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Critical Care Nurses' Perceptions of Their Knowledge and Self-Efficacy About Providing End-of-Life Care

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COLLEGE OF EDUCATION

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MSN, Walden University, 2009

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Project Study Submitted in Partial Fulfillment

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Abstract

Most nurses receive limited formal education regarding end-of-life (EOL) care, which affects their ability to meet dying patients' needs. Guided by Bandura's social learning theory, this explanatory correlational study examined the relationships between critical care nurses' personal and professional characteristics and their perceived knowledge and self-efficacy when providing EOL care at an academic medical center. Convenience sampling was used to recruit participants from the eligible adult, pediatric, and neonatal critical care nurses for this study. The 67 participants completed the End-of-Life Professional Caregiver Survey (EPCS) to assess EOL care knowledge and self-confidence. Total EPCS scores revealed only moderate levels of EOL knowledge and self-confidence. The Fisher's exact test indicated that higher EPCS scores were significantly associated with nurses' age and completion of advance directive. A 3-day workshop was designed to address deficits related to EPCS scores and advance directive completion, while educating younger nurses to gain confidence in their EOL discussions. Additional research is recommended to distinguish between nurses' actual knowledge and perceived knowledge about EOL care, the long-term effects of EOL care education on the quality of patient care, nurses' levels of moral distress and burnout, and nurses' communication skills with patients and other health care providers. The result of this research promotes positive social change through EOL education to improve the confidence of nurses working with dying patients and their families, as well as to understand the challenges of communicating difficult decisions regarding EOL care.

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Dedication

I owe a debt of gratitude to the inspiring, brilliant, and patient men and women who have added immeasurable depth and humor to my life. They represent not only significant portions of my life, but also the very aspects that make me who I am and who I am becoming. To the girls of bygone summers, I thank you for your belief in me and for the self-confidence you helped to inspire. To the men who returned to me the joy of music, I thank you for your kindness, love, and the insatiable urge to "push tutti and go." To the wise and witty women of Ye Olde Book Club, I am forever grateful for your friendship, laughter, and ongoing support. Finally, to the many great teachers, mentors, and role models who have touched my life, I thank you for your legacy.

Acknowledgments

A special thanks is in order for the people who helped along the way. These include my doctoral committee members: Dr. Kathleen McKee, Committee Chair; Dr. Marianne Borja, Committee Member; and Dr. Beate Baltes, University Research Reviewer. Because of their questions, observations, and direction, I have accomplished more than I thought possible.

The dedicated members of the medical ethics committee always served as a wonderful sounding board for how to look at a problem in a variety of ways. They offered not only constructive criticism, but also statistical support and mentoring. My hope is that this research will positively affect the care of a category of patients who frequently come to the group's attention.

I also extend my gratitude to the many friends and colleagues who helped with ideas, provided moral support, and served as my greatest cheerleaders. These include fellow musicians, coworkers, educators, and church members, to name a few. My family members also supported and participated in this journey, reminding me that there is life after graduate education. Thank you to one and all.

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Section 1: The Problem

Introduction

Until the middle of the 20th century, most people in the United States died at home in familiar surroundings, cared for by family, friends, and clergy (Risse & Balboni, 2013). As medical expertise shifted away from care and focused on cure, societal expectations changed. Confidence in high-tech medicine created a false sense of security that life can be prolonged indefinitely (Yang & Mahon, 2012). At present, this fallacy is perpetuated by unrealistic, yet popular, television programs that suggest all persons can be saved if heroic measures are used (Turow, 2012). This illusion, coupled with a culture in which youth and beauty are revered, is a recipe for health care disasters. The result is a culture that believes "death is optional" (Payne, 2006, p. 609).

A more realistic approach to mortality could be achieved through timely discussions about and delivery of end-of-life (EOL) care. This could improve both quality of life and quality of death (Christopher, 2010). Because of their unique relationships with patients, families, and members of the interdisciplinary health care team, critical care nurses are strategically positioned to engage patients and families in the exploration of EOL preferences and how they approach issues related to mortality.

Definition of the Problem

The emphasis on curing patients has outpaced the practice of holistic care at an academic medical center located in the southeast United States. This was evident in the historically cursory attention offered to palliative and EOL aspects of care. In response to changes in the health care environment and patient expectations, the medical center

recognized the need to modify this approach to patient care, particularly for those with life-limiting and life-threatening illnesses and injuries. Critical care nurses anticipated being an integral part of this change in practice due to the nature of their relationships with patients and their families; however, their ability to provide this care was uncertain, particularly with regard to their knowledge about engaging patients and families in EOL conversations and their belief in their ability in doing so. As critical care nurses prepare to embrace this change in culture, they must consider not only their comfort level with providing more complete EOL care, but also their knowledge about how to respond to the needs of a culturally, socioeconomically, and spiritually diverse patient population. Without the necessary preparation, critical care nurses as well as other members of the health care team would be poorly equipped to assist patients and their families.

The academic medical center was comprised of a hospital for adults, one for children, and multiple clinics and outpatient services. As an institution, it offered multiple sites for the education of medical, nursing, and allied health care providers (HCPs). In addition to undergraduate and graduate education, the institution offered medical residencies and fellowships to prepare physicians for clinical practice. Four local nursing schools also used the hospitals for clinical practice sites. According to documents related to the study site, this 632-bed Level 1 Trauma Center and tertiary care referral center provided a wide variety of services for infants, children, and adults. Patients from across the state, and also a neighboring state, sought medical care from the variety of subspecialists available in the hospital and outpatient settings. The institution also

attracted national and international clientele for certain orthopedic and neurosurgical procedures.

The research site relied on a multidisciplinary staff to care for persons with complex medical and surgical needs. According to the institution's human resources department, 1,235 registered nurses represented one third of the inpatient work force (personal communication, February 20, 2013). Of these, approximately 300 critical care nurses provided care for high acuity sick and injured patients that occupied the 120 intensive care unit (ICU) beds.

Nursing education at this medical center fell under the purview of the chief nursing officer. In turn, the responsibility of identifying and providing oversight of hospital-wide education was delegated to one individual who held a dual role with the College of Nursing and the hospitals and clinics. Under her supervision, two separate, hospital-wide education committees existed. These groups worked to provide unit-based nurse educators with the resources needed to address general issues. One committee focused on hospital-wide professional practice, while the other addressed unit-specific educational processes. Without assurance that consistent content was presented at the unit level, competencies were likely to vary from one unit to the next.

The hospitals and clinics conglomerate recently announced intent to incorporate palliative care services and EOL care into its practice model. This philosophical change in health care delivery would require modification of practice across several professional disciplines. The institution has established a partnership with a local hospice agency to facilitate this process. As part of the arrangement, a physician with experience in hospice

and palliative care will work with physician faculty members to develop and implement palliative and EOL services (director of case management, personal communication, October 16, 2013). Nurses will receive education regarding indications for implementation of hospice services.

Rationale

Evidence of the Problem at the Local Level

Nurses, physicians, and chaplains serving on the hospital ethics committee recognized a problem commonly associated with the delivery of care at this institution: Patients with life-limiting illnesses were poorly prepared for their eventual demise. Committee members described encounters with patients and families who did not understand the progression of the disease. They voiced concern that many physicians had not had frank, intimate discussions with their patients and families about the terminal nature of the illness. Patients, by the time they required hospitalization, had not grasped the reality of their situations and expressed confusion, surprise, and anger. According to the director of case management, this most frequently occurred with oncology patients, though other service lines were mentioned.

Nurses and chaplains serving on the ethics committee reported encounters with patients and families whose physicians have not discussed quality of life issues or EOL planning. Traditionally, physicians initiate these conversations, though some medical specialties, such as oncology and cardiology, are more likely to be remiss in this duty to their patients than others (director of chaplain service, personal communication, February 20, 2013). In crisis situations, patients and families often turn to nurses, asking for

clarification and information about the disease processes and the differences between life-sustaining measures and those that only prolong death (ICU nurses, personal communications, February 13, 2013). The nurses conveyed the frustration they experienced during these situations, describing them as times during which they were not sure how to best represent the patients' interests. These conversations were especially difficult when physicians avoided them altogether or did not discuss fully the nature of interventions with the patients and families.

Nurses from the Neuroscience Intensive Care Unit described situations in which they could have initiated EOL conversations with patients' families, though they elected not to do so. They lacked the self-confidence to initiate the discussion, citing uncertainty about what to say and if it would align well with prior discussions between physicians and their patients' families. Even when families hinted they were ready to talk, the nurses' hesitancy or limited self-confidence diminished the potential for candid EOL discussions and delivery of high-quality EOL care.

According to the study site's website, the institution used Mosby's Skills for procedural guidelines, to provide education for general nursing skills, and to test for competency. These were available through the institution's intranet portal. The topics were written in such a way as to be generalizable to subscribing institutions. Procedures for EOL care and discussions were available, but the instructions were so brief and nonspecific that they did not provide any true direction. There was no requirement for nurses to review the procedures or complete the accompanying posttests (ICU nurses, personal communication, September 12, 2013).

In 2012, the hospital ethics committee conducted an audit of patient charts. Those selected included only those in which the patient was hospitalized for 10 or more days and subsequently died while receiving care in an ICU. The deaths occurred over a 3-month period and included patients in all of the hospital's ICUs except for the Cardiac Care Unit and the Neonatal Intensive Care Unit. Several practices and system processes were evaluated. See Table 1 for the specific categories.

Table 1

Summary of Chart Review

Chart Review Foci	Criteria
Demographics	Patient age
	Primary diagnosis and co-morbidities
	Length of hospitalization
Evidence of advance care planning	Existence of an advance directive
	Designation of a health care proxy
Physician documentation	Number of days prior to death that daily progress notes indicate discussion with patient and family about futility of treatment
	Number of days prior to death that daily progress notes indicate discussion with patient and family about end-of-life care
Nursing documentation	Any record of discussions concerning diagnosis, prognosis, and end-of-life preferences

Note. A total of 29 charts were reviewed (27 adult, 2 pediatric).

Upon evaluation and summarization of the information, common themes regarding EOL care were identified. First, physician documentation did not describe if or

how well patients and families understood the diagnosis and prognosis associated with the disease or injury. There was no evidence to suggest that physicians assessed patient and family understanding. Second, physician documentation of the futility of curative treatment occurred more than 72 hours prior to death, though heroic measures were added or escalated until death. Third, physician documentation did not describe if comfort care or palliative care were offered as treatment options. Nurses' documentation revealed an equivalent lack of discussion with patients and families; however, it is possible that they, like physicians, engaged in these conversations though they did not include this in their documentation.

There was no database or method by which to systematically query the electronic medical record for content specific to EOL conversations. The existing documentation process allowed health care providers to enter information by specific categories; however, there was no category established for EOL care or for communication with patients and families about treatment options. Documentation of these activities occurred in free text entries.

Nurses' educational preparation and roles in palliative and EOL care also merit consideration. Inconsistencies in knowledge, practice, and skill potentially exert negative influence on patient outcomes and nursing satisfaction with the services. The nurse academic liaison between the hospital and the College of Nursing (personal communication, February 20, 2013) believed that lack of formal education and mentorship by medical and nursing faculty contributed to health care providers' discomfort and diminished sense of confidence. She maintained that medical and nursing

professionals relied on their observations of others, learning about how to provide EOL care, deliver bad news, or deal with grief responses while "on the job." The nurse academic liaison's conversations with nurses revealed they did not have a clear understanding of their role or their responsibilities in providing this aspect of care. Critical care nurses (personal communication, February 20, 2013) reported feeling uncomfortable or uneasy about entering into EOL conversations. Nurses' self-efficacy may have been less in these situations, especially because no baseline competency for EOL care or communication had been established at this institution. Ideally, the partnership with the hospice agency will facilitate acquisition of these new skills; however, in a personal communication with the agency's clinical liaison (February 20, 2013), I learned that plans for educational support had not been negotiated.

Evidence of the Problem from the Professional Literature

With a shared responsibility for communication and care, nurses need the self-confidence to discuss EOL care, as well as the knowledge of how to administer that care. In recognition of this, the American Association of Colleges of Nursing (2013), an accrediting organization for nursing programs, has required that at least 1 hour be devoted to EOL care instruction. This mandate ensures that students are introduced to the possibility of death within the professional setting, as well as basic EOL care and communication concepts.

Nursing students typically receive a great deal of coaching and instruction regarding interpersonal and professional communication (Włoszczak-Szubzda, & Jarosz, 2013). Through practice during their education and with support from their classmates

and instructors, they develop a sense of confidence in their ability to communicate well with their patients. Once they complete their undergraduate education, they lose this safety net. Their self-confidence is shaken when they are confronted with the emotional and physiologic complexities of their patients and by the realization they still have much to learn.

The evolution of the role of most nurses places them in a position in which they need both the knowledge and self-confidence to provide EOL care. According to a review completed by Pulsford, Jackson, O'Brien, Yates, and Duxbury (2011), many scholars recognized the need to address knowledge deficits and limited self-confidence related to delivery of EOL care. They concluded that nurses' needs are multidimensional.

In their practice, Yoshioka and Moriyama (2013) identified deficits in nursing knowledge and attitudes, both of which are necessary to provide high-quality EOL care. In a subsequent study, they described an increase in self-efficacy after nurses completed an educational intervention, suggesting that knowledge and confidence may be related (Yoshioka, Moriyama, & Ohno, 2013). Powazki et al. (2013) assessed ICU nurses' knowledge of EOL care in order to make recommendations regarding continuing education. They identified that nurses, particularly those who were younger and had less experience, were more likely to need continuing education to develop competence in EOL care. Some authors maintained that all nurses who work on high-mortality units should receive continuing education to develop and maintain competence in EOL care (Choi, Lee, Kim, Kim, & Kim, 2012). Deficits in knowledge about pharmacologic management of pain and symptoms, as well as those related to communication skills,

need to be remedied to ensure the delivery of high-quality EOL care (White & Coyne, 2011).

Without ongoing support for the development and maintenance of adequate communication techniques, nurses' sense of competence and confidence when working with culturally diverse patients nearing EOL is diminished (Gallagher & Krawczyk, 2013). Researchers have linked nurses' limited or ineffective communication abilities to decreased quality of patient care and lower satisfaction with their work (Khodadadi, Ebrahmimi, Joghaddasian, & Babapour, 2013).

Problematic communication about EOL needs or wishes may be a reflection of lack of self-confidence in nurses and even other HCPs. As a result, their ability or motivation to discuss EOL care may wane. When this occurs in the physician population, nurses may be left to initiate EOL conversations. For example, one group of oncology nurses reported that they had to initiate EOL conversations with about 20% of their actively dying patients because physicians had not done so (Boyd, Merkh, Rutledge, & Randall, 2011). In these situations, nurses need to be able to draw from more than a rudimentary skill set. Nurses need both competence and confidence to provide high-quality EOL care.

Nurses' personal or professional characteristics also may contribute to their sense of competence and self-efficacy in EOL situations. For example, years of professional experience, age, and gender may influence ICU nurses' ability and confidence in EOL situations (Chen et al., 2013). Conceivably, nurses' educational achievements and the type of ICU where they work could have bearing on their knowledge and self-confidence

(Ryan & Jezewski, 2012). Nurses' faith traditions and ethnicity also should be considered for their effects on nurse-patient communication, particularly with regard to existential and cultural matters (Balboni et al., 2013; Morhaim & Pollack, 2013).

Nurses who have completed their own advance directives may be more knowledgeable about and confident with discussing or delivering EOL care than those who have not shared their EOL treatment wishes. Ryan and Jezewski (2012) reported that nurses described themselves as moderately knowledgeable about advance directives. Influences such as age, experience, or type of nursing unit where employed may contribute to their perceptions of knowledge.

With changes occurring at institutional and professional levels, plans for successful integration of new or modified roles must be considered. Plans need to include not only shared care with staff members from the contracted hospice agency, but also an assessment of current practices and responsibilities within the institution. The purpose of this study was to examine the relationship between nurses' personal and professional characteristics and their perceptions of knowledge and self-efficacy when providing EOL care at an academic medical center.

Definitions

Competency: Competency, in health care, represents a person's ability to execute a skill or demonstrate a particular quality, characteristic, attitude, or judgment (Wright, Jolly, Schneider-Kolsky, & Baird, 2011).

Critical care nurses: Critical care nurses are specialized registered nurses (RNs) who provide care for patients with life-threatening or life-limiting conditions or injuries

(American Association of Critical-Care Nurses, 2013); critical care nurses also are referred to as *intensive care unit (ICU) nurses*.

Educational preparation: Educational preparation is the anticipatory training or learning about a particular subject; it may be the result of formal or informal instruction or experiences (Krimshtein et al., 2011).

End-of-life (EOL) care: EOL care is the process of enhancing quality of life by providing holistic, interdisciplinary care to all patients with life-limiting or terminal conditions, regardless of diagnosis or age, as they progress toward death (Izumi, Nagae, Sakurai, & Imamura, 2012).

End-of-life (EOL) communication: EOL communication occurs when health care providers discern patients' or family members' understanding of prognosis, discuss the trajectory of the illness, and identify preferences for care around the time of death (Mack et al., 2012).

Intensive care unit (ICU): The ICU is a highly specialized area in the hospital in which seriously ill or injured persons receive care (Torpy, 2009).

Knowledge: Knowledge is a combination of "facts, information, and skills acquired by a person through experience or education" that implies "theoretical or practical understanding of a subject" ("Knowledge," 2014).

Self-efficacy: Self-efficacy is a subjective, self-reported assessment of a person's ability to respond in an expected way during a predefined situation (Bandura, 1986).

Significance

Due to the recent plan to include hospice and palliative care services within the hospital, the institution needed to determine if nurses are adequately prepared to provide this type of care. Because bedside nurses spend more time with patients and families than any other members of the health care team, the institution needed to assess not only their knowledge and capability of delivering EOL care, but also any personal or professional characteristics that affected delivery. One cannot assume that because critical care nurses deliver more EOL care than other nursing specialties that they are more capable of providing high-quality EOL care. Their choice of specialty is not indicative of their ability to initiate or participate in EOL conversations or provide care tailored to meet the unique needs of each patient and family. Instead, their skillfulness and readiness may be determined by the combination of knowledge and self-efficacy and how these are affected by personal and professional factors. I intended for this research to determine characteristics that exerted the greatest influence on nurses' knowledge and self-efficacy so that the institution could purposefully target future educational efforts.

Improvement of nurses' ability to provide high-quality EOL care contributes to far-reaching, positive implications for patients, their families, and nurses. First, patients, along with their families, benefit from the enhanced advocacy that critical care nurses provide as decisions are made during EOL care (American Association of Critical-Care Nurses, 2014). Through these relationships, patients and their families are supported across the continuum of life. Secondly, with increased knowledge and self-awareness, critical care nurses are expected to experience less work-related anxiety and stress.

Positive social change, as an outcome of decreased burnout, is influenced through reduced attrition rates within a workforce that is already in short supply.

Research Questions

Critical care nurses regularly care for patients who will not survive their illnesses or injuries. Their educational preparation for this aspect of their jobs varies considerably as does their range of personal experiences and other characteristics that could influence the delivery of EOL care and communication. The institution under study had not assessed the competency of ICU nurses with regard to the delivery of high quality EOL care, nor did it have a basic understanding of nurses' confidence and comfort in providing EOL care and the nature of their role in EOL communication. Of equal importance, the institution lacked insight into the effects of professional or personal factors that interact with knowledge and self-efficacy to affect the delivery of EOL care. This study was intended to evaluate the extent to which critical care nurses' perceptions of knowledge and self-efficacy were affected by specific demographic variables. The following research questions and hypotheses provided direction for this endeavor.

*RQ*1: Is there a relationship between age and the perceptions of knowledge and self-efficacy in critical care nurses providing EOL care at an academic medical center?

$H_0$1*:* There is no significant relationship between age and perceptions of knowledge and self-efficacy about EOL care for critical care nurses at an academic medical center.

H_a1: There is a significant relationship between age and perceptions of knowledge and self-efficacy for critical care nurses who provide EOL care at an academic medical center.

*RQ*2: Is there a relationship between nurses' gender and the perceptions of knowledge and self-efficacy in critical care nurses providing EOL care at an academic medical center?

$H_0$2: There is no significant relationship between nurses' gender and perceptions of knowledge and self-efficacy about EOL care for critical care nurses at an academic medical center.

H_a2: There is a significant relationship between nurses' gender and perceptions of knowledge and self-efficacy for critical care nurses who provide EOL care at an academic medical center.

*RQ*3: Is there a relationship between ethnicity and perceptions of knowledge and self-efficacy in critical care nurses providing EOL care at an academic medical center?

$H_0$3: There is no significant relationship between ethnicity and perceptions of knowledge and self-efficacy about EOL care for critical care nurses at an academic medical center.

H_a3: There is a significant relationship between ethnicity and perceptions of knowledge and self-efficacy for critical care nurses who provide EOL care at an academic medical center.

*RQ*4: Is there a relationship between faith tradition and the perceptions of knowledge and self-efficacy in critical care nurses providing EOL care at an academic medical center?

$H_0$4: There is no significant relationship between faith tradition and perceptions of knowledge and self-efficacy about EOL care for critical care nurses at an academic medical center.

H_a4: There is a significant relationship between faith tradition and perceptions of knowledge and self-efficacy for critical care nurses who provide EOL care at an academic medical center.

*RQ*5: Is there a relationship between educational level and the perceptions of knowledge and self-efficacy in critical care nurses providing EOL care at an academic medical center?

$H_0$5: There is no significant relationship between educational level and perceptions of knowledge and self-efficacy about EOL care for critical care nurses at an academic medical center.

H_a5: There is a significant relationship between educational level and perceptions of knowledge and self-efficacy for critical care nurses who provide EOL care at an academic medical center.

*RQ*6: Is there a relationship between years of nursing experience and the perceptions of knowledge and self-efficacy in critical care nurses providing EOL care at an academic medical center?

$H_0$6: There is no significant relationship between years of nursing experience and perceptions of knowledge and self-efficacy about EOL care for critical care nurses at an academic medical center.

H_a6: There is a significant relationship between years of nursing experience and perceptions of knowledge and self-efficacy for critical care nurses who provide EOL care at an academic medical center.

*RQ*7: Is there a relationship between ICU type and the perceptions of knowledge and self-efficacy in critical care nurses providing EOL care at an academic medical center?

$H_0$7: There is no significant relationship between ICU type and perceptions of knowledge and self-efficacy about EOL care for critical care nurses at an academic medical center.

H_a7: There is a significant relationship between ICU type and perceptions of knowledge and self-efficacy for critical care nurses who provide EOL care at an academic medical center.

*RQ*8: Is there a relationship between communication of personal EOL wishes to family or friends and perceptions of knowledge and self-efficacy in critical care nurses providing EOL care at an academic medical center?

$H_0$8: There is no significant relationship between communication of personal EOL wishes to family or friends and perceptions of knowledge and self-efficacy about EOL care for critical care nurses at an academic medical center.

H_a8: There is a significant relationship between communication of personal EOL wishes to family or friends and perceptions of knowledge and self-efficacy for critical care nurses who provide EOL care at an academic medical center.

*RQ*9: Is there a relationship between the completion of a personal advance directive and perceptions of knowledge and self-efficacy in critical care nurses providing EOL care at an academic medical center?

$H_0$9: There is no significant relationship between completion of a personal advance directive and perceptions of knowledge and self-efficacy about EOL care for critical care nurses at an academic medical center.

H_a9: There is a significant relationship between completion of a personal advance directive and perceptions of knowledge and self-efficacy in critical care nurses who provide EOL care at an academic medical center.

Review of the Literature

To define and narrow the scope of this literature review, articles from professional, peer-reviewed journals and other sources were discovered by searching with specific terms. A Google Scholar search was conducted with the following terms, both with and without the Boolean term "AND": *end-of-life, communication, knowledge, nurse, ICU, self-efficacy,* and *education*. I also performed a parallel query of the CINAHL Plus, ProQuest, and EBSCOhost databases at the Walden University Library. Queries yielded more than 300 peer-reviewed articles. The Google Scholar search found several books only peripherally related to the topic, published more than 5 years ago, or unrelated to nursing or education.

Theoretical Framework

Competence and confidence are essential components of professional nursing practice. Bandura (1977) articulated the relationship of these elements of practice well within the context of social learning theory (SLT). In this section, the theory and evidence of its influence on nursing practice are explored.

