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# Home Healthcare Nurse Knowledge of Palliative Care and Hospice: A Quality Improvement Project

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**Home Healthcare Nurse Knowledge of Palliative Care and Hospice:**

**A Quality Improvement Project**

Alyse Jewel McGarraugh

Regis University

706C Capstone Project

Dr. Lora Claywell

04/29/2023

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## Executive Summary

### Nurse Knowledge of Hospice and Palliative Care

**Problem:** Home Healthcare (HHC) nurses in a clinical setting can identify patients who may qualify for palliative care or hospice if they know the difference and understand the benefits. A literature review confirmed a need for increased palliative care and hospice referrals. Home healthcare nurses can assist by providing the information. This correlated with increased knowledge, leading to the PICO question: Compared to palliative care nurses with no educational intervention, will an evidence-based educational intervention that explains the difference between palliative care and hospice increase home healthcare nurses' knowledge, as measured by a pre-survey and post-survey and a post-survey in 30 days using a Likert Scale format?

**Purpose:** To determine if providing education about palliative care and hospice to the home healthcare nursing staff will increase their knowledge of the difference between palliative care and hospice.

**Goal:** The project's primary goal was to increase the home healthcare nurse's knowledge of the difference between palliative care and hospice.

**Objectives:** To reach these goals, expected outputs included at least home healthcare nurses completing the pre-and post-surveys and 29 nurses participating in the educational module.

**Plan:** This project started with an extensive literature review and needs assessment. The next step involved locating evidence-based educational material and obtaining permission to use this material to develop a module. This project was entirely virtual, using an online platform. An evidence-based educational module was designed with the use of an edited version of Foundations of Patient Care, Palliative Care presentation, and use of Palliative Performance Scale (PPS) as well as Edmonton Symptom Assessment System (ESAS) tools to assist the home healthcare nurse in identifying patient's that may qualify for palliative care or hospice.

The project was presented to the Regis DNP project panel and Institutional Review Board (IRB) for approval. Once the project was approved, pre-intervention surveys were distributed from mid-November 2022 to mid-December 2022. Once the pre-intervention surveys were closed, the second post-intervention survey was opened from mid-December 2022 to mid-January 2023. During the Spring of 2023, the collected data was analyzed.

**Outcomes and Results:** A paired sample t-test compared the pre-test to the two post-tests. The p-value and the shift in mean scores indicated that the educational module intervention effectively improved the mean score. The mean scores were the same between the first and second post-test, showing that the participants seemed to retain the information.

**Implications for Change:** This project supports that using an evidence-based educational module increased home healthcare nurses' knowledge of the difference between palliative care and hospice. Continued research to modify the module will keep the nurses updated on the requirements and the changes made within the palliative care and hospice requirements.

## Acknowledgments

I want to thank my children for all their love and support. I could not have done this without them. Love you to the moon and back! I want to extend a very special thank you to my cohort group.

I want to extend a very special thank you to Dr. Lora Claywell for her patience, guidance, and encouragement throughout this process. I appreciate her efforts in reviewing, editing, and guiding this project; without her help, this would not have been possible. All the course instructors at Regis University were instrumental and an inspiration in my completion of this project.

## Table of Contents

<i>Copyright .....</i>	<i>i</i>
<i>Executive Summary .....</i>	<i>ii</i>
<i>Acknowledgments .....</i>	<i>iii</i>
<i>Nurse Knowledge of Hospice and Palliative Care .....</i>	<i>1</i>
<i>Problem Recognition and Definition .....</i>	<i>1</i>
Statement of Purpose .....	3
Problem Statement.....	4
PICO Question .....	5
Project Significance, Scope, and Rationale .....	5
Theoretical Foundation for Project and Change.....	6
Literature Review .....	8
Background of the Problem.....	9
Systematic Review of the Literature.....	10
<i>Project Plan and Evaluation .....</i>	<i>15</i>
Market & Risk Analysis .....	15
Driving/Restraining Forces.....	16
Project Need, Resources, and Sustainability .....	16
Feasibility, Risks, and Unintended Consequences .....	17
Stakeholders and Project Team .....	18
Cost-Benefit Analysis .....	18
Mission and Vision.....	18
Goals .....	19
Process Outcomes and Objectives .....	20
Logic Model.....	21
Needs, Resources & Sustainability .....	23
Population & Sampling .....	24
Setting for the EBP project.....	24
Methodology and Measurement.....	25
Procedures.....	26
<i>Project Findings and Results .....</i>	<i>31</i>
Demographics of the Sample .....	32
Answering the PICO Question.....	32
Reliability of Findings .....	33

<b><i>References</i></b> .....	<b>35</b>
<b>Appendix A</b> .....	<b>44</b>
<b>Appendix B</b> .....	<b>45</b>
<b>Appendix C</b> .....	<b>46</b>
<b>Appendix D</b> .....	<b>47</b>
<b>Appendix E</b> .....	<b>48</b>
<b>Appendix F</b> .....	<b>49</b>
<b>Appendix G</b> .....	<b>50</b>
<b>Appendix H</b> .....	<b>51</b>
<b>Appendix I</b> .....	<b>52</b>
<b>Appendix J</b> .....	<b>53</b>
<b>Appendix K</b> .....	<b>54</b>

### **Nurse Knowledge of Hospice and Palliative Care**

Transitioning from curative treatment to palliative care or hospice can be difficult for nurses, patients, and their families. Palliative care is accessible to patients undergoing active therapy, emphasizing enhancing the quality of life. Hospice is available to those who no longer wish to pursue curative treatment and prefer to concentrate on comfort. According to Moir et al. (2015), patients and their families can benefit from nurses who possess knowledge of the benefits and distinctions between hospice and palliative care. This knowledge can facilitate a smoother transition in the direction of care when healthcare goals change, highlighting the importance of home healthcare nurses' understanding of hospice and palliative care. However, many individuals only use palliative care or hospice near the end of their lifetimes, thus failing to maximize these benefits (Moir et al., 2015). According to Gray, Curry, and Considine (2017), home healthcare nurses get to know their patients and can detect clinical deterioration through simple changes in heart rate, blood pressure, or temperature. Because of the various situations they are exposed to, they have developed unique skills in addressing multiple healthcare needs (Brant, 2018). Nurses are at the forefront of making care plan recommendations because they can respond to their intuition (Padilla & Mayo, 2017). These recommendations may include recommending palliative care or hospice services if the nurse believes they are eligible. Nurses who are skilled and at ease recognizing or communicating palliative care and hospice with patients and families may improve these patients' quality of life (QOL) in any setting (Moir et al., 2015). The level of training received by all healthcare providers will determine the success of palliative care and hospice, allowing for a smooth transition for the patient (Brant, 2018).

### **Problem Recognition and Definition**

There is a common misperception between patients and healthcare workers that palliative care and hospice are the same regarding end-of-life care. Home healthcare (HHC) nurses can deliver accurate information and propose referrals to palliative care or hospice to the patient's primary care provider as soon as they recognize a change in the patient's condition (Kirk et al., 2019).

The National Hospice and Palliative Care Organization (NHPCO) (2021) publishes periodic reports on hospice status in the United States. According to their most recent information, Americans who receive hospice spend an average of twenty-four days in the program. That amounts to less than one-third of the recommended service. Nearly 34% of Americans who receive hospice receive less than 180 days. Furthermore, 28% of patients receive hospice care for less than a week (NHPCO, 2021). The two main reasons patients and their families receive insufficient hospice care are prognostication and unfamiliarity. It can be difficult for doctors to predict how long patients will live, and they may overestimate their prognosis due to optimism (Busa, 2022). Many patients and families are unaware of hospice, what it involves when initiated, and how it benefits them and their loved ones. Since many families are unfamiliar with hospice, they are not always sure when to request it (Moir et al., 2005).

Sterling et al. (2020) state that home healthcare nurses are crucial in preventing unnecessary hospitalizations and fatalities by providing quality care to patients in their homes. Home healthcare has emerged as an alternative to in-patient hospitalization since patients historically are released from the hospital sooner than in the past. Fjortoft, Oksholm, Delmar, Forland, and Alvsvag (2020) found that when patients are released from the hospital too soon, their healthcare issues tend to be more severe. Home healthcare nurses play an essential role in caring for patients at home, reducing hospital admissions and deaths (Sterling et al., 2020). With

patients being discharged from the hospital earlier than before, home healthcare has become an alternative solution to hospital care. Earlier discharges make the patients' problems more complex (Fjortoft et al., 2020). Nurses are becoming very influential in suggesting referrals to palliative care earlier in the disease process and can recommend a referral if they understand the benefit (Malloy et al., 2010). If nurses had additional education, they could monitor patients and determine if they would be a good candidates for palliative care or hospice. By providing an educational opportunity to the nursing staff, the nurse will be better prepared to explain the benefit of palliative care and hospice services to the patient and family.

This topic addresses quality improvement needs from a systems-wide perspective (Essential II) concerning the DNP role, identifying gaps in practice from a broader perspective that extends beyond the individual patient or population. By utilizing quality improvement principles and techniques, the DNP-prepared advanced practice registered nurse (APRN) can facilitate the incorporation of integrative modalities into systems and evaluate changes made (Zaccagnini & Pechacek, 2021). Even with complex and unstable medical demands, hospitals are discharging patients earlier and keeping them at home longer, according to home healthcare nurses, who report seeing patients with higher acuity levels than ten years ago (Fjortoft et al., 2020).

