 (0.41) 4.60 (0.55)</td>
</tr>
</tbody>
</table>

*Group 5 consisted of 15 nurse residents.*
Table 8

**Pre- and Posttest Simulation Scores for Knowledge, Attitudes and Self-Efficacy Among Participants**

<table>
<thead>
<tr>
<th></th>
<th>Pretest mean (SD)</th>
<th>Posttest mean (SD)</th>
<th>T-Test T-value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>0.72 (0.12)</td>
<td>0.83 (0.13)</td>
<td>0.002</td>
<td></td>
</tr>
<tr>
<td>Attitudes</td>
<td>3.44 (0.28)</td>
<td>4.86 (0.30)</td>
<td>&lt; 0.001</td>
<td></td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>3.49 (0.22)</td>
<td>4.95 (0.28)</td>
<td>&lt; 0.001</td>
<td></td>
</tr>
</tbody>
</table>
**Table 9**

*Correlations Between Changes in Knowledge, Attitudes and Self-Efficacy Among Participants*

<table>
<thead>
<tr>
<th></th>
<th>Knowledge*</th>
<th>Attitude*</th>
<th>Self-Efficacy*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>1.0</td>
<td>0.54</td>
<td>0.36</td>
</tr>
<tr>
<td></td>
<td></td>
<td>p=0.001</td>
<td>p=0.031</td>
</tr>
<tr>
<td>Attitude</td>
<td>0.54</td>
<td>1.0</td>
<td>0.48</td>
</tr>
<tr>
<td></td>
<td>p=0.001</td>
<td></td>
<td>p=0.003</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>0.36</td>
<td>0.48</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>p=0.031</td>
<td>p=0.003</td>
<td></td>
</tr>
</tbody>
</table>

* Pearson Correlation between variables & significance.
Table 10

Correlations Between Demographic Characteristics of Participants and Pre-Simulation Scores for Knowledge, Attitudes and Self-Efficacy

<table>
<thead>
<tr>
<th></th>
<th>Knowledge*</th>
<th>Attitudes*</th>
<th>Self-Efficacy*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.36</td>
<td>0.49</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>p=0.023**</td>
<td>p=0.001**</td>
<td>p=0.162</td>
</tr>
<tr>
<td>Experience in Nursing (years)</td>
<td>-0.19</td>
<td>0.53</td>
<td>0.36</td>
</tr>
<tr>
<td></td>
<td>p=0.244</td>
<td>p&lt;0.001**</td>
<td>p=0.022**</td>
</tr>
<tr>
<td>Experience in Hospice and/or</td>
<td>0.40</td>
<td>0.44</td>
<td>0.01</td>
</tr>
<tr>
<td>Palliative Care (years)</td>
<td>p=0.011**</td>
<td>p=0.005**</td>
<td>p=0.963</td>
</tr>
</tbody>
</table>

* Pearson Correlation between demographic variable and pretest mean scores & significance
** Significant correlation p<0.05.
Note: Knowledge correlation with Experience in Nursing using Spearman Rho’s correlation coefficient (0.332) showed significance (p=0.036**).
Table 11

*Example of Changes Pre- to Post-Simulation in Self-efficacy Among Participants*

<table>
<thead>
<tr>
<th>Caring Efficacy Scale Questions</th>
<th>% positive change from pre-post simulation*</th>
</tr>
</thead>
<tbody>
<tr>
<td>I convey a sense of personal strength to my clients/patients.</td>
<td>19%</td>
</tr>
<tr>
<td>I often find it difficult to express empathy with clients/patients.</td>
<td>18%</td>
</tr>
<tr>
<td>I think a client/patient is uneasy or may need some help, I approach that person.</td>
<td>17%</td>
</tr>
<tr>
<td>I can usually establish a close relationship with my clients/patients.</td>
<td>16%</td>
</tr>
<tr>
<td>Clients/patients can tell me almost anything and I won’t be shocked.</td>
<td>14%</td>
</tr>
<tr>
<td>I use what I learn in conversations with clients/patients to provide more individualized care.</td>
<td>14%</td>
</tr>
<tr>
<td>I feel if I talk to clients/patients on an individual, personal basis, things might get out of control.</td>
<td>12%</td>
</tr>
<tr>
<td>I often become overwhelmed by the nature of the problems clients/patients are experiencing.</td>
<td>11%**</td>
</tr>
<tr>
<td>I can usually create some way to relate to most any client/patient.</td>
<td>11%</td>
</tr>
<tr>
<td>I often find it hard to get my point of view across to patients/clients when I need to.</td>
<td>7%</td>
</tr>
</tbody>
</table>

*Comparison for responses in categories Strongly Agree or Strongly Disagree.

**Responses with “disagree” had a 25% change.
Table 12

A *Comparison of Self-efficacy Results from Betcher (2010) and CHATT (2020).*

<table>
<thead>
<tr>
<th>Caring Efficacy Scale Questions</th>
<th>% change from pre-post simulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I don’t use creative or unusual ways to express caring to my clients/patients.</td>
<td>CHATT Study</td>
</tr>
<tr>
<td></td>
<td>21.5%</td>
</tr>
<tr>
<td></td>
<td>Betcher</td>
</tr>
<tr>
<td></td>
<td>18%</td>
</tr>
<tr>
<td>I convey a sense of personal strength to my clients/patients.</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td>37%</td>
</tr>
<tr>
<td>I use what I learn in conversations with clients/patients to provide more individualized care.</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>18%</td>
</tr>
</tbody>
</table>
Figures

Figure 1

*CHATT Simulation Framework*
Figure 2

*Bandura’s Self-Efficacy Theory: Efficacy Expectations*
Figure 3

*Conceptual Framework of RN Process of Transition with ACP Conversations*

Figure 4

Schematic Diagram of Pre- and Posttest Quasi-Experimental Design

O1  X  O2

Key:
X = Intervention (One-hour simulation).
O1 = measurement of knowledge, attitudes, and self-efficacy before the simulation.
O2 = measurement of knowledge, attitudes, and self-efficacy after the simulation.
Seven Steps in the Development of the CHATT Simulation

1. **Performed a needs assessment**
   - Determined constructs to be examined in advance care planning based on RN feedback and literature review.

2. **Determined clearly what to measure**
   - Based on a theoretical framework
   - Developed broad and specific objectives

3. **Generated a scenario for simulation**
   - Selected the proper modality
   - Used case study and materials from the study site's palliative care team
   - Developed "the story"

4. **Determined a simulation format**
   - Used the INACSL Simulation Design Standards & NLN Simulation Design Template
   - Addressed physical, conceptual, and psychological fidelity to create perception of realism
   - Began simulation-based experiences with pre-briefing; followed by debriefing

5. **Performed an iterative review by experts**
   - Expert panel included palliative care specialists and simulation experts

6. **Established inclusion of scenario items**
   - Expert panel evaluated simulation sections with content validity index

7. **Administered the simulation to a sample of subjects**
   - Simulation tested among RNs at a health system
Figure 6

Association Between Differences in Pre- and Posttest Scores for Knowledge and Mean Post Knowledge Scores
Figure 7

Association Between Differences in Pre-Post Scores for Attitudes and Mean Post Attitudes Scores
Figure 8

Association Between Differences in Pre-Post Scores for Self-Efficacy and Mean Post Self-Efficacy Scores

Mean of Post-Simulation Self-Efficacy Scores
Pre-Screening Form

Title of Study: Development & Testing of a High-fidelity Simulation for Advance Care Planning Communication: Conversations Had at Trying Times (CHATT)

The following questions will help us identify participants who meet the inclusion and exclusion criteria of this study. You may not be eligible for our study depending on your response to the following questions.

1. Are you aged 18 years and older?
   (1) Yes (Go to #2) (2) No and you are not eligible to participate, thank you for your time.

2. Are you a registered nurse?
   (2) Yes (Go to #3) (2) No and you are not eligible to participate, thank you for your time.

3. Are you an employee of Middlesex Health?
   (3) Yes (Go to #4) (2) No and you are not eligible to participate, thank you for your time.

4. Are you able to read and understand English?
   (4) Yes (Go to #5) (2) No and you are not eligible to participate, thank you for your time.

5. Are you willing to participate in the study for a total of at least one hour and 45 minutes? Forty-five minutes is answering surveys pre- and post-simulation and 1 hour is for the simulation.
   (5) Yes (Go to #6) (2) No and you are not eligible to participate, thank you for your time.

If you answered yes to questions 1 through 5, you are eligible to participate in this study. The investigator will email a copy of the consent/information form to you to review. She will schedule a time to speak with you about the research. You can ask her any questions when she goes over the form with you.
Appendix B

Information Sheet

Information Sheet for Participants in a Research Study

**Student Investigator:** Amisha Parekh de Campos, BSN, MPH, RN, CHPN  
**Faculty Mentor:** E. Carol Polifroni, RN, EdD, NEA-BC, CNE, ANEF  
**Study Title:** Development & Testing of a High-fidelity Simulation for Advance Care Planning Communication: Conversations Had at Trying Times (CHATT)

**Overview of the Research**

You are being asked to provide consent to participate in a research study. Participation is voluntary. You can say yes or no. If you say yes now you can still change your mind later. Some key points to consider are summarized in this overview, but you should consider all of the information in this document carefully before making your decision.

This research is being done to test the feasibility of advance care planning (ACP) simulation and to learn if registered nurses will benefit from a simulation in ACP communication.

Participation will involve approximately 1 hour and 45 minutes of your time. One hour is allocated for the simulation. Also, there are three surveys to answer before and four survey to answer after the simulation. These will take approximately 45 minutes to complete.

The surveys you will be asked to complete include questions on your knowledge, attitudes, and self-efficacy in ACP communication. Additional surveys post-simulation include questions on evaluating the simulation design and process. Once you complete these surveys, you will attend a simulation. The simulation will consist of an introduction to the simulation, an overview of learning objectives, the simulation scenario, and a debriefing.

The main risk of the simulation is a breach of confidential information because of the group setting. Also, there may be a risk of increased anxiety from some of the questions on the surveys or the simulation. Risks are described in more detail later in this form.

There may also be benefits from participation. You will have the opportunity to provide feedback on the simulation design and feasibility. If the simulation is effective, you may experience an improvement in knowledge and self-efficacy; but this is not guaranteed. The benefits of your participation may impact nursing by furthering educational interventions in ACP. Your participation can also support society by helping increase knowledge on ACP communication.

A more detailed description of this research follows.
Introduction

You are invited to participate in a research study to assess the feasibility of a simulation developed to better understand registered nurses’ knowledge, attitudes, and self-efficacy in ACP. You are being asked to participate because you are a registered nurse, over the age of 18 and work at Middlesex Health System.

Why is this study being done?

