Implementation of a Nursing Care Bundle for Hospitalized Patients Receiving End-of-Life Care

A Scholarly Project

Submitted to the

Faculty of Liberty University

In partial fulfillment of

The requirements for the degree

Of Doctor of Nursing Practice

By

Klaire Thomason

Liberty University

Lynchburg, VA

May, 2024

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Scholarly Project Chair Approval:

Lynne' Sanders, EdD, MSN, RN, CNE Date

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Abstract

A significant number of patients die in the hospital. Family-centered nursing care interventions are critically important to help ease the physical, social, spiritual, and emotional symptoms that patients may experience at the end of life. Despite the importance of the nurse's role in delivering comprehensive end-of-life care, many nurses lack the knowledge and confidence necessary to implement evidence-based interventions. The purpose of this project was to evaluate the effectiveness of a nursing care bundle on increasing nurses' self-perceived ability to deliver high-quality end-of-life care to patients in the inpatient setting. For this pilot study, an evidence-based Comfort Care Nursing Bundle was developed and implemented on an inpatient oncology unit for a period of four weeks. Nurses' perceived self-efficacy in palliative care delivery was measured before and after the intervention period using a validated survey questionnaire, and qualitative data regarding the nurses' perceptions of the care bundle was analyzed. Nurses' perceived self-efficacy in palliative care delivery scores increased from 7.44 to 8.13, and 94% of nurses (n=15) perceived the bundle to be clinically useful. Findings suggest that the implementation of the bundle increased nurses' perceived knowledge and confidence in end-of-life care delivery, and that the bundle may be particularly beneficial to practice settings in which nurses do not regularly deliver end-of-life care.

Keywords: Palliative care, end-of-life care, nursing care, care bundle, perceived self-efficacy, nursing care quality

Dedication

All credit and glory for this accomplishment belong to my Savior, Jesus Christ, who called me out of darkness and into life abundantly, and without whom I would have nothing.

I dedicate this manuscript to my dad. I have dedicated my career and my life to honoring his memory, and I hope that I make him proud. I also dedicate this work to my mother, who has believed in me and walked with me through every valley, and celebrated with me on every mountaintop. Your unwavering support is what has brought me here. I dedicate this work also to my grandmother, who went to her heavenly home before seeing me complete my degree, but never doubted that I would see this day. I am confident her prayers are what carried me through the most difficult of times. I also dedicate this to my granny, whose warmth and kindness I will strive to emulate every day that I live.

I also dedicate this work to my children, Liam and Ledger, who are the very best parts of my life. And to my husband, Nicholas- this accomplishment is ours. If there is anything good that I accomplish in this life, it is only because of you.

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Implementation of a Nursing Care Bundle for Hospitalized Patients Receiving End-of-Life Care

Although many people prefer to die at home, the number of patients who die in the hospital remains high (Centers for Disease Control and Prevention, 2020). The quality of care delivered to dying patients in the hospital setting is heavily influenced by the knowledge and confidence of the nurses who care for them. Evidence-based end-of-life (EOL) nursing care interventions are underutilized in the acute care hospital setting due to insufficient nurse knowledge and confidence in delivering EOL care (Chan et al., 2019; Chua & Shorey, 2021; Howe, 2015). Poor nursing care at the end of life translates to inadequate symptom management, decreased patient and family satisfaction, and avoidable distress for patients, families, and caregivers.

Nursing care bundles have been implemented in a variety of care settings for numerous patient conditions and have demonstrated effectiveness in improving the quality of nursing care, and increasing nurses' knowledge and confidence in delivering care (Ahluwalia et al., 2018; Boyle, 2015; Gua et al., 2021; Kim et al., 2019). The organization in which this project was implemented lacks guidance for nurses specific to caring for patients receiving EOL care. Therefore, the implementation of a Comfort Care nursing bundle was piloted on a 36-bed inpatient Oncology unit.

Background

The most recently published data from the Centers for Disease Control and Prevention (CDC) and the National Vital Statistics System demonstrate that more than one-third of the population in the United States dies in the hospital setting (2018). The Institute of Medicine (IOM) describes the important contribution that healthcare makes to patients at the end of their

lives: Through the combination of science and compassion, healthcare can relieve uncomfortable disease symptoms and ease the burden on families by facilitating constructive family dynamics (IOM, 2015, p. 45). To that end, the IOM charges healthcare workers to deliver patient-centered and family-oriented care for patients near the end of life.

Domain 7 of the National Coalition for Hospice and Palliative Care's consensus practice guidelines (2018) describes the standards of quality care for patients on the days leading up to their death. Specifically, the Coalition acknowledges the increase in intensity of care required for patients in the days leading up to death, noting that "The meticulous and comprehensive assessment and management of pain and other physical symptoms, as well as social, spiritual, psychological, and cultural aspects of care, are critically important as the patient nears death" (p. 45). In the inpatient setting, the nurse is primarily responsible for implementing these interventions, with the goal of helping the patient to achieve a "good death."

The provision of high-quality palliative care has the potential to reduce healthcare costs. In the inpatient setting, palliative care cost reductions are related to decreased intensive care unit (ICU) length of stay (LOS) and decreased utilization of unnecessary monitoring and treatments (Luta et al., 2021). Studies have identified a decrease in hospital costs by 9 to 25% with palliative care consultation and overall healthcare cost reduction of up to 77% (Luta et al., 2021).

Nurses make up the largest portion of the healthcare workforce, and play a critical role in the quality of care delivered to patients receiving palliative care (Kisvetrová et al., 2017; Parekh de Campos et al., 2022). However, many nurses lack knowledge and confidence in caring for dying patients (Chan et al., 2019). Although many hospitals have adopted designated palliative care units in order to meet the needs of these patients, no such unit currently exists within the hospital where this intervention was piloted. Therefore, patients who are no longer receiving

treatment for their medical condition and have instead elected to pursue comfort measures only are intermixed with the general acute care population. Additionally, in the organizational setting of high nurse turnover rates requiring an abundance of travel nurses and nurses "floating" outside of their assigned units in the acute care division of this hospital, there is a lack of consistency in education, training, and preparation for nurses who deliver EOL care.

Problem Statement

Nursing care interventions for patients receiving EOL care are underutilized due to a lack of knowledge and confidence among nurses caring for dying patients in the acute care setting (Chan et al., 2019; Rawlings et al., 2020).

Purpose of the Project

The purpose of this project was to determine whether the implementation of a nursing care bundle for patients receiving EOL care in the inpatient hospital setting increases nurses' self-perceived ability to deliver high-quality care to dying patients in comparison to current practices.

Clinical Question

In nurses delivering end-of-life care on an acute care hospital floor (P), does the implementation of a comfort care nursing care bundle (I) in comparison to care as usual (C) improve nurses' perceived ability to implement evidence-based nursing interventions for dying patients and their families (O) within four weeks (T)?

Section Two: Literature Review

A thorough literature review was conducted in order to synthesize and appraise evidence to support the clinical question. A methodical database search was conducted using keywords, and appropriate parameters were utilized in order to identify relevant literature that is applicable

to the problem statement and proposed intervention. The Iowa Model for Evidence-Based Practice provided the conceptual framework for the project design.

Search Strategy

Utilizing the following academic databases, a thorough literature search was conducted to identify high-quality, relevant publications: CINAHL Plus, Cochrane, MEDLINE Ultimate (EBSCO), and PubMed. The keywords and phrases used included *end-of-life*, *end-of-life care, dying, comfort measures,* and *nursing interventions.* Search parameters utilized were articles that were peer reviewed, research, full text, and published in the English language between 2017 and 2023. Initial searches yielded 190 results. Duplicate articles, and articles related to advanced care planning, outpatient hospice care, formal End-of-Life Nursing Consortium education, and pediatric patients were omitted. Three studies were identified using a hand-search of bibliographies. Two studies identified through a hand search were published earlier than 2015, but were selected for inclusion due to their quality and high relevance to the practice problem. Eighteen articles are included in the literature review for this project.

Critical Appraisal

The identified articles were critically appraised to evaluate the strength of the evidence included following the Melnyk Level of Evidence hierarchy model (Melnyk & Finout-Overholt, 2015). A table summation of the articles, their limitations, and levels of evidence is provided (Appendix A). Levels of evidence ranged from 1 to 7. Three systematic reviews, two systematic reviews of qualitative evidence, one randomized controlled trial, three retrospective cohort studies, eight single descriptive studies, and one expert opinion articles were included. Evidence that emerged is broken down into the following sections: what constitutes high-quality care for

dying patients, practice gaps and barriers to optimal EOL care delivery, and interventions that improve the quality of EOL care for dying patients.

High Quality End-of-Life Care

The Agency for Healthcare Quality and Research (AHQR) defines EOL care as care delivered with the goal "to achieve a 'good death', defined by the IOM as '…free from avoidable distress and suffering for patients, families, and caregivers; in general accord with patients' and families' wishes; and reasonably consistent with clinical, cultural, and ethical standards'" (AHRQ, 2018, para. 3). Because EOL care quality is dependent upon caregivers' response to patients' spiritual, emotional, psychosocial, and physical needs, methods used to measure the quality of care delivery are variable. Often, quality of EOL care is indicated by its related processes, rather than by patient outcomes. It is necessary to understand what constitutes quality EOL care in order to identify gaps in care, and identify effective interventions for improving care.

In a systematic review by Waller et al. (2017), the authors found that the most frequently studied EOL care quality indicators included concordance between preferred care and actual care, number of unnecessary, unwanted, or futile interventions used, self-perceived quality of life, symptom management, and referrals to palliative care. Lau et al. (2018) evaluated symptom management and involvement of spiritual care services as outcomes of interest in their retrospective cohort study. In a systematic review of qualitative data, Miller et al. (2022) studied patients' and families' perceptions of care palliative quality as the outcome of interest.

Although many studies have been conducted to evaluate the effects of a palliative care team and specialized palliative care provider, multiple studies have described the nursing role to be of crucial importance in determining outcomes. In a descriptive study by Pereira and Sousa

Valente Ribeiro (2023), patients and their families identified the nurse as the most privileged player in all phases of EOL care delivery. A similar study by Tappen and Sopcheck (2023) found that patients receiving EOL care and their families attributed a significant portion of their satisfaction level to their comfort with the nurse providing care. These studies were conducted using relatively small sample sizes, and subjects were identified using convenience sampling methods, which may limit their generalizability. However, these study findings are aligned with larger studies that demonstrate the high impact of nursing interventions on patient care quality (Miller, 2022; Soo Rui Ting et al., 2022; Zaddeh et al., 2017). These findings are also reflected in the National Coalition for Hospice and Palliative Care's emphasis on nurse-driven interventions in Domain 7 of the Palliative Care guidelines (2018).

