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Improving Early Utilization of Palliative Care Services to Impact Quality of Life

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Eastern Kentucky University

College of Health Sciences
School of Nursing

Doctor of Nursing Practice Program
DNP Project Final Report

Improving Early Utilization of Palliative Care Services to Impact Quality of Life

DNP Student: April McDonald, MSN, CHPN, FNP-BC
Date: April 9, 2023

EKU
DOCTOR OF NURSING PRACTICE

The DNP Project Final Report is submitted in partial fulfillment of the requirements for the degree of Doctor of Nursing Practice (DNP) at Eastern Kentucky University (EKU).

Student Acknowledgement
"I assert that the content of this DNP Project is my original work. Proper citation, credit, and permissions have been obtained and/or given to all external sources. I retain the right to ownership of my work. I further retain the right to use the work in future publications (i.e., articles, books…) all or any part of my work."

EKU DNP Student: April McDonald, MSN, CHPN, APRN, FNP-BC
Signature: **Date:**
4/9/23
____ __________________

Review & Approval of DNP Project Final Report
The DNP Project Final Report has been reviewed and approved by the DNP Project Team, which includes the DNP Project Chair and the DNP Project Team Member(s). The DNP Project meets the satisfactory requirements for the DNP Project Final Report outlined in the EKU DNP Project Guidelines. The EKU DNP Project Guidelines are based on best practices outlined by the American Association of Colleges of Nursing (AACN) and external evidence-based sources. The DNP Committee develops, maintains, and monitors these standards on behalf of the Department of School of Nursing at Eastern Kentucky University.

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Dedication:

Much appreciation to my husband Robert for believing in me and providing the encouragement to keep going. I love you so much.

Improving Early Utilization of Palliative Care Services to Impact Quality of Life

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NSC 994: DNP Project

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April 9, 2023

Abstract

Despite studies indicating the benefits of palliative care, many barriers remain that prevent individuals from accessing this specialty service. Palliative care needs improved utilization. The purpose of this quality improvement project was to improve the utilization of palliative services and increase general knowledge and confidence among nursing staff within one nursing home facility. In the intervention bundle, training was provided on the use of a Palliative Referral Flowchart and the Palliative Performance Scale (PPS) along with evidence-based materials made available to residents and families. Data was collected pre and post intervention. Knowledge was improved by 26 %. Confidence was improved by 50 %. The distribution of handouts was increased by 100 % with utilization of materials being increased by 20 %. Overall referral rates increased by 71 % in 2023 compared to 2022. The average PPS score of referrals increased to 44 % in 2023 as compared to 36 % in 2022. This indicates that the palliative referrals were placed earlier in the disease process. Collectively, the impact of the project was beneficial to nursing staff and indicates educational efforts should continue to evolve in future nursing practice. Literature continues to support that palliative care can positively impact quality of life.

Keywords: palliative care, referrals, end of life, quality of life

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Improving Early Utilization of Palliative Care Services to Impact Quality of Life

Chronic diseases are among the most prevalent and costly health conditions in the United States with nearly half of all Americans suffering from at least one chronic disease (Raghupathi, & Raghupathi, 2018). Chronic disease such as cancer, heart disease, respiratory diseases, renal impairment, and dementia often lead to hospitalizations, long-term disability, reduced quality of life, and eventually death. Chronic diseases are responsible for seven out of ten deaths in the United States, killing more than 1.7 million Americans each year (Raghupathi, & Raghupathi, 2018). More than 75% of the $2 trillion spent on public and private healthcare in the past has gone toward chronic diseases (Raghupathi, & Raghupathi, 2018).

According to the Center to Advance Palliative Care (2022) palliative care services are for individuals with chronic, life-limiting, or terminal illnesses with care being focused on providing relief from the symptoms and stress of the illness. The goal is to improve the quality of life for both the patient and the family. Palliative care is usually provided by a specially trained team of doctors, nurses and other specialists who collaborate with a patient's other doctors to provide an extra layer of support. Palliative care is based on the needs of the patient, not on the patient's prognosis. The National Institute on Aging (2022) states it is appropriate at any age or stage in a serious illness and can be provided along with curative treatment.

Although many studies suggest that services such as palliative care can improve quality of life, this specialty service continues to be underutilized (NIA, 2022). There remains a generalized lack of awareness and understanding concerning the role of palliative care. Palliative care is a public necessity and a human right, meaning that people have the right to live free of cruel and degrading side-effects of treatment, the right to nondiscrimination and equal access, as well as the right to information on their condition (Dixe, Santo, Lopes, Catarino, Duarte, Querido, & Laranjeira, 2020).

Palliative care and hospice care have an associated stigma. For example, every year, 1.5 million Americans die in palliative care units (60%), and there are many others who meet the admissibility criteria for these units but are not admitted because of stigma, fears, and misinformation linked to end-of-life care (Dixe et al., 2020). Patients with an advanced disease often receive palliative care late in their illness course, probably due to fear and stigmas attached to palliative care (Dixe et al., 2020).

Declining health and death are often hard to acknowledge and address in healthcare. Ultimately, this can lead to unnecessary suffering, unwanted or futile medical care, and increased medical costs. Patients, families, and healthcare providers often struggle with how to approach these issues (NIA, 2022). Quality of life is important to all individuals and can be impacted in numerous ways when living with a chronic or terminal disease (NIA, 2022). The purpose of this quality improvement project is to improve quality of life for patients by ensuring that the health care team has the knowledge, confidence, skills, and resources to refer patients to palliative care in a timely manner.

Background and Significance

History of Palliative Care

Palliative care stems from the roots of hospice services. Cicely Saunders founded the first modern hospice and was responsible for establishing the discipline and the culture of palliative care (NEJM, 2020). In 1974, Dr. Balfour Mount, a surgical oncologist at The Royal Victoria Hospital of McGill University in Montreal, Canada, coined the term palliative care to avoid the negative connotations of the word hospice in French culture, and introduced Dr. Saunders' innovations into academic teaching hospitals (NEJM, 2020). In 1990, palliative care became recognized as a distinct specialty dedicated to relieving suffering and improving quality of life for patients with life-limiting illness (NEJM, 2020). By 1997, discrepancies were noted between what the American public wanted for end-of-life care and how Americans were experiencing end of life in the United States (NEJM, 2020).

By 2006 the American Board of Medical Specialties (ABMS) and the Accreditation Council for Graduate Medical Education (ACGME) recognized hospice and palliative care as its own specialty (NEJM, 2020). The field of palliative care has shown stunning growth over the last 15 years. Today, more than 1,700 hospitals with 50+ beds have a palliative care team, and palliative care is spreading beyond the hospital into community settings where people with serious illnesses live and need care (CAPC, 2022).

Impact on Population and Healthcare System

Palliative care is significant to the optimization of quality of life for both the patients with serious illness and their families. Palliative care uses purposeful measures to anticipate, treat, and prevent suffering which encompasses the continuum of illnesses including physical, psychosocial, emotional, and spiritual needs of seriously ill patients (Schroeder & Lorenz, 2018). It is the goal and responsibility of the healthcare team to ensure that end of life care is compassionate, affordable, sustainable, and of the best quality possible (Schroeder & Lorenz, 2018). Palliative care impacts the overall population with efforts to provide holistic care throughout the disease course.

Palliative care has demonstrated that it can achieve the health care “Quadruple Aim.” The Quadruple Aim is a framework developed by the Institute for Healthcare Improvement (2022) that describes an approach to optimizing health system performance with the belief that new designs must be developed to simultaneously pursue four dimensions, which is referred to as the “Quadruple Aim”:

- Improving the patient experience of care
- Improving the health of populations
- Reducing the per capita cost of health care
- Preserving the healthcare workforce

Since palliative care helps ensure that resources are matched to patient and family needs and priorities, it results in substantially lower hospital costs, providing patients, hospitals, the health care system, and clinicians with an effective solution to a growing challenge (CAPC, 2022). A study among Medicare beneficiaries with metastatic lung, colorectal, breast, and prostate cancers found that palliative care consultation significantly reduced total health-care costs following intervention (Doyle, 2017). Doyle (2017) reported the average total cost of care for patients after receiving palliative care at any time over the course of their treatment was $6,880 compared to $9,604 for controls ($P < .001$). Moreover, the author reported that the economic effect of palliative care depended on the timing of the consult. Palliative care consultation within 7 days of death decreased health-care costs by $975, whereas palliative care consultation more than 4 weeks from death decreased costs by $5,362 (Doyle, 2017).

By improving care and preventing crises for those at highest risk, palliative care reduces the need for burdensome and costly acute care services while also impacting value. According to the Center to Advance Palliative Care (2022), palliative care teams working in hospitals can:

1. Improve patient and family satisfaction with care.
2. Reduce 30-day readmission rates.
3. Reduce ICU utilization.

4. Can save 9-25% of costs for each inpatient stay through a mixture of shorter length of stay and reduced cost per day.

Regarding palliative care teams working in home-based programs, it can save ACOs, health plans, and health systems as much as $12,000 per person enrolled (CAPC, 2020). It can also reduce emergency department visits, hospital admissions, hospital readmissions, and hospital length of stay (CAPC, 2020). Clearly, there are benefits to all.

Proposed Evidence Based Intervention and Purpose Statement

As the primary investigator with more than seven years' experience in palliative and hospice medicine, it is still apparent that this specialty service needs more availability and education to the community. Communication is essential with patients and family members to address burdensome symptoms while also exploring the individual's healthcare wishes and options for care. Often the misconceptions and lack of awareness for what the palliative specialty is create a barrier to open discussions.

As the primary investigator it is further evident that even in the nursing facility setting where most of the palliative consults take place, consults are placed too late in the disease process and typically are ready to be referred to hospice services. If palliative referrals were implemented earlier, goals of care discussions could take place well before the patient is at the EOL stage. In the primary investigators experience, facility staff often think palliative care is just for patients seeking comfort care only, which is not the case. Staff in these facilities may benefit from more education and clear protocols to utilize.

The purpose of this project will be to implement evidence-based solutions. Resources to streamline the referral process and improve provider knowledge and confidence may ultimately improve quality of life by increasing the number of referrals and promoting earlier referrals. The review of literature in the next section provides supporting evidence for the project intervention.

Review of the Literature

PICOT Question

A formal review of literature was conducted to answer the question, "In appropriate patients, how does palliative care in comparison to standard care effect quality of life?" The databases searched included Academic Search Ultimate, CINAHL Complete, and the Cochrane Database of Systematic Reviews. The keywords used were *palliative care, quality of life,* and *end of life*. The findings were further narrowed by limiting the findings to publications in English, publications within the last 5 years, full text articles, peer reviewed articles, and evidence-based practice. In total 401 studies were found. After completing a hand search of the titles and abstracts 6 studies were selected for inclusion. Search results were proven to be reproducible. All evidence was appraised and constructed into a Hierarchy Table of Evidence (Appendix A) using the Melnyk-Fineout Overholt Rapid Critical Appraisal Forms.

Relevant Studies

Evidence 1

In a systematic review and meta-analysis Jordan et al., (2020) aimed to identify studies that reported the time interval between initiation of specialized palliative care services and death for adults within routine clinical practice. The review sought to explore associated patient service and country characteristics that could potentially influence this duration. Six databases were searched from 1946 through 2019, but later limited to studies published from 2013 to 2018. A total of 169 (N = 169) eligible studies including 11, 996, 479 participants aged 18 or older from 23 countries in any setting were reviewed.

Findings of this systematic review showed the weighted median duration of palliative care until death was 18.9 days. Countries with an elevated level of human development had shorter duration of palliative care than less developed countries. This level I evidence was limited in its definition of palliative care services and the use of length of stay in inclusion criteria. The preponderance of data from high income countries had unclear implications for low and middle-income countries. However, the study was large enough to give significant power to findings. Jordan et al., (2020) concluded that the duration of palliative care before death is much shorter than is supported by research evidence and widely advocated in health care policy (Appendix B; Figure B1). These findings can potentially contribute to this DNP project by providing insight on how to reduce barriers to accessing palliative care and promoting earlier integration alongside active treatment while reducing costs to the healthcare system and maximizing benefits to patients.

Evidence 2

In a scoping review, Senderovich et al., (2020) sought to understand how an integrated approach to palliative care may be influential in the delivery of healthcare amongst an aged population. After searching 4 databases, 15 randomized control trials (RCT's) published between 2000 and 2020 were selected for review. The studies focused on articles implementing palliative care versus usual care using a 95% confidence interval and a significance value ($p < .05$). Findings of the review indicated those under palliative care had better QOL ($p = .020$), less depression ($p = .01$). The palliative approach shown fewer emergency room visits, reductions in hospitalizations and readmissions ($p = .009$), shorter overall stay and significant decrease in Intensive Care Unit (ICU) stay ($p < .001$), without a significant increase in mortality ($p = .09$). This Level I study concludes that earlier integration of palliative care can significantly improve quality of life (Appendix B; Figure B2). This review will assist in the development of models of integrated palliative care and policies that can help serve the needs of the elderly community. It can also guide physicians and familiarize them with the disease trajectory, prognostication uncertainty, and emphasize the importance of advance care planning. The authors recommended further research.