The purpose of this research study is to provide an educational intervention for registered nurses in ACP communication. The process of ACP aims to ensure the verbalization and documentation of a patient’s health care goals. All patients benefit from early conversations in ACP, but particularly those with serious illness. These conversations lead to earlier utilization of palliative and hospice services, improved quality of life, decreased use of unwanted medical interventions and hospitalizations, and reduced stress, anxiety, and depression among family members.

Although these patient-centered conversations should occur early and over time, ACP conversations are often not done or not done repeatedly. Many clinicians struggle with having ACP conversations due to a lack of training, time, and comfort, which can result in low self-efficacy with the conversation.

What are the study procedures? What will I be asked to do?

If you agree to take part in this study, you will be asked to fill out three surveys through an online survey platform called Qualtrics. These surveys should take approximately 15 minutes to complete. After you have completed the surveys, you will pick a time to participate in the one-hour simulation in October or November at the Middlesex Simulation Laboratory. The simulation consists of an introduction to the study, briefing on the learning objectives, the simulation, and debriefing. Following the simulation, you will be sent an additional four surveys through Qualtrics for post-simulation follow-up. The surveys will include questions on your perceptions of knowledge, attitude, and self-efficacy in ACP communication, and questions to evaluate the simulation design and process.

The inclusion criteria for participants are: (1) RN’s with age ≥ 18 years, (2) work at Middlesex Health, (3) can read and speak English and (4) willing to dedicate 1 hour for the simulation and 45 minutes for the surveys. The simulation will be a one-time visit to the simulation laboratory. Eight to 10 participants will be enrolled for each simulation group. Two participants will be asked to volunteer to actively participate in the simulation while the other 6-8 participants will observe the simulation through a large monitor. Participants will be contacted for post-simulation survey completion.

What are the risks or inconveniences of the study?

The main risk of the simulation is a breach of confidential information because of the group setting. Other members of the group may not keep what is discussed during the group confidential. Employers may become aware of which employees participate in the simulation. However, the facilitator of the simulation will create an environment where participants can openly discuss their experiences in a non-punitive
manner. Also, there may be a risk of increased anxiety from some of the questions on the surveys or the simulation. Participants will receive resources for assistance if needed.

Another inconvenience may be the amount of time it takes to complete the study. The simulation is approximately one hour, and the surveys will take an additional 45 minutes; therefore, participants must spend 1 hour and 45 minutes in the study.

**What are the benefits of the study?**

There may also be benefits from participation. You will have the opportunity to provide feedback on the simulation design and feasibility. If the simulation is effective, you may experience an improvement in knowledge and self-efficacy; but this is not guaranteed. The benefits of your participation may impact nursing by furthering educational interventions in ACP. Your participation can also support society by helping increase knowledge on ACP communication.

**Will I receive payment for participation? Are there costs to participate?**

There will be no costs for you if you agree to take part in the study. If you choose to participate and complete all components of this study, you will be entered into a raffle to win a $50 Amazon gift card. There will be ten $50 Amazon gift cards raffled to participants who complete all phases of the study (pre-tests, simulation, post-test/evaluation). You can qualify for the raffle after you complete the post-test/evaluation surveys. You are not eligible for the raffle if you do not complete the surveys pre-simulation (pre-tests), do not attend a simulation, or do not complete the surveys post-simulation (post-test/evaluation).

**How will my personal information be protected?**

The following procedures will be used to protect the confidentiality of your data. All study participants will receive a study ID number. Research records will be labeled with a code. The code will be derived from a number based on a sequential 3-digit code that reflects how many people have enrolled in the study. A master key that links names and codes will be maintained in a separate and secure location. The master key will be destroyed after 3 years. The student researcher will keep all study records (including any codes to your data) locked in a secure location in her home office. All electronic files (e.g., database, spreadsheet, etc.) containing identifiable information will be password protected. Any computer hosting such files will also have password protection to prevent access by unauthorized users. Only the members of the research team (student investigator and advisors at UConn) will have access to the passwords. No one from the study site, other than the student investigator, will have access to data. Data that will be shared with the research team will be coded as described above to help protect your identity. At the conclusion of this study, the researchers may publish their findings. Information will be presented in summary aggregate format, and you will not be identified in any publications or presentations.

We will do our best to protect the confidentiality of the information we gather from you, but we cannot guarantee 100% confidentiality. Your confidentiality will be maintained to the degree permitted by the other
participants and the technology used. Specifically, no guarantees can be made regarding the interception of
data sent via the Internet by any third parties.

De-identified data will be retained indefinitely.

**Can I stop being in the study and what are my rights?**

You do not have to be in this study if you do not want. If you agree to be in the study, but later change your
mind, you may drop out at any time for any reason. There are no penalties or consequences of any kind if you
decide that you do not want to participate. You do not have to answer any questions that you do not want to
answer.

Participants may be withdrawn if they do not complete the surveys in a timely manner, are late to a
simulation, or are disruptive during the simulation.

**Whom do I contact if I have questions about the study?**

Take as long as you like before you make a decision. We will be happy to answer any questions you have
about this study. If you have further questions about this study or if you have a research-related problem,
you may contact the Student Investigator Amisha Parekh de Campos at
amisha.parekh_de_campos@uconn.edu or 860-358-4791, or the Principal Investigator Dr. Carol Polifroni
at carol.polifroni@uconn.edu or 860-486-0511.
Appendix C

Pre-Brief Script

Pre-brief script:
Welcome to the CHATT simulation at Middlesex Health. Please turn off your cell phones and beepers. The restrooms are located XX. Please make sure that if you must leave, it is not during the simulation or debriefing.

My name is Amisha Parekh de Campos, and I am a Ph.D. candidate at the University of Connecticut. I am in my last year and working on my dissertation. I have developed, with a review from a panel of experts, a simulation in advance care planning conversations specifically for registered nurses. The reason I developed this simulation is the lack of existing simulations that provide the tools and resources in advance care planning. This simulation will allow nurses to practice these types of conversations in a safe environment, where they can debrief about their experience. For my dissertation study specifically, I will be assessing the variables of knowledge, attitude, and self-efficacy before and after the simulation. This is a pilot, so I will also be looking at the feasibility of this study.

The following video will orient you to the simulation and debriefing rooms. After, I will discuss the simulation process, the roles of standardized patients, the roles of the participants, and objectives.

[show video]
I assume that all of you are going to do your best. I want to help fill in knowledge gaps in advance care planning conversations. I know your active participation here is your willingness to participate in an environment to learn [basic assumption].
I want to assure you that what happens in simulation, stays in simulation. It is not a punitive environment, and mistakes are meant to be learning opportunities [confidentiality].

When you walk through the door of the sim room, the patient is real. By participating, you agree to immerse yourself in a realistic environment. There are no “gotcha” moments in this simulation. I ask you to work through it like you would in clinical practice. If you find yourself needing to regroup, there is a designated area in the simulation room called the “cone of silence” [show area of room, away from SPs and camera]. You can regroup if you must; however, this simulation is meant to be an environment where you can make mistakes and move forward.

[fiction contract]
One participant (two participants – for the nurse resident script) will volunteer for the simulation. If there are no volunteers, I will choose two people. If you are an active participant in the simulation, you will be given a report and told what your role is in the simulation. Then you will enter the simulation. Once it is complete, we will all meet back here [debriefing room] to discuss the simulation called the debriefing. I will lead this discussion where all of us can talk about the simulation and experiences with these types of scenarios. We will also discuss the learning
objectives again [logistics]. We have practiced this simulation; however, if we encounter technical difficulties, please bear with us.

This is the time where you can make mistakes; where you can practice. I want to ensure everyone that others will not judge you, and the point is to engage in a productive discussion. You should respect your peers in this room, and there is no tolerance for excessive criticism. We are all here to support each other and learn [psychological safety].

The simulation has two standardized patients, called SPs, and a nurse giving report. I will play the role of the nurse. The two SPs are the patient, Jane Franklin, and her daughter Emily. They are given scripts and can only answer specific questions. Do you best, like you would when talking to a patient and family member in the clinical setting. The two nurses that will participate in the simulation will both assist in answering questions from the patient and daughter [roles].

There are 10 minutes allotted for the simulation. You don’t have to use all 10 minutes, but you are expected to complete the simulation within that timeframe. Then we will debrief for approximately 20 minutes. After the debrief, you will be sent four surveys. Two will look familiar because they will contain the same questions you had before attending this simulation. Two additional surveys consist of questions evaluating the simulation. Once you return all the surveys, you will be entered a raffle to win an Amazon gift card. After all the simulations are completed, winners will be announced [time allotment].

I will review the objectives of the simulation next. The objectives are:

1. Ask permission and elicit the patient’s and family member’s understanding of the patient’s condition.
2. Engage patient and family in a goals of care conversation.
3. Perform an advance care planning conversation.
4. Explain advanced directives and the reason initiation of this conversation is important.
5. Guide them through this conversation in a compassionate manner.

Any questions?

In this scenario, you are a registered nurse working at Middlesex Health on a med-surge floor. The patient’s room is located here (point to the simulated hospital room). You will be given a brief patient background, by myself, as well as some instructions on how to proceed. During the briefing stage, you may ask questions to be sure that you understand the task at hand. Once the simulation begins you will be prompted to complete the task if necessary. Are you ready for a brief report?

The patient’s name is Jane Franklin. (Read nurse handoff report)

Is there anything else you want/need to know before you begin?

[IF the participant asks questions you may repeat information already given, and/or provide a limited amount of new information to selected questions below (briefly)]

[IF the participant asks more questions or questions that are not listed below, state “that is not known at this time.”]

• How many times has the patient had a conversation regarding advance care planning?

“I believe she may have talked about it with her husband who died a few years ago, but not sure
if she’s discussed it with her daughter or sons. She had a palliative consult which started the conversation yesterday.”

- Have the sons been contacted about this conversation?
  “I’m not sure. Usually Emily talks to them and updates them. I have not spoken to them myself.”
- Has the doctor seen the patient?
  “No, he hasn’t rounded yet.”
- Has the social worker seen the patient?
  “No, the patient and daughter are refusing social work…they say that they don’t need any of that.”
- Has palliative care come to see the patient?
  “Yes, yesterday.”
- What is the patient’s prognosis?
  “Not sure. The provider will have to address that.”