In a systematic review by Chua et al. (2021) and a cross-sectional survey by Chan et al. (2019), the authors measured nursing attitudes and self-perceptions of care quality in their measurement of EOL care delivery. Chan et al. (2019) noted that in hospital settings, the primary nurse is ideally positioned to provide insight into the needs for optimal care delivery because of their continual presence at the bedside.

Barriers to Optimal Care Delivery

Several barriers to optimal care delivery were identified in the literature. An EOL care knowledge deficit or perceived knowledge deficit was described as a primary barrier in four descriptive studies (Chan et al., 2019; Chua et al. 2021; Howes, 2015; Kisvetrova et al., 2017). Howes (2015) also found that lack of a palliative care consultation and a perceived lack of support were frequently cited barriers among nurses delivering EOL care in the inpatient hospital setting. Kisvetrova et al. (2017) studied the frequency of EOL care activities performed by nurses caring for dying patients. In a convenience sample of 201 nurses with at least one year of

experience in the hospital setting, nurses self-reported frequent use of activities focused on patients' physical comfort, and few reported frequently performing interventions focused on psychological or spiritual well-being (Kistrvetrova et al., 2017). The authors concluded that such findings are reflective of a knowledge deficit among nurses, because findings were consistent across all care divisions and among all educational levels; of note, findings from this study are limited to respondents' self-reporting.

Interventions

Several interventions were identified as effective in improving EOL care. In a systematic review of qualitative studies, Miller et al. (2022) identified the provision of an environment that was perceived as safe and private, personalized, home-like, and amenable to family presence as having a positive impact on patient and family perceptions of palliative care quality. Studies using smaller sample sizes aligned with these findings, with the care environment influencing patient and caregiver perceptions of EOL care quality (Chan et al., 2019; Miller et al., 2022; Miller et al., 2023; Zaddeh et al., 2017). Several studies identified family support and presence as important influencers on perceived quality of EOL care (Miller et al., 2022; Tappen & Sopcheck, 2023; Zaddeh et al., 2017).

Ahluwalia et al. (2018) found through a systematic literature review that utilizing an interdisciplinary team approach, offering spiritual care services, and providing a soothing environment, as outlined by the National Coalition for Hospice and Palliative Care, were associated with better symptom management, although low-quality evidence was utilized in many studies.

Using the Delphi method, Kim et al. (2022) established a standardized end-of-life protocol for nurses working in inpatient intensive care units (ICUs). The Delphi technique is a

validated method for deriving consensus among subject-matter experts by synthesizing the opinions of these experts on topics for which knowledge is considered complete (Kim et al., 2022). Action items included are the staff nurse's assumption of the leadership role, management of physical symptoms, offering spiritual and psychological support, assessing for specific religious, cultural, or personal values that should be recognized when preparing the body, and determining family needs and providing management and emotional support (Kim et al., 2022). Although there have been insufficient studies to establish the efficacy of this protocol, its recommendations are based upon expert consensus and grounded in principles taught by the End-of-Life Nursing Education Consortium (ELNEC) program, developed by the American Association of Colleges of Nursing (AACN) to train nurses in symptom management, ethical issues, cultural considerations, communication, and bereavement (Kim et al., 2022).

As a repeatedly cited barrier among nurses is their perceived knowledge of EOL care, Chua et al. (2021) and Rawlings et al. (2018) studied the effects of education intervention on nurses' clinical practice. In a systematic review, Chua et al. concluded that education interventions are effective for improving nurses' and nursing students' perceived knowledge and attitudes towards delivering EOL care. Following the completion of online education modules, clinicians reported increased communication with patients and their families, improved symptom management, greater confidence in care delivery, and endorsed delivering patient-centered care (Rawlings et al., 2018). Although each of these studies utilized self-reporting, leaving a risk for respondent bias, findings were consistent between respondents across a variety of care settings and among nurses with a variety of skill levels and backgrounds.

Standardized protocols, guidelines, order sets, and bundles for healthcare delivery have been used in a variety of care settings for a variety of patient conditions in order to improve

reliability of care, reduce complications such as sepsis, infection, and injury, and optimize patient outcomes (Gau et al., 2021). A systematic review by Sosnowski et al. (2023) synthesized outcome data from 29,576 patients and identified strong evidence to support the use of a multidisciplinary, evidence-based care bundle to improve recovery after discharge from ICUs. A randomized control trial by Gao et al. (2021) demonstrated the effectiveness of a nursing care bundle on decreasing recovery time, improving patient satisfaction scores, and reducing complications in patients presenting to an emergency department with a severe traumatic brain injury.

Lau et al. (2018) studied the effects of a standardized care protocol on care delivery for dying patients in comparison to standard care. A retrospective study of 94 patient records, 67 of whom were treated using a standard comfort measure protocol and 27 of whom were treated with usual care, were examined (Lau et al., 2018). The researchers found that in patients who were treated following the comfort measure protocol, there was an increase in spiritual care involvement and improved symptom management. Although this study was conducted in a single setting on a designated palliative care unit, it demonstrates how standardized care improves outcomes that are considered important to patients, families, and caregivers (Miller et al., 2022).

Soo Rui Ting et al. (2022) studied the effects of implementing an EOL nursing care bundle in a retrospective cohort study of 112 general medicine patients in the inpatient setting. In concordance with Lau et al.'s (2018) findings, the researchers found that pain assessments were documented more frequently in the experimental group, and also found that interventions not aimed at comfort, such as blood draws and vital sign monitoring, occurred less frequently in the experimental group. Although this study demonstrated a significantly positive impact on process-

level care quality care indicators with an EOL nursing care bundle, it has a few notable limitations. Such limitations include a small number (17) of patients in the experimental group, and researchers did not adjust for confounding variables such as education and experience of nurses caring for patients.

Clark et al. (2015) studied the effects of a care bundle for EOL care on acute care nursing staff in a small retrospective cohort study. Pre- and post-intervention surveys were complete by 75 and 25 nurses, respectively, following the implementation of an EOL care bundle. Although the study had a low response rate post-intervention, a modest positive increase in self-perceived competency to provide EOL care was reported after bundle implementation, and a significant portion of respondents perceived the bundle to be clinically useful (Clark et al., 2015).

Synthesis

Despite many people's desire to die at home, the aging population and increase in prevalence of chronic disease have led to a significant portion of the population dying in the hospital, compelling healthcare systems to focus more attention on care quality at the EOL (AHRQ, 2018; CDC, 2020). Quality of EOL care is measured in a variety of ways. Studies evaluating quality of EOL care generally concede to the AHRQ's definition, which is to assist patients in achieving a "good death", while ensuring relief from physical, emotional, psychological, and spiritual distress in the final days and hours of life (para. 3). Measured outcomes are frequently related to the nursing process, such as management of physical symptoms including pain, nausea, agitation, anxiety, dyspnea, dry mouth, and excessive secretions; concordance between patient wishes and care received, referrals to specialized palliative care providers, perceived quality of life, and the frequency of unnecessary or unwanted

interventions used (Waller et al., 2017). Nurses play a significant role in impacting these outcomes (Chan et al., 2019; Tappen & Sopcheck, 2023).

Primary barriers identified for delivery of optimal EOL care quality among nurses in inpatient settings are knowledge deficit and perceived lack of support (Chan et al., 2019; Chua et al. 2021; Howes, 2015; Kisvetrova et al., 2017). Specific interventions that demonstrated effectiveness identified include provision of a peaceful, ambient environment; frequent symptom assessment, collaboration with spiritual care services, collaboration with specialty palliative care services, and facilitation of family support (Ahluwalia et al., 2018; Chan et al., 2019; Kim et al., 2022; Miller et al., 2022; Miller et al., 2023; Zaddeh et al., 2017). Bundled care and standardized order sets have been shown to improve nurses' knowledge and confidence in EOL care delivery, as well as improve symptom management, decrease unwanted interventions, and increase involvement of an interdisciplinary team (Clark et al., 2015; Lau et al., 2018; Soo Rui Ting et al., 2022).

Conceptual Framework

The Iowa Model of Evidence-Based Practice was used as the conceptual framework for this practice project. Permission to use The Iowa Model was granted by the University of Iowa Hospitals and Clinics (Appendix B). This model provides a practical and highly efficient guide for implementing evidence-based practice (EBP). Since its inception, many researchers have demonstrated the usefulness of the Iowa Model in implementing changes. In 2017, the Iowa Model Collaborative reported that nearly 4,000 requests for permission to use the Iowa Model had been submitted by researchers from all 50 states and from 130 countries (p. 175).

The Iowa Model begins with an identified opportunity for an evidence-based practice project, state the purpose of the project or articulate the question to be addressed, then guides the

user to develop a relevant practice question, assemble a team, synthesize and evaluate the evidence, implement a practice change, evaluate the change, sustain the change, and finally, disseminate the results (Iowa Model Collaborative, 2017). The model has several built-in feedback loops that require the user to evaluate the evidence and the relevance of the project to the organization's priorities throughout the process.

Fragmentation of nursing care delivered to patients receiving EOL palliative care on inpatient acute care units at a community hospital was a trigger for this project. In the organizational setting of high nurse turnover rates requiring an abundance of travel nurses and nurses "floating" outside of their assigned units in the acute care division of this hospital, this fragmentation reflects a lack of knowledge about EOL care delivery among nurses. Among other barriers, research has demonstrated that nurses lack knowledge and confidence in caring for dying patients (Chan et al., 2019). A need for standardized guidance for nursing care was identified.

The purpose of this project, as previously stated, was to determine whether the implementation of a nursing care bundle for patients receiving EOL care in the inpatient hospital setting increases nurses' knowledge, confidence, and self-perceived ability to deliver high-quality care to dying patients in comparison to current practices.

Based upon an assessment of the problem, the topic was deemed to be a priority. Because a greater number of patients are dying in the hospital, it is imperative that nurses receive support and guidance in caring for patients at the end of life. Nurses are the primary drivers of process-related EOL care outcomes, and play a critical role in care delivery for patients receiving EOL care in the hospital. This project also aligns with the organization's self-described mission and values, which further supports the topic as an organizational priority.

The team consisted of the project leader and the project committee chair. Additional guidance from colleagues in the organization's nursing research council, the unit manager, and the director of nursing research was obtained.

