



University of Kentucky
UKnowledge

DNP Projects

College of Nursing

2021

Promotion of MOST Forms Through Education About Importance of Advance Care Planning in Seriously Ill Patients

Nidhi More
nnmo223@uky.edu

[Right click to open a feedback form in a new tab to let us know how this document benefits you.](#)

Recommended Citation

More, Nidhi, "Promotion of MOST Forms Through Education About Importance of Advance Care Planning in Seriously Ill Patients" (2021). *DNP Projects*. 338.
https://uknowledge.uky.edu/dnp_etds/338

This Practice Inquiry Project is brought to you for free and open access by the College of Nursing at UKnowledge. It has been accepted for inclusion in DNP Projects by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.



**Promotion of MOST Forms Through Education About Importance of Advance Care
Planning in Seriously Ill Patients**

Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Nursing
Practice at the University of Kentucky

By

Nidhi N More

Louisville, Ky

Spring 2021

Abstract

Purpose: To establish the importance of early Advance Care Planning (ACP) and improve the utilization of Medical Orders for Scope of Treatment (MOST) forms in seriously ill patients by educating providers and nurses to identify patients who meet specified criteria. The goals of this intervention are reduction of readmissions and better quality of life for this patient population.

Methods: A quasi-experimental design was used for evaluation of an Educational intervention to promote MOST forms, Advance Directives (AD) and Palliative Care (PC) consults. A retrospective and prospective chart review was conducted to determine the number of patients who met criteria for ACP discharged from the intensive care unit (ICU) and progressive care unit (PCU) of the hospital in the three months before and the three months after implementing the Educational intervention by comparing the number of MOST forms, ADs, PC, and readmissions. A Pre and Post Education survey was conducted to assess the knowledge of the providers and the nurses on ADs and PC.

Results: The study identified no statistically significant differences in ADs, PC consults, and readmissions, in patients who met criteria for ACP according to the evidence-based tool pre and post Education. There was a decrease in the number of patients who died in the hospital post education. Although no MOST forms were documented, the knowledge of ADs post Education increased in the survey results and the knowledge of PC remained the same.

Conclusion: An educational intervention showed a modest reduction in hospital deaths but was not effective by itself in increasing ACP discussions, PC consults, or completion of MOST forms.

Dedication

I would like to dedicate this project to my family and friends, without whom, I would not be where I am in life. My husband, Nitin, and my two boys, Omkar and Ansh, have been a constant source of support and encouragement through the challenges of this doctoral program. I am truly thankful for your love and for always believing in me. I would also like to thank my parents and my brother who motivate me from thousands of miles away but are always close to my heart. Lastly, I am grateful for all my friends who started and shared this DNP program journey with me and were always there to help when I reached out.

Acknowledgements

I would like to express my sincere gratitude to Dr. Sheila Melander for her immense knowledge, continuous support, motivation, and guidance literally at any hour I needed it throughout my DNP journey. I would like to thank Dr. Melanie Hardin-Pierce who has been a wealth of knowledge in the clinical setting and the best cheerleader. Special appreciation goes to my clinical mentor Dr. Michael S. Myers, whose expertise in the field of Palliative care paved the way to this project, and Michael supported me not just as a mentor but also as a friend. Additionally, I appreciate all the help Dr. Amanda Thaxton Wiggins has offered by sharing her expertise on statistics, Dr. Debbie Hampton for being a part of the IRB approval process, and Whitney Kurtz-Ogilvie for editing my manuscript and providing essential pointers. Finally, I would like to offer my special thanks to the Manager Tabatha Wright and the staff at Norton Women's and Children's Hospital, who supported me with everything I needed for the completion of the project.

Disclosure:

Norton Healthcare Scholarship Recipient: This Doctor of Nursing Practice project and program of study was partially funded through Norton Healthcare Scholar Program.