Once the participant’s questions are answered, state “The simulation begins now.”
## Appendix D

### Debrief Outline Structure with PEARLS Method

<table>
<thead>
<tr>
<th>Setting the Scene</th>
<th>Create a safe context for learning/State the goal of debriefing: articulate the basic assumption</th>
<th>“Let’s spend about 20 minutes debriefing. Our goal is to improve how we work together and care for our patients.” “Everyone here is intelligent and wants to improve.”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction</td>
<td>Explore feelings/Solicit initial reactions &amp; emotions</td>
<td>“Any initial reactions?” “How did everyone feel about the scenario?” “How did caring for this patient/family make you feel?”</td>
</tr>
<tr>
<td>Description</td>
<td>Clarify facts/Develop shared understanding of the case</td>
<td>“Can someone summarize the key events faced in this scenario so that we are all on the same page?” “What happened next?” “What things did you do for the patient?”</td>
</tr>
<tr>
<td>Analysis (Plus/Delta method)</td>
<td>Eliciting critical thinking Explore variety of performance domains/learner-self assessment, focused facilitation, provide information</td>
<td>“What went well and why?” “What was challenging and why?” “How have your past experiences helped you make sense of the current situation?” Advocacy/Inquiry method “I saw...(beh), I think…, I wonder...(suggested beh w/rationale). “Did you think objective 1 was met?” (same for other objectives)</td>
</tr>
<tr>
<td>Guided application of information/summary</td>
<td>Identify take-aways/learner-centered &amp; instructor-centered</td>
<td>“I would like to spend the next few moments talking about X.” Focused discussion on advanced directives, MOLST/POLST/advance care planning. “What are some takeaways from this discussion for our clinical practice?” “In summary, the key learning points from this scenario were…”</td>
</tr>
</tbody>
</table>
Resources Provided to RNs at Debriefs

Resources were provided to RN participants to assist with ACP conversations. These included 1) the Centers to Advance Palliative Care (CAPC) Modules which was available by the study site, 2) the VitalTalk Mobile application which is available through iOS and Android provides tips and resources to prepared for ACP conversations, 3) the Connecticut Department of Public Health Advance Directives (accessible at: https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/MOLST/042715AdvanceDirectivesEnglishpdf.pdf?la=en), 4) the Serious Illness Conversation Guide developed by Adriane Labs to facilitate ACP conversations, 5) Medical Orders for Life Sustaining Treatment (MOLST).

1)
App From VitalTalk

Build your communication superpowers

VitalTalk Tips App

If you are a clinician who cares for patients with serious illness and their families, you need communication superpowers. Having great communication skills makes a difference—your patients will understand their medical situation better, and build trust with you faster, and you’ll be able to guide them to medical decisions that match their values.
3) CONNECTICUT

Advance Directives:

Planning for Future Health Care Decisions

- Your Rights to Make Health Care Decisions and Frequently Asked Questions – A Summary of Connecticut Law
- Directions for Completing the Consolidated Health Care Instructions and Advance Directives Document
- Consolidated Health Care Instructions and Advance Directives Document including all of the Advance Directives – Appointment of A Health Care Representative, Living Will and Health Care Instructions, Appointment of A Conservator, and Organ Donation – in one form.

CONNECTICUT DEPARTMENT OF SOCIAL SERVICES
Bureau of Aging, Community and Social Work Services
Aging Services Division (State Unit on Aging)
25 Sigourney Street, Hartford, CT 06106

Connecticut Department of Social Services
Serious Illness Conversation Guide

PATIENT-TESTED LANGUAGE

**SET UP**

“I’d like to talk about what is ahead with your illness and do some thinking in advance about what is important to you so that I can make sure we provide you with the care you want — is this okay?”

“What is your understanding now of where you are with your illness?”

“How much information about what is likely to be ahead with your illness would you like from me?”

“I want to share with you my understanding of where things are with your illness…”

_Uncertain:_ “It can be difficult to predict what will happen with your illness. I hope you will continue to live well for a long time but I’m worried that you could get sick quickly, and I think it is important to prepare for that possibility.”

_OR_

_Time:_ “I wish we were not in this situation, but I am worried that time may be as short as ____ (express as a range, e.g. days to weeks, weeks to months, months to a year).”

_OR_

_Function:_ “I hope that this is not the case, but I’m worried that this may be as strong as you will feel, and things are likely to get more difficult.”

**EXPLORE**

“What are your most important goals if your health situation worsens?”

“What are your biggest fears and worries about the future with your health?”

“What gives you strength as you think about the future with your illness?”

“What abilities are so critical to your life that you can’t imagine living without them?”

“If you become sicker, how much are you willing to go through for the possibility of gaining more time?”

“How much does your family know about your priorities and wishes?”

“I’ve heard you say that ____ is really important to you. Keeping that in mind, and what we know about your illness, I recommend that we _____. This will help us make sure that your treatment plans reflect what’s important to you.”

“How does this plan seem to you?”

“I will do everything I can to help you through this.”
This form is yours to keep with you. Bring it to all medical appointments and admissions to health care facilities.
Appendix F

Researcher-Developed Demographic Instrument

Demographic questions.

Please fill out the following 7 questions about demographic information:

1. Age
   - 18-24 years
   - 25-34 years
   - 35-44 years
   - 45-54 years
   - 55-65 years
   - 65+ years

2. Gender
   - Male
   - Female
   - Non-Binary
   - Prefer not to answer

3. Ethnicity/Race (check all that apply)
   - American Indian or Alaska Native
   - Asian
   - Black or African American
   - Hispanic or Latino
   - Native Hawaiian or Other Pacific Islander
   - White
   - Prefer not to answer

4. Religion
   - Protestant
   - Catholic
   - Mormon
   - Jehovah’s Witness
   - Other Christian
   - Jewish
   - Muslim
   - Buddhist
   - Hindu
   - Other World Religions
   - Unaffiliated
   - Prefer not to answer

5. Spirituality
   - I consider myself spiritual
   - I do not consider myself spiritual
   - Prefer not to answer

6. Nursing degree (highest attained)
   - Associate Degree
   - Bachelors
   - Masters
• PhD
• DNP

4. Other Non-nursing Education (highest attained)
  • Associates
  • Bachelors
  • Masters
  • Doctorate

5. Years of experience in nursing
  • 0-1 year
  • 1-5 years
  • 5-10 years
  • 10-15 years
  • 15-20 years
  • 20+ years

6. Years of experience in hospice and/or palliative care
  • 0-1 year
  • 1-5 years
  • 5-10 years
  • 10-15 years
  • 15-20 years
  • 20+ years

7. Prior training in advance care planning
  • Lecture
  • Intervention (role play activity, simulation, etc.)
  • Conference or seminar
  • Other (free text)
### Knowledge questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
</table>
| Which of the following best describes “advance directives”? | a) Living will  
  b) Durable power of attorney for health care or health care proxy  
  c) Both A and B  
  d) Don’t know |
| To my knowledge, the role of the nurse in advance care planning is | a) Skillfully asking patients to sign an advance directive.  
  b) Promoting a structured clinician-patient communication process to discuss the patient’s end-of-life care. |
| The Patient Self-Determination Act mandates that all competent individuals must sign and advance directive | a) True  
  b) False  
  c) Don’t know |
| The best time to discuss advance care planning is when patients are seriously ill. | a) True  
  b) False  
  c) Don’t know |
| Most Americans have implemented an advance directive. | a) True  
  b) False  
  c) Don’t know |
| For an effective advance care planning discussion, it is important to ask the patient. | a) To bring or sign an advance directive.  
  b) To identify a trusted individual as his or her healthcare proxy.  
  c) Don’t know |
| A notarized advance directive from one state is legal in all other states. | a) True  
  b) False  
  c) Don’t know |
| During an advance care planning discussion, it is important to | a) Involve the patient’s healthcare proxy.  
  b) Disclose the diagnosis and prognosis to the patient.  
  c) Don’t know |
| A patient may revoke his or her advance directive at any time. | a) True  
  b) False  
  c) Don’t know |
| Which of the following descriptions is true about five wishes? | a) Contain five statements to direct medical treatment when seriously ill  
  b) A living will that outlines patients’ personal, emotional, spiritual and medical wishes  
  c) Don’t know |
| An advance directive is an effective way to communicate patients’ wishes for end-of-life. | a) True  
  b) False  
  c) Don’t know |
| I am knowledgeable about the medical/physician order for life-sustaining treatment (MOLST/POLST). | a) True  
  b) False  
  c) Don’t know |

### Attitudes questions (Likert scale: strongly agree, agree, neutral, disagree, strongly disagree)

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
</table>
| Advance care planning will speed up the dying process in many patients. | a) Strongly agree  
  b) Agree  
  c) Neutral  
  d) Disagree  
  e) Strongly disagree |
Advance care planning should be discussed with every patient regardless of diagnosis. Advance care planning is important to patients who are diagnosed with life-threatening diseases. Advanced care planning can reduce the end-of-life care decisional crisis. Advanced care planning can destroy patients’ sense of hope. Advanced care planning can improve patients’ and families’ satisfaction about end-of-life care. Advanced care planning reduces the likelihood of futile treatment at the end of life. Advanced care planning is the physician’s responsibility. Advanced care planning is a professional responsibility for nurses. The practice of advanced care planning is consistent with patient-centered care standards. I believe it is my responsibility to discuss advanced care planning with patients and families. Most patients with cancer want to know about their diagnosis, prognosis, and available care options. Most patients with advanced cancer, if asked, want to discuss their wishes for end-of-life care with clinicians. My colleagues support me in discussing advanced care planning with patients and families. I feel comfortable discussing issues related to death and dying with patients and their families. I feel comfortable discussing advanced care practices with patients with serious illness. I have sufficient knowledge about how to conduct advanced care planning conversations with patients with serious illness and their families. I feel confident in my ability to communicate “bad news.”

Clinical Practice Behavior Questions (only for practicing RNs) (Likert scale: strongly agree, agree, neutral, disagree, strongly disagree)

In my practice, I routinely initiate advanced care planning discussions with patients with serious illness. In my practice, I routinely follow-up advanced care planning discussions, when appropriate, with patients with serious illness. In my practice, I have had advanced care planning discussions with more than 50% of patients with serious illness. In my practice, I routinely talk with patients and families about palliative and hospice care options when appropriate to patients’ disease status.
Appendix H

Caring Efficacy Scale

1. I do not feel confident in my ability to express a sense of caring to my clients/patients.
2. If I am not relating well to a client/patient, I will try to analyze what I can do to reach him/her.
3. I feel comfortable in touching my clients' patients in the course of care giving.
4. I convey a sense of personal strength to my clients/patients.
5. Clients/patients can tell me almost anything and I won't be shocked.
6. I have an ability to introduce a sense of normalcy in stressful conditions.
7. It is easy for me to consider the multi-facets of a clients/patients care, at the same time as I am listening to them.
8. I have difficulty in suspending my personal beliefs and biases in order to hear and accept a client/patient as a person.
9. I can walk into a room with a presence of serenity and energy that makes clients/patients feel better.
10. I am able to tune into a particular client/patient and forget my personal concerns.
11. I can usually create some way to relate to most any client/patient.
12. I lack confidence in my ability to talk to clients/patients from backgrounds different from my own.
13. I feel if I talk to clients/patients on an individual, personal basis, things might get out of control.
14. I use what I learn in conversations with clients/patients to provide more individualized care.
15. I don't feel strong enough to listen to the fears and concerns of my clients/patients.
16. Even when I'm feeling self-confident about most things, I still seem to be unable to relate to clients/patients.
17. I seem to have trouble relating to clients/patients.
18. I can usually establish a close relationship with my clients/patients.
19. I can usually get patients/clients to like me.
20. I often find it hard to get my point of view across to patients/clients when I need to.
21. When trying to resolve a conflict with a client/patient, I usually make it worse.
22. I think a client/patient is uneasy or may need some help, I approach that person.
23. If I find it hard to relate to a client/patient, I'll stop trying to work with that person.
24. I often find it hard to relate to clients/patients from a different culture than mine.
25. I have helped many clients/patients through my ability to develop close, meaningful relationships.
26. I often find it difficult to express empathy with clients/patients.
27. I often become overwhelmed by the nature of the problems clients/patients are experiencing.
28. When a client/patient is having difficulty communicating with me, I am able to adjust to his/her level.
29. Even when I really try, I can't get through to difficult clients/patients.
30. I don't use creative or unusual ways to express caring to my clients/patients.
# Appendix I

