

Advance Care Planning in the Intensive Care Unit: A Quality Improvement Project

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### **Abstract**

Advance Care Planning (ACP) is an essential component in the delivery of high-quality nursing care. Due to current gaps between knowledge and practice, nurses' involvement in ACP is low. The purpose of this project was to improve nurses' knowledge about ACP processes while increasing the number of Pastoral Care referrals. Nurses' involvement in ACP includes making referrals to chaplains because they provide in-depth ACP education for patients and families. Rosswurm and Larrabee's Model for Evidence-Based Practice Change was used to guide the development of this project. A convenience sample of 26 intensive care unit nurses participated in this ACP educational program. Participants were assessed pre- and post-intervention on their knowledge regarding ACP practices. A ten-question test before and after the intervention was administered by the investigator. The results of the test scores demonstrated a positive effect on nursing knowledge, as well as an increase in the number of ACP referrals to the Pastoral Care team. The findings of this project support existing research evidence indicating that there is a need for additional nursing education regarding ACP practices. This project may contribute to a change in healthcare practice by promoting ACP education and referrals.

*Keywords:* advance care planning, advance directives, nursing knowledge

### Advance Care Planning in the Intensive Care Unit: A Quality Improvement Project

The provision of high-quality care involves Advance Care Planning (ACP) because it increases patients' autonomy and provides patient-centered care at the end of life (Gazarian et al., 2018). ACP is the process of helping patients plan future goals of care in case they become unable to make decisions on their own (Kermel-Schiffman & Werner, 2017). The ACP process starts when patients consider their desired treatment options before an acute illness and communicate their wishes to a spokesperson, family member, or health care provider (Hare & Jerome-D'Emilia, 2018). Subsequently, patients document their wishes in writing by completing an advance directive. As the last step in the process, patients review and update ADs as needed (Pearlman, 2013).

ACP is an aspect of health care that is often not fully understood by nurses (Izumi, 2017). Many nurses, as well as patients and families, relate ACP with dying and end-of-life conversations (Izumi, 2017). There is a lack of clarity regarding who assumes the responsibility to initiate ACP (Kroning, 2014). Nurses have the perception that only doctors are responsible for making health care decisions for patients (Kermel-Schiffman & Werner, 2017). Another reason nurses are reluctant to initiate ACP conversations is the limited education and training in ACP (Izumi, 2017). Due to these barriers, nurses fear discussions about ACP despite its benefits (Kermel-Schiffman & Werner, 2017). ACP is valuable because it provides individualized care based on patients' values and beliefs (American Nurses Association [ANA], 2016). ACP can also better prepare families in times of distress and help during difficult decision-making situations (Kermel-Schiffman & Werner, 2017).

Nurses are important in the delivery of ACP because they are actively involved in the patient's care. Nurses have the opportunity to improve ACP discussions by educating patients

and their families and clarifying concepts for them, which will encourage and facilitate their care-planning conversations. When nurses assume an active role in ACP discussions, patients will be more comfortable, and feelings of anxiety and fear can be reduced (Izumi, 2017).

According to the ANA (2016), nurses are responsible for encouraging patients to start the ACP process. However, ACP completion rates are low and the most common cause is lack or insufficient nursing knowledge about this process (Kermel-Schiffman & Werner, 2017).

Although some hospitals offer ACP education for nurses, ACP awareness remains deficient, and many nurses feel unprepared to discuss this topic (Miller, 2017). This proposal outlines a project to improve the quality of ACP processes, including enhancing nursing knowledge and improving ACP practices by making appropriate referrals to the Pastoral Care Department.

### **Background and Significance**

The ACP process has its origins in the 1980s, after two patients with terminal illness diagnoses had poor outcomes (Miller, 2017). In both cases, the families of the two patients wanted to cease life-sustaining measures due to the patient's poor quality of life. The lack of necessary documentation, however, prevented the family and healthcare team from addressing the patient's wishes. The physicians and the hospital rejected the families' requests because they believed that removing life support measures would be unacceptable by the standards of medical practice and considered a homicide (Miller, 2017). Both legal cases received attention from the public, prompting Congress to pass *The Patient Self Determination Act (PSDA)* in 1990. The PSDA requires that all healthcare facilities and providers who receive Medicare and Medicaid reimbursement educate patients about and encourage them to outline their treatment wishes in the form of Advance Directives (ADs). The PSDA requires that information should be provided to patients at the time of their hospital admission and throughout their hospital stay.

The two types of ADs are living wills, or “living documents,” and durable power of attorney for health care (Prince-Paul & DiFranco, 2017). The living will and durable power of attorney for health care both consist of a legal written document outlining the medical care an individual wants or does not want in the case that they have an irreversible and life-threatening condition. A patient’s living will is a written statement of treatment goals to be followed in specific situations (Institute of Medicine [IOM], 2015). A durable power of attorney identifies a person who will serve as the decision-maker when a patient cannot speak for him or herself. ADs take effect only when an individual becomes incapacitated and is too ill to communicate (Prince-Paul & DiFranco, 2017).

Despite the implementation of the PSDA, AD completion rates remain low (Josephs, Bayard, Gabler, Cooney, & Halpern, 2018). In a 2012 survey, 82% of people said it was important to put their wishes in writing, yet only 23% had completed ADs (Prince-Paul & DiFranco, 2017). Many factors contribute to this problem, such as fear, confusion, insufficient knowledge, time limitations, and a lack of family support (Dube, McCarron, & Nannini, 2015). In most cases, young people who are less educated, nonwhite, and of low socioeconomic status are less likely to have this documentation (IOM, 2015). Other aspects that discourage completion of ADs include ambiguous wording of state-mandated forms, restrictions on who can serve as witnesses, notarization, and inadequate reciprocity across states (IOM, 2015).

All adult patients, regardless of age, should participate in ACP discussions; however, ACP is particularly important to the elderly population. The number of older adults is increasing, and two-thirds of them have more than one chronic condition (IOM, 2015). In 2014, 14.5%, or 46.2 million Americans, were 65 years of age or older, and by 2040 older people will consist of 90 million or 21.7% of the total population (IOM, 2015). Older people are the

population group most likely to have chronic conditions, which can impact health care costs. In the United States (U.S.), people with more than one chronic illness account for 71% of the total health care spending (Centers for Disease Control and Prevention [CDC], 2018). More important is that, as the number of chronic conditions increases, older adults are at higher risk of dying or being hospitalized (CDC, 2018). Because of the advances in medicine and life-extending technology, patients' care is not always in accordance with their wishes (McRee & Reed, 2016).

ACP is associated with the reduced use of aggressive, costly, and unnecessary treatments (Dube, McCarron, & Nannini, 2015). The U.S. health care spending increased by 3.9% or \$3.5 trillion in 2017, about 18% of the U.S. gross domestic product was related to health care (Centers for Medicare & Medicaid Services, 2018). The IOM (2013) estimates that \$750 to \$765 billion is lost annually as a result of unnecessary and inefficient services, excess administrative costs, missed prevention opportunities, and medical fraud (IOM, 2013). Federal spending on Medicare services was \$554 billion in 2011; of that total, 28%, or \$170 billion, was spent during the last six months of life (Dewar, 2017, p. 151). Patients often spend their final months of life hospitalized in intensive care units (ICUs) while receiving aggressive treatments (IOM, 2015).

Nursing organizations have taken the lead in promoting ACP. In 2016, the ANA board of directors wrote a position statement to serve as a guideline for nurses and enhance ACP participation. The position statement noted that nurses have the responsibility to facilitate decision-making processes according to patients' preferences. To facilitate nurses' active participation during care planning, they must be knowledgeable about ACP and respect patients' autonomy (ANA, 2016). An initiative led by the Hospice and Palliative Nurses Association (HPNA), tagged "#ISaidWhatIWant," encourages nurses to lead by example and initiate ACP

discussions (National Association for Home Care & Hospice, 2018). In addition, the End-of-Life Nursing Education Consortium (ELNEC), a national education initiative that offers continuing education and training to specialty nurses about ACP, teaches nurses how to communicate with patients and their families about goals of care (American Association of Colleges of Nursing, 2019). Nurses need to be proactive and introduce ACP conversations as early as possible.

### **Needs Assessment**

A large teaching hospital in central New Jersey has an AD policy that states nurses should initiate ACP discussions with patients and families. The AD policy also states that nurses are responsible for ensuring documentation of ADs and making referrals to the Pastoral Care Department to give patients further information about ACP and ADs. Informal interviews with ICU nurses, however, confirmed that most do not follow these procedures. To further understand the need for a quality improvement project to increase ACP knowledge and Pastoral Care referrals, the investigator conducted a SWOT analysis to identify the strengths, weaknesses, opportunities, and threats of this project.

### **Strengths, Weaknesses, Opportunities, and Threats (SWOT)**

**Strengths.** Some strengths associated with the project included support from the nursing director, nurse educator, and Pastoral Care Department. The nursing director of the Trauma/Surgical ICU (SICU) and nurse educator were knowledgeable of the care delivery system and ensured compliance with evidence-based practice policies. The director of the Pastoral Care Department and chaplains offered strong support and constant communication. Members of the hospital's Nursing Research Committee were also enthusiastic about the project implementation period. Another strength that supported the development of this project was the ease and availability of the required documents and recordkeeping of ADs, which are part of the



electronic medical record. Also, red stickers in the paper chart identified patients who already had ADs.

**Weaknesses.** The unit setting was a weakness due to the critical status of the patients. Nurses did not make referrals to the Pastoral Care Department if patients were sedated or comatose. Another weakness was the high number of graduate nurses who are still learning how to react in critical situations. According to the IOM (2015), undergraduate nursing programs are required to offer end-of-life education; new graduates, however, often feel unprepared and not confident in their ability to address ACP. Another weakness was the constraints on the time available to discuss ACP. The ICU is a fast-paced, high-acuity critical environment in which nurses need to take additional time from their busy days to educate patients (Miller, 2017).

**Opportunities.** The project presented the opportunity to improve ACP knowledge among nurses working in the ICU. The nursing staff also stated that their confidence levels increased by educating patients and families about ACP. The project allowed patients to be more involved in documenting their wishes and be active participants of their care. Nurses reported that several patients had executed ADs documentation. Other opportunities consisted of improvements in communication and collaboration between nurses and the Pastoral Care Department. The chaplains were seen more often in the unit, which meant that greater involvement and support from the Pastoral Care team were provided. In the future, this project will also bring opportunities for financial savings and decrease ICU stays because nurses who are knowledgeable about ACP can minimize the likelihood of over- or under-treatment. Expensive therapies and prolonged ICU stays can be avoided when nurses play an active role in ACP.

**Threats.** A possible threat to this project might have been resistance or opposition to the proposed practice change from the ICU nurses. For the successful implementation of the project,

cooperation from nurses and members of the Pastoral Care Department was essential. Another potential threat could be possible changes to the AD policy, which would have affected how the study was conducted. Stigma toward ACP and end-of-life planning may also have posed a threat (Izumi, 2017). Nurses and patients often have incorrect beliefs about setting up goals of care, and they equate ACP and ADs to impending death (Izumi, 2017).

The implementation of this project was essential because there was a gap between evidence and practice regarding ACP. In the SICU, the majority of nurses had insufficient knowledge about ACP, which was verified by informal interviews and direct nursing experience. Members of the leadership team also confirmed that nurses lack education and training about ACP and its documentation. Before implementing the project, the director of the Pastoral Care Department verified that the number of referrals made by nurses had decreased, reflecting a lack of involvement in ACP practice.

The congruence of the project with the organization's mission was evident because ACP improves the quality of end-of-life care (Chan, Ng, Chan, Wong, & Chow, 2019). This project was significant because it improved the practice of and adherence to ACP processes and procedures. It also encouraged nurses to begin confident conversations with patients about their desired medical-treatment goals. Implementation of this project was feasible because it was specific to one unit, the number of nurses was small, and it was cost-effective.

### **Problem Statement**

In the SICU department, the process of ACP consists of a check box on the nursing admission assessment form. According to the IOM (2015), all hospitals are required to ask patients upon admission if they have ADs. If patients do not have ADs, nurses assume the responsibility to educate, verify, and update the ACP documentation. It became apparent that a

check box did not facilitate conversations or inform patients about ACP. Nurses must confirm ADs with family and act as advocates for patients (Izumi, 2017). When patients arrived at the unit in critical condition, nurses were unable to complete ACP education. Patients who then became stable would be transferred out of the ICU without receiving ACP education. This problem revealed the need to develop a quality improvement project that could increase knowledge and improve participation in ACP practices to better care for patients in the acute care setting. Informal nursing interviews and direct experience confirmed that SICU nurses were unaware that making referrals to the Pastoral Care Department meant in-depth ACP education for patients and families. The purpose of this Doctor of Nursing Practice (DNP) project was to improve nurses' knowledge about ACP processes and procedures while increasing the number of Pastoral Care referrals.

### **Clinical Question**

The project addresses the following question: In a sample of SICU nurses (P), how does implementing a protocol change that includes an educational program and a bedside assessment checklist (I), when compared to the standard practice (C), increase knowledge about ACP and the number of Pastoral Care referrals (O)?

### **Aims & Objectives**

The purpose of this project was to promote and increase ACP in the SICU. The first aim of this project was to improve nurses' knowledge about ACP processes and procedures. Five objectives assisted in the achievement of this goal:

- Develop a PowerPoint presentation that includes the definitions and goals of ACP, its' documentation, the current hospital policy, and instructions about the ACP checklist.