Evidence 3

Temel et al., (2017) evaluated the impact of early integrated palliative care in patients with newly diagnosed lung and gastrointestinal (GI) cancer (Appendix B; Figure B3). Patients were randomly assigned to receive integrated palliative care and oncology care (n = 175) or usual care (n = 175) between May 2011 and July 2015. The palliative care group met with a clinician at least once per month until death. The usual care (UC) group only had palliative care if requested. Multiple surveys assessing quality of life, mood, anxiety, and understanding of prognosis were obtained at baseline, 12 weeks, and 24 weeks. The findings of the Temel et al., (2017) study indicated the mean number of palliative care visits by 24 weeks were 6.54 in the PC group and 0.89 visits in UC group. The palliative group reported a mean 0.39-point increase in FACT-G scores from baseline to 12 weeks compared with UC group who reported a 1.13-point decrease from baseline (Temel et al., 2017). At 24 weeks the palliative group reported a 1.59-point increase in FACT-G scores from baseline whereas UC group reported a 3.40-point decrease from baseline (Temel et al., 2017). PHQ-9 and HADS scores did not differ significantly between the groups (Temel et al., 2017). The palliative group had significantly higher quality of life and lower depression symptoms scores at 2 and 4 months, but not at 6 months, before death (Temel et al., 2017). The palliative group reported knowing prognosis was extremely helpful in making decisions and reported more end of life wishes discussed with oncologists compared to the UC group (Temel et al., 2017).

The participants were not blinded to group assignment and results were diluted as the UC group also could have access to palliative care. This Level II study did not plan a sample size large enough to analyze cancer subgroups which would have been valuable information. It does identify new benefits of integrated palliative care in improving patients' ability to cope with prognosis and enhance end of life care preferences. The authors recommended further research.

Evidence 4

In a RCT, Treasure et al., (2021) examined the differences in study duration, symptom burden, adverse events, and quality of life between those receiving structured palliative care versus supportive usual care by the oncologist (Appendix B; Figure B4). Patients (n = 86) enrolled in Phase 1 clinical trials having solid tumors and their caregivers (n = 39) were randomly assigned to the two intervention groups. Several surveys measuring function, symptoms, caregiver reaction, and quality of life were conducted at baseline, day 32, day 61, and day 88 +/- 8 days. Patients in the structured palliative arm remained on the study 26 days longer compared to those in the standard arm (142 days vs 116 days; p = 0.55). This study found no notable differences between arms regarding baseline symptoms or quality of life measures but did favor the palliative arm. This Level II evidence having a small sample size may have contributed to the lack of statistical significance. Treasure et al., (2021) concluded that structured palliative care services can potentially support patients on Phase 1 clinical trials and enable the patients to stay on the study longer.

Evidence 5

In a cohort study, Vinant et al., (2017) wanted to describe the activity and integration of palliative care consultation teams' (PCCT'S) at the patient level (Appendix B; Figure B5). Based in a university in Paris, France, 17 separate PCCT's studied patients (N = 744) newly referred to a PCCT aged 72 +/- 15 years between October 5th and December 6th in 2014 with the intent to analyze the circumstances of the first referral, identified problems, number of interventions, survival after first evaluation, and place of death. Findings revealed that 68% of participants had cancer as the primary diagnosis. After 6 months, 74% of the participants had died. After the first evaluation, 12 % were outpatients, 88 were inpatients. Symptoms represented the main reason for referral. Only 24 % encountered PCCT once. The median survival after first evaluation by PCCT was 22 days. Place of death was in an acute care hospital for 51.7% while 35% died at home or in a palliative care unit. Patients referred earlier to PCCT died more often in a palliative unit. This study provides original multicentered data describing detailed activity of PCCT's in French university hospitals, but findings may not necessarily be generalized to other geographic areas. In this Level III evidence, Vinant et al., (2017) concluded that patients can benefit from earlier introduction of palliative services. The authors recommended further research efforts.

Evidence 6

One random sample cross sectional survey conducted by ElMokhallalati et al., (2019) examined the factors associated with good pain relief at home in the last three months of life for people with advanced progressive disease (Appendix B; Figure B6). A total of 5 annual VOICES surveys were sent to family members of the decedents registered in England from 2011 to 2015 whom had home care prior to death. Although 246, 763 were invited to participate, only 45% returned completed surveys (N = 43, 509). The National Bereavement Survey in England questioned the extent of pain relief at home, the recorded preference for place of death, and out of hours service contact. Findings indicated 35.7 % received palliative care at home, 24.6% had recorded preferences for place of death, and 78.7% had at least one out of hours service contact. Cancer decedents were more likely to receive palliative care support at home compared to non-cancer decedents. The reliability and validity of this Level IV study is questionable given the surveys are completed by someone other than the patient and cannot demonstrate causality. ElMokhallalati et al., (2019) conclude that patients at home approaching end of life experience better pain relief if receiving palliative care.

Synthesis of the Literature

A summarization of the interventions utilized in each piece of evidence is provided (Appendix C). The collection of evidence used for the purpose of this proposed project show a consensus that palliative care does impact quality of life for individuals suffering from chronic or terminal illness which is consistent with many other previous studies to date. There are gaps and limitations to the study of the benefits of palliative care for several reasons including small sample sizes, limited settings, and short study durations. Research of palliative care can contribute to the overall care we provide to patients suffering from chronic disease and provides evidence for earlier referrals and expansion of access to these services. The table summarizing the impact these articles have on target outcomes is provided (Appendix D). Future research should include RCT's of larger sample sizes that are specific to each disease group and that can be generalized to a global standard. Special focus should be placed on analyzing the barriers to palliative services and ways to increase the awareness of these beneficial services. The evidence included in this paper show a clear connection of value specific to the proposed question "In appropriate patients, how does palliative care in comparison to standard care effect quality of life?" The review of current literature can help guide this DNP project by providing insight as to what patients with chronic disease value most when approaching the end of life and assisting with ways to implement earlier palliative referrals.

Application to Evidence Based Practice

Research on the integration of palliative care will continue to build upon current evidence-based practices in healthcare. Policies and protocols used to initiate these services can be evolved to ensure timely referrals not just to palliative care, but for hospice services as well. Studies that show hard evidence of the benefits that palliative care can provide may help reduce stigma and increase overall awareness. Future studies can provide guidance in the best methods in educating the public and healthcare professionals. Healthcare requires the continued search for the best evidence to deliver high quality care, increase satisfaction scores and quality of life, and improve outcomes.

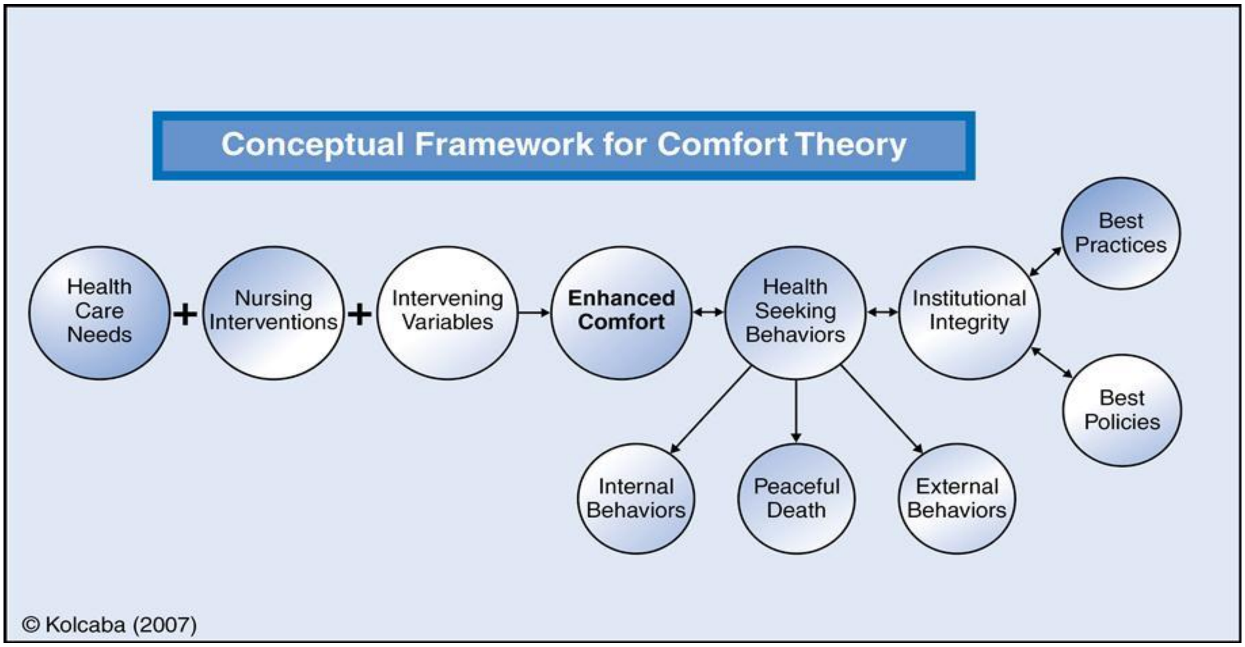
Guiding Theory

Kolcaba's Theory of Comfort

Comfort is an important aspect in patient care and satisfaction. According to Kolcaba (1994) comfort is defined for nursing as the satisfaction (actively, passively, or co-operatively) of the basic human needs for relief, ease, or transcendence arising from health care situations that are stressful. Kolcaba (1994) dedicated much time to examining the relationships and outcomes of patients relating to comfort and deemed comfort to be a fundamental need of all human beings. The Theory of Comfort has six basic concepts: health care needs, nursing interventions, intervening variables, patient comfort, health seeking behaviors, and institutional integrity (Kolcaba, 1994). The theory asserts that comfort could enhance health-seeking behaviors for patients, family members, and health care providers. The context in which comfort can occur can include physical, psychospiritual, social, and environmental dimensions (Kolcaba, 1994).

Figure 1.

Conceptual Framework for Comfort Theory



Note. This reprinted material is a figure providing a visual conceptual framework for Kolcaba's Theory of Comfort.

The Comfort Theory can be applied to numerous situations and to several different health disciplines where patient stressors are involved. Individuals with chronic or terminal disease would absolutely relate to having daily stressors. The project intends to impact quality of life which is directly related to comfort. The outcome of comfort is influenced by nursing interventions and the theory of comfort is potentially unifiable with theories of health and well-being that are yet to be developed (Kolcaba, 1994). Perceptions from patients, family members, and other health professionals can vary significantly depending on what they believe comfort or quality to be. It is important to first begin with the patient. We must know their beliefs, values, preferences, and priorities to deliver true quality or comfort. The theory of comfort provides direction for nursing practice and research because it entails an outcome that is measurable, holistic, positive and nurse sensitive (Kolcaba, 1994). Palliative and Hospice Care services place high value on the concept of comfort and often utilize the theory. The very word "palliative" means to ease or comfort.

Organizational Description

Setting

The organization in which this quality improvement project took place was in southern Kentucky. Their commitment to communities across the state began in 1978 with hospice care and continues to flourish today offering a variety of services to support patients and families. These services now include primary care, pediatric care, palliative care, and hospice care across several counties within the state. The primary investigator, being employed as an Advanced Practice Registered Nurse (APRN) provided palliative services to several nursing facilities for this organization. Implementation of the DNP project occurred in one of these facilities.

Mission

The organizational mission is to provide patient-centered care to the seriously ill and their families with excellence and compassion; engaging in community partnerships, education, and counseling; offering opportunities to staff, volunteers, and donors to enrich lives through their gifts (Bluegrass Care Navigators, 2022).

Goal

The organizational vision is to be the leader in delivering comforting care at the right time to the seriously ill. Their core values include compassion, excellence, teamwork, respect and dignity, diversity, integrity, innovation, and sustainability. The goal of the primary investigator was to continue to provide awareness and education to the community about these services to relieve unnecessary suffering and explore what path is acceptable to the patients and families who are battling diseases.

Strategic Plan

The quality improvement project intended to meet the above goals by providing enhanced palliative education and support to staff and residents at one nursing home facility. This was anticipated to increase palliative referrals from the facility.

Relevant Policy

According to CAPC (2022), widespread access to high-quality palliative care for all people living with serious illness requires supportive policy at both the federal and state level which should address the following:

- Access to specialty palliative care including workforce adequacy, program availability in all care settings and reliable payment models.
- Quality of specialty palliative care including program standards and quality measures
- Training of all clinicians in the essential skills necessary to provide quality care to the seriously ill.