### **Statement of Purpose**

The purpose of this DNP capstone project was to present a proposal for a quality improvement project that aims to increase home healthcare nurses' perceived knowledge and skill related to the differences between palliative care and hospice care services. Apprehension and a lack of education among home healthcare nurses when speaking with patients and families may have a negative impact on the transition to other care services (Moir et al., 2015).

**Problem Statement**

A prevalent misconception exists among patients and healthcare professionals that palliative care and hospice are equivalent in terms of end-of-life care. According to Kirk et al. (2019), when home healthcare nurses observe changes in the patient's condition, they can provide dependable guidance and recommend palliative care or hospice referral to the primary care provider. The World Health Organization (WHO) recommends palliative care as an integral component of patient-centered health services (2019). Whether physical, psychological, social, or spiritual, it is a universal ethical obligation to alleviate severe suffering caused by poor health. Therefore, palliative care may be necessary and available at all levels of care, regardless of the disease-causing distress. According to Taber, Ellis, Reglain, Ellington, and Ferrer (2019), palliative care provides an extra layer of care. The knowledge level of hospice and palliative care in home healthcare has yet to be extensively explored.

Palliative care is any care aimed at improving the quality of life for people with serious illnesses and supporting their families, managing patients' pain and symptom burden, and addressing psychosocial issues while respecting the goals and needs of patients and families. Palliative care is recommended starting at the time of diagnosis and regardless of whether patients pursue life-sustaining or "curative" treatments. Some examples include cardiovascular disease, cancer, major organ failure, drug-resistant tuberculosis, severe burns, end-stage chronic illness, acute trauma, or extreme frailty of old age (WHO, 2019; Soikkeli-Jalonen et al., 2019). The numerous advantages of receiving palliative care improve many aspects of life, including mood and lower healthcare costs.

On the other hand, the hospice approach prioritizes the patient's comfort, dignity, and personal development during the final stages of life. This approach considers the biomedical,

psychosocial, practical, and spiritual aspects of the dying process, places a greater emphasis on quality of life and healing, and places a greater emphasis on strengthening interpersonal relationships rather than attempting to prolong the dying process (Fine, 2018). To achieve these objectives, expertise in pain and symptom management and a thorough understanding of intrapersonal and interpersonal dynamics at this unique point in the human life cycle are required (Wallerstedt et al., 2018). Furthermore, hospice promotes the well-being of those identified as family and in primary caregiving roles and provides bereavement care for survivors for thirteen months after the patient's death (Fine, 2018).

### **PICO Question**

This project employed a Population/Patient/Problem-Intervention-Comparison-Outcome "PICO" format. The population engaged was home healthcare nurses (RNs/LPNs). The intervention was the implementation of an evidence-based educational module describing palliative care and hospice and explaining the difference between palliative care and hospice. The comparison correlated with nurses that did not participate in the educational intervention. The outcome was demonstrated via the Measurement Tool, a pre-and post-survey using a Likert scale format to determine if the education intervention was successful.

The PICO question is:

Compared to home healthcare nurses with no educational intervention, will an evidence-based educational intervention that explains the difference between palliative care and hospice increase home healthcare nurses' knowledge, as measured by a pre-survey and post-survey/30-day post-survey using a Likert Scale format?

### **Project Significance, Scope, and Rationale**

As previously noted, home healthcare nurses are in an ideal position to recognize patient health status changes. This project focused on clarifying the differences between hospice and palliative care. The intended outcome is to see if providing additional education to home healthcare nurses improves their perceived level of knowledge of palliative care and hospice. This outcome is sensitive to nurses, patients, and the organization. The nurse will understand the distinction between hospice and palliative care and will be able to explain it to the patient. The palliative care and hospice team will provide additional assistance to the patient. More referrals will benefit the organization by increasing its profit margin. The DNP student/investigator is aware of a knowledge gap in the current practice of home healthcare nursing on the advantages of palliative care and hospice, their philosophies, and their eligibility requirements for patients with chronic illnesses. Unfortunately, patients' avoidance of palliative care and hospice is because patients, families, and healthcare professionals are either unaware of the distinctions or have false impressions about them. Providing education about palliative care and hospice to the home healthcare nursing staff may better prepare the nurses to be more helpful to those who must make decisions about the care of themselves or a loved one (Kirk et al., 2019).

Once educated on hospice and palliative care, the nurse can recommend referrals, increasing the patient's quality of life. This was a purposive small-scale quality improvement project in one home healthcare organization in the Fall of 2022. A total of ten home healthcare nurses participated in the pre-survey and first post-survey, with three nurses completing the second post-survey. It is presented that an educational module will increase home healthcare nurse knowledge as measured by the surveys.

### **Theoretical Foundation for Project and Change**

The Relationship-Based Care Theory is a theoretical framework applied to this project. The theory is based on relationship-centered care, which emphasizes the essential social process registered nurses engage in when identifying serious illnesses, initiating discussions about care goals, facilitating care transitions, and providing recommendations for primary care providers (Peacock-Johnson, 2018). At the center of relationship-based care is the concept of caring. Based on the Theory of Human Caring by Watson (1988) and the middle range Theory of Caring by Swanson (1993), the model includes dimensions of leadership, teamwork, professional practice, care delivery, resources, and outcomes (Koloroutis, 2004). Home healthcare nurses support care transitions with wisdom and knowledge by identifying illness trajectory changes and being alert to diminishing quality of life. Home healthcare nurses are skilled at engaging patients, families, and the team, providing care in the home for as long as feasible, navigating complex systems of care, and ultimately transferring and guiding care to other providers and settings. These are examples of relationship-centered care. An essential component of delivering high-quality care requires that from the time of diagnosis, RNs play a crucial role in guiding discussions about goals of care (GOC) and facilitating transitions to comfort-focused care, such as palliative and hospice programs for seriously ill patients and their families (Ferrell et al., 2018). Home healthcare nurses, with their exclusive view into their patients' personal lives, are essential for meeting this objective.

Jean Watson's Theory of Human Caring was an ethical framework theory also applied to this project. The four components of her caring philosophy are nursing acts, people, health, and the environment. Nursing professionals cultivate empathy, which helps the patient and the home healthcare nurse by focusing on the importance of human compassion, the transpersonal relationship between those caring for one another, and their capacity for healing. Clients and

family members frequently provide personal information about their health situations during home visits. The foundation of Watson's caring-healing paradigm is "what it means to be human." Home healthcare nurses focus on listening and talking with patients; they are authentic and allow the expression of feelings (Wei & Watson, 2019).

Another theoretical framework applied to this DNP undertaking is Knowles's Theory of Adult Learning. In adult education, this theory is best known for conceptualizing how and why adults learn. Adult education differs from that of youth. If adult learners are given the opportunity to learn, they must believe their participation is worthwhile (Dong et al., 2021). Adult learners want to know why they are learning something rather than being told to do so. Adult learners bring their own life experiences to the table, which can impact their comprehension. Adult learners appreciate having "control" over their educational programs and personal growth. They prefer learning that is pertinent to them and has a distinct purpose (Dong et al., 2021). Introducing an educational module concentrating on adult learners aligns with this theory. Home healthcare nurses want to acquire new knowledge to resolve issues promptly. They maintain an emphasis on education while utilizing their relevant experience. Home healthcare nurses are highly motivated, independent, and adept at problem-solving. Historically, home healthcare nurses have more experience than recent graduates due to their responsibility and discretion when treating patients in their residences.

## **Literature Review**

A comprehensive literature review utilizing Google Scholar, Medline, CINAHL, Cochrane Database, and PubMed occurred. Key terms included palliative care and hospice referrals, delay of referrals to palliative care and hospice, Veterans and end-of-life, and misperceptions of palliative care and hospice. Primary search terms included home healthcare

nurse, communication, end-of-life care, the difference in palliative care and hospice, palliative care stigma, hospice benefit, hospice eligibility, prognostic uncertainty, advanced care planning, knowledge, nurses, clinical deterioration recognition, palliative care misconceptions, intuition, palliative care referrals, hospice referrals, communication. Exclusion criteria included articles dated before 2017, articles not written in English, and limited studies outside the United States. The initial database yielded 500 results and was narrowed down after including limiters. One hundred twenty-eight articles were reviewed. After careful review, 22 articles were selected for inclusion in this project's literature frame of reference.

The Seven-Tiered Levels of Evidence model was used to grade the final 22 articles selected for the systematic review table (Houser & Oman, 2011). One of these articles was Level I: Evidence obtained from a systematic review or meta-analysis of relevant randomized controlled trials (RCT) or evidence-based clinical practice guidelines based on a systematic review of RCTs; the vast majority (13) was from Level III: Evidence obtained from well-designed controlled trials without randomization (quasi-experimental studies), six of the articles were level IV: Evidence obtained from well-designed case-control and cohort studies (non-experimental studies), and two articles were considered Level V: Evidence obtained from systematic reviews of descriptive and qualitative studies (Appendix A).

### **Background of the Problem**

Care providers, patients, and families misunderstand the distinction between palliative care and hospice. Many healthcare professionals, nurses, and patients and their families may need to realize that palliative care and disease-directed therapy can be administered concurrently (Hawley, 2016). Not knowing palliative care and hospice exist, not knowing the difference between palliative care and hospice, and a patient's reluctance to be referred by a healthcare

provider are well-described reasons (2016). Patients and families may hesitate to receive palliative care due to its association with death. Specifically, if home healthcare nurses understand palliative care or hospice, they can recommend it. The nurses may be able to make this suggestion if they have received additional training.