SLT provides a basis for understanding how internal and external factors influence a person's behavior in specific situations (Bandura, 1977). Four factors contribute to how a learner develops self-efficacy. First, performance accomplishments generate a sense of mastery and confidence in ability (Bandura, 1982). Second, verbal persuasion bolsters a person's belief in his or her ability and ultimately motivates or dissuades a person's willingness to engage in the activity. Third, vicarious experience increases confidence in one's abilities through careful study of another's behaviors. The fourth factor, emotional arousal, contributes to a person's self-efficacy through the introduction of personal feelings such as anxiety. Personal and external expectations of confidence and competence are derived from these factors and are keys to learning, application of knowledge, and, ultimately, self-efficacy. These represent factors that influence reciprocal determinism (Bandura, 1986).

Evidence of learning might not always be obvious to the observer, though this does not mean that learning has not occurred (Bandura, 1977). Bandura (1997) did not equate competence with perceived self-competence. Competence represents a person's ability to perform a specific skill from social, cognitive, emotional, and psychomotor perspectives. A person may have the capacity to perform the skill, though this does not

mean that he or she will do so. Perceived self-competence, the person's interpretation of his or her ability and the likelihood of successful execution of the skill, functions as a motivator or deterrent of performance (Bandura, 1986, 1989). As such, a person with a greater sense of self-competence is more likely to engage in the behavior and persevere to achieve the desired outcome than is a person with less.

At the core of Bandura's (1977) theory lies the concept of self-efficacy. Bandura described self-efficacy as a person's self-confidence and likelihood of maintaining learned changes in behavior or attitude. Feelings of self-confidence and pride serve as positive reinforcement for learning, though these alone may not be adequate to initiate or sustain a change in behavior. Extrinsic influences such as praise or penalties for failing to perform the behavior also may be required. Ultimately, successful performance, as a measure of mastery, most effectively increases one's sense of self-efficacy (Bandura, 1982). Perceived self-efficacy and level of performance mastery can predict the likelihood of the performance of specific actions (Bandura, 1977, 1982). Both competence and self-competence must coexist for a person to demonstrate a consistent response in specific situations (Bandura, 1986). Each episode of successful completion of the skill increases self-competence. As a result, a person may seek out additional opportunities to use the skill. A sense of self-efficacy serves as a powerful motivator to engage in activities (Bandura, 1989).

Review of Pertinent Literature

SLT provides a theoretical basis for evaluating the relationship between self-efficacy and educational preparation as it pertains to EOL care and conversations. If

nurses' level of participation in care is a reflection of their self-confidence and their belief that they are capable of engaging in EOL care, then predictably, knowledge and educational deficits can be assumed to negatively affect nurses' confidence. Nurses' willingness to fully engage in all aspects of EOL care and communication may be limited by these deficits (Chesser-Smyth & Long, 2013). The following discussion examines historical perspectives of EOL care, deficits in and barriers to EOL care in nursing education, the evolution of critical care nursing roles, and Bandura's (1982) internal and external mitigating factors and their influence on the knowledge and self-efficacy of critical care nurses providing EOL care.

Historical considerations regarding EOL care in the United States. History has influenced the present-day relationships of physicians and nurses with their patients who are nearing the EOL. To gain perspective, it is important to understand how the medical profession has evolved and how these changes affect nursing education and practice with regard to EOL care. Many of these changes occurred within the past 50 years and shape the current professional and social climate.

The American Medical Society (AMA, 1903) published *Principles of Medical Ethics,* which included a statement that described the expected conduct and communication for physicians with terminally ill patients and their families. Physicians were admonished to avoid making distressing prognostications to patients; instead, they were to confide in patients' friends. They also had the option of assigning this task to other persons who could be entrusted. By the 1970s, patients' right to self-determination, and, therefore, all patients' right to know their diagnoses and prognoses, became the

societal norm in the United States (Baker, 2004). The AMA (2013) ultimately deemed therapeutic privilege to be unethical in 2006, effectively ending a paternalistic chapter in health care.

In this generation, patients expect physicians' communication and full disclosure to predicate all decisions about health care. This places a burden on other HCPs in addition to physicians. In the ICU setting where physician contact is considerably less than nursing interaction, a shared practice of disclosure and communication is more likely to occur (Gutierrez, 2012). Regardless of whether patients and families, physicians, or nurses initiate the conversation, all HCPs are expected to be truthful and forthcoming in order to maintain the trust of patients and families (Lind, Lorem, Nortvedt, & Hevrøy, 2012).

The formation of trusting relationships is particularly challenging in the ICU. Most ICU HCPs have no relationship with their patients before they are admitted (Galanos, Morris, Pieper, Poppe-Ries, & Steinhauser, 2012). As many as 50% of ICU attending physicians, nurses, and residents knew their patients for less than 48 hours before their deaths. Trusting relationships also may be difficult to establish when families perceive significant differences between what nurses are at liberty to discuss and what physicians feel free to communicate about the patients (Lind et al., 2012). Split communication provides mixed or incomplete messages about patient status and prognosis, something viewed as unsettling and confusing to family members.

Limitations of nursing education. Ideally, undergraduate nursing education prepares students by encouraging knowledge acquisition and skill development.

According to Bandura (1986), knowledge or competency alone is not indicative of students' learning. Perfectly demonstrated psychomotor skills or sharing of isolated pieces of information does not ensure that students ultimately will believe in their abilities. For undergraduate education to be successful, students need to develop a commensurate sense of self-competence.

Undergraduate nursing programs receive oversight from accrediting agencies that prescribe essential components of the curriculum. The American Association of Colleges of Nursing (2013a), one of two accrediting organizations for nursing programs, has required schools to prepare students to care for dying persons and their family members. This agency did not mandate a specific number of hours or dictate the exact content of instruction.

Nursing schools incorporate instructional time in such a way that course content parallels the philosophy and objectives of each school. As a result, there is great variability among schools regarding the amount of EOL education offered to students and the goals of the education. For example, one nursing program included a 1-day session about EOL communication to better equip students with the skills and knowledge necessary to provide holistic nursing care within a geriatric-dense community (Ladd, Grimley, Hickman, & Touhy, 2013). Another undergraduate program provided a semester-long curriculum to increase students' confidence and attitudes about providing EOL care (Todaro-Franceschi, & Spellman, 2012). Though the results of these two programs described improvement in students' knowledge and confidence, the methods and foci of each program differed greatly, thus reflecting the lack of standardization

across undergraduate nursing curricula. The outcomes of each educational intervention suggested that students who receive education could be expected to engage in some EOL care behaviors.

Nursing students with repeated exposure to EOL care throughout the curriculum gradually mastered complex EOL concepts and skills (Wallace et al., 2009). Practicing nurses also echoed this, reporting a predictable rise in self-efficacy after repeated experiences of caring for dying patients and their families (Shorter & Stayt, 2009). Interventions such as these supported the concept that nursing programs can respond effectively to the need for more comprehensive education about EOL care. They also illustrated the reciprocal nature of competence and self-efficacy described by Bandura (1982).

Limited and varied EOL education is a problem that is not unique to nursing schools in the United States. Students from eight Argentinian nursing programs felt they were ill prepared for EOL care, suggesting that their humanities courses had done a better job of preparing them for care of the dying than their nursing programs (Mutto, Errazquin, Rabhansl, & Villar, 2010). This lack of knowledge directly affected students' self-confidence about their ability to provide EOL care, even when they believed that EOL communication was the right thing to do.

The lack of standardization or emphasis on EOL education continues beyond undergraduate education. Though the American Nurses Association (ANA, 2008) stated that nurses are responsible for maintaining general competency throughout their careers, variation in competencies and expectations exist. Mandatory education for practicing

nurses is dependent on state and employer requirements. Many state boards of nursing require nurses to provide evidence of educational activities as a condition of licensure (Medscape, 2013). Professional organizations such as the American Association of Critical Care Nurses (2008) require continuing education to maintain specialty certification as a critical care nurse. The conflict between educational needs, wishes, requirements, and the means to attain these further affects nurses' development of knowledge and self-efficacy.

Employers and nurses often differ in their expectations regarding employer-funded education. Lack of support for professional development has bearing on nurses' motivation to increase knowledge and self-efficacy. Reasons for limited support may be due, in part, to a shift in fiscal priorities. Many hospitals reduced or even eliminated financial support for in-house education, off-site conferences, and graduate-level education. In-house education alone may not be adequate for development of the more advanced skills needed for patient care (Richardson & Gage, 2010). Furthermore, employers who are not flexible with scheduling restrict nurses' ability to obtain education outside of the work environment. Common financial barriers to education include lack of registration fee or tuition reimbursement by the employer and no paid time off for education (Santos, 2012). Without support for education, there is concern that nurses' knowledge cannot keep pace with changes in the profession and deliver care that meets expected standards.

Reduced educational funding, when coupled with minimal prior education about EOL care, limited EOL experience, and highly variable institutional support results in a

nursing workforce poorly prepared to address the complex needs of persons with life-limiting injury or illness. Members of the Oncology Nurses Society (ONS) raised concern about patient and family outcomes when their nurses are ill prepared, particularly because the amount of education has decreased (White & Coyne, 2011). The lack of institutional support for professional education also diminished the likelihood that nurses will pursue education independently (Gaudine, LeFort, Lamb, & Thorne, 2011).

The loss of or limited access to educational resources also negatively affects nurses' attitudes about EOL. Nurses may feel compelled to provide care that is outside of their scope of knowledge or ability, magnifying nurses' sense of inadequacy (Wright, Prasun, & Hilgenberg, 2011). On-the-job training is unreliable and inconsistent, leading to the "see one, do one, teach one" method of teaching and learning that provides little opportunity for development of knowledge or efficacy beliefs (Espinosa et al., 2010, p. 276).

Many nurses report a general knowledge deficit that limits their confidence with providing all aspects of EOL care. In their study, Landsell and Beech (2010) demonstrated that education effectively generates a deeper knowledge and more confidence in ability. While these outcomes would be expected, based on Bandura's (1982) SLT, another finding was not: awareness of individual limitations. Nurses reported that realization of limitations was evidence of their learning. This insight could have served as a motivating force to further increase their knowledge.

Others described inadequate knowledge in specific EOL care areas such as pain or symptom management. In one study, knowledge scores were relatively low despite high

scores for confidence, a finding that would not be expected when considering SLT principles (Brazil, Brink, Kaasalainen, Kelly, & McAiney, 2012). Nurses' confidence may have originated from the familiarity developed when providing care repeatedly, even though that care was substandard. In another study, nurses' assessment of their self-efficacy and knowledge was low despite their demonstrated performance abilities (Powazki et al., 2013). This was attributed to multiple factors such as ethical dilemmas, communication problems, or grief response.

Without continuing education, even highly experienced critical care nurses are left to learn from co-workers who may be no better prepared than they are (Fridh, Forsberg, & Bergbom, 2009). This option was determined to be an ineffective strategy, especially when educational activities lacked content that was supported by current literature and did not lead to evidence-based practice. Even when nurses learned through vicarious experience, they could develop a false sense of confidence if the modeled behaviors were inadequate.

Festic, Wilson, Gajic, Divertie, and Rabatin (2012) identified that critical care nurses and physicians may hold different perspectives about nurses' capabilities and attitudes regarding EOL care. HCPs' misconceptions or lack of confidence in nurses' knowledge, competence, or interest in EOL care may lead to further degradation of nurses' self-efficacy. For EOL care to improve, fundamental changes are needed at many levels. Education, as a means to impart skills, must be paired with a conceptual change about the delivery of care at the end of life.

Assessment of surviving family members of ICU patients offers another window into nurses' self-efficacy and knowledge of EOL care delivery. Oncology patients' survivors described relatively less satisfaction with EOL care and communication in ICU than those of nononcology patients, suggesting that the critical care nurses are less knowledgeable and skilled regarding EOL care (Kinoshita & Miyashita, 2012). These results could be attributed to how terminal cancer care is contrary to the main mission of the ICU: survival. Learning how to ensure a peaceful death competes with the countless other technical and cognitive competences for nurses, so, comparatively, the motivation to learn could be relatively low.

The exploration of knowledge, self-efficacy, and nursing education revealed opportunities for education and obstacles to the delivery of high-quality EOL care. Consistent deficits of specific knowledge and self-confidence demonstrated the pervasive inadequacies of education for EOL care. These were attributed to basic nursing education and to ongoing educational needs of nurses after entering the workforce. Whether the lack of EOL knowledge stemmed from limited undergraduate preparation or variable institutional support, the end result was the same: critical care nurses require the knowledge and self-confidence to provide this type care. The ways in which this knowledge was obtained varied and included previous life experiences, on-the-job experiences, and formal and informal education.

Learning through performance accomplishments. Nursing students and professional nurses alike frequently equated competency with the ability to perform skills or demonstrate the acquisition of factual knowledge (Bromley, 2014; Yanhua & Watson,

2011). Because of this, use of scenarios, simulations, and role-playing activities may be particularly appealing to learners. These methods can be used promote knowledge development and, ultimately, increased self-efficacy.

When opportunities to learn in the clinical setting are limited, nursing students and practicing nurses alike could benefit from simulated experiences to develop knowledge and self-efficacy. Simulation scenarios provided opportunities for nurses to actively learn without risk to themselves or actual patients (Disher et al., 2014). These experiences could be offered in static learning situations when specific psychomotor skills are learned. Alternatively, scenarios requiring application of critical thinking skills could be conducted in a hi-fidelity simulation lab. There, students or practicing nurses have opportunity to learn and practice skills in a more realistic experience, potentially building self-confidence and developing a sense of mastery.

Coffman (2012) demonstrated Bandura's (1986) concept of how improved levels of knowledge and self-efficacy can serve as predictors that nurses will apply their skills in future situations. The research evaluated nursing students' perceptions of learning about EOL care in static and hi-fidelity simulation labs. The static lab was useful for learning about concrete tasks or isolated psychomotor skills. The hi-fidelity lab experience provided students the opportunity to learn complex concepts, practice related to the psychomotor skills, and develop critical thinking skills necessary to apply their knowledge. Fluharty et al. (2012) also found this to be true. The simulation lab experience appeared to be a suitable method of instruction for the physical aspects of EOL care, especially when this may be students' only encounter with dying patients

during their undergraduate experience. Successful development of abstract thinking and communication skills also was noted to occur within the simulation lab, particularly when scenarios included elements that require learners to interact with patients and families (Kameg, Closhesy, Mitchell, & Suresky, 2010)

Role-playing activities and standard patient scenarios provided other ways in which HCPs could increase EOL knowledge and self-efficacy. Krimshtein et al. (2011) devised an interactive standard patient and role-playing intervention that assisted nurses in the development of communication skills and the self-confidence necessary to discuss poor prognosis, goals of treatment, and EOL care with family members. Jack et al. (2013) used role-playing activities during their workshop to enhance mastery of EOL communication skills. Each of these scholars concluded that education effectively developed knowledge and positively affected HCPs' self-efficacy.

Use of simulated experiences also incurred possible disadvantages. Learners were found to be at risk of developing inflated perceptions of self-efficacy when complex skills learned in the simulated setting (Pike & O'Donnell, 2010). In addition, the ability to apply skills in the clinical setting was found lacking when compared to the simulation lab. Disproportionate levels of knowledge and self-efficacy thus could negatively affect future opportunities to engage in the behavior (Bandura, 1986). Simulated learning experiences must be carefully designed so that learners develop not only knowledge, but also realistic expectations of their performance abilities.

Ultimately, experience and practice frequency must be intertwined with knowledge and self-efficacy. HCPs who frequently were in a position to convey bad

news to patients and families were more confident in their skill (Boss, Urban, Barnett, & Arnold, 2013). Knowledge and self-efficacy were recognized as proportionate to the HCPs' sense of mastery in these circumstances.

Learning through verbal or social persuasion. Verbal persuasion includes assurances, coaxing, or goading by persons who are in authority or are held in esteem (Bandura, 1982). Conceivably, nurse-patient relationships embody many of these characteristics, particularly when nurses or students perceive high levels of patient needs or instructor expectations. In these situations, actual knowledge and perceptions of self-efficacy may not be equivalent, but through learning, this may be resolved.

Verbal persuasion affects self-efficacy by way of encouragement, coaching, and positive reinforcement (Bandura, 1982). To that end, faculty-student relationships play a key role in developing students' self-efficacy. Verbal persuasion was noted to be a powerful motivator, especially when learners perceived that instructors believed in their ability to learn and apply new knowledge (Eller, Lev, & Feurer, 2013). When they were supportive and constructive, instructors' communication skills and behaviors increased learners' belief in their abilities (Esmaeili, Cheraghi, Salsali, & Ghiyasvandian, 2013). Conversely, behaviors and attitudes that were deterrents to learning, such as indiscrete criticism, left students discouraged about their capacity to develop into competent professionals.

Critical care nurses are adept at providing care in an environment that is physically and technically challenging. In this setting, they also may be familiar with talking to family members about the practical aspects of dying. Critical care nurses

reported engaging in EOL conversations more often than their peers, and, therefore, possessed higher levels of self-efficacy (Boss, Urban, Barnett, & Arnold, 2013; Langley, Schmollgruber, Fulbrook, Albarran, & Latour, 2013). Uncertainty arose when they were unsure of how to time aspects of the discussion with the trajectory of the illness, especially if there was confusion about prognosis and hope for recovery. By responding to patients' requests, nurses showed a willingness to engage in these conversations, even when this meant leaving their comfort zone. While experience could be interpreted as a predictor of their behavior, persuasion by patients and their family members also served as a primary motivation (Ranse, Yates, & Coyer, 2012).

The ICU setting provides ample opportunity to observe and apply SLT concepts because of the wide range of skills and behaviors required to deliver care. Critical care nurses' perceptions of self-efficacy were observed to be positively associated with the collaborative practice styles of interdisciplinary teams (LeBlanc, Schaufeli, Salanova, Llorens, & Nap, 2010). With reinforcement from professional interactions, mutual respect and interdisciplinary support effectively promoted learning of EOL skills.

Learning through vicarious experience. Situations that promote or enhance learning are not always reliant on nurses actively performing a skill. As an alternative, observational experiences offer opportunities for less experienced persons to observe how peers achieve desired outcomes (Bandura, 1976). Observation of modeled behaviors, attention to descriptions of behaviors, and symbolic representations of behaviors are important to the learning process. Observational experiences have long been a method

employed in nursing education and endorsed as one method of achieving professional growth and development (Benner, 1984).

Observation of modeled behaviors and, later, their imitation, affords nurses the luxury of reflective learning, one component of vicarious learning. Perry (2009) noted that the modeling of behaviors, as a way of instruction, allowed learners to mentally organize what they have seen and then later demonstrate learning through their performance. Observation of peers' skills provided opportunity for assimilation of new knowledge prior to initiating practice (Marshall, West, & Aitken, 2013; Perry, 2009). This method of learning was particularly important when integrating complex behaviors and concepts. For vicarious learning to be most effective, learners had to be paired with role models who paid attention to details, made meaningful connections with learners, intentionally demonstrated the desired skill, and affirmed the value of others (Perry, 2009).

When critical care nurses received education specific to the withdrawal of mechanical support, this often occurred without any formal structure (Kirchhoff & Kowalkowski, 2010). Observation served as the primary, often sole, method of gaining new information. Witnessing and examining the complexities of EOL care facilitated learning within the context of existing knowledge. Direct observation and mimicry of behaviors served as powerful tools for learning, but without established competencies and ways to evaluate them, the extent of learning could not be determined (Bloomer, Morphet, O'Connor, Lee, & Griffiths, 2013). Furthermore, it was impossible to ensure the consistency of what different learners would witness during observation alone.

Deficits in educational preparation persisted and continued to limit critical care nurses' ability to provide high-quality EOL care.

Learning through moral distress and emotional arousal. Emotional arousal contributes to self-efficacy and learning (Bandura, 1989). The emotionally charged nature of EOL care requires consideration of how anxiety or other feelings may affect nurses, particularly when emotional arousal functions either as a motivator or as a deterrent to learning about and engaging in EOL care. Emotions, moral distress, spirituality, and sense of professional duty to the patient all are instrumental in motivating nurses to attain EOL knowledge and increased self-efficacy.

Self-efficacy regarding EOL care, nurse spirituality, and the perceived importance of EOL care are key predictors of nurses' tendency to engage in EOL conversations. Nurses with a heightened sense of spirituality and greater self-efficacy were more likely to ask patients about aspects of EOL care such as resuscitation preferences (Bjarnason, 2012). Of note, nurses felt less capable of EOL communication in situations when treatment is withdrawn or withheld. This illustrated the complexities of the relationship between emotional response and personal beliefs on nurses' behaviors.

When patients' or physicians' choices about care were in direct conflict with personal values, nurses were more inclined to engage in EOL conversations (Browning, 2013). Nurses experienced high levels of moral distress when families or physicians asked them to provide what they believe is futile care. This generated a significant emotional and psychological burden for ICU nurses. To dissipate their distress, nurses initiated conversations directly with patients, families, and other HCPs. Through verbal

and nonverbal interactions, all parties could work to achieve the eventual balance observed in reciprocal determinism (Bandura, 1986).

Patients' or family members' requests for information about diagnosis or prognosis created internal conflict for many nurses. Tension between duty to patient and evolving role expectations led nurses to feel "caught in the middle" between patients and physicians, especially when physicians do not or will not tell patients about their terminal conditions (McLennon et al., 2013, p. 430). The ethical obligation to disclose information about prognosis generated significant moral distress (Teixeira, Ribeiro, Fonseca, & Carvalho, 2014). In these situations, nurses followed their moral compasses, regardless of knowledge or self-efficacy regarding EOL communication.

Nurses' emotional response to patient suffering served as a powerful motivator for increasing knowledge about EOL care and communication. Nurses reported that some patients experienced needless suffering until a consensus about the terminal nature of the disease was reached between HCPs and family members (King & Thomas, 2013). Until that time, nurses were bound to continue aggressive treatment of the patient in spite of their moral distress. Education could mitigate some distress simply by empowering nurses with the communication skills needed to guide patients and families through this difficult time and possibly reach consensus sooner.

One of the most stressful times for nurses occurred when the patient care model was shifted from curative efforts to comfort care. Before this change, critical care nurses often were in the position of insisting that EOL discussions occur with patients' families. If physicians were hesitant or resistant to this, some nurses, whether confident or not in

their knowledge and ability, reacted to the emotional and professional tension. They responded with or without knowledge or self-confidence, initiating these conversations to alleviate their internal conflict (Coombs, Addington-Hall, & Long-Sutehall, 2011).

Evolution of the role of critical care nurses in EOL care. The American Nurses Association (ANA, 2010) clearly articulated nurses' obligations to patients at the end of life. These responsibilities include exploration of patients' or their families' preferences for care and treatment, mitigation of suffering, patient advocacy, and dignity at death. EOL care may include the withholding or withdrawal of treatment, both of which are considered ethically acceptable in response to patients' or proxies' wishes (ANA, 2010).

Communication is but one aspect of EOL care, though it is considered essential to ensure that the goals and wishes of patients and families are honored. The question of who should initiate EOL discussions is less clear as the role of the critical care nurse evolves and increasing emphasis on an interdisciplinary approach to patient care. Epstein (2010) posited that the general culture of the unit may be what determines nurses' involvement in EOL decision-making, care, and communication. Though nurses and physicians described specific role-related responsibilities, there was an overlap. This was thought to be due to the evolution of both roles as collaborators. In units where nurses regularly contributed to the day-to-day plan of care, they were more likely to be involved in all aspects of EOL planning and care. While role expectations are broadening for critical care nurses, individual unit or regional cultures and practices continued to influence nurses' contributions to the interdisciplinary team (Latour, Fulbrook, & Albarran, 2009).

Unfortunately, high levels of collaboration do not occur routinely on all units. For units where nurses merely are present for the discussions, an interdisciplinary willingness to adopt new roles must emerge to facilitate transition to a new paradigm. In ICUs where there were collaborative relationships between physicians and nurses, nurses exercised greater autonomy and received encouragement to initiate EOL discussions (Carnevale et al., 2012). Some ICU cultures respected that both physicians and nurses share the responsibility of engaging families in EOL discussions. Adoption of a collaborative approach relieved concerns about usurping patient's autonomy while simultaneously recognizing the value of nurses' partnership in the process (McLennan, Celi, Gillett, Penney, & Foss, 2010).