- Generate a ten-question test to evaluate SICU nurses' knowledge.
- Identify any misconceptions about ACP with the pretest.
- Educate SICU nurses using the ACP PowerPoint presentation.
- Evaluate nurses' knowledge with a ten-question posttest.

The second aim of this project was to increase Pastoral Care referrals within the SICU department. The objectives to achieve this aim were:

- Conduct retrospective and prospective data collection of Pastoral Care referrals two months before and two months after the project's implementation.
- Develop a data collection checklist to initiate and promote ACP referrals.
- Implement the ACP checklist for two months.

### **Review of Literature**

A comprehensive search of the literature was performed to analyze and evaluate substantial evidence that answers the clinical question. The databases searched included the Cumulative Index to Nursing and Allied Health Literature (CINAHL), PubMed, MEDLINE via EBSCO, and Google Scholar. All databases were searched using the Medical Subject Headings (MeSH) option to narrow down and match content rather than text. The subject headings "advance care planning" or "advance directives" were selected as major concepts. The keywords included in the search were *nursing staff*, *registered nurses*, *healthcare professionals*, *interprofessional team*, or *critical care nurses*, and *educational intervention*, *education program*, or *online learning*, or *continuing education*. The total amount of articles yielded by the search was 308.

The results were refined by reviewing articles according to the inclusion criteria: English language, peer-reviewed, in full text, published from January 1<sup>st</sup>, 2012 to December 31<sup>st</sup>, 2019,

designed with a high level of evidence, and relevant to the PICO question. The total number of articles meeting the inclusion criteria was 157. Of these, 41 were excluded in this review because study participants did not include registered nurses. Articles that addressed other specific disease populations, such as patients with chronic kidney disease or cancer, were eliminated. Another 41 articles were rejected because the studies occurred in the community, primary care, or long-term care settings. Finally, 37 articles were excluded because the studies addressed palliative care, end-of-life, and Physician Orders for Life-Sustaining Treatment (POLST). Of the remaining 38 articles, 23 articles were duplicates and five articles did not address the clinical question. Ten articles were selected for this project because they specifically addressed the clinical problem of how to improve ACP among ICU nurses (See Appendix A). The remaining ten research studies were critically appraised using the Johns Hopkins Nursing Evidence-Based Practice (JHNEBP) research evidence appraisal tool (See Appendix B). The ten research studies included two systematic reviews, one quasi-experimental study, and five non-experimental descriptive studies. The two non-research studies were a quality improvement report and an integrative review (See Appendix C).

### **The Need for ACP**

In the current healthcare system, low rates of ACP persist. An estimated 30% of the population is involved in ACP, and fewer than 50% of severely ill patients have an AD in their medical record (De Vleminck et al., 2013; Kroning, 2014; Lewis, Cardona-Morrell, Ong, Trankle, & Hillman, 2016; Miller, 2018). When ACP discussions do not occur, it could lead to unnecessary or inappropriate medical interventions during emergencies and life-threatening situations (Prince-Paul & DiFranco, 2017). Ideally, ACP information should be provided before patients become critically ill or unable to make decisions for themselves (De Vleminck et al.,

2013; Kroning, 2014; Lewis et al., 2016; Wessman, Sona, & Schallom, 2017). In 2015, 40% of inpatient adults had physical, cognitive, and mental conditions that prevented them from discussing ACP (IOM, 2015). The evidence suggests that patients who initiate ACP before a critical event are more likely to receive their preferred medical treatment (De Vleminck et al., 2013; Rietze, Heale, Roles, & Hill, 2018; Velasco-Sanz & Rayón-Valpuesta, 2016). ICUs are known to provide aggressive medical care; however, it may not always be what the patient desires (Lewis et al., 2016; Price et al., 2017; Shepherd, Waller, Sanson-Fisher, Clark, & Ball, 2018; Wessman et al., 2017). Therefore, ICU nurses play an important role in the delivery of accurate ACP information (Miller, 2018; Price et al., 2017; Rietze et al., 2018; Shepherd et al., 2018).

### **ACP in Nursing Practice**

Nurses expressed positive attitudes toward ACP because it facilitates future care planning and enhances patient comfort and communication (Lewis et al., 2016; Price et al., 2017; Rietze et al., 2018; Shepherd et al., 2018; Velasco-Sanz & Rayón-Valpuesta, 2016). The evidence indicates that nurses are the most appropriate members of the healthcare team to initiate conversations about ACP. Therefore, nurses are expected to be competent in ACP practice, education, and quality processes (Miller, 2018; Price et al., 2017; Rietze et al., 2018; Shepherd et al., 2018; Wessman et al., 2017). Nurses can deliver ACP information at the point of care because they spend the greatest amount of time at the patient's bedside and develop trusting relationships with patients and families (Arnett et al., 2017; De Vleminck et al., 2013; Rietze et al., 2018; Shepherd et al., 2018; Wessman et al., 2017). Although studies found that nurses play a critical role in ACP practice, they also found multiple barriers to facilitating ACP (De Vleminck et al., 2013; Lewis et al., 2016; Price et al., 2017; Rietze et al., 2018). Some barriers

included work environment, comfort level, nurses' knowledge, and time constraints (De Vleminck et al., 2013; Lewis et al., 2016; Price et al., 2017; Rietze et al., 2018).

Nurses play an important role in ACP, however, several studies assessed the participation of other members of the interprofessional team, such as physicians, chaplains, and social workers (Arnett et al., 2017; De Vleminck et al., 2013; Miller, 2018; Price et al., 2017; Shepherd et al., 2018; Velasco-Sanz & Rayón-Valpuesta, 2016; Wessman et al., 2017). ACP can be facilitated by social workers and chaplains because of their knowledge about related policies, legal issues, and spiritual care needs of patients with advanced illnesses (Arnett et al., 2017; Izumi, 2017; Wessman et al., 2017). Physicians and advance practice providers also initiate ACP discussions and inform patients about their prognoses (Kroning, 2014; Izumi, 2017).

### **ACP and AD documentation**

The process of ACP is important because the future goals of patient care can be identified and documented (Arnett et al., 2017; De Vleminck et al., 2013; Price et al., 2017; Shepherd et al., 2018; Velasco-Sanz & Rayón-Valpuesta, 2016). Studies have revealed that AD documentation facilitates discussions and increase nursing knowledge about ACP (Kroning, 2014; Lewis et al., 2016; Miller, 2018; Velasco-Sanz, & Rayón-Valpuesta, 2016). In one study, 64.4% of nurses admitted not knowing the different types of AD documentation, and 90.6% of the nursing professionals did not check to see whether patients' in their care had any form of AD (Velasco-Sanz, & Rayón-Valpuesta, 2016). Another study revealed that most registered nurses reported having a good understanding of ACP and its' documentation, yet participants agreed that their confidence level in ACP would increase with more education (Rietze et al., 2018).

### **Barriers to ACP**

The barriers that prevent ACP discussions consist of limited training, a lack of nursing education, a lack of system-based support, heavy workloads, and role confusion (Arnett et al.,

2017; De Vleminck et al., 2013; Kroning, 2014; Miller, 2018; Price et al., 2017; Rietze et al., 2018; Shepherd et al., 2018; Wessman et al., 2017). Organizations rarely have standardized guidelines or system-based workflow processes that nurses could use to initiate ACP discussions with patients (Arnett et al., 2017; Rietze et al., 2018; Velasco-Sanz, & Rayón-Valpuesta, 2016). Recommendations from the literature included identifying and understanding the barriers to ACP discussions before developing an educational intervention (Arnett et al., 2017; De Vleminck et al., 2013; Kroning, 2014; Lewis et al., 2016; Price et al., 2017). Engaging other stakeholders, such as hospital administrators, nursing leaders, policymakers, registered nurses, and nursing students, to advocate for clear policies and guidelines will help improve nursing knowledge and ACP practices (Kroning, 2014; Rietze et al., 2018; Velasco-Sanz, & Rayón-Valpuesta, 2016).

### **Best Practice Recommendations**

Knowledge about ACP processes and procedures is critical in acute care settings; however, studies highlight a knowledge gap among nurses in this area (Arnett et al., 2017; Price et al., 2017; Shepherd et al., 2018; Velasco-Sanz & Rayón-Valpuesta, 2016; and Wessman et al., 2017). The results of several studies indicated that most nurses felt untrained to initiate ACP conversations because of their inadequate knowledge and low confidence levels (Arnett et al., 2017; Miller, 2018; Shepherd et al., 2018; Velasco-Sanz, & Rayón-Valpuesta, 2016). ACP education from undergraduate schools was limited, and many nurses felt that continuing education in their workplaces would improve practices (Arnett et al., 2017; De Vleminck et al., 2013; Miller, 2018; Shepherd et al., 2018; Velasco-Sanz, & Rayón-Valpuesta, 2016; Wessman et al., 2017). Although researchers recommended that ACP incorporate other disciplines, such as physicians, advanced practice nurses, Pastoral Care workers, and social workers, nurses are in a better position to initiate ACP discussions because they spend the most time with patients (Arnett



et al., 2017; Price et al., 2017; Wessman et al., 2017). Several studies recommended educational interventions that consist of in-services, conferences, workshops, and formal education modules on ACP. By implementing these educational interventions, nursing knowledge about ACP processes can be expected to increase (Arnett et al., 2017; De Vleminck et al., 2013; Kroning, 2014; Miller, 2018; Rietze et al., 2018; Shepherd et al., 2018; Velasco-Sanz, & Rayón-Valpuesta, 2016; Wessman, Sona, & Schallom, 2017).

### **Theoretical Framework**

Rosswurm and Larrabee's Model for Evidence-Based Practice Change was developed to facilitate the transition from traditional and intuition-driven practice to research-driven practice (White, Dudley-Brown, & Terhaar, 2016). The Model for Evidence-Based Practice Change can be used in a variety of settings, such as primary care or acute inpatient areas (Rosswurm, & Larrabee, 1999). The flexibility of using this model in the inpatient setting was considered during the selection of this framework. The model consists of six steps:

- Assess the need for change by comparing both internal data and external data;
- Link the proposed problem with interventions and outcomes;
- Gather and combine appropriate evidence;
- Design how the change will be implemented in practice;
- Implement the change in practice and evaluate the processes and outcomes; and
- Maintain and integrate the proposed change using diffusion strategies (White, Dudley-Brown, & Terhaar, 2016).

Each of the listed steps provided a solid framework to guide this DNP project (See Appendix D). In step one, the investigator assessed the need for change in practice by interviewing nurses about ACP education and related hospital procedures. The investigator

appraised nurses' knowledge about ACP processes by performing a pretest before the educational program. The investigator also discussed the clinical problem of ACP referrals between the Pastoral Care director and members of the leadership team. The model describes a comparison of the internal and external data to support the need for a change in practice. In this project, internal and external data of ACP referrals and the nurses' knowledge of ACP could not be obtained due to the lack of performance data from the participating facility and other similar medical centers.

The second step was to link the problem to interventions and outcomes. The investigator identified potential interventions that can be adapted into the facility setting. Outcome indicators were also selected to assess the impact of the interventions. The two dependent variables consisted of increasing ACP knowledge and Pastoral Care referrals for the promotion of ACP. The formulation of a clinical question using the PICOT format completed this step. The clinical question addressed the problem, intervention, comparison, and outcomes of this project.

The third step included gathering and synthesizing the evidence. This step was accomplished by reviewing the literature pertinent to the clinical question. Critical appraisal of the literature evaluated potential answers to the clinical question. Evidence that provided possible interventions to improve the ACP process was synthesized in the review of literature.

The fourth step was to design how the change would be implemented into practice. Results of research studies indicated that an educational program for nurses could improve their knowledge of ACP and related policies and procedures. The investigator designed this project also to test the proposed implementation of an ACP checklist at this facility, which would increase Pastoral Care referrals.

The fifth step was implementing and evaluating the practice change. Following Institutional Review Board (IRB) approval, the investigator conducted a two-month retrospective data collection of Pastoral Care referrals as baseline data before the implementation of the project. After retrospective data collection, the investigator conducted ACP educational sessions for one month. The bedside checklist tool and prospective data collection were implemented following the educational sessions for two months. The evaluation of this project indicated that knowledge about ACP improved after the educational program and there was an increase in the number of Pastoral Care referrals made by the participants.

The sixth and final step was integrating and maintaining the practice change. To sustain and integrate the improvements in knowledge and ACP referrals, nurses could complete ACP continuing education courses twice a year as an online module. The lecture presentation could be incorporated into the facility's electronic learning system using PowerPoint slides. Additional efforts to maintain the practice change would be to integrate the protocol into a standard of practice.

### **Methodology**

This DNP project consisted of a one-group pretest-posttest interventional design using a convenience sample of SICU nurses. One of the interventions was an educational program that involved a lecture presentation and a case study. A single group of participants completed a pretest before the ACP educational program and a posttest immediately after. The related outcome for this intervention was to improve nurses' knowledge regarding ACP practices.

The project also included retrospective and prospective data collection of Pastoral Care referrals made before and after the project implementation. A second intervention was to implement the ACP bedside assessment checklist for two months. Participants completed the

checklist to assess if a patient needs a referral to Pastoral Care. Retrospective data collection assessed the number of existing Pastoral Care referrals prior to the intervention, and prospective data collection evaluated the number of Pastoral Care referrals after the project implementation. The related outcome was to increase the number of Pastoral Care referrals made by nurses. The process of selecting the setting, recruiting participants, planning, and collecting the data will be described in this section.