CAPC (2022) collaborates with coalitions and partnering organizations to educate stakeholders on palliative care's values and how policy change could improve access and outcomes. At a federal level, CAPC (2022) train health care professionals, support's research to expand evidence-based practices, and ensure entitlement programs serving those with serious illness, particularly Medicare, incentivize and support access to quality palliative care. Both Congress and the Centers for Medicare and Medicaid play a significant role in improving access to palliative care though workforce investment, reimbursement, and promoting research (CAPC, 2022). State level recommendations address policies for health care professionals and organizations with licensure and program quality oversight (CAPC, 2022).

Stakeholders

Organizational

There were many stakeholders involved for this project which were crucial in the overall success of the initiation and implementation process. Organizational stakeholders for this project included general staff at the participating organization. This included the board members, the administrative support team, clinical providers, and the primary investigators preceptor/mentor. Staff in the nursing home facility in which implementation of the project occurred would also qualify as organizational stakeholders. These stakeholders included the Director of Nursing (DON), the administrative team, physicians and nurse practitioners, and nursing staff.

Intervention Group

The nursing staff play a significant role as they are usually the first to recognize the needs of the patient and alert the providers to obtain appropriate care. The nursing staff therefore was the primary intervention group who participated in enhanced education and support with the goal to increase palliative referrals.

Impact Population

This project should have a direct impact to healthcare staff by providing them with the improved knowledge and skills in recognizing when palliative services are appropriate while also helping them feel empowered in contacting a provider to obtain a palliative referral. As a result, this should impact the patients who are living with serious illnesses and their loved ones, providing the opportunity for improved symptom management, exploration of health care options, and clarity in their overall plan of care.

Organizational Assessment

The private non-profit organization is a member of the National Hospice and Palliative Care Organization, is certified by Medicare and Medicaid, licensed by the Commonwealth of Kentucky, and is accredited by The Joint Commission. A SWOT analysis (Appendix E) was used to identify the internal and external factors that are favorable or unfavorable to achieving the objectives of the project. Strengths of the organization include being well established as the leading company for palliative and hospice services in the surrounding area. Weaknesses include a continued lack of knowledge about what palliative and hospice services are intended to provide within the participating facilities. The organization expanded care services to include primary and pediatric services which may take focus away from its original hospice roots. The opportunity exists to improve the overall awareness for these services which can potentially expand business opportunities and improve quality and outcomes for more individuals. The threats involve the stigma and misconceptions surrounding these services that have persisted for several years despite continued efforts to enhance awareness.

Congruence of Project to the Organization

As a system, the organization strives to provide the right care at the right time and proves to be incredibly supportive of efforts that may increase education and awareness of palliative and hospice services. The quality improvement project integrated nursing informatics which is the specialty of combining nursing science, computer science, and information science to communicate data to improve knowledge to nursing practice. The quality improvement project was congruent to the mission and vision of this organization in striving to improve knowledge and skills using evidence-based practices that will lead to increased referrals while also improving quality of life for patients.

Statement of Mutual Agreement

As a requirement of Eastern Kentucky University (EKU), the organization involved has reviewed and approved the DNP project as evidenced by a signed Statement of Mutual Agreement (Appendix F; Figure F1). Signature was obtained from the primary investigator's preceptor/mentor using email verification authorized by the Executive Director of the Department of Medicine (Appendix F; Figure F2).

Methodology

Aims & Objectives

The aim of the project was to improve overall awareness of palliative care services which will hopefully lead to earlier initiation of palliative care referrals. The quality improvement project included:

1. Development, implementation, and evaluation of an evidence-based intervention bundle
2. Improved quality of life by ensuring that staff were given the knowledge, confidence, and resources to promote improved utilization of palliative care.

The following objectives were developed to quantify project success:

1. Collection of Demographics: Goal = Train 100% of staff
2. Assessment of Knowledge and Confidence pre and post-test intervention: Goal = improve both outcomes by 25% on post-test
3. Training on use of:
    a) A Referral Flowchart
    b) The Palliative Performance Scale (PPS)
    c) Goal = Train 100 % of staff

4. Improved distribution of evidence-based printed materials: Goal = increase distribution by 25%
5. Benchmarking of the number of patient referrals: Goal = increase referrals by 25%

Design & Implementation Framework

This mixed method pre and post-test design is a quality improvement project that used the PDSA Framework for implementation. The primary investigator planned and implemented a targeted educational phase to increase knowledge and skills of palliative services to nursing staff. The educational intervention phase occurred over a 4-week period. Results of the enhanced education can be studied and proven successful if palliative referrals within the facility increased post intervention. Nursing staff is anticipated to provide direct guidance in what went well within the design and what areas could be improved. The primary investigator can then act upon the findings to create a sustainable educational program for this and other participating facilities.

Intervention Setting

The primary investigator selected one nursing home facility within the service area to implement the quality improvement project. The facility currently holds a contract and utilizes the primary investigators participating organization specifically for consultative palliative care services. The selection of this nursing facility was based on consistently having the lowest requests for palliative referrals and therefore, may reap the greatest benefit from the project.

Recruitment

Subjects

Recruitment methods for this project included direct communication with the nursing home facility staff and a flyer displayed for staff and residents to view within the facility. The targeted goal was for all nursing staff within the facility to participate in the project. According to the Director of Nursing (DON), there are an estimated total of twenty-five nursing staff currently employed at the facility. Nursing staff participation was anticipated to fluctuate some due to the inevitable turnover.

Inclusion/Exclusion Criteria

Inclusion criteria for the palliative educational implementation involved all nursing staff actively employed at the nursing home facility. This included nurses employed by the facility and nurses working at the facility through agency services. After some debate it was decided to include agency nurses in the project. Many facilities are now relying heavily on agency nurses and any knowledge obtained during the implementation process would benefit not only the participating facility but any other facilities the agency nurse frequented. Exclusions were only considered for non-English speaking participants, non-nursing staff, and any nursing staff on extended leave.

Access

The primary investigator had direct access to the patients, staff, and palliative referral information within the facility. As a nurse practitioner who specializes in palliative and hospice care the primary investigator was responsible for completing palliative referrals for her organization at this facility. This included having access to the electronic medical records (EMR) on a as needed basis. Therefore, the primary investigator has been credentialed and has current privileges to practice in this service area at this facility.

Recruitment Strategies

The recruitment flyer (Appendix G) contains an overview of the project including the purpose and a brief description of the implementation process. The flyer was displayed throughout the facility at all nursing stations and the main entrance in a location where residents and family members could easily view. The primary investigator informed staff at the facility in person and via email to keep them updated on the progress of the project.

IRB, Consent, & Ethics

The participating organization permitted EKU to function as the Institutional Review Board (IRB). This project included an expedited review. A stamped approved waiver and consent form (Appendix H) was obtained from EKU's IRB. Participants were asked to view the consent form and therefore agreed to participation by proceeding with completion of the demographic questionnaire (Appendix I). Ethical considerations apply to any research involving human subjects. The EKU IRB has required the primary investigator to complete training modules on basic human research.

Intervention Description

The first step of the intervention was to obtain consent and demographic information from nursing staff prior to the implementation of palliative education. The consent and demographic survey link were sent via email to the DON and nursing coordinator of the facility to forward to all nursing staff to maintain an anonymous status. After collection of these items, nursing staff were then asked to complete a pre-test questionnaire (Appendix J: Figure J1) through an anonymous survey link which was developed by the primary investigator to assess baseline knowledge, confidence, and attitudes towards palliative services. During this phase numbered brochures were supplied throughout the facility in various locations including the main entrance and at each nursing station. After collection of the pretest, nursing staff were then provided an educational PowerPoint presentation which obtained general information about palliative services including a review of the specific tools developed for purposes of the project. The tools consisting of the palliative referral flowchart (Appendix K: Figure K1) and a PPS chart

(Appendix K, Figure K2) were displayed at each nursing station for easy referencing. The primary investigator provided weekly in person support to address any questions or concerns throughout the implementation phase. During the fourth and final week of implementation, nursing staff were asked to complete a post-test (Appendix J; Figure J2) via a forwarded anonymous survey link to indicate the end of the process. The number of palliative referrals were being tracked during and following the intervention phase. The data also included the average PPS score of pre and post-test intervention referrals.

Data

Instruments

Demographics.

Descriptive statistics of participants including age, years of experience, length of employment, and type of licensure of nursing staff were obtained prior to the implementation of educational materials. Demographic questions used for the project including the rationales are provided (Appendix I). Gender was not obtained as it was determined not to hold any relevance to this project. The objective was to have 100% of nursing staff at the facility participate and provide demographic information.

Palliative Knowledge and Confidence Questionnaire.

The pretest (Appendix J: Figure J1) was obtained to determine the nursing staff’s baseline knowledge of palliative care services. The pretest consisted of 12 questions including numerical scales, true or false, multiple choice, and open-ended answer options. The questions were intended to evaluate common misconceptions, confidence in placing referrals, PPS knowledge, and perceptions towards palliative care education and services. No special permissions were required to utilize the pre or posttest as it was developed by the primary investigator. A post-test evaluation (Appendix J: Figure J2) was collected from nursing staff to compare to baseline evaluations. Question 12 is the only one that varies between the pre and posttest. These questions both address perceptions of education. Question 12 on the pretest asks if palliative education could be perceived as beneficial while the posttest is asking if the actual presented education was beneficial for them. The objective was to show a 25% increase in post test scores after the educational intervention.

Palliative Screening Tools.

The primary investigator has developed and implemented a Palliative Referral Process Flowchart (Appendix K: Figure K1) to assist nurses with identifying palliative needs and placing referrals. The flowsheet was created based on similar tools utilized by other organizations to ensure validity and reliability. The flowsheet was also displayed at each nursing station within the facility for easy access and to ensure daily visualization. The objective was to train 100% of the nursing staff with this educational intervention. Weekly rounding by the primary investigator helped to ensure the tools remained in their designated areas.

The Palliative Performance Scale (PPS) was first introduced by Anderson and Downing in 1996 as a new tool for measurement of performance status in palliative care (Ho et al., 2008). It has prognostic value and can numerically show a pattern of decline over time when tracked. It serves as a useful tool for measuring the progressive decline of a palliative resident. It has five functional dimensions: ambulation, activity level and evidence of disease, self-care, oral intake, and level of consciousness. To score, there are 11 levels of PPS from 0% to 100% in 10 percent increments. Every 10% decrease on the chart marks a significant decrease in physical function. For example, a resident with a score of 0% is deceased and a score of 100% is fully ambulatory and healthy having no functional limitations.

The PPS is a way for the interprofessional team to communicate with each other or with residents and families as it can be used as a guide to help in initiating and facilitating conversations about palliative care or end-of-life care transitions. The PPS has been used in many countries and has been translated into other languages and is considered a valid and reliable method to determine if palliative referrals are occurring earlier in the disease process (Ho et al., 2008). No permission is required to utilize the PPS chart. The PPS chart (Appendix K: Figure K2) was displayed at each nurse's station within the facility for easy access and to ensure daily visualization. Utilization of the PPS chart should be evident by an increase in post-test evaluations.

Training.

The primary investigator developed a training session via power point presentation with audio to provide training and education to nursing staff. The presentation was sent to the DON and nursing coordinator of the facility via email to forward to all nursing staff. The objective was to have 100% of nursing staff participate in the viewing of the palliative education video. It was explicitly stated that participating staff in the project must view the presentation. Although it was confirmed to be sent to all nursing staff by the facility's unit coordinator, the primary investigator had no evidence that nursing staff did in fact view the education.

Printed Materials.

Printed materials providing an overview of palliative services were made available within the facility for staff, residents, and family. Brochures were developed and funded by the participating organization, thus permission to use and supply the brochures had been granted prior to the implementation process. The brochures were intended to provide general information and should increase overall awareness of palliative services. The objective was to improve distribution of evidence-based printed materials within the facility by 25%. The facility did not have any palliative brochures displayed prior to the implementation of this project. A total of twenty-five brochures were placed at the main entrance of the facility.

Data Collection Process

Demographics, the pretest, and post-test were collected using an anonymous online survey tool and transferred to a spreadsheet. Palliative referrals were tracked using a month-to-month (March 2022 vs March 2023) comparison chart at the end of the process. As the primary investigator was an employee of the participating organization, this provided ease of access to a monthly referral spreadsheet. The spreadsheet is securely stored on a private work laptop. This helped to determine if palliative referrals increased after implementation of education at the facility. The average PPS of each referral was also tracked on a spreadsheet. The training presentation was forwarded to all nursing staff by the facility's unit coordinator via email. Only staff that consented to participate in the project were required to view the training. Unfortunately, there was no way to monitor if the material was viewed or how many staff viewed the training presentation. The brochures were simply monitored and counted to determine how many were taken at the end of the implementation phase.