The clinical question guided the systematic literature search and evidence appraisal. Evidence identified was of high-quality and demonstrated consistency. No risks to patients in implementing the proposed project were identified; therefore, the author designed and piloted the practice change, as detailed by the Iowa Model (2017). After post-pilot data were collected, the project leader determined that the pilot was appropriate for practice adoption. The project leader will integrate and sustain the practice change, and finally, disseminate results of the project.

Summary

Evidence identified following a methodical literature search and article appraisal is widely consistent in its description of what constitutes high-quality EOL care delivery, identification of barriers to delivering high-quality EOL care, identification of interventions that contribute to care improvement, and the efficacy of bundled care in improving care. Provision of a "good death", as described by the AHRQ (2018), is largely measured by outcomes related to the nursing process, and nurses play a pivotal role in impacting these outcomes (Chan et al., 2019; Tappen & Sopcheck, 2023; Waller et al., 2017).

A gap in nursing knowledge and confidence related to EOL care delivery has been consistently identified as a barrier across a variety of care areas and organizations (Chan et al., 2019; Chua et al. 2021; Howes, 2015; Kisvetrova et al., 2017). Care bundles, a group of items consistently implemented in particular patient groups in order to improve patient outcomes, have demonstrated efficacy, feasibility, and clinical utility in multiple settings (Gau et al., 2021; Sosnowski et al, 2023). No standardized, validated EOL care bundle that specifically relates to

nursing care interventions for dying patients has been identified. However, bundled nursing care has been shown to improve nurses' knowledge and confidence in EOL care delivery, and in some studies, has been shown to improve symptom management, involvement of an interdisciplinary team, and better alignment of practice with patient preferences (Clark et al., 2015; Lau et al., 2018; Soo Rui Ting et al., 2022). A substantial amount of evidence supports implementation of several nursing interventions, including provision of a peaceful environment, frequent symptom assessment, collaboration with spiritual care services, collaboration with specialty palliative care services, and facilitation of family support (Ahluwalia et al., 2018; Chan et al., 2019; Kim et al., 2022; Miller et al., 2022; Miller et al., 2023; Zaddeh et al., 2017). These findings informed the development of an evidence-based EOL care bundle for dying patients who have elected to pursue comfort measures only in the inpatient setting.

Section Three: Methodology

The project design, population, data collection method, tools utilized, and analysis methods were strategically selected to feasibly and accurately measure the outcomes of interest in the identified hospital setting. The project was deemed to be a priority for the organization, and closely aligned with the organization's mission, vision, values, and strategic plan. The project leader implemented measures to ensure protection for individuals participating in the pilot study in accordance with ethical standards for research. The project was underpinned by a biblical worldview. The intervention, including bundle development, preparation, the eliciting of participants, training for implementation, project timeline, and a feasibility analysis, are described in detail.

Design

This project is an evidence-based practice project following the Iowa Model for Evidence-Based Practice (Iowa Model Collaborative, 2017). A pilot project for the proposed practice change was conducted and evaluated. This evidence-based practice project utilized a quasi-experimental approach featuring a pre- and post-intervention survey for Registered Nurses (RNs). The intervention was the introduction of a comfort care nursing bundle for patients receiving EOL care in an inpatient acute care setting.

Measurable Outcomes

1. After the piloting of the Comfort Care Nursing Bundle, RNs working on an inpatient oncology unit will demonstrate an improved perception of knowledge and confidence in palliative care delivery as evidenced by an increase in mean scores on the Self-Efficacy in Palliative Care (SEPC) scale.
2. Following the implementation of the Comfort Care Nursing Bundle, the bundle will be perceived as clinically useful by RNs working on an inpatient oncology unit, as evidenced by responses on a qualitative post-intervention survey questionnaire.

Setting

The setting for this pilot project was an inpatient Oncology Unit at mid-sized regional hospital. This facility is a level II trauma center with almost 400 licensed beds. In 2022, 1,066 total patient deaths occurred at the facility, and in 2023, 889 total patient deaths occurred at the facility. The 36-bed inpatient Oncology Unit provides a care setting for a variety of adult patients, including oncology and medical-surgical patients. Because of the spacious rooms on this floor and the close proximity of the unit to the Palliative Medical Group offices in the hospital, patients receiving EOL care are frequently transferred to this unit. Recently, this unit

has experienced a relatively high rate of nurse turnover. To this author's knowledge, there have been no prior studies evaluating the self-perception of efficacy in palliative care delivery among nurses who work on this unit. Despite providers' preference for transferring patients at the end of life to this unit, there is no additional training or demonstration of competency specific to the delivery of EOL care required during the nurse orientation process.

Organization

This hospital is a Magnet-designated regional hospital that boasts national recognition for cardiology, emergency medicine, orthopedics, oncology, neurology, and neurosurgery. The facility is a part of a large regional nonprofit healthcare system that serves over 500,000 people.

Mission, Vision, and Values

The organization's self-described mission is to improve health and quality of life for the communities for which it serves. This mission is driven by a vision of pursuing excellence, inspiring hope, and advancing health and healing. The organization describes their values in terms of standards of behavior. These include resect and kindness, excellence, stewardship, integrity, teamwork, equity, diversity, and inclusion. This project is closely aligned with the organization's mission and vision, as it aims to increase excellence in care delivery for patients who are at the end of their lives, which will ultimately translate to better quality of life for patients and their families. The project espouses the organization's values of respect, kindness, and excellence through upholding respect and kindness for patients and families along the continuum of care, and by advancing excellence in care through the implementation of an evidence-based care intervention.

Strategic Plan

The organization's 2023-2025 Nursing Strategic Plan lays out organizational priorities over the years to come. Top priorities include clinical nurse transformation through professional development, leadership transformation, and creation of a healthy work environment. These short-term goals are guided by broader long-term strategic plans to grow, develop, and sustain the nursing workforce. This project contributes to the advancement of these strategic goals, as it aims to support bedside nurses providing care that can be morally distressing, and it uses scientific knowledge and research to improve nursing care processes. The need to improve nursing care delivery in order to enhance the quality of life for patients at the end of their lives, in the absence of any clear guidance or training among nurses who provide this care, made this project an organizational priority.

Support

This project was supported by the Director of Acute Care Nursing, and a formal letter of support was provided (Appendix C). Support from the organization's Nursing Research Council was obtained after the project leader presented and defended the proposal to the Council (Appendix C).

Population

The population studied included RNs working on an inpatient Oncology Unit. At the time of the pilot project, this unit staff was comprised of 25 RNs, including one Unit Manager and one Clinical Quality Coordinator. Of the 25 RNs, eight were new graduate RNs with less than one year of nursing experience. Additionally, 24 travel RNs were assigned to staff this unit. The bundle was piloted among all unit staff for a four-week pilot period. All RNs working on the Oncology Unit were invited to participate in the study, but only data from RNs who voluntarily

completed the surveys were included. Due to the need to protect anonymity, no demographic information was collected from participants.

Ethical Consideration

Protection of Subjects

Confidentiality for nurses included in the study was protected. The project leader obtained approval from Human Resources, the unit manager, the Acute Care Nursing Director, and the Nursing Research Council prior to eliciting participation and surveying participants. In accordance with ethical standards of research, subjects were informed that their participation in the study was completely voluntary, and that participation would not impact any aspect of their employment (Appendix H). This DNP-candidate project leader and the project chair completed Collaborative Institutional Training Initiative (CITI) training prior to initiating the pilot in order to ensure competency in the protection of human subjects involved in research (Appendix D). Institutional Review Board (IRB) approval was obtained from Liberty University (Appendix E). The project was deemed exempt by the organization's IRB (Appendix F). The project leader collaborated closely with the organization's Director of Nursing Research to ensure that all necessary documentation and requirements were met in accordance with the organization's research policies and guidelines. Data were stored on a password-protected computer and will be destroyed after a period of three years.

Christian Worldview

This practice project was underpinned by a Biblical Christian Worldview. According to Scripture, death is not final, and therefore does not have to be feared. This is evident in I Corinthians 15:55, in which the author declares that Jesus has conquered death, and in Ecclesiastes 3, which acknowledges that death is an inescapable part of human life (*New*

International Version, 1973/2001). The Bible clearly conveys that God created each individual in His perfect image, and that each person has inherent dignity regardless of their proximity to death (*New International Version*, 1973/2001; Genesis 1:27). This is also in alignment with the American Nurses' Association Code of Ethics (2015). The Christian's mandate from Christ is to demonstrate compassion to others, and to reduce suffering (*New International Version*, 1973/2001; Luke 10:36-37). This Christian mandate is what underpins the purpose, aim, and rationale of this project.

Data Collection

Baseline data were collected from all staff RNs and travel RNs assigned to the inpatient Oncology Unit via a pre-intervention survey that was disseminated through a single-use anonymous quick response (QR) code. The single-use code feature ensured that no more than one survey response was permitted per device, and the QR-code method prevented any single participant from entering multiple survey responses on multiple devices. The code was posted at the nurses' station, in the staff locker room, and in the staff breakroom, which are high-traffic areas. The survey remained open from March 1 to March 15, 2024 to ensure that staff had ample opportunity to respond to the survey. The post-intervention survey was distributed to staff immediately following the four-week intervention period using the same method and remained open between April 21 and May 4, 2024. The second survey contained two additional questions regarding the perceived clinical usefulness of the bundle.

The surveys were created and housed on the platform Qualtrics, which is a secure Health Insurance Portability and Accountability Act (HIPPA)-compliant survey generator and data management system (Qualtrics, 2022). The survey was created to protect the privacy of participants, but prohibited multiple responses from a single mobile device. Responses were

visible only to the DNP-candidate project leader and the DNP project chair. Data were collected and entered into Statistical Package for the Social Sciences (SPSS) software by the DNP-candidate project leader. Data were stored on a secure password-protected computer and will be destroyed after a period of three years. Nurse perceptions of self-efficacy in EOL care delivery were compared before and after the study period in order to evaluate the outcome of the pilot.

Tools

A modified version of the Self-Efficacy in Palliative Care (SEPC) scale was utilized for outcome measurement. The SEPC scale is a validated and reliable assessment scale, grounded in theoretical self-efficacy models, that measures the impact of an education intervention (Mason & Ellershaw, 2004). The SEPC scale assesses perceived efficacy in communication, patient management, and multidisciplinary teamwork, and asks subjects to rate their perceived competence in these areas between anchors of "very anxious" and "very confident" (Mason & Ellershaw, 2004). For the purposes of this project, the assessment included only items from the Patient Management section, and respondents rated their agreement with various statements about their perceived self-efficacy on a 0 to 10 numeric scale, with "very anxious" as the 0 anchor, and "very confident" as the 10 anchor. Items were adjusted to reflect their application to the population being studied. For example, a question about ability to prescribe appropriate and adequate medication for pain control was omitted. Permission to utilize the SEPC scale has been granted by the author (Appendix I).