### **Setting**

The setting for the project was a SICU department that cares for trauma, post-surgical, and neurosurgical patients in a large urban hospital in central New Jersey. The unit had a central nursing station and ten patient rooms.

This 965-bed hospital is affiliated with one of the largest health care systems in the state. The hospital provides comprehensive medical and surgical care to different patient populations and specializes in cardiovascular surgery, cancer care, neuroscience, and orthopedics. This facility concentrates on emergency preparedness and is considered a level-one trauma center. In addition, the participating facility is the principal teaching hospital for one of the state's four medical schools. The hospital has also earned the prestigious Magnet Award designation for nursing excellence more than five times. As a Magnet hospital work environment, the participating SICU department integrates transformational leadership, team collaboration, structural empowerment, innovations, and support for performance improvement into the culture of its organization.

The nursing leadership structure consists of one nursing director, three assistant nurse managers, and one clinical nurse educator. Additionally, the staffing pattern during the day and

night shifts consist of six registered nurses. The typical nurse-to-patient ratio was one-to-two, but at times the ratio was reduced to one nurse to one patient, based on acuity.

### **Population**

Participants in this project were drawn from a total of 30 bedside nurses with various years of ICU experience. Most nurses in this unit have earned critical care nursing certification (CCRN) from the American Association of Critical Care Nurses (AACN). However, nurses who were not CCRN board-certified also participated in the project. Inclusion criteria were registered nurses who work full time, part time, or per diem, have six months or more experience on the unit, and provide direct patient care. Newly hired nurses who were precepted and on orientation, nurses who were in the float pool, and nurses who were part of the leadership or administrative staff were excluded.

The project included a convenience sample of nurses working in the SICU department. It was originally estimated that the sample size would include the total number of nurses in the participating unit; however, the sample size consisted of 26 nurses. The sample size was small, but it was feasible for data collection and large enough to observe changes in practice.

### **Participant Recruitment**

The recruitment strategy included advertising materials, such as flyers, e-mail notices, and direct person-to-person invitations. The flyers were displayed at the center of the nursing station, bulletin board, locker room, and break room (See Appendix E). All nurses from the designated SICU department received an e-mail recruitment notice, and an additional reminder e-mail was sent 15 days later (See Appendix F). The co-investigator conducted in-person recruitment by approaching the potential participants at work and providing them with an announcement (See Appendix G). All advertising methods included the name of the project, the

project design and purpose, the criteria for eligibility, a list of benefits, and the time or other commitments required of the participants. The principal investigator's (PI) contact information was also available on the recruitment materials so participants could request further information about the project. The recruitment process lasted one month, and participation was voluntary.

### **Consent Procedure**

Registered nurses who were willing to participate in the project were provided with detailed information about its purpose, benefits, risks, and outcome measures before consenting to be part of the project. The participants had the decisional capacity to consent and were required to give informed consent. The consent form was created using the Rutgers IRB template and was customized to meet the objectives of this project (See Appendix H). All participants were assured that participation was strictly voluntary and confidential. The consent discussion lasted five minutes, but participants also had additional time to ask questions about the consent. The co-investigator collected all participants' signed agreement and placed them in a secure location.

The project also involved obtaining the number of Pastoral Care referrals placed by the participants before and after project implementation. Referrals to the Pastoral Care Department were made at the time of an inpatient admission or by calling the Pastoral Care Office. Referrals were not linked to patient's protected health information (PHI) and did not constitute human subjects research because dataset was not identifiable. Electronic medical records, patient medical charts, or other patient related information was not accessed or collected.

### **Ethical Consideration**

IRB submission and review was required to protect the participants' privacy and monitor their safety. The co-investigator completed the Rutgers IRB non-interventional research protocol

template. The research protocol obtained IRB approval on December 2, 2019, before project implementation. Federal, institutional, and ethical guidelines in accordance with IRB requirements were strictly followed. In addition, the co-investigator completed the Rutgers Collaborative Institutional Training Initiative (CITI Program) prior to engaging in human subjects' research.

Registered nurses employed in the participating SICU department were the only individuals involved in this project. Participants were assured that all data collection was free of personal identifiers. Pretest and posttest results were anonymous, and strict confidentiality was maintained during the implementation of the project and analysis of the results. There was no connection between a participant's identity and their test answers.

### **Risks, Harms, Benefits**

There were minimal risks associated with this project. The possibility of a breach to confidentiality was a small risk, but participants were assured that the data collected was safely stored. Answers to the pretest, posttest, and evaluation forms were anonymous throughout the implementation and dissemination of the project. Data collection was free of personal identifiers. Participants' names and email addresses, however, were entered on the back of one raffle ticket for the possibility of winning a gift card. All tickets were shredded at the end of the raffle drawing. There was no harm related to the implementation of this DNP project.

Many benefits were associated with the project, but these benefits could not be guaranteed. Participants had the chance to increase their knowledge and confidence levels about ACP and related documentation. There was also the possibility of improving nurses' communication skills and ability to be effective advocates for patients. Another potential benefit

was that ICU nurses could create their own goals of care and begin conversations about ACP with their own families.

### **Subject Costs and Compensation**

There was no cost to participate in the project. Nurses who met the inclusion criteria could participate at any time during the recruitment period. Nursing participants did not receive any monetary payment; however, a \$20 Amazon gift card was provided to five nurses in compensation for their time and effort. Participants entered a drawing and five winners were randomly selected at the end of the project. The five winning subjects signed and printed their names on a copy of the purchased gift cards to ensure documentation of compensation.

### **Intervention**

The co-investigator developed a 20-minute educational program that consisted of a 15-minute lecture presentation and a five-minute case-study discussion. The format of the presentation was guided by cognitive and experiential learning theories because adult learners are motivated to learn when the content is applied to real work experiences (Merriam & Bierema, 2014). The educational program included the definitions and goals of ACP, completion of ACP-related documentation, current hospital policy, and instructions on how to fill out the ACP checklist (See Appendix I). The education was provided using a PowerPoint presentation and included images and visual diagrams to improve learning and memorization. Multiple educational sessions were held for one month and additional one-to-one education was provided as needed. Following the lecture presentation, there were three open-ended questions presented for group discussion: (a) What are the benefits of initiating ACP discussions?, (b) What are the forms of ACP documentation?, and (c) Where else could you refer the patient for advice on ACP? Participants were encouraged to ask questions and share their experiences with ACP.



Another intervention was the implementation of a bedside assessment checklist to assess whether a patient needed a referral to Pastoral Care for ACP counseling. Though validated tools are not available at this time, the main content of this intervention was based on evidence from the literature, hospital policies, and direct nursing experience. The checklist was developed by the co-investigator and consisted of four contingency questions (See Appendix J). Questions verified ACP and AD information during patient admission to the unit or as soon as a patient became able to make informed decisions. Participants were required to ask their patients if they were interested in learning additional information about ACP, which prompted participants to make a referral to the Pastoral Care Department. The checklist contained no patient information and was not part of the medical record. After the checklist was completed, the form was returned to the co-investigator for data analysis. The implementation of this checklist lasted two months following the educational program.

### **Outcomes**

The project had two outcome variables. One of them consisted of improving the participants' knowledge about ACP practices in accordance with the facility policy. The second outcome was to increase the number of Pastoral Care referrals. A detailed description of the outcomes and data collection tools will be addressed in this section.

### **Outcomes Measured**

One dependent variable was to improve participants' knowledge about ACP practices. Nurses play an essential role in the delivery of ACP; however, knowledge about ACP and its related policies was limited. Nurses do not receive a standardized education, and there is no formal protocol. Although the facility has a policy that provides definitions of ADs, legal terms, and overall description of nurses' responsibilities, nurses reported the need for further education.

Improvement in knowledge has the potential to facilitate and promote ACP; therefore an educational program was necessary in order to achieve this outcome.

The second outcome was to increase the number of Pastoral Care referrals. Pastoral Care referrals are typically made by nurses completing the health assessment form at the time of an inpatient admission. Nurses could also refer patients at any time after admission by calling the Pastoral Care Office at the specified extension number. Referrals to the Pastoral Care Department indicated in-depth discussion of ACP for patients and families; however, it was identified that nurses were not following these procedures.

### **Data Collection Tools**

The outcome of enhancing the participants' knowledge about ACP was measured by a pretest and a posttest. The pretest and posttest were designed by the co-investigator, and they contained the same ten multiple choice questions (See Appendix K). Question topics included the definitions and goals of ACP, how to complete ACP-related documentation, and current hospital policy. The co-investigator administered the pretest and posttest before and after the educational program. The pretest measured the current knowledge about ACP practices; the posttest was used to determine whether there were any changes in knowledge and understanding of ACP after the program.

Retrospective and prospective data collection methods were used to measure the outcome of increasing the number of Pastoral Care referrals. Retrospective data collection determined the number of referrals made during the two months before the educational program, while prospective data collection assessed the number of referrals made after the program. Members of the Pastoral Care Department have recorded each referral received for the past two years. The staff provided the co-investigator with the total number of referrals made within the specified

period of time. The Nursing Informatics team provided the total number of referrals made through the inpatient admission process for the SICU department and not from any other unit.

### **Project Timeline**

The project proposal was finalized and received approval by the DNP project chair and team members on August 14, 2019. After receiving the project team's approval, the project proposal was submitted to the IRB for review. The co-investigator was required to make minor revisions and editorial modifications to the protocol from September until November. The IRB approved the project on December 2, 2019. The co-investigator then assessed the number of existing Pastoral Care referrals for October and November 2019. Following retrospective data collection, the educational sessions were held from December 10 until December 31, 2019. The implementation of the ACP bedside assessment tool and the prospective data collection for Pastoral Care referrals began at the end of the educational program. It proceeded for the next two months of January and February 2020. The data analysis and evaluation of the project were completed by March 2, 2020.

### **Resources Needed/Economic Considerations**

The total cost to implement this project was \$200.00, which included material costs, compensation costs, data management technology costs, and parking costs (See Appendix L). The DNP student was responsible for the full monetary cost of the project's implementation. Written materials, such as advertisement flyers, tests, and education tools were printed on 8.5"x11" standard letter paper. Printing and photocopying from an office supply store cost a total of \$60.00. During the educational intervention, a laptop computer was used to display the PowerPoint presentation. Data management technology was provided by the co-investigator's laptop and desktop computer and was provided at no cost. The co-investigator traveled multiple

times to the SICU department to hang recruitment materials and deliver the educational program. Parking costs at the participating facility were \$40.00. The co-investigator purchased five \$20.00 Amazon gift cards to compensate nurses for their voluntary time and effort.

### **Evaluation Plan**

Evaluation of the project provided information about its strengths, weaknesses, and opportunities for further improvement. The co-investigator created an evaluation form, which was completed at the end of the implementation period. The evaluation form consisted of six questions: two Likert-scale, one close-ended, and three open-ended questions (See Appendix M). Participants responded to these six questions:

- Did you find this project beneficial?
- Do you feel comfortable advising patients about ACP?
- What aspect did you like the most?
- What aspect did you like the least?
- Did you perceive any barriers to implementing this information into clinical practice? and
- What suggestions do you have for improvement?

Participants evaluated the project by selecting one answer for each question and supplementing additional comments when needed. Comfort level and beliefs were measured with 5-point Likert scale questions ranging from 1 = strongly disagree to 5 = strongly agree. Participants, who answer “no” to the close-ended question, were required to provide a reason. All evaluation forms remained anonymous, and participants were given at least five minutes to answer all questions. After completing the form, participants dropped their answers into a box

located in the unit. The results of the participants' evaluations would be beneficial if this DNP project is replicated.

### **Data Analysis**

Data entry and quantitative data analysis were completed using Microsoft Excel. The data collected by the pretest and posttest scores were analyzed using descriptive and inferential statistics. Pretest and posttest results were summarized using descriptive statistics, including frequency distribution, the mean, standard deviation, median, and percentages. Inferential statistics were used to measure test scores before and after the intervention. A two-sample *t*-test was used to determine whether the educational program made a difference in the participants' knowledge. The number of referrals obtained from the prospective and retrospective data collection was analyzed using a two-sample *t*-test, which compared the difference between the number of Pastoral Care referrals before and after the educational program.

### **Data Maintenance and Security**

Procedures were established to ensure the safety and anonymity of the data. Consent forms were securely stored in a locked filing cabinet in the residency office of the co-investigator. Upon completion of the pretest, posttest, and evaluation forms, participants folded the documents in half and placed them in a large manila envelope. All data collected was then stored in a locked cabinet in the residency office of the co-investigator. Access to all paper files was restricted to the co-investigator alone. The participants' raffle tickets, which included their names and personal email addresses, were collected in a black bag and stored on-site at the participating facility. The raffle tickets were placed in the co-investigator's locker, secured with a lock until the end of the project. Only the co-investigator had access to her work locker. Upon completion of the project, all research data collected will be stored in a secured location in a

locked filing cabinet at the investigator's office. Research record retention after the study is closed will be in accordance with Rutgers IRB policy. The raffle tickets will be destroyed via shredder after the drawing.

## **Results**

This DNP project had five objectives. These were to educate nurses about ACP, administer a pretest and posttest to measure nurses' knowledge, implement the ACP bedside assessment checklist, complete the retrospective and prospective data collection of Pastoral Care referrals, and fill out a project evaluation form.