When physicians and nurses were not in agreement about curative treatment versus EOL care, nurses' moral distress increases and nurses' job satisfaction decreased (Latour, Fulbrook, & Albarran, 2009; Piers et al., 2011). Frank conversations early in patient relationships helped to mitigate nurses' moral distress about providing treatment with little hope of success. Working as partners, interdisciplinary team members shared the weight of decision-making responsibilities as well as the responsibility to fully inform patients and their families (Papathanassoglou et al., 2012). Trusting relationships developed not only between HCPs, but also between families and HCPs. Without these relationships, nurses and physicians differed in what and how they communicated to families and potentially compromised the quality of EOL care (Lind, Lorem, Nortved, & Hevrøy, 2012).

Within collaborative units, critical care nurses are more likely to be fully engaged as patient advocates; however, advocacy related to EOL care is hindered when nurses are limited by inadequate knowledge. Critical care nurses reported difficulty in explaining prognoses to families and raised concern that they could provide a false sense of hope, especially when terms used to describe patients' conditions might be ambiguous (Aslakson et al., 2012). An overall lack of training for these discussions was a major barrier to patient care and advocacy (Quenot et al., 2012). To overcome this, collaboration must be coupled with appropriate staff preparation, creating a positive work environment where high-quality patient care and shared responsibility for EOL care co-exist.

Other variables affecting nurses who provide EOL care. Personal and professional factors contribute to critical care nurses' EOL care attitudes, knowledge, and self-efficacy. For example, spiritual and faith-based beliefs influenced nurses' comfort levels when providing EOL care. Balboni et al. (2012) observed that while spiritual care was considered an integral component of EOL care, religious and faith matters were not routinely addressed by HCPs. When addressing spirituality, some nurses felt overwhelmed by anxiety and sadness, especially if they were less experienced with these conversations (Strang, Henoch, Danielson, Browall, & Melin-Johansson, 2014). Fortunately, nurses were receptive to education about meeting the spiritual needs of their patients (Al-Kindi, Zeinah, & Hassan, 2013).

Both existential and interpersonal factors shaped nurses' responses in EOL situations (Marcysiak, Dąbrowska, & Marcysiak, 2013). Psychological and professional

stressors, such as negative interactions with grieving family members or taxing emotional encounters with patients and families, profoundly influenced nurses' attitudes. Nurses, even those with experience, inconsistently demonstrated the necessary knowledge or skills to cope with difficult situations.

The intimacy of existential conversations required a certain amount of risk for the nurses, both personally and professionally (Udo, Danielson, & Melin-Johansson, 2012). Even those who were comfortable responding to patients' questions about mortality encountered feelings of inadequacy or anxiety. Nurses' personal and professional experiences could not be separated and, as a result, affected their ability and the manner in which they responded to their patients.

Discomfort with EOL conversations may be a reflection of the difficulty in processing ideas about their own mortality. Nurses may be reticent with the same issues and avoid discussions with their own family members and friends. Assessment of nurses' communication of their own EOL wishes through power of attorney assignment or completion of an advance directive may be an objective indicator of nurses' personal readiness to engage in EOL conversations with patients. No relevant literature addressing this specific association was identified.

Maturity likely contributes to the development of EOL knowledge and self-efficacy (Choi, Lee, Kim, Kim, & Kim, 2012). Nurses' ages and their knowledge about EOL care were related positively, suggesting that life experiences shaped the development of EOL knowledge. Personal experiences with death and dying influenced nurses' comfort with caring for their dying patients (Naidoo & Sibiya, 2014).

Factors such as education, perceptions of competency, knowledge, and other attitudes also affect the quality of EOL care in the ICU. A positive association existed between years of experience in critical care and educational preparation about EOL care (Montagnini, Smith, & Balistrieri, 2012). This association was significant because it identified the group of individuals most likely to benefit from EOL education: newer, less experienced HCPs. For ICUs with a high rate of nurse attrition, the need for EOL education could be ongoing.

Personal and professional variables may influence critical care nurses' attitudes toward providing EOL care. Personal morals often were challenged during EOL care, particularly when patients or family members pushed for aggressive treatment in futile situations (Chen et al., 2013). Many nurses reported that the death of their patients was traumatic for them, eliciting a sense of failure (Heidari & Norouzadeh, 2014). The ethical, emotional, and professional burdens of providing EOL care within the ICU weighed on nurses' ability to deliver high quality care.

The gender of ICU nurses potentially contributes to their comfort with providing EOL care. Traditional societal definitions assign women to the role of caregiver (Carothers & Reis, 2012). This gender-based expectation is perpetuated through the composition of the nursing workforce where only 6.6% are men (Robert Wood Johnson Foundation, 2010). To date, no studies have identified gender as a limiting or defining characteristic of the ability to provide high-quality EOL care (Peters et al., 2013). This does not preclude the possibility that either gender is better suited to or more likely to be effective in providing EOL care.

Implications

Current institutional practices, when viewed in tandem with information from professional organizations and literature, pointed to the need for further assessment of barriers to delivering high-quality EOL care. Recent plans to include hospice and palliative care services within the hospital further supported the need to determine if nurses are adequately prepared to provide this type of care. The discovery of knowledge deficits was anticipated. Specific participant characteristics affecting knowledge and self-efficacy also were anticipated to be influential.

As stakeholders, critical care nurses, nurse managers, and hospital administrators needed the information communicated to them in ways that were meaningful. For some, review of a brief summary of the study and results provided adequate information. For others, review of a complete report of the study was more meaningful. Eventually, all three groups of stakeholders will need to be involved in determining a solution to the problem, particularly in light of the shared governance nursing practice model used at the institution. With greater understanding of the nature of any deficits in relation to specific characteristics, nurses, educators, and senior leadership potentially could develop appropriate strategies for resolution.

Addressing the local problem of EOL care has implications for social change, both within and beyond the hospital's doors. The institution serves persons living within three-quarters of the state's geographic area in addition to many persons living in an adjoining state. While the population is ethnically and socioeconomically diverse, the common denominator is that many adults eventually will encounter situations in which

they must make decisions about EOL care for themselves or for loved ones. These decisions are made within the historical context of mistrust and a racially disparate delivery of health care. To recover that trust, patients and families need to feel that HCPs understand their priorities for the care of their loved ones. Interactions between critical care nurses, patients, and families have the potential to bridge that gap, ensuring that the dignity of patients is maintained while their families and friends are supported.

Of equal importance are the nurses themselves. Their ability to more effectively engage in EOL conversations has the potential to improve their understanding of the rationale behind patients' and families' decisions about EOL care (Popejoy, Brandt, Beck, & Antal, 2009). Increased awareness could offer nurses the opportunity to provide care that is in keeping with the wishes of patients and their families. Participation in these conversations eventually could reduce nurses' sense of moral distress and decrease burnout (Karanikola et al., 2014; Pattison, Carr, Turnock, & Dolan, 2013).

Upon identification of significant findings from this research, appropriate educational interventions were designed to positively influence critical care nurses' perceptions of their EOL care knowledge and self-efficacy. Opportunities for improvement were anticipated in the realm of communication, pharmacologic support, ethnic diversity, spiritual support, and ethical concerns. The equivalent of a three-day interactive workshop was designed. Resources from within the institution, as well as from the community, were used to target the identified needs.

Conclusion

In this section, evidence of the problem was presented and key stakeholders were identified. The nature of the problem, including contributory influences from professional and educational practices, was explored. Current research was examined to gain a global perspective of the problem, establishing not only a theoretical basis, but also an understanding of the scope and history of the problem.

The next section addresses processes associated with conducting a correlational study including a rationale for methodology, sample determination, choice of instrument, and data collection and analysis. The assumptions, limitations, scope, and delimitations of the study will be described. Methods to ensure protection of the participants and Institutional Review Board (IRB) provisions will be discussed. Subsequent sections will include analysis of data and their interpretation, the design process of an educational intervention, and strategies for implementation.

Section 2: The Methodology

Introduction

Before conducting any type of research, a thorough examination of the nature of the problem is necessary so that the most appropriate research design is used. In the previous section, the institution was assessed for the nature and significance of the problem. Actual knowledge about EOL care and nurses' self-efficacy and propensity to provide appropriate care were identified as contributing influences in critical care nurses' ability to meet the needs of their patients and families. In this section, processes for testing the relationships between nurses' personal and professional characteristics and their perception of knowledge and self-efficacy are explored.

Research Design and Approach

A quantitative design was selected to facilitate assessment of a large number of critical care nurses within a relatively brief time period. The use of a qualitative design would have limited applicability at the research site where metrics and the objective measurement of processes is preferred. In light of this, it was imperative to use a design that would address discrete aspects of nursing practice and that would help stakeholders understand the depth and breadth of any limitations in nursing practice.

An explanatory correlational design was selected for this study. This method is appropriate for use when the investigator seeks to demonstrate that two variables influence or relate to one another (Creswell, 2012). To accomplish this, a statistical evaluation of the nature of a relationship between two known variables was performed (Lodico, Spaulding, & Voegtle, 2010). I did not examine the effect of one variable on

multiple variables, nor did I use experimental and quasi-experimental designs because I had no intention of manipulating either variable (Creswell, 2012).

The selection of a methodology was influenced by the nature of the research questions. These questions drew attention to the possibility that personal and professional characteristics of critical care nurses may affect their perceptions of knowledge and competency. I hypothesized that relationships would exist between the dependent and independent variables, though I could not confirm these without formal assessment.

Setting and Sample

Approximately 300 critical care nurses who worked in any one of the institution's seven ICUs were eligible to participate in this study. These ICUs represented individuals with diverse nursing expertise associated with a wide range of disease processes. The institution's ICUs included the following: Neuroscience, Trauma, Surgical, Medical, Cardiac, Pediatric, and Neonatal. Eligibility to participate was not dependent on the type of shift nurses worked or if nurses had obtained certification in critical care nursing. Critical care nurses working only in the Emergency Department or postanesthesia care units were excluded due to the brief, transitional relationships they have with their patients. As a condition of employment, all nurses were able to read the English language. Convenience sampling was used for this research, thereby allowing all eligible nurses to participate.

A minimum number of participants was needed to ensure that responses were representative of the population. To determine this number, I established the following parameters: $\alpha = 0.05$; $\beta = 0.95$; and $\rho = 0.5$. The α value represents the significance level

or the possibility that results are due to chance (Schneider, 2013) and, therefore, describes the probability of a Type 1 error occurring (Creswell, 2012). Selection of the α value affected the size of the sample needed to represent the true population (Creswell, 2009). In this study, the use of $\alpha = 0.05$ accepted a 5% chance of incorrectly rejecting the null hypothesis. Assignment of this α, commonly used in social sciences research, addressed the statistical concerns related to the 5% of the participants who would fall outside of the norm of the responses. Stipulation of α accommodated for this by requiring a minimum sample size (StatTrek, 2014). When using a relatively small sample size such as in this study, there was an inherent risk that the sample and subsequent results would not be truly representative of the population. This study's sample size was limited by the number of eligible nurses and precluded using an α value of greater significance such as $p = 0.01$ instead of 0.05.

When planning research, there is a probability that responses from some participants will not demonstrate the presence of a relationship between variables despite evidence to the contrary (Laszlo, 2013). The determination of a confidence interval allows for specification of the amount of risk that is acceptable with a particular sample size and significance level (StatTrek, 2014). This value functions as a margin of error or tolerance for incorrectly accepting the null hypothesis (Creswell, 2012). For this study, the confidence interval of 0.95 or 1- β was selected as a threshold. This represented the likelihood of concluding that there was no association between the dependent and independent variables when there was one (Creswell, 2009).

Researchers use effect size to describe the presence or strength of the relationship between the variables (Creswell, 2009). When a lower effect size is used, a relationship may not be obvious unless there is a strong positive or negative one. In this situation, use of a higher power can be helpful in distinguishing when a weak relationship exists between variables. For this study, 0.5, a large effect size, was used to evaluate the nature of the relationships between the independent and dependent variables. In selecting a large effect size, I considered the type of statistical analysis planned for this research as well as the relatively small sample (Cohen, 1992).

The software program G*Power 3.1 (Faul, Erdfelder, Lang, & Buchner, 2007) was used to determine the number of participants necessary for this research. Based on the population size, selected significance level, confidence interval, and power, a minimum of 46 nurses (15%) had to participate to ensure adequate representation of the population. If fewer than 46 nurses had participated, external reliability would be decreased, thus limiting the generalizability of the results (Trochim, 2006). Because a sample size of 67 was greater than 46, reliability of the results was increased despite the use of a convenience sample.

In keeping with the national trends in professional nursing, the number of female and male respondents reflected that the majority of nurses at this institution were female (U.S. Census Bureau, 2013). The institution currently employed nurses of various ethnic, religious, and cultural backgrounds without discrimination. Distribution of these demographic traits reflected the makeup of the population as a whole.

Instrumentation and Materials

Participants completed a questionnaire that included demographic data and the End-of-Life Professional Caregiver Survey (EPCS; Lazenby, Ercolano, Schulman-Green, & McCorkle, 2012; see Appendix B). Several types of raw data were collected during this study. The demographic portion of the questionnaire collected nominal or categorical data. The portion that assesses perceptions of knowledge and self-efficacy was used to obtain ordinal data. The survey did not include short answer, essay, or other methods to collect data.

Demographic data were collected at the beginning of the survey. These data included age (range by decade of life); gender (male/female), ethnicity (African American, Asian, Caucasian, Latino, Native American, other); faith tradition (Christian, Judaism, Muslim, Hindu, atheist, other); level of education (degree completed); years of nursing experience (range by increments in years); primary ICU (Shock/Trauma, Surgical, Medical, Neuroscience, Cardiac, Pediatric, Neonatal); EOL care preferences known (true/false); and advance directive completed (yes/no).

The EPCS (Lazenby et al., 2012) was used to obtain data about the participants' self-efficacy concerning delivery of EOL care as well as their perceived level of EOL knowledge. This survey consists of 28 Likert-type items that use a 5-point scale for self-assessment. The survey is effective in evaluating three knowledge areas commonly associated with EOL care provided by professional caregivers: providing patient- and family-centered care, responding to cultural and ethical values, and delivering effective care.

To assess the content validity of the EPCS, a pilot study was conducted using volunteers at a statewide conference on EOL care. The pilot survey included 40 items (Schulman-Green et al., 2010). Ten of the items were removed due to redundancy, one due to extreme singularity, and one because of extreme multicollinearity. The remaining 28 items were deemed to be truly multidisciplinary in nature. After modifying the survey, participants in three separate multidisciplinary focus groups provided feedback and validated the instrument. To demonstrate reliability of the survey, participants were sampled from the Connecticut Coalition to Improve End-of-Life Care membership roster. Reliability of the instrument was evaluated using Cronbach's alpha ($\alpha > 0.70$). The overall α for all items was 0.96, a measure of internal consistency that supports generalization of results. Correlations were demonstrated between questions within the three knowledge areas identified during the initial validation process (Schulman-Green et al., 2010).

Lazenby et al. (2012) further modified the survey based on recommendations derived from the initial validation process. Total scores, as well as individual questions, were assessed. Individual questions were re-evaluated with a sample of 369 participants, after which the EPCS was deemed to be psychometrically valid. Permission to use this instrument was obtained from the Yale School of Nursing (see Appendix C).

In paper format, the EPCS uses two methods of describing each Likert scale response option: a descriptive title and a numerical representation of the scale. The headings and numerical pairings are as follows: 0 = *Not At All*; 1 = *A Little Bit*; 2 = *Somewhat*; 3 = *Quite A Bit*; and 4 = *Very Much*. Scoring of the survey is accomplished by

totaling each participant's numeric responses, thus yielding a single score. The possible range for the total score is 0 to 112 for the 28 questions. Lower scores are indicative of lower perceptions of EOL knowledge and self-efficacy. For this research, I determined that use of the comprehensive summed scores was the most effective way of obtaining data necessary to answer the research questions.

To assist with preparations for the survey process, six non-ICU HCPs who were ineligible to participate in the study agreed to take an electronic version of the survey to test the survey site's function and to determine the length of time necessary to complete the survey. These individuals reported that the electronic features of the survey functioned as intended. They were not prompted to enter any information such as an e-mail address or a password at any time during the survey. They also reported that the survey could be completed within 5 to 10 minutes. Responses entered for each item automatically populated to the online spreadsheet that served as a repository for raw data.

The invitation to participate in the survey was e-mailed by me to the unit-based ICU nurse educators. Nurse educators were instructed to forward the initial invitation e-mail to their ICUs' staff nurses (see Appendix F). This e-mail included information about the purpose of the study, the voluntary and anonymous nature of participation, protection of participants and nonparticipants alike, how data would be collected and results disseminated, and how to contact the researcher or a representative of the IRB. In addition, the e-mail included the hyperlink to the electronic survey site. Critical care nurses were instructed to complete the survey at their convenience.

Though the letter of invitation clearly stated that voluntary completion of the survey represents consent to participate, I added an additional measure to ensure nurses understood the terms of participation. The first page of the survey contained a statement of consent. Nurses acknowledged their consent to participate by clicking on the "I agree" choice (see Appendix B). Those who did not give their consent were not able to proceed to the actual survey.

The survey was available to the nurses for a period of two weeks. Nurses received the initial e-mail invitation on Day 1 of the data collection period. A reminder e-mail containing the same information was sent to the nurse educators on Day 8 (see Appendix G) with a request to forward the e-mail to their respective ICUs' staff nurses. The e-mail content instructed nurses to disregard the e-mail if they previously completed the survey.

Data Collection and Analysis

Data Collection

Data from the demographic survey and EPCS were collected electronically using the online survey site available through Google® (2013). Participants completed the survey by entering their responses within the web-based survey site. Participants did not need any skills beyond those required to complete computer-based, work-related responsibilities. Responses did not contain participants' personal identifiers, nor were they linked to individual participants in any way. To decrease the potential for missing data within each frequency, the survey was constructed so that participants could not move to the next page of the survey prior to answering all questions on that page. No incidents of incomplete or missing data were observed.

Responses were populated automatically to an online spreadsheet and stored online within the survey system, access to which was password protected. Raw data were downloaded into an Excel® (Microsoft®, 2011) spreadsheet for coding prior to analysis by SPSS® Statistics, Version 21 (IBM, 2012). A master copy of the raw data was stored as an Excel® file on a compact disk that will be maintained in a locked office. All raw data will be destroyed after 5 years. Until that time, the data will be available upon request.

Data Analysis

Descriptive statistics were used to analyze responses to the demographic section of the survey. Inferential statistics were used to determine the presence of a relationship between the independent and dependent variables for each of the null hypotheses. Null hypotheses were rejected or retained based on Fisher's exact test.

Descriptive statistics. Of the approximately 300 nurses who received the e-mail invitation, a total of 67 nurses participated in the survey. The response rate was 22.3%. All categories of age range were represented in the survey (see Table 2). Of the 67 participants, 5 (7%) were male. Little ethnic diversity was observed with 96% of participants identifying themselves as Caucasian and the remainder as African-American.

Table 2

Age Range of Participants

Categorical Age of Participant	Frequency	Percent
18-29 years	8	11.9%
30-39 years	15	22.4%
40-49 years	20	29.9%
50+ years	24	35.8%
Total	*N* = 67	100.0

All seven of the ICUs were represented, though participation was notably lower in the Cardiac and Surgical ICUs (see Table 3). Their limited representation decreased my understanding of the nurses working in these units. Their contributions to the overall results of the study were diluted by the relatively higher participation rates of other ICUs. The greatest participation was from the neonatal ICU nurses (31%). This rate was consistent with the large staff required for this high-census unit, comprising 28% of nurses eligible for this study. This proportionately large response allowed nurses from a single milieu to statistically shape the results for the entire population.

Table 3

Participants by Intensive Care Unit (ICU)

Primary ICU	Frequency	Percent
Cardiac	1	1.5%
Medical	7	10.4%
Neonatal	21	31.3%
Neuroscience	13	19.4%
Pediatric	12	17.9%
Surgical	4	6.0%
Trauma	9	13.4%
Total	$N = 67$	100.0%

The educational level of nurses ranged from entry level to graduate level (see Table 4). Years of nursing experience spanned all age categories (see Table 5). Of note, the number of nurses who had not obtained a Bachelor of Science in Nursing (BSN) was surprisingly large. This was unexpected due to the conversion of the largest local Associate Degree in Nursing program to a BSN program more than 15 years ago.

Table 4

Educational Level of Participants

Participant Highest Level of Education	Frequency	Percent
ADN	21	31.3%
BSN	33	49.3%
MSN	12	17.9%
Doctorate (Nursing)	1	1.5%
Total	$N = 67$	100.0%

Note: Associate Degree in Nursing (ADN), Bachelor of Science in Nursing (BSN), Master of Science in Nursing (MSN).

Table 5

Participants by Years of Experience

Participant Years of Experience	Frequency	Percent
< 2 years	4	6%
2-5 years	7	10.4%
6-10 years	13	19.4%
11-15 years	8	11.9%
16-20 years	9	13.4%
21-25 years	9	13.4%
26-30 years	7	10.4%
30+ years	10	14.9%
Total	*N* = 67	100.0%

Christianity was the predominant faith tradition of the participants (see Table 6). This was expected due to the wide spread prevalence of Christianity in this geographic region. Limited diversity in ethnicity and faith tradition accurately reflected the demographics of the sample; however, this was in contrast to the patients for whom these nurses provide care. Ninety-three percent of respondents reported having verbalized EOL preferences to family members or friends, though completion of advance directives was less commonly reported, with only about a third of participants reporting that this had been done.

Table 6

Participants by Faith Tradition

	Frequency	Percent
Christianity	63	94%
Atheism	3	4.5%
Other	1	1.5%
Total	67	100.0%

Responses to the questions on each completed EPCS were tallied to obtain the EPCS total score for each participant. Potential total scores ranged from 0 – 112 (see Table 7). From lowest to highest, participants' total scores ranged from 42-106. Mean, range, and standard deviation were determined from the EPCS total scores for all participants. The mean total score was 75 (see Table 8).

The total scores, representative of ordinal data, were grouped into categories that were consistent with the EPCS scales (see Table 9). On a scale of 0 – 4, Category 0 represented perceptions of low EOL knowledge and self-efficacy, whereas Category 4 represented perceptions of high EOL knowledge and self-efficacy. This data processing strategy is commonly applied in social sciences research (Chen & Wang, 2014).

Table 7

Scales for Assessment of EPCS Total Scores

0	0 – 21	Not at all
1	22 – 44	A little bit
2	45 – 67	Somewhat
3	68 – 90	Quite a bit
4	91 – 112	Very much

Table 8

Descriptive Statistics for EPCS Total Scores

	N	Range	Min.	Max.	Mean	Std. Deviation
EPCS Total Score	67	64	42	106	75	14.525

Table 9

Descriptive Statistics for Range of EPCS Categorical Scores

Range of EPCS Categorical Scores	Frequency	Percent
1	1	1.5%
2	24	35.8%
3	31	46.3%
4	11	16.4%
Total	67	100.0%

Note: No categorical scores were observed in Category 0.

Inferential statistics. A sample of 67 was considered to be relatively small (McDonald, 2014). Because of this and the type of data collected, I gave careful attention to the selection of an appropriate test for association between variables. Pearson's chi-square test for independence was selected initially; however, not all assumptions required for this test were met because not all cells had at least five responses (Triola, 2012). Instead, I used Fisher's exact test to evaluate the variables for association. Fisher's exact test estimates the probability of the observed responses occurring, but does not stipulate the conditions required to apply Pearson's chi-square (McDonald, 2014). Use of multiple regression analysis was not appropriate with these data (Creswell, 2012). The null hypotheses are as follows:

Null Hypothesis 1: There is no significant relationship between age and perceptions of knowledge and self-efficacy about EOL care for critical care nurses. To determine if data supported this hypothesis, Fisher's exact test was used to assess the association between age and perceptions of EOL knowledge and self-efficacy (see Table 10). A significant relationship was found: $p = 0.045$. Therefore, the null hypothesis was rejected.

Table 10

Cross-Tabulations of Age and EPCS Categorical Scores

		EPCS Categorical Score Range				Total
		1.0	2.0	3.0	4.0	
18-29 years	Count	1	6	1	0	8
	% of Total	1.5%	9.0%	1.5%	0.0%	11.9%
30-39 years	Count	0	5	6	4	15
	% of Total	0.0%	7.5%	9.0%	6.0%	22.4%
40-49 years	Count	0	6	12	2	20
	% of Total	0.0%	9.0%	17.9%	3.0%	29.9%
50+ years	Count	0	5	14	5	24
	% of Total	0.0%	7.5%	20.9%	7.5%	35.8%
Total	Count	1	22	33	11	67
	% of Total	1.5%	32.8%	49.3%	16.4%	100.0%

Note: No EPCS summed scores were observed in score range 0.