An additional two questions were included only on the post-intervention survey, which asked respondents whether they perceived the bundle to be clinically useful, with options for respondents to select "yes" or "no." This was followed by an open-ended question asking respondents to explain why they chose "yes" or "no", with an open field textbox provided for

respondents to answer in their own words. Surveys were distributed electronically, and took an estimated 5 to 10 minutes for respondents to complete.

The SEPC scale was developed in 2004 by Mason and Ellershaw in the United Kingdom. Reliability and validity of the scale were determined after implementation of the tool among medical students yielded a Cronbach's α value of greater that 0.92 on all three subscales (Mason & Ellershaw, 2004). The SEPC scale has since been adapted for use in a variety of languages, among populations in diverse cultures. Herrero-Hahn et al. (2019) adapted and tested the tool for validity and reliability for use in Spain. Granat et al. (2022) adapted and tested it for validity in Swedish healthcare settings. The SEPC was recently used to evaluate caregivers' self-efficacy in EOL communication in long-term care settings in a large, six-country cross-sectional study (Koppel et al., 2019). In this study, Koppel et al. deemed the SEPC scale an adequate instrument to measure the outcome of interest, based upon the developer's validity assessment findings.

Intervention

Preparation

The trigger was identified using the Iowa Model framework, as outlined previously. The team, consisting of the DNP-candidate project leader and the project chair, was formed, and subsequently a thorough literature review and analysis was conducted to identify barriers to quality EOL nursing care delivery in inpatient settings and evidence-based interventions that improve care quality. The project proposal was submitted and successfully defended to the project chair in January 2024. Approval from Liberty University's IRB was obtained in February 2024. The project leader presented the project proposal before the organization's Nursing Research Council in February 2024 and received the council's approval. An Exemption

Application was submitted to the healthcare organization's IRB in February 2024, and the project was deemed to be exempt from IRB approval.

Bundle development

The Comfort Care Nursing Bundle was developed according to evidence-based interventions identified in the literature review (Appendix G). For this pilot project, the care bundle was only used for patients who were receiving EOL care on the Oncology unit.

Eliciting Participants

The project leader met with the Unit Manager on February 29, 2024 to discuss the plan for disseminating the surveys and educating staff about participation in the project. The project leader elicited participation in the pre- and post-intervention survey among nurses by providing information about the survey to nurses through a recruitment email that was sent to all nursing staff on March 1, 2024 (Appendix H). Information about the survey was also shared in start-of-shift huddles and flyers posted at the nurses' station and staff breakroom beginning on March 1, 2024.

Training for Implementation

Information about the finalized bundle and its use was provided to staff through written materials, nursing huddle points, and the unit's Microsoft Teams communication platform between March 17 and March 23. Charge nurses were educated about the bundle via an email from the project leader.

Implementation

The Comfort Care Nursing Bundle was piloted from March 24 to April 20, 2024. Several paper copies of the document containing the Comfort Care Nursing Bundle were distributed on the unit and kept at the charge nurse desk. Each patient with an active "Comfort Care" or

"Comfort Measures Only" order documented in the Electronic Health Record (EHR) received a paper copy of the document attached to the patient's nursing handoff report sheet. The bundle guided nurses to check-off items on the bundle as they were completed. The project leader reinforced education for charge nurses at a charge nurse meeting on April 9, 2024. The project leader provided staff education and monitored for compliance by performing in-person unit rounds on March 24, March 27, April 3, April 8, April 9, April 10, April 15, April 17, April 18, and April 20, 2024.

Data Analysis

A data analysis of the quantitative findings from the survey results and qualitative data from the open-ended questions was performed. Descriptive, inferential statistics were utilized for data analysis of the first measurable outcome, and descriptive statistics were utilized to analyze the second measurable outcome.

Measureable Outcome 1

The first outcome measured was perceived knowledge and confidence in EOL care delivery among nurses following implementation of the Comfort Care Nursing Bundle, in comparison to perceived knowledge and confidence in EOL care delivery among nurses before implementation of the bundle. To measure this, SEPC survey responses were collected during a two-week period before the implementation of the Comfort Care Nursing Bundle, and again during a two-week period following the four-week pilot period. Level of comfort with specific components of palliative care delivery was measured using a 0 to 10 scale, where 0 = "very anxious" and 10 = "very confident." Pre-intervention scores were given the group label "1", and post-intervention scores were given the group label of "2."

The parameter of interest was the difference in the mean scores between the two groups of answers for each question, and the difference in mean total scores. Descriptive statistics (total, mean, and standard deviation) were used to describe the results of each question on the questionnaire, and then to describe the group perception mean scores.

Descriptive statistics for the mean total scores for the pre-intervention and post-intervention scores were calculated using SPSS software. Inferential statistics allowed the project leader to measure the change in perceived self-efficacy pre- and post-intervention, and to test the statistical significance between the mean total scores (Jolley, 2020). Because of the need to protect the confidentiality of survey respondents, pre- and post-intervention variables were not matched; therefore, the independent *t*-test was selected. A Hedges' *g* analysis was performed to evaluate the effect size of the intervention. The data analysis was performed utilizing SPSS software.

Measurable Outcome 2

The second outcome measured was the perception of clinical usefulness of the Comfort Care Nursing Bundle among nurses. To measure this, two additional questions were included in the post-intervention survey. The first asked respondents, "Did you find the Comfort Care Nursing Bundle to be clinically useful?" with a "yes" or "no" option. The second question asked respondents to explain in their own words using a free-text field why they answered "yes" or "no" to the previous question. A descriptive, qualitative data analysis was performed by the author, through which key themes and patterns of perceptions were identified and coded.

Section Four: Results

Nineteen pre-intervention survey responses (*n*=19) and sixteen post-intervention survey responses (*n*=16) were collected by convenience sampling, representing a response rate of 39%

and 33%, respectively. This is within the expected survey response rate range for nursing research (L'Ecyer et al., 2023). Key findings from an analysis of the quantitative and qualitative data using descriptive and inferential statistical methods are highlighted.

Measurable Outcome 1

The first outcome measured was perceived knowledge and confidence in palliative care delivery among RNs working on an inpatient oncology unit following the piloting of the Comfort Care Nursing Bundle as evidenced by pre- and post-intervention mean scores on SEPC scale.

Descriptive Statistics

Following implementation of the bundle, nurses' perceived ability to assess the patient's needs mean scores increased from 7.42 with a standard deviation of 2.80 to 8.19 with a standard deviation of 0.75. Perceived knowledge of common EOL symptoms mean scores increased from 7.84 with a standard deviation of 2.27 to 8.38 with a standard deviation of 0.89. Perceived ability to manage common EOL symptoms mean scores increased from 8.00 with a standard deviation of 2.45 to 8.50 with a standard deviation of 1.10. Nurses' perceived ability to provide social care for the palliative care patient and family mean scores increased from 7.15 with a standard deviation of 1.98 to 7.50 with a standard deviation of 1.79. Nurses' perceived ability to provide spiritual care for the palliative care patient and family mean scores increased from 6.47 with a standard deviation of 2.09 to 7.44 with a standard deviation of 1.86. Finally, nurses' perceived comfort working within a multi-professional palliative care team mean scores increased from 7.78 with a standard deviation of 2.07 to 8.75 with a standard deviation of 1.25 (Table 1).

The mean total score of perceived self-efficacy in palliative care delivery before the implementation period was 7.45, with a standard deviation of 1.92. Following the implementation of the Comfort Care Nursing Bundle, the mean total score of perceived self-

efficacy in palliative care delivery increased to 8.13 with a standard deviation of 0.94. There was an overall increase in mean total scores by 0.68 following the implementation of the bundle (Table 2).

Inferential Statistics

An independent samples *t*-test showed that the post-intervention survey results (M=8.13, SD=0.94) were not significantly higher (t=-1.285, p=0.10) than the pre-intervention survey results (M=7.45, SD=1.92). A Hedges' *g* correction point estimate of -0.43 indicated a small to moderate effect size (Table 3).

Measureable Outcome 2

The second outcome measured was the perceived clinical usefulness of the Comfort Care Nursing Bundle following a four-week pilot period, as evidenced by responses on a qualitative post-intervention survey questionnaire.

Descriptive Statistics

Of the 16 post-intervention responses that were collected, 94% (n=15) of respondents answered "yes" to the question of whether they perceived the Comfort Care Nursing Bundle to be clinically useful.

The second additional question on the post-intervention survey was a free-text field asking respondents to explain in their own words why they answered "yes" or "no" to the previous question. Of the 16 survey responses, five responses did not include meaningful text entered into the text field. Eleven responses were included in the analysis. Five key themes were identified: (1) the Comfort Care Nursing bundle provided guidance (n=6), (2) the bundle was helpful to nurses who do not regularly deliver EOL care (n=5), (3) the bundle contributed to care

consistency (*n*=2), (4) the bundle was useful in providing family care (*n*=3), and (5) there were limitations with the process of utilizing the bundle (*n*=2; Table 4).

Six respondents perceived the Comfort Care Nursing Bundle to be helpful, useful, or that it provided guidance. One respondent stated, “It is helpful to have everything listed to glance over”, and another respondent described the bundle as “very helpful.” Several respondents indicated that the bundle is particularly useful to nurses who do not deliver EOL care on a frequent basis. One nurse responded, “I think the comfort care bundle is extremely useful for nurses who are not used to caring for patients on comfort measures.” Another respondent described the bundle as “a great guide when dealing with a patient and their family at the end of their life. Especially if you haven’t had a comfort care patient in a while.” Two respondents indicated that the bundle improved their knowledge of EOL care delivery, with one stating that it was useful for “learning how to better manage comfort care patients and their families”, and another noting that it “improves knowledge.” Three nurses indicated that the bundle aided in provision of care for the family as well as the patient.

Two nurses perceived the bundle to be a contributor to care consistency. One respondent stated that the bundle provided “consistency in care”, and another stated, “It is very easy to forget some things we should be doing in our care for these patients.” One nurse stated that the bundle “lays out the guidelines for what we need to look for and apply”, and another stated that it “provides [nurses] with a good framework to set the patient and their family up for the best outcomes.”

Some limitations with the Comfort Care Nursing Bundle were identified, which were related to the process for implementation of the bundle. One respondent, who answered that they did not find the bundle to be clinically useful, indicated that they were unfamiliar with the

bundle. Another respondent, who answered that they did find the bundle to be clinically useful, commented that they forgot to view the paper copy of the bundle attached to the patient report sheet throughout the day, and suggested, "Perhaps [the bundle] could be posted in the room."