A total of 26 bedside nurses participated in this project, which represented 87% of the total population size. The findings of the project are presented and discussed in sections: (a) results of knowledge pretest and posttest, (b) results of number of Pastoral Care referrals, and (c) results of the intervention evaluation.

### **Results of Nursing Knowledge, Pretest, and Posttest**

Descriptive statistics were used to summarize measures of central tendency and measures of variability, such as the mean, median, range, and standard deviation. As seen in Table 1, the pretest scores ranged from 50% to 90%, with a mean score of 71.5% (SD = 11.5). The respondents' most common score ( $n = 10$ , 38%) was 80%, while only 8% of respondents ( $n = 2$ ) received a score of 90% (Table 2). The lowest scores were 50% ( $n = 3$ , 12%) and 60% ( $n = 4$ , 15%).

The posttest scores ranged from 70% to 100%, with a mean score of 88.5% (SD = 10). The respondents' most common score (35%) was 90% ( $n = 9$ ), and 31% of participants received a score of 100% ( $n = 8$ ). Only three respondents (12%) scored between 61% and 70%, and zero participants scored a 50% (Table 3). The results of all ten multiple-choice questions successfully

demonstrated that knowledge did improve, as seen by the 24% increase in the posttest scores after the ACP educational program. The posttest scores were significantly higher ( $M = 88.46$ ,  $SD = 10.07$ ) than pretest scores ( $M = 71.53$ ,  $SD = 11.55$ ),  $t(50) = -5.62$ ,  $p < 0.001$ ,  $d = 1.61$ .

An independent two-sample  $t$ -test was used to determine whether the ACP program made a difference in the participants' knowledge (Table 4). The results were found to be statistically significant; a pairwise comparison of the two values showed a significance of  $p < 0.001$  with a 95% confidence interval.

### **Results of Pastoral Care Department Referrals**

The co-investigator completed a retrospective and prospective data collection of Pastoral Care referrals before and after the intervention. The total number of referrals for October and November 2019 were three and four, respectively. Prospective data collection assessed the number of Pastoral Care referrals made after the educational program and during the implementation of the ACP bedside checklist. During January and February 2020, referrals had increased to ten and eight, respectively (Table 5). A two-sample  $t$ -test showed a statistically significant increase in the number of Pastoral Care referrals made after the educational program ( $M = 9$ ,  $SD = 1.41$ ) compared to before the implementation of the program ( $M = 3.5$ ,  $SD = 0.70$ ),  $t(2) = -4.91$ ,  $p = 0.03$  (two-tailed). The total number of Pastoral Care referrals for October and November was seven, and the number of referrals post project implementation was 18, a mean improvement of 1.57 (Table 6).

### **Results of the Program Evaluation**

The ACP program evaluation assessed the participants' perspective on the learning objectives and overall project experience. The majority of respondents (58%,  $n = 15$ ) strongly agreed with the statement, "the information included will benefit my practice." An average of

31% (n = 8) of the respondents agreed, while 12% (n = 3) answered “neither agree nor disagree” (Table 7). Of the respondents, 54% (n = 14) strongly agreed with the second statement: “I feel comfortable advising patients on the importance of ACP.” Nine participants (35%) agreed about feeling comfortable, while 4% (n = 1) disagreed.

Nine respondents (35%) answered “yes” to the third question: “Do you perceive any barriers to implementing this information into clinical practice?” Participants who answered “yes” were provided a space in which to identify some of the barriers. The majority of respondents (n = 5, 56%) stated that the patient’s acuity was the main barrier to ACP. Time restraints and sensitivity about discussing the topic were the second-most common barriers (n = 2, 22%). Seventeen participants (n = 17, 65%) denied perceiving barriers to implementing ACP education into their clinical practice (Table 8).

The last three questions consisted of identifying which aspect of the project respondents liked the most, which aspects they liked the least, and their suggestions for improvement. The majority of participants (n = 14, 54%) reported that they liked learning about ACP practices; seven nurses (27%) reported that they liked the lecture presentation, and five nurses (19%) did not answer the question. Responses to the question “What did you like the least?” included “nothing” (n = 13, 50%), “the ACP bedside checklist” (n = 8, 31%), and no answer (n = 5, 19%). Additional recommendations for project improvement involved the following: “Do nothing” (n = 10, 38%), no answer (n = 8, 31%), “incorporate program into an actual nursing protocol” (n = 6, 23%), and other reasons (n = 2, 8%).

### **Discussion**

The American Nurses Association (ANA) expects nurses to encourage ACP discussions among patients and their families (ANA, 2015). In 2016, the ANA released a position statement



that described the nursing responsibilities during ACP. Nurses need to provide patient education about ACP, be knowledgeable about the topic, and understand their facilities' policies and procedures regarding ADs (Miller, 2017). Studies have revealed, however, a lack of nursing education and standardized training about ACP (Arnett et al., 2017; Miller, 2018; Shepherd et al., 2018; Velasco-Sanz, & Rayón-Valpuesta, 2016). In addition, most nurses feel unprepared to discuss ACP or answer questions related to its documentation (Izumi, 2017; Kermel-Schiffman, & Werner, 2017; Miller, 2018). The purpose of this quality improvement project was to enhance nursing knowledge and improve ACP practices by increasing the number of referrals to the Pastoral Care Department, per facility policy.

An ACP educational program was the most appropriate intervention for this study site because nurses expressed their lack of knowledge and ACP involvement. The literature supports that educational interventions, which consist of in-services, conferences, and formal education modules, are necessary to improve nursing knowledge about ACP processes (Arnett et al., 2017; De Vleminck et al., 2013; Kroning, 2014; Miller, 2018; Rietze et al., 2018; Shepherd et al., 2018; Velasco-Sanz, & Rayón-Valpuesta, 2016; Wessman, Sona, & Schallom, 2017). The co-investigator identified many misconceptions associated with the completion of AD and related organizational policies. Many studies have stated that healthcare institutions should support the ACP process by developing clear guidelines and training programs (Arnett et al., 2017; Jimenez et al., 2018; Rietze et al., 2018; Velasco-Sanz, & Rayón-Valpuesta, 2016).

This project was successful in increasing nursing knowledge about ACP. A formal ACP educational program was conducted that included a 15-minute lecture presentation and a 5-minute case study for discussion. Nursing participants completed a pretest and a posttest before and after the intervention to evaluate changes in their knowledge. Participants who received the

educational intervention increased their knowledge by 24%. These results were evident after analyzing participants' pre and posttest scores. The average pretest score was 71.5%, while the average posttest score was 88.5%. Data analysis revealed statistically significant results after participants received the educational program ( $p < 0.001$  with a 95% confidence interval).

The second aim of this project was to increase the number of ACP referrals to the Pastoral Department because doing so will contribute to the promotion of ACP. Researchers recommend incorporating other disciplines, such as physicians, advance practice nurses, Pastoral Care workers, and social workers, into ACP practice, but nurses are in a better position to initiate ACP discussions (Arnett et al., 2017; Price et al., 2017; Wessman et al., 2017). The policy and procedures of the participating institution indicate that nurses should inquire about ACP and make referrals to the Pastoral Care Department for additional education. This project found that there was an increase in referrals. The data analysis revealed that, after the educational program, the number of ACP consults to the Pastoral Care Department increased significantly ( $p = 0.03$ ). The total number of referrals before the project's implementation was seven during October and November 2019. After the educational program, during January and February 2020, the number of referrals increased to 18.

### **Facilitators and Barriers**

An important facilitator during the project's development was the support and constant communication between the nursing leadership and the co-investigator. The nursing director and nurse educator were motivated to learn more about ACP and offered assistance during the implementation of the study. The director of the Pastoral Care Department offered ongoing support and was available to clarify and reinforce policy and procedures. Another facilitator was the clear identification of nursing responsibilities and the AD policy of the institution, which

ensured that the project's implementation was not determined by the co-investigator but followed organizational guidelines.

The project had several limitations. One of the limitations was time constraints. Although the lecture presentation was short, it was difficult to accrue nurses to participate in the educational program. Providing time for nurses to attend the program during regular work hours was a key factor in ensuring access to the lecture presentation and case study. An alternative approach to this limitation would have been to develop an online ACP educational module, which would allow nurses to access the learning module at home.

Another limitation was patient acuity in an ICU setting. The implementation of the ACP checklist was challenging to complete because of the acuity of each patient. Many patients in the ICU are sedated and intubated, which prevented nurses from filling out the checklist. Nurses reported difficulty in determining whether a checklist had been completed for a patient. A revised checklist that included date or patient initials would have resolved this limitation.

Understaffed Pastoral Care chaplains also represented an important barrier. The Pastoral Care Department director reported having a limited number of health care chaplains within the facility. At times, the referral process involved leaving a voicemail because chaplains were not readily accessible after hours or on weekends.

### **Unintended Consequences**

Two unintended negative consequences were found during the implementation of this project. First, the SICU department moved to a new location within the facility. This unforeseen change in setting required an immediate update to the Pastoral Care Department by the co-investigator. It was important to notify the Pastoral Care team to avoid collecting referrals from the wrong department.

The second unintended consequence was nurse turnover and the introduction of newly hired nurses. Four nurses did not participate in the educational program. One nurse refused participation, two nurses transferred out to other departments, and one nurse did not have six months of experience in the unit. Nurses who were being precepted did not meet inclusion criteria to participate in the program, creating a separation between the new nurses and the experienced nurses. There were no positive unintended consequences during the project implementation.

### **Plan for Process Evaluation**

Process evaluation consisted of considering the limitations for project implementation and adapting to constructive participants' feedback. The information obtained from the participants' evaluation forms will improve the future implementation of other ACP-related projects. One suggestion for improvement was to make the ACP checklist clearer and readily available. Nurses reported inconsistency and misunderstandings when filling out the checklist. This information was important because the ACP checklist could be revised and incorporate better assessment parameters. Nurses also stated that it was important to include families when completing the ACP checklist because patients in the acute care setting are usually surrounded by family members.

Other information from the participants' evaluation forms included incorporating the educational program into a nursing standard of practice. The majority of nurses (58%) stated that the project would benefit their practice, and 54% felt more comfortable advising patients on the importance of ACP. This information can assist the co-investigator in creating a nurse-driven protocol. Knowing participants' suggestions for project improvement and adapting to

constructive feedback are important aspects of the evaluation plan. When considering these aspects, future implementation of the project can achieve better results and expected outcomes.

### **Implications**

This project was designed using Rosswurm and Larrabee's Model for Evidence-Based Practice Change. The last step of the theoretical framework is integration and maintenance of the change in practice, including the implications of the project and its clinical significance. This project has implications for clinical practice, healthcare policy, quality and safety, education, economical, and organizational. The findings resulting from this ACP quality-improvement project should be adapted into a plan for future scholarship and sustainability.

### **Clinical Practice**

Standards of practice vary by hospital, but a nurse can function as an educator, assessor, advocate, facilitator, and manager of ACP (Izumi, 2017). Nurses at the participating hospital are required to ask patients about the existence of an AD and document the answer in their medical record. This process is only being done, however, during patients' admission to a unit. A positive result on this project reinforced the need for a change in current practice because ACP should be initiated at any time and revisited periodically as a patient's health status changes. The ACP assessment checklist was used during patient admission to the ICU or as soon as a patient became able to make informed decisions. The checklist empowered bedside nurses to ask about ACP and make Pastoral Care referrals early.

Organizations rarely have standardized guidelines or system-based workflow processes that nurses can use to initiate ACP discussions with patients (Arnett et al., 2017; Rietze et al., 2018; Velasco-Sanz, & Rayón-Valpuesta, 2016). Although the findings of this project are

specific to nurses in one department, the finds suggest that there is an opportunity to attain a standardized ACP process throughout the hospital.

According to the ANA (2016), nurses should promote and facilitate early ACP conversations for all individuals regardless of their age or health status. Most nurses, however, lack knowledge about the goals of ACP and their roles and responsibilities during the ACP process. After implementing the ACP educational program and using the ACP assessment checklist, nurse participants increased their knowledge by 24% and began initiating early ACP discussions. The methodology of this project could serve as a template for providing nurses with basic knowledge of ACP and creating a standardized nursing practice protocol.

Several studies indicated that most nurses felt untrained to initiate ACP conversations because of their inadequate knowledge and low confidence levels (Arnett et al., 2017; Miller, 2018; Shepherd et al., 2018; Velasco-Sanz, & Rayón-Valpuesta, 2016). The results of this project confirm that nurses are more comfortable having ACP discussions with their patients when they are knowledgeable about ACP. More than 50% of the participants agreed with the statement “I feel comfortable advising patients about ACP.” Nurses play a critical role in leading practice changes; therefore, they need to be confident and knowledgeable when initiating conversations about the ACP process.

Several studies also assessed the participation of other members of the interprofessional team, such as chaplains and social workers (Arnett et al., 2017; De Vleminck et al., 2013; Miller, 2018; Price et al., 2017; Shepherd et al., 2018; Velasco-Sanz & Rayón-Valpuesta, 2016; Wessman et al., 2017). Pastoral Care counselors, such as chaplains, are already equipped to have ACP conversations, which additionally leads to the completion or documentation of ADs (Lee, McGinness, Levine, O’Mahony, & Fitchett, 2018). The findings of this project also reinforced

current practice to include other disciplines in the ACP process. It was important to involve the Pastoral Care Department and follow current hospital practices. The results of the project indicate a correlation between the increase in Pastoral Care referrals and the active involvement between Pastoral Care and nurses.