Chi-Square Tests for H_O1

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	19.195[a]	9	.024	.015
Likelihood Ratio	17.192	9	.046	.041
Fisher's Exact Test	15.159			.045
N of Valid Cases	67			

a. 11 cells (68.8%) have expected count less than 5. The minimum expected count is .12.

Null hypothesis 2: There is no significant relationship between nurses' gender and perceptions of knowledge and self-efficacy about EOL care for critical care nurses. To determine if data supported this hypothesis, Fisher's exact test was used to assess the association between gender and perceptions of EOL knowledge and self-efficacy (see Table 11). No significant relationship was observed: $p = 0.083$. Therefore, the null hypothesis was accepted.

Table 11

Cross-Tabulations of Gender and EPCS Categorical Scores

		EPCS Categorical Score Range				Total
		1.0	2.0	3.0	4.0	
Male	Count	0	1	1	3	5
	% of Total	0.0%	1.5%	1.5%	4.5%	7.5%
Female	Count	1	21	32	8	62
	% of Total	1.5%	31.3%	47.8%	11.9%	92.5%
Total	Count	1	22	33	11	67
	% of Total	1.5%	32.8%	49.3%	16.4%	100.0%

Note: No EPCS summed scores were observed in score range 0.

Chi-Square Tests for $H_0$2

	Value	*df*	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	7.542[a]	3	.056	.105
Likelihood Ratio	5.580	3	.134	.171
Fisher's Exact Test	6.504			.083
N of Valid Cases	67			

a. 5 cells (62.5%) have expected count less than 5. The minimum expected count is .07.

Null hypothesis 3: There is no significant relationship between ethnicity and perceptions of knowledge and self-efficacy about EOL care for critical care nurses. To

determine if data supported this hypothesis, Fisher's exact test was used to assess the association between ethnicity and perceptions of EOL knowledge and self-efficacy (see Table 12). No significant relationship was observed: $p = 0.432$. Therefore, the null hypothesis was accepted.

Table 12

Cross-Tabulations of Ethnicity and EPCS Categorical Scores

		EPCS Categorical Score Range				Total
		1.0	2.0	3.0	4.0	
African-American	Count	0	0	2	1	3
	% of Total	0.0%	0.0%	3.0%	1.5%	4.5%
Caucasian	Count	1	22	31	10	64
	% of Total	1.5%	32.8%	46.3%	14.9%	95.5%
Total	Count	1	22	33	11	67
	% of Total	1.5%	32.8%	49.3%	16.4%	100.0%

Note: No EPCS summed scores were observed in score range 0.

Chi-Square Tests for $H_0$3

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	1.819[a]	3	.611	.591
Likelihood Ratio	2.708	3	.439	.432
Fisher's Exact Test	3.381			.432
N of Valid Cases	67			

a. 5 cells (62.5%) have expected count less than 5. The minimum expected count is .04.

Null hypothesis 4: There is no significant relationship between faith tradition and perceptions of knowledge and self-efficacy about EOL care for critical care nurses. To determine if data supported this hypothesis, Fisher's exact test was used to assess the association between faith tradition and perceptions of EOL knowledge and self-efficacy

(see Table 13). No significant relationship was observed: $p = 0.201$. Therefore, the null hypothesis was accepted.

Table 13

Cross-Tabulations of Faith Tradition and EPCS Categorical Scores

		EPCS Categorical Score Range				Total
		1.0	2.0	3.0	4.0	
Christianity	Count	1	22	31	9	63
	% of Total	1.5%	32.8%	46.3%	13.4%	94.0%
Atheism	Count	0	0	1	2	3
	% of Total	0.0%	0.0%	1.5%	3.0%	4.5%
Other	Count	0	0	1	0	1
	% of Total	0.0%	0.0%	1.5%	0.0%	1.5%
Total	Count	1	22	33	11	67
	% of Total	1.5%	32.8%	49.3%	16.4%	100.0%

Note: No EPCS summed scores were observed in score range 0.

Chi-Square Tests for $H_0$4

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	7.090[a]	6	.313	.204
Likelihood Ratio	6.509	6	.369	.259
Fisher's Exact Test	9.461			.201
N of Valid Cases	67			

a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is .01.

Null hypothesis 5: There is no significant relationship between educational level and perceptions of knowledge and self-efficacy about EOL care for critical care nurses. To determine if data supported this hypothesis, Fisher's exact test was used to assess the association between educational level and perceptions of EOL knowledge and self-

efficacy (see Table 14). No significant relationship was observed: $p = 0.141$. Therefore, the null hypothesis was accepted.

Table 14

Cross-Tabulations of Educational Level and EPCS Categorical Scores

		EPCS Categorical Score Range				Total
		1	2	3	4	
ADN	Count	0	5	9	7	21
	% of Total	0.0%	7.5%	13.4%	10.4%	31.3%
BSN	Count	0	13	17	3	33
	% of Total	0.0%	19.4%	25.4%	4.5%	49.3%
MSN	Count	1	4	7	1	13
	% of Total	1.5%	6.0%	10.4%	1.5%	19.4%
DOC	Count	1	22	33	11	67
	% of Total	1.5%	32.8%	49.3%	16.4%	100.0%
Total	Count	0	5	9	7	21
	% of Total	0.0%	7.5%	13.4%	10.4%	31.3%

Note. The following abbreviations are used for academic degrees: ADN (Associate Degree in Nursing); BSN (Bachelor of Science in Nursing); MSN (Master of Science in Nursing); DOC (Doctoral Degree, Nursing). No EPCS summed scores were observed in score range 0.

Chi-Square Tests for $H_0$5

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	10.730[a]	6	.097	.077
Likelihood Ratio	9.401	6	.152	.158
Fisher's Exact Test	8.713			.141
N of Valid Cases	67			

a. 6 cells (50.0%) have expected count less than 5. The minimum expected count is .19.

Null hypothesis 6: There is no significant relationship between years of nursing experience and perceptions of knowledge and self-efficacy about EOL care for critical care nurses. To determine if data supported this hypothesis, Fisher's exact test was used to assess the association between years of experience and perceptions of EOL knowledge and self-efficacy (see Table 15). No significant relationship was observed: $p = 0.700$. Therefore, the null hypothesis was accepted.

Table 15

Cross-Tabulations of Years of Experience and EPCS Categorical Scores

		EPCS Categorical Score Range				Total
		1	2	3	4	
< 2 years	Count	1	2	1	0	4
	% of Total	1.5%	3.0%	1.5%	0.0%	6.0%
2-5 years	Count	0	5	2	0	7
	% of Total	0.0%	7.5%	3.0%	0.0%	10.4%
6-10 years	Count	0	3	6	4	13
	% of Total	0.0%	4.5%	9.0%	6.0%	19.4%
11-15 years	Count	0	2	5	1	8
	% of Total	0.0%	3.0%	7.5%	1.5%	11.9%
16-20 years	Count	0	2	6	1	9
	% of Total	0.0%	3.0%	9.0%	1.5%	13.4%
21-25 years	Count	0	3	5	1	9
	% of Total	0.0%	4.5%	7.5%	1.5%	13.4%
26-30 years	Count	0	2	3	2	7
	% of Total	0.0%	3.0%	4.5%	3.0%	10.4%
30+ years	Count	0	3	5	2	10
	% of Total	0.0%	4.5%	7.5%	3.0%	14.9%
Total	Count	1	22	33	11	67
	% of Total	1.5%	32.8%	49.3%	16.4%	100.0%

Note: No EPCS summed scores were observed in score range 0.

Chi-Square Tests for $H_0$6

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	26.794[a]	21	.178	.[b]
Likelihood Ratio	17.457	21	.683	.688
Fisher's Exact Test	19.236			.700
N of Valid Cases	67			

a. 31 cells (96.9%) have expected count less than 5. The minimum expected count is .06.
b. Cannot be computed because there is insufficient memory.

Null hypothesis 7: There is no significant relationship between ICU type and perceptions of knowledge and self-efficacy about EOL care for critical care nurses. To determine if data supported this hypothesis, Fisher's exact test was used to assess the association between ICU type and perceptions of EOL knowledge and self-efficacy (see Table 16). No significant relationship was observed: $p = 0.647$. Therefore, the null hypothesis was accepted.

Table 16

Cross-Tabulations of ICU Type and EPCS Categorical Score Ranges

		EPCS Categorical Score Range				Total
		1	2	3	4	
Cardiac	Count	0	0	1	0	1
	% of Total	0.0%	0.0%	1.5%	0.0%	1.5%
Medical	Count	0	1	5	1	7
	% of Total	0.0%	1.5%	7.5%	1.5%	10.4%
Neonatal	Count	0	7	12	2	21
	% of Total	0.0%	10.4%	17.9%	3.0%	31.3%
Neuroscience	Count	0	5	4	4	13
	% of Total	0.0%	7.5%	6.0%	6.0%	19.4%
Pediatric	Count	0	4	6	2	12
	% of Total	0.0%	6.0%	9.0%	3.0%	17.9%
Surgical	Count	1	1	2	0	4
	% of Total	1.5%	1.5%	3.0%	0.0%	6.0%
Trauma	Count	0	4	3	2	9
	% of Total	0.0%	6.0%	4.5%	3.0%	13.4%
Total	Count	1	22	33	11	67
	% of Total	1.5%	32.8%	49.3%	16.4%	100.0%

Note: No EPCS summed scores were observed in score range 0.

Chi-Square Tests for $H_0$7

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	23.502[a]	18	.172	.150
Likelihood Ratio	14.434	18	.700	.679
Fisher's Exact Test	18.116			.647
N of Valid Cases	67			

a. 24 cells (85.7%) have expected count less than 5. The minimum expected count is .01.

Null hypothesis 8: There is no significant relationship between communication of personal EOL wishes to family or friends and perceptions of knowledge and self-efficacy about EOL care for critical care nurses. To determine if data supported this hypothesis, Fisher's exact test was used to assess the association between communication of EOL preferences and perceptions of EOL knowledge and self-efficacy (see Table 17). No significant relationship was observed: $p = 0.171$. Therefore, the null hypothesis was accepted.

Table 17

Cross-Tabulations of Verbalized EOL Preferences and EPCS Categorical Scores

		EPCS Categorical Score Range				Total
		1	2	3	4	
True	Count	1	18	32	11	62
	% of Total	1.5%	26.9%	47.8%	16.4%	92.5%
False	Count	0	4	1	0	5
	% of Total	0.0%	6.0%	1.5%	0.0%	7.5%
Total	Count	1	22	33	11	67
	% of Total	1.5%	32.8%	49.3%	16.4%	100.0%

Note: No EPCS summed scores were observed in score range 0.

Chi-Square Tests for $H_0$8

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	5.567[a]	3	.135	.171
Likelihood Ratio	5.745	3	.125	.146
Fisher's Exact Test	5.102			.171
N of Valid Cases	67			

a. 5 cells (62.5%) have expected count less than 5. The minimum expected count is .07.

Null hypothesis 9: There is no significant relationship between completion of a personal advance directive and perceptions of knowledge and self-efficacy about EOL care for critical care nurses. To determine if data supported this hypothesis, Fisher's exact test was used to assess the association between completion of personal advance directive and perceptions of EOL knowledge and self-efficacy (see Table 18). A significant relationship was found: $p = 0.047$. Therefore, the null hypothesis was rejected.

Table 18

Cross-Tabulations of Advance Directive Completion and EPCS Categorical Scores

		EPCS Categorical Score Range				Total
		1	2	3	4	
Yes	Count	0	4	11	7	22
	% of Total	0.0%	6.0%	16.4%	10.4%	32.8%
No	Count	1	18	22	4	45
	% of Total	1.5%	26.9%	32.8%	6.0%	67.2%
Total	Count	1	22	33	11	67
	% of Total	1.5%	32.8%	49.3%	16.4%	100.0%

Note: No EPCS summed scores were observed in score range 0.

Chi-Square Tests for $H_0$9

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	7.492[a]	3	.058	.039
Likelihood Ratio	7.652	3	.054	.051
Fisher's Exact Test	7.089			.047
N of Valid Cases	67			

a. 3 cells (37.5%) have expected count less than 5. The minimum expected count is .33.

Discussion of Results

Several opportunities for growth and development were identified during review of the EPCS cumulative scores and their ranked categorical scores. Based on the cumulative survey scores, the majority of critical care nurses perceived themselves to be only moderately knowledgeable and self-confident when meeting EOL care needs of their patients. The cumulative and categorical scores corroborated the anecdotal observations of many stakeholders and other researchers that nurses do not possess the full complement of knowledge and self-confidence necessary to provide high-quality care to dying patients and their families (Malloy, Virani, Kelly, Harrington-Jacobs, & Ferrell, 2008; Espinosa, Young, Symes, Haile, & Walsh, 2010; Choi, Lee, Kim, Kim, & Kim, 2012; Powazki et al., 2013). Equally important, though they did not perceive themselves to be experts, they also did not describe themselves as without some measure of capability. If provided with the opportunity to improve their EOL care abilities, all nurses at the institution potentially could benefit.

Of the nine independent variables, two were found to have a significant relationship with nurses' perceptions of knowledge and self-efficacy: age of the nurses and nurses' completion of their own advance directive. As opposed to their younger peers, older nurses rated themselves as more knowledgeable and confident in their ability to meet the needs of dying patients and their families. This relationship may have been due, in part, to the cumulative effect of personal and professional experiences (Knowles, 1973). The gradual change that comes from maturation may have heightened nurses' awareness of their own mortality and their ability to confront it. This study did not

establish whether personal or professional experiences were more likely to influence nurses' perceived knowledge and self-efficacy, though it is possible that this could be distinguished if another instrument was used.

The duration of professional experience and nurses' EOL knowledge and self-efficacy were not significantly related. This finding was unexpected. Much like the knowledge that comes from the accumulation of personal and professional experiences, the cumulative effects of a longer professional career were anticipated to promote the development of EOL knowledge; however, this was not observed. A possible explanation for this is that EOL knowledge and self-efficacy may develop gradually up to a certain point in nurses' careers and then plateau in the absence of continuing education.

The gender of nurses may contribute to perceptions of EOL knowledge and self-efficacy, though with the relatively small sample size, this could not be assessed effectively. Men remain a minority in the nursing profession, and, as such, their representation accurately corresponded with the participants' demographics. Limited diversity in faith tradition also was observed, as most participants described themselves as Christians. Similarly, little variation was observed with regard to ethnicity. It was reasonable to conclude that these results, when based on the perspective of such large majorities, were affected by what could be described as rather homogenous existential and cultural perspectives on EOL care. This was noteworthy due to the ethnic diversity of the patient population receiving care at this institution. This ethnocentricity may have led nurses to incorrectly base their understanding of EOL care needs solely on this singular perspective.

The formal educational preparation of nurses did not appear to be associated with their perceptions of EOL knowledge and self-efficacy. This lack of association confirmed what has been reported in other studies: nurses receive little formal education about EOL care across all levels of education. Without this, they practice without the resources necessary to provide high-quality EOL care. To compensate, they rely on other methods of developing EOL acumen.

Two-thirds of the participants had not completed their own advance directives. This was noteworthy considering the nature of the environment in which the participants work. Several plausible explanations for this finding existed. First, participants may have believed that conversations with their loved ones were the most dependable means of ensuring their wishes were known and honored. A large number of participants indicated that their loved ones were aware of their wishes even though they had not completed advance directives. Secondly, communication of EOL preferences in advance directives requires the exploration of one's own mortality, a process that may have been uncomfortable or unpleasant for some individuals, regardless of how often they have cared for dying patients. Thirdly, the critical care nurses were representatives of a much larger society and, as such, were like many of the patients they served. They were members of a culture in which formalization of EOL wishes with advance directives is not the norm (U.S. Department of Health and Human Services, 2008). Their completion rate could be consistent with other groups in this community, though this was not assessed.

Assumptions, Limitations, Scope, and Delimitations

Assumptions

Not all aspects and elements of this study could be controlled, predicted, or built into the design. Because of this, assumptions were made about the participants and environment. I assumed that nurses' responses would be truthful and independent of influence by individual nursing unit milieus or by hospital administrators. I also assumed that respondents would represent the demographic diversity found in the entire group of ICU nurses at the institution. With the exception of ethnic and faith diversity, this appears to have occurred as anticipated.

Limitations

The research questions influenced the choice of methodology for this study. I accepted that use of a correlational design would limit the generalizability of the results. Without treatment and control groups as seen with experimental and quasi-experimental designs, accurate measurement of the effect of the independent variable on the dependent was not possible. Instead, only observation of the association between variables was feasible. Use of a correlational design also eliminated the possibility of participants' randomization to experimental and control groups. As such, this could limit generalization of results to other groups or agencies.

The ability to generalize results beyond this institution was substantially limited by the lack of diversity within the sample. The homogenous characteristics of the participants, though they paralleled the ICU employee profile, left reason to be concerned. The nurses' responses may have reflected an understanding of their

ethnocentric perspectives more accurately than their awareness of the perspectives of other ethnic groups.

This study did not assess if the nurses received any education specific to EOL care and how this affected their nursing practice. Future research could be used to examine the relationship between formal EOL continuing education experiences and EPCS scores. By demonstrating an increase in knowledge and self-efficacy after formal EOL education, the value of education could be reinforced.

Critical care nurses from only one academic medical center participated in this survey. Other groups of nurses could report differently, particularly in settings where palliative care services are a fixed component of the patient care model. As such, this study, conducted at an institution without an inpatient palliative care or hospice services, may not represent the general trend of nursing knowledge about EOL care.

This study did not test actual knowledge of aspects EOL care, only the nurses' perceptions of their knowledge. As such, it is difficult to know the true depth of their knowledge without more concrete, objective measurement. Additional research is needed to distinguish between the two. Future research also is needed to learn how completion of advance directives specifically contributes to nurses' perceptions of EOL knowledge and self-efficacy.

Scope and Delimitations

The scope of this study was narrowed to give attention to constituents of the critical care nursing genre. Critical care nurses working outside of areas traditionally perceived as ICUs were excluded intentionally. This was done to respect that nurses

working in ICUs are able to develop more complex relationships with their patients and families than are those working outside of ICUs in transitional areas such as the emergency departments or postanesthesia care units.

Protection of Participants' Rights

In preparation for conducting human subject research, the Collaborative Institutional Training Initiative (CITI) education was completed in December of 2012 (see Appendix D). This training satisfied requirements for both the Walden University IRB and that of the academic medical center. The National Institutes of Health (NIH) (2013) training course also was completed because this was the preferred training program for Walden University (see Appendix E).

Approval to conduct the study was obtained from the Walden University IRB and that of the academic medical center as per both institutions' policies. The Walden University IRB approval code for this study is 01-16-15-0059760. The study identification number at the academic medical center is 617420-2. In the event that there were any variations in process or requirements, the stricter guidelines were applied. Documentation of approval to conduct research was obtained prior to beginning recruitment of participants and data collection.

Participants in this study received no compensation for their participation. No vulnerable populations were invited to participate in the study (CITI, 2012; NIH, 2013). Because participants did not receive any treatment or intervention, the risks associated with the study were minimal. Anonymous participation and lack of obligation to participate further reduced the risk to participants. No personal identifiers were obtained

during data collection. Nurse managers or others in a supervisory role were not be able to determine those who elected to participate or those who declined the invitation to participate.

I was an employee of this institution, so additional ethical considerations were necessary. As a pediatric clinical nurse specialist and case manager, I did not hold any supervisory role, nor did I have direct working relationships with any of the eligible ICU nurses. The patient population for which I was responsible did not include critical care patients, thus limiting the possibility of any direct contact with critical care nurses. As an employee whose responsibilities were outside of the critical care setting, I was not able to influence participation or specific responses.

To prevent any perception of coercion, nurse managers were not involved in any aspect of the recruitment process. They were not involved in forwarding of e-mail invitations or advertising the opportunity to participate in the study. By using unit-based nurse educators for these activities, those in a supervisory role had no influence or role in this research.

It is important to note that many eligible participants were of child-bearing age and that some nurses who received the invitation to participate could have been pregnant. These nurses typically would be viewed as members of a vulnerable population. Because they were not deliberately recruited, they were not excluded if they were interested in participating and were not obliged to divulge their status. They had the same opportunity to participate as those who were not pregnant and shared the same minimal risks associated with survey research.

To prevent direct or indirect discovery of the identity of any participants, response options for the demographic portion of the survey primarily were categorical in nature. The age of individual participants would be the most obvious identifier for those who are the oldest. To eliminate this risk, responses for this item were categorized by decade rather than by actual age. The maximum age representation was listed as 50+.

As part of the invitation to participate, nurses received information regarding how to address questions or concerns about the research and associated procedures. They were instructed to contact the IRB at the academic medical center for any questions or concerns. As an alternative, they were offered the opportunity to contact the Walden University research representative via the telephone number provided.

At a future date, nurse educators for each of the ICUs will receive results for their respective units. Results will be presented in tables and in unit-specific, brief narrative summaries. The chief nursing officer (CNO) and the members of the ethics committee will receive an executive summary and a detailed report of the findings. Tables will be used to display data in a concise and logical manner.

Conclusion

In this section, I discussed the methodology and rationale for its selection. This included discussion of the population and sample, sampling techniques, eligibility requirements for participation, and recruitment strategies. Measures to protect participants from harm were reviewed and were in accordance with IRB requirements. The contents of the questionnaire, including the demographic portion and the validated instrument, were reviewed for their ability to determine the presence of a relationship

between the independent variables and the knowledge and self-efficacy for critical care nurses who provide EOL care. The collection and storage of raw data, and plans for analysis also were explored. The results of data analysis and their interpretation were discussed, as were limitations, delimitations, scope, and assumptions. In the next section, I will discuss how findings were used to inform the development of an appropriate educational intervention to meet the needs of critical care nurses at this academic medical center.

Section 3: The Project

Introduction

In previous sections, the research problem was explored within the context of the local setting and across the profession. A literature review was conducted to identify the gap in knowledge and to determine if knowledge and self-efficacy are associated with nurses' experience and with their personal and professional characteristics. A quantitative research methodology was selected based on characteristics of the nurses, the institution, and the need for discrete, measurable data. Independent and dependent variables were identified, after which research questions were developed. Survey research was conducted using a convenience sample of critical care nurses. Descriptive and inferential statistics were used for analysis of data. Results of data analysis indicated that nurses' age and completion of their personal advance directives had a significant positive relationship with their perceptions of EOL knowledge and self-efficacy. EPCS scores revealed that 37% of participants possessed only moderate levels of EOL knowledge and self-confidence. The following project incorporates interventions designed to address educational needs identified in the research findings.

Project Description and Goals

Summary of the Project

The project is a 3-day workshop designed to develop the skills, knowledge, and self-confidence of critical care nurses who provide EOL care. Over the 3 days, the nurses, hereafter referred to as *learners*, will receive information during presentations, small

group activities, and panel discussions. Learners will have opportunity to practice and apply new skills during case scenarios and role-playing activities.

Goals of the Project

Project goals were defined by the results of the study. These were developed according to the three categories evaluated by the EPCS. Project goals were used to provide direction for project development so that the overall quality of EOL nursing care is enhanced. The goals include the following:

- The quality of EOL care will be improved by preparing critical care nurses to identify, assess, and respond to the physiologic needs of patients at EOL.
- The quality of EOL care will be improved by increasing critical care nurses' awareness, understanding, and application of cultural and faith-based influences on EOL care.
- The quality of EOL care will be improved by developing critical care nurses' insight into and application of ethical principles and moral influences on EOL care.

Rationale

Research results demonstrated that none of the responding nurses' summed EPCS scores consistently appeared in the category representing highest levels of knowledge and self-efficacy. The majority of nurses indicated that they had not completed their own advance directives, suggesting that knowledge levels about this document may have been lower for them than for their peers who already had done so. By incorporating education about the advance directive and how to initiate this conversation with patients, nurses

build on knowledge and self-confidence and later apply these skills to discussions about other aspects of care.

The majority of nurses described themselves as somewhat knowledgeable, falling in the midrange of cumulative scores. With a sample of predominantly Caucasian, Christian women, any profession of expertise regarding ethnicity and spirituality different from their own must be viewed with skepticism because it arises from a primarily singular viewpoint. The difference in ages and years of nursing experience also were indicative of the need for education that is valuable to those with both lower and higher perceptions of EOL knowledge and self-efficacy. As such, it was reasonable to design a professional development activity that provides a general overview of EOL care and skills while addressing specific findings from the research. Content for the course was derived from the three knowledge areas (see Table 19).