Data Analysis Plan

Demographics were analyzed using percentages and measures of central tendency. The mean, median and mode are the three commonly used measures of central tendency. The number of palliative referrals and the average PPS were tracked using a spreadsheet. Pre and post test results were analyzed using measures of central tendency and an independent sample t test. Statistical significance was set at ($p < .05$). Observations in rounding will be described by the primary investigator.

Storage and Security of Data

All identifying information was protected for confidentiality purposes. Pertinent data was only accessible to the primary investigator. Data was stored on a designated work laptop provided by the organization which requires a passcode to access. This passcode is only available to the primary investigator. Results of this study are maintained according to IRB requirements and standards.

Timeline, Resources, and Budget

The total intervention phase occurred over a 6-week period beginning with the posting of the flyer. This hopefully ensured that all nurses had some form of work rotation and ability to participate in the educational intervention phase if they elected to. Participation in the project occurred during normal work hours of nurses. There was no extra compensation for participation. The resources required included paper, a printer, palliative care brochures, and a laptop. The primary investigator was already assigned to a work laptop by the participating organization. Brochures with palliative care information were easily accessible by the organization and provided to the primary investigator for purposes of this project. All printed materials such as the flyer and posted charts were provided by the primary investigator. The total estimated cost for supplies was under $100. The organization was aware that time spent on the project would occur during normal work hours for the primary investigator. The primary investigator did spend more time than typical within this facility due to project requirements. It was estimated that nursing participants would spend less than 10 hours total in completing all tasks required for the project. The primary investigator is expected to spend at least 360 clock hours during the Spring 2023 semester to meet requirements for the doctoral program. The primary investigator used personal funds to supply candy to staff during weekly support rounding. The cost for candy was under $50. There was not an allocated budget for the project.

Results

The results of this quality improvement project are provided below. The total number of nursing staff employed at the participating facility was reported to be 25. The actual number of nursing staff that participated in the project was (N=11), indicating that only 44% of staff participated in the project. Participants consistently completed all aspects of the implementation process causing no deviation in the results. However, the goal was to have 100 % of nursing staff participate in the intervention which means the recruiting goal was only partially met. Statistical significance level was set at ($p < .05$).

Demographics

Participating nursing staff displayed varying age ranges. Those aged 25-35 totaled 46 % (n=5) and were the largest demographic group. The remaining participants were age 35-55 years old. Participants as a majority held an associate degree in nursing (82 %) or a licensed nurse practitioner degree (18 %). The length of licensure varied with 64 % having worked more than 4 years as a nurse, and 36 % having worked 4 years or less as a nurse. Length of employment with participants in this facility revealed that 45 % were employed greater than 4 years and 55 % were employed less than 4 years. Once again, the goal to have participation from 100 % of staff was partially met.

Pre-test and Post-test

Questions 1 and 2 of the pre and post-test used a Likert scale to assess the confidence level nursing staff perceived to have with their knowledge of palliative care and with placing referrals. As seen in Figure 2, confidence in knowledge of palliative care and with placing referrals post intervention was statistically significant (*p* = .0002). The objective to increase confidence levels by 25 % among nursing staff pre and post-test was met.

Figure 2.

Confidence Table

Question #	Pre Mean	Post Mean	% Improved	p Value
(1) Knowledge of Palliative Care.	6	9	50%	0.000204773
(2) Placing Referrals**.**	6	9	50%	0.000204773

Questions 3 through 9 found in Figure 3 focused on the general knowledge of palliative care and use of the PPS tool pre and post intervention. Questions 3 through 6 could be answered true, false, or uncertain. Question 6 asked if the PPS is a communication tool to help describe a patient's current functional level while also having prognostic value. Questions 7 through 9 inquired about the PPS score for specific patient scenarios. Questions 3 through 9 showed a general improvement over baseline knowledge. Questions 6, 8, and 9 were statistically significant. One possible explanation for this may be that nursing staff had likely not been previously exposed to specific education about the PPS chart prior to the intervention.

Figure 3.

Knowledge Table

Question #	Pre Test	Post Test	% Improved	Mean	p Value
(3) Palliative same as Hospice?	91%	100%	9%	1.818181818	0.329256577
(4) PC only for comfort care/no aggressive therapies?	73%	91%	18%	1.454545455	0.140272172
(5) Palliative/Hospice causes death sooner?	91%	100%	9%	1.818181818	0.329256577
(6) PPS is communication tool?	64%	91%	27%	0.636363636	0.026781141
(7) PPS question.	73%	91%	18%	2.727272727	0.290977976
(8) PPS question.	18%	73%	55%	2.090909091	0.009119623
(9) PPS question.	55%	100%	45%	2.090909091	0.009119623

The primary investigator was able to observe nursing staff inquiring about the tools and applying their knowledge of the educational materials during weekly rounding. The objective was to have 100% of nursing staff receive the training on the referral flowchart and PPS chart during the implementation process. All nursing staff were sent the power point presentation via email and exposed to both charts posted at all nursing stations. However, it can only be verified that the participating nurses (N = 11) viewed the materials. Based on this, the objective was deemed as partially met. Another objective was to show a 25% increase in post- test knowledge scores. Based on questions 3 through 9 as a whole this goal was met having a total average of 26 % increase in post intervention scores.

Questions 10 and 11 inquired about the perceived benefits and barriers to palliative care. The common theme for benefits included comfort care, symptom management, and goals of care discussions. The common theme for barriers included a negative stigma and misconceptions attached to palliative care. Question 12 varied slightly on the pre and post-test. The pretest inquired if staff felt palliative education would be beneficial. The post-test inquired if staff felt the educational material received during the intervention phase was beneficial. All participants indicated the education was beneficial.

Printed Materials

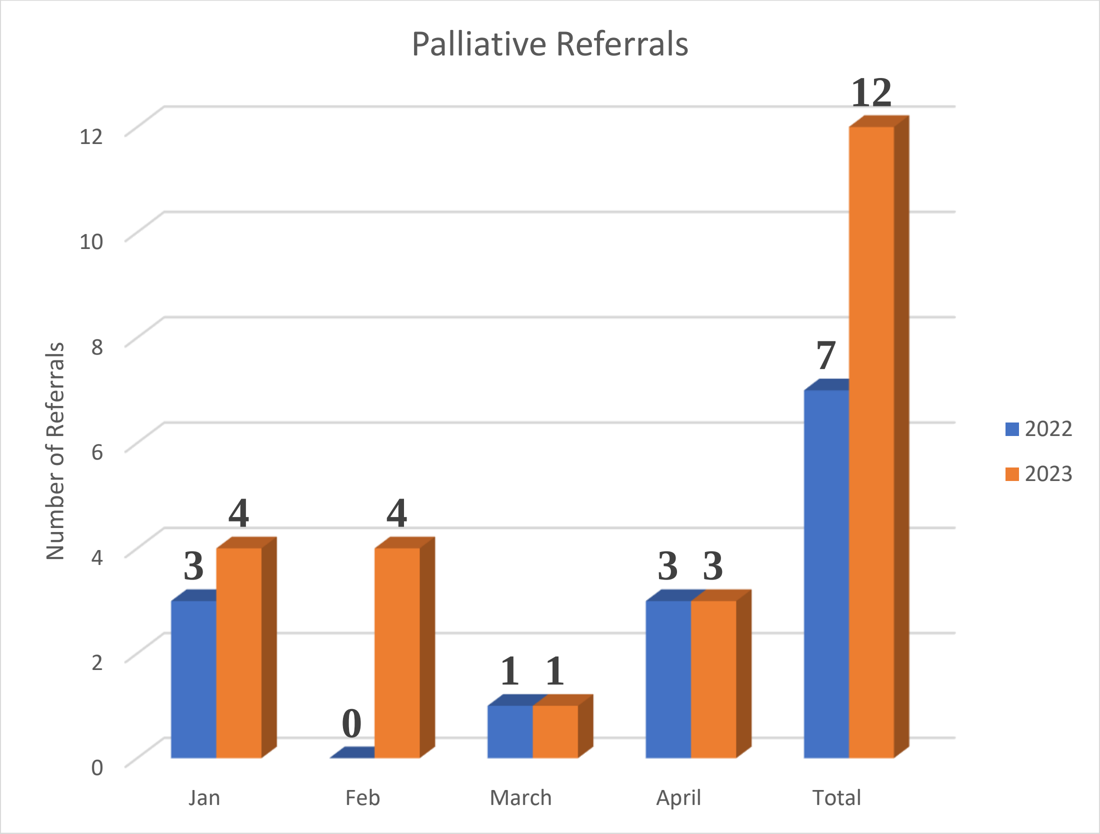
A total of twenty-five brochures were placed in the facility at the beginning of implementation. Upon review of materials, it was discovered that only five of the brochures had been taken out of the twenty-five (or 20 % utilization of materials) by the end of implementation. The goal was to increase distribution of materials within the facility by 100 %. Since the facility began with no materials in general, this goal is evaluated as being met.

Referrals

Palliative referrals were monitored in the months of January through April during the intervention phase and compared between 2022 and 2023. Palliative referrals varied overall between each month. The results in Figure 4 indicate there were more referrals in 2023 during the implementation phase. The goal was to increase referrals by 25 % post intervention. This goal was met as there was a 71 % increase in referrals in 2023 compared to 2022.

Figure 4.

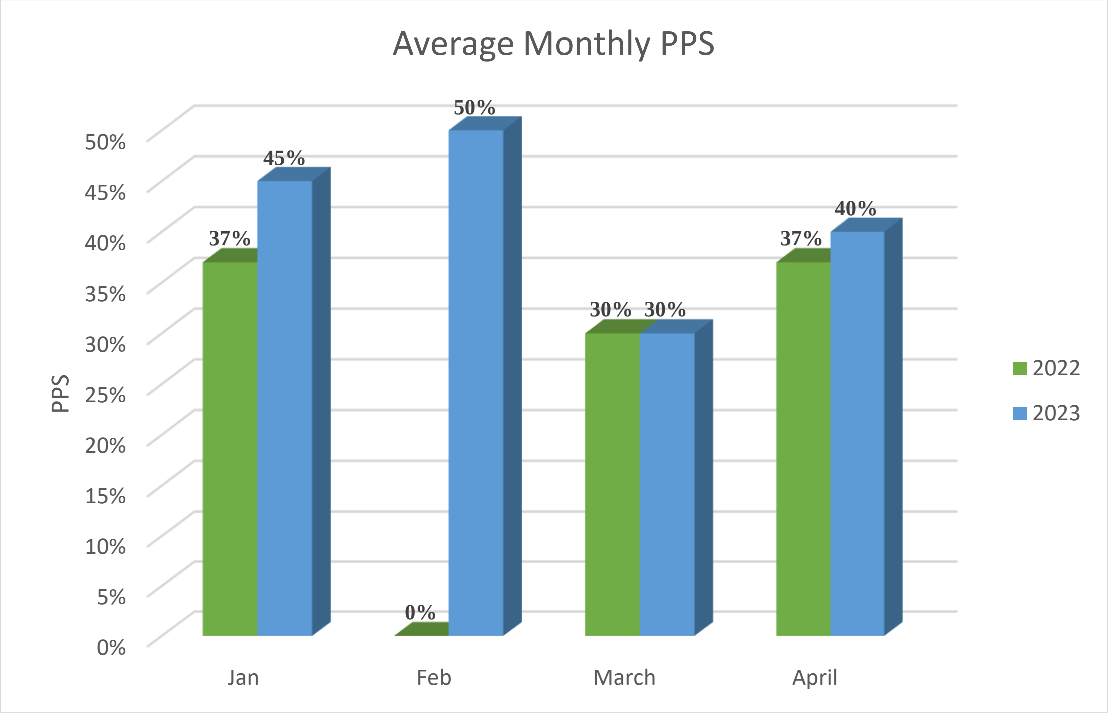
Palliative Referral Chart



Tracking of the average PPS score found in Figure 5 was not necessarily part of an aim or an objective. Providing education on the PPS chart would hopefully assist the staff with recognizing a decline in a patient’s functional status. However, averaging the difference in PPS scores pre and post intervention may show that educational efforts were beneficial in obtaining palliative referrals earlier in the disease process. The average PPS score in 2022 referrals was 36 %. The average PPS score in 2023 referrals was 44 %. This indicates that palliative referrals are being placed earlier in the disease process.

Figure 5.

Average Monthly PPS Chart



Discussion

Interpretation of Findings

The aims and objectives set for the purposes of this project were either met or partially met. After review of the results for this quality improvement project, it is evident that the educational intervention bundle did in fact have an impact on the confidence and knowledge level of nursing staff. This appears to be connected to the overall increase in referrals during the intervention phase. The increase in average PPS score of the referrals indicates that palliative referrals were being placed earlier in the disease process. Findings of this project are clinically significant and are similar to findings in the literature that indicate educational interventions can improve knowledge of palliative services leading to earlier palliative care referrals which can improve overall quality of life.