### **Healthcare Policy**

Recommendations for policy changes can occur at the organizational, state, and national levels. The focus of best practices in ACP has shifted from having AD documentation to encouraging ongoing conversations about the future goals of care (Izumi, 2017). The current policy at the institution focuses on creating ADs rather than involving the other steps of the ACP process. ACP is an ongoing discussion about patients' health care goals, values, and wishes for their future care (IOM, 2015). The organization should consider updating the policy to include the importance of ACP and empower nurses to initiate these conversations regularly.

The PSDA of 1990 requires all healthcare facilities to ask patients whether they have ADs and provide them with education by trained professionals (Miller, 2017). The current hospital policy requires nurses to inquire and offer the opportunity for discussion during the nursing admission process. Nurses should refer patients to the chaplain when in-depth information is requested. Unfortunately, at this hospital, this requirement devolved into a checkbox during the initial nursing assessment form and did not facilitate the ACP conversation as intended. The findings of this project validate this information because there was a lack of knowledge about existing ACP policies and procedures. A policy update should be considered that requires nurses to complete a continuing education course on ACP to clarify their responsibilities, increase knowledge on ACP practices, and learn relevant facility policies. At

this time there is no nursing-specific course or additional education required to demonstrate competency on ACP practice.

Policies guiding ACP and its documentation vary by state, and nurses need to know what applies in the state where they practice. Lack of knowledge about ACP practice is considered a public concern, but several significant efforts have encouraged more awareness (IOM, 2015). Surveys have shown that about 80% of adults believe having conversations about ACP is important, yet only about 30% have actually done so and documented their wishes using ADs (De Vleminck et al., 2013; Kroning, 2014; Miller, 2018). The results of this project can inspire nurses and influence politics to improve the delivery of patient-centered care and end-of-life care resources. The actions that nurses could take from the findings of this project include supporting state policymakers when ACP or AD topics arise. Nurses can also write to their state representatives regarding ACP healthcare policies for the improvement and well-being of patients and their families.

From a national perspective, the findings of this project can encourage nursing schools to include ACP education as part of the curriculum. Undergraduate baccalaureate nursing programs lack an emphasis on ACP and other related end-of-life care (IOM, 2015). The pre and posttest scores assessed nurses' ACP knowledge before and after the educational program. Most nurses felt more prepared and confident in their ability to discuss ACP with patients and families after the implementation of the educational program. This positive result can encourage nurses to become certified in ACP. National ACP certifications and various educational programs around the country can help nurses become more knowledgeable and promote ACP. In addition, many nursing specialty organizations, such as the American Nurses Association (ANA), Oncology Nursing Society (OSN), and Hospice and Palliative Nurses Association (HPNA)



among others, have written position statements that are supported by the results of this DNP project. One of the position statements from the OSN states that nurses must be educated and trained in ACP to facilitate critical conversations with patients (OSN, 2017).

### **Quality and Safety**

The implementation of this project and its outcomes can improve the quality of health care and treatment for patients and their families. The goal of ACP is to help ensure that patients receive medical treatment consistent with their preferences, goals, and values (Detering & Silveira, 2018). ACP discussions and the creation of ADs with the Pastoral Care team have allowed patients to express their values and beliefs regarding their future care. The positive findings of this project suggest that nurses will use their knowledge and principals learned in the educational program to support patients' reported values and beliefs. It is anticipated that patients will feel more confident and safer after communicating and documenting their wishes with nurses and chaplains.

The positive findings from this project could improve patient safety. By having ACP discussions, the medical team can make confident decisions about treatment options for patients. Nurses and physicians could collaborate and create a plan of care that followed the specific guidelines set by the patients' ADs. Patients with ADs were identified by a sticker on the outside of their charts. This safety measure allowed nurses and the medical team to identify a patient with an AD easily and recognize the type of treatment decisions to be made. During emergencies, patients and their families could feel confident that nurses would carry out the treatment wishes outlined in the patients' ADs.

Quality of care also involves the patients' families. Studies have shown that ACP eases the burden of making difficult health care decisions for the family members of patients who are

unable to communicate due to illness (Chan, Ng, Chan, Wong, & Chow, 2019). Active communication, a central part of the ACP process, is needed among patients, families, health care providers, and nurses to achieve better outcomes during ACP (De Vleminck et al., 2013). During the implementation of this project, nurses facilitated ACP practices by making referrals to the Pastoral Care team. Nurses and chaplains used active communication when making and receiving referrals. They were also able to build a stronger relationship with patients and families.

### **Education**

One aim for this project was to increase ACP nursing knowledge. Nurses play a critical role in initiating ACP discussions because they spend the majority of their time interacting with patients and families (Izumi, 2017; Kroning, 2014; Miller, 2018; Price et al., 2017; Rietze et al., 2018; Shepherd et al., 2018). This constant interaction builds a strong and trusting relationship between nurses and patients (Arnett et al., 2017; De Vleminck et al., 2013; Rietze et al., 2018; Shepherd et al., 2018; Wessman et al., 2017). Despite this vital role they play, most nurses reported having insufficient knowledge about ACP, which has affected their confidence and ability to initiate ACP discussions. The educational program made a significant difference in the nurses' knowledge about ACP. Participants' knowledge improved, as determined by a comparison of their average pre and posttest scores. Nurses also felt that ACP education was beneficial to their practice.

The findings from this project demonstrate that additional ACP learning opportunities should be available to nurses in the work setting. Nurses can benefit from a standardized educational program and periodic follow-up educational sessions to reinforce ACP concepts and current hospital protocols. The participating facility, as well as other institutions, could use the

format of this educational program to educate bedside nurses in other departments. It is important to increase ACP education because nurses could apply the knowledge in their practice.

Improvement in ACP nursing knowledge could also benefit other team members. Nurses who understand and promote ACP discussions with their patients can educate other health care providers, such as physicians, advance practice nurses, and nursing assistants. Research has found that a majority of patients expect providers to initiate ACP conversations (De Vleminck et al., 2013; Kroning, 2014; Lewis, Cardona-Morrell, Ong, Trankle, & Hillman, 2016; Miller, 2018). Patients also have misconceptions and feel ACP is related to old age and end-of-life issues (Kermel-Schiffman & Werner, 2017). The results of this project could contribute to nursing education and training. After the educational program, participants had the potential to educate professionals in other disciplines and lead practice changes that support routine ACP practices.

### **Economics**

The delivery of cost-effective care is an important responsibility for all health care organizations. The U.S. health care loses \$750 billion each year on unnecessary medical services (\$210 billion annually), inefficient delivery of care (\$130 billion annually), and other areas of waste (IOM, 2013). ACP has been associated with the reduced use of costly, aggressive, and unnecessary treatments (Dube, McCarron, & Nannini, 2015). ACP services can lead to appropriate care with better symptom relief at low cost (Bond et al., 2019).

Federal spending on Medicare services was \$554 billion in 2011, of which 28% (\$170 billion) was spent during the last six months of life (Dewar, 2017, p. 151). If patients do not have an AD, aggressive life-sustaining care is performed. It is common for patients to spend their last months of life hospitalized in the ICU while receiving multiple aggressive treatments

(IOM, 2015). This project promotes cost-effective care by enabling patients to have early ACP and goals-of-care discussions. Patients with progressive and chronic illnesses who decide not to receive life-sustaining care can decrease their length of stay in the ICU, limit their unnecessary medical care, and prevent ICU readmissions, ultimately reducing the cost of healthcare.

The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey measures patients' perspectives on hospital care (Centers for Medicare and Medicaid Services [CMS], 2020). Public reporting of HCAHPS results creates new incentives for hospitals to improve quality of care (CMS, 2020). Patients and families who have a better hospital experience can lead to higher HCAHPS scores in patient satisfaction, which, in turn, will increase hospital reimbursement. Nurses who are more knowledgeable about ACP and discuss the topic with their patients can improve health care quality and patient satisfaction. This educational program can potentially be the origin of a more standardized nursing care initiative to promote ACP in different areas of the hospital setting.

### **Sustainability**

Sustainability is vital to the success of any quality improvement project. Although this project was successful at one hospital, its success can lead to changes in other facilities throughout the state and across the country. To sustain the improvement in knowledge and ACP practice, organizations should provide nurses with continuing education. The lecture presentation and case study can be part of a mandatory continuing education course. This project will be developed as an online ACP module, and nurses will be required to complete it twice a year. The ACP educational program can also be incorporated into the hospital's orientation program for new employees. Additional efforts to maintain the change in practice may include in-service education and workshops. This education will ensure the sustainability of the program and reinforce the standards of nursing practice. Organizations can support the ACP project by

having clear and consistent policies and guidelines throughout the organization. Aspects of this educational program could be incorporated into the hospital's AD policy and procedures so advance healthcare directives could become a standard of practice.

The ACP bedside assessment checklist can be incorporated into the nursing standard of care because it will help ensure that bedside nurses continue to assess and facilitate ACP practices. The ACP checklist could be revised and updated to follow specific assessment parameters. In the future, it could also be integrated into the organization's electronic medical record and nursing admission forms. The checklist would be patient-specific and follow the patient across units and settings within the health care system. The checklist will function as a tool to follow up on the patient's response or initial ACP inquiry.

#### **Plan for Future Scholarship**

Early dissemination practices include a formal project presentation with the DNP team members, faculty, and students prior to graduation. The investigator will also report the findings of this project through a scholarly poster during the Rutgers University School of Nursing poster day. In addition, the ACP project and outcomes will be presented to the Nursing Research Committee and Evidence-Based Practice Steering Committee at the participating facility. The next step will include an abstract submission, which will be presented at the hospital's Annual Nursing Research Symposium.

Another way this project will be disseminated to the health care community is through publication in a peer-reviewed journal. The *Critical Care Nurse Journal* publishes articles that contribute to the care of critically ill patients. This educational program contributes to nursing practice because it led to significant improvements in nursing knowledge. This project can also affect patients' quality of care in critical care settings, including the SICU, where this project

was implemented. Although the project findings cannot be generalized to all ICU nurses or settings, the implementation of this project serves as a foundation for future research.

### **Summary**

Nurses are not adequately prepared to discuss ACP, which contributes to the low number of Pastoral Care referrals. This project indicates the need of a protocol change to promote ACP. An educational program and the implementation of a bedside assessment checklist have shown to improve knowledge and facilitate ACP practices. Several barriers prevent nurses from discussing ACP with their patients. The most common barriers were insufficient education and training. The educational program conducted in this project significantly improved ACP knowledge and its' related policies. Most nurses felt more prepared and confident in their ability to discuss ACP with patients and families after the implementation of this program. The bedside assessment checklist was a useful intervention because it empowered nurses to ask about ACP and make Pastoral Care referrals early. The number of Pastoral Care referrals increased after the conclusion of the project, which reflected active ACP participation. ACP is considered an ongoing process that should continue and be reassessed over time. Therefore, the checklist outlined the basics to provide a more comprehensive ACP approach. The promotion of ACP should be a high priority in organizations because it supports patient-centered care, reduces unnecessary treatments, and improves the quality of life.

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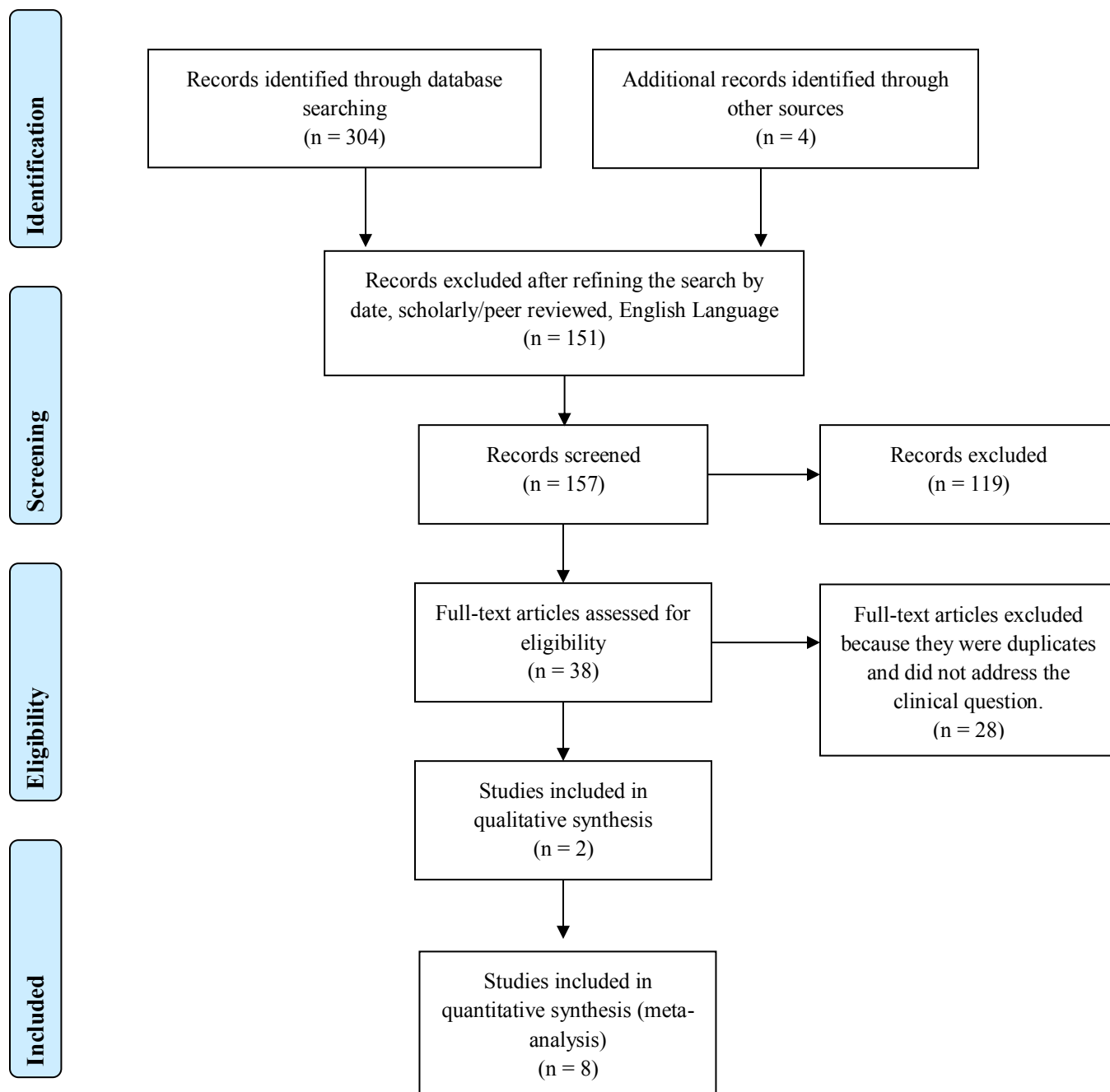
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## Appendix A

## Prisma Flow Diagram



## PRISMA 2009 Flow Diagram



## Appendix B

## Evidence Summary of Research Studies

The Evidence Based Practice (EBP) question for this project is in SICU nurses, how does implementing an educational program and an ACP bedside assessment checklist, result in improvements of knowledge and increased number of ACP referrals?