Table 19

Course Development by EPCS Knowledge Areas

Physical Care and Physiologic Needs	Patient- and Family-Centered Care	Moral, Ethical, and Legal Care
Symptom management	Cultural competency	Ethical and legal concerns
Withdrawing pharmacologic and technologic support	Responding to faith-based needs and requests	Advance directives
Communication strategies between HCPs	Communication strategies for HCPs and patients / families	Staff member grief and moral distress
Hospice in the ICU	Grief facilitation	

Project Structure

Workshops are a commonly used, proven format for presentation of professional development activities in which facilitators and learners collaborate to develop knowledge and skills. Learning activities that invite learner participation and interaction are commonly included in workshop experiences (Lauer, Christopher, Firpo-Triplett, & Butching, 2014; Walters, 2014). The workshop format, as a formal workplace learning opportunity, provides learners with structure to support progressive knowledge development during the experience (Lloyd et al., 2014). For this workshop, particular attention will be given to designing a learner-centered experience that anticipates the various learning styles of potential participants. All portions of the workshop will accommodate at least two learning styles.

The sequence of events ensures that learners build on skills from previous interactive and collaborative portions of the workshop (May, 2014). In the first day of the workshop, learners will focus on the ethical and legal considerations in EOL care, cultural and faith-based EOL practices, interdisciplinary communication skills, and symptom management. The second day continues with communications skills, giving specific attention to communication with patients and families. Withdrawal of patients' treatment and coping with unexpected deaths also will be discussed. Incorporation of hospice care in the ICU, staff member grief, survivor experiences, and identifying solutions to existing EOL care problems within the institution's ICUs will be presented during the last day.

Review of Literature

To identify and gain support for best practices and strategies in adult learning program design, I conducted a multidisciplinary review of literature. Searches on Google Scholar and through EBSCO and CINAHL were conducted to identify pertinent peer-reviewed, scholarly articles. Search terms included *adult learning, professional development, program development, program evaluation, seminars, workshops, instruction methods, nurse morale,* and *nurses*. Articles identified during this process were reviewed. Those found to be pertinent to the development of the project are included in the following discussion.

Adult Learning

Project developers must consider learner motivations and attitudes, the role of the educator or facilitator, teaching methods, and the effect of previous knowledge and experience on learning when designing learning experiences (Curran, 2014). Bandura (1977), through his understanding of adult learning idiosyncrasies, recognized four specific processes that promote and enhance adult learning: performance accomplishments, verbal persuasion, vicarious experience, and emotional arousal. Inclusion of experiences that support these four methods throughout the learning activity encourages learners' engagement and transfer of learning.

Knowles (1973) also recognized that learning is influenced in unique ways, particularly for adult learners. Traditional pedagogical methods, when used for adult learning experiences, do not provide an optimal environment in which learning can occur. Instead, Knowles (1973) championed an andragogical approach, one in which the

characteristics of adult learners are appreciated and shape the learning experience. For instance, learners' autonomy and their readiness for learning must be considered to ensure engagement. Learners need to believe that new knowledge can be applied to actual situations in a meaningful way, as this influences their understanding of why they need to learn and provides incentive to learn (Knowles, 1984). The introduction of new knowledge does not minimize the significance of previous knowledge, but, rather, the learning experience serves as a way to achieve greater depth of learning.

Bloom (1956) also recognized characteristics of the adult learning process. Adult learners develop knowledge in three distinct domains: cognitive, psychomotor, and affective. To meet adult learners' needs, educators are responsible for creating a learning environment and curricula that support each of the domains (Attard, Baldacchino, & Camilleri, 2014; Wolff, Wagner, Poznanski, Schiller, & Santen, 2015).

In addition to identifying domains of learning, Bloom (1956) described learning as a hierarchical process with which learners demonstrate their level of understanding. Bloom developed a taxonomy to describe manifestations of these progressively higher levels of thinking. Action verbs, representing each of the levels, were identified. With these verbs, educators and learners alike are able to recognize the degree of learners' mastery of the content and development of knowledge. More recently, Anderson and Krathwohl (2001) revised this taxonomy. The categories, from lowest to highest level of learning, are remembering, understanding, applying, analyzing, evaluating, and creating. Both abstract and concrete types of knowledge are incorporated in the taxonomy (Muehleck, Smith, & Allen, 2014).

As with much of adult education and, by default, nursing education, significant effort is directed toward the cognitive learning domain (O'Connell, Gardner, & Coyer, 2014). This creates an environment that often is predominantly teacher-centered, primarily focused on what the instructor believes learners need to know (Kantar, 2014). The use of problem-based learning strategies (L'Ecuyer, Pole, & Leander, 2015; Zhang, 2014) and hi-fidelity simulation (Alinier & Platt, 2013) has drastically improved the learning experiences of both nursing students and practicing nurses because they incorporate all three learning domains. Still, the affective learning domain often remains neglected despite the expectation for empathetic and compassionate patient care (Doyle, Hungerford, & Cruickshank, 2014; Einhelig, Hummel, & Gryskiewicz, 2015).

Professional Development

The ANA (2010) emphasized ongoing education as a means to maintain competency in the setting of a rapidly changing profession. The Royal College of Nursing (2007) recognized that professional development is necessary to sustain high-quality patient care. Both organizations emphasized ongoing, life-long learning is necessary to achieve this goal. While the pursuit of information for the purpose of maintaining clinical competency is important, continuing education differs from professional development. Continuing education, as a component of professional development, represents an individual learning experience that provides resources for learning or skill acquisition related to a specific aspect of professional practice (American Nurses Credentialing Center, 2012). Professional development, a more deliberate

process, uses continuing education components as a way to achieve and demonstrate comprehensive competency (ANA, 2010).

Continuing education activities that target quality of care and performance improvement have been instrumental in facilitating professional development of nurses (Brekelmans, Poell, & van Wijk, 2013). Despite growing international support of education to achieve competency, rationale for pursuing professional development varies greatly between individual nurses and institutions. The Institute of Medicine (2010) advised that all nurses entering into new clinical practices should receive professional development in the form of residency programs. Johnson and Beehr (2014) found that voluntary participation in learning activities for practicing nurses often was motivated by their interest in obtaining knowledge or skills specific to their work environments. Intrinsic motivation to improve professional practice served as the best indicator of nurse participation, though less reliable factors such as age or experience potentially motivated participation in professional development activities (Pool, Poell, & ten Cate, 2013). Johnson, Hong, Groth, and Parker (2011) reported that though nurses' motivation for pursuing professional development activities varied, outcomes for patients and other stakeholders improved when nurses engaged in learning activities.

Employers may be unaware of the relationship between professional development and competency (Institute of Medicine, 2010). When the institution supported professional development activities, nurses were more likely to embrace activities that promote professional growth and enhance their level of practice (Gaudine, LeFort, Lamb, & Thorne, 2011). Periodic assessment of multiple aspects of competency yielded

information about where educational efforts should be directed (Levine & Johnson, 2014).

Professional development activities are beneficial for nurses and employers alike. Miskelly and Duncan (2014) reported that the quality of patient care is better at institutions providing professional development activities. At institutions where nurses have access to professional development activities, they felt empowered to provide high-quality care (Brandon, Ryan, Sloane, & Docherty, (2014); Laschinger, Read, Wilk, & Finegan, 2015). For quality improvement efforts to succeed, Siegl, Miller, Khan, and Harris (2014) recognized that professional development activities must be incorporated to affect long-term change of behaviors, knowledge, and attitudes.

Professional development activities also positively influenced job satisfaction (Atefi, Abdullah, Wong, & Mazlom, 2014; Flinkman & Salanterä, 2014). Institutions lacking professional development activities observed higher rates of absenteeism and turnover, lower morale, and greater moral distress than those that did offer or provide access to them (Baydoun, Dumit, & Daouk-Öyry, 2015; Sabanciogullari & Dogan, 2014).

Instruction Methods

Many learning experiences for health care providers are aligned theoretically with Bandura's (1977) SLT. Learners, after they develop a cognitive or psychomotor basis for a behavior or attitude, are inclined to respond in ways consistent with their knowledge because of the confidence gained through having that knowledge. Repeated experiences with these skills perpetuate the growth of knowledge and confidence.

Lecture. Lecture, in its classic pedagogical form, potentially restricts the depth and breadth of learning. This is attributed to the limited opportunity for learners to interact with the didactic content and create their own knowledge. Rahman et al. (2012) described how interactive lecture, as an andragogical method of instruction, offered students the opportunity to be active participants in their learning through moderated exploration of the topic. When instruction methods changed from teacher-centered to learner-centered when interactive formats were used, learners had to be active in constructing their knowledge (Fahlberg, Rice, Muehrer, & Brey, 2014; McCabe & O'Connor, 2013).

During lecture portions of a class, learner interactions with the content can be promoted by using audience response systems (Tlhoaele, Hofman, Naidoo, & Winnips, 2013). Smart phone applications such Socrative® also allow learner interaction with the presenter by using the phone as the clicker, thereby eliminating the advance purchase and maintenance of equipment (MasteryConnect, 2015). Other less sophisticated options for interaction include encouraging spontaneous questions from the audience and using polling techniques such as a show-of-hands or verbal responses to questions posed by the instructor.

Breakout groups. In addition to traditional lectures or presentations, breakout groups are an effective method to facilitate adult learning. To be effective, the number of persons in each group needs to be relatively small. Burgess, McGregor, and Mellis (2014) advocated groups with 5-7 members to allow all the opportunity for active engagement. Lougheed, Kirkland, and Newton (2012) promoted the used of small groups so that

learners have the opportunity to explore information presented during lectures. Dellaportas and Hassall (2013) identified that active engagement with the concept or problem helps learners to construct their own knowledge through intellectual and emotional investment in the process. Interaction with other learners and facilitators also was found to increase the depth of learning, as well as improving retention of content and concepts (Lumpkin, Achen, & Dodd, 2015; Saleh, Shabila, Dabbagh, Al-Tawil, & Al-Hadithi, 2015).

Case scenario. Case scenario learning, also known as case-based learning, is a participatory instructional strategy often used for small groups. Towle and Breda (2014) supported this modality because learners actively engage in a realistic situation, applying problem-solving skills while attempting to resolve issues within the scenario. Dutra (2013) indicated that knowledge is constructed as learners work to make meaning of the experience. Yoo and Park (2014) found that this technique yields a deeper learning than lecture-based instruction. Learners' self-confidence improved as they anticipate and practice how they would respond in similar situations (Clark, Ahten, & Macy, 2013).

Scenarios can be inserted within lectures to illustrate concepts and provide opportunity for active learning (Marshall, Nykamp, & Momary, 2014). Other scholars advocated using scenarios to provide opportunity for role-play activities (Wolff, Wagner, Poznanski, Schiller, & Santen, 2015). Learners, as they assumed the roles of characters in the scenarios, gained insight through observation and practice (Ertmer et al., 2010). Communication skills also improved as learners interact with the content (Hsu, Chang, & Hsieh, 2014).

Panel discussion. Use of panel discussions is warranted when learners may benefit from hearing about a topic from more than one perspective. Panel discussions often are used in health care education because they prepare learners for professional encounters (Fidyk, Ventura, & Green, 2014). Caulfield and Woods (2013) found that experiential learning sessions potentially reveal information that is much more applicable to the learner than lecture alone. A more complete transfer of knowledge occurred when context was provided for new knowledge (Bader et al., 2013). For this technique to be successful, Leh and Melincavage (2012) determined that panel members needed to be mindful of the learning objectives and their role in helping learners achieve the objectives. Program developers selected panelists for their expertise about the topic as well as potential point-counterpoint interactions with other panelists (Nature Education, 2014). While panelists' passion was found to be essential, the presence of a moderator was necessary to maintain the direction and meet the objectives of the discussion (Kirsner, 2013).

Panel discussions require some preparation to assure their effectiveness. Aside from identifying a moderator, input from learners also is advisable. Some researchers proposed inviting learners to submit questions for panelists prior to or during the discussion (Scott et al., 2014; Razmerita & Kirchner, 2011). Social media venues were found to be helpful in obtaining questions for panelists as well as maintaining the exchange of ideas after the panel discussion completed.

Program Development

Several approaches to program development have been described in professional literature. Some scholars suggested that a successful program outcome begins with a needs assessment (Rossi, Freeman, & Lipsey, 2004). Others advocated that the process of program development was more efficient and effective when the desired behavioral or attitudinal outcomes were identified during the initial phase of development. For example, Guskey (2014) recommended that the program development process should begin with the initial focus on learner outcomes and proceed to the design of learning activities necessary to achieve these outcomes. Fink (2003) proposed starting program design with identification of the teaching methods most appropriate for the context or topic, then developing a plan for evaluation, and then, finally preparing learning objectives. Brousselle and Champagne (2011) suggested that program development could be initiated from either approach, assuming rationale for the choice could be substantiated in literature or in understanding of how resources should be used to achieve specific outcomes.

Another approach to program development relies first on establishing an overarching concept of the ideal situation, resources, and outcome, then proceeding to program design (Jeffries et al., 2013). With this approach, if planners dreamed of the ideal outcome, finances, personnel, and other resources could be located to realize that dream. An approach such as this is fraught with risks, as the reality of the situation or environment could prevent even the best ideas from achieving the desired outcome.

The Interactive Model proposed by Caffarella (2010) provides yet another process for program development. Caffarella's (2010) model was developed to provide a flexible structure, thus ensuring consideration of and preparation for the many contextual, conceptual, and logistic aspects of the program. The twelve components of the model function as a guide for the process. These include "discerning the context; building a solid base of support; identifying program ideas; sorting and prioritizing program ideas; developing program objectives; designing instructional plans; devising transfer-of-learning plans; formulating evaluation plans; making recommendations and communicating results; selecting formats, schedules, and staff needs; preparing budgets and marketing plans, and coordinating facilities and on-site events (Caffarella, 2010, p. 22)."

Regardless of the model selected, many aspects of the process are common to all models. These include assessment of the organization or target group, identification of course content and resources, and program evaluation (Cavarocchi et al., 2015; Titzer, Shirey, & Hauck, 2015). Program planners also need to be cognizant of the learning styles and existing knowledge of the intended learners (Rozenszajn & Yarden, 2014). Program design also must reflect professional standards of practice, both in content and philosophy (Bernard, 2014).

Project Design and Implementation

The following discussion describes the process used to design a professional development activity for critical care nurses. Components of this process included needs

assessment, identification of learning objectives, design of workshop and content, logistic considerations for implementation, and proposed evaluation methods.

Background

This workshop was designed with the guidance of the Interactive Model of Program Planning proposed by Caffarella (2010). The Interactive Model was the most relevant and realistic model for this situation because progressing through the planning and staging process in a linear fashion was not possible. The result of this was a program that was conceived over a period of time, taking into account adult learning theory, professional literature, research results, and the needs of the target institution.

Prior to designing the workshop, research was completed to assess learners' current perceptions of their knowledge and confidence in relation to specific personal and professional characteristics. Summed scores from the EPCS also were helpful for collecting information about learners' perceptions of EOL knowledge and self-efficacy. After identifying these and reviewing the summed scores of the EPCS, the workshop curriculum was designed in response to learners' perceptions and needs.

Program Objectives and Learner Outcomes

Program objectives. The program objectives served as reference points for how education is used to improve the quality of EOL care. Program objectives were developed using data collected during the project study. The program objectives included the following behaviors:

Upon completion of the workshop, the learner will be able to:

1. Analyze ethical and legal aspects of EOL care in the ICU;

2. Incorporate meaningful cultural or faith-based care with other EOL care;
3. Describe useful techniques and strategies for discussing EOL preferences or advance directives;
4. Examine current practices of anticipating and ameliorating EOL symptoms;
5. Apply skills and strategies that enhance EOL communication with families and with other professionals;
6. Anticipate when hospice care can be used as an adjunct in the ICU setting;
7. Apply skills and techniques that enhance support patients, families, and HCP during the acute experience of grief;
8. Propose solutions to current problems associated with EOL care in this institution's ICUs.

At the beginning of each day of the workshop, the program objectives will be reviewed with the learners. This will aid learners' understanding of how objectives are linked to specific content and to the overall goal of the experience. Additionally, learners will be introduced to the instructional techniques that will support various learning styles.

Learner outcomes. Evaluation of learner outcomes frequently is framed in Bloom's (1956) taxonomy. Outcomes are represented as specific, measurable behaviors or attitudes. Bloom (1956) proposed that the complexity of the change in knowledge and behavior should be characterized by verbs that reflect the degree of complexity. Higher-level actions or attitudes may be more abstract or require a greater degree of skill than lower-level objectives (Kantar, 2014). Based the research findings, middle-tiered verbs were used to describe specific learner outcomes for each session of this workshop.

Key Stakeholders

Learners. Nurses who could participate in this workshop may be doing so for a number of reasons. First, they may have a sincere desire to improve their capacity to provide care for dying patients and their families. Second, they may be using this learning experience as a means to gain continuing education credits. Third, they may have been designated to attend by their nurse managers or unit-based nurse educators. Regardless of the impetus for their participation, they will be expected to attend all workshop events and participate in the various learning activities.

Nursing administration. Nurse administrators, in agreeing to pay for critical care nurses to a 3-day educational event, should have justifiable expectations regarding outcomes. Assessment of learners with the EPCS, both before and after the workshop, would provide some evidence that learning had occurred, but to more fully assess self-efficacy regarding EOL care, evidence of transfer of learning in the clinical setting would be more telling. Family comments, improvement on family survey scores, and use of evidence-based practice all could be established as measures of the success of the event.

Program presenters. Presenter success is dependent on more than expertise with the subject matter. Presenters rely on participants' willingness to be engaged in their learning process. This creates an atmosphere in which presenters become facilitators of learning rather than lecturers. Without active learners, presenters will fail in meeting their objectives. Presenters also depend on the availability of a suitable meeting space with necessary technical support so that adjuncts to their teaching process are not impeded.

For the purpose of this workshop, I defined content experts as individuals with special knowledge, skill, and experience related to EOL care. They had a vested interest in the success of the program due to their relationships with the institution. They also held obligations to the community to provide education and guidance pertinent to EOL matters.

Program coordinator. The program coordinator carries great responsibility for both learners' and nurse administrators' satisfaction with the workshop. To achieve the desired learning experience and ensure a procedurally smooth process, the coordinator will be reliant on presenter success, learner participation, and evidence of learning. To accomplish these, presenters were carefully selected for their content expertise and skill in engaging learners. I also created an environment in which learners would be free to construct their own knowledge with the information and activities provided.

Resource Requirements and Existing Supports

Workshop faculty. To present a workshop that introduced information from so many perspectives and used several methods of presentation, a large number of faculty members was necessary. These individuals would be recruited 12 weeks prior to the established date of the workshop. Some presenters would be associated with the institution, while others would be recruited from agencies or resources within the community. Collaboration with the institution's contracted hospice agency would be necessary to identify qualified presenters for some of the topics. All potential faculty members would be interviewed to determine their interest in participating, their status as content experts, and their ability to address specific learner outcomes using interactive

teaching methods. They would be advised that no honorarium would be awarded for their participation; however, they would be encouraged to join and interact with learners at lunch. Persons who agreed to participate would receive an e-mail to confirm date, time, topic, and length of time allotted for the presentation. They would be required to submit the following items two months before the workshop:

1. Curriculum vitae or résumé
2. List of necessary audio-visual equipment
3. Electronic copy of PowerPoint® slides, presenter notes, or other materials that require printing
4. Description of preferred seating or table arrangements

Resource requirements. This professional development program would be presented at an academic medical center. Appropriate classroom space and support services for audio-visual needs would be available at no cost to faculty and staff members. Expenses related to the printing of course materials would be the responsibility of the Center for Nursing Excellence, the entity that endorses continuing education and professional development programs for the nursing staff.

Two other printed resources would be used during the workshop. Critical Conditions™ (2015) is a comprehensive manual that addresses many aspects associated with EOL preparedness. Five Wishes℠ (Agency with Dignity, 2011) primarily focuses on choices that are related to physical care at EOL. The Chaplain Residency Program would provide these resources as part of their outreach efforts.

Many of the faculty would be drawn from internal sources. Because of this, they would not eligible to receive stipends or other tangible compensation for their contributions. Faculty members from community hospice agencies would be advised that there is no reimbursement for their participation. They would be welcome to stay and participate, as learners, in other portions of the workshop, thereby earning continuing education credits.

The most expensive aspect of the course is the necessity of paying nurses for time during which they are not providing patient care. Nurse managers and unit-based nurse educators would need to consider the number of nurses they could send to a 3-day workshop and how this would affect their units' budgets. No registration fee would be incurred.

Few other incidental costs are likely. A beach ball and a permanent marker would be needed for the ice-breaker activity at the beginning of the first day. The estimated cost for these items is less than $5. Community hospice and durable medical equipment companies would be invited to provide lunches, snacks, and drinks for the learners.

Potential Barriers

Professional education activities are a multifaceted investment in the nursing workforce. They also are expensive. For an institution concerned about achieving fiscal metrics, the value of providing compensation for nurses when they are not engaged in direct patient care could be dubious (Santos, 2012). To overcome this barrier, nurse managers and executives first would need to grasp the significance of the knowledge deficit in their units. They would be encouraged to review my research findings. Nurse

managers and executives also would need to appreciate the wide-ranging ramifications to patient care, nurse retention, and unit morale. Professional literature could be used to provide multiple examples in which professional education improved the quality of patient care, increased morale, and helped to retain nurses (Hart, Brannan, & de Chesnay, 2014; Lartey, Cummings, & Profetto-McGrath, 2014; Twigg & McCollough, 2014). The current paradigm shift toward evidence-based practice for all patient care activities would further support the need to address nurses' knowledge deficits and maintain current professional practice.

Nurse managers and administrators, even though they may be in agreement that professional development could improve the quality of patient care, first are bound to meet the day-to-day staffing needs on each unit. When there is a surge in patient census, off-unit activities may be restricted, disrupting plans for attendance. For this reason, the number of learners will be limited to 24. None of the seven ICUs would be expected to send more than three or four nurses to the workshop. A small class size would minimize the stress on staffing patterns and patient care responsibilities, particularly if only 2-4 nurses from each unit were scheduled to attend.

Workshop Setting

Extensive preparation is necessary to ensure the smooth flow of the learning experience for learners and faculty members alike. This includes assuring that a comfortable, functional space is available on campus. Because this workshop would use several formats for instruction, classroom furniture would need to be easily moved so that small group interaction, lecture-style presentation, a panel discussion, and role-play

activities could be accommodated. Audio-visual equipment would be needed throughout the workshop. Equipment and technical assistance would be reserved through the Classroom Services Department at the same time that the room and table configuration reservations were placed.

Advertising and Registration

This workshop is intended to span three consecutive days so that learners develop rapport with each other and facilitators, thereby enhancing learning during the interactive portions of the course. To facilitate attendance for three consecutive days, nurse managers and unit-based nurse educators would receive information three months in advance of the workshop. Shift schedules for bedside nurses often are published as much as six weeks ahead of the dates listed on the schedule, so considerable advance planning would be necessary to ensure there was no risk of compromising patient care.

The advertisement would contain information including date and time, location, content, presenters, and continuing education credits awarded. The advertisement also would include how to register for the conference. Potential learners would be responsible for communicating their interest in participation to their nurse managers and registering through the Center for Nursing Excellence office. Registration would be limited to 24 nurses who work at the institution.

Continuing Education Approval

Professional nursing organizations frequently establish criteria for ensuring that educational programs meet minimum standards for legitimacy. In this state, applications for continuing education are submitted to the state Nurses Association for approval. This

process must be initiated 2-4 weeks in advance of the event. Program objectives, learner outcomes, qualifications of speakers, descriptions of learning activities, and length of the activity must be included on the application. After the agency determines that an educational program meets necessary quality requirements, continuing education credits may be awarded to learners who attend the full workshop. The application will request approval for a total of 18 hours of continuing education credit for attendees.

Methods of Instruction

This workshop would use five modes of instruction to create a learning environment appropriate for adult learners. These methods would accommodate differences in learning styles. The majority of these methods capitalize on Bandura's (1977) four motivators of learning that ultimately increase knowledge and self-efficacy: performance accomplishments, verbal persuasion, vicarious experience, and emotional arousal.