## Simulation Design Scale

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>NA</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objectives and Information</strong></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>1. There was enough information provided at the beginning of the simulation to provide direction and encouragement.</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
<td>O NA</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
</tr>
<tr>
<td>2. I clearly understood the purpose and objectives of the simulation.</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
<td>O NA</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
</tr>
<tr>
<td>3. The simulation provided enough information in a clear manner for me to problem-solve the situation.</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
<td>O NA</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
</tr>
<tr>
<td>4. There was enough information provided to me during the simulation.</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
<td>O NA</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
</tr>
<tr>
<td>5. The cases were appropriate and geared to promote my understanding.</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
<td>O NA</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
</tr>
<tr>
<td><strong>Support</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>6. Support was offered in a timely manner.</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
<td>O NA</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
</tr>
<tr>
<td>7. My need for help was recognized.</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
<td>O NA</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
</tr>
<tr>
<td>8. I felt supported by the teacher's assistance during the simulation.</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
<td>O NA</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
</tr>
<tr>
<td>9. I was supported in the learning process.</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
<td>O NA</td>
<td>O1</td>
<td>O2</td>
<td>O3</td>
<td>O4</td>
<td>O5</td>
</tr>
</tbody>
</table>
Use the following rating system when assessing the simulation design elements:
1. Strongly Disagree with the statement
2. Disagree with the statement
3. Undecided - you neither agree or disagree with the statement
4. Agree with the statement
5. Strongly Agree with the statement
NA - Not Applicable; the statement does not pertain to the simulation activity performed.

| Item                                                                 | 1 | 2 | 3 | 4 | 5 | NA | 1 | 2 | 3 | 4 | 5 |
|----------------------------------------------------------------------|---|---|---|---|---|----|---|---|---|---|---|---|
| Problem Solving                                                      |   |   |   |   |   |    |   |   |   |   |   |   |
| 10. Independent problem-solving was facilitated.                    | O1 | O2 | O3 | O4 | O5 | O NA | O1 | O2 | O3 | O4 | O5 |
| 11. I was encouraged to explore all possibilities of the simulation. | O1 | O2 | O3 | O4 | O5 | O NA | O1 | O2 | O3 | O4 | O5 |
| 12. The simulation was designed for my specific level of knowledge and skills. | O1 | O2 | O3 | O4 | O5 | O NA | O1 | O2 | O3 | O4 | O5 |
| 13. The simulation allowed me the opportunity to prioritize nursing assessments and care. | O1 | O2 | O3 | O4 | O5 | O NA | O1 | O2 | O3 | O4 | O5 |
| 14. The simulation provided me an opportunity to goal set for my patient. | O1 | O2 | O3 | O4 | O5 | O NA | O1 | O2 | O3 | O4 | O5 |
| Feedback/Guided Reflection                                          |   |   |   |   |   |    |   |   |   |   |   |   |
| 15. Feedback provided was constructive.                             | O1 | O2 | O3 | O4 | O5 | O NA | O1 | O2 | O3 | O4 | O5 |
| 16. Feedback was provided in a timely manner.                       | O1 | O2 | O3 | O4 | O5 | O NA | O1 | O2 | O3 | O4 | O5 |
| 17. The simulation allowed me to analyze my own behavior and actions | O1 | O2 | O3 | O4 | O5 | O NA | O1 | O2 | O3 | O4 | O5 |
| 18. There was an opportunity after the simulation to obtain guidance/feedback from the teacher in order to build knowledge to another level. | O1 | O2 | O3 | O4 | O5 | O NA | O1 | O2 | O3 | O4 | O5 |
| Fidelity (Realism)                                                   |   |   |   |   |   |    |   |   |   |   |   |   |
| 19. The scenario resembled a real-life situation.                   | O1 | O2 | O3 | O4 | O5 | O NA | O1 | O2 | O3 | O4 | O5 |
| 20. Real-life factors, situations, and variables were built into the simulation scenario. | O1 | O2 | O3 | O4 | O5 | O NA | O1 | O2 | O3 | O4 | O5 |
Appendix J

Simulation Satisfaction and Self-Confidence in Learning Scale

**Student Satisfaction and Self-Confidence in Learning**

*Instructions:* This questionnaire is a series of statements about your personal attitudes about the instruction you receive during your simulation activity. Each item represents a statement about your attitude toward your satisfaction with learning and self-confidence in obtaining the instruction you need. There are no right or wrong answers. You will probably agree with some of the statements and disagree with others. Please indicate your own personal feelings about each statement below by marking the numbers that best describe your attitude or beliefs. Please be truthful and describe your attitude as it really is, not what you would like for it to be. This is anonymous with the results being compiled as a group, not individually.

*Mark:*

1. STRONGLY DISAGREE with the statement
2. DISAGREE with the statement
3. UNDECIDED - you neither agree or disagree with the statement
4. AGREE with the statement
5. STRONGLY AGREE with the statement

<table>
<thead>
<tr>
<th>Satisfaction with Current Learning</th>
<th>SD</th>
<th>D</th>
<th>UN</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The teaching methods used in this simulation were helpful and effective.</td>
<td>○ 1</td>
<td>○ 2</td>
<td>○ 3</td>
<td>○ 4</td>
<td>○ 5</td>
</tr>
<tr>
<td>2. The simulation provided me with a variety of learning materials and activities to promote my learning the medical surgical curriculum.</td>
<td>○ 1</td>
<td>○ 2</td>
<td>○ 3</td>
<td>○ 4</td>
<td>○ 5</td>
</tr>
<tr>
<td>3. I enjoyed how my instructor taught the simulation.</td>
<td>○ 1</td>
<td>○ 2</td>
<td>○ 3</td>
<td>○ 4</td>
<td>○ 5</td>
</tr>
<tr>
<td>4. The teaching materials used in this simulation were motivating and helped me to learn.</td>
<td>○ 1</td>
<td>○ 2</td>
<td>○ 3</td>
<td>○ 4</td>
<td>○ 5</td>
</tr>
<tr>
<td>5. The way my instructor(s) taught the simulation was suitable to the way I learn.</td>
<td>○ 1</td>
<td>○ 2</td>
<td>○ 3</td>
<td>○ 4</td>
<td>○ 5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Self-confidence in Learning</th>
<th>SD</th>
<th>D</th>
<th>UN</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. I am confident that I am mastering the content of the simulation activity that my instructors presented to me.</td>
<td>○ 1</td>
<td>○ 2</td>
<td>○ 3</td>
<td>○ 4</td>
<td>○ 5</td>
</tr>
<tr>
<td>7. I am confident that this simulation covered critical content necessary for the mastery of medical surgical curriculum.</td>
<td>○ 1</td>
<td>○ 2</td>
<td>○ 3</td>
<td>○ 4</td>
<td>○ 5</td>
</tr>
<tr>
<td>8. I am confident that I am developing the skills and obtaining the required knowledge from this simulation to perform necessary tasks in a clinical setting</td>
<td>○ 1</td>
<td>○ 2</td>
<td>○ 3</td>
<td>○ 4</td>
<td>○ 5</td>
</tr>
<tr>
<td>9. My instructors used helpful resources to teach the simulation.</td>
<td>○ 1</td>
<td>○ 2</td>
<td>○ 3</td>
<td>○ 4</td>
<td>○ 5</td>
</tr>
<tr>
<td>10. It is my responsibility as the student to learn what I need to know from this simulation activity.</td>
<td>○ 1</td>
<td>○ 2</td>
<td>○ 3</td>
<td>○ 4</td>
<td>○ 5</td>
</tr>
<tr>
<td>11. I know how to get help when I do not understand the concepts covered in the simulation.</td>
<td>○ 1</td>
<td>○ 2</td>
<td>○ 3</td>
<td>○ 4</td>
<td>○ 5</td>
</tr>
<tr>
<td>12. I know how to use simulation activities to learn critical aspects of these skills.</td>
<td>○ 1</td>
<td>○ 2</td>
<td>○ 3</td>
<td>○ 4</td>
<td>○ 5</td>
</tr>
<tr>
<td>13. It is the instructor's responsibility to tell me what I need to learn of the simulation activity content during class time.</td>
<td>○ 1</td>
<td>○ 2</td>
<td>○ 3</td>
<td>○ 4</td>
<td>○ 5</td>
</tr>
</tbody>
</table>
Appendix K

NLN Simulation Design Template

Simulation Design Template
(revised March 2018)

(name of patient) Simulation

<table>
<thead>
<tr>
<th>Date:</th>
<th>File Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline: Nursing</td>
<td>Student Level:</td>
</tr>
<tr>
<td>Expected Simulation Run Time:</td>
<td>Guided Reflection Time:</td>
</tr>
<tr>
<td>Location:</td>
<td>Twice the amount of time</td>
</tr>
<tr>
<td>Today’s Date:</td>
<td>that the simulation runs.</td>
</tr>
<tr>
<td></td>
<td>Location for Reflection:</td>
</tr>
</tbody>
</table>

Brief Description of Client

Name:

Date of Birth:

Gender:  Age:  Weight:  Height:

Race:  Religion:

Major Support:  Support Phone:

Allergies:  Immunizations:

Attending Provider/Team:

Past Medical History:

History of Present Illness:
Social History:

Primary Medical Diagnosis:

Surgeries/Procedures & Dates:

Psychomotor Skills Required of Participants Prior to Simulation
(list skills)

Cognitive Activities Required of Participants Prior to Simulation
(Textbooks, lecture notes, articles, websites, etc.)

Simulation Learning Objectives

General Objectives (Note: The objectives listed below are general in nature and once learners have been exposed to the content, they are expected to maintain competency in these areas. Not every simulation will include all of the objectives listed.)

1. Practice standard precautions.
2. Employ strategies to reduce risk of harm to the patient.
3. Conduct assessments appropriate for care of patient in an organized and systematic manner.
4. Perform priority nursing actions based on assessment and clinical data.
5. Reassess/monitor patient status following nursing interventions.
6. Communicate with patient and family in a manner that illustrates caring, reflects cultural awareness, and addresses psychosocial needs.
7. Communicate appropriately with other health care team members in a timely, organized, patient-specific manner.
8. Make clinical judgments and decisions that are evidence-based.
9. Practice within nursing scope of practice.
10. Demonstrate knowledge of legal and ethical obligations.