Article #	Author & Date	Evidence type	Sample, Sample Size, Setting	Study findings that help answer the EBP Question	Limitations	Evidence level & Quality
1	Arnett et al. (2017).	Nonexperimental univariate descriptive design	<ul style="list-style-type: none"> <li>- Convenience sample.</li> <li>- A total of 118 health care team members.</li> <li>- [REDACTED]</li> </ul>	<ul style="list-style-type: none"> <li>- Most health care team members (62%) did not have, or did not know if they had guidelines or policies about when to review ACP.</li> <li>- Only 14% of the facilities had an educational program to improve ACP.</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of generalizability.</li> <li>- Sampling bias.</li> <li>- No intervention, variables are not manipulated.</li> </ul>	LEVEL III Good Quality
2	De Vleminck et al. (2013).	Systematic review of a combination of quantitative and qualitative studies	<ul style="list-style-type: none"> <li>- Electronic search using PubMed, CINAHL, EMBASE, and PsycInfo databases.</li> <li>- Size: 320 publications from 1990-2011 were examined and only 61 were included.</li> <li>- Outpatient setting.</li> </ul>	<ul style="list-style-type: none"> <li>- Recommend understanding the barriers and facilitators for developing interventions aimed at discussing ACP.</li> <li>- Recommend training programs to change skills, attitudes and beliefs preventing practitioners to initiate ACP.</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of generalizability.</li> <li>- Meta analysis not an option: Limited number of randomized control trials.</li> <li>- Setting and participants not related with EBP question.</li> </ul>	LEVEL III Good Quality

3	Lewis, E., Cardona-Morrell, M., Ong, K. Y., Trankle, S. A., & Hillman, K. (2016).	Systematic review of a combination of quantitative and qualitative studies	<p>Sample: Electronic search using MEDLINE, CINAHL, EMBASE, EBM REVIEWS, Cochrane Library and PsycInfo databases.</p> <p>- Sample Size: 4,250 publications from 2000 to 2015 were examined and 24 were included in the review</p> <p>- Various health care settings.</p>	<p>- Most studies (18/24) found nursing staff had positive attitudes towards the use of ACP documents as instruments to improve communication and encouraged future care planning.</p> <p>- 24 articles reported Advance care planning documentation (ACPD) influences health professionals' engagement in conversations.</p>	<p>- Studies were of low level evidence.</p> <p>- Majority of studies had small sample sizes.</p> <p>- Mostly qualitative studies.</p>	LEVEL III Good Quality
4	Price et al. (2017).	Nonexperimental descriptive correlational design	<p>- Convenience sample.</p> <p>- A total of 583 RNs. 182 RNs from adult acute care units, 227 RNs from adult ICU, 85 RNs from acute care pediatrics, and 89 RNs from the pediatric ICU.</p> <p>- One large academic setting.</p>	<p>- Recommend performing needs assessment to identify unique needs for each unit department and institution prior to implementing an end-of-life care program.</p> <p>- The study discusses the benefits of proactive end-of-life care in the ICU using either consultative or integrative approach, interventions, checklist tools, and early communication.</p>	<p>- Lack of generalizability.</p> <p>- Sampling bias.</p> <p>- Survey instrument did not measure actual competency in end-of-life care, but perceived competency.</p> <p>- No intervention, variables are not manipulated.</p>	LEVEL III Good Quality

5	Rietze, L., Heale, R., Roles, S., & Hill, L. (2018).	Nonexperimental descriptive cross- sectional design	<ul style="list-style-type: none"> <li>- 125 RNs from Ontario, Canada.</li> <li>- Surveys were mailed and participation was voluntary.</li> <li>- Nurses were categorized in the acute and non-acute settings.</li> </ul>	<ul style="list-style-type: none"> <li>- Using a nurse-led ACP education can improve ACP conversations in patients.</li> <li>- Recommend having other disciplines be involved in ACP education, such as Pastoral Care department.</li> </ul>	<ul style="list-style-type: none"> <li>- Study was conducted in Canada.</li> <li>- Low survey response (12.8%).</li> </ul>	LEVEL III Good Quality
6	Shepherd, J., Waller, A., Sanson- Fisher, R., Clark, K., & Ball, J. (2018).	Nonexperimental descriptive cross- sectional design	<ul style="list-style-type: none"> <li>- Eligible nurses were approached between April 2016 and January 2017.</li> <li>- Inclusion criteria: nurses with a BSN, aged 18 or older and had ICU experience.</li> <li>- 306 RNs were invited to participate but 181 RNs returned with completed surveys.</li> <li>- Setting: RNs employed in acute and critical care units from three metropolitan hospitals in Australian.</li> </ul>	<ul style="list-style-type: none"> <li>- 56% of RNs had misconceptions about ACP concepts and related documentation.</li> <li>- Recommendation is to introduce ACP professional development programs in hospitals to reinforce the importance of ACP.</li> </ul>	<ul style="list-style-type: none"> <li>- Study was conducted in Australia.</li> <li>- Variables observed at one point in time.</li> </ul>	LEVEL III Good Quality

7	Velasco-Sanz, T. R., & Rayón-Valpuesta, E. (2016).	Nonexperimental descriptive cross-sectional design	<ul style="list-style-type: none"> <li>- Convenience sample of ICU RNs and physicians from 9 different hospitals.</li> <li>- 341 participants.</li> <li>- Study performed in Madrid, Spain.</li> <li>- Hospital settings include: adult ICU, Trauma ICU, CCU, Neuro ICU).</li> </ul>	<ul style="list-style-type: none"> <li>- 64.4% of the responders admitted not knowing different types of ACP documentation.</li> <li>- 90.6% (n = 300) of the professionals did not check to see whether the patients in their care had ADs documented.</li> <li>- Study recommends training measures to improve health care professionals' knowledge.</li> </ul>	<ul style="list-style-type: none"> <li>- Study performed in Spain and not in the U.S.A.</li> <li>- Lack of generalizability.</li> <li>- Sampling bias.</li> </ul>	LEVEL III Good Quality
8	Wessman, B. T., Sona, C., & Schallom, M. (2017).	Nonexperimental univariate descriptive design	<ul style="list-style-type: none"> <li>- Multidisciplinary team sample, which consisted of RNs, physicians, residents, NPs, RTs and SWs.</li> <li>- Preintervention survey was sent to 242 providers but only 122 responded.</li> <li>- Post intervention survey was sent to 280 providers but 101 responded.</li> <li>- Study conducted in a Trauma Surgical ICU from a large academic center.</li> </ul>	<ul style="list-style-type: none"> <li>- The study included mostly RNs but other members of the interdisciplinary team, such as Pastoral Care, responded to the survey.</li> <li>- The findings confirm lack of formalized education and guidelines to address ACP.</li> <li>- Goals of care/End-of-life program created to improve caregivers' perception and knowledge about ACP.</li> </ul>	<ul style="list-style-type: none"> <li>- Study is single center and lacks generalizability.</li> <li>- Sampling bias</li> <li>- Many variables of interest.</li> <li>- Variables were not manipulated.</li> </ul>	LEVEL III Good Quality



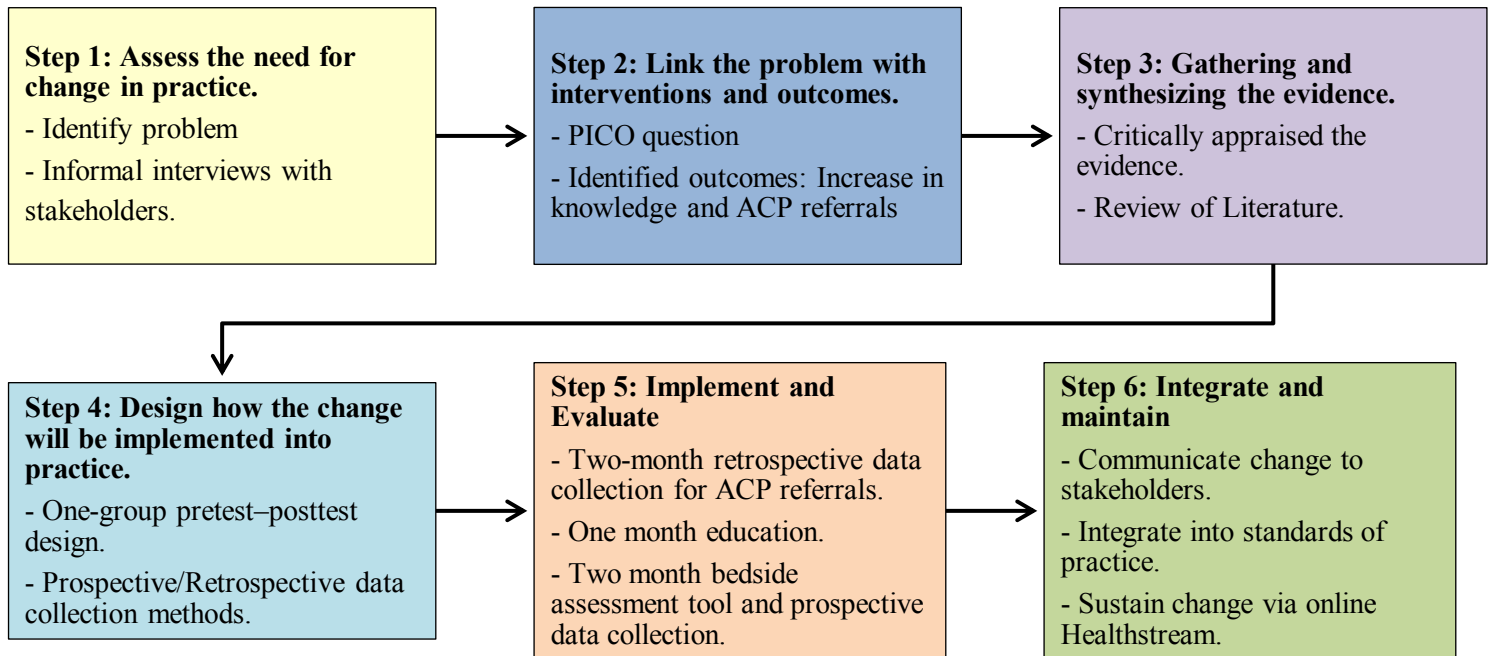
## Appendix C

## Evidence Summary of Non-Research Studies

Article #	Author & Date	Evidence type	Sample, Sample Size, Setting	Study findings that help answer the EBP Question	Limitations	Evidence level & Quality
1	Kroning, M.(2014).	Quality Improvement	<ul style="list-style-type: none"> <li>- 49 Acute care RNs.</li> <li>- Setting: Acute care units in a 325-bed regional hospital in New York.</li> </ul>	<ul style="list-style-type: none"> <li>- Quantitative data from the survey confirmed knowledge about ACP is deficient.</li> <li>- Educational program was successful and more nurses became aware of their lack of knowledge.</li> <li>- There is a critical need for RNs to receive ACP education to increase confidence and effectively advocate for patients.</li> </ul>	<ul style="list-style-type: none"> <li>- Nonresearch evidence.</li> <li>- Study is single center and lacks generalizability.</li> <li>- Inadequate staff nurses to attend inservice education during regular work hours.</li> <li>- Future studies recommended.</li> </ul>	LEVEL V Good Quality
2	Miller, B. (2018)	Integrative Review	<ul style="list-style-type: none"> <li>- The reviewer searched 6 electronic databases using EBSCO-Host discovery service.</li> <li>- Review of studies published between 1990 and February 2018. Only 19 studies were included.</li> </ul>	<ul style="list-style-type: none"> <li>- The literature review suggested that half of all RNs in ICU settings have inadequate knowledge and low confidence about ACP.</li> <li>- Recommendation is to develop educational training to address knowledge gaps.</li> </ul>	<ul style="list-style-type: none"> <li>- Existing research is dated.</li> <li>- Quality of the studies were moderate to low.</li> <li>- Small sample studies.</li> <li>- Lack of generalizability.</li> </ul>	LEVEL V Good Quality

## Appendix D

## Model for Evidence-Based Practice Change



## Appendix E

## Flyer



**RUTGERS**  
School of Nursing

## Advance Care Planning in the ICU: A Quality



# Calling All Nurses For Advance Care Planning Improvement Initiative

- ✚ Are you a Nurse with at least 6 months of SICU experience?
- ✚ Do you want to improve patient experience  
AND learn more about Advance Care Planning practices?