To achieve the goals of the workshop, several instructional strategies would be employed. Presenters would be expected to incorporate active, experiential techniques to enhance learning. Methods of instruction for each portion of the workshop are described in detail in Appendix A.

Assessment of Learning

Formative evaluation. Throughout the workshop, learners would have multiple opportunities to receive formative evaluation. For example, during some presentations, feedback from the Socrative® audience response system would provide immediate

information to learners about their understanding of content and concepts (Fuller, 2014). During role-play activities, other learners and from facilitators would provide feedback.

Summative evaluation. The process of providing summative evaluation would occur in two ways. First, participants would complete the EPCS before and after the workshop. Learners would be able to estimate the extent of learning through changes in their scores. The second method of summative evaluation would occur during the final session of the workshop. Learners would collaborate with each other as they seek solutions to problems they identified during the first session of the workshop. This activity would provide opportunity to apply new knowledge and develop a sense of mastery of the material.

Roles and Responsibilities of Learners and Others

Learners. Critical care nurses are professionals and, as such, are responsible for their own learning. To reap the benefits of this program, learners would be expected to actively participate in all associated discussions and exercises. Learners would be expected to be respectful of others whose experiences or opinions may differ from theirs. All learners would share the responsibility to supporting the learning of their peers throughout the experience.

Instructors and facilitators. To provide adequate instruction and promote exploration of the topics, several instructors and facilitators would be involved. Faculty member roles could include lecturer, coach, small group facilitator, and discussant. As faculty members, they would be responsible for creating and supporting an environment

of inquiry and professional growth. To that end, they would be expected to treat learners with respect and dignity.

Program coordinator. The program coordinator would be responsible for obtaining speakers and facilitators for all aspects of the workshop. This individual must be capable of working with other departments and individuals, arranging for classroom space and multimedia support for all portions of the workshop. The program coordinator would be responsible for completing and submitting the application for continuing education credits for this learning experience.

Proposal for Implementation and Timetable

A detailed schedule of all preworkshop and workshop activities was created to ensure seamless coordination of efforts (see Appendix A). The schedule is specific to the responsibilities of the program coordinator and to program faculty members and presenters. The program coordinator will exercise good judgment and may modify this table as necessary.

A daily schedule was developed to ensure smooth transition from one portion of the workshop to the next (see Appendix A). Presenters would need to adhere to this schedule to ensure that other have adequate time to present their concepts. Other pertinent details related to the flow of the workshop would be included on the daily schedule.

Program Evaluation

Program evaluation is an ongoing process that begins during the initial design phase and ends long after the completion of the program (Caffarella, 2010). To aid in the

evaluation process, Kirkpatrick's (1959, in Praslova, 2010) method of evaluation was selected. This method assesses the following four participant aspects or levels:

1. Participant reactions
2. Participant learning
3. Participant behavioral change
4. Results or outcomes

Assessment of each level offers valuable insight into many aspects of the program throughout its lifespan. Persons involved in the evaluation process include those who identified the need, program planners, presenters and facilitators, learners, hospital administration, nurse managers and unit-based educators, and the patients and families affected by this program.

Participant Reaction

During the workshop, learners, presenters, and the coordinator would have the opportunity to share responses or reactions during or between sessions. This feedback would be spontaneous. Presenters or the coordinator also could request feedback from participants or other presenters as needed. This feedback could be used to modify the learning experience as warranted.

Participant Learning

Formative evaluation of the program is a somewhat structured process that is frequently accomplished as a form or survey format (Caffarella, 2010). A form was designed for this workshop (see Appendix A). After each learning activity, learners would complete the evaluation form. All forms would be collected at the end of each day.

Participant Behavior Change

This phase of evaluation would be used to assess the learners' overall experience during the workshop. Learners would complete a questionnaire that addresses multiple aspects of the experience, the environment, and effectiveness of the workshop (see Appendix A). Learners must complete this prior to receiving their continuing education certificates.

Results or Outcomes

Caffarella (2010) defined transfer of learning as a "longitudinal outcome" that is observed after completion of the professional development activity (p. 321). The effect of the workshop on learners may not be immediately evident at the close of the workshop. This would not mean that learning did not occur. Ultimately, the success of the workshop would be measured in changes in attitude and the quality of EOL care provided in the ICU.

Learners would receive a link to a web-based questionnaire two months after the workshop (see Appendix A). The questionnaire would be used to assess if learners perceived a change in their EOL knowledge and self-efficacy. In addition to the questionnaire, learners, nurse managers, and unit-based nurse educators, as they notice changes in practice, would be encouraged to notify the course coordinator of these positive outcomes.

Implications for Social Change

Change in Local Community

Implementing change within an academic medical center is a daunting task, one that influences attitudes and processes alike. The current practice of providing EOL care is based on the existing culture of the institution, a culture in which communication with patients and families, as well as interdisciplinary communication, is inadequate. Flawed communication hampers the delivery of high-quality EOL care. This educational experience is expected to increase the knowledge and self-efficacy of critical care nurses. With the resources necessary to influence change within their ICUs, the delivery of patient- and family-centered care is anticipated to improve.

The workshop holds great potential for affecting more than care of patients and their families. Critical care nurses, in dealing with the emotional, moral, and ethical ramifications of providing EOL care, are at high risk for burnout from moral distress. This raises the possibility that critical care nurses will opt to leave the ICU environment. Attrition profoundly affects all aspects of patient care, ICU staffing patterns, and the ICU's financial obligation to hire and train replacements. Therefore, if the workshop is successful in providing nurses with tools to decrease moral distress and, ultimately, burnout, then positive social change will have occurred.

Far-Reaching Social Change

Though death is an expected consequence of life, advances in health care are capable of delaying this eventuality. The result is a population that is ill-prepared to consider its mortality and a health care team that is inexperienced in helping persons

accept the limitations of the human body and science. Death with dignity is easily overlooked in the ICU setting. The problem is not unique to this academic medical center, as it is pervasive throughout the region.

The EOL workshop, though not offered to nurses outside of the institution, has the potential to bring change throughout the region. As family members return to their local communities, they often share their experiences and describe the care that they received. With improvements, high-quality EOL care would become the expectation, even in the more remote areas of the region. If other institutions and communities see the value of this care and endorse nursing education as a means to achieving this goal, then positive social change would be possible.

The complexities of nursing practice require nurses to develop and maintain competence in a variety of domains. Many organizations define their minimum level of competence based on standards established by professional organizations. Others rely on standards prescribed by regulating agencies or specific community demands. For EOL care, no such measureable standard exists. Until HCPs and consumers alike recognize the need for basic competencies in providing EOL care, small groups of nurses will rely on educational activities such as this workshop to build a foundation of knowledge and professional standards.

Conclusion

Section 3 included information about the development of a professional learning experience for critical care nurses. Elements of the design, delivery, and evaluation processes were discussed in detail. The local and far-reaching impact of EOL education

was explored from the perspective of positive social change. The final section will include evaluation of the project and personal reflections about scholarship, leadership, and research.

Section 4: Reflections and Conclusions

Introduction

In previous sections, a local problem was identified and supporting information provided. A literature review offered additional support regarding the pervasiveness of the problem at a national and international level. Research questions were developed, and survey research was determined to be an appropriate means of collecting data. Prior to conducting the research, IRB approval was obtained from Walden University and from the academic medical center. After data collection, descriptive and inferential statistics were used to complete data analysis. Results from the research were used to design a 3-day workshop, the purpose of which is to address knowledge deficits observed from data collected during the project study. The final section includes an evaluation of the project and an assessment of myself as program planner, scholar, practitioner, and leader.

Project Strengths

The strength of the project is representative of the interdisciplinary engagement throughout the research and development phases. The contributions of stakeholders within the institution increase the potential for successful delivery of the program. Their contributions, in the form of dialogue, participation in the research, and confirmation of key findings, ensure that the project meets the needs of the institution.

In a time when budgets for education are contracting, fiscal responsibility is yet another consideration. Responsible use of the medical center's personnel and resources, in addition to community liaisons, respects the financial constraints of the institution. Though there will be no nationally known keynote speakers invited, the information

shared by local content experts ensures that information provided is consistent with the regional values and culture. Partnership with local experts also fosters relationships that transcend the borders of the hospital, improving the quality of care both inside and outside of the hospital setting.

The project incorporates several intentional elements and processes. First, the program promotes interactive learning experiences in all sessions. Knowles (1973), as a champion of andragogy rather than pedagogy, endorsed the use of learning activities that engage learners. By providing an environment in which participants practice new skills, receive feedback, and reflect on the process of learning, they make meaning of their experience and place it in context with existing knowledge.

Second, the project includes each of Bloom's (1956) three domains of learning. Engagement of more than one domain increases the likelihood of transfer of learning (Légaré et al., 2014). The cognitive and emotional domains are saturated more than the psychomotor, though this is to be expected due to the subject matter.

One of the most important components of the project is that learners are engaged from the beginning with identifying problems associated with EOL care. As learners move through the program, they will progressively develop their role as EOL patient care advocates. The final learning activity of the program returns the learners' attention to the problems identified in the first session. As the learners collaborate to find solutions, their ability to synthesize new knowledge and apply it to real problems increases self-efficacy and reinforces their learning.

Project Limitations

Some conditions and uncontrollable events limit the strength of the project. First, the amount of information provided during a relatively short period of time may be unwieldy for participants and coordinator alike. The results of the research revealed no specific target areas for content other than the advance directive, so by necessity, a broad approach was used to develop this program.

The project is limited by lack of resources to recruit compensated experts from outside of the community. This could affect the quality of presentations and the breadth of knowledge available to learners. The program coordinator, prior to recruiting facilitators and presenters, will need to establish requisite criteria to ensure content experts are selected.

The absence of recorded vignettes also is a potential limitation of the project. Without consistent methods of demonstrating communication techniques, the quality and consistency of facilitator demonstrations is uncertain. The program coordinator will need to orient all presenters and facilitators to the teaching points and techniques of each scenario to maintain the quality and reliability of the content.

Finally, cognitive and emotional domains of learning are engaged throughout the majority of the program. For some learners, this could negatively affect their ability to learn as the program progresses. Learners will need to be assessed for fatigue throughout the program.

Nurses are not alone in their need to learn more about the care of dying patients and their families. An alternative to the designed program would be to develop an

interdisciplinary program. At this research site, ICU culture continues to shift toward a team approach to patient care, engaging physicians, nurses, and other allied HCPs in the day-to-day decision-making process that is patient care. The participation of other disciplines in an EOL workshop could empower those as their roles evolve, draw them deeper into the team relationship, and develop the trusting relationships necessary to provide high-quality EOL care.

Incorporation of hi-fidelity simulation components in the current workshop would provide another alternative for the learning experience. This option would provide a better opportunity for psychomotor learning than the current workshop provides. Experience in the simulation lab could be especially helpful, particularly if members of the interdisciplinary team participate in scenarios.

Neither of the alternatives for content and presentation were appropriate for inclusion in this project. Introduction of an interdisciplinary component without first investigating the specific needs of other disciplines potentially could lead to an unsatisfactory experience for many of the learners. I also rejected the incorporation of a hi-fidelity component due to the variation in simulation lab capabilities and equipment. Without assurance of consistency of resources at all institutions, development of a fully deliverable project that includes this type of learning activity was not possible.

Scholarship

Piaget (1952) recognized that knowledge is the result of accommodation and assimilation. The process of designing and conducting research also could be defined in those terms. Constant reexamination of the components of the process provided me the

opportunity to steadily add new knowledge to the old, thereby gaining a clearer understanding of the problem. With active participation in the development of a new knowledge, the scholarly aspects of the project study moved from theory to practice.

After constructing new knowledge, a more pressing challenge emerged: the application of this knowledge. Interaction with colleagues aided in the examination of the findings, especially my interpretation of them. These discussions also stimulated the critical thinking skills that ultimately helped conceptualize the professional development program.

The scholarship required to complete research and program development is essentially the same. Checks and balances are present in the perpetual cycle of inquiry, examination, and testing. The common denominator for all is an abundance of information. The ease with which I could obtain information from the Internet was both a blessing and a bane. Achieving saturation for a literature review is no longer the challenge. Instead, the challenge lies in determining the credibility of the information and its relative value to the original problem and questions.

Project Development and Evaluation

The success of a program, from conception to delivery, is dependent on buy-in from stakeholders. Their early involvement engenders a sense of ownership and commitment to the final product. Responsibility for the success of the program, by default, becomes something shared by all parties; however, I as the program designer am the sole person who remains accountable for any outcomes. Early in this experience, I was able to identify potential stakeholders and collaborators. This helped me to develop

relationships and gage their commitment to the project. Throughout the research and planning phases, I used frequent progress reports to maintain their interest and engagement.

The final phase of the project is yet to be tested. The actual execution of any program has inherent risks, many of which cannot be prevented. Technology failures and sudden unavailability of presenters are not uncommon events. Technology failures would not be a catastrophic event for this program because no video vignettes will be used and all presentations will be printed and available for learners. By staging the program at the academic medical center, assistance from Classroom Services would remedy technology problems or find workarounds. The unexpected loss of a content expert is more likely to create distress for the program coordinator and learners than any technology failure. To minimize the potential impact to the program, the coordinator would need to quickly implement solutions such as rearranging the daily schedule or substituting another content expert to accommodate both presenter and learner needs.

Leadership and Change

Changing one aspect of practice in a portion of any hospital requires communication, preparation, and education. Changing both practice and culture requires something more: perseverance. Societal expectations of perfect health and a long-avoided death are in conflict with the reality of life itself. The result is a convoluted health care environment. HCPs are confused too, and are not always good stewards of their scientific knowledge, now finding it easier to offer treatment instead of comfort.

Academic medical centers are sites where HCPs receive both education and professional socialization. To enhance the quality of care through improved EOL care, the interdisciplinary medical ethics committee has begun a multipronged approach. This includes assessment and oversight of some professional policy and practice guidelines, advocating for palliative care services within the institution, and providing regular education to medical specialties, local civic and religious organizations, and professional schools in the area. As a member of this Committee, I have experienced the good fortune of being a leader and active participant in this attempt to bring about a shift in culture. This is a monumental task for the hospital as a whole, but even more so in isolated places within the hospital where resistance is greater. To achieve change, persistent efforts at communication, education, and research will be needed.

Analysis of Self as Scholar

The American Association of Colleges of Nursing (1999) defines scholarship as a compound entity that includes research, teaching, clinical practice, and multidisciplinary collaboration. Over a 30-year nursing career, I built a foundation that is strong in critical care and pediatrics, I mentored and educated undergraduates and professionals, and I joined in collaborative ventures with a range of HCPs. In spite of the strength in these areas, I lacked a commensurate degree of confidence and experience with research. I viewed myself as a consumer of research or, on occasion, as someone who could critique research. Planning and conducting research certainly was not an aspiration. Over time, I realized that much of my reluctance was related to a lack of mentorship and to little understanding of the process itself. Now, with this first research experience behind me, I

feel as though I evolved into a more balanced professional. While research may never be my strength, it no longer has to be my perpetual weakness. As my professional life evolves into a situation more focused on teaching and less so on clinical practice, the most logical arm of the scholarship model to take its place is research.

Analysis of Self as Practitioner

My current identity as a scholar is due, in part, to my strength as a practitioner: I do not define myself by one measure alone. Similarly, possessing a singular skill does not make me an expert or denote qualification. Instead, my ability as a practitioner, whether as a nurse or educator, relies on my accountability and integrity. The project study provided a unique opportunity to observe how they intertwine with a developing academic skill set. Though I now possess a broader set of abilities, I also respect that I have much work to do before achieving Benner's (1984) estimation of an expert practitioner. As teacher or mentor, there always is opportunity to enhance the learning process for others.

Analysis of Self as a Project Developer

The qualities and skills that ground me as a practitioner include many of those that will serve me well as a program developer. Though many of these skills seem obvious or simple, they are essential to the success of learning activities. Maintaining a mutual exchange of ideas and collaborating with others will increase chances for positive outcomes for learners and stakeholders alike. Through the entire doctoral process, input from others ensured a smoother experience. They served as sounding boards for ideas, offered mentorship, and shared with me their experiences about adult education.

With the help of others, I learned the significance of taking calculated risks with any project. Sometimes, these risks take the form of introducing a learning activity that may not resonate with some learners. Other uncertainties include speakers that are unproven, budgets that are subject to decrease, and changes in stakeholder expectations. A certain amount of risk is essential to the growth of the learners as well as my own.

The Project and Potential for Social Change

Nursing education pertinent to EOL care remains an unmet need. Though there are 5-day programs with international acclaim available, they are expensive and may require travel to where they are conducted. A locally based program, in addition to being more accessible, provides insight into cultures and practices that are more salient for nurses. Within the context of the local experience, a program such as this offers the potential for collaboration between multiple disciplines and agencies that are united to improve the EOL experience for patients in their families. The result of combined efforts is the positive social change for the community and the academic medical center. EOL care becomes a shared venture, one in which the community and the HCPs share the responsibility of caring for persons across the continuum of life.

For the critical care nurses who work aside death daily, the project has given them a small, but growing, voice in the process of change. Because the study results serve as a measure of the nurses' baseline level of care, these metrics are useful to the institution. They reveal an area in which there is great opportunity for improvement. The nurses are positioned strategically as stakeholders and, as such, are capable of being advocates for high-quality EOL care and the education needed to provide it, especially now that the

survey results have been shared. Now, positive social change takes the form of their advocacy.

How the critical care nurses at this institution move forward with EOL care has bearing on their moral distress and burnout. As an essential commodity in the health care workforce, protecting them from moral distress and preventing burnout decreases their rate of attrition from the ICU. Preserving them is paramount for maintaining a nursing workforce large enough to meet the health care needs of the community. Positive social change is seen when the profession and employers alike take action to preserve the health and well-being of nurses.

Implications, Applications, and Directions for Future Research

The health care community and families addressing EOL concerns are becoming more aware of the need for high-quality EOL care as part of continuum of health care. The project study revealed information about the effect of critical care nurses' characteristics on their perceptions of EOL care knowledge and self-efficacy. These findings will be useful in determining how to incorporate high-quality EOL care into the health care process, especially within the critical care setting. Implementation of a long-term education strategy is crucial to achieving the desired improvements in nurses' knowledge. Performance improvement processes may be helpful in establishing minimal levels of EOL knowledge or competency for critical care nurses. Future research should focus on the long-term effects of EOL care education on the quality of care provided, nurses' communication with patients and HCPs about EOL preferences, and changes in levels of moral distress and burnout.

Conclusion

The journey toward completion of the project study is analogous to solving a Rubik's cube. It is a multidimensional process that requires concentration, inquiry, critical thinking, strategy, and, on occasion, luck. Each of those skills is necessary to move the next piece of the puzzle into place without disrupting the other pieces. The process of completing the project study pushed me to hone and use many of those same skills to accomplish the task. My abilities as a scholar, practitioner, researcher, and educator are more distinct and polished now than they were at beginning of this journey. As I continue forward in my professional life, I know that future nurses and I will benefit from the end result of this experience: the joy of a positive learning experience.

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Appendix A: Project Elements

Pre-Workshop, Workshop, and Post-Workshop Planning Schedule

≥ 4 months before workshop	3 months before workshop	2 months before workshop
Complete needs assessment	Advertise workshop within the institution's ICUs and through local American Association of Critical-Care Nurses (AACN) chapter	Initiate application for continuing education credits
Present results of needs assessment to ICU educators and administrators	Begin registration for workshop	Send faculty members the learner objectives for modules in which they are participating
Assess stakeholder interest in and commitment to educational intervention to address identified needs	Reserve classroom space (must have Wifi [standard in all campus buildings] and digital AV capabilities) through Classroom Services; microphones required for Day #3	Request from faculty members: • CV • AV needs required to support teaching strategy • Digital copy of slides if PowerPoint will be used • Digital copy of any handouts that will need to be printed
Prioritize identified needs and outline format of workshop	Identify workshop faculty members	Contact local hospice companies and durable medical equipment companies to determine how they would like to support the event (literature, donation of snacks) Continue to advertise workshop within the institution's ICUs and through the local AACN chapter

Pre-Workshop, Workshop, and Post-Workshop Planning Schedule (continued)

1 month before workshop	2 weeks before workshop	Week of workshop
Obtain from faculty members • CV • Digital copies of PowerPoint presentations • Digital copies of handouts	Close registration	Print jobs: • Course materials as requested by course faculty • Module and course evaluations • Continuing education certificates
Submit application for continuing education credits	Send all faculty members a reminder email to confirm dates and times of presentation(s)	Meet with Classroom Services representative to review use of AV equipment
Invite hospice companies to provide literature and donate snacks and drinks	Send email to Classroom Services to reiterate classroom requirements	Visit classroom space to assess for need to adjust floor plans for the various types of learning experiences
	Design floor plans for various types of learning experiences and submit to Classroom Services	Obtain literature and donated snacks and drinks from hospice companies

Pre-Workshop, Workshop, and Post-Workshop Planning Schedule (continued)

During the Workshop	1 month after the Workshop
Formative evaluation process 1. Distribute and collect learner evaluation forms for each session 2. Distribute and collect presenter/facilitator evaluation forms for each session	Summative evaluation process 3. Send email to all participants with link to summative evaluation form 4. Send email to all presenters/facilitators with link to summative evaluation form

Workshop Schedule: Day #1

Time	Speaker	Topic	Method of Instruction	Equipment/Seating/ Supplies/Handouts
0800-0900	Program Coordinator	Welcome	• Lecture • Ice-breaker activity	• Laptop computer and digital projector • 4 tables with 6 chairs each • Beach ball • Permanent marker
0900-1000	Hospital Attorney, Chair of Ethics Committee	Ethical & Legal Considerations in EOL Care	• Lecture • Case scenario	• Laptop computer and digital projector • 4 tables with 6 chairs each
1000-1015	Break			
1015-1115	Chaplain, Patient Representative, Interpreter	Cultural & Faith-based EOL Practices	• Lecture • Case scenario	• Laptop computer and digital projector • 4 tables with 6 chairs each
1115-1215	Chaplain Facilitators, Attorney	Advance Directives	• Lecture • Small groups for role playing activity	• Laptop computer and digital projector • 4 tables with 6 chairs each • Five Wishes® and Critical Conditions documents (24 of each)
1215-1315	Lunch			
1315-1415	Chaplain & Psychologist	Interdisciplinary Communication Strategies	• Lecture • Case scenario • Discussion • Audience responses	• Laptop computer and digital projector • 4 tables with 6 chairs each • Learners will need to download the free Socrative® application to their smart phones and log into the virtual classroom prior to beginning this session
1415-1430	Break			
1430-1545	Hospice Pharmacist & Hospice RN	Pharmacologic & Non-pharmacologic Management of Symptoms	• Lecture • Demonstration • Case scenario • Audience responses (Socrative®)	• Laptop computer and digital projector • 4 tables with 6 chairs each • Learners will need to log into the Socrative® virtual classroom prior to beginning this session
1545-1600	Program Coordinator	Wrap-up	• Discussion	• Laptop computer and digital projector • 4 tables with 6 chairs each

Workshop Schedule: Day #2

Time	Speaker	Topic	Method of Instruction	Equipment, Seating, Supplies
0800-0815	Program Coordinator	Welcome	• Discussion	• Laptop computer with digital projector • 4 tables with 6 chairs each
0815-0945	Patient Representative, Interpreter, Chaplain, Psychologist	Communication Strategies with Families: Part 1	• Lecture • Small group • Case scenario with role play	• Laptop computer with digital projector • 4 tables with 6 chairs each
0945-1000	Break			
1000-1130	Patient Representative, Interpreter, Chaplain, Psychologist	Communication Strategies with Families: Part 2	• Lecture • Small group • Case scenario with role play	• Laptop computer with digital projector • 4 tables with 6 chairs each
1130-1230	Lunch			
1230-1400	Hospice RNs, Palliative Care MDs	Withdrawing Technologic & Pharmacologic Support	• Lecture • Case scenario • Discussion • Audience responses (Socrative®)	• Laptop computer with digital projector • 4 tables with 6 chairs each • Learners will need to log into the Socrative® virtual classroom prior to beginning this session
1400-1415	Break			
1415-1545	Chaplain, Grief Counselors	Witnessing Unanticipated Deaths	• Lecture • Case scenario	• Laptop computer with digital projector • 4 tables with 6 chairs each
1545-1600	Program Coordinator	Wrap-up	• Discussion	• 4 tables with 6 chairs each

Workshop Schedule: Day #3

Time	Speaker	Topic	Method of Instruction	Equipment, Seating, Supplies
0800-0815	Program Coordinator	Welcome	• Discussion	• Laptop computer with digital projector • 4 tables with 6 chairs each
0815-0930	Hospice Chaplain & Social Worker	Why Hospice in the ICU?	• Discussion	• Laptop computer with digital projector • 4 tables with 6 chairs each
0930-0945	Break			
0945-1100	Psychologist & Hospital Chaplain	Staff Member Grief	• Lecture • Discussion	• Laptop computer with digital projector • 4 tables with 6 chairs each
1200-1330	3 Survivors (panelists), 1 moderator	Survivor Experiences	• Panel discussion with moderator • Questions from the audience	• Table with 3 chairs for panelists (place in front of and facing audience) • 4 tables with 6 chairs each • Microphone for panelists (3)
1330-1345	Break			
1345-1515	Program Coordinator	System Analysis: What can this hospital do better?	• Discussion • Problem-solving activity	• Laptop computer with digital projector • 4 tables with 6 chairs each • Beach ball from initial session • Pencils and paper
1515-1545	Program Coordinator	Course Wrap-up and Evaluation	• Discussion • Evaluation completion	• Laptop computer with digital projector • 4 tables with 6 chairs each • Final course evaluation form (24) • Continuing education certificate (24)

Learner Objectives for Each Class

Ethical & Legal Considerations

1. Describe 2 examples of ethical concerns in EOL care.
2. Identify 2 examples of legal concerns in EOL care.
3. Identify 2 resources for help with addressing ethical or legal concerns

Cultural and Faith-based EOL Practices

1. Identify 3 cultural and 3 faith-based practices that are different from his/her own.
2. Identify 3 environmental and 3 unit-based cultural obstacles to meeting patient's and families cultural and faith-based EOL needs.
3. Develop 3 ways in which the ICU environment can be adapted to facilitate families' beliefs and practices when a loved one is dying.