Section Five: Discussion

Nursing interventions are a critical component of care quality for patients at the end of life. A perceived lack of self-efficacy in palliative care delivery contributes to the underutilization of nursing care interventions for patients receiving EOL care. This project utilized quantitative and qualitative methods of analysis to determine whether the implementation of a nursing care bundle for EOL care improves nurses' perceived ability to implement evidence-based EOL care interventions in an acute care setting. The implementation of the Comfort Care Nursing Bundle demonstrated clinically significant improvements in perceived knowledge and care consistency among nurses caring for patients and their families at end of life. These findings support previous studies, which have demonstrated the effectiveness of nursing education interventions in improving EOL care delivery, and the usefulness of bundled nursing care in improving care consistency.

Clinical Significance

Mean scores in each of the questions on the SEPC survey increased following the pilot period, and the mean survey score increased by 0.68. The greatest increase reported following the implementation of the bundle was in nurses' confidence working within a multi-professional palliative care team (0.98). The second greatest increase reported was in nurses' perception of their ability to provide spiritual care for the palliative care patient and family (0.97). Paired with the qualitative analysis findings, which indicated that nurses found the bundle to be helpful in delivery of both patient and family care, it may be understood that the bundle assisted nurses in

delivering comprehensive care that addresses the complex needs of patients at EOL. A similar outcome was identified by Lau et al. (2018) following the implementation of a comfort measures order set in an acute care setting, which resulted in a significant increase in spiritual care involvement among patients at EOL.

The smallest increase reported was in nurses' perceived ability to manage common symptoms experienced at EOL (0.50). In the pre-intervention survey, confidence in managing common symptoms experienced at EOL was rated highest among survey responders (8.00), indicating that nurses working in this care area were confident in their ability to manage physical symptoms prior to the bundle implementation.

The independent *t*-test revealed no statistically significant increase in mean scores on the SEPC scale following the implementation of the Comfort Care Nursing Bundle. Given the small and non-equivalent sample sizes of the study, a Hedges' *g* analysis was performed to evaluate the effect size of the intervention. According to the generally accepted Hedges' *g* effect size cutoff, a point estimate of -0.43 indicates that the intervention had a small to moderate effect on nurses' perceived self-efficacy (Ellis, 2010).

The Comfort Care Nursing Bundle was perceived as clinically useful by 94% of nurses following a four-week pilot period on an inpatient oncology unit. Nurses reported that the bundle provided helpful guidance, increased care consistency, and aided in the delivery of family care. This is consistent with findings from previous studies that have established the usefulness of bundled care in improving consistency and reliability of care (Clark et al., 2015; Gau et al., 2021; Sosnowski et al., 2023). There seemed to be agreement among respondents who found the bundle to be clinically useful that there was a need for nursing guidance for EOL care delivery, and that the bundle was beneficial for nurses who do not regularly deliver care for patients at

EOL. Given that the nurse participants reported that they were moderately confident in their ability to deliver palliative care at baseline but still found the bundle to be clinically useful, it may be inferred that the bundle's perceived usefulness is related to its ability to improve self-efficacy in nurses who are not regularly exposed to EOL care delivery.

Limitations

Several limitations to this pilot study were identified. First, the study measured nurses' perceived knowledge and confidence according to the SEPC scale, but did not directly measure an impact on patient care. Future studies evaluating patient outcomes, such as frequency of palliative care referral, patient satisfaction, frequency of symptom assessment, or level of pain control may be beneficial to expand the understanding of bundled nursing care for patients at EOL. Secondly, there was a risk of response bias, as the sample was limited to nurses who volunteered to participate in the pre- and post-intervention surveys. Additionally, there was an inability to account for confounding factors, such as years of nursing experience or previous education in palliative care delivery, which may have contributed to nurses' overall knowledge and confidence perception. Because of the need to protect the anonymity of nurses and elicit participation in the surveys, this was an understood and anticipated limitation of the study. Finally, the small and non-equivalent sample sizes mean that the *t*-test lacks statistical power to demonstrate significance, and should therefore be interpreted with caution.

Implications for Practice

Self-perceived knowledge and confidence in palliative care delivery increased among nurses delivering EOL care to patients on an inpatient oncology unit following a four-week implementation of an evidence-based Comfort Care Nursing Bundle. An inferential test for significance did not reveal a statistically significant increase in self-efficacy in palliative care

delivery among this small sample, but a Hedges' *g* size effect interpretation indicated a small to moderate effect from the intervention. Nurses were confident in their knowledge of symptom management for common EOL symptoms at baseline, but perceived the care bundle to be clinically useful, particularly for nurses who do not deliver EOL regularly. The results of this pilot study contribute to existing knowledge about the efficacy of bundled nursing care in improving nursing care consistency. Findings from this study are consistent with prior studies that have determined educational interventions to be an effective method of improving nurses' knowledge of evidence-based EOL care. These findings suggest that the implementation of the bundle may be especially beneficial in practice settings in which nurses do not regularly deliver EOL care.

Sustainability

This pilot study demonstrates that implementation of bundled nursing care for patients receiving EOL care is feasible in an acute care setting. The next steps to integrate the practice change will be to identify and engage key stakeholders, hardwire the change into the system, and perform ongoing monitoring (Iowa Model Collaborative, 2015). Permanent implementation of the Comfort Care Nursing Bundle will require significant buy-in from key stakeholders. This should include directors of patient experience, intensive and intermediate care division directors, policy managers, professional nursing governance, and professional nursing development leaders. Buy-in from the end user will also be critical to hardwire the change into standard care processes. Success of the care bundle will depend on the culture, attitudes, and appropriate staffing of each unit in order for the nurses to feasibly implement the evidence-based interventions listed in the care bundle, and each of these factors must be assessed prior to implementation of the care bundle on any unit.

The project leader was heavily involved in educating staff and monitoring for appropriate use of the bundle during the pilot period. A unit-based leader who could similarly champion the use of the bundle would be essential, particularly in the early stages of implementation, in order to promote the practice change. Integration of care bundles into the electronic health record (EHR) have been shown to increase compliance with other types of bundles in various settings, and may aid in adoption of this practice change (Thapa et al., 2023; Warstadt et al., 2022).

Future research opportunities were identified during the implementation and evaluation period. Further research is needed to understand the impact of the Comfort Care Nursing Bundle on patient care, to explore the feasibility and efficacy of integrating the Comfort Care Nursing Bundle into the EHR, and to understand its usefulness in diverse care settings.

Dissemination Plan

In order to share knowledge gleaned from this evidence-based practice project, dissemination efforts will be directed towards key stakeholders and audiences who can utilize this knowledge to improve patient outcomes and inform future nursing research endeavors. The results of this project will be disseminated internally in the form of a written summary to the organization’s Nursing Research Council, an oral presentation to the pilot unit’s staff at a quarterly meeting, and an oral presentation to the organization’s multidisciplinary end-of-life committee. The project leader will pursue local and regional dissemination by presenting a poster presentation at the Virginia Henderson Nursing Research symposium.

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Thapa, D., Liu, T., & Sek, Y. C. (2023). Multifaceted interventions are likely to be more effective to increase adherence to the ventilator care bundle: A systematic review of strategies to improve care bundle compliance. *Intensive & Critical Care Nursing, 74*. https://doi.org/10.1016/j.iccn.2022.103310

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Waller, A., Dodd, N., Tattersall, M. H. N., Nair, B., & Sanson-Fisher, R. (2017). Improving hospital-based end of life care processes and outcomes: A systematic review of research output, quality and effectiveness. *BMC Palliative Care, 16*(1), 34. https://doi.org/10.1186/s12904-017-0204-1

Warstadt, N. M., Caldwell, J. R., Tang, N., Mandola, S., Jamin, C., & Dahn, C. (2022). Quality initiative to improve emergency department sepsis bundle compliance through utilization of an electronic health record tool. *BMJ Open Quality, 11*(1), e001624. https://doi.org/10.1136/bmjoq-2021-001624

Zaccagnini, M. & Pechacek, J. M. (2021). *The doctor of nursing practice essentials: A new model for advanced practice nursing* (4th ed.). Jones & Bartlett Learning.

Zaddeh, R. S., Eshelman, P., Setla, J., Kennedy, L., Hon, E., & Basara, A. (2017). Environmental design for end-of-life-care: An integrative review on improving the quality of life and managing symptoms for patients in institutional settings. *Journal of Pain and Symptom Management, 55*(3), 1018-1034. https://doi.org/10.1016/j.jpainsymman.2017.09.011

Appendix A: Table of Evidence

Name: Implementation of a Nursing Care Bundle for Hospitalized Patients Receiving End-of-Life Care

Clinical Question: In nurses delivering end-of-life care on an acute care hospital floor (P), does the implementation of a comfort care nursing care bundle (I) in comparison to care as usual (C) improve nurses' perceived knowledge and confidence in their ability to implement evidence-based nursing interventions for dying patients and their families (O) within four weeks (T)?