### Then you are eligible to participate!

- ✚ What do You Have to Do?
  - Complete participation agreement.
  - Attend a 20 minute education session which includes a pre and posttest.
  - Complete an ACP bedside assessment checklist and an evaluation form at the end of the study.
- ✚ How long? 3-month research
- ✚ Where? SICU Department

\*\*\*You can be one of 5 RNs to win a \$20 Amazon gift card

### Contact Information

To find out more about this study, please contact:

Principal Investigator (PI):  
Darcel Reyes, PhD, ANP-BC

office: [REDACTED]

Co-investigator: Katherine  
Casas, BSN, RN, CCRN

cell: [REDACTED]

Rutgers, The State University of  
New Jersey



## Appendix F

## Recruitment E-mail Invitation

Dear Registered Nurses,

I am student at Rutgers University School of Nursing and I am seeking nurses to include in my pre/post interventional research study. Eligible participants are nurses who have been on the unit for at least 6 months. The purpose of this research study is to assess Advance Care Planning knowledge and current practices.

Participation in this study involves:

- Complete Participation agreement.
- Attend a 20 minute education session which includes a pre and posttest.
- Complete an Advance Care Planning bedside assessment tool and an evaluation form at the end of the study.

For more information about this study, please contact me.

Thank you,

Study Title: Advance Care Planning: A Quality Improvement Project

-----  
Katherine Casas, BSN, RN, CCRN  
School of Nursing  
Rutgers, The State University of New Jersey

Stanley S. Bergen Building (SSB)  
65 Bergen St. Newark, NJ 07107

cell: [REDACTED] • [REDACTED]

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[nursing.rutgers.edu](http://nursing.rutgers.edu)



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*Excellence in Action*  
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## Appendix G

## In-Person Script

Hello, my name is Katherine Casas, and I am a graduate student from Rutgers University School of Nursing. I would like to invite you to participate in my research study to assess Advance Care Planning knowledge and current practices. I am seeking nurses to include in my pre/post interventional research study who have been on the unit for at least 6 months.

Participation in this study involves:

- Complete Participation agreement.
- Attend a 20 minute education session which includes a pre and posttest.
- Complete an Advance Care Planning bedside assessment tool and an evaluation form at the end of the study.

Do you have any questions now?

If you have questions later, please contact me at my cell phone number [REDACTED] or you may contact my email at [REDACTED]

## Appendix H

## Adult Consent



Rutgers Biomedical and Health Sciences  
School of Nursing  
Rutgers, The State University of New Jersey  
Stanley S. Bergen Building  
65 Bergen Street  
Newark, NJ 07103

Principal Investigator (PI)  
Darcel Reyes, PhD, ANP-BC  
[REDACTED]  
Co-Investigator: Katherine Casas  
[REDACTED]  
p. [REDACTED]

## CONSENT TO TAKE PART IN A RESEARCH STUDY

**Title of Study:** Advance Care Planning in the Intensive Care Unit: A Quality Improvement Project

**Principal Investigator:** Darcel Reyes, PhD, ANP-BC

**STUDY SUMMARY:** This consent form is part of an informed consent process for a research study and it will provide information that will help you decide whether you want to take part in this study. It is your choice to take part or not.

The **purpose of the research** is to: Improve nurses' knowledge about Advance Care Planning processes and procedures and to increase the number of Pastoral Care referrals. If you take part in the research, you will be asked to take a pretest and a posttest, attend an educational session, complete an anonymous Advance Care Planning bedside assessment checklist with your patients, and fill out an evaluation form. Your time in the study will take 20 minutes to attend a lecture presentation, and 10 minutes to take a pretest and posttest. You will take an additional 5 minutes to complete an evaluation form at the end of the study. In addition, the Advance Care Planning bedside assessment checklist will take 5 minutes to complete. You will fill out the checklist during a patient's admission to the unit, upon request, or as soon as a patient becomes able to make informed decisions. The checklist will be implemented for two months following the educational session.

**Possible harms or burdens** of taking part in the study may be that there is a small risk of breach of confidentiality; however, the co-investigator will ensure all data collected is safely stored. Possible benefits of taking part in the study may be: increase in knowledge about Advance Care Planning, improve your communication skills with patients and families, improve collaboration with members of the Pastoral Care team, and develop your own goals of care and start conversations about Advance Care with your own family.

**Alternative to taking part in the research study:**

Your alternative to taking part in the research study is not to take part in it.

The information in this consent form will provide more details about the research study and what will be asked of you if you choose to take part in it. If you have any questions now or during the study, if you choose to take part, you should feel free to ask them and should expect to be given answers you

completely understand. After your questions have been answered and you wish to take part in the research study, you will be asked to sign this consent form. You are not giving up any of your legal rights by agreeing to take part in this research or by signing this consent form.

**Who is conducting this study?**

Darcel Reyes, PhD, ANP-BC is the Principal Investigator of this research study. A Principal Investigator has the overall responsibility for the conduct of the research. However, there are often other individuals who are part of the research team.

Darcel Reyes may be reached at [REDACTED] and she is located at:  
Rutgers, The State University of New Jersey.

The Principal investigator or another member of the study team will also be asked to sign this informed consent. You will be given a copy of the signed consent form to keep.

**Why is this study being done?**

This study is being done to increase the nurse's knowledge about Advance Care Planning practice in the Surgical Intensive Care Unit (SICU). In addition, this study is being done to increase the number of Pastoral Care referrals.

**Who may take part in this study and who may not?**

Registered nurses who may take part of this study are any registered nurses who work either full time, part time or per diem, have six months or more experience on the unit, and provide direct patient care. Exclusion criteria are new nurses who are being precepted and on orientation, nurses who are in the float pool, and nursing administrative staff such as unit director or clinical educator.

**Why have I been asked to take part in this study?**

You are being asked to be part of this study because you are a registered nurse and you are directly involved in taking care of patients in the unit.

**How long will the study take and how many subjects will take part?**

The length of participation time in this study is a total of 35 minutes.

Each subject will participate in a 5 minute pretest, a 20 minute lecture presentation, and a 5 minute posttest. Participants will take an additional 5 minutes to complete an evaluation form at the end of the study.

In addition, you are required to complete The Advance Care Planning (ACP) checklist throughout a period of two months following the educational session. Each participant will take 5 minutes every time they complete the ACP bedside assessment on their patients.

Overall, this research study will last three months. One month of educational sessions and two months of bedside Advance Care Planning (ACP) checklist implementation along with data collection of Pastoral Care referrals. A total amount of 30 participants will be invited to participate in this study.

**What will I be asked to do if I take part in this study?**

If you do take part in this study, you will be asked to give consent before the implementation of the study. You will then take a pretest that consist of ten multiple choice questions. After taking the pretest, you will

be expected to attend a 20minute educational session during work hours or during your lunch break. The educational program includes general information about Advance Care Planning (ACP), goals and definitions, and current hospital related policies. The educational lecture will also include information about using the ACP bedside assessment checklist to facilitate and monitor Pastoral Care referrals.

Participants who need further clarification will have the option to receive follow-up educational sessions or one to one education from either the principal investigator or co-investigator. After the educational session, participants will take a posttest to evaluate acquired knowledge on the topic.

You will use the Advance Care Planning (ACP) bedside checklist to assess and initiate referrals to the Pastoral Care Department during a patient's admission to the unit, upon request, or as soon as a patient becomes able to make informed decisions. The checklist will be implemented for two months following the educational session.

Lastly, at the end of the study, you will also be asked to complete a five minute evaluation form.

**What are the risks of harm or discomforts I might experience if I take part in this study?**

There is minimal risk associated with this study. As seen with other studies, there is a small confidentiality risk, but measures to prevent this risk will be carefully evaluated. Your personal identifiers will be collected for this consent form and for the purpose of winning a gift card at the end of study. All consent forms and raffle tickets will be stored securely. Your name and email will be entered at the back of one raffle ticket and will only be selected upon the end of the implementation period. All raffle tickets will be destroyed at the completion of the study.

Test results and evaluation forms will be anonymous.

**Are there any benefits to me if I choose to take part in this study?**

The benefits of taking part in this study may be:

- You will increase knowledge about Advance Care Planning and related documentation.
- You will improve your communication skills with patients and families.
- You will increase your confidence level when discussing Advance Care Planning.
- You will be an integral member of the healthcare team and act as an advocate for your patients.
- You may improve collaboration with the Pastoral Care Department team.
- You may create your own goals of care and start conversations about Advance Care Planning with your own family.
- You may win a \$20.00 gift card to Amazon for your voluntary time and participation.

However, it is possible that you may not receive any direct benefit from taking part in this study.

**What are my alternatives if I do not want to take part in this study?**

Your alternative is not to take part in this study.

**How will I know if new information is learned that may affect whether I am willing to stay in the study?**

During the study, you will be updated about any new information that may affect whether you are willing to continue taking part in the study. If new information is learned that may affect you after the study or your follow-up is completed, you will be contacted.

**Will there be any cost to me to take Part in this study?**

There will be no cost associated with taking part in this study.



**Will I be paid to take part in this study?**

You will not be paid to take part in this study. However, you may win one of the five \$20.00 gift cards to Amazon for your voluntary time and participation.

**How will information about me be kept private or confidential?**

All efforts will be made to keep your personal information in your research record confidential, but total confidentiality cannot be guaranteed. All data collection will only be accessible by the principal investigator and co-investigator. The consent forms will be stored in a secured location in a locked filing cabinet until the study is completed. The testing materials and evaluation forms will be anonymous, but they will also be stored securely. The principal investigator will then analyze the test scores before and after the educational session.

Personal identifiable information such as name and email will be collected only for the purpose of entering a raffle held at the end of the implementation period. Your personal information will be written at the back side of one raffle ticket which will be in a random drawing for the chance to win a \$20.00 Amazon gift card. Five winners will be selected in this drawing. Raffle tickets will be kept in a black colored bag inside the principal investigator's locker until the selected drawing date. After five draws, the remaining tickets will be shredded.

**What will happen if I do not wish to take part in the study or if I later decide not to stay in the study?**

It is your choice whether to take part in the research. You may choose to take part, not to take part or you may change your mind and withdraw from the study at any time.

If you do not want to enter the study or decide to stop taking part, your relationship with the study staff will not change, and you may do so without penalty and without loss of benefits to which you are otherwise entitled.

You may also withdraw your consent for the use of data already collected about you, but you must do this in writing to Darcel Reyes, PhD, ANP-BC.

School of Nursing

Rutgers, The State University of New Jersey.

65 Bergen Street, SSB 848

Newark NJ, 07107

If you decide to withdraw from the study for any reason, you may be asked to return for at least one additional visit for safety reasons.

**Who can I contact if I have questions?**

If you have questions about taking part in this study or if you feel you may have suffered a research related injury, you can contact the Principal Investigator:

Darcel Reyes, PhD, ANP-BC

Assistant Professor, HIV Specialization Program Director

Division of Advanced Nursing Practice



If you have questions about your rights as a research subject, you can contact the Rutgers IRB Director at: Newark HealthSci IRB, 65 Bergen St., SSB 511, Newark, NJ 07107, (973)-972-3608; or the Rutgers

Human Subjects Protection Program at (973) 972-1149, email us at [humansubjects@ored.rutgers.edu](mailto:humansubjects@ored.rutgers.edu), or write us at 65 Bergen St., Suite 507, Newark, NJ 07107.

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Those persons or organizations that receive your information may not be required by Federal privacy laws to protect it and may share your information with others without your permission, if permitted by the laws governing them.

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## **AGREEMENT TO PARTICIPATE**

### **Subject Consent:**

I have read this entire consent form, or it has been read to me, and I believe that I understand what has been discussed. All of my questions about this form and this study have been answered. I agree to take part in this study.

Subject Name (Print): \_\_\_\_\_

Subject Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### **Signature of Investigator/Individual Obtaining Consent:**

To the best of my ability, I have explained and discussed all the important details about the study including all of the information contained in this consent form.