Advance Directives

1. Describe 2 strategies in which to introduce the purpose of an advance directive to patients and families.
2. Identify 3 common patient/family concerns related to advance directives.
3. Utilize one of the advance directive tools to facilitate completion.

Interdisciplinary Communication Strategies

1. Describe 3 strategies to maintain professional interactions.
2. Illustrate 2 ways to prevent deterioration of professional relationships when there is a difference of opinion.

Pharmacologic and Non-Pharmacologic Interventions

1. Describe the physiologic reasons for the presence of non-pain physical symptoms.
2. Explain how pharmacologic management of symptoms does not always require the use of narcotics.
3. Justify the doses of narcotics that may be needed for patients who are not narcotic-naïve.
4. Give examples of signs and symptoms that are amenable to non-pharmacologic intervention.
5. Distinguish between psychological and physiological pain.

Communication Strategies with Families, Part 1

1. Describe 2 approaches for assessing patient/family understanding of prognosis.
2. Identify 3 causes for breakdown in communication between patient/family and interdisciplinary team members.
3. Develop 3 ways to decrease potential communication breakdown between interdisciplinary team members or between patient/family members and interdisciplinary team.

Communication Strategies with Families, Part 2

1. Generate a definition for DNR.
2. Generate a definition for "do everything."
3. Describe 3 ways in which the transition from treatment to comfort care can be made easier for patients and families.

Withdrawing Technologic and/or Pharmacologic Support

1. Identify 2 measures to control symptoms during and after removal of technological support.
2. Describe 2 strategies to prepare families for what they are likely to observe.
3. Anticipate possible ethical dilemmas associated with the withdrawal of treatment.

Witnessing Unanticipated Deaths

1. Anticipate 3 emotions family members could experience when coping with the sudden death of a loved one.
2. Identify 2 survivor resources (1 in hospital, 1 in community) that can provide support for unexpectedly bereaved families.

Hospice in the ICU? Really?

1. Identify 2 benefits of hospice care for patients and survivors.
2. Describe 2 ways in which hospice care compliments care provided by ICU nurses.
3. Consider 2 rules embedded in ICU culture that may need to be changed to accommodate EOL care.

Staff Member Grief

1. Recognize positive and negative coping mechanisms.
2. Identify 2 support services available to staff members.
3. Describe 2 ways in which to support grieving co-workers.

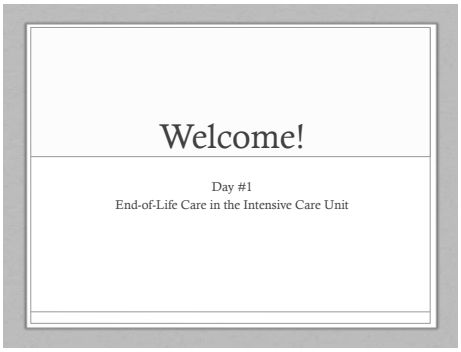
Panel Discussion: Survivor Experiences

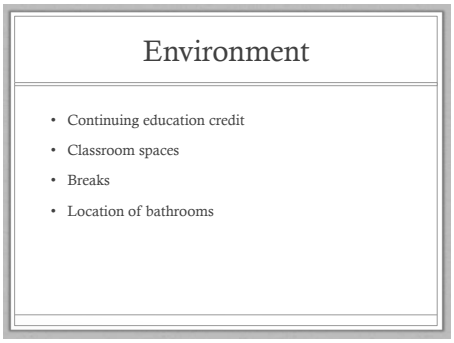
1. Describe 3 statements or actions that were helpful when their loved one was dying in the ICU.
2. Describe 3 statements or actions that were not helpful when their loved one was dying in the ICU.
3. Anticipate 2 ways in which to support grieving family members.

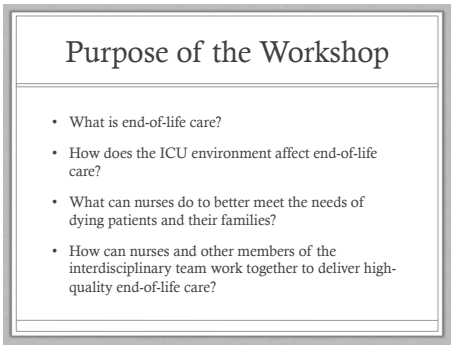
System Analysis: What Can This Hospital Do Better?

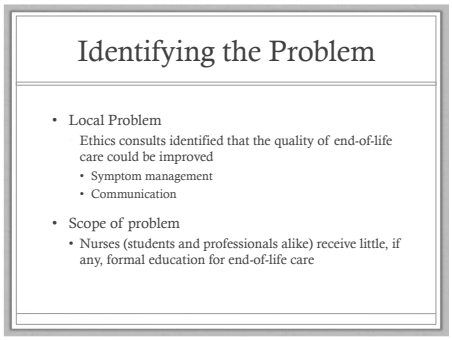
1. Identify 2 or 3 solutions that can be readily incorporated into EOL practice in the institution's ICUs.
2. Identify 2 or 3 solutions that will require change in the ICU culture or infrastructure prior to change.

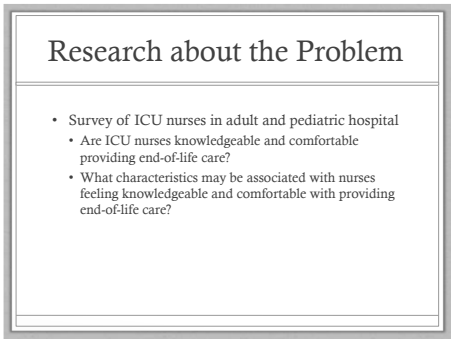
Slides and Instructions for Each Class

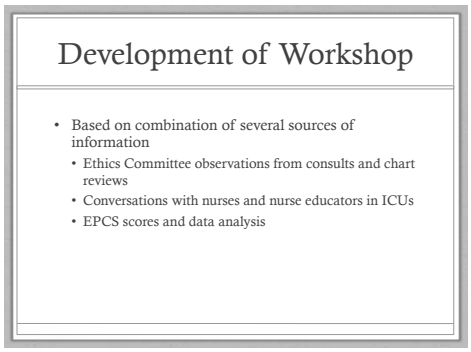


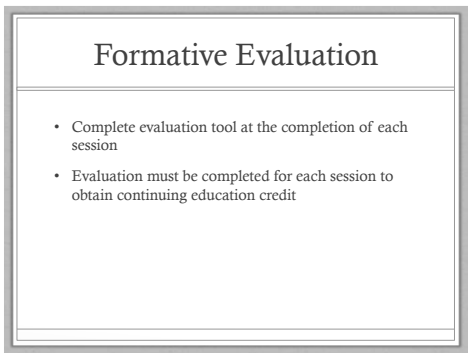


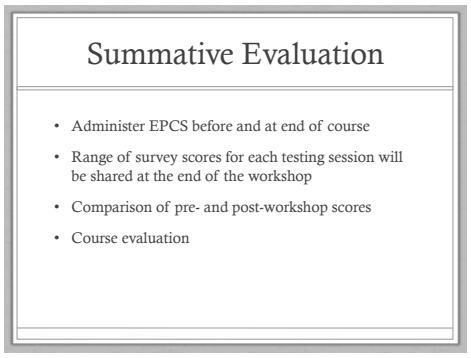








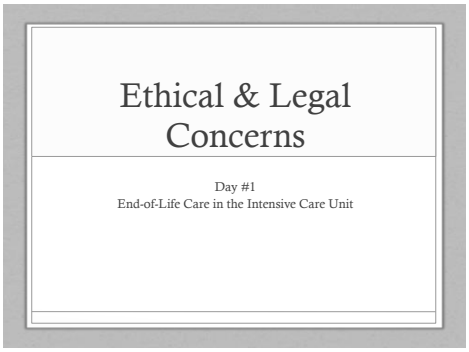




Facilitators: 1
Seating: 4 tables with 6 learners each

Activity #1: Introduction to course, presentation of local research
Interactive lecture: (30 minutes)

Activity #2: Ice-breaker activity
Participants pass beach ball around the room. When signaled, the participant with the ball writes a problem associated with EOL care on the ball. Continue until learners have no new ideas to write on the ball. Save the ball for the final activity.



Facilitators: 1
Seating: 4 tables with 6 learners each

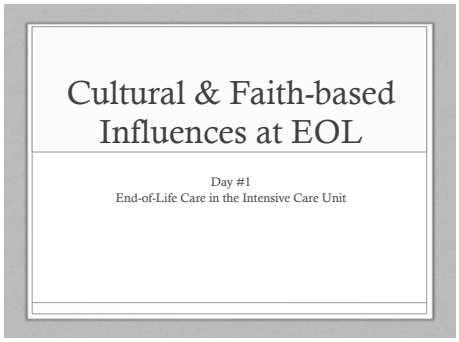
Activity #1: Interactive lecture (15 minutes):

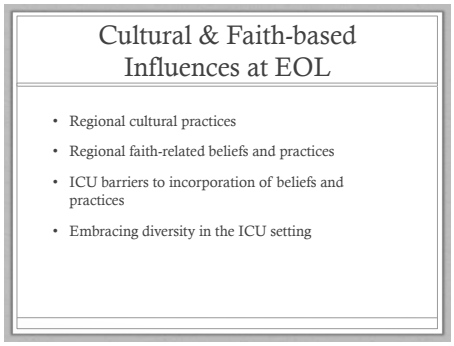
1. Review meaning of these terms.
2. Encourage learners to offer definitions and examples of these terms.

Facilitators: 4
Seating: 4 tables with 6 learners at each

Activity # 2: Case presentation with small group discussion (15 minutes x 3 scenarios)

1. Identify the primary ethical problem in each scenario.
2. Discuss the ethical and legal aspects to determine how to resolve these problems.
3. Consider the ramifications of moral distress for nurses and other healthcare providers.
4. Cases
    1. 78yo competent woman who requests discontinuation of transcutaneous pacemaker without placement of permanent pacemaker
    2. 93yo man with metastatic cancer whose family does not want him to receive narcotics because they make him "too sleepy"
    3. 17yo girl with 2nd recurrence of rhabdomyosarcoma who does not want chemotherapy, but the family does





Facilitators: 1
Seating: 4 tables with 6 learners at each

Activity: Interactive lecture (30 minutes): Focus on regional and international cultural and faith-related EOL practices likely to be encountered at this hospital. Involve learners by asking for examples of these practices and how they affected the care provided. Speaker is encouraged to incorporate cases or examples within the presentation. Audience response system (i.e., Socrative®) can be used for audience interaction and as form of formative evaluation.

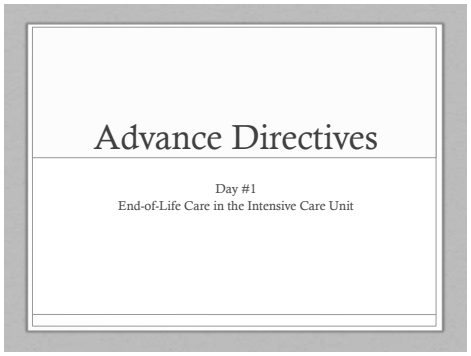
Facilitators: 4
Seating: 4 tables with 6 learners at each

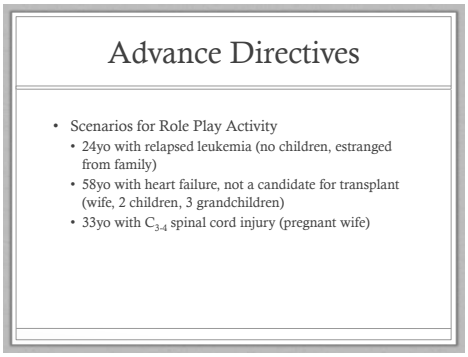
Activity: Case Scenarios (Note: facilitators must be familiar with all scenarios and their cultural or faith-related elements prior to beginning the session)

1. Case presentations: 20 minutes x 3 for exploration of cultural and faith-based influences; facilitator is to moderate the discussion and ask open-ended questions.
2. At the end of each scenario, the facilitator asks for additional thoughts and questions about the experience.

Each of the following case criteria must be represented in at least 1 of cases:

1. Regional or international faith practices that are likely to be different from the group members
2. Regional or international cultural practices that may be different from the group members
3. Patient ages (one scenario to include EOL care for child)





Facilitators: 1
Seating: 4 tables with 6 learners at each

Activity #1: Interactive lecture (15 minutes):

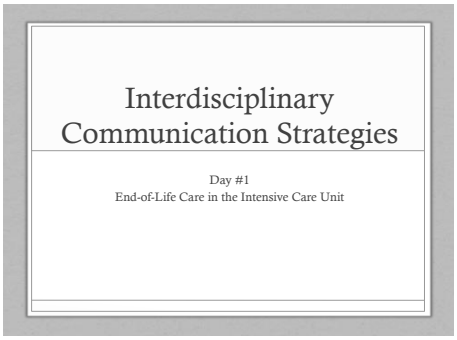
1. Use PowerPoint to describe the components of an advance directive.
2. Discuss the legal benefits and limitations of the advance directive, including when these documents may not be binding.
3. Thinking point: Ask what DNR (do not resuscitate) really means– should patients be allowed to choose from options such as no compressions, no intubation, and/or no drugs or should DNR mean no resuscitation at all?

Activity #2: Observation (10 minutes)

Note change from above: Facilitators: 4; seating: 4 tables with 6 learners at each
Two facilitators demonstrate use of advance directive tools through role-play for the full class. Third facilitator stops action intermittently to ask learners to reflect on process.

Activity #3: Role-play (10 minutes x 3 scenarios):

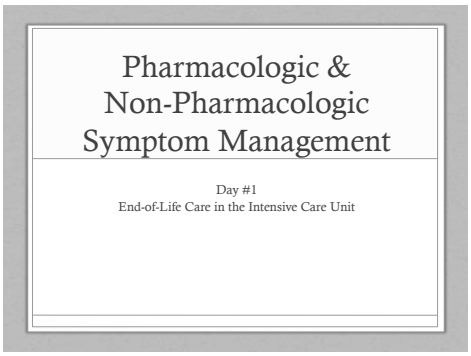
1. Facilitator serves as the patient/patient's family member. One or two group members introduce the concept of advance directive to the patient and then help the patient to complete the directive. Learners share observations of the experience within their small groups.
2. Debriefing and reflection for full class (5 minutes):
    a. What was the most difficult part of the process?
    b. What was the easiest?
    c. Which tool was most helpful with the discussion?

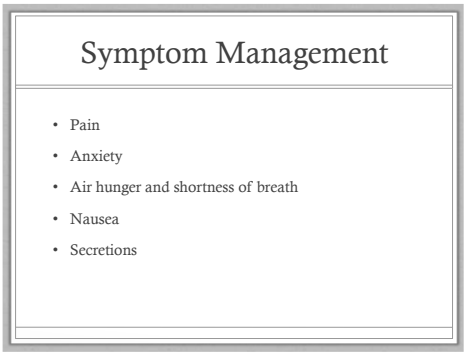


Facilitators: 4 (all facilitators must be familiar with all scenarios that will be used)
Seating: 4 tables with 6 learners at each; facilitators will be used as characters in role-play activity

Activity: Role-play (15 minutes x 3 scenarios + 15 minutes de-briefing):

1. Use scenarios that depict lateral and vertical conflicts as they relate to EOL care in the ICU at this hospital (nurse-nurse, physician-nurse, respiratory therapist-nurse).
2. Facilitator stops action at intervals to point out behaviors that can be introduced to turn conversation to more constructive dialogue. Also asks learners what is at the root of each type of conflict (age difference, experience, level of expertise, little or no respect for the contributions of other professionals).
3. Each group needs to spend ~ 5 minutes after each role-playing scenario for de-briefing.
4. At end of session, groups are encouraged to share what they learned with the full class.

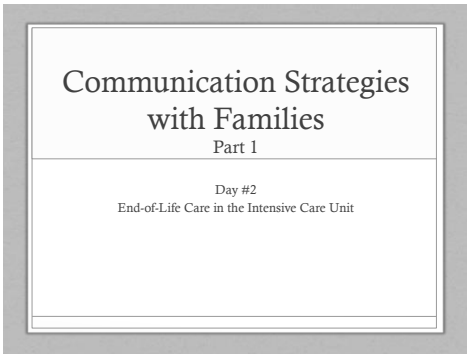


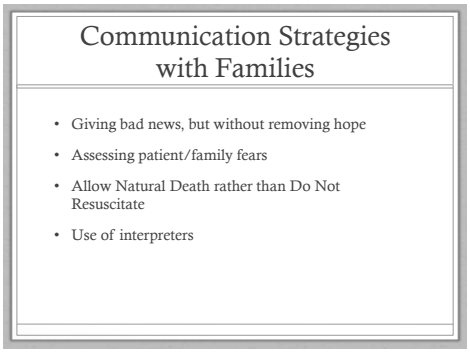


Facilitators: 1
Seating: 4 tables with 6 learners at each

Activity: Interactive lecture (75 minutes)

1. Before introducing speaker, program coordinator needs to ensure that all learners have downloaded the Socrative® application to their phones and have logged into the virtual classroom.
2. Facilitator uses PowerPoint® to outline content (recognition of symptoms, physiology of symptoms, drugs and doses, non-pharmacologic symptom management).
3. Illustrate appropriate indications for and how to use intervention by weaving case scenarios into the presentation. Use Socrative® to display learners' responses to scenario questions on the screen to give learners feedback on their developing knowledge (formative evaluation).
    a. Case scenario #1: 58yo man with end-stage COPD and kidney failure has elected to stop dialysis. He has significant respiratory distress at baseline, but this increases after 3 days without dialysis. He becomes agitated. Use the scenario to identify causes of symptoms, pharmacologic and non-pharmacologic symptom management.
    b. Case scenario #2: 46yo man with metastatic colon cancer who has exhausted treatment options. He has developed a small bowel obstruction. Use the scenario to identify causes of symptoms, pharmacologic and non-pharmacologic symptom management.
    c. Case scenario #3: 16yo teen with Duchenne's Muscular Dystrophy who has progressive respiratory failure. The teen and his family agree not to resuscitate him. He is alert and anxious, complains of pain. Use the scenario to identify causes of symptoms, pharmacologic and non-pharmacologic symptom management.

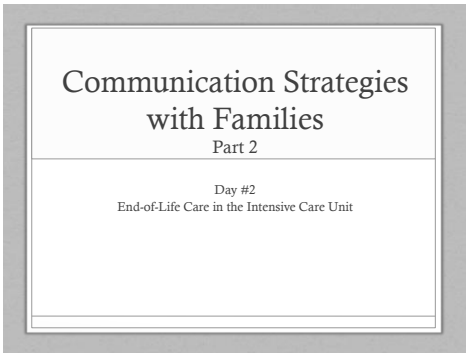




Facilitators: 4
Seating: 4 tables with 6 learners at each

Activity: Small group problem-solving (75 minutes + 15 minutes for de-briefing):

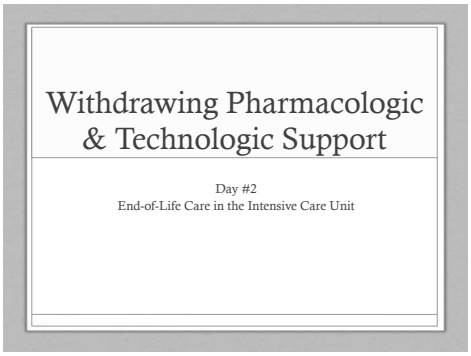
1. Use vignettes that demonstrate examples of good and bad ways of assessing patient/family understanding of prognosis and delivering bad news.
2. Facilitator stops action at intervals for teaching points.
3. Small group members work together to determine better ways to present bad news to patient/family. Group members discuss the role of the medical interpreter when breaking bad news.
4. Each small group presents key learning points from the experience to the whole group (de-briefing).
5. Learners are encouraged to share how they have handled similar experiences (de-briefing).

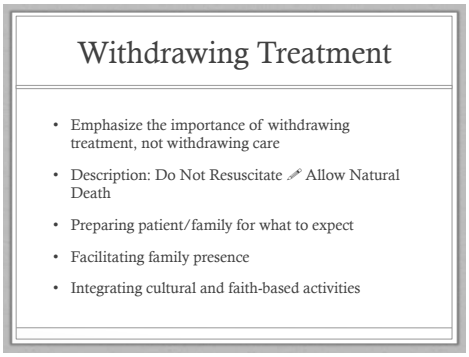


Facilitators: 4
Seating: 4 tables with 6 learners at each

Activity: Small group brain-storming activity (75 minutes + 15 minutes):

1. Identify ways patient/family can share information about the person prior to hospitalization (prevent de-humanization). Develop a communication tool that can be used in the ICU.
2. Interventions: are they intended to heal or to facilitate prolonged treatment (tracheostomy, feeding tube, dialysis)? How can patient/family be helped to understand the difference?
3. What does patient/family mean when saying, "Do everything"?
4. How can critical care nurses assist patient/family during transition from active treatment to comfort care? Is it possible to do both?
5. Each small group presents key learning points from the experience to the whole group (de-briefing).
6. Learners are encouraged to share how they have handled similar experiences (de-briefing).

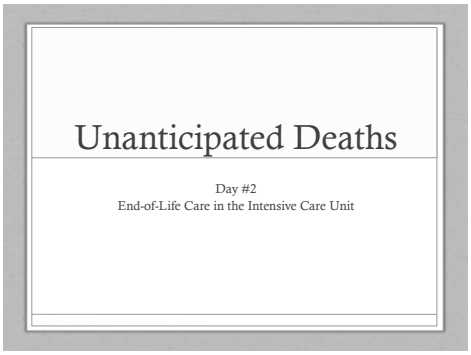


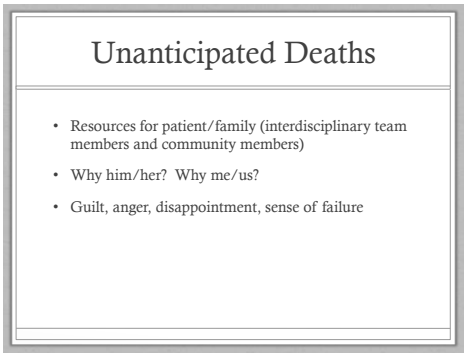


Facilitators: 4 (1 for interactive lecture; 4 for small group discussions)
Seating: 4 tables with 6 learners at each

Activity:

1. 45 minutes: Facilitator reviews a list of physiologic or behavioral problems that could be encountered when withdrawing treatment. Learners are asked to describe situations when they encountered these problems and how they resolved them.
2. 45 minutes: Small group discussion about how critical care nurses have supported patient/family during transition time (facilitator must redirect conversation to ensure learners discuss concrete problems so that conversation does not become a therapy session). Facilitator asks about the effectiveness of each strategy and offers other options for consideration.