Limitations

Several limitations occurred throughout the duration of this project. The participating organization redefined the scope of practice for their palliative services in January 2023. This new scope placed emphasis on palliative services being more time-based, meaning referrals should be anticipated to transition to hospice within six months of the palliative referral. This is contradictory to the mission of the project in obtaining earlier palliative referrals. The redefined scope also limited pain management services available for palliative patients. This required providers to discharge many patients who fell outside of the redefined scope. This led to frustration and tension among all individuals involved. As a result, the facility that was originally selected for project implementation fell through. The primary investigator was tasked with finding a new facility for implementation on short notice. As details of this project were presented on short notice to the new facility, it took greater effort to get nursing staff to participate in general.

The primary investigator did not have control over the above circumstances as these were changes on an organizational level. However, some areas of the project implementation could have been improved by the primary investigator. The selection and security of the location could have been explored further to ensure solidarity. More time to present the project may have led to increased participation of staff. Implementation at more than one location along with longer duration of data tracking could have provided increased variability and reliability of results.

Implications

According to the American Association of Colleges of Nursing (2023) the DNP project should have an impact (direct or indirect) on patients and populations. This impact can exist on multiple levels.

Clinical Practice

Implications for clinical practice involve continued development of educational support for patients and staff. This can prove beneficial to all stakeholders. The organization can benefit by providing enhanced education. This should lead to more appropriate referrals, especially given the recent change in scope of practice. As a result, patients will be referred to palliative care when appropriate leading to improved quality of life.

Policy

Many current policies are encouraging utilization of palliative services in the face of advanced disease. Data obtained from research or quality improvement studies can change how palliative services are rendered on an organizational, system, and political level. Some organizations allow nursing staff to place palliative referrals while others only allow physicians to do so. Findings from this project can show that nursing staff are fully capable of recognizing the needs of patients and prompting referrals. As a system, policies have been developed to trigger palliative referrals using protocols instead of the clinical judgement of staff. The need for advocacy continues to grow in the field of health care and our aging population. Many debates persist concerning end of life care such as with assisted dying policies. Political leadership will guide policies surrounding this and many other health care related topics that affect us all.

Quality and Safety

Improving education about palliative care services directly contributes to the quality and safety of healthcare. Palliative care can be an added layer of support for patients and families dealing with chronic, life-limiting, or terminal illness. Palliative care improves quality by managing burdensome symptoms and improves safety by clarifying goals of care. This helps to ensure the health care team is providing care that is fully understood and acceptable to the patient leading to higher satisfaction scores.

Education

Implications of this project and other studies may enhance future educational pursuits. The healthcare system continues to evolve which requires continued education for health care providers, populations, communities, and organizations. As healthcare providers, we continuously search for best evidence practices that shape the way we educate, train, and provide care. A personal goal for the primary investigator is to ensure mandatory palliative and hospice care education within all healthcare institutions. This may reduce persistent stigmas, misconceptions, or barriers to these valuable services. The community should be fully informed about available healthcare options through education. On numerous occasions, the primary investigator has had clients express “Why haven’t I heard about palliative care before now?”

Sustainability

Sustainability is defined as the practice of using resources wisely to support present and future generations. The AACN (2023) asserts that DNP projects should be designed with sustainability in mind. Although palliative care has been around for several years now, it is evident that there remains a need for enhanced awareness and knowledge of services. Implementing education and support to facilities where palliative consultations are provided is a logical and feasible way to ensure proper and sustained utilization of these services. Methods including educational presentations and palliative tools such as the referral flowsheet and PPS chart are non-complicated and proven ways to guide nursing staff in palliative referrals. Integrated learning plans that are non-complicated will typically have higher sustainability. Continued education is essential in sustaining relationships within organizations.

Future Scholarship

Beyond the academic context, findings of this project will be disseminated on an organizational level to improve knowledge and utilization of palliative services. Findings of this project provide a platform that can guide future endeavors of developing successful training programs for nursing staff. The primary investigator can utilize the skills acquired from this project to expand on future educational platforms. The skills obtained as a DNP prepared nurse will prove valuable in creating future quality improvement projects.

Conclusion

Despite the expansion and growing evidence that palliative care services can improve quality of life, these services remain to be underutilized and misunderstood among patients and healthcare providers. Evidence continues to show the value that palliative care can provide. The primary investigator designed and implemented a quality improvement project providing nursing staff with enhanced education and support in hopes of improving palliative referrals at one nursing home facility in southern Kentucky. Results indicated that the education was beneficial to the participating nursing staff and did increase palliative referrals. Future studies within the scope of palliative care should focus on enhanced education that impact outcomes such as mortality, costs of care, health preferences, quality of life, and variances among disease types. Providers should continue to reduce barriers and improve education and access to this growing specialty.

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Appendix A

Figure A1: Hierarchy Table of Evidence

Melnyk Level	Evidence 1 (Jordan et al., 2020)	Evidence 2 (Treasure et al., 2021)	Evidence 3 (ElMokhallalati et al., 2019)	Evidence 4 (Senderovich et al., 2020)	Evidence 5 (Vinant et al.,2017)	Evidence 6 (Temel et al., 2017)
I	X			X		
II		X				X
III					X	
IV			X			
V						
VI						
VII						

Note. This table demonstrates the selected studies, categorized by the level of evidence using the Melnyk System of Hierarchy of Evidence for Intervention.

Appendix B

Figure B1: Summary of Evidence Table 1

First Author (Year)	Conceptual Framework	Design/Method	Sample/Setting	Major Variables Studied	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
Jordan et al., *BMC Medicine* 2020;18:368	None	SR Purpose: -to identify studies reporting the time interval between initiation of specialized PCS and death for adults within routine clinical practice -to explore associated pt. service, and country characteristics which influence this duration 6 databases searched from 1946-2019 Limited to studies published from 2013 to 2018	N= 169 eligible studies with -11,996,479 total study participants from 23 countries Setting: Included adult pts >18yo in any setting Attrition: NR	IV: PC DV1: Dx type DV2: development index of countries DV3: duration of palliative care until death	DV1: statistical data DV2: UNDP Development Index DV3: mean, median, or both	MA Central tendency IBM SPSS Statistics 22 Mann Whitney U test	-Weighted median duration of PC until death was 18.9 days -Studies from countries with high level of human development had shorter duration of PC than less developed countries (18.9 vs 34.0 days, $P < 0.001$) -Median # of days of PC prior to death for all US studies was < 19 days, and for all non-US studies was 29 days	**Level I Evidence** **Weaknesses:** -definition of PCS and the use of length of stay in inclusion criteria -preponderance of data from high income countries with unclear implications for low and middle-income countries **Strengths:** -Inclusion of a large # of studies with over 11 million participants giving significant power to findings. **Conclusion:** -Duration of PC before death is much shorter than is supported by research evidence and widely advocated in health care policy -highlights wide variations at level of country, across disease types and settings to which pts are referred. **Contribution:** Reducing barriers to accessing PC and promoting earlier integration alongside active Tx would maximize benefits to pts before they die and reduce costs to the wider healthcare service

DV= dependent variable, Dx= diagnosis, IV= independent variable, MA= meta-analysis, N= number, NR= not reported, p=p value or probability, PC= palliative care, PCS= palliative care services, pts= patients, SR= systematic review TX=treatment, US=United States

Appendix B

Figure B2: Summary of Evidence Table 2

Senderovich et al., *Palliative Medicine in Practice*, 2020; 14, 4: 259-270	None	SR Purpose: to understand how an integrated approach to PC may be influential in the delivery of healthcare amongst an aged population Included: -4 databases -15 RCT's discussing integrated and traditional PC -published b/w 2000 and 2020 -using framework described by Arksey and O'Malley -English language Exclusions: -Grey literature -Theoretical studies -Non RCT's -Underdeveloped countries	N= 70 studies qualified for full text assessment in which 15 studies complied with identified criteria Setting: USA, Europe, and China Attrition: NR	IV: PC DV: QOL with early integration of PC DV2: Usual Care	DV1: review of RCTs with 95% CI and significant p-value ($p < .05$) DV2: Patient Health Questionnaire	Microsoft Excel data charting form Numerical analysis Thematic Analysis CCM	Better QOL ($p = .020$ Less depression ($p = .01$) CCM was shown to improve QOL ($p < .01$ or $p < .05$), self-care ($p < .05$), and cardiac function ($p < .01 – p < .001$) of pts as compared with usual care PC approach shown fewer ER visits, reductions in hospitalizations and readmissions ($p = .009$), shorter overall stay and significant decrease in ICU stay ($p < .001$), all without significant increase in mortality ($p = .09$).	**Level I Evidence** **Weaknesses:** -Review is limited by type of study design -exact geographical spread of research in PC could not be fully appreciated -limited selection of studies with small sample sizes and short follow up -does not appraise quality, nor weight of evidence in favor of a particular intervention **Strengths:** Ability to provide a transparent means of mapping current research, particularly in describing the volume, nature, and characteristics of the literature to identify gaps in the existing evidence base **Conclusion:** studies demonstrate that early integration of PC has been shown to significantly improve QOL, alleviate caregiver burden, reduce hospitalizations, shorten hospital stay, and decrease ICU stay. **Contribution:** Review will assist in development of models of integrated PC and policies that can help serve needs of elderly community -will help guide physicians and familiarize them with dx trajectory, prognostication uncertainty, and emphasize importance of ACP.

ACP= Advance Care Planning, CCM= collaborative care model, CI=confidence interval, DV= dependent variable, EOL= end of life, ICU=intensive care unit, IV= independent variable, N= number, NR= not reported, p= p value or probability, PC= palliative care, PCS= palliative care services, pts= patients, PC= palliative care, QOL=quality of life, RCT's=randomized controlled trials, SR= scoping review, USA=United States of America

Appendix B

Figure B3: Summary of Evidence Table 3

First Author (Year)	Conceptual Framework	Design/Method	Sample/Setting	Major Variables Studied	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
Temel et al., Journal of Clinical Oncology, 2017, 35: 834-841.	None	RCT Purpose: -to evaluate the impact of early integrated PC in pts with newly diagnosed lung and GI cancer -eligible to participate if within 8 weeks of a diagnosis of incurable lung or noncolorectal GI cancer 18+ English speaking No hx of metastatic disease Excluding those already with PC services or those needing immediate hospice referrals, or those with significant comorbid dx or psychiatric disorders	N= 350 (n=175 PC) (n=175 UC) May 2011 to July 2015 Monthly PC visits until death with assessments at baseline, 12 and 24 weeks. Visits upon request for UC group. Setting: Massachusetts General Hospital Attrition: NR	IV: PC IV2: UC DV1: QOL DV2: mood and anxiety DV3: understanding of prognosis	DV1: FACT-G scale DV2: PHQ-9and HADS DV3: Prognosis and TX Perceptions Questionnaire	STATA software Independent samples *t* tests ANCOVA	-Mean # of PC visits by 24 weeks were 6.54 in IG and 0.89 visits in UC group -PC group reported mean 0.39-point increase in FACT-G scores from baseline to 12 weeks compared with UC group who reported a 1.13-point decrease from baseline. -At 24 weeks PC group reported 1.59-point increase in FACT-G scores from baseline whereas UC group reported a 3.40-point decrease from baseline PHQ-9 and HADS scores did not differ significantly between groups PC had significantly higher QOL and lower depression sx scores at 2 and 4 months, but not at 6 months, before death PC group reported knowing prognosis was very helpful in making decisions and reported more EOL wishes discussed with oncologists compared to UC group	**Level II Evidence** **Weaknesses:** -participants not blinded to group assignment -did not plan sample size to evaluate outcomes by cancer subtype -Usual care often involved PC services in setting which may have diluted effect of intervention **Strengths** -added to growing literature on the benefits of integrating PC services earlier in dx course. -confirms previous findings that PC can improve QOL and mood in pts with cancer. - identified new benefits of integrated PC model in improving patients' ability to cope with prognosis and enhance EOL care preferences. **Conclusion:** -For pts with newly diagnosed incurable cancers, early integrated PC improved QOL and other salient outcomes with differential effects by cancer types. . **Contribution:** Findings provide further evidence to support early integrated PC as the standard of care for patients with newly diagnosed incurable cancers.