### **Systematic Review of the Literature**

The present study explores several themes: the definition of palliative care, comprehension of hospice care, the intuitive abilities of home healthcare nurses, common misperceptions surrounding palliative care, and the prognostication process. The themes used are palliative care defined, understanding hospice, home healthcare nurse intuition, misperceptions, and prognostication.

### **Palliative Care Defined**

Palliative care is a specialist care team of physicians, nurses, social workers, and chaplains that focus on managing pain and symptoms, promoting illness understanding and spiritual distress, enabling treatment decisions aligned with care goals, and facilitating care coordination across settings and specialties at any stage of a serious illness (Flieger, Chui & Koch-Weser, 2020). It is designed to enhance patients and their family's quality of life (2020). It is a medical specialty offered at all ages and stages of illness and is administered with curative care (CAPC, 2022). Palliative care meets the long-term needs of patients and their families by providing continuous, coordinated, and high-quality care in the face of a terminal illness (Fine, 2018). The palliative care team addresses the severe disease's episodic, complicated, and long-term nature by focusing on patient and family needs rather than prognosis. It improves the quality of care, monitors and supports family caregivers, and can relieve caregiver role tension. (van Driel, Becque, Reijtjens, van der Heide, & Witkamp, 2020) Because most serious illnesses

develop and worsen over time, the trajectory is rarely predictable or continuous. Patients experience periods of relative stability interspersed with shorter crisis or disease exacerbation periods. Early integration of palliative care is associated with better patient quality of life, better understanding and communication about illness, improved access to homecare and emotional and spiritual supports, increased patient well-being and dignity, improved care at the time of death and decreased symptom burden (Quest & Lamba, 2022). Studies show that palliative care reduces hospital length of stay and cost per episode of care, primarily by reducing unnecessary tests and nonbeneficial treatments; in some cases, it may prolong life (2022). Recent studies of symptom burden among cancer patients discovered decreased crisis care utilization and improved well-being and survival compared to the control group of those who did not receive palliative care (CAPC, 2022). In addition, research indicates that home healthcare nurses are in an ideal position to recognize when their patients begin exhibiting symptoms that may indicate they would benefit from a palliative care or hospice referral.

Palliative care in home healthcare is becoming increasingly crucial in post-acute care, especially for those who wish to avoid nursing home placement or readmission (2022). Because home healthcare nurses routinely see their patients several times weekly, they can recognize subtle changes that may indicate a decline in their physical and mental health (Gray, Curry & Considine, 2017). Murali et al. (2022) concur that palliative care has been shown to have positive outcomes in various healthcare settings, such as decreased symptom burden and improved quality of life, which can reduce further healthcare utilization. Since palliative care and hospice are misunderstood, patients and caregivers frequently require clarification regarding their benefits. Their concerns about losing comprehensive medical care after accepting palliative care must be clarified in detail to ensure everything is clear (Murali et al., 2022). When home

healthcare nurses are aware of the palliative care and hospice admission criteria, this increased knowledge of the benefits offered when patients access palliative care will deliver high-quality patient care (Soikkeli-Jalonen et al., 2019).

### **Understanding Hospice**

Hospice is an alternative for people with terminal illnesses and a life expectancy of six months or less. In contrast, palliative care is available for people with chronic, severe, and life-limiting conditions. The alternatives for providing end-of-life care should be known to all nurses (Casey, 2019). Fine (2018) points out that nurses should also understand the eligibility criteria for hospice services. Similarly, Kline and Panosky (2017) discuss the requirements of Medicare and the misunderstanding of the eligibility criteria. Toh, Hollen, Ang, Lee, and Devi (2020) noted that the communication difficulties nurses experience with patients and families are increased in young novice nurses who embraced a religious experience and had more difficulty communicating with patients. Healthcare services are critical in caring for patients at home, reducing hospital admissions and deaths (Sterling et al., 2020). Educating nurses on the differences between hospice and palliative care will create new awareness in the community (2020).

### **Home Healthcare Nurse Intuition**

Ofsti, Devik, Enmarker, and Olsen (2020) found that the home healthcare nurses did not use tools or guidelines but used observation and interpretation, performing a complex process guided by their experience and knowledge of the patient and the patient's individual and contextual circumstances (Joren de Veer, Groot, and Francke, 2021). If an assessment tool is needed, Stober, Hager, and Rinker (2022) found that using the Edmonton Symptom Assessment Scale (ESAS-r) (Appendix A) is a tool developed to identify symptoms and provide symptom

control preventing unnecessary hospitalizations and reduce healthcare costs in patients with advancing disease. Another assessment tool is the Palliative Performance Scale (PPS) (Appendix B). When combined with a provider's clinical judgment familiar with patients' condition, history, goals and values, and social support circumstances, this scale can help predict survival in patients with various diseases (Fine, 2018). By providing these tools, home healthcare nurses will have a guideline to determine if a patient is starting to decline. The education module included a copy of the PPS and ESAS tools.

### **Misperceptions and Prognostication**

Inadequate understanding and misconceptions cause fear among patients and have been identified as barriers to palliative care and hospice usage. Many people wrongly believe palliative care is the same as hospice or associate it only with the end of life (Taber et al., 2019). The need for clarity concerning how to interpret and implement the concept of palliative care in practice can result in difficulties for healthcare professionals in identifying patients who would benefit from it. This can lead to a delay in meeting patients' needs (Wallerstedt et al., 2018). According to Flieger et al. (2020), these misunderstandings may also impact doctors, who have expressed concern that offering palliative care to patients may result in a loss of hope or cause the patient to believe their provider is abandoning them. Similarly, Schneider, Karlekar, Crispens, Prescott, and Brown (2018) found that specialist palliative care interventions have improved quality of life and decreased the number of procedures, emergency room visits, hospital admissions, and ICU stays.

A primary reason for underutilizing palliative care or hospice is delayed referrals by the physician determining the terminal prognosis. Physicians may hesitate to mention hospice for fear of saying it too soon, a lack of training in a compassionate discussion of bad news, and

difficulty accurately predicting a prognosis of six months or less (Fine, 2018). Barriers at the patient level include a misunderstanding of what end-of-life care entails. Patients and families may need to be more optimistic in estimating and denying terminal prognoses (Kirk et al., 2019).

Kline and Panosky (2017) agreed on the barriers of uncertain prognosis and service misunderstanding. People use phrases like "giving up" and "ending the fight" to describe palliative care and hospice practices (Moir et al., 2015). While assessing their objectives and care requirements, palliative care patients can continue pursuing curative treatments (2015). Although current recommendations state that their primary care practitioner should start this dialogue, according to Busa (2022), many countries believe it is the responsibility of patients' families to do so. Home healthcare services are essential for caring for patients at home and reducing hospital admissions and deaths (Sterling et al., 2020). It is critical to emphasize and concentrate on the benefits it can provide to patients. This misunderstanding frequently makes it difficult for healthcare professionals to initiate conversations with families about palliative care or hospice (Kline & Panosky, 2017). Based on nursing knowledge and intuition, patients will receive additional care anytime during their illness

Communication skills are critical in effectively delivering palliative care and hospice information, according to Malloy et al. (2010), because this is a sensitive subject. Home healthcare nurses are uniquely placed to facilitate this conversation, benefiting the patient and the family. Home healthcare nurses are critical to meeting this goal with their insight into the patients' lives. Similarly, Sullivan, Mann, Mullen, and Chang (2020) agree that engaging patients and families in discussions about treatment goals are beneficial. Patients will be referred sooner and have a better quality of life if the time of referral is reduced by increasing nursing knowledge.

## **Project Plan and Evaluation**

### **Market & Risk Analysis**

A SWOT analysis, or an analysis of strengths, weaknesses, opportunities, and threats, ensure that factors within and outside an organization are assessed (Fortenberry, 2010). This study focuses on home healthcare nurses and palliative care and hospice. An analysis of strengths, weaknesses, opportunities, and threats related to this DNP project is provided in Appendix B.

Several strengths emerged from this DNP project: The organization's management team was very supportive and interested in the project as it addressed a need they had been researching. The nursing staff showed interest in participating in the project; however, only ten of the 29 potential participants participated in the DNP project.

Weaknesses of this project included that the nursing staff needed to be more willing to spend their own time to take part and learn, which increased their lack of motivation. The nursing staff has many time constraints with a heavy workload. Additional weaknesses included staff turnover and the nurse departure before the end of the study, which affected the participation rate for the 2<sup>nd</sup> post-survey in 30 days.

Several opportunities were identified in this DNP project, including that the nurses will develop an understanding of hospice and palliative care, which they can take anywhere; the online module can be taken at home, nurses can educate families, nurses' confidence increases with the education, and organizations can use the module for onboarding.

As with the other components of the SWOT analysis, threats were detected. The identified threats included changes in MCR/MCD regulations, policies and procedures of hospice

and palliative care that may be updated, and lack of access to a module. To duplicate the module is costly, as is the purchase and maintenance of Qualtrics software. See Appendix B.