Table of Contents

Acknowledgements.....	1
Introduction.....	5
Background.....	6
Purpose of Proposed Project.....	7
Proposed Evidence-Based Intervention.....	8
Specific Aims/Objectives.....	8
Theoretical/ Conceptual Framework.....	9
Review of Literature.....	10
Methods for Search.....	10
Synthesis of Evidence.....	11
Identification of Knowledge Gap.....	14
Expected Outcomes.....	14
Evidence-based Intervention.....	15
Project Design.....	16
Agency Description.....	18
Congruence with Organizational Values.....	19
Description of Stakeholders.....	20
Site-specific Facilitators and Barriers.....	21
Target Population.....	22
Procedure.....	22
Data Analysis.....	24
Results.....	25

Timeline of Project	25
Manual Chart Review	26
Survey	27
Discussion.....	28
Implications for Future Practice.....	30
Development of an Educational Platform.....	30
Opportunities for Further Study.....	31
Resources, Feasibility and Plan for Sustainability.....	33
Limitations	33
Conclusion	35
References.....	36
Tables.....	41
Table 1. Study measures.	41
Table 2. Pre and Post – Chi-square Test.....	41
Table 3. Pre and Post Score - Independent Samples Test.....	42
Figures.....	43
Figure 1. Variables Recorded Pre and Post Educational Intervention.....	43
Figure 2. Prevalent Diagnoses that Met MOST form and Palliative Care Criteria	43
Figure 3. Questions on Advance Directives Answered Correctly Pre and Post Educational Intervention.....	44
Figure 4. Questions on Palliative Care Answered Correctly Pre and Post Educational Intervention.....	44
Appendix A.....	45

Appendix B 46

Promotion of MOST Forms Through Education About Importance of Advance Care Planning in Seriously Ill Patients

Introduction

The focus of our modern healthcare system is treatment of disease, injury, and other physical and mental impairments in people by any means possible. Although this approach has helped providers to fight many diseases and increase the lifespans of patients, the quality of life is many times neglected for patients suffering from serious illnesses such as cancer, advanced heart disease, and dementia. These patients often visit the hospitals multiple times a year and have enormous healthcare costs due to exacerbations of their symptoms. According to the Center to Advance Palliative Care (CAPC), a study done by Avalere Health shows that patients diagnosed with cancers of the brain, esophagus, liver, or lung have more than a one-in-three chance of at least one hospital admission every six months, and also have up to a 40% chance of at least one Emergency Department (ED) visit in that same time period (CAPC, 2019). Most of these patients become trapped in the cycle of hospitalizations, and as many as one in five will die in the ICU receiving futile care and multiple resuscitation attempts up until the moment of death (Feeley, 2016). Such patients need better symptom management and reduced rehospitalizations to improve their care.

To help these patients, our modern healthcare system focuses on the concept of the triple aim, which seeks to provide quality care, increase satisfaction, and lower costs (Barkley et al., 2019). Palliative care (PC) is an often overlooked strategy for holistic care that can help many patients in a manner consistent with the triple aim. PC is a medical subspecialty which, according to the CAPC, “provides patients with relief from the symptoms, pain, and stress of a serious illness-whatever the diagnosis or prognosis” (2019). The focus is on ensuring that the patient’s quality of life is as high as possible, rather than devoting all available resources

to treatment and a cure. PC programs do not just provide the best quality care for patients and family members, but they also significantly reduce costs. PC reduces ED/ICU visits, allows for timely discharges to optimal care settings, reduces hospital mortalities, and improves communication scores on the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) surveys (CAPC, 2019). PC can be appropriate for a serious illness at any stage and for patients of any age, and it can be provided along with all the other recommended treatments a patient is undergoing. As this is not end of life (EOL) care, patients are treated based on the need, complexity, and seriousness of their disease, not by their prognosis. Advance Care Planning (ACP) is an important domain in providing high quality PC that helps patients discuss their prognosis, the uncertainty of treatment outcomes, and provides recommendations for end-of-life care, that are tailored to each patient' specific disease course (Agarwal & Epstein, 2018).

Background

Because PC teams specialize in transition to EOL care, one of the main goals of the team is to provide ACP to the patients who need it. Advanced directives (ADs) have been established as legal documents that protect patients' rights and wishes if/when they are not able to decide for themselves. There are many common misconceptions related to ADs, e.g., that ADs are only for patients who are elderly, in intensive care, terminally ill, or sick with certain diagnoses such as advanced cancers (Oriakhi et al., 2019). Legally, anyone over the age of 18 can create an AD to avoid conflicts when they are not able to make healthcare decisions. ADs are especially helpful to avoid readmissions and unnecessary code situations in hospitals when terminally ill patients do not wish to undergo these life sustaining treatments. Therefore, to ensure high-quality, cost-effective care in these populations, it is

vital to educate providers to use clinical tools to identify which patients would benefit from an AD. A significant cultural shift is required to normalize the concept that ADs are not designed or developed only for dying patients; this is only possible if providers make use of the available PC resources for their patients and initiate conversations about ADs (Barkley et al., 2019).