DV= dependent variable, Dx= disease, EOL= end of life, FACT-G= Functional Assessment of Cancer Therapy-General, GI= gastrointestinal, HADS= Hospital Anxiety and Depression Scale, hx=history, IV= independent variable, N= number, NR= not reported, PC= palliative care, PHQ=Patient Health Questionnaire, pts=patients, QOL=quality of life, RCT= randomized control trial, sx=symptom/s, UC= usual care

Appendix B

Figure B4: Summary of Evidence Table 4

First Author (Year)	Conceptual Framework	Design/Method	Sample/Setting	Major Variables Studied	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
Treasure et al., *Cancer Medicine*, 2021; 10: 4312-4321.	None	RCT Purpose: Examine differences in study duration, symptom burden, AE, and QOL between those receiving structured PC vs usual supportive care. Inclusions: - Pts and their caregivers enrolled in Phase 1 clinical trials -Pts with solid tumors 18 + Excluded: Pts already enrolled in PC	N= 86 pts enrolled in Phase 1 clinical trials And 39 of their CG Setting: UTD Attrition: NR	IV: Supportive care by outpatient PC team IV2: Usual supportive care from treating oncologist DV: QOL DV2: Symptoms DV3: Family Caregiver QOL	Functional Assessment of Cancer Therapy General Memorial Symptom Assessment Scale Caregiver Reaction Assessment Quality of Life in Life-Threatening Illness (Family Carer Version)	T test at day 32, 61, and 88 +/- 8,	-Patients in structured PC arm remained on the study 26 days longer than those in standard arm (142 days vs 116 days; p = 0.55). -No notable differences between arms regarding baseline symptom or QOL measures other than slightly better QOL scores in the domain of social and family wellbeing in the standard arm of care -While differences between arms was not statistically significant, the trend favored the structured PC arm.	**Level II Evidence** **Weaknesses:** small sample size may have contributed to lack of statistical significance **Strengths:** Findings are consistent with recently reported results of larger RCT's **Conclusion:** -Regardless of GOC treatment, structured palliative care, and aggressive management of sx can support patients on phase 1 clinical trials, and potentially enable pts to stay on study longer -Phase 1 pts and their CG have physical and psychosocial needs warranting PCS with results suggesting structured PC is associated with increased duration of the study and improved QOL for pt and CG **Contributions:** Provides further evidence that PC can provide benefits when facing a chronic illness including improved QOL and sx burden relief.

AE=adverse event, CG= caregivers, DV= dependent variable, Dx= disease, IV= independent variable, N= number, NR= not reported, PC= palliative care, PCCT's= palliative care consultation teams, PCU= palliative care unit, pts= patients, p=p value or probability, QOL=quality of life, RCT= randomized control trial, sx=symptom/s, UTD=unable to determine, vs=versus

Appendix B

Figure B5: Summary of Evidence Table 5

First Author (Year)	Conceptual Framework	Design/Method	Sample/Setting	Major Variables Studied	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
Vinant et al., *BMC Palliative Care*, 2017, 16: 36.	None	CS Purpose: Describe the activity and integration of PCCT's at the patient level Criteria: Pts newly referred to participating PCCT's between October 5 and December 6, 2014. Inclusions: adults aged 72 +/- 15 Exclusions: NR	N = 744 Setting: 17 PCCT's based in university hospitals in Paris, France Attrition: NR	IV: PC DV: circumstances of 1st referral DV2: Problems identified DV3: Number of interventions DV4: survival after 1st evaluation DV 5: place of death	DV1: Frequency DV2: Descriptive survey DV3: proportions DV4: frequency DV5: proportion	Common standard format LogRank test Chi2 test	68 % of participants had cancer as primary dx After 6 months 74% had died After 1st evaluation 12% were outpatients, 88 were inpatients Symptoms represented main reason for referral 79% had altered performance status 24% encountered PCCT only once Median survival after 1st evaluation by PCCT was 22 days Place of death was acute care hospital for 51.7 % and home or PC unit for 35 % Patients referred earlier died more often in PCU	**Level III Evidence** **Weaknesses:** -results or findings may not be able to be generalized to other geographical areas -May not be representative of all French PCCT's activity **Strengths:** study provides for the first time some original multicentered data describing detailed activity of PCCT's based in French university hospitals **Conclusion:** There is strong evidence that patients can benefit from earlier introduction of palliative care **Contributions:** Provides original data showing a still late referral to the PCCT's in France and relays the most frequent symptom needs and topics discussed in PC

CS= cohort study, DV= dependent variable, Dx= disease, IV= independent variable, N= number, NR= not reported, PC= palliative care, PCCT's= palliative care consultation teams, PCU= palliative care unit, pts= patients, RA= review article

Appendix B

Figure B6: Summary of Evidence Table 6

First Author (Year)	Conceptual Framework	Design/Method	Sample/Setting	Major Variables Studied	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
ElMokhallalati et al., *BMC Medicine*, 2019, 17:50	None	RS, CSS Purpose: Examine factors associated with good pain relief at home in the last 3 months of life for people with advanced progressive dx.	N= 43, 509 decedents Setting: -Home care before death -registered in England from 2011 to 2015 -5 annual VOICES surveys conducted -246,763 invited to participate -45% returned completed surveys Attrition: NR	IV: PC at home in last 3 months of life DV1: Extent of pain relief at home DV2: recorded preference for place of death DV3: out of hours service contact	DV1: Survey DV2: Survey DV3: Survey	-National Bereavement Survey in England -Logistic regression models IBM SPSS statistics version 24	-35.7% received PC at home -24.6% had recorded preference for place of death -78.7% had at least one out of hours service contact within last 3 months of life -Cancer decedents more likely to receive PC support at home compared to non- cancer decedents	**Level IV Evidence** **Weaknesses:** -perceptions reported by relative's vs patient -questionable reliability and validity -cannot demonstrate causality **Strengths:** -Used data from first national survey on the quality of EOL care in England -response rate provides suitable sample size for analysis at the national level -weighting method used corrected for non-response and sample bias. **Conclusion:** Pts at home approaching EOL experience substantially better pain relief if receiving PC or have a recorded preference for place of death regardless of dx etiology. **Contribution:** Clear benefits indicating policymakers should consider how to ensure improvements in pain management for pts at home through advice and support from PCS.

CSS= cross sectional survey, DV= dependent variable, Dx= disease, EOL= end of life, IV= independent variable, N= number, NR= not reported, PC= palliative care, PCS= palliative care services, pts= patients, RS= random sample

Appendix C

Figure C1: Intervention Table

Intervention	Jordan et al., BMC Medicine 2020;18: 368	ElMokhallalati et al., *BMC Medicine*, 2019, 17:50	Senderovich et al., *Palliative Medicine in Practice*, 2020; 14, 4: 259-270	Langberg et al., *Liver International*, 2018; 38: 768-765	Vinant et al., *BMC Palliative Care*, 2017, 16: 36.	Treasure et al., *Cancer Medicine*, 2021; 10: 4312-4321.	Temel et al., Journal of Clinical Oncology, 2017, 35: 834-841.
Palliative Care	X	X	X	X	X	X	X
Pain Relief		X			X	X	X
Survey		X			X	X	X
Usual Care			X			X	X

Appendix D

Figure D1: Impact of the Evidence Table

Evidence Reference	**Contributions to Target Outcomes**
Jordan et al., BMC Medicine 2020;18:368	Level I systematic review and meta-analysis indicating reducing barriers to accessing PC and promoting earlier integration alongside active Tx would maximize benefits to pts before they die and reduce costs to the wider healthcare service
Senderovich et al., *Palliative Medicine in Practice*, 2020; 14, 4: 259-270	Level I scoping review assists in the development of models of integrated PC and policies that can help serve needs of elderly community Also helping to guide physicians and familiarize them with dx trajectory, prognostication uncertainty, and emphasize importance of ACP.
Temel et al., Journal of Clinical Oncology, 2017, 35: 834-841.	Level II RCT provides further evidence to support early integrated PC as the standard of care for patients with newly diagnosed incurable cancers.
Treasure et al., *Cancer Medicine*, 2021; 10: 4312-4321.	Level II RCT provides further evidence that PC can provide benefits when facing a chronic illness including improved QOL and sx burden relief.
Vinant et al., *BMC Palliative Care*, 2017, 16: 36.	Level III cohort study provides original data showing a still late referral to the PCCT's in France and relays the most frequent symptom needs and topics discussed in PC
ElMokhallalati et al., *BMC Medicine*, 2019, 17:50	Level IV article showing clear benefits of PC indicating policymakers should consider how to ensure improvements in pain management for pts at home through advice and support from PCS.
Langberg et al., *Liver International*, 2018; 38: 768-765	Level IV article having qualitative and informative literature to describe the struggles of patients with decompensated liver cirrhosis with descriptions of barriers to PC and ways to enhance education and earlier referrals.

Appendix E

SWOT Analysis Chart

	Strengths	**Weaknesses**
Internal	• Company is well established • Leading company for palliative/hospice services in the area • Strives to provide the right care at the right time hosting various service lines • Supportive of efforts to increase education and awareness	• Participating facilities still lack knowledge of palliative/hospice services • No routine education is provided to facilities • Barriers/misconceptions persist among the community and healthcare providers • Expanded service lines reduce focus on palliative service lines • Limited resources to provide routine education to participating facilities
	Opportunities	**Threats**
External	• Awareness and knowledge can increase with routine education • Increased revenue if facilities place more referrals • Improved quality of life and outcomes for patients	• Stigmas/misconceptions surrounding services persist despite efforts • Other providers at facilities assuming role of palliative provider • Facility losing value for palliative/services provided by BCN

Appendix F

Figure F1: Statement of Mutual Agreement Form

Eastern Kentucky University
Doctor of Nursing Practice (DNP) Program
Statement of Mutual Agreement

The purpose of this document is to describe the nature of the agreement for the Doctor of Nursing Practice (DNP) Project between:

Student Name: _______April McDonald______________________________________

Partnering Organization Name: _______Bluegrass Care Navigators_______________

This statement of mutual agreement is completed in the DNP Project planning phase as a precursor to the Institutional Review Board (IRB) and to show general organizational support for the DNP Project.

General Information:

DNP Project Title:	**Improving Early Utilization of Palliative Care Services to Impact Quality of Life**
Partnering Organization:	Name of Organization: Bluegrass Care Navigators Name of Organizational Contact: Lizzie Eubank, Executive Director DOM Phone: 859-983-9396 Email: leubank@bgcarenav.org Permission has been granted by Lizzie Eubank for Nancy Hudson DNP, APRN/Preceptor to sign all documents related to DNP Project. Nancy Hudson, DNP, APRN Email: nhudson@bgcarenav.org Phone: 859-361-2702

Brief Description of the Project:

Identified Problem/Gap:	Lack of awareness for PC services and late referrals
Proposed Intervention(s):	Increase awareness by use of the following interventions:

	- Train 100% of staff on new palliative referral protocol within 2 weeks - Increase distribution of brochures/information on palliative care services by 25% - Record 80% attendance of staff at weekly rounding sessions - Increase palliative care referrals by 25% over same month last year
Proposed Evaluation of: ● Outcomes ● Process	Evaluation of palliative referrals post education and protocol use Pre and post evaluations to determine knowledge of palliative care
Description of On-Site Activities: ● Student's Role ● Meetings ● Access to Data	Student will provide the surveys and education to staff. Student will perform weekly rounding for Q/A at facility. Student will only collect number of referrals and average PPS score from patient records, no personal data. Meetings are to be determined. Access to data is already available as student is APRN provider.
Intellectual Property: ● Ownership ● Plans for Dissemination ● Non-disclosure expectations ● Publication Plans	Student *** All EKU DNP Projects will require at minimum a de-identified abstract to be uploaded into the digital repository as a marker of academic work.

Institutional Review Board:

EKU is the IRB of Record	The organization agrees to let EKU be the IRB of Record. ☐ Yes ☐ No ☐ Other: (Explain) ☐
Organization is the IRB of Record	The organization prefers to be the IRB of Record. ☐ Yes ☐ No ☐ Other: (Explain)

Other elements for clarification prior to implementation of the DNP Project. Describe.