Simulation Scenario Objectives (limit to 3 or 4)
For Faculty: References, Evidence-Based Practice Guidelines, Protocols, or Algorithms Used for This Scenario:

Setting/Environment

☐ Emergency Room
☐ Medical-Surgical Unit
☐ Pediatric Unit
☐ Maternity Unit
☐ Behavioral Health Unit
☐ ICU
☐ OR / PACU
☐ Rehabilitation Unit
☐ Home
☐ Outpatient Clinic
☐ Other:

Equipment/Supplies (choose all that apply to this simulation)

Simulated Patient/Manikin/s Needed:

Recommended Mode for Simulator:
(i.e. manual, programmed, etc.)

Other Props & Moulage:

Equipment Attached to Manikin/Simulated Patient:
☐ ID band
☐ IV tubing with primary line fluids running at ___mL/hr
☐ Secondary IV line running at ___mL/hr
☐ IVPB with ______ running at mL/hr
☐ IV pump
☐ PCA pump
☐ Foley catheter with ___mL output
☐ 02
☐ Monitor attached
☐ Other:

Equipment Available in Room:
☐ Bedpan/urinal
☐ 02 delivery device (type)
☐ Foley kit
☐ Straight catheter kit
☐ Incentive spirometer
☐ Fluids
☐ IV start kit
☐ IV tubing
☐ IVPB tubing
☐ IV pump
☐ Feeding pump
☐ Crash cart with airway devices and emergency medications
☐ Defibrillator/pacer

Other Essential Equipment:
Medications and Fluids:
☐ Oral Meds:
☐ IV Fluids:
☐ IVPB:
☐ IV Push:
☐ IM or SC:
☐ Suction
☐ Other:

Roles
☐ Nurse 1
☐ Nurse 2
☐ Nurse 3
☐ Provider (physician/advanced practice nurse)
☐ Other healthcare professionals:
(pharmacist, respiratory therapist, etc.)
☐ Observer(s)
☐ Recorder(s)
☐ Family member #1
☐ Family member #2
☐ Clergy
☐ Unlicensed assistive personnel
☐ Other:

Guidelines/Information Related to Roles
Learners in role of nurse should determine which assessments and interventions each will be responsible for, or facilitator can assign nurse 1 and nurse 2 roles with related responsibilities.

Information on behaviors, emotional tone, and what cues are permitted should be clearly communicated for each role. A script may be created from Scenario Progression Outline.

Pre-briefing/Briefing
Prior to report, participants will need pre-briefing/briefing. During this time, faculty/facilitators should identify expectations and orient participants to the environment, scenario, roles, time allotment, and objectives.

Report Students Will Receive Before Simulation
(Use SBAR format.)

Time:

Person providing report:
Situation:

Background:

Assessment:

Recommendation:

---

**Scenario Progression Outline**

<table>
<thead>
<tr>
<th>Patient Name:</th>
<th>Date of Birth:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timing (approx.)</td>
<td>Manikin/SP Actions</td>
</tr>
<tr>
<td>0-5 min</td>
<td>(Verbal information provided by manikin or SP should be in quotes so a script can be created for individuals in those roles.)</td>
</tr>
</tbody>
</table>

- Performing hand hygiene
- Introducing selves
- Confirming patient ID

5-10 min
10-15 min
15-20 min

---

**Debriefing/Guided Reflection**

**Themes for this scenario:**

We do not expect you to introduce all of the questions listed below. The questions are presented only to suggest topics that may inspire the learning conversation. Learner actions and responses observed by the debriefer should be specifically addressed using a theory-based debriefing methodology (e.g., Debriefing with Good Judgment, Debriefing for Meaningful Learning, PEARLS). Remember to also identify important concepts or curricular threads that are specific to your program.

1. How did you feel throughout the simulation experience?
2. Give a brief summary of this patient and what happened in the simulation.
3. What were the main problems that you identified?
4. Discuss the knowledge guiding your thinking surrounding these main problems.
5. What were the key assessment and interventions for this patient?
6. Discuss how you identified these key assessments and interventions.
7. Discuss the information resources you used to assess this patient. How did this guide your care planning?
8. Discuss the clinical manifestations evidenced during your assessment. How would you explain these manifestations?
9. Explain the nursing management considerations for this patient. Discuss the knowledge guiding your thinking.
10. What information and information management tools did you use to monitor this patient’s outcomes? Explain your thinking.
11. How did you communicate with the patient?
12. What specific issues would you want to take into consideration to provide for this patient’s unique care needs?
13. Discuss the safety issues you considered when implementing care for this patient.
14. What measures did you implement to ensure safe patient care?
15. What other members of the care team should you consider important to achieving good care outcomes?
16. How would you assess the quality of care provided?
17. What could you do improve the quality of care for this patient?
18. If you were able to do this again, how would you handle the situation differently?
19. What did you learn from this experience?
20. How will you apply what you learned today to your clinical practice?
21. Is there anything else you would like to discuss?
Simulation Design Template

Simulation

(Date: [Simulator Lab Date]
Discipline: Nursing
Expected Simulation Run Time: 10 minutes
Location: Middlesex Health Simulation Laboratory
Today’s Date: [Today’s Date]

File Name: ACP_Jane_Franklin
Student Level: Registered Nurses
Guided Reflection Time: Twice the amount of time that the simulation runs.
Location for Reflection: Middlesex Health Debriefing Room

Brief Description of Client

Name: Jane Franklin
Date of Birth: 6/25/1941
Gender: F Age: 77 Weight: 105lbs Height: 5’2
Race: Caucasian Religion: Catholic
Major Support: Daughter, Emily Support Phone: 860-523-0896
Allergies: Banana- hives Immunizations: Shingrix, Flu 10/2019
Attending Provider/Team: Dr. Leona Jenkins, hospitalist

Past Medical History: anxiety, arthritis, chronic respiratory failure, COPD, depression, eczema, emphysema, former smoker, history of GI bleed, hyperlipidemia, hypertension, hypothyroidism, lower extremity edema, oxygen-dependent, peptic ulcer disease, pulmonary hypertension, pulmonary nodules, shortness of breath

History of Present Illness: 77-year-old female coming from Wellington Park skilled nursing facility with a history listed above, who presented to the emergency department today with reports of having altered mental status and being unresponsive to staff.

The patient was just discharged to Wellington Park last week after being readmitted for acute on chronic hypercapnic respiratory failure due to possible malfunctioning BiPAP. She was stabilized in the hospital and was discharged to Wellington Park on BiPAP at 18/8. According to the daughter, she did well on discharge and was placed on CPAP for two nights after discharge, but she noted that the patient has been off it since Friday and the weekend and she wasn’t sure why. Based on the facility’s note, the
patient had low O2 sats in the 80’s on CPAP which was switched to BiPAP yesterday but despite that had O2 sats hovering in the 80’s. She was then kept on high flow oxygen after that. Her mental status worsened, and she became more lethargic and less responsive this morning and was transferred to the emergency department. There, she was found to have an elevated PCO2 of 125.3 on VBG. CPAP was placed, and since then, her mental status has slightly improved. She was admitted to the IMCU. After 24 hours, the patient has improved with O2 sats in the low 90’s on 4L O2 via nasal cannula. She is currently on S8, is AOx2, and can respond to simple questions.

**Social History:** Widowed; recently discharged to short-term rehab. Daughter Emily lives in CT, two sons James and Mike live in California. Quit smoking in 1996 with a prior 30+ pack-year history. She denies alcohol use. She is a retired ultrasound technician.

**Primary Medical Diagnosis:** COPD

Psychomotor Skills Required of Participants Prior to Simulation

General care of a patient diagnosed with a serious illness.

Cognitive Activities Required of Participants Prior to Simulation

None

Simulation Learning Objectives

General Objectives (Note: The objectives listed below are general in nature and once learners have been exposed to the content, they are expected to maintain competency in these areas. Not every simulation will include all of the objectives listed.)

11. Practice standard precautions.
12. Employ strategies to reduce risk of harm to the patient.
13. Perform priority nursing actions based on assessment and clinical data.
15. Communicate with patient and family in a manner that illustrates caring, reflects cultural awareness, and addresses psychosocial needs.
16. Communicate appropriately with other health care team members in a timely, organized, patient-specific manner.
17. Make clinical judgments and decisions that are evidence-based.
18. Practice within nursing scope of practice.
19. Demonstrate knowledge of legal and ethical obligations.

Simulation Scenario Objectives

6. Ask permission and elicit the patient’s and family member’s understanding of the patient’s condition.
8. Perform an advance care planning conversation.
9. Explain advanced directives and the reason initiation of this conversation is important.
10. Guide them through this conversation in a compassionate manner.
References, Evidence-Based Practice Guidelines, Protocols, or Algorithms Used for This Scenario:


Setting/Environment

- Emergency Room
- Medical-Surgical Unit
- Pediatric Unit
- Maternity Unit
- Behavioral Health Unit
- ICU
- OR / PACU
- Rehabilitation Unit
- Home
- Outpatient Clinic
- Other:

Equipment/Supplies

Simulated Patient/Manikin/s Needed: Standardized Patients – Jane - patient elderly female, Emily - daughter

Recommended Mode for Simulator: N/A
(i.e. manual, programmed, etc.)

Other Props & Moulage:

<table>
<thead>
<tr>
<th>Equipment Attached to Manikin/Simulated Patient:</th>
<th>Equipment Available in Room:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ ID band</td>
<td>□ Bedpan/urinal</td>
</tr>
<tr>
<td>□ IV tubing with primary line fluids running at ___mL/hr</td>
<td>□ 02 delivery device (type)</td>
</tr>
<tr>
<td>□ Secondary IV line running at ___mL/hr</td>
<td>□ Foley kit</td>
</tr>
<tr>
<td>□ IVPB with _______ running at mL/hr</td>
<td>□ Straight catheter kit</td>
</tr>
<tr>
<td>□ IV pump</td>
<td>□ Incentive spirometer</td>
</tr>
<tr>
<td>□ PCA pump</td>
<td>□ Fluids</td>
</tr>
<tr>
<td>□ Foley catheter with ___mL output</td>
<td>□ IV start kit</td>
</tr>
<tr>
<td>□ 02</td>
<td>□ IV tubing</td>
</tr>
<tr>
<td>□ Monitor attached</td>
<td>□ IVPB tubing</td>
</tr>
<tr>
<td>□ Other: O2 tubing</td>
<td>□ IV pump</td>
</tr>
<tr>
<td></td>
<td>□ Feeding pump</td>
</tr>
<tr>
<td></td>
<td>□ Crash cart with airway devices and emergency medications</td>
</tr>
<tr>
<td></td>
<td>□ Defibrillator/pacer</td>
</tr>
<tr>
<td></td>
<td>□ Suction</td>
</tr>
<tr>
<td></td>
<td>□ Other: Simulated television, producing noise; bedside table w/water pitcher and tissues; chair for daughter at bedside</td>
</tr>
</tbody>
</table>

Other Essential Equipment: Blood pressure cuff, thermometer, stethoscope

Medications and Fluids:

- Oral Meds:
- IV Fluids:
- IVPB:
- IV Push:
- IM or SC:
simulation and take notes. The scenario will be streamed to the debriefing room.