Article Title, Author, etc. (Current APA Format)	Study Purpose	Sample (Characteristics of the Sample: Demographics, etc.)	Methods	Study Results	Level of Evidence (Use Melnyk Framework)	Study Limitations	Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.
Ahluwalia, S. C., Chen, C., Raaen, L., Lorenz, L., Akinniranye, O., & Hempel, S. (2018). A systematic review in support of the national consensus project clinical practice guidelines for quality palliative care, fourth edition. *Journal of Pain and Symptom Management, 56*(6), 831-870. doi: 10.1016/j.jpainsymman.2018.09.008	To provide a synthesis of the evidence in palliative care to inform the fourth edition	139 systematic reviews meeting inclusion criteria were identified through an extensive systematic	A systematic review	A substantial amount of evidence has been published in support of clinical practice guidelines for	Level 5: A systematic review of descriptive and qualitative studies	Low quality of evidence utilized in many articles	Underscores the benefit of standardized guidance in the delivery of palliative care; evidence-backed interventio

	of the National Consensus Project Clinical Practice Guidelines for Quality Palliative Care	literature search		palliative care			ns for symptom improvement include an interdisciplinary team approach, offering of spiritual care, and provision of a soothing environment
Chan, C. W. H., Chow, M. C.., Chan, S., Sanson-Fisher, R., Waller, A., Lai, T. K., & Kwan, C. (2019). Nurses' perceptions of and barriers to the optimal end-of-life care in hospitals: A cross-sectional study. *Journal of Clinical Nursing, 29*(7-8), 1209-1219. http://doi.org/10.1111/jocn.15160	To examine nurses' perceptions of optimal EOL care in hospital settings and evaluate perceived barriers to EOL	A convenience sample of 175 nurses in an acute care hospital	A cross-sectional survey	Perceived factors associated with optimal EOL care included knowledge of patients' wishes, management of emotional concerns, and	Level 6: Single descriptive study	Convenience sampling method limits the generalizability of study findings	Provides insight into nurses' perceptions of barriers to delivering high-quality EOL care, which informs policy and education interventio

	care delivery			environmental factors. Perceived barriers identified included insufficient knowledge about EOL care delivery			ns to optimize the care environment and care delivery
Chua, J. Y. X. & Shorey, S. (2021). Effectiveness of end-of-life educational interventions at improving nurses and nursing students' attitude toward death and care of dying patinets: A systematic review and meta-analysis. *Nurse Education Today, 10*, 104892. http://doi.org/10.1016/j.nedt.2021.105892.	To examine the effectiveness of EOL educational interventions in improving nurses and nursing students' attitude towards care of	A purposive sample of 9 studies that met inclusion criteria were identified using an extensive search and selection protocol	A systematic review and meta-analysis of randomized controlled trials and controlled clinical trials	In-person and web-based education interventions were effective at improving nurses and nursing students' attitudes towards caring for dying patients	Level 1: Systematic review	Small number of studies were included; of the 9 studies included, 8 were rated as having a high risk for bias according to the Cochrane risk of bias tool; most studies	Demonstrates effectiveness of education interventions for improving nurses' attitudes towards delivering EOL care

	dying patients					did not include a follow-up assessment to evaluate long-term effects	
Clark, K., Curry, T., & Byfieldt, N. (2015). The effect of a care bundle on nursing staff when caring for the dying. *International Journal of Palliative Nursing, 21*(8), 392-398. https://web.s.ebscohost.com/chc/pdfviewer/pdfviewer?vid=0&sid=70fef3db-dc2c-42a6-a8e8-831cc7cf8ec0%40redis	To evaluate the impact of a care bundle for the dying on nurses' self-perceived capacity to care for people at the end-of-life in the hospital	A convenience sample of 75 nurses working on two general medical units in Australia were surveyed before and 25 nurses were surveyed after the implementation of the bundle	A retrospective cohort design	A modest positive increase in self-perceived competency to provide EOL care was reported after bundle implementation; a significant portion of respondents perceived the bundle as clinically useful	Level 4: A retrospective cohort study	Low response rate following implementation of the bundle	Demonstrates feasibility of implementing bundled EOL care; provides support for increases in nurses' perceived comfort level in delivering EOL care, as well as perceived clinical usefulness of an EOL care bundle

Gau, Y., Liao, L. P., Chen, P., Wang, K., Huang, C., Chen, Y., & Mou, S. Y. (2021). Application effect for a care bundle in optimizing nursing of patients with severe craniocerebral injury. *World Journal of Clinical Cases, 9(*36), 11265–11275. https://doi.org/10.12998/wjcc.v9.i36.11265	To evaluate the effect of a nursing care bundle on optimizing early rehabilitation in patients with severe craniocerebral injuries	A convenience sample of 126 patients with severe traumatic brain injury admitted to an emergency department between January 2019 and December 2020 were selected	A randomized controlled trial	Patients in the experimental group had lower incidences of complications, improved neurological function, shorter recovery times, and reported higher satisfaction rates	Level 2: A randomized controlled trial	Small sample size	Demonstrates the efficacy of nursing care bundles on improving care outcomes and patient satisfaction
Howes, J. (2015). Nurses' perceptions of medication use at the end of life in an acute care setting. *Journal of Hospice & Palliative Nursing, 17*(6), 508-516. doi: 10.1097/NJH.0000000000000192	To explore nurses' perceptions regarding end-of-life medication use in an acute care	A purposive, convenience sample of 22 nurses with at least six months of experience from multiple	A qualitative, descriptive study	Perceived knowledge gaps around symptom identification, lack of palliative care consultation, and	Level 6: A single qualitative study	Small sample size; low level of evidence	Provides helpful background information about nurses' perception of barriers in managing symptoms

	setting in order to identify variables that may impact symptom management at the end of life	medical-surgical units were recruited to participate in group interviews		perceived lack of support were the most commonly cited barriers to managing symptoms			in dying patients
Kim, J., Yun, H., Kim, E., Kim, H., Kim, G., Kim, S., Koo, J., Park, J., Park, A., Han, E., Kim, S., Jeong, J. & Kim, S. (2022). Development of an end-of-life nursing care protocol for intensive care units. *Journal of Hospice & Palliative Nursing, 24*(4), 159-165. doi: 10.1097/NJH.0000000000000872	To develop a standardized end-of-life nursing protocol for use in intensive care units	Following the Delphi technique, two surveys with 30 subject matter experts was conducted in order to gain consensus for establishing a valid end-of-life care protocol	Expert consensus	A protocol including 24 care items was drafted	Level 7: Expert opinion	Low level of evidence; the impact of implementing this protocol on patient outcomes has not been tested in comparison to standard care	Although this protocol was developed for use in the intensive care setting, it provides valuable insight into expert consensus on care interventions for symptom manageme

		for hospitals in South Korea					nt in end-of-life care
Kisvetrová, H., Joanovič, E., Vévoda, J., & Školoudík, D. (2017). Dying care nursing intervention in the institutional care of end-of-life patients. *International Journal of Nursing Knowledge, 28*(3), 131–137. https://doi.org/10.1111/2047-3095.12128	To determine the frequency of EOL care activities performed by nurses caring for dying patients	A convenience sample of 201 nurses with at least one year of experience practicing in the hospital setting in the Czech Republic were surveyed	A cross-sectional, descriptive study	Nurses reported more frequent use of activities focused on physical comfort of patients, few nurses reported interventions focused on psychological symptoms and patient or family communication	Level 6: A single descriptive design	Small number of survey respondants, leaving potential for bias; frequency of care interventions was self-reported	Provides insight into nursing knowledge gaps and comfort level with managing psychological symptoms associated with EOL and communicating with families of dying patients
Lau C, Stilos K, Nowell A, Lau F, Moore J, Wynnychuk L. (2018). The comfort measures	To assess	A purposive	A restrosp	In patients	Level 4: A	At least 10% of	Demonstrates the

order set at a tertiary care academic hospital: Is there a comparable difference in end-of-life care between patients dying in acute care when CMOS is utilized? *American Journal of Hospice and Palliative Medicine, 35*(4), 652-663. doi:10.1177/1049909117734228	the differences in care delivered to dying patients using a comfort measures order compared with care as usual	sampling method was used to review the charts of 67 patients who received care with a comfort measures order set on inpatient medical units and 27 patients who received EOL care without the order set	ective cohort study	who received care with the order set, there was an increase in spiritual care involvement and improved symptom management	retrospective cohort study	the charts reviewed did not contain complete documentation of symptoms at EOL	effectiveness on a comfort measures order set on symptom management at the end of life in the hospital setting
Miller, E. M., Porter, J. E., & Barbagallo, M. S. (2022). The physical hospital environment and its effects on palliative patients and their families: A qualitative meta-synthesis. Health Environments *Research & Design Journal,15*(1):268-291. doi:10.1177/19375867211032931	To synthesize and analyze available evidence related to how	A purposive sample of 12 qualitative studies that met inclusion	A systematic review of qualitative studies	Provision of an environment that feels safe, private, personalized,	Level 5: Systematic review of qualitative studies	Studies included utilized low levels of evidence	Provides evidence that interventions that affect the care environme

	the physical hospital environment impacts patients receiving palliative care and their families	criteria were identified using an extensive search and selection protocol		amenable to family presence, and home-like were identified as improving patients' and families' perception of palliative care quality			nt positively impact patient and family satisfaction with care quality
Miller, E. M., Porter, J. E., & Barbagallo, M. S. (2023). The effects of the ward environment and language in palliative care: A qualitative exploratory study of Victorian nurses' perspectives. *Health Environments Research & Design Journal,16*(4):146-158. doi:10.1177/19375867231177299	To explore nurses' perpectives of how the physical, natural, social and symbolic environment impacts	Six nurses who deliver EOL care in the hospital setting in Victoria, Australia were recruited using a snowball sampling method	A qualitative, exploratory study	Participants described a home-like environment, with minimal nise, views of nature, personal items, and hidden care	Level 6: A single descriptive study	Small sample size of nurses surveyed	Provides insight into how the environment impacts nurses' perception of their ability to deliver person-centered care for

	their ability to provide holistic palliative care			equipment as an important contributor to dying patients' comfort			dying patients
Pereira, R. A. M., & Sousa Valente Ribeiro, P. C. P. (2023). Ways and means to comfort people at the end of life: How is the nurse a privileged player in this process? *Palliative Care & Social Practice, 17*, 1–16. https://doi.org/10.1177/26323524231182730	To examine ways and means of comfort perceived by hospitalized patients at the end-of-life and their families, and to describe the value of the nurse in caring for patients	Eighteen patients, 18 matched family members, and healthcare professionals in an inpatient palliative care unit in Lisbon were selected through a purposive sampling method	A qualitative study	The nurse was identified as the most privileged player in all phases of end-of-life care delivery	Level 6: A single qualitative study	Small sample size; conducted in a designated palliative-care unit, leaving the potential for representation bias	Demonstrates the critical role that nurses have in impacting patient's quality of life at the end of life

	at the end of life						
Rawlings, D., Yin, H., Devery, K., Morgan, D., & Tieman, J. (2020). End-of-life care in acute hospitals: Practice change reported by health professionals following online education. *Healthcare, 8*(3), 254. https://doi.org/10.3390/healthcare8030254	To determine whether a web-based EOL care education intervention was effective in implementing clinical practice changes	A convenience sample of 122 clinicians in Australia, 73% of whom were nurses, who completed web-based EOL care modules	A cross-sectional survey	Two-thirds of respondents reported practice changes following completion of an EOL education intervention; the most commonly cited practice changes were communication, improved skills, confidence, and patient-centered care delivery	Level 6: Single descriptive study	Post-intervention survey had a low response rate (5.5%), leaving a large potential for response bias	Demonstrates the effectiveness of an education intervention at improving caregivers' perception of their own knowledge and confidence in EOL care delivery