### **Driving/Restraining Forces**

According to Lewin, the process of change involves first creating the perception that a change is necessary, then advancing toward the new, desired level of behavior, and lastly, establishing the new behavior as the standard (Hussain et al., 2018). The primary motivation behind this project was to assist home healthcare nurses in identifying patients who could potentially benefit from palliative care or hospice services. Home healthcare nurses can explain the difference between hospice and palliative care and provide pertinent and related details to the patient's primary care provider, potentially increasing the number of referrals. A pressing need is increased and timelier referrals to palliative care and hospice services. Research indicates that patients are often not referred to palliative care or hospice due to various factors, including a lack of comprehension regarding the advantages of such care.

As with driving forces, there were restraining forces of this capstone project. Some identified barriers included patients and families being reluctant to listen to this discussion because they believe it will be about "end-of-life care" or their misconception that palliative care or hospice is where people go to die. Many medical professionals are unaware of the distinction between palliative care and hospice, or that additional assistance is available; nurses leave the organization before the completion of the project; nurses only have time to participate if not voluntarily, and the organization provides compensation.

### **Project Need, Resources, and Sustainability**

There were several needs in completing this project. A critical need was support and participation from leadership and administration. There was a need for technological tools that

ensured the delivery of the intervention. This included an online platform for nurses to participate. Technology was also needed to deliver a platform that maintained the participants' anonymity. Nursing participation and support from the DNP mentor were essential in completing this project. The resources required for this project included Qualtrics software, IBM SPSS v28, and Microsoft and Zoom.

The sustainability of this DNP project was identified as information technology (IT) maintaining software updates, updating educational modules, and updating policy and procedures for hospice and palliative care. Nurses will be more likely to participate if paid for their time. Benchmarking is valuable for identifying strengths and weaknesses at all healthcare system levels. This allows organizations to learn from one another and apply best practices by measuring and comparing clinical outcomes across organizations (Wilmington, Belardi, Murante, & Vainieri, 2022). Specific benchmarks the company would like to see are increased knowledge of palliative care and hospice by the home healthcare nursing staff, increased palliative care and hospice referrals, and improved satisfaction levels from patients and families. The organization confirmed the need for this project as they demonstrated the need to identify the gap in nursing knowledge about hospice and palliative care.

### **Feasibility, Risks, and Unintended Consequences**

Several factors impacted the potential feasibility of this project, including DNP student/investigator time, time for administration engagement, Administration/Information Technology support, SPSS Version 28, Qualtrics software, and time needed for data analysis.

There were also risks and possible unintended consequences associated with this project. There was a risk of embarrassment to the participant. There was a risk of the nurse participant becoming upset and not wanting to participate due to the topic of palliative care and hospice.

There was a risk that management would be unsupportive and nurses not being interested in participation. A potential unintended consequence for the project was the continuation and maintenance of Qualtrics software, which is quite expensive to purchase and maintain for the organization.

### **Stakeholders and Project Team**

This project's stakeholders included the organization's CEO, IT, healthcare providers, patients, and families. The project team comprised the DNP student/investigator, the DNP Capstone Project Chair, the DNP Clinical Mentor, and Steve Pantilat, MD.

### **Cost-Benefit Analysis**

A cost-benefit analysis is a powerful tool that demonstrates that the benefit of solving the problem is worth the costs (Zaccagnini & Pechacek, 2021). The direct costs of this project include the Qualtrics software, SPSS v28 software, employee tablet, and educational module. All of these items were of no cost to the DNP student/investigator except for the SPSS v28 software, which costs approximately \$42.00. The university provided free use of the Qualtrics software. The organization provides a table for the employees to use. The owner granted permission to use the educational module at no cost to the DNP student/investigator. Using palliative care or hospice is an effective means of preventing unnecessary hospitalizations. Patients' quality of life improves, increases patient satisfaction, and decreases symptom severity. These benefits may be more significant if interventions are offered earlier in the serious illness (Akhtar et al., 2019). The Indirect costs are difficult to measure other than the donated time from participating nurses (Table II).

### **Mission and Vision**

This project explored the effectiveness of education designed for home healthcare nurses caring for patients and recognizing patients that may qualify for palliative care or hospice. The mission of this capstone project was to enhance self-perceived nursing knowledge related to palliative care and hospice as measured by the survey and demonstrate the efficacy of an educational opportunity to address self-perceived weaknesses and gaps in nursing knowledge related to palliative care and hospice. This was measured by the scores from the Likert Scale formula using Qualtrics.

Outcomes:

- Identify the gap in the home healthcare nurses' understanding of palliative care and hospice as evidenced by the Likert scale scores
- Determine if a nursing education module focused on palliative care and hospice can improve understanding of the distinction between palliative care and hospice.
- Improve the timeliness of palliative care and hospice referrals for seriously ill patients and their families.
- Improve clinician satisfaction by expanding generalist palliative care and hospice knowledge, emphasizing communication across disciplines.

The vision was to increase training and education regarding palliative care and hospice in this nursing community and increase palliative care and hospice referrals and patients' and families' quality of life.

## **Goals**

This quality improvement project aimed to increase the perceived knowledge of palliative care and hospice for the home healthcare nurse by offering additional evidence-based education. With this further education, the home healthcare nurse will recognize when a patient benefits

from palliative care or hospice and explain the program and advantages to the patient or the family. In the long term, beyond the scope of this project, this may increase timelier referrals to palliative care and hospice services.

### **Process Outcomes and Objectives**

Hospice companies that provide community-based palliative care account for roughly half of the providers in the United States, according to the Center for Advance Palliative Care (CAPC, 2022). While many hospices are expanding their service lines to include palliative care, many are struggling to maintain financial sustainability in the current payment environment based primarily on Medicare fee-for-service models (Parker, 2020)

Benchmarking has been recognized as a beneficial approach for evaluating strengths and shortcomings at all healthcare system levels. This enables businesses to monitor and compare clinical outcomes across their organizations to share information and best practices (Willmington, Belardi, Murante, & Vainieri, 2022). Benchmarking in palliative care is difficult to calculate. There are no standards and little available data. Palliative care is measured silently on the money saved from avoiding an ER visit or hospitalization and reducing interventions, including referring specialists or obtaining a specific test (2020). According to the Agency for Healthcare Research and Quality, National Healthcare Quality and Disparities Reports (NHQDR), there are many areas for improvement in home healthcare. In 2019, home healthcare patients who had an emergency department visit without hospitalization in 2018 were 5.5% and 4.7% in 2013. This is rated as *worse than average*. Improvement of oral medication in home healthcare patients was rated *average* (69.5% in 2018, 52.2% in 2013). While Increased referrals for palliative care and hospice and increased patient and family satisfaction are specific goals for

the organization, this educational intervention may help improve the long-term benchmarks; however, measuring them is not part of this project.

### **Logic Model**

According to Zaccagnini and Pechacek (2021), a logic model (Appendix C & D) depicts how the project creator expects the design operation to work. A logic model can be used to create and implement an educational intervention to improve home healthcare nurses' knowledge of palliative care and hospice.

The first stage of the model was to identify the gap that needed to be filled. Since home healthcare nurses are finding themselves in a situation where they spend more time with more complex patients who are being discharged from the hospital earlier, requiring more time to complete complex tasks and conversations about referrals to palliative care or hospice (Fatemi et al., 2019). They can recommend palliative care and hospice services if they have the knowledge to explain the differences and benefits and understand the concepts themselves.

The second phase involved a literature review to identify community needs and assets. As a result, practical education on care delivery for home healthcare nurses was required to increase their knowledge about hospice and palliative care. This enhancement could result in more referrals to palliative care and hospice services. This would benefit both the patient and the company.

Phase three reviewed the anticipated results and their effects. The intended outcomes—home healthcare nurses' increased knowledge and comprehension regarding the distinction between palliative care and hospice are matched with rising patient and family requirements utilizing an evidence-based online learning program. The process outcome revealed that they did

acquire new knowledge and retained this knowledge 30 days later after taking the 2<sup>nd</sup> post-survey.

In phase four, identifying a pre-survey and post-survey appropriate for the home healthcare nurse environment was developed, as was the information email and consent form. The survey was in Likert scale format, and the information page was designed by this DNP student/investigator in Likert scale format. The email was sent to the participants using the Qualtrics software. The management team's recognition of the benefit of providing additional palliative care and hospice education to nurses is yet to be determined.

The strategies identified for phase five included the development of the survey using Qualtrics, which was sent to the targeted home healthcare nurse population. The email contained a link directing the participant to the survey, including a demographic section. The educational module chosen was discovered from a Google Scholar search of hospice and palliative care educational modules. The author of this educational video is Steve Pantilat, MD, the Medical Director of the Palliative Care program at the University of California, San Francisco (UCSF), is the Kates-Burnard and Hellman Distinguished Professor in Palliative Care at UCSF and the division's inaugural Chief of Palliative Medicine, presented 04/21/2015. This is the first of four palliative care and hospice modules presented to medical students at UCSF. Dr. Pantilat. Dr. Pantilat was contacted on 08/03/2022 by email and granted permission to use his training module for this project (Appendix F).

The assumption for the final stage was that home healthcare nurses would have more extensive knowledge after participating in the evidence-based educational opportunity, enabling nurses to understand palliative care and hospice care better and communicate it to their patients. Patients and families will also benefit if referred earlier during their serious illness.

**Needs, Resources & Sustainability**

Several resources were required for this project, including home healthcare nurses and supplies. Nursing staff included full-time, part-time, or as-needed employees who could participate in the surveys and educational module intervention. Nurses to find time to participate in the DNP project. Several online tools were needed for virtual events, pre/post survey development using the Likert Scale format, and the information sheet and consent form development—additionally, collaboration with the head of the nursing department to approve the proposed activity.