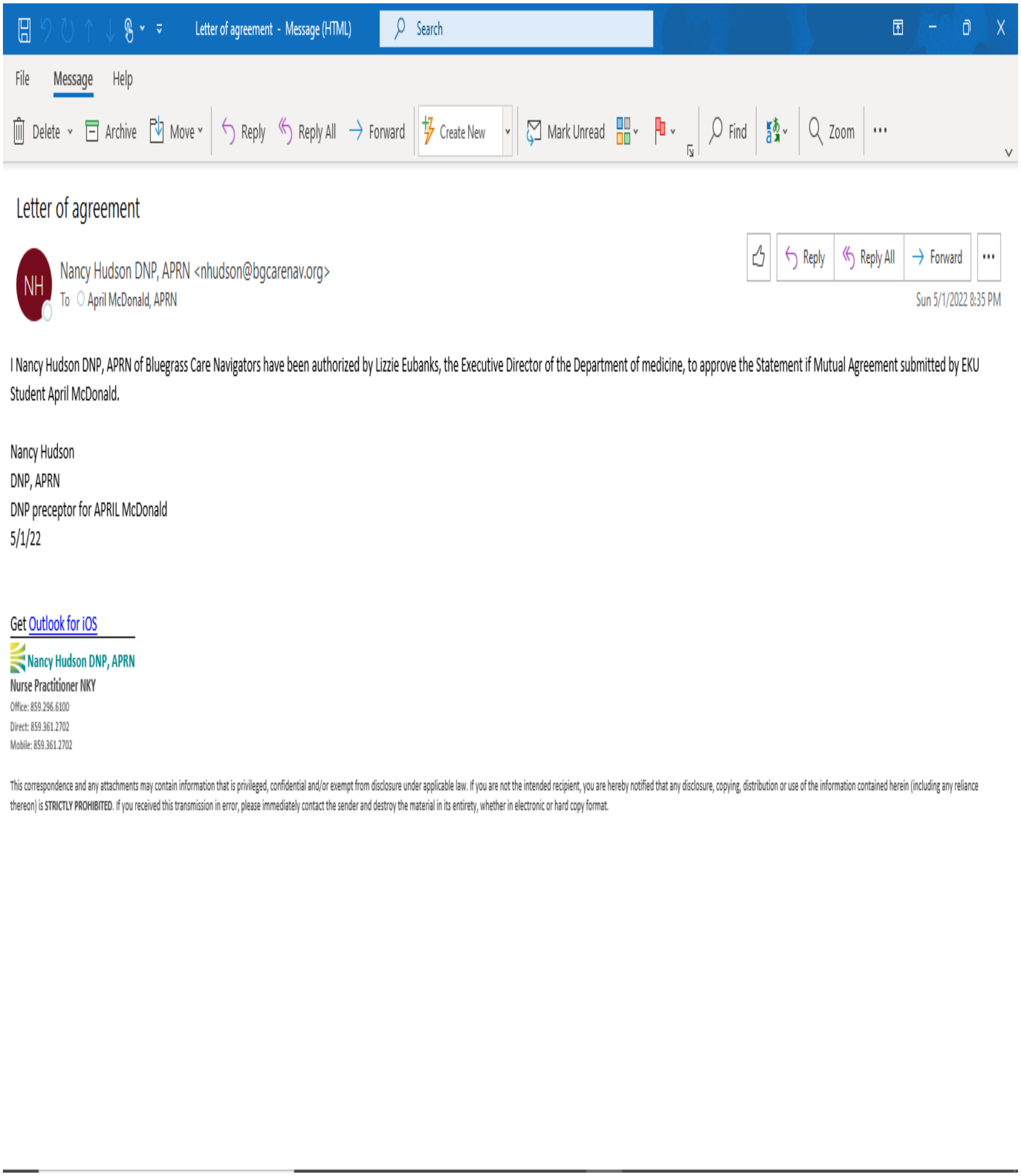
DNP project will take setting at Homestead NH facility (or other agreeable facility) where records indicate there are low referrals. Student will obtain consent from facility/nurses. Evaluation to determine demographics including age, gender, years of RN experience of nursing staff and base knowledge of palliative care services. Student will provide education to nursing staff via PowerPoint presentation including implementation of Palliative Protocol Tool and weekly rounding for Q&A. The protocol tool and PPS chart will be displayed at each nurse’s station. Numbered Palliative brochures will be made available and tracked in facility for staff, residents, and family. A post evaluation will be collected from nursing staff to compare to baseline evaluations. Palliative referrals will be compared month to month (August 2021 vs August 2022) at the end of the process.

DNP Student Signature: ____
Date:

Partnering Organization’s Signature: ____
Date:

Appendix F

Figure F2: Statement of Mutual Agreement Approval



Letter of agreement

Nancy Hudson DNP, APRN <nhudson@bgcarenav.org>
To April McDonald, APRN
Sun 5/1/2022 8:35 PM

I Nancy Hudson DNP, APRN of Bluegrass Care Navigators have been authorized by Lizzie Eubanks, the Executive Director of the Department of medicine, to approve the Statement if Mutual Agreement submitted by EKU Student April McDonald.

Nancy Hudson
DNP, APRN
DNP preceptor for APRIL McDonald
5/1/22

Get Outlook for iOS

Nancy Hudson DNP, APRN
Nurse Practitioner NKY
Office: 859.296.6100
Direct: 859.361.2702
Mobile: 859.361.2702

Appendix G

Recruitment Flyer

Attention Nursing Staff and Residents!

Your participation is requested for a Quality Improvement Initiative
as a required component of doctoral education for Eastern Kentucky University

DNP Project Purpose:

Improving Early Utilization of Palliative Care Services to Impact Quality of Life

DNP Project Includes:

- Pre and Post Questionnaire for Nursing Staff
- Palliative Care Education for Nursing Staff
- Implementation of Palliative Protocol Tool for Nursing Staff
- Take home information for Residents and Family
- Weekly Visits from Palliative Provider for implementation support

**Implementation Process will occur over 6 weeks

**Sorry, no compensation offered other than knowing you are helping to improve health care.

For More Information Contact:

April McDonald, MSN, CHPN, APRN, FNP-BC
Palliative Care APRN with Bluegrass Care Navigators
Eastern Kentucky University DNP Student
amcdonald@bgcarenav.org
or
Molly Bradshaw DNP, APRN, FNP-BC, WHNP-BC
DNP Chair at Eastern Kentucky University
Molly.Bradshaw@eku.edu

Appendix H

IRB Stamped Approved Waiver and Consent Form

Eastern Kentucky University Institutional Review Board
Informed Consent Form Template

Consent to Participate in a Research Study

Improving Early Utilization of Palliative Care Services to Impact Quality of Life

Institutional Review Board
Protocol Number
5162
Approval Valid
2/15/23-12/22/23

Key Information

You are being invited to participate in a research study. This document includes important information you should know about the study. Before providing your consent to participate, please read this entire document and ask any questions you have.

Do I have to participate?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you chose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering. If you decide to participate, you will be one of the many currently employed nursing staff at this facility asked to participate in the study.

What is the purpose of the study?

The purpose of the study is to enhance education about palliative care services. The education is primarily directed towards nursing staff as they are key contributors in recognizing the needs for palliative care services and can initiate the referral process. The goal is that the enhanced education will lead to increased palliative referrals for appropriate individuals. Studies suggest that palliative care services can improve quality of life for those suffering from chronic or terminal illnesses.

Where is the study going to take place and how long will it last?

The research procedures will be conducted at Homestead Nursing & Rehabilitation Center. You will need to come to work on your regularly designated days and times as determined by your supervisor during the study. This study will require you to complete a demographics questionnaire consisting of 4 questions, a palliative pre-test consisting of 12 questions, a palliative posttest consisting of 12 questions, and viewing of a power point presentation that is estimated to be under 1 hour in length. Completion times of the questionnaires may vary. The educational implementation is expected to last over a 4-week period which will include weekly visits by the primary investigator to assist with questions or concerns. These visits should only require a few minutes of time from the participating nursing staff. The total amount of time you will be asked to volunteer for this study is estimated to be under 10 hours total over the duration of the project lasting 4 weeks.

What will I be asked to do?

During participation in the study, the nurse will be asked to complete a demographics questionnaire consisting of 4 questions, a palliative pre-test consisting of 12 questions, a palliative posttest consisting of 12 questions, and viewing of a power point presentation that is estimated to be under 1 hour in length. A palliative referral process flowchart and a palliative performance scale chart will be posted at each nursing station for easy access. Palliative brochures will be posted throughout the facility for staff, residents, and/or family to review. The educational implementation will occur over a 4-week period. The primary investigator will make weekly visits to the facility to assist with any questions or concerns the nursing staff may have during that 4 week span. This study does not involve any procedures that are experimental. There are no randomized procedures in this study.

Are there reasons why I should not take part in this study?

Reasons to not participate in this study would include if the individual is non-nursing staff, currently not employed by the selected facility, under the age of 18, on leave for an extended period, or simply does not wish to participate.

What are the possible risks and discomforts?

To the best of our knowledge, the things you will be doing have no more risk of harm or discomfort than you would experience in everyday life. No procedures are involved that would cause possible physical or mental harm or significant social, psychological, emotional, or financial harm. There is no more than average risk for breach in confidentiality.

You may, however, experience a previously unknown risk or side effect.

What are the benefits of taking part in this study?

You are not likely to get any personal benefit from taking part in this study. Your participation is expected to provide benefits to others by identifying those in need of palliative care services and assisting with appropriate referrals to palliative care. Several previous studies indicate that palliative care services can improve quality of life for individuals suffering from chronic or terminal illnesses. This study could result in the nurse having enhanced education about palliative services and how to identify and place appropriate referrals. We cannot and do not guarantee that you will receive any benefits from this study.

If I don't take part in this study, are there other choices?
If you do not want to be in the study, there are no other choices except to not take part in the study.

Now that you have some key information about the study, please continue reading if you are interested in participating. Other important details about the study are provided below.

Other Important Details

Who is doing the study?
The person in charge of this study is April McDonald, DNP Student at Eastern Kentucky University. She is being guided in this research by Dr. Molly Bradshaw-O'Neal and Dr. Lisa Jones. There may be other people on the research team assisting at different times during the study.

What will it cost me to participate?
There are no costs associated with taking part in this study.

Will I receive any payment or rewards for taking part in the study?
You will not receive any payment or reward for taking part in this study.

Who will see the information I give?
Your information will be combined with information from other people taking part in the study. When we write up the study to share it with other researchers, we will write about this combined information. You will not be identified in these written materials.

This study is anonymous. That means that no one, not even members of the research team, will know that the information you give came from you.

However, there are some circumstances in which we may have to show your information to other people. For example, the law may require us to show your information to a court or to tell authorities if we believe you have abused a resident or are a danger to yourself or someone else. Also, we may be required to show information that identifies you for audit purposes.
This study involves online data collection. We will make every effort to safeguard your data, but as with anything online, we cannot guarantee the security of data obtained via the Internet. Third-party applications used in this study may have terms of service and privacy policies outside of the control of Eastern Kentucky University.

The information or biospecimens you provide as part of the research will not be used or distributed for future research studies even if identifiers are removed.

Can my taking part in the study end early?

If you decide to take part in the study, you still have the right to decide at any time that you no longer want to participate. You will not be treated differently if you decide to stop taking part in the study.

The individuals conducting the study may need to end your participation in the study. They may do this if you are not able to follow the directions they give you, if they find that your being in the study is more risk than benefit to you, or if the University or agency funding the study decides to stop the study early for a variety of reasons.

What happens if I get hurt or sick during the study?

If you believe you are hurt or get sick because of something that is done during the study, you should call April McDonald at 859-278-4869 immediately. It is important for you to understand that Eastern Kentucky University will not pay for the cost of any care or treatment that might be necessary because you get hurt or sick while taking part in this study. Also, Eastern Kentucky University will not pay for any wages you may lose if you are harmed by this study. These costs will be your responsibility.

Usually, medical costs that result from research-related harm cannot be included as regular medical costs. Therefore, the costs related to your care and treatment because of something that is done during the study will be your responsibility.
You should ask your insurer if you have any questions about your insurer's willingness to pay under these circumstances.

What else do I need to know?

Bluegrass Care Navigators are involved in the study and will assist with some supplies during the study. You will be told if any new information is learned which may affect your condition or influence your willingness to continue taking part in this study.

We will give you a copy of this consent form to take with you.

Consent

Before you decide whether to accept this invitation to take part in the study, please ask any questions that come to mind now. Later, if you have questions about the study, you can contact the investigator, April McDonald, at amcdonald@bgcarenav.org. If you have any questions about your rights as a research volunteer, you can contact the staff in the Division of Sponsored Programs at Eastern Kentucky University at 859-622-3636.

If you would like to participate, please read the statement below.

By completing this activity of reviewing the informed consent and proceeding with the collection of demographic information, you agree that you (1) are at least 18 years of age, (2) are a current nursing employee at the participating facility (3) have read and understand the information above and (4) voluntarily agree to participate in this study.

Appendix I

Demographic Questions with Rationales

1.) What is your current age? Rationale: determine age related learning preferences
__18-25
__25-35
__35-45
__45-55
__55-65
__65+

2.) How long have you been a licensed RN? Rationale: determine level of work experience
__Less than 1 year
__1-4 years
__4-10 years
__>10 years

3.) How long have you been an employee of this facility? Rationale: determine comfort level and familiarity of facility.
__Less than 1 year
__1-4 years
__4-10 years
__>10 years

4.) What nursing degree do you hold? Rationale: determine level of educational experience
__LPN
__Associate degree
__Bachelor's Degree
__Graduate Degree
__ Other. Please list________________________

Appendix J

Figure J1: Palliative Care Confidence/Knowledge Questionnaire for Nurses: Pre-Test

1. How confident are you in your current knowledge of palliative care?

   Not at all confident 0 1 2 3 4 5 6 7 8 9 10 Extremely confident

2. How confident are you in asking the facility MD/APRN for a palliative referral based on your current knowledge of palliative care?