Soo Rui Ting, M., Nashi, N., Ang Lin Elaine, K., & Hooi, B. (2022). Effect of a multidisciplinary ward-based intervention on end-of-life care for general medicine patients. *Palliative & Supportive Care, 20*(6), 813-817. doi:10.1017/S1478951521001723	To examine the effects of an EOL nursing care bundle on EOL care for general medicine patients in the hospital setting	A purposive sampling method was used to review the charts of 17 adult patients who died on a general medical unit during the pilot period of the intervention (experimental group) were compared with 95 patients who died on other general medical units	A retrospective cohort study	Pain assessments were more common for patients in the experimental group; interventions not aimed at patient comfort, such as blood draws and vital sign monitoring, occurred less frequently in patients in the experimental group	Level 4: Retrospective cohort study	Small number of patients included in the experimental group; no adjustment for potential confounding factors	Demonstrates the effectiveness of an EOL nursing care bundle on improving process-level quality care indicators such as better symptom assessment and management

		during the same period (control group)					
Sosnowski, K., Lin, F., Chaboyer, W., Ranse, K., Herrernan, A., & Mitchell, M. (2023). The effect of the ABCDE/ABCDEF bundle on delirium, functional outcomes, and quality of life in critically ill patients: A systematic review and meta-analysis. *International Journal of Nursing Studies, 138*, 104410. https://doi.org/10.1016/j.ijnurstu.2022.104410	To synthesize the evidence on the effectiveness of the ABCDEF bundle on delirium, function, and quality of life in adult patients in intensive	A purposive sample of eighteen studies and 29,576 patients meeting specific inclusion criteria were identified through a rigorous, methodical literature search of eight databases	A systematic literature review	Most studies utilized a high level of evidence; synthesis of evidence demonstrated a statistically significant reduction in delirium among patients following	Level 1: A systematic review	Most studies were conducted in a single setting; several studies did not utilize a blinding method; studies that did not contain a detailed description in the abstract	Demonstrates the effectiveness of care bundles on improving patient care outcomes with a high level of evidence

	care settings			bundle implementation; a small number of studies evaluating function after discharge found that bundle implementation improved cognition, mental health, and physical function		were excluded	
Tappen, R., & Sopcheck, J. (2023). Nursing home resident, family, and staff perspectives on achieving comfort at end of life: A qualitative study. *Journal of Hospice & Palliative Nursing, 25*(4), 188-196. https://doi.org/10.1097/NJH.0000000000000953	To explore nursing home resident, family, and staff perpectives regarding end-of-life	A convenience sample of 16 residents, 10 family members, and 20 staff members were surveyed	A qualitative, exploratory study	Family support, physical comfort, and grooming emerged as priorities for quality end-of-	Level 6: A single qualitative study	Low diversity of sample size; study conducted in a single setting	Provides insight into patient and family preferences at the end-of-life to inform the focus of nursing

	care preferences for the resident			life care to residents and their families			interventions
Waller, A., Dodd, N., Tattersall, M. H. N., Nair, B., & Sanson-Fisher, R. (2017). Improving hospital-based end of life care processes and outcomes: A systematic review of research output, quality and effectiveness. *BMC Palliative Care, 16*(1), 34. https://doi.org/10.1186/s12904-017-0204-1	To examine the quality and quality of data-based research aimed at improving the processes and outcomes associated with delivering end-of-life care in hospital settings	A purposive sample of 416 articles meeting inclusion criteria were identified through a rigorous literature search	A systematic review	Most publications reported benefits for end-of-life processes and end-of-life discussions and documentation	Level 1: Systematic review	Studies of interventions that impacted providers, such as caregiver education, were excluded	Provides helpful background information about the volume and quality of evidence for end-of-life care interventions in hospital settings, and demonstrates the demand for improved EOL care in hospitals
Zaddeh, R. S., Eshelman, P., Setla, J., Kennedy, L., Hon, E., & Basara, A. (2017). Environmental design for end-of-life-care: An	To evaluate and	A purposive sample of	An integrative	The key environmental	Level 6: Descript	Thirty-three articles	Synthesizes evidence related to

integrative review on improving the quality of life and managing symptoms for patients in institutional settings. *Journal of Pain and Symptom Management, 55*(3), 1018-1034. https://doi.org/10.1016/j.jpainsymman.2017.09.011	analyze evidence related to environmental design factors that improve the quality of life of people receiving end-of-life (EOL) care	225 articles, including 9 systematic reviews, 40 integrative reviews, 3 randomized controlled trials, 118 empirical research studies, and 55 anecdotal evidence.	review of experimental and non-experimental evidence	factors that impact the quality of EOL care include communication and social interaction with the care team, positive distractions, privacy, personalization, and the ambient environment.	ive design	included were not peer-reviewed; most articles included in the review used low levels of evidence	optimizing the care environment, which will inform recommendations for nursing interventions.

Appendix B: Approval for Use of Iowa Model of Evidence-Based Practice

You have permission, as requested today, to review and/or reproduce *The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care.* Click the link below to open.

Iowa Model - 2015.pdf

Copyright is retained by University of Iowa Hospitals and Clinics. **Permission is not granted for placing on the internet.**

Reference: Iowa Model Collaborative. (2017). Iowa model of evidence-based practice: Revisions and validation. *Worldviews on Evidence-Based Nursing, 14(3), 175-182. doi:10.1111/wvn.12223*

In written material, please add the following statement:

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Please contact UIHCNursingResearchandEBP@uiowa.edu or 319-384-9098 with questions.

Appendix C: Project Site Letter of Support

November 11, 2023

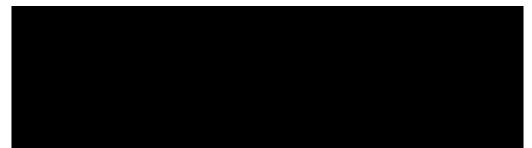
To Whom It May Concern,

I approve Klaire Thomason's evidence-based project on the Oncology Unit and Lynchburg General Hospital. The summarized design for this project is an evidence-based design following the Iowa Model, with a quasi-experimental approach. The intervention will be the implementation of an End-of-Life nursing care bundle.

Please let me know if you need any additional information from me.

Take care,

Director of Acute Care Nursing



Date: February 9th, 2024

Applicant: Klaire Thomason, BSN, RN

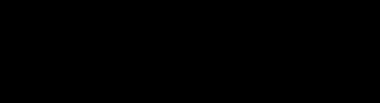
Unit Oncology

Thank you for submitting your proposal entitled, "Implementation of a Nursing Care Bundle for Hospitalized Patients Receiving End-of-Life Care." We appreciate that you took the time to participate in the council as your proposal was introduced and discussed. Your proposal has been accepted to move forward as a Evidence-based project.

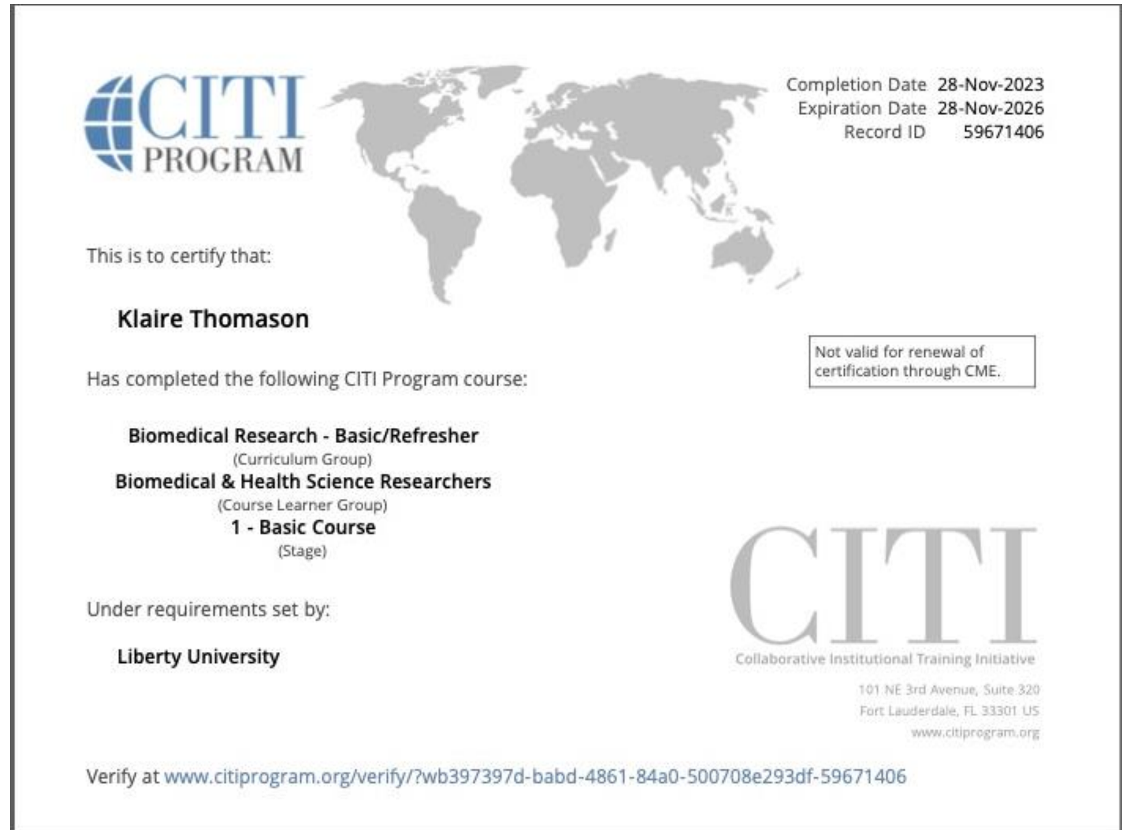
As part of a Magnet organization, we will be tracking your progress as you move through your project. Please set reminders in your telephone/calendar when you receive this letter to remind you to send me an update every 1-3 months or sooner if your project ends before then.

Please feel free to reach out to me if you have any questions as you start your project. Best of luck!

Follow us at:
Facebook | Instagram | Pinterest
YouTube | Linkedin | Twitter



Appendix D: CITI Training Certificate



CITI PROGRAM

Completion Date 28-Nov-2023
Expiration Date 28-Nov-2026
Record ID 59671406

This is to certify that:

Klaire Thomason

Not valid for renewal of certification through CME.