---

Roles

- Nurse 1
- Nurse 2
- Nurse 3
- Provider (physician/advanced practice nurse)
- Other healthcare professionals: (pharmacist, respiratory therapist, etc.)
- Observer(s)
- Recorder(s)
- Family member #1 Daughter Emily
- Family member #2
- Clergy
- Unlicensed assistive personnel
- Other:

Guidelines/Information Related to Roles

Learners in role of nurse should determine which assessments and interventions each will be responsible for, or facilitator can assign nurse 1 and nurse 2 roles with related responsibilities.

Nurse #1 – responsible for patient assessment, discuss goals of care and advance directives with patient

Nurse #2 – responsible for family assessment, provide ACP information to family

Information on behaviors, emotional tone, and what cues are permitted should be clearly communicated for each role. A script may be created from Scenario Progression Outline.

---

Pre-briefing/Briefing

Prior to report, participants will need pre-briefing/briefing. During this time, faculty/facilitators should establish a safe container for learning, discuss the fiction contract and confidentiality, and orient participants to the environment, scenario, roles, time allotment, and objectives (see full pre-brief script).

Expectations and orient participants

- Environment – Welcome, restrooms, turning off pagers/cell phones
- Scenario – Purpose of simulation & simulation study, Middlesex Health orientation video, SP overview and embedded roles, basic assumption, confidentiality and safe learning environment, fiction contract, logistics, debriefing explanation, psychological safety
- Roles – Define the SP’s roles, the participating nurse’s roles
Report Students Will Receive Before Simulation

Time: 7 a.m.

Person providing report: Nurse ending shift

Situation: Jane Franklin was brought to the ER by her daughter Emily after increased SOB, periods of unconsciousness, and AMS. She was diagnosed with COPD exacerbation and transferred to our unit yesterday. This is her 3rd hospitalization in 6 months.

Background: Jane was just discharged to Wellington Park last week after being readmitted for acute on chronic hypercapnic respiratory failure due to possible malfunctioning BiPAP. She was stabilized in the hospital and was discharged to Wellington Park on BiPAP at 18/8. According to the daughter, she did well on discharge and was placed on CPAP for 2 nights after discharge, but she noted that the patient has been off it since Friday and the weekend and she wasn’t sure why. Based on the facility’s note, the patient had low O2 sats in the 80’s on CPAP which was switched to BiPAP yesterday but despite that had O2 sats hovering in the 80’s. She was then kept on an oxymizer after that. Her mental status worsened, and she became more lethargic and less responsive this morning and was transferred to the emergency department. There, she was found to have an elevated PCO2 of 125.3 on VBG. CPAP was placed, and since then, her mental status has slightly improved. She was admitted to the IMCU. After 24 hours, the patient has improved with O2 sats in the low 90’s on 4L O2 via nasal cannula. She is currently on S8, is AOx2, and can respond to simple questions.

Assessment: I performed an assessment from head to toe. The patient is responsive but slow to answer. She is SOB and sitting in High Fowler’s position is the most comfortable to her. She has been ordered Morphine q4 for SOB, so I administered it at 6am. Her daughter Emily is in the room. Jane’s last vital signs were temperature 98.6F, heart rate 90, respirations 18, and her blood pressure is 135/82. She denies pain. Her intake is minimal, as she is only able to take sips and bites of food.

Recommendation: Jane and Emily asked about the Morphine, but I had to run to another patient, so I administered it but wasn’t able to answer all of their questions. I completed most of the admission documentation but had to skip the section on advance directives because another patient started to code. They seem to have a lot of questions about Jane’s status.

Scenario Progression Outline

Patient Name: Jane Franklin          Date of Birth: 7/24/1941
<table>
<thead>
<tr>
<th>Timing (approx.)</th>
<th>Manikin/SP Actions</th>
<th>Expected Interventions</th>
<th>May Use the Following Cues</th>
</tr>
</thead>
</table>
| 0-3 minutes     | Jane is resting in bed. Emily walks into the room and is visibly upset. Emily: “Mom, they said that you started Morphine for your breathing…does that mean that you’re dying?” Jane: “No...at least, I don’t think so. It helps me breathe. It’s just another medication. I don’t know much more about it.” Emily: “Well, I think you should stop taking it, or it’ll make you die.” | Learners should begin by:  
- Introducing selves  
- Recognize distress between patient and daughter  
- Sits at eye level with patient and daughter  
- Shuts off tv  
- Provide education about Morphine and use | Role member providing cue: Jane, patient.  
Cue: “Will this Morphine make me die?” |
| 3-6 minutes     | Jane: “Thank you for the explanation for the medication. I had a palliative care consult, and the nurse recommended Morphine, which has worked well. She gave me a lot to think about though…she was talking about advance directives and planning, so much to think about.” | • Provide information on specifics of advanced directives such as DNR/DNI, living wills, designated health representatives.  
• Difference between DNR/DNI (effective immediately) & the living will (takes effect only when patient cognitively compromised). | Role member providing cue: Jane, patient.  
Cue: She said something about a DNW...or something and a will…oh and that I had to pick someone to answer questions for me.” |
| 6-10 minutes    | Emily (panicked): “Who came? Why was she talking about that? I don’t understand why it would be brought up if you’re not dying.” | • Initiate discussion on ACP with points of - what does patient know, long-term goals, discuss time frame of illness (...when is the last time you felt | Role member providing cue: Jane, patient.  
Cue: “All I know is that James’s son is graduating kindergarten in 4
Jane: Well I know that my breathing has been getting worse and worse the past few months. I can’t seem to recover like I usually do. I would want Emily to make decisions for me if I can’t. I know I’m sick of coming back to the hospital over and over, feeling better for a little while, and then getting sick again.

Emily: I didn’t realize that you felt this way. We should talk more about what you want...do you remember specific details? I am flying out to California to watch it!”

-------

Debriefing/Guided Reflection
(see debrief script)

Themes for this scenario:
- Discuss ACP conversations among patients
- Advance Directives/MOLST/POLST
- Effective therapeutic communication
- Medication education

We do not expect you to introduce all of the questions listed below. The questions are presented only to suggest topics that may inspire the learning conversation. Learner actions and responses observed by the debriefer should be specifically addressed using a theory-based debriefing methodology (e.g., Debriefing with Good Judgment, Debriefing for Meaningful Learning, PEARLS). Remember to also identify important concepts or curricular threads that are specific to your program.

d) How did you feel throughout the simulation experience?
e) Give a brief summary of this patient and what happened in the simulation.
f) What were the main problems that you identified?
22. Discuss the knowledge guiding your thinking surrounding these main problems.
23. What were the key assessment and interventions for this patient?
24. Discuss how you identified these key assessments and interventions.
25. Discuss the information resources you used to assess this patient. How did this guide your care planning?
26. Discuss the clinical manifestations evidenced during your assessment. How would you explain these manifestations?
27. Explain the nursing management considerations for this patient. Discuss the knowledge guiding your thinking.
28. What information and information management tools did you use to monitor this patient’s outcomes? Explain your thinking.
29. How did you communicate with the patient?
30. What specific issues would you want to take into consideration to provide for this patient’s unique care needs?
31. Discuss the safety issues you considered when implementing care for this patient.
32. What measures did you implement to ensure safe patient care?
33. What other members of the care team should you consider important to achieving good care outcomes?
34. How would you assess the quality of care provided?
35. What could you do improve the quality of care for this patient?
36. If you were able to do this again, how would you handle the situation differently?
37. What did you learn from this experience?
38. How will you apply what you learned today to your clinical practice?
39. Is there anything else you would like to discuss?

Scripts for Standardized patients

Patient (Jane)

General appearance/affect: You are anxious about being in the hospital again and have been given a lot of information. You are generally agreeable to whatever the nurse and physicians are recommending for you.

Due to your COPD, you speak slowly and are frequently out of breath.

If you run into trouble, the safety phrase is: “My chest hurts.”

If the participant/s talk in front of you and don’t maintain fidelity: “Are you saying you don’t know what you’re doing? Could you please get someone that does?”

Daughter (Emily)

General appearance/affect: You are anxious and worried about your mother. With her being back and forth from the hospital and nursing home, you haven’t slept well for a few weeks. You are generally distrustful of the physicians and nurses and wonder what kind of information they’re giving your mom.

At first, you are suspicious of the nurse (participant); however, you begin to listen more when they explain using Morphine, advance directives, advance care planning.

If you run into trouble, the safety phrase is: “My chest hurts.”
If the participant/s talk in front of you and don’t maintain fidelity: “Are you saying you don’t know what you’re doing? Could you please get someone that does?”
Appendix L

Promoting Excellence and Reflective Learning in Simulation

(PEARLS) Method for Debriefing

<table>
<thead>
<tr>
<th>Objective</th>
<th>Task</th>
<th>Sample Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting the Scene</td>
<td>Create a safe context for learning</td>
<td>State the goal of debriefing; articulate the basic assumption</td>
</tr>
<tr>
<td>Reactions</td>
<td>Explore feelings</td>
<td>Solicit initial reactions &amp; emotions</td>
</tr>
<tr>
<td>Description</td>
<td>Clarify facts</td>
<td>Develop shared understanding of case</td>
</tr>
<tr>
<td>Analysis</td>
<td>Explore variety of performance domains</td>
<td>See backside of card for more details</td>
</tr>
</tbody>
</table>

**Any Outstanding Issues/Concerns?**

---

The Analysis Phase

Performance Domains

The analysis phase can be used to explore a variety of performance domains:

- Decision Making
- Technical Skills
- Communication
- Resource Utilization
- Leadership
- Situational Awareness
- Teamwork

Three Approaches

1. **Learner Self-Assessment**
   - Promote reflection by asking learners to assess their own performance

2. **Focused Facilitation**
   - Probe deeper on key aspects of performance

3. **Provide Information**
   - Teach to close clear knowledge gaps as they emerge and provide directive feedback as needed

Sample Phrases

- "What aspects were managed well and why?"
- "What aspects do you want to change and why?"
- "Advocacy: I saw [observation], I think [your point-of-view]."
- "Inquiry: How do you see it? What were your thoughts at the time?"
- "Instructed [behavior]. Next time you may want to consider [suggested behavior], because [rationale]."
Appendix M

Example of Lynn’s Method for Content Validity

Figure 2: Last Page of Simulation Scenario Example Content Validity Form, with Content Expert Feedback

<table>
<thead>
<tr>
<th>Please assess content validity by providing information about the relevance of the item in the simulation.</th>
<th>CONTENT RELEVANCE</th>
</tr>
</thead>
</table>
| In this column are the items of the simulation. Content reviewers will read this content and then rate the relevance of the item using the Content Relevance Scale on the right. | 1. Not relevant  
2. Somewhat relevant  
3. Quite relevant  
4. Highly relevant |
| When initially sent to Content Experts, this column would be blank for content experts to provide a rating and any comments. | 1. Levophed is not necessary in this patient scenario. Consider revising this item. |
| 7. Item 4. HR 120  
BP 76/57  
RR 14  
SpO2 80%  
• If participant(s) begin Levophed drip: Go to Item 6  
• If participant(s) do not begin Levophed drip: Go to Item 5. | As shown here, content experts have rated each item and assigned a number using the Content Relevance Scale. Often reviewers will provide comments if they do not find an item relevant. This is helpful to the educator or researcher when making revisions to the item. |
| 8. Item 5  
HR 140  
BP 75/57  
RR 40  
SpO2 70%  
• If participant(s) intubate patient:  
HR 100  
BP 90/57  
RR 35  
SpO2 80%  
Scenario proceeds to Item 6.  
• If participant(s) do not intubate patient, simulation proceeds to mock code scenario. | 3 |
| 9. Item 6  
End of Scenario  
HR 110  
BP 104/62  
RR 12  
SpO2 98% | 4. Realistic VS to end this scenario. |

What variables that should be added to this simulation scenario?