With the necessary resources, the DNP student/investigator completed several activities as part of the overall evidence-based educational module and survey development. Using Qualtrics software, the information sheet and surveys were used. An investigation occurred to identify if the organization had a means of conducting a quality assessment process or an internal IRB department. The nurse educator and the vice president for clinical services were contacted for additional information to obtain approval to conduct the DNP project.

In developing the logic model and project, it was hoped that the project would prove beneficial and lead to the continuation of the project beyond the three-month intervention period. In the long term, home healthcare nurse knowledge of hospice and palliative care will lead to an open discussion with the patient and the family by including an educational module in the onboarding process for home healthcare nurses. It was hoped that more timely referrals to hospice and palliative care with assistance from the home healthcare nurse and extend the education module to other departments within the organization, including CNAs and OT/PT.

While successful project implementation was desired, potential constraining factors were considered. These included a one-semester timeline for the intervention and perceptions of nursing staff that they were too busy to participate in the module intervention.

### **Population & Sampling**

The focus population for this project was nurses practicing in the home healthcare setting employed by a national home healthcare organization. The inclusion criteria were that subjects must be registered nurses (RN), or licensed practical nurses (LPN) employed full-time or part-time or on an as-needed (PRN) basis. The exclusion criteria included certified nursing assistants (CNA) and occupational (OT), and physical therapists (PT). Twenty-nine RNs and LPNs specializing in home healthcare employed by a company in Indiana were invited.

### ***Setting for the EBP project***

This purposive sampling technique (non-probability sampling) intentionally selected participants based on inclusion criteria (Laerd, n.d.). The reliability and validity of the method utilized in a capstone project impact the quality of the findings. Reliability is the degree of dependability or precision with which an instrument measures its intended characteristic (Polit, 2010). Before having any chance of being valid, the measurement must be reliable (Rumsey, 2011). The result cannot be considered valid if consistent measurements cannot be obtained for the same object or person under similar conditions (Frost, 2022).

This DNP student/investigator created the specified Measurement Survey Tool. When evaluating content validity, the pre-and post-survey questions were examined to establish if the instrument addressed the whole range of topics and all pertinent features of the content

area (2022). If the module did not address the issues, the objectives, or the theoretical elements of the concept, validity would be at stake.

Researchers determine whether each item contributes and ensure no aspect is overlooked (2022a). The historical effect describes extraneous factors' influence on the study's outcomes. This could include any exposure to learning as an unrelated event that influences the results between pre-and post-intervention periods. Content validity is the extent to which a concept is accurately measured in a quantitative study (Heale & Twycross, 2015). This study explored whether nurses' self-perceived knowledge improved after implementing an EB module. The instrument adequately covered all the content concerning the variables.

Testing can be affected by the pre-survey, influencing the outcomes of the post-survey. Due to familiarity or awareness of the study's purpose, participants may achieve high results. There is no threat to instrumentation as the measures used in the pre-and post-survey phases are the same. Other threats to reliability include participant bias; participants may respond in a way that they think is expected/desired, even though it is entirely confidential (Heale & Twycross, 2015). The setting for this capstone project took place virtually. The nurses were sent a link with the consent form and then asked to click the link in the email to begin the survey.

### **Methodology and Measurement**

This DNP quality improvement project was a one-group before and after the intervention, time-series design using an educational intervention module and associated Likert self-assessment tool developed by this DNP student/investigator. The data collected is interval level. Descriptive and inferential statistics were applied to the data.

The Likert-type scale survey has seven questions:

- I am familiar with palliative care and hospice options for patient care
- I know who is eligible for and who pays for palliative care and hospice
- I know the difference between palliative care and hospice
- I know who makes up a palliative care and hospice team
- I know whom to ask if I think a patient may benefit from palliative care or hospice
- I know enough about palliative care and hospice to decide if the patient qualifies
- I will ask for palliative care or hospice referral services earlier rather than later.

Content validity was measured by evaluation from the DNP clinical mentor, one DNP cohort, and the director of education at the organization. The feedback provided was that they all agreed each question measured the construct.

The standard Likert scale measured participants' responses to the seven survey questions on a one-to-five scale. There are five response options and measurements for the Likert scale: not at all (1), somewhat (2), enough (3), good (4), and great (5). This Likert scale was chosen to measure the participants' perceived knowledge level related to palliative and hospice care before and after an educational module's completion.

## **Procedures**

The pre-survey assesses the nurses' understanding of palliative care and hospice. The nurses will then watch a 15-minute educational module on the distinction between palliative care and hospice. An extensive web-based search for modules explaining the difference between palliative care and hospice services led to the decision to use the Palliative Care module, recognized by the Center to Advance Palliative Care (CAPC, 2022). The module is a component of the University of California, San Francisco Palliative Care Program (2022) and describes the speaker when dealing with a severe or terminal illness. This module addresses

the importance of initiating palliative care early in the disease process and prognostication (Pantilat, 2015).

Immediately after completing the Hospice and Palliative Care education module, the participants were asked to answer the same seven questions as the pre-survey. The same survey was again sent out thirty days post to determine retention of the benefit of the educational intervention.

The outcomes assessed the impact of an evidence-based educational opportunity on home healthcare nurses' knowledge of palliative care and hospice. The education module was the independent variable. The dependent variable was nurses' self-perceived knowledge of palliative care and hospice services after completing the online educational module. Extraneous variables included nursing staff time constraints, willingness to participate, prior learning, specialty experience, skill in using the online format, failure to complete the survey, demographics, and staff experience.

The evidence-based educational intervention *Foundations of Patient Care, Palliative Care, Part I: Introduction module* (<https://www.youtube.com/watch?v=ANllihWQ5rl>) was yielded after a thorough search of Google Scholar, Medline, and PubMed. Dr. Pantilat presents this module as a palliative care expert and a pioneer in transforming the healthcare system and developing innovative programs to improve the care and quality of life of people with serious illnesses and their families. He is the founding Director of the National Palliative Care Quality Network and the Director of UCSF Palliative Care Leadership Center, and he has received numerous awards and recognitions (TEDMED, n.d.).

Dr. Pantilat was contacted via email on 08/03/2022 and granted permission to use his educational module for this project at no cost. In this module, Dr. Pantilat discusses that

palliative care is not end-of-life care and focuses on the quality of life for a serious illness. He defines palliative care and describes why it is so important. He stresses that without palliative care, people receive the care they do not want and from which they will not and cannot benefit, and they do not receive the care they do want, from which they will benefit. In other words, they do not receive the care they are entitled to. He describes hospice as end-of-life care.

Additional evidence-based educational interventions included a copy and a description of the Palliative Performance Scale (PPS) (Appendix E) and the Edmonton Symptom Assessment System (ESAS) (Appendix F). These tools are included to assist the home healthcare nurse identify patients who may qualify for palliative care or hospice. Finally, a hand-out (Appendix G) provides information on hospice and the criteria for hospice eligibility.

The pre-survey assessed the nurses' understanding of palliative care and hospice. The nurses watched a 15-minute evidence-based educational module on the distinction between palliative care and hospice. They read the information on assessment tools to help identify if a patient's clinical condition is changing. As mentioned earlier, the module was a component of the Palliative Care Program at the University of California, San Francisco. (2022). This module discussed the significance of initiating palliative care early in a disease (Pantilat, 2015) (Appendix H). This study demonstrated its validity using identical pre- and post-surveys (Alessandri, Zuffiano & Perinelli, 2017). Immediately after completing the Hospice and Palliative Care education module, the participants were asked to answer the same seven questions as the pre-survey. The same survey was emailed to participants 30 days after the initial survey to determine retention of the benefit of the educational intervention.

**Protection of Human Rights**

Exempt status approval for this project was granted from the Regis University Institutional Review Board (IRB) on 10/28/22. The exempt from review procedures designation indicated a less than minimal risk for the subjects. It is usually reserved for educational interventions or projects that involve teaching patients and families in the clinical setting (Regis University, 2022).

Several crucial duties were required to assure human beings' safety in this study. Confidentiality, avoiding unwanted influence, and avoiding shame were among them. There was concern that although participants do not report to the DNP student/investigator, they may feel compelled to participate in a project at work or believe that doing so will have favorable effects (Mick, 2019). Mick (2019) recommended safeguards for this project, such as including clear language in the informed consent that participants can choose not to participate without penalty, limiting supervisor-employee discussions about the research, and maintaining confidentiality. At the start of the pre-survey, an information sheet informed participants that their participation was voluntary. All communication about the project and the program was handled by this DNP student/investigator, and care was taken, as with the demographic questions, to ensure anonymity. No personally identifying information was collected at any time for participants.

**Instrumentation, Reliability & Validity**

The Measurement Survey Tool (Appendix I) used a Likert-type inventory measuring interval-ranked data. To analyze data, Likert scales generate descriptive and inferential statistics. In this project, the t-test is justified. The repeated measure design results were graphed in a horizontal line format, measuring each question pre-and post-survey (Terry, 2018). This showed the results for each of the seven questions.

There are different approaches to measuring internal consistency reliability; the most widely used method is to compute Cronbach's Alpha. The normal range of values for coefficient alpha is between .00 and +1.00. Higher values reflect better internal consistency. If the scale's variance is much larger than the sum of item variances, which occurs when the items measure the same construct and are correlated, the alpha is closer to 1.0 (Polit, 2010). The results of Cronbach's Alpha are high at .973. This demonstrates that the tool used was highly reliable.