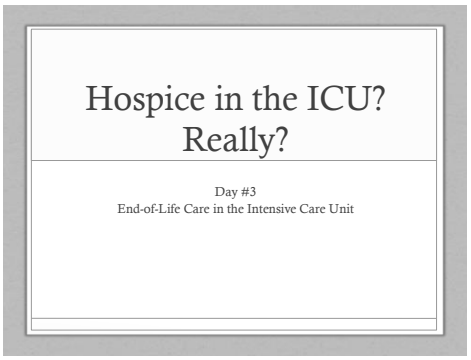
Facilitators: 4
Seating: 4 tables with 6 learners at each

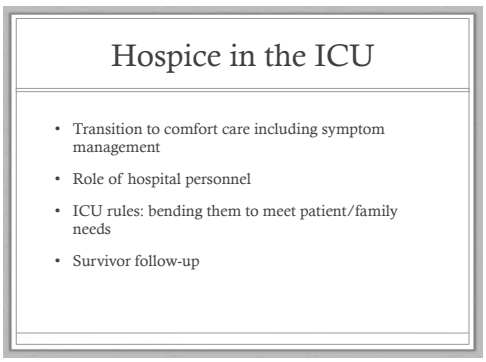
Activity #1: Role-play (60 minutes):

1. Facilitator serves as the patient/family member
2. 1 or 2 learners serve as nurses for each scenario (total 3 scenarios).
3. Scenarios must include at least 1 key emotional response and 1 existential question; at least 1 scenario must be based on loss of child.
4. Learners assist patient/family member (facilitator) to explore key emotions and existential questions.
5. Members of small groups de-brief after each scenario.

Activity #2: Full group discussion (30 minutes)

1. Identify hospital-based resources available to help critical care nurses in these situations.
2. Identify hospital- and community-based resources available to help patient/family in these situations.





Facilitators: 4 (hospice RNs and hospice chaplains)
Seating: 4 tables with 6 learners at each

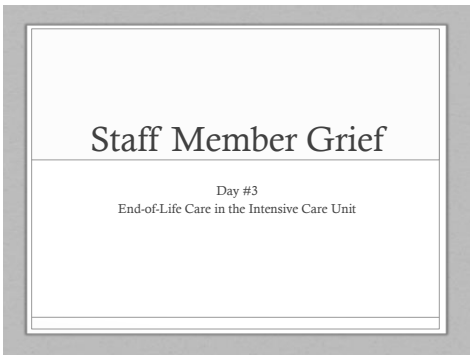
Activity #1: Interactive lecture (30 minutes)

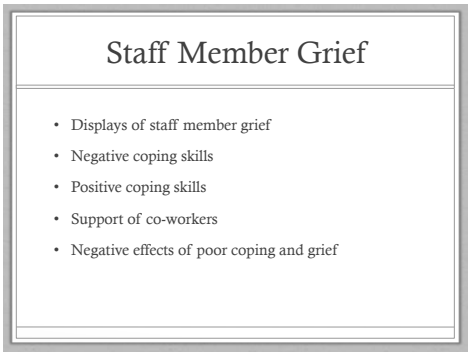
1. Define hospice care
2. Discuss hospice philosophy
3. Discuss role of hospice personnel in ICU and partnership with ICU staff

Activity #2: Problem-solving (30 minutes)

1. Present scenario in which challenging transition to hospice care is likely
2. Small group discussion that includes roles of hospice and ICU staff, how to accommodate patient/family needs in the ICU

Activity #3: 15-minute question and answer period



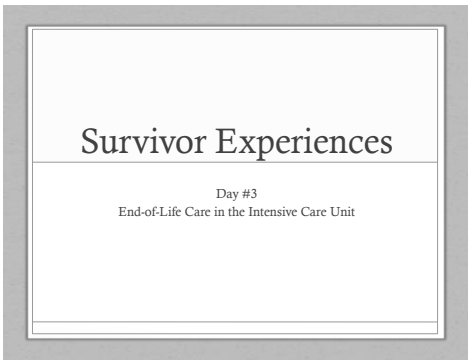


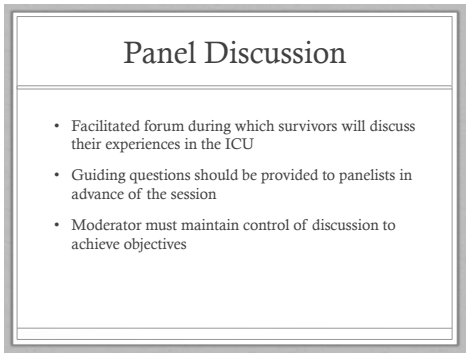
Facilitators: 4
Seating: 4 tables with 6 learners each

Activity #1: Introduction to ways in which grief is displayed (15 minutes)

Activity #2: Facilitator moderated discussion about the effects of poor coping and grief (45 minutes)

1. Learners are encouraged to identify and reflect on evidence of personal or co-worker grief experiences.
2. Learners are encouraged to share how personal experiences have shaped their coping skills.
3. Facilitator provides information about resources available at this institution to assist staff members with grief.
4. Facilitators must maintain direction of discussion to prevent it from becoming therapy session.





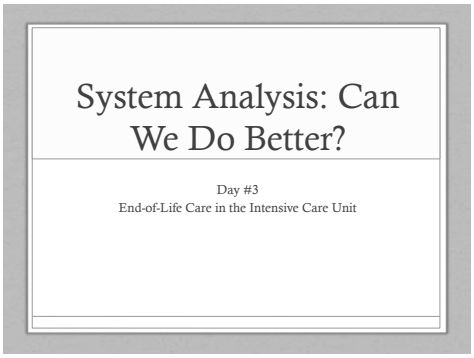
Facilitators: 1 moderator
Seating: 1 table for 3 panelists (facing learners); 4 tables of 6 learners each

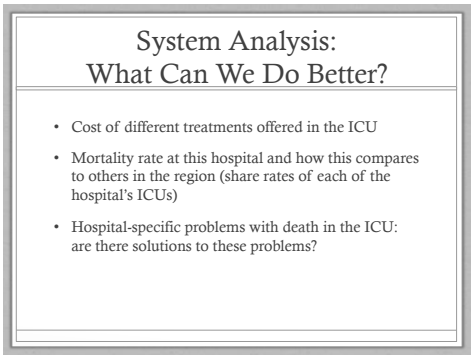
Activity#1: Panel discussion (75 minutes)

1. Panelists will be introduced by name to the learners, then panelists will tell (briefly) their relationship to their loved one, why they were admitted to the ICU, and the length of time they spent in the ICU.
2. Panelists will be asked the following guiding questions:
    a. What did nurses ask or say that was most helpful during the time close to when your loved one was dying? What was least helpful?
    b. What do you wish you had been better prepared for around the time when your loved one was dying?
    c. What would you have wanted to be done differently around the time your loved one was dying? What would you keep the same?
3. Learners are invited to submit additional questions to the panelists (on paper or by raising hand during the question and answer period at the end of the presentation).
4. Moderator must be able to promote dialogue with and between panelists as well as be able to prevent event from becoming a therapy session.

Activity #2: De-briefing (15 minutes)

1. Ask learners to share key points of the panel discussion.
2. Ask learners to discuss how this panel will change their practice.





Facilitators: 2
Seating: 4 tables with 6 learners each

Activity #1: Interactive presentation (10 minutes)

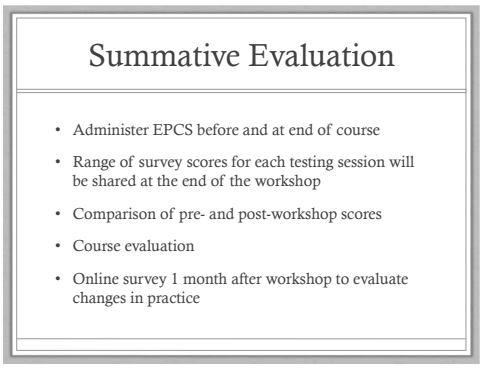
1. Provide overview of hospital mortality statistics.
2. Provide overview of costs associated with death in this hospital's ICUs.

Activity #2: Facilitated problem-solving activity (55 minutes)

1. Present list of issues, concerns, or problems identified during the ice-breaker activity from Day #1.
2. Assign groups different problems to work out collaboratively.
3. Work on constructive, realistic solutions for problems.
4. What aspects of the ICU setting can be adapted during EOL situations?

Activity #3: Presentation of solutions (25 minutes)

1. Facilitators work with large group to evaluate the feasibility of solutions.
2. Learners identify two or three solutions that can be readily incorporated into EOL care in the institution's ICUs.
3. Learners identify two or three solutions that will require change in the ICU culture or infrastructure before implementation.



Facilitators: 2 (1 to facilitate discussion, 1 to compare scores and statistics from pre- and post-workshop EPCS)
Seating: 4 tables with 6 learners each

Activities:

1. Administer EPCS (5 minutes): learners can use laptop computers or smart phones to take EPCS.
2. Facilitate reflection and discussion (20 minutes).
3. Compare pre- and post-workshop scores and statistics for EPCS (5 minutes).
4. Complete evaluations.
5. Remind learners to respond to final email evaluation (1 month after workshop).

Formative Evaluation Form

Session Title:					
Presenter:					
Please select the most appropriate response to evaluate the presenter/facilitator.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The presenter clearly stated the objectives of the presentation.					
The presenter was knowledgeable about the subject matter.					
The presenter used teaching strategies that helped me to understand the subject matter.					
The presenter encouraged participation during the learning activity.					
The presenter answered my questions about the topic.					

Please select the most appropriate response to evaluate the learning activity.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I was able to understand the concepts that were presented.					
The learning activity helped me to feel more confident about the subject matter.					
The learning activity helped me to feel more knowledgeable about the subject matter.					
I can use this knowledge in my work environment to improve the quality of patient care.					
I can use this information in my work environment to improve interactions with other healthcare professionals.					
I can use this information in my work environment to improve interactions with patients and families.					

Please write any additional comments on the back of this form. Thank you!

Summative Evaluation Form #1

Please select the most appropriate response to evaluate the workshop.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The workshop met my expectations.					
The materials were helpful.					
The topics kept my interest.					
The workshop was held in a convenient location.					
The workshop was held in a comfortable environment.					
The workshop helped me to think of ways to improve the quality of end-of-life care in the ICU.					
The duration of the workshop was appropriate.					
I would recommend this learning experience to colleagues.					

What new skills did you learn?
Which topics were most helpful?
Which topics were least helpful?
Please provide any additional comments:

Summative Evaluation Form #2

Please select the most appropriate response to describe how the effect of the EOL care workshop.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I have been successful in making positive changes in the way I provide EOL care.					
I have shared information that I learned at the workshop with other nurses in my unit.					
I feel that I provide better EOL care for patients and their families than I did before attending the workshop.					
I feel that I am more effective in discussing aspects of EOL care with the interdisciplinary team than I was before attending the workshop.					
I feel that I am better equipped to cope with the stress of providing EOL care than I was before attending the workshop.					
I feel that I am more aware of the cultural and faith-based EOL needs of my patients and their families than I was before attending the workshop.					
I feel that there are other nurses in my unit who would benefit from education about EOL care for ICU patients and their families.					

Note: This form will be sent to participants one month after the workshop to assess for transfer of learning.

Appendix B: Demographic Portion of the Survey

Statement of Consent to Participate

I am volunteering to participate in a survey about nurses' knowledge and self-confidence when caring for dying patients and their families. I have read the introductory email and understand the risks and benefits of participating in this research. By selecting "I agree," I am consenting to participate in this research.

☐ I agree (continue to survey) ☐ I disagree (exit survey site)

Demographic Portion of Survey

Please select the best response for each of the following items:

1. Age range
   - ☐ 18-29 years
   - ☐ 30-39 years
   - ☐ 40-49 years
   - ☐ 50-59 years

2. Gender
   - ☐ Male
   - ☐ Female

3. Ethnicity
   - ☐ African-American
   - ☐ Asian
   - ☐ Caucasian
   - ☐ Latino
   - ☐ Native American
   - ☐ Other: _____

4. Religious/faith preference
   - ☐ Christianity
   - ☐ Hinduism
   - ☐ Judaism
   - ☐ Islam
   - ☐ Atheist
   - ☐ Other: _____

5. Highest level of education completed
   - ☐ Associate Degree in Nursing
   - ☐ Bachelor of Science in Nursing
   - ☐ Master of Science in Nursing
   - ☐ Master-level degree other than nursing
   - ☐ Doctorate-level degree in nursing (PhD, DNP, or DSN)
   - ☐ Doctorate-level degree other than nursing (PhD or EdD)

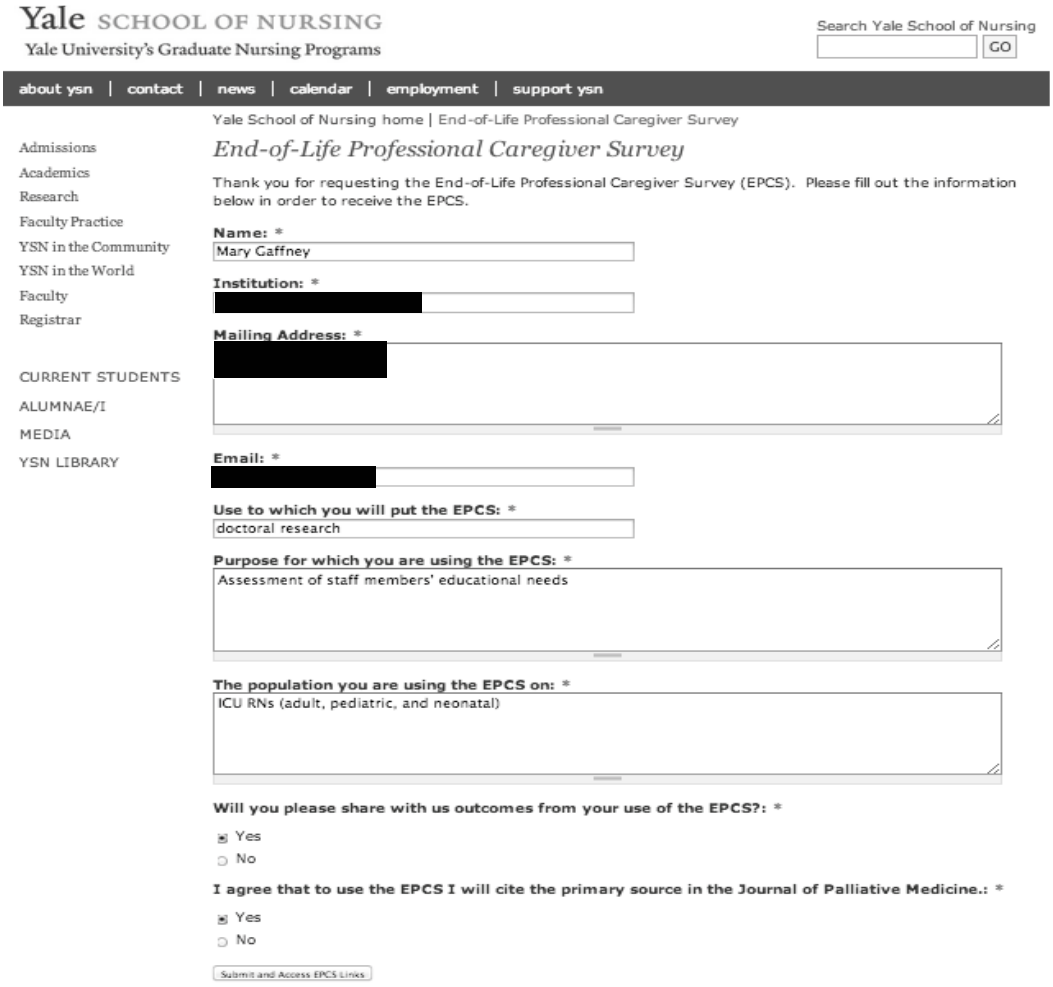
6. Number of years as a registered nurse
   - ☐ < 2 years
   - ☐ 2-5 years
   - ☐ 6-10 years
   - ☐ 11-15 years
   - ☐ 16-20 years
   - ☐ 21-25 years
   - ☐ 26-30 years
   - ☐ 30^{+} years

7. Intensive care unit where primarily employed
   - ☐ Cardiac
   - ☐ Medical
   - ☐ Neonatal
   - ☐ Neuroscience
   - ☐ Pediatric
   - ☐ Surgical
   - ☐ Trauma

8. I have spoken with my family and/or friends and they can accurately communicate my health care preferences to the healthcare team if I cannot do so myself.
   - ☐ True
   - ☐ False

9. I have completed my Advance Directive.
   - ☐ Yes
   - ☐ No

Appendix C: End-of-Life Professional Caregiver Survey Permission



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Yale School of Nursing home | End-of-Life Professional Caregiver Survey

End-of-Life Professional Caregiver Survey

Thank you for requesting the End-of-Life Professional Caregiver Survey (EPCS). Please fill out the information below in order to receive the EPCS.

Name: *
Mary Gaffney

Institution: *
[redacted]

Mailing Address: *
[redacted]

Email: *
[redacted]

Use to which you will put the EPCS: *
doctoral research

Purpose for which you are using the EPCS: *
Assessment of staff members' educational needs

The population you are using the EPCS on: *
ICU RNs (adult, pediatric, and neonatal)

Will you please share with us outcomes from your use of the EPCS?: *
- (•) Yes
- ( ) No

I agree that to use the EPCS I will cite the primary source in the Journal of Palliative Medicine.: *
- (•) Yes
- ( ) No

Submit and Access EPCS Links

Appendix D: NIH Protecting Human Research Participants Certificate

Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Mary Gaffney** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 01/06/2013

Certification Number: 1071018

Appendix E: CITI Training Certificate

CITI Collaborative Institutional Training Initiative

Human Research Curriculum Completion Report
Printed on 11/3/2012

Learner: Mary Gaffney [redacted]
Institution: [redacted]
Contact Information [redacted]

Group 2 - Non-FDA Regulated Research:

Stage 2. Refresher Course Passed on 11/03/12 (Ref # 8915905)

Required Modules	Date Completed	Score
Biomedical 200 Refresher Course - Introduction	10/25/12	no quiz
Biomedical 200 Refresher Course - History and Ethical Principles	10/25/12	3/3 (100%)
Biomedical 200 Refresher Course - Regulations and Process, Part 1	10/25/12	1/1 (100%)
Biomedical 200 Refresher Course - Regulations and Process, Part 2	10/25/12	1/1 (100%)
Biomedical 200 Refresher Course - Informed Consent	10/25/12	3/3 (100%)
Biomedical 200 Refresher Course - Social & Behavioral Research (SBR)	10/30/12	3/3 (100%)
Biomedical 200 Refresher Course - Genetics Research, Part 1	10/30/12	1/1 (100%)
Biomedical 200 Refresher Course - Genetics Research, Part 2	10/30/12	1/1 (100%)
Biomedical 200 Refresher Course - Records-Based Research, Part 1	10/30/12	1/1 (100%)
Biomedical 200 Refresher Course - Records-Based Research, Part 2	10/30/12	1/1 (100%)
Biomedical 200 Refresher Course - Records-Based Research, Part 3	10/30/12	1/1 (100%)
Biomedical 200 Refresher Course - Research Involving Vulnerable Subjects	10/30/12	1/1 (100%)
Biomedical 200 Refresher Course - Vulnerable Subjects - Research Involving Prisoners, Part 1	10/30/12	1/1 (100%)
Biomedical 200 Refresher Course - Vulnerable Subjects - Research Involving Prisoners, Part 2	10/30/12	1/1 (100%)

Biomedical 200 Refresher Course - Vulnerable Subjects - Research Involving Children, Part 1	11/03/12	1/1 (100%)
Biomedical 200 Refresher Course - Vulnerable Subjects - Research Involving Children, Part 2	11/03/12	1/1 (100%)
Biomedical 200 Refresher Course -Vulnerable Subjects - Research Involving Children, Part 3	11/03/12	1/1 (100%)
Biomedical 200 Refresher Course - Vulnerable Subjects - Research Involving Pregnant Women, Human Fetuses, and Neonates, Part 1	11/03/12	0/1 (0%)
Biomedical 200 Refresher Course - Vulnerable Subjects - Research Involving Pregnant Women, Human Fetuses, and Neonates, Part 2	11/03/12	1/1 (100%)
Biomedical 200 Refresher Course - Avoiding Group Harms	11/03/12	3/3 (100%)
Biomedical 200 Refresher Course - HIPAA and Human Subjects Research	11/03/12	4/5 (80%)
Biomedical 200 Refresher Course - Financial Conflicts of Interest in Research Involving Human Subjects	11/03/12	3/3 (100%)
How to Complete the CITI Refresher Course and Receive a Completion Report	11/03/12	no quiz

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Course Coordinator

Return

Appendix F: E-mail Invitation to Participate

Dear Critical Care Nurse,

I invite you participate in a research project to that will help to identify characteristics of ICU nurses' that affect their knowledge and self-confidence when caring for dying patients and their families. Your participation will include completion of a single online survey that can be completed approximately 5 minutes.

No identifying information will be collected during the survey, so your participation is totally anonymous. By voluntarily completing the questionnaire, you are providing your consent to participate in this research. No incentives will be offered for your participation. If you elect not to participate, you will not be penalized in any way. Neither I nor anyone else at XXXXXXX Medical Center will know who accepts or declines this invitation to participate. The risks associated with survey research are minimal. If you wish, you may print a copy of this letter for your records.

Upon completion of this research, results will be made available to the participating nursing units. This information may be helpful to you and your unit as you seek ways to improve the quality of patient care. The results also may help you to identify specific topics for future education.

Although I am case manager at the XXXXXXX Medical Center, this research is being conducted independent of my professional role. The Institutional Review Board at XXXXXXX Medical Center has approved this study. If you have any questions or concerns about completing the questionnaire or about being in this study, please contact me at mary.gaffney@waldenu.edu. If you have any questions or concerns about the rights of research subjects or wish to speak privately with someone about this study, please contact Dr. Leilani Endicott, the Walden University research representative, at 612-312-XXXX or at irb@waldenu.edu. The Walden University research number is 01-16-15-0059760. The XXXXXXX Medical Center research number for this study is 617420-2.

I hope that you will volunteer to complete this survey! **Please click on the link below to access the survey.**

http://goo.gl/forms/dMJcGPIaTH

Sincerely,

Mary Gaffney, RN
Doctoral Candidate, Walden University
Email: mary.gaffney@waldenu.edu

Appendix G: Follow-up E-mail Invitation to Participate

Dear Critical Care Nurse,

You recently received an email inviting you to participate in a research project that will identify characteristics of ICU nurses' that affect their knowledge and self-confidence when caring for dying patients and their families. **If you have already completed the survey, please accept my gratitude! You do not need to complete the survey again and can disregard this email.**

If you have not yet completed the survey, let this email serve as a reminder to do so. The survey, available until February 2, 2015, can be completed in approximately 5 minutes.

No identifying information will be collected during the survey, so your participation is totally anonymous. By voluntarily completing the questionnaire, you are providing your consent to participate in this research. No incentives will be offered for your participation. If you elect not to participate, you will not be penalized in any way. Neither I nor anyone else at the XXXXXXX Medical Center will know who accepts or declines this invitation to participate. The risks associated with survey research are minimal. Upon completion of this research, results will be made available to the participating nursing units. This information may be helpful to you and your unit as you seek ways to improve the quality of patient care. The results also may help you to identify specific topics for future education.

Although I am case manager at the XXXXXXX Medical Center, this research is being conducted independent of my professional role. The Institutional Review Board at the XXXXXXX Medical Center has approved this study. If you have any questions or concerns about completing the questionnaire or about being in this study, please contact me at mary.gaffney@waldenu.edu. If you have any questions or concerns about the rights of research subjects or wish to speak privately with someone about this study, please contact Dr. Leilani Endicott, the Walden University research representative at 612-312-XXXX or at irb@waldenu.edu. The Walden University research number for this study is 01-16-15-0059760. The XXXXXXX Medical Center research number is 617420-2.

Please access the survey through the following link:

http://goo.gl/forms/dMJcGPlaTH

Sincerely,

Mary Gaffney, RN
Doctoral Candidate, Walden University
Email: mary.gaffney@waldenu.edu