   Not at all confident 0 1 2 3 4 5 6 7 8 9 10 Extremely confident

3. Palliative is the same as Hospice Care.

   True or False or Uncertain

4. Palliative Care is only for patients seeking total comfort care and no longer desire aggressive therapies.

   True or False or Uncertain

5. Palliative and Hospice Care will cause death to occur sooner.

   True or False or Uncertain

6. The Palliative Performance Scale (PPS) is a communication tool to help describe a patient's current functional level and has prognostic value.

   True or False or Uncertain

7. An alert and oriented 20-year-old male with no evidence of health issues who requires no assistance with eating, walking, or any ADL's would be scored at what PPS percentage?

   a. 60%
   b. 90%
   c. 100%

8. A patient who spends most of the day sitting or lying down due to fatigue from advanced disease, requires considerable assistance to walk even for short distances, but who is otherwise fully conscious with good intake would be scored at what Palliative Performance Scale (PPS) percentage?
    a. 30%
    b. 50%
    c. 60%
9. A patient that is nearing death, essentially unresponsive, bed bound with no intake and only mouth care being provided would be scored at what PPS percentage?
    a. 20%
    b. 30%
    c. 10%
10. In your experience, what are the benefits of palliative referrals in your facility?
11. In your experience, what are the concerns/challenges you see with palliative care/referrals in your facility?
12. Do you think routine education about palliative services at your facility would be helpful?

    Yes or No or Uncertain

Appendix J

Figure J2: Palliative Care Confidence/Knowledge Questionnaire for Nurses: Post-Test

1. How confident are you in your current knowledge of palliative care?

   Not at all confident 0 1 2 3 4 5 6 7 8 9 10 Extremely confident

2. How confident are you in asking the facility MD/APRN for a palliative referral based on your current knowledge of palliative care?

   Not at all confident 0 1 2 3 4 5 6 7 8 9 10 Extremely confident

3. Palliative is the same as Hospice Care.

   True or False or Uncertain

4. Palliative Care is only for patients seeking total comfort care and no longer desire aggressive therapies.

   True or False or Uncertain

5. Palliative and Hospice Care will cause death to occur sooner.

   True or False or Uncertain

6. The Palliative Performance Scale (PPS) is a communication tool to help describe a patient’s current functional level and has prognostic value.

   True or False or Uncertain

7. An alert and oriented 20-year-old male with no evidence of health issues who requires no assistance with eating, walking, or any ADL’s would be scored at what PPS percentage?

   a. 60%
   b. 90%
   c. 100%

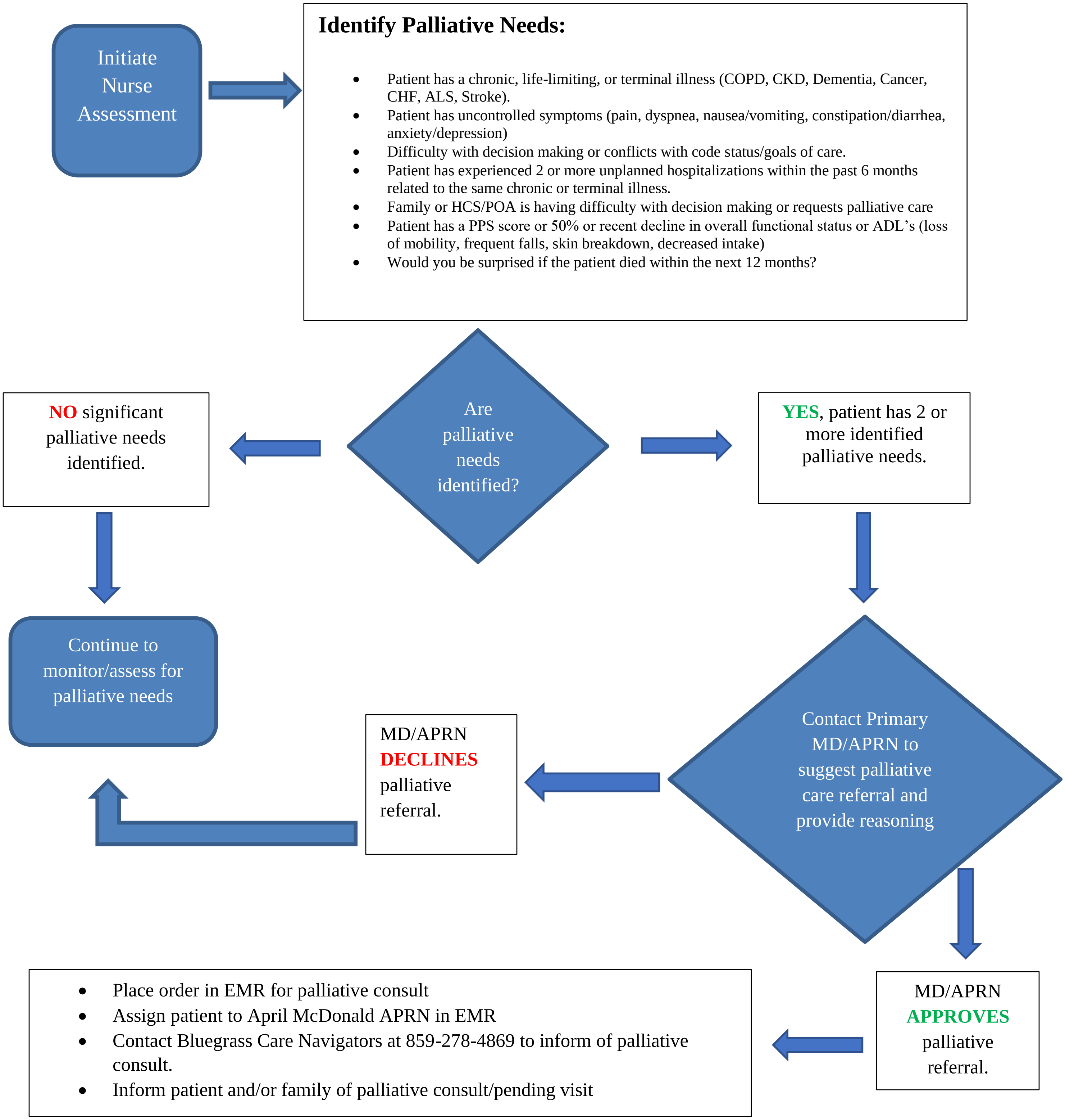
8. A patient who spends most of the day sitting or lying down due to fatigue from advanced disease, requires considerable assistance to walk even for short distances, but who is otherwise fully conscious with good intake would be scored at what Palliative Performance Scale (PPS) percentage?
    a. 30%
    b. 50%
    c. 60%
9. A patient that is nearing death, essentially unresponsive, bed bound with no intake and only mouth care being provided would be scored at what PPS percentage?
    a. 20%
    b. 30%
    c. 10%
10. In your experience, what are the benefits of palliative referrals in your facility?
11. In your experience, what are the concerns/challenges you see with palliative care/referrals in your facility?
12. In your experience, did the education and support during the Quality Improvement Project concerning palliative services and the referral process provide benefit or improve the process?

    Yes or No or Uncertain

Appendix K

Figure K1: Palliative Referral Process Flowsheet

The illustration below is a flowsheet to assist nursing staff on how to identify a patient with palliative needs. The flowsheet also provides guidance on how to place a palliative referral.



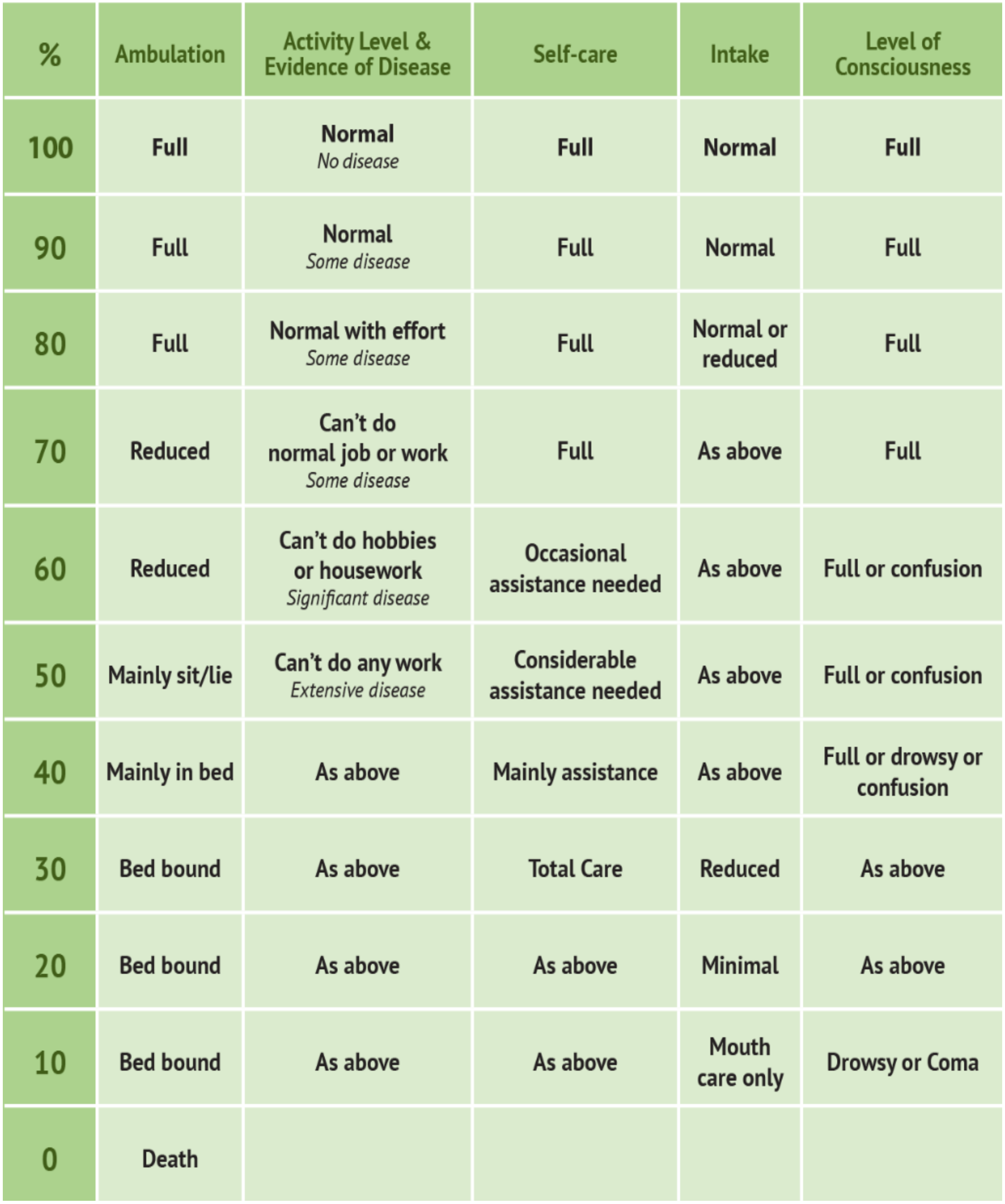
Identify Palliative Needs:

- Patient has a chronic, life-limiting, or terminal illness (COPD, CKD, Dementia, Cancer, CHF, ALS, Stroke).
- Patient has uncontrolled symptoms (pain, dyspnea, nausea/vomiting, constipation/diarrhea, anxiety/depression)
- Difficulty with decision making or conflicts with code status/goals of care.
- Patient has experienced 2 or more unplanned hospitalizations within the past 6 months related to the same chronic or terminal illness.
- Family or HCS/POA is having difficulty with decision making or requests palliative care
- Patient has a PPS score or 50% or recent decline in overall functional status or ADL's (loss of mobility, frequent falls, skin breakdown, decreased intake)
- Would you be surprised if the patient died within the next 12 months?

- Place order in EMR for palliative consult
- Assign patient to April McDonald APRN in EMR
- Contact Bluegrass Care Navigators at 859-278-4869 to inform of palliative consult.
- Inform patient and/or family of palliative consult/pending visit

Appendix K

Figure K2: Palliative Performance Scale Chart



%	Ambulation	Activity Level & Evidence of Disease	Self-care	Intake	Level of Consciousness
100	Full	Normal *No disease*	Full	Normal	Full
90	Full	Normal *Some disease*	Full	Normal	Full
80	Full	Normal with effort *Some disease*	Full	Normal or reduced	Full
70	Reduced	Can't do normal job or work *Some disease*	Full	As above	Full
60	Reduced	Can't do hobbies or housework *Significant disease*	Occasional assistance needed	As above	Full or confusion
50	Mainly sit/lie	Can't do any work *Extensive disease*	Considerable assistance needed	As above	Full or confusion
40	Mainly in bed	As above	Mainly assistance	As above	Full or drowsy or confusion
30	Bed bound	As above	Total Care	Reduced	As above
20	Bed bound	As above	As above	Minimal	As above
10	Bed bound	As above	As above	Mouth care only	Drowsy or Coma
0	Death				