### **Data Collection and Treatment**

The proposed project was a pre-and post-intervention quantity improvement project investigating the efficacy of increasing knowledge levels after viewing an educational module. This project used a paired t-test to measure and compare the statistical differences in participants' knowledge of the difference between palliative care and hospice before and after the survey. The independent variable was the educational module. This variable is nominal and quantitative (Polit, 2010). The dependent variable was nurses' perceived knowledge of the distinction between hospice and palliative care. Interval data specify that the distance between each value on the scale is equivalent. There is no actual zero point on the scale or way to measure ratios. The distances between each value on the scale were meaningful and equal (Valcheva, 2022).

Lastly, home healthcare nurses report they provide nursing care to hospital-discharged patients with a higher degree of illness than before the pandemic. Because home healthcare nurses can detect early changes in a patient's health, they can recommend a referral early in the disease process if they have sufficient knowledge of the differences between palliative care and hospice. This DNP project assessed their palliative care and hospice knowledge through a pre-survey. Following the pre-survey, participants were instructed to view a brief educational module and complete a post-survey. Then, calculations were conducted to determine the efficacy of the

entire process. As previously discussed, the pre and two post-surveys were administered via Qualtrics. The pre-survey was open from November 11, 2022, to December 12, 2022. The second post-survey was open from December 20, 2022, to January 23, 2023. Once data was collected, the DNP student/investigator scored the demographic section, the pre-survey, and the two post-surveys and recorded the scores. All data were entered into Excel; responses to the demographic questions were coded for entry into Excel. Statistical tests were run using SPSS v28.

With the first paired samples t-test, 10 participants completed this part of the project. One email was sent three times to obtain these results. Three participants completed the second post-survey. The participants were asked to create a four-digit code for the month and year of a significant other (MMYY), making it possible to pair the first post-survey to the second post-survey to compare the answers.

### **Project Findings and Results**

Before initiating the project, multiple meetings were held with the organization's nursing leadership to discuss the project's purpose and the recruitment of the participants. Participants were recruited by the nursing managers at the home healthcare agency, and completion of the DNP project was voluntary. Participants were reassured that they did not have to answer questions they did not want to. Informed consent was implied by participation in the survey. Participants were told they could stop the process anytime by closing their browsers. They were reassured that participation would remain anonymous and that their participation was completely voluntary. It was explained to them that picking a 4-number MMYY of a significant other would be possible to pair both to the post-surveys.

A paired samples t-test was used to compare the pre-survey and two post-survey scores. The paired samples t-test was most influential for this study because it compares differences between the variables of the same subject. The DNP student/investigator was looking to assess the difference between the pre-survey and post-survey scores and measure whether they learned anything or retained the information 30 days later. Out of 29 identified participants, ten completed the survey. This is a participation rate of 30%. Of the ten participants that participated in the pre-survey and post-survey, three participated in the second post-survey, which is a 30% participation rate.

### **Demographics of the Sample**

Ten nursing staff members participated in the educational intervention and completed pre- and post-surveys. The predominant educational attainment among the participants was a Bachelor of Science in Nursing (BSN), with six out of ten individuals (60%) holding this degree. Additionally, half of the participants (50%) were registered nurses (RNs) with experience in the field. Six of the ten (60%) nurses had been employed in their current role for a period ranging from 0 to 3 years. On average, the nursing experience of the participants was four years, representing 40% of the total sample. Among the nurses who reported prior training in Palliative Care, 60% indicated no previous experience, while 50% reported no experience in hospice c

### **Answering the PICO Question**

This project sought to answer the PICO question: Compared to home healthcare nurses with no educational intervention, will an evidence-based educational intervention that explains the difference between palliative care and hospice increase home healthcare nurses' knowledge, as measured by a pre-survey and post-survey and a post-survey in 30 days using a Likert Scale format? The inferential analysis looked at the ten participants with paired pre and post-surveys.

The second analysis examined the three participants and compared the first post-survey to the second post-survey results.

A paired sample t-test was used for this project to compare the pre-test to the two post-tests. The p-value determines if there is a difference between two mean scores and if that difference is statistically significant. The first paired-sample t-test compared the pre-test mean score to the first post-test mean score. The results indicated a difference between the two mean scores, which was statistically significant ( $t = -5.914$ ,  $p < .001$ ). The mean score for the pre-test was 2.48, and the mean score for the first post-test was 4.03, showing an increase in the two mean scores from the pre-test to the first post-test. The p-value and the shift in mean scores indicate that the educational module intervention effectively improved the mean score.

The second paired sample t-test compared the pre-test to the second post-test. When comparing the mean of the pre-test to the second post-test, the p-value is  $< .001$ . The statistical proof is ( $t = -5.914$ ,  $p < .001$ ). This demonstrates statistical significance because there is a difference between ( $t = -4.042$ ,  $p < .001$ ).

The third paired sample t-test compared the first and second post-test to determine if any difference could be related to losing the knowledge learned through the intervention. To analyze the two post-tests, the  $p .849$  (normal value  $> 0.050$ ) shows no difference between the first post-test and the second post-test mean score ( $t = .193$ ,  $p .849$ ). Since the mean scores are the same between the first and second post-test, the participants seem to retain the information. The organization can use this information to guide them when the nursing staff needs a refresher.

### **Reliability of Findings**

An internal reliability test was run to determine Cronbach's alpha for the Measurement Tool. Cronbach's Alpha tests the tool's reliability with normal results falling between zero and

one. The results of Cronbach Alpha are high at .973. This demonstrates that the tool used is highly reliable.

This study should be interpreted with some limitations, including the low response rate for initial participation and the second post-survey. Ten of the 29 eligible nurses completed the pre-survey/module/first post-survey, and three completed the second post-survey. This is an overall response rate of 30%. The post-test response was small compared to the pre-test. Future research should include a larger sample size from multiple locations or organizations. There was a limited amount of time to conduct the study.

Recommendations would include testing outside the organization, monitoring the modules and assessment tools for updates, repeating the project with a larger sample size, conduct quarterly post-surveys for one year as a longitudinal study. Future research investigating approaches for improving home healthcare nurse knowledge of palliative care and hospice includes testing outside the organization. This project was limited to one home healthcare organization. This theoretical model warrants testing outside of this small sample size.

This project supports that by using an educational module, home healthcare nurses increased their knowledge of the difference between palliative care and hospice. Implications for change include continuing to use this education platform for all current nurses and adding to the onboarding process for new nurse hires. The rules and regulations will need to be monitored continually for updates or changes to Medicare and Medicaid requirements and policies and procedures for palliative care and hospice.

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**Appendix A**

## Level of Evidence Table

Melnik and Fineout-Overholt table (Houser &amp; Oman, 2011)

Level of Evidence	Number of Articles	Authors and Dates
Level I – Systemic Review or Metanalysis	1	Schneider et al. (2018); Taber et al. (2019)
Level II – Randomized Control Trial		
Level III – Controlled Trial Without Randomization	13	Akhtar et al. (2019); Brant (2018); Fine (2018); Fjortoft et al. (2020); Flieger et al. (2020); Joren et al. (2021); Moir et al. (2015); Ofsti et al. (2020); Padilla & Mayo (2018); Sterling et al. (2020); Stober et al. (2022); Wallerstedt et al. (2018); Zaccara et al. (2020)
Level IV – Case-Control or Cohort Study	6	Busa et al. (2022); Gray et al. (2017); Isenberg et al. (2021); Kirk et al. (2019); Kline & Panosky (2017); Sullivan et al. (2021)
Level V – Systematic Review of Qualitative or Descriptive Study	2	Casey (2019); Murali et al. (2022)
Level VI – Qualitative or Descriptive Study	0	
Level VII – Opinion or Consensus	0	