Has completed the following CITI Program course:

Biomedical Research - Basic/Refresher
(Curriculum Group)
Biomedical & Health Science Researchers
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

Liberty University

CITI
Collaborative Institutional Training Initiative
101 NE 3rd Avenue, Suite 320
Fort Lauderdale, FL 33301 US
www.citiprogram.org

Verify at www.citiprogram.org/verify/?wb397397d-babd-4861-84a0-500708e293df-59671406

Appendix E: Liberty University IRB Approval

Date: 2-6-2024

IRB #: IRB-FY23-24-1308
Title: Implementation of a Nursing Care Bundle for Hospitalized Patients Receiving End-of-Life Care
Creation Date: 2-4-2024
End Date:
Status: Approved
Principal Investigator: Klaire Thomason
Review Board: Research Ethics Office
Sponsor:

Study History

Submission Type	Review Type	Decision
Initial	Exempt	No Human Subjects Research

Key Study Contacts

Member	Role	Contact
Lynne Sanders	Co-Principal Investigator	lsanders@liberty.edu
Klaire Thomason	Principal Investigator	kmevans@liberty.edu
Klaire Thomason	Primary Contact	kmevans@liberty.edu

Appendix F: Hospital IRB Exemption

February 16, 2024

Klaire Thomason, BSN, RN
kmevans@liberty.edu
thomkl1@centrahealth.com

CHIRB0631e Implementation of a Nursing Care Bundle for Hospitalized Patients Receiving End-of-Life Care

Dear Ms. Thomason,

The project you have initiated has been reviewed by the Institutional Review Board exempt committee (Reference February 12, 2024) in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study does not classify as human subjects research. This means you may begin your research with the data safeguarding methods mentioned in your IRB exempt application.

Your study does not classify as human subjects research because evidence-based practice projects and process improvement initiatives are considered quality improvement activities, which are not considered "research" according to 45 CFR 46.102(d).

Please note that this decision only applies to your current research application, and any changes to your protocol must be reported to the IRB for verification of continued non-human subjects research status. You may report these changes by submitting a new application to the IRB exempt committee and referencing the above IRB Application number.

If you have any questions about this determination or need assistance in identifying whether possible changes to your protocol would change your application's status, please email us at

Sincerely,

IRB Exempt Committee Chair

Director of Nursing Research

Appendix G: Comfort Care Nursing Bundle

- ☐ Question and clarify any orders not related to providing patient comfort (i.e. lab draws, glucose monitoring, use of external monitoring devices, intravenous fluids, artificial nutrition, shift vital sign monitoring, sequential compression devices, etc.).
- ☐ Assess patient's comfort level Q2 hours. More frequent assessment (every 15 to 30 minutes) may be required if symptoms are not well-controlled.
- ☐ Symptom assessment should include (but may not be limited to):
  - Pain (document using appropriate pain scale. Pain assessment >1 warrants at least one intervention.)
  - Dyspnea (signs include use of accessory muscles, noisy and labored breathing, or tachypnea.)
  - Nausea/vomiting
  - Anxiety
  - Agitation or delirium
  - Secretions
- ☐ Contact Palliative Care for poorly controlled symptoms, difficulty managing symptoms, or any other concerns related to symptom management or medications. If no Palliative Care consult, contact the patient's assigned provider.
  - Request a Palliative Care consult as appropriate for any patients with a "Comfort Care" order.
- ☐ Provide oral care every 2 hours or PRN.
- ☐ Turn and reposition every two hours or PRN for comfort and management of secretions.
- ☐ Provide bath daily, unless otherwise preferred by the patient or family.
  - Offer family the opportunity to participate in grooming.
- ☐ Offer family a complimentary "comfort cart" provided by nutrition services.
  - Place a "Dietary Communication" order → request a comfort cart for up to 10 people (ex: "Please send up a comfort cart for 5-7 people once now.")
- ☐ Offer patient and/or family a Spiritual Services consultation.
- ☐ Offer family a Grief Brochure.
- ☐ Consider offering family items from the Serenity Cart as appropriate.
  - The Serenity Cart is shared by all units in the A tower. Check with the charge nurse or nursing supervision to determine its current location.
  - Items on the Serenity Cart can help provide families with memories of their loved one (ink pads and canvases, glass vials in which to store a telemetry strip clipping, prayer blankets, etc.). Instructions for use of these items is available with the cart.
- ☐ Assist with arranging furniture, and offer extra blankets and pillows as needed in order to accommodate family visitation. Check with the charge nurse or nursing supervisor for questions related to the current visitation policy.
- ☐ Place a purple butterfly magnet on the outside door frame as a signal to staff in order to promote a quiet and peaceful environment (available at the nurses' station).

Appendix H: Recruitment for Participation

Dear RN Colleague,

As a doctoral candidate in the School of Nursing at Liberty University, I am conducting an evidence-based practice project as part of the requirements for the DNP/FNP degree. The purpose of this project is to determine whether the use of a nursing care bundle for patients receiving end-of-life care in the inpatient hospital setting increases nurses' knowledge, confidence, and self-perceived ability to deliver high-quality care to dying patients in comparison to current practices. I am writing to ask for you to participate in my study.

Participants must be 18 years of age and a Registered Nurse at [insert name of organization] Hospital. Participants will be asked to take an anonymous survey analyzing your perceived self-efficacy in palliative care delivery for dying patients. It should take approximately 5 minutes to complete. Participation will be completely anonymous, and no personal, identifying information will be collected.

You will have the opportunity to complete this survey over the next two weeks using a simple QR code that can be scanned on your mobile device. The code will be shared at start-of-shift huddles and can be found posted at the nurses' station and in the staff breakroom. Please do not hesitate to reach out if you have any questions.

Sincerely,

Klaire Thomason, BSN, RN
Liberty University Doctoral Student

Appendix I: SEPC Use Permission and Transfer Agreement

[External] RE: Permission Request: The Self-Efficacy in Palliative Care Scale

Mason, Stephen <maceo@liverpool.ac.uk>
Tue 11/28/2023 11:20 AM
To:Thomason, Klaire Michelle <kmevans@liberty.edu>
Cc:Mason, Stephen <maceo@liverpool.ac.uk>

1 attachments (441 KB)
SEPC and TS MTA for general use v1 English 2019.pdf;

You don't often get email from maceo@liverpool.ac.uk. Learn why this is important

---

[EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.]

Dear Klaire,

Thanks for your mail and please accept my apologies for the late reply to your mail – I have been in Europe for meetings and struggled to get to my inbox.

Your project sounds really great - and we'd be very happy for you to use the scale. The scales are freely available, but all we ask is that those interested complete the attached Material Transfer Agreement, and then I will happily forward you the information needed - I can send you MSWord copies of the scale so you can amend the demographics as needed, or if you wish a link to an electronic version of the scales, and of course the user guide.

Happy to discuss further if/as needed

Kind regards,

Stephen

Dr Stephen Mason

- **RD Lead @ Palliative Care Unit:** University of Liverpool I Room G036 North West Cancer Research Centre I 200 London Road I Liverpool I L3 9TA
- **Program Lead for Palliative Care @ PG Dept:** University of Liverpool I Room 412 Cedar House I Ashton Street I Liverpool I L69 3GE

Institute of Life Course and Medical Sciences I Faculty of Health & Life Sciences I University of Liverpool

Chair: Palliative Care Research Society - https://pcrs.org.uk/

Office: 0151 794 8876 I Email: stephen.mason@liverpool.ac.uk

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From: Thomason, Klaire Michelle <kmevans@liberty.edu>
Sent: 27 November 2023 14:44

assumes all liability for claims for damages against it by third parties, which may arise from the supply, use, storage or disposal of the Material.

8. The Recipient agrees to use the Material in compliance with all applicable statutes and regulations, including foreign law and regulations concerning the import, handling, transportation, storage, use and misuse or other wrongdoing with respect to the Material.

9. The Recipient agrees to be contacted by the PCIL regarding Recipient's use and experience of the Material, in the interests of further refinement and development of the tool. Such agreement does not imply Recipient's right to use future Material.

10. In the event of transfer to another Institution or Recipient, a new Material Transfer Agreement is to be executed.

11. The Material is currently provided at no cost.

12. This Agreement is not assignable, whether by operation of law or otherwise, without the prior written consent of PCIL.

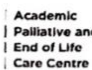
13. This Agreement shall be construed and enforced in accordance with the laws of England, and the parties submit to the exclusive jurisdiction of the courts of England.

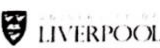
The Recipient should sign two copies of this Agreement and return both to PCIL. The MCPCIL will then send the Material and return one fully executed copy of this Agreement.

RECIPIENT INFORMATION and AUTHORISED SIGNATURES:

Recipient
Name: Tonia R. Kennedy, EdD, MSN, RN, NI-BC; Klaire Thomason ,BSN, RN
Title: Professor of Nursing; DNP Student
Organisation:
Signature:
Date: 11.29.2023

Recipient's Employing Organisation (where applicable) N/A
Name:
Title:
Organisation:
Signature:
Date:





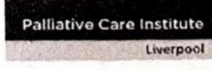


Table 1

Group Descriptive Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Assess	1	19	7.4211	2.79515	.64125
	2	16	8.1875	0.75000	.18750
Symptom_knowledge	1	19	7.8421	2.26723	.52014
	2	16	8.3750	0.88506	.22127
Manage_symptoms	1	19	8.0000	2.44949	.56195
	2	16	8.5000	1.09545	.27386
Social_care	1	19	7.1579	1.97943	.45411
	2	16	7.5000	1.78885	.44721
Spiritual_care	1	19	6.4737	2.09148	.47982
	2	16	7.4375	1.86078	.46519
Multiprofessional	1	19	7.7895	2.07040	.47498
	2	16	8.7500	1.12546	.28137

Note. Group 1 represents pre-intervention survey data; Group 2 represents post-intervention survey data.

Table 2

Mean Total Group Descriptive Statistics

	Group	*N*	Mean	Std. Deviation	Std. Error Mean
Score	1	19	7.4474	1.92133	.44078
	2	16	8.1252	.94415	.23604

Note. Table displays data from the mean survey score. Group 1 represents pre-intervention survey data; Group 2 represents post-intervention survey data.

Table 3

Independent Samples Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Significance One-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
Score	Equal variances assumed	2.198	.148	-1.285	33	.104	-.67784	.52771	-1.75147	.39579
	Equal variances not assumed			-1.356	27.127	.093	-.67784	.50000	-1.70354	.34786

Table 4

Perceived Clinical Usefulness

Themes	*n*	Examples
Provided guidance	6	“It helps lay out the guidelines for what we need to look for and apply when taking care of comfort patients”
Useful for nurses who do not frequently deliver end-of-life care	5	“I think the comfort care bundle is extremely useful for nurses who are not used to caring for patients on comfort measures”
Care consistency	2	“It is very easy to forget some things we should be doing in our care for these patients”
Useful in providing family care	3	“It serves as a great guide when dealing with a patient and their family at the end of their life”
Process limitations	2	“I did forget to regularly look over the sheet”

Note. Exemplars of key patterns of perception identified and categorized by theme.