Investigator/Person Obtaining Consent (Print): \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix I

## Educational Program Outline

- I. Background Information
  - A. Definition of Advance Care Planning (ACP)
  - B. Goals and Benefits
- II. Advance Directives (AD) documentation
  - A. Durable Power of Attorney for Healthcare
  - B. Living Will
- III. Process of ACP: When and Who
- IV. Hospital Policy and Procedures about AD
  - A. Nursing responsibilities
  - B. Interdisciplinary collaboration
- V. Instructions on How to Complete ACP checklist
- VI. Barriers of ACP
- VII. Case Study
  - A. Questions and answers

## Appendix J

## ACP Checklist



Rutgers Biomedical and Health Sciences  
 School of Nursing  
 Rutgers, The State University of New Jersey  
 Stanley S. Bergen Building  
 65 Bergen Street  
 Newark, NJ 07103

Principal Investigator (PI)  
 Darcel Reyes, PhD, ANP-BC  
 [Redacted]  
 Co-Investigator: Katherine Casas  
 [Redacted]  
 P. [Redacted]

**Advance Care Planning (ACP)** is a process in which a patient reflects on and communicates their values, beliefs, goals, and preferences to best prepare for their future medical care. The process involves four steps: (1) Self-reflection, (2) Communication with family and health care providers, (3) Documentation in the form of Advance Directives, and (4) Periodic revisions.

### Advance Care Planning (ACP) Bedside Checklist

Circle one:

On Admission

During ICU Stay

1. Does the patient have an Advance Directive (AD)? Yes ☐ No ☐  
 If the answer is "Yes", refer to the Advance Directive policy  
 If the answer is "No", continue with question #2
2. Is the patient able to make informed decisions? Yes ☐ No ☐  
 If the answer is "Yes", continue with question #3  
 If the answer is "No", no further questions need to be completed
3. During this admission, has the patient received information about AD? Yes ☐ No ☐  
 If the answer is "Yes", continue with question #4  
 If the answer is "No", review information available in the patient's admission brochure
4. Is the patient interested in learning more about ACP? Yes ☐ No ☐  
 If "Yes", make referral to the Pastoral Care Department by calling Ext# 8504  
 If "No", please state the reason: \_\_\_\_\_

\*\*(Inform patients about the importance of planning future goals of care in case of unforeseen events).

This form is not a permanent part of the chart. Please drop this checklist in the box located in the unit after completion.

## Appendix K

## Pre-Post Test

1. What is Advance Care Planning?
  - a) It is the process of gathering information from patients and families on their understanding of patient's medical condition.
  - b) It is the process of communicating information about a patient's diagnosis, treatment options, life goals, values and wishes.
  - c) It is defined as care at the end-of-life.
  - d) It is the process of persuading a patient to continue medical treatment and physicians' recommendations.
2. What does Advance Care Planning include?
  - a) End-of-life care
  - b) Advance Directives documentation
  - c) POLST forms
  - d) Both b & c
3. What are the benefits of Advance Care Planning?
  - a) It prevents hospital readmissions.
  - b) It helps patients voice their medical wishes.
  - c) It strengthens family relations.
  - d) Both b & c
4. What are the barriers that affect nurses to initiate Advance Care Planning with patients?
  - a) Lack of confidence
  - b) Lack of education about ACP
  - c) Time constraints
  - d) All of the above
5. What is an Advance Directive?
  - a) It is a legal document.
  - b) It consists of a Durable Power of Attorney for Healthcare and Instruction Directive.
  - c) Both a & b
  - d) It is a government beneficial program.

6. Do you need a lawyer to complete an Advance Directive?
  - a) Yes
  - b) No
  - c) I don't know
7. How many witnesses do you need in case an Advance Directive is not notarized?
  - a) 0
  - b) 1
  - c) 2
  - d) 3
8. What are you witnessing when a patient requests to complete an Advance Directive?
  - a) It means that I assume full responsibility of the patient's medical care.
  - b) It means that the patient appears to be of sound mind and that he/she voluntarily signed the advance directive.
  - c) It means that I am required to pay the patient's full medical treatment.
  - d) Both a & b
9. Two days after admission, a family member brings a patient's original advance directive to the hospital. The nurse is responsible for all of the following actions except:
  - a) Placing a copy of the document and an "Advance Directive" sticker on the chart
  - b) Reading the advance directive
  - c) Notifying admitting
  - d) Notifying the physician
10. What member of the healthcare team can further assist patients in completing Advance Directives?
  - a) Physician
  - b) Registration
  - c) Chaplain
  - d) Dietitian

## Appendix L

## Cost Summary

<b>Item Description</b>	<b>Cost</b>
Printed advertisement and recruitment materials	\$20.00
Other printed materials (pre/posttest, evaluation)	\$30.00
Photocopies of data-collection tool	\$10.00
Technical Equipment (laptop and desktop computer for data collection and analysis)	\$0 (item provided by the co-investigator)
Compensation (Amazon gift cards)	5 gift cards at \$20.00 each = \$100
Parking at facility site	\$40.00
Total Cost:	\$200.00

## Appendix M

## Project Evaluation Form



Rutgers Biomedical and Health Sciences  
 School of Nursing  
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 Stanley S. Bergen Building  
 65 Bergen Street  
 Newark, NJ 07103

Principal Investigator (PI)  
 Darcel Reyes, PhD, ANP-BC  
 [REDACTED]  
 Co-Investigator: Katherine Casas  
 [REDACTED]  
 p. [REDACTED]

## Advance Care Planning (ACP) Project Evaluation Form

## Program Overview

Strongly Disagree/Disagree/Neither/Agree/Strongly Agree	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1. The information included will benefit my practice.	( )	( )	( )	( )	( )
2. I feel comfortable advising patients on the importance of advance care planning.	( )	( )	( )	( )	( )
3. Do you perceive any barriers to implementing this information into clinical practice?	No( ) Yes( )		If yes, please describe:		

## Overall Impression

4. What did you like the most?
5. What did you like the least?
6. What suggestions for improvement?



Table 1

*Descriptive Statistics of Pre and Posttest Scores*

<i>Pretest</i>		<i>Posttest</i>	
Mean	71.53846154	Mean	88.46153846
Standard Error	2.266295363	Standard Error	1.976189627
Median	70	Median	90
Mode	80	Mode	90
Standard		Standard	
Deviation	11.55588428	Deviation	10.07662947
Sample Variance	133.5384615	Sample Variance	101.5384615
Kurtosis	-0.543668696	Kurtosis	-0.825637801
Skewness	-0.491500552	Skewness	-0.431541604
Range	40	Range	30
Minimum	50	Minimum	70
Maximum	90	Maximum	100
Sum	1860	Sum	2300
Count	26	Count	26

Table 2

*Pretest Frequency Distribution*

<i>Interval</i>	<i>Frequency</i>	<i>% Frequency</i>
41-50	3	12%
51-60	4	15%
61-70	7	27%
71-80	10	38%
81-90	2	8%
91-100	0	0%

Table 3

*Posttest Frequency Distribution*

<i>Interval</i>	<i>Frequency</i>	<i>% Frequency</i>
41-50	0	0%
51-60	0	0%
61-70	3	12%
71-80	6	23%
81-90	9	35%
91-100	8	31%

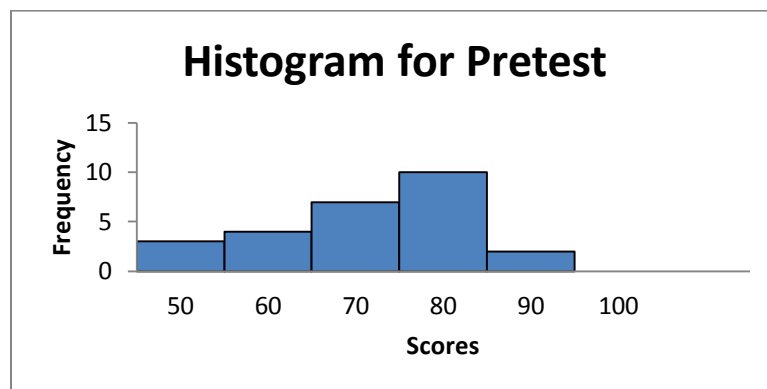


Figure 1. Frequency distribution table of Pretest

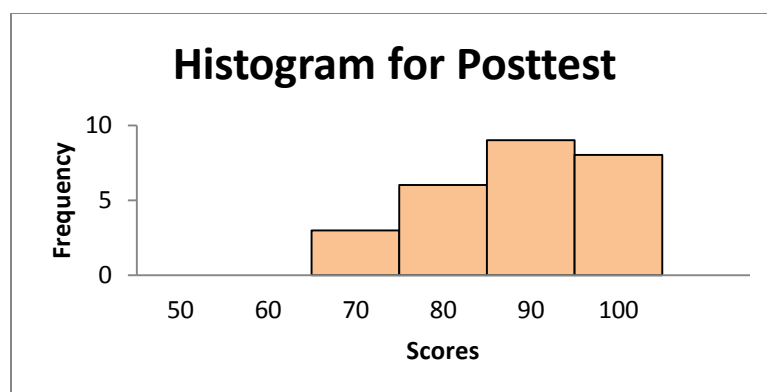


Figure 2. Frequency distribution table of Posttest

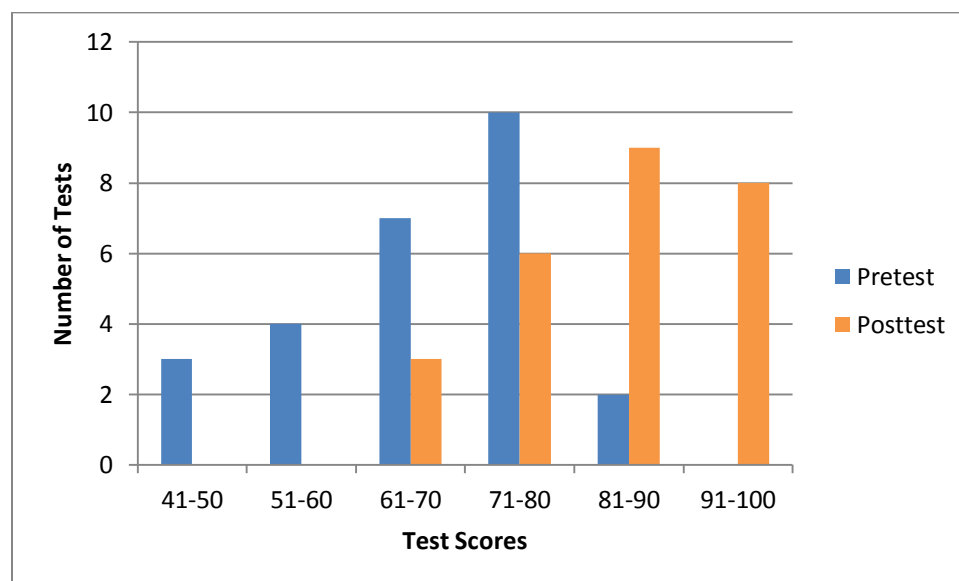


Figure 3. Bar graph representing the comparison between pre and posttest

Table 4

*Two-Sample t-Test of Pre and Posttest Scores: Assuming Equal Variances*

	<i>Pretest</i>	<i>Posttest</i>
Mean	71.53846154	88.46153846
Variance	133.5384615	101.5384615
Observations	26	26
Pooled Variance	117.5384615	
Hypothesized Mean Difference	0	
df	50	
t Stat	-5.628089611	
P(T<=t) one-tail	4.11689E-07	
t Critical one-tail	1.675905025	
P(T<=t) two-tail	8.23378E-07***	
t Critical two-tail	2.008559112	

\*\*\* $p = 0.00000082$

Table 5

*Number of Referrals Before and After Educational Program*

	<b>Before Program</b>	<b>After Program</b>
Month 1	3	10
Month 2	4	8
SUM	7	18
Mean	3.5	9
Variance	0.5	2

Table 6

*Two-Sample t-Test of Pastoral Care Referrals: Assuming Equal Variances*

	<b>Before Educational Program</b>	<b>After Educational Program</b>
Mean	3.5	9
Variance	0.5	2
Observations	2	2
Pooled Variance	1.25	
Hypothesized Mean Difference	0	
df	2	
t Stat	-4.91934955	
P(T<=t) one-tail	0.019462769	
t Critical one-tail	2.91998558	
P(T<=t) two-tail	0.038925538***	
t Critical two-tail	4.30265273	

\*\*\**p*-value = 0.003

Table 7

*Likert Scale Evaluation Questions*

<b>Questions</b> (Short Description)	<b>Strongly Agree (%)</b>	<b>Agree (%)</b>	<b>Neither (%)</b>	<b>Disagree (%)</b>	<b>Strongly Disagree (%)</b>
Question 1					
<b>The information included will benefit my practice.</b>	15 (58%)	8 (31%)	3 (12%)	0%	0%
Question 2					
<b>I feel comfortable advising patients on the importance of advance care planning.</b>	14 (54%)	9 (35%)	2 (8%)	(1) 4%	0%

Table 8

*Responses to Close-Ended Question*

Question 3 (Short Description)	Yes, Frequency (%)	No, Frequency (%)
<b>Do you perceive any barriers to implementing this information into clinical practice?</b>	9 (35%)	17 (65%)

Table 9

*Responses to Open-Ended Questions*

<b>Questions Description</b>	<b>Learning about ACP Frequency (%)</b>	<b>Answers Description</b>	<b>No Answer Frequency (%)</b>	<b>Protocol Frequency (%)</b>	<b>Other Frequency (%)</b>
Question 4 What did you like the most?	14 (54%)	Presentation Frequency (%) 7 (27%)	5 (19%)		
Question 5 What did you like the least?	Nothing Frequency (%) 13 (50%)	Checklist Frequency (%) 8 (31%)	No Answer Frequency (%) 5 (19%)		
Question 6 What suggestions for improvement?	Nothing Frequency (%) 10 (38%)	No Answer Frequency (%) 8 (31%)	6 (23%)		2 (8%)