**Appendix B**

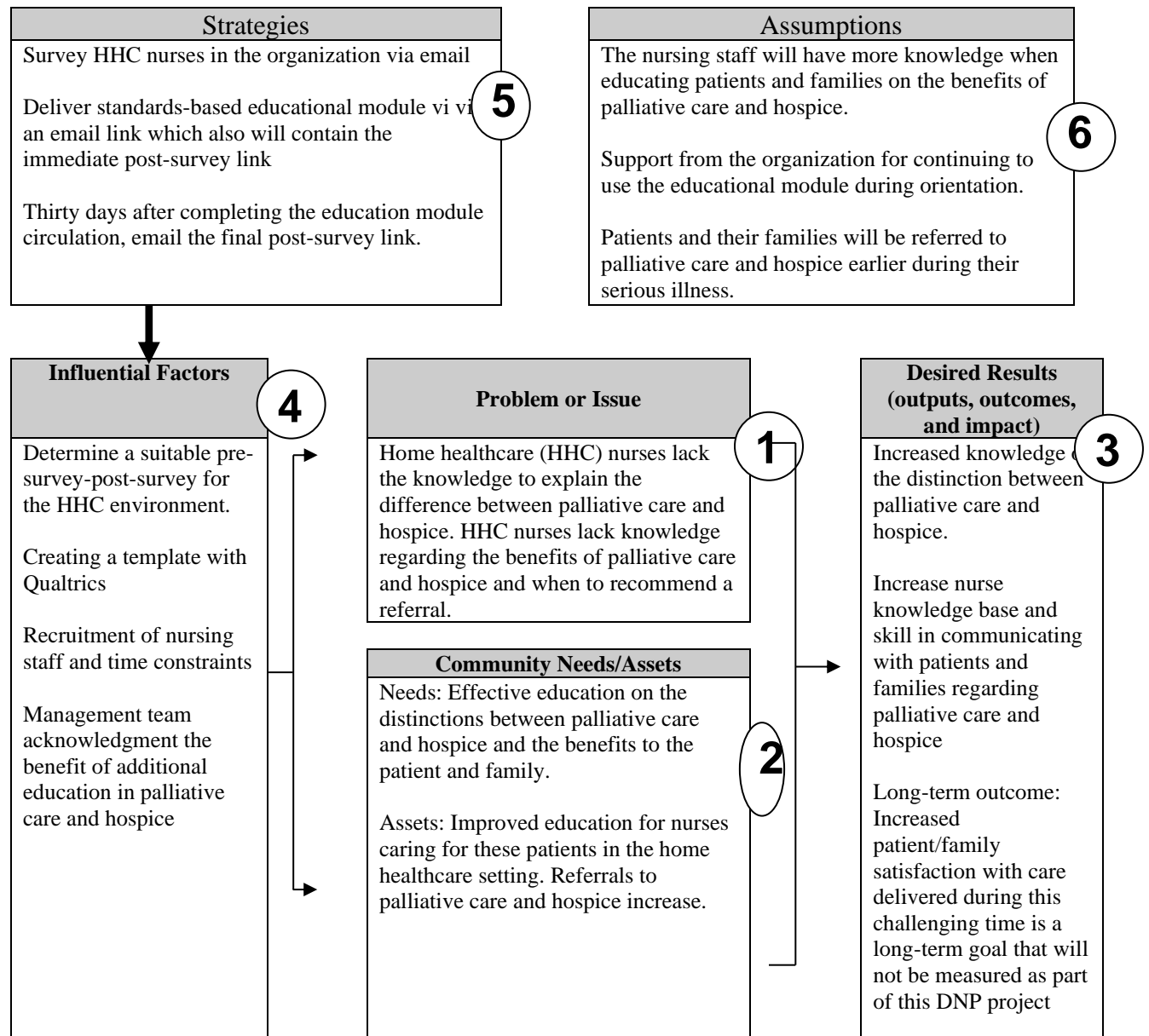
## Strengths, Weakness, Opportunities, Threats (SWOT) Analysis

<p style="text-align: center;"><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• Dedicated management team</li> <li>• Organizational needs are addressed</li> <li>• Dedicated nursing staff</li> </ul>	<p style="text-align: center;"><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• Staff not paid to participate</li> <li>• Time constraints</li> <li>• Nurse departure before end of study</li> <li>• Nurses' lack of motivation</li> <li>• Low participation rate for 2<sup>nd</sup> post-survey</li> </ul>
<p style="text-align: center;"><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Education about hospice and palliative care</li> <li>• Online platform</li> <li>• Nurses educate families</li> <li>• Nurse confidence increases</li> <li>• Use with onboarding</li> </ul>	<p style="text-align: center;"><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Changes in MCR/MCD regulations</li> <li>• Changes in Pol/Proc of hospice and palliative care</li> <li>• Lack of access to a module</li> <li>• Lack of access to Qualtrics software</li> </ul>

## Appendix C

### Logic Model

RESOURCES/INPUTS	ACTIVITIES	OUTPUTS	SHORT & LONG-TERM OUTCOMES	IMPACT
<i>In order to accomplish the Set of activities we will need the following:</i>	<i>In order to address our problem or asset we will accomplish the following activities:</i>	<i>We expect that once accomplished these activities will produce the following evidence of service delivery:</i>	<i>We expect that if accomplished these activities will lead to the following changes in 1-3 then 4-6 years:</i>	<i>We expect that if accomplished these activities will lead to the following changes in 7-10 years:</i>
<ul style="list-style-type: none"> <li>-HHC nurses to participate in surveys and educational module</li> <li>-HHC nurses find time to participate</li> <li>-Online tools for virtual events, pre/post survey, information sheet, Qualtrics access</li> <li>-Contact department leads and influential employees to approve activities</li> <li>-Funding for Qualtrics</li> </ul>	<ul style="list-style-type: none"> <li>-Develop a survey using Qualtrics</li> <li>-Contact Jennifer Hale from Compassus to determine if they have an IRB or quality assessment process</li> <li>-Contact gatekeeper: Deb Polkowski, VP of Clinical Excellence for Home Health, and Brandi Tayloe-Jones, RVP for Indiana Home Health</li> </ul>	<ul style="list-style-type: none"> <li>-30 HHC nurses will watch the educational module and complete pre and post survey</li> <li>Develop a baseline for the level of knowledge the HHC nurse has in understanding the difference between palliative care and hospice</li> </ul>	<ul style="list-style-type: none"> <li>-Short-term: at least 40% of HHC nurses will participate in the evaluation of the nursing staff's knowledge of palliative care and hospice</li> <li>-HHC nurses recognize a change in the patient's health status and discuss it with their nurse manager</li> <li>Long-term: <ul style="list-style-type: none"> <li>-HHC nurse's knowledge of palliative care and hospice leads to an open discussion with patients and family</li> <li>-Include an education module in the onboarding education process for HHC nurses</li> <li>-More timely referrals to palliative care and hospice with the assistance from the HHC nurse</li> <li>-Extend the education module to other departments within the organization (OT/PT, CNA, etc.)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>-Increase patient and family satisfaction with treatment from the nursing staff</li> <li>-Include an education module in the onboarding education process for HHC nurses</li> <li>-More timely referrals to palliative care and hospice with the assistance from the HHC nurse</li> <li>-Extend the education module to other departments within the company (OT/PT etc.)</li> </ul>

**Appendix D****Logic Model Development  
Program Planning Diagram**

**Appendix E**

## Palliative Performance Scale

(permission granted from Victoria Hospice)

						Palliative Performance Scale (PPS)
%	Ambulation	Activity and Evidence of Disease	Self-Care	Intake	Level of Conscious	
100	Full	Normal activity, no evidence of disease	Full	Normal	Full	
90	Full	Normal activity, some evidence of disease	Full	Normal	Full	
80	Full	Normal activity with effort, some evidence of disease	Full	Normal or reduced	Full	
70	Reduced	Unable to do normal work, some evidence of disease	Full	Normal or reduced	Full	
60	Reduced	Unable to do hobby or some housework, significant disease	Occasional assist necessary	Normal or reduced	Full or confusion	
50	Mainly sit/lie	Unable to do any work, extensive disease	Considerable assistance required	Normal or reduced	Full or confusion	
40	Mainly in bed	Unable to do any work, extensive disease	Mainly assistance	Normal or reduced	Full, drowsy, or confusion	
30	Totally bed bound	Unable to do any work, extensive disease	Total care	Reduced	Full, drowsy, or confusion	
20	Totally bed bound	Unable to do any work, extensive disease	Total care	Minimal sips	Full, drowsy, or confusion	
10	Totally bed bound	Unable to do any work, extensive disease	Total care	Mouth care only	Drowsy or coma	
0	Death	—	—	—	—	

**Appendix F**

(permission granted from Alberta Health Services)



Affix patient label within this box

**Edmonton Symptom Assessment System  
Revised (ESAS-r)**
**Please circle the number that best describes how you feel NOW:**

No Pain	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Pain
No Tiredness (Tiredness = lack of energy)	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Tiredness
No Drowsiness (Drowsiness = feeling sleepy)	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Drowsiness
No Nausea	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Nausea
No Lack of Appetite	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Lack of Appetite
No Shortness of Breath	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Shortness of Breath
No Depression (Depression = feeling sad)	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Depression
No Anxiety (Anxiety = feeling nervous)	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Anxiety
Best Wellbeing (Wellbeing = how you feel overall)	0	1	2	3	4	5	6	7	8	9	10	Worst Possible Wellbeing
No _____ Other Problem (For example constipation)	0	1	2	3	4	5	6	7	8	9	10	Worst Possible _____