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Appendix N

Example of Content Validity from Expert Review

INSTRUCTIONS: Please assess content validity by providing information about the relevance of each item in the simulation in the spaces indicated in RED. Rate each item 1 = not relevant to 4 = very relevant and succinct. If you have additional comments or suggestions, space is provided. There are 11 areas for content validation in this document (File: Simulation Scenario_CHATT_CVI). There are two other documents for pre-brief and debrief scripts (Files: Prebrief CHATT script_CVI & Debrief CHATT script_CVI). At the end of each document is space to provide additional comments.

Simulation Design Template
Conversations Had at Trying Times (CHATT) Simulation

<table>
<thead>
<tr>
<th>Date:</th>
<th>File Name: ACP_Jane_Franklin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline:</td>
<td>Student Level: Registered Nurses</td>
</tr>
<tr>
<td>Expected Run Time: 10 minutes</td>
<td>Guided Reflection Time: Twice the amount of time that the simulation runs.</td>
</tr>
<tr>
<td>Location:</td>
<td>Location for Reflection: Middlesex Health Debriefing Room</td>
</tr>
<tr>
<td>Laboratory</td>
<td></td>
</tr>
<tr>
<td>Today’s Date:</td>
<td></td>
</tr>
</tbody>
</table>

Brief Description of Client

Name: Jane Franklin

Date of Birth: 6/25/1941

Gender: F Age: 77 Weight: 105lbs Height: 5’2

Race: Caucasian Religion: Catholic

Major Support: Daughter, Emily Support Phone: 860-523-0896

Allergies: Banana- hives Immunizations: Shingrix, Flu 10/2019

Attending Provider/Team: Dr. Leona Jenkins, hospitalist
**Past Medical History:** anxiety, arthritis, chronic respiratory failure, COPD, depression, eczema, emphysema, former smoker, history of GI bleed, hyperlipidemia, hypertension, hypothyroidism, lower extremity edema, oxygen-dependent, peptic ulcer disease, pulmonary hypertension, pulmonary nodules, shortness of breath.

**History of Present Illness:** 77-year-old female coming from Wellington Park skilled nursing facility with a history listed above, who presented to the emergency department today with reports of having altered mental status and being unresponsive to staff. The patient was just discharged to Wellington Park last week after being readmitted for acute on chronic hypercapnic respiratory failure due to possible malfunctioning BiPAP. She was stabilized in the hospital and was discharged to Wellington Park on BiPAP at 18/8. According to the daughter, she did well on discharge and was placed on CPAP for two nights after discharge, but she noted that the patient has been off it since Friday and the weekend and she wasn’t sure why. Based on the facility’s note, the patient had low O2 sats in the 80’s on CPAP which was switched to BiPAP yesterday but despite that had O2 sats hovering in the 80’s. She was then kept on high flow oxygen after that. Her mental status worsened, and she became more lethargic and less responsive this morning and was transferred to the emergency department. There, she was found to have an elevated PCO2 of 125.3 on VBG. CPAP was placed, and since then, her mental status has slightly improved. She was admitted to the IMCU. After 24 hours, the patient has improved with O2 sats in the low 90’s on 4L O2 via nasal cannula. She is currently on S8, is AOx2, and can respond to simple questions.

**Social History:** Widowed; recently discharged to short-term rehab. Daughter Emily lives in CT, two sons James and Mike live in California. Quit smoking in 1996 with a prior 30+ pack-year history. She denies alcohol use. She is a retired ultrasound technician.

**Primary Medical Diagnosis:** COPD

Brief description of client:
Content relevance - Your answer: ____3__

1. Not relevant
2. Unable to assess relevance without item revision
3. Relevant but needs minor alteration
4. Very relevant and succinct

Comments:

Great HPI. I think it would be more realistic that the patient is transferred to the ED sooner when sats were in the low 80s since they are usually uncomfortable with this type of situation in the facilities. Also, I may be wrong but I don’t believe high flow nasal cannula is available in the nursing home setting so I would recommend taking that part out (unless it means higher levels of supplemental o2 by nc, like 6L).
Psychomotor Skills Required of Participants Prior to Simulation

General care of a patient diagnosed with a serious illness.

<table>
<thead>
<tr>
<th>Content relevance</th>
<th>Your answer: <strong>4</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Not relevant</td>
<td></td>
</tr>
<tr>
<td>2. Unable to assess relevance without item revision</td>
<td></td>
</tr>
<tr>
<td>3. Relevant but needs minor alteration</td>
<td></td>
</tr>
<tr>
<td>4. Very relevant and succinct</td>
<td></td>
</tr>
</tbody>
</table>

Comments:

---

Cognitive Activities Required of Participants Prior to Simulation

All participants will have completed three questionnaires as part of the pre-test. The first is demographic information; the other two ask questions regarding knowledge, attitudes, and self-efficacy in advance care planning.

---

Simulation Learning Objectives

**General Objectives** (Note: The objectives listed below are general in nature and once learners have been exposed to the content, they are expected to maintain competency in these areas. Not every simulation will include all of the objectives listed.)

20. Practice standard precautions.
21. Employ strategies to reduce risk of harm to the patient.
22. Perform priority nursing actions based on assessment and clinical data.
23. Reassess/monitor patient status following nursing interventions.
24. Communicate with patient and family in a manner that illustrates caring, reflects cultural awareness, and addresses psychosocial needs.
25. Communicate appropriately with other health care team members in a timely, organized, patient-specific manner.
26. Make clinical judgments and decisions that are evidence-based.
27. Practice within nursing scope of practice.
28. Demonstrate knowledge of legal and ethical obligations.
Simulation Scenario Objectives

11. Ask permission and elicit the patient’s and family member’s understanding of the patient’s condition.
13. Perform an advance care planning conversation.
14. Explain advanced directives and the reason initiation of this conversation is important.
15. Guide them through this conversation in a compassionate manner.

<table>
<thead>
<tr>
<th>Learning Objectives:</th>
<th>Content relevance -</th>
<th>Your answer: 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Not relevant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Unable to assess relevance without item revision</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Relevant but needs minor alteration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Very relevant and succinct</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:
References, Evidence-Based Practice Guidelines, Protocols, or Algorithms Used for This Scenario:


Setting/Environment

- Emergency Room
- Medical-Surgical Unit
- Pediatric Unit
- Maternity Unit
- Behavioral Health Unit
- ICU
- OR / PACU
- Rehabilitation Unit
- Home
- Outpatient Clinic
- Other:

Equipment/Supplies

**Simulated Patient/Manikin/s Needed:** Standardized Patients – Jane-patient elderly female, Emily-daughter

**Recommended Mode for Simulator:** N/A (i.e. manual, programmed, etc.)

**Other Props & Moulage:**

**Equipment Attached to Manikin/Simulated Patient:**
- ID band
- IV tubing with primary line fluids running at ___mL/hr
- Secondary IV line running at ___mL/hr
- IVPB with _______ running at mL/hr
- IV pump
- PCA pump
- Foley catheter with ___mL output
- 02
- Monitor attached
- Other: O2 tubing connected to O2 concentrator

**Other Essential Equipment:** Blood pressure cuff, thermometer, stethoscope

**Medications and Fluids:**
- Oral Meds:
- IV Fluids:
- IVPB:
- IV Push:
- IM or SC:

**Equipment Available in Room:**
- Bedpan/urinal
- 02 delivery device (type)
- Foley kit
- Straight catheter kit
- Incentive spirometer
- Fluids
- IV start kit
- IV tubing
- IVPB tubing
- IV pump
- Feeding pump
- Crash cart with airway devices and emergency medications
- Defibrillator/pacer
- Suction
- Other: Simulated television, producing noise; bedside table w/water pitcher and tissues; chair for daughter at bedside

The scenario will not be recorded; however, an outside observer will be present for each.
simulation and take notes. The scenario will be streamed to the debriefing room.

### Setting/Environment & Equipment/Supplies:

**Content relevance -**

1. Not relevant
2. Unable to assess relevance without item revision
3. Relevant but needs minor alteration
4. Very relevant and succinct

**Comments:**

---

### Roles

<table>
<thead>
<tr>
<th>Nurse 1</th>
<th>Nurse 2</th>
<th>Nurse 3</th>
<th>Provider (physician/advanced practice nurse)</th>
<th>Other healthcare professionals: (pharmacist, respiratory therapist, etc.)</th>
<th>Observer(s)</th>
<th>Recorder(s)</th>
<th>Family member #1 Daughter Emily</th>
<th>Family member #2</th>
<th>Clergy</th>
<th>Unlicensed assistive personnel</th>
<th>Other: Nurse handing off report will be performed by facilitator</th>
</tr>
</thead>
</table>

---

### Guidelines/Information Related to Roles

(Learners in role of nurse should determine which assessments and interventions each will be responsible for, or facilitator can assign nurse 1 and nurse 2 roles with related responsibilities),

Nurse #1 – responsible for medication explanation, and communication in goals of care, advance directives, and advance care planning,

Nurse #2 – assists Nurse #1 in above. Both nurses will assist each other in the simulation with the communication task.
Pre-briefing/Briefing
Prior to report, participants will need pre-briefing/briefing (See full pre-brief script).