Patient Name \_\_\_\_\_

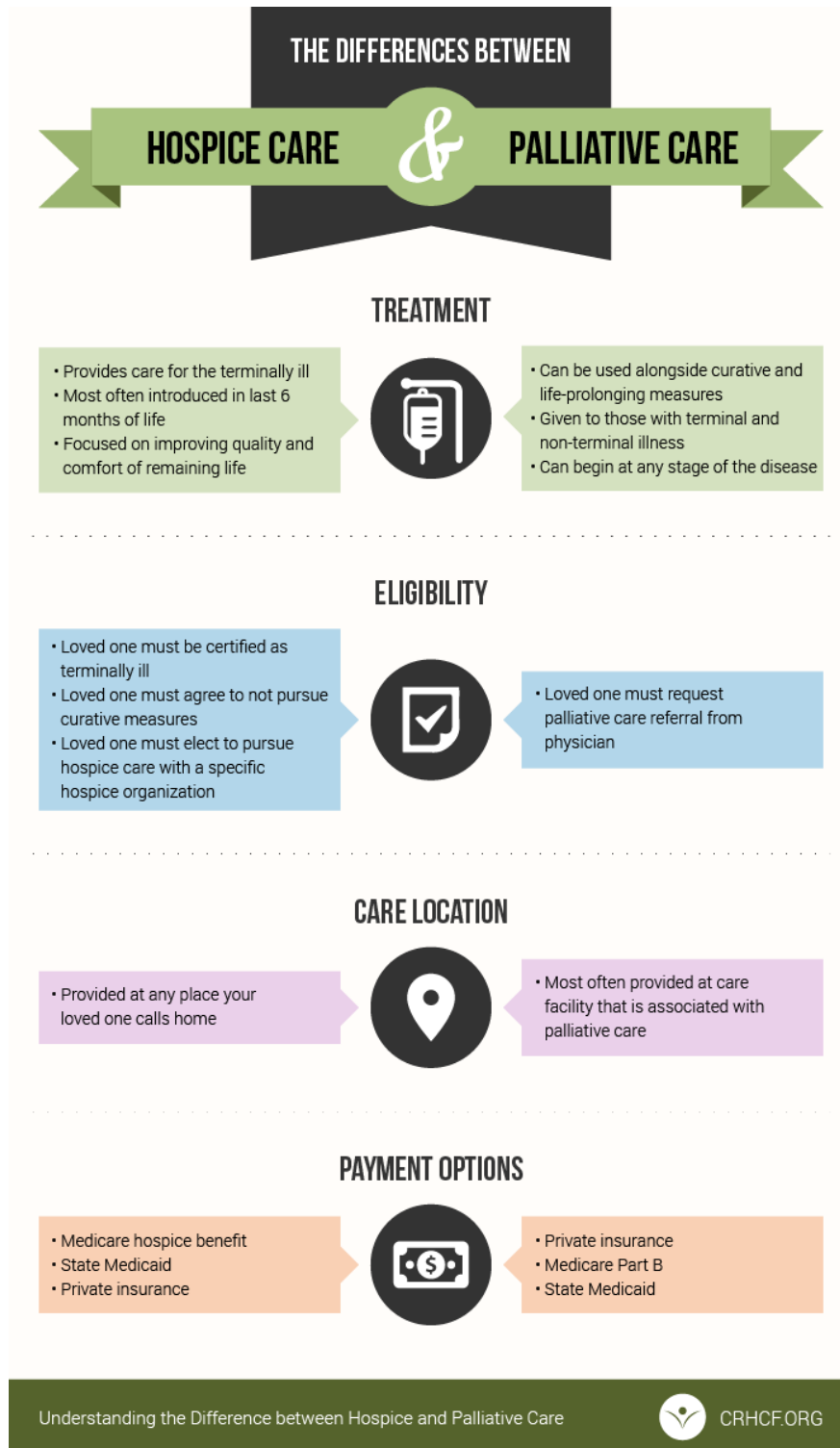
Date (yyyy-Mon-dd)

Time (hh:mm)

Completed by (Check one)

- ☐ Patient  
☐ Family Caregiver  
☐ Health Care Professional Caregiver  
☐ Caregiver-assisted

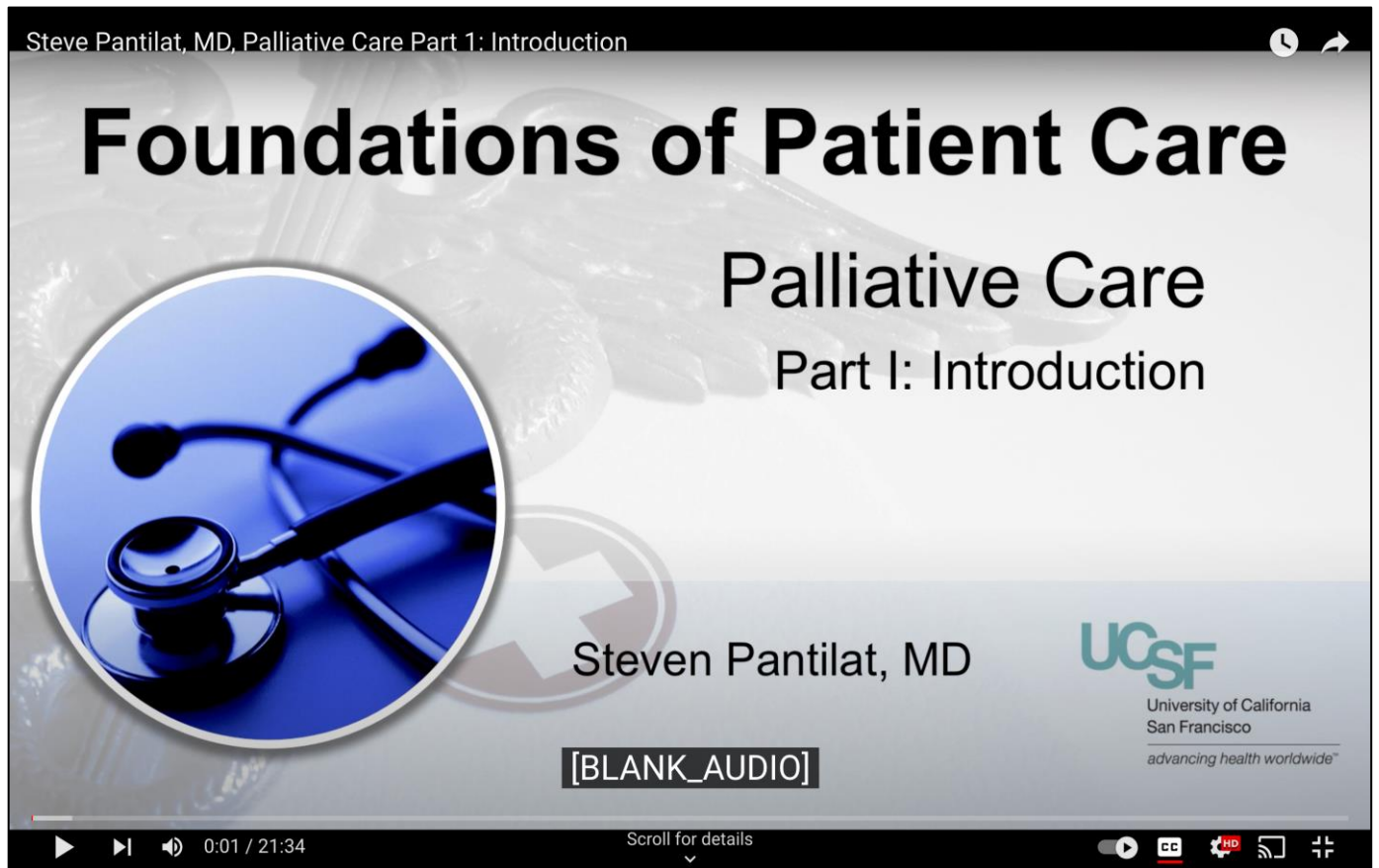
**Body Diagram on Reverse**

**Appendix G****Hospice & Palliative Care Information Sheet**

## Appendix H

Dr. Pantilat's Module (Pantilat, 2015)

(permission granted from Dr. Steven Pantilat)



**Appendix I****Measurement Survey and Measurement Tool**

Rueckert-Hartman College  
for Health Professions

3333 Regis Boulevard, G-8  
Denver, Colorado 80221-1099

303-964-5779  
303-964-5343 fax  
[www.regis.edu](http://www.regis.edu)

60

**Measurement Survey and Measurement Tool**

Flesch-Kincaid Grade Level 7.5

By filling out this form you consent to participate in the survey and in this evidence based research project. Your participation is voluntary and you may cease participation at any time without loss of any benefit to which you are entitled. Not all questions have to be answered. You can choose not to answer any questions, or not to participate, and you can leave the discussion or quit the survey at any time.

In the space next to the sentence circle a number from 1 to 5 depending on what you know about palliative care and hospice.

1. **I am familiar with the palliative care and hospice options for patient care.**  
1 = Not at all    2 = Somewhat    3 = Enough    4 = Good    5 = Great
2. **I know who is eligible for and who pays for palliative care and hospice.**  
1 = Not at all    2 = Somewhat    3 = Enough    4 = Good    5 = Great
3. **I know the difference between palliative care and hospice.**  
1 = Not at all    2 = Somewhat    3 = Enough    4 = Good    5 = Great
4. **I know who makes up a palliative care and hospice team.**  
1 = Not at all    2 = Somewhat    3 = Enough    4 = Good    5 = Great
5. **I know who to ask if I want palliative care or hospice.**  
1 = Not at all    2 = Somewhat    3 = Enough    4 = Good    5 = Great
6. **I know enough about palliative care and hospice to decide if I want it.**  
1 = Not at all    2 = Somewhat    3 = Enough    4 = Good    5 = Great
7. **I might ask for palliative care or hospice earlier rather than later.**  
1 = Not at all    2 = Somewhat    3 = Enough    4 = Good    5 = Great

## Timeframe for DNP Project (Moran, Burson &amp; Conrad, 2020)

[illegible]

**Appendix K**

Budget for DNP capstone project

<b>Item</b>	<b>Researcher Cost</b>	<b>Item</b>	<b>Costs to Replicate</b>
Qualtrics Software	0	Qualtrics Software	1,500-5,000/year
E-Learning Module Creation	0	eLearning Module	\$8,000-10,000
Nurse donated time	0	20 nurses@ \$30.00/hr	\$600.00
SPSS Software	\$42.00	SPSS Software	\$42.00
Nursing Educator Time	0	Nursing Educator Time	\$3,000/training event
IT maintenance/updates	0	IT maintenance/updates	\$4,000/event
Total	\$42.00		\$29,642.00