Expectations and orient participants
- Environment – Welcome, location of restrooms, turning off pagers/cell phones
- Scenario – Purpose of simulation & simulation study, Middlesex Health orientation video, SP overview and embedded roles, basic assumption, confidentiality and safe learning environment, fiction contract, logistics, debriefing explanation, psychological safety
- Roles – Define the SP’s roles, the participating nurse’s roles
- Time allotment – Overview of timeline
- Objectives – Review objectives of simulation, answer questions

Roles & Role information:
Content relevance - 
1. Not relevant
2. Unable to assess relevance without item revision
3. Relevant but needs minor alteration
4. Very relevant and succinct

Your answer: 4

Comments:
Report Students Will Receive Before Simulation

Time: 7 a.m.

Person providing report: Nurse ending shift

Situation: Jane Franklin was brought to the ER by her daughter Emily after increased SOB, periods of unconsciousness, and AMS. She was diagnosed with COPD exacerbation and transferred to our unit yesterday. This is her 3 hospitalization in 6 months.

Background: Jane was just discharged to Wellington Park last week after being readmitted for acute on chronic hypercapnic respiratory failure due to possible malfunctioning BiPAP. She was stabilized in the hospital and was discharged to Wellington Park on BiPAP at 18/8. According to the daughter, she did well on discharge and was placed on CPAP for 2 nights after discharge, but she noted that the patient has been off it since Friday and the weekend and she wasn’t sure why. Based on the facility’s note, the patient had low O2 sats in the 80’s on CPAP which was switched to BiPAP yesterday but despite that had O2 sats hovering in the 80’s. She was then kept on high flow oxygen after that. Her mental status worsened, and she became more lethargic and less responsive this morning and was transferred to the emergency department. There, she was found to have an elevated PCO2 of 125.3 on VBG. CPAP was placed, and since then, her mental status has slightly improved. She was admitted to the IMCU. After 24 hours, the patient has improved with O2 sats in the low 90’s on 4L O2 via nasal cannula. She is currently on S8, is AOx2, and can respond to simple questions.
Assessment: I performed an assessment from head to toe. The patient is responsive but slow to answer. She is SOB and sitting in High Fowler’s position is the most comfortable to her. She has been ordered Morphine q4 for SOB, so I administered it at 6am. Her daughter Emily is in the room. Jane’s last vital signs were temperature 98.6F, heart rate 90, respirations 18, and her blood pressure is 135/82. She denies pain. Her intake is minimal, as she is only able to take sips and bites of food.

Recommendation: Jane and Emily asked about the Morphine, but I had to run to another patient, so I administered it but wasn’t able to answer all of their questions. I completed most of the admission documentation but had to skip the section on advance directives because another patient started to code. They seem to have a lot of questions about Jane’s status.
Scenario Progression Outline

Report:
Content relevance - Your answer: ___3___
1. Not relevant
2. Unable to assess relevance without item revision
3. Relevant but needs minor alteration
4. Very relevant and succinct

Comments:
Change This is her 3 hospitalization in 6 months to “3rd hospitalization…”

Patient Name: Jane Franklin Date of Birth: 7/24/1941

<table>
<thead>
<tr>
<th>Timing (approx.)</th>
<th>Manikin/SP Actions</th>
<th>Expected Interventions</th>
<th>May Use the Following Cues</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3 minutes</td>
<td>Jane is resting in bed. Emily walks into the room and is visibly upset. Emily: “Mom, they said that you started Morphine for your breathing…does that mean that you’re dying?” Jane: “No...at least, I don’t think so. It helps me breathe. It’s just another medication. I don’t know much more about it.” Emily: “Well, I think you should stop taking it, or it’ll make you die.”</td>
<td>Learners should begin by: • Introducing selves • Recognize distress between patient and daughter • Sits at eye level with patient and daughter • Shuts off tv • Provide education about Morphine and use</td>
<td>Role member providing cue: Jane, patient Cue: “Will this Morphine make me die?”</td>
</tr>
</tbody>
</table>
### 3-6 minutes

Jane: “Thank you for the explanation for the medication. I had a palliative care consult, and the nurse recommended Morphine, which has worked well. She gave me a lot to think about though...she was talking about advance directives and planning, so much to think about.”

- Provide information on specifics of advanced directives such as DNR/DNI, living wills, designated health representatives

<table>
<thead>
<tr>
<th>Role member providing cue: Jane, patient</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cue:</strong> She said something about a DNW...or something and a will...oh and that I had to pick someone to answer questions for me.”</td>
</tr>
</tbody>
</table>

### 6-10 minutes

Emily (panicked): “Who came? Why was she talking about that? I don’t understand why it would be brought up if you’re not dying.”

Jane: Well I know that my breathing has been getting worse and worse the past few months. I can’t seem to recover like I usually do. I would want Emily to make decisions for me if I can’t. I know I’m sick of coming back to the hospital over and over, feeling better for a little while, and then getting sick again.

Emily: I didn’t realize that you felt this way. We should talk more about what you want

- Initiate discussion on ACP with points of - what does patient know, long-term goals, time frame example

<table>
<thead>
<tr>
<th>Role member providing cue: Jane, patient</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cue:</strong> “All I know is that James’s son is graduating kindergarten in 4 months, and I am flying out to California to watch it!”</td>
</tr>
</tbody>
</table>
Scenario progression outline min 0-3:
Content relevance - Your answer: ___4___
1. Not relevant
2. Unable to assess relevance without item revision
3. Relevant but needs minor alteration
4. Very relevant and succinct

Comments:

Scenario progression outline min 3-6
Content relevance - Your answer: ___4___
1. Not relevant
2. Unable to assess relevance without item revision
3. Relevant but needs minor alteration
4. Very relevant and succinct

Comments:

Would also consider teaching point of the difference between DNR/DNI status (effective immediately) and the living will (takes effect only in coma or if thought to be actively dying”

Scenario progression outline min 6-10:
Content relevance - Your answer: ___4___
1. Not relevant
2. Unable to assess relevance without item revision
3. Relevant but needs minor alteration
4. Very relevant and succinct

Comments:
Debriefing/Guided Reflection

(see debrief script)

Themes for this scenario:
- Discuss ACP conversations among patients
- Advance Directives/MOLST/POLST
- Effective therapeutic communication
- Medication education

We do not expect you to introduce all of the questions listed below. The questions are presented only to suggest topics that may inspire the learning conversation. Learner actions and responses observed by the debriefer should be specifically addressed using a theory-based debriefing methodology (e.g., Debriefing with Good Judgment, Debriefing for Meaningful Learning, PEARLS). Remember to also identify important concepts or curricular threads that are specific to your program.

g) How did you feel throughout the simulation experience?
h) Give a brief summary of this patient and what happened in the simulation.
i) What were the main problems that you identified?
40. Discuss the knowledge guiding your thinking surrounding these main problems.
41. What were the key assessment and interventions for this patient?
42. Discuss how you identified these key assessments and interventions.
43. Discuss the information resources you used to assess this patient. How did this guide your care planning?
44. Discuss the clinical manifestations evidenced during your assessment. How would you explain these manifestations?
45. Explain the nursing management considerations for this patient. Discuss the knowledge guiding your thinking.
46. What information and information management tools did you use to monitor this patient’s outcomes? Explain your thinking.
47. How did you communicate with the patient?
48. What specific issues would you want to take into consideration to provide for this patient’s unique care needs?
49. Discuss the safety issues you considered when implementing care for this patient.
50. What measures did you implement to ensure safe patient care?
51. What other members of the care team should you consider important to achieving good care outcomes?
52. How would you assess the quality of care provided?
53. What could you do improve the quality of care for this patient?
54. If you were able to do this again, how would you handle the situation differently?
55. What did you learn from this experience?
56. How will you apply what you learned today to your clinical practice?
57. Is there anything else you would like to discuss?
Debrief summary (scripts for pre-brief are in another document – File: Debrief CHATT script_CVI)

Content relevance - Your answer: __4____

1. Not relevant
2. Unable to assess relevance without item revision
3. Relevant but needs minor alteration
4. Very relevant and succinct

Comments:
Debrief script:
This is a general outline to prompt questions for debriefing using the PEARLS approach.

| Setting the Scene | Create a safe context for learning | “Let’s spend about 20 minutes debriefing. Our goal is to improve how we work together and care for our patients.”
| | State the goal of debriefing: articulate the basic assumption | “Everyone here is intelligent and wants to improve.” |
| Reaction | Explore feelings | “Any initial reactions?”
| | Solicit initial reactions & emotions | “How did everyone feel about the scenario?”
| | “How did caring for this patient/family make you feel?” |
| Description | Clarify facts/Develop shared understanding of the case | “Can someone summarize the key events faced in this scenario so that we are all on the same page?”
| | “What happened next?” | “What things did you do for the patient?” |
| Analysis (Plus/Delta method) | Explore variety of performance domains/learner-self assessment, focused facilitation, provide information | “What went well and why?”
| | “What was challenging and why?” | “How have your past experiences helped you make sense of the current situation?”
| | Advocacy/Inquiry method “I saw…(beh), I think…, I wonder…(suggested beh w/rationale),” | “Did you think objective 1 was met?” (same for other objectives) |
| Guided application of information/summary | Identify take-aways/learner-centered & instructor-centered | “I would like to spend the next few moments talking about X.”
| | | Focused discussion on advanced directives, MOLST/POLST/advance care planning. |
| | | “What are some takeaways from this discussion for our clinical practice?” |
| | | “In summary, the key learning points from this scenario were…” |
Setting the Scene:

Content relevance - Your answer: ___3___

5. Not relevant
6. Unable to assess relevance without item revision
7. Relevant but needs minor alteration
8. Very relevant and succinct

Comments: I like the idea that everyone (regardless of skill level) wants to improve. I might have trouble saying “Everyone here is intelligent and wants to improve” without sounding condescending, but that might just be me.

Reaction:

Content relevance - Your answer: ___4___

1. Not relevant
2. Unable to assess relevance without item revision
3. Relevant but needs minor alteration
4. Very relevant and succinct

Comments:
Good, open questions.

Description:

Content relevance - Your answer: ___4___

1. Not relevant
2. Unable to assess relevance without item revision
3. Relevant but needs minor alteration
4. Very relevant and succinct

Comments:
Great idea to have one person summarize and encourage others to chime in.

Analysis:

Content relevance - Your answer: ___4___

1. Not relevant
2. Unable to assess relevance without item revision
3. Relevant but needs minor alteration
4. Very relevant and succinct

Comments:
Beh = behavior? I like that summing it up by asking if the objectives were met comes at the end, so that the participants will be prompted to give a more nuanced (and thereby sensitive) answer.
Guided application of information/summary:

Content relevance - Your answer: ___4___

1. Not relevant
2. Unable to assess relevance without item revision
3. Relevant but needs minor alteration
4. Very relevant and succinct

Comments:
Great way to sum it all up.

Comments:
I feel as if the sample phrases would stimulate discussion for patient at a variety of skill levels, from novice to expert. The beauty of this simulation is that it can be used effectively regardless of the level of expertise in the players, as people can always improve upon this skill. I think it would also work well with a group where there is mixed-levels of expertise.