There are various types of AD such as the Living Will, Do Not Resuscitate (DNR) Order, Organ Donation, Health Care Surrogate, etc., though the type of AD identified for this project is the Medical Orders for Scope of Treatment (MOST) form. According to the PC team at the selected study site, the MOST forms in the Electronic Health Records (EHRs) were being underutilized by providers. A MOST form is a provider's order that helps patients keep control over their medical care at the EOL. Like a DNR, the MOST form tells emergency medical personnel and other health care providers whether to administer cardiopulmonary resuscitation (CPR) in the event of a medical emergency. A MOST form may be used in addition to or, in some cases, instead of a DNR order. A MOST form may also provide other information about the patient's wishes for EOL health care, such as nutrition, antibiotics, healthcare proxy, etc. This project aimed at creating an educational intervention which would focus on promoting the utilization of MOST forms by providers to reduce the pain, burden, and unnecessary treatments in the seriously ill population, thereby reducing financial and emotional costs to the hospital and the patients.

Purpose of Proposed Project

PC services in the hospital setting are associated with increased rates of formalized AD, decreased ICU length of stay, increased use of hospice, and decreased use of nonbeneficial life-sustaining therapies (Hua et al., 2014). The purpose of this DNP project

was to increase the use of MOST forms in patients with terminal illnesses and comorbid burdens to reduce the rate of readmissions and improve patients' quality of life. This would be achieved by educating providers, nurses, care managers and social workers to screen patients using appropriate tools and establishing criteria for MOST form documentation during morning rounds.

Proposed Evidence-Based Intervention

According to CAPC (2019), PC teams can achieve the goal of reducing patient burden and readmission costs by devoting time to patient/family meetings, setting goals with patients and family members about what type of treatments they want, and by providing ACP planning for patients who would benefit from this discussion. When appropriate tools are used for early identification of seriously ill patients, ACP communication and completion of an AD is associated with a lower likelihood of life sustaining treatments in the last three months of life (Yen et al., 2019). This can significantly reduce costs by avoiding unnecessary hospitalizations, reducing code situations for hospitalized patients, and reducing ICU deaths for terminally ill patients. The MOST form is a detailed type of AD designed to respect the patient's specific wishes regarding EOL care, therefore completion of an AD means that patients are more likely to receive care consistent with their preferences.

Specific Aims/Objectives

The aim of this project was to educate providers and nurses about MOST forms and ensure that seriously ill patients complete the form before discharge from the hospital. An educational platform was created preceding the implementation of the project to educate providers, nurses, care-managers, pharmacists, and other team members on the alpha unit where the program was implemented.

Due to lack of training, providers have a very low involvement in ACP discussions (Chang et al., 2019). The main goal of this DNP project was to create awareness among clinicians through education so that patients get the benefit of AD and better quality of life when they are nearing death. The CAPC has identified a set of criteria which was used in this project to screen patients with serious illness. According to these criteria, the population at risk of unnecessary suffering can be identified through a combination of three key types of variables: diagnosis, functional impairment, and past health services utilization (CAPC, 2019). After identifying these patients, they would be recommended for a MOST form consult.

The specific aims of this project were to:

1. Increase the use of MOST forms for seriously ill patients before discharge through provider education about the importance of ACP.
2. Increase the number of PC consults in the seriously ill patient population through provider education about importance of early PC consults.
3. Conduct a Pre/Post survey of staff to assess their knowledge of ADs, MOST forms, and PC.
4. Reduce the costs related to readmissions and unnecessary life-saving treatments in seriously ill patients through increased utilization of MOST forms.
5. Reduce the burden of pain, suffering, unnecessary treatments, and adverse code situations in this patient population and improve quality of life.

Theoretical/ Conceptual Framework

Change is constant in healthcare organization, with new research emerging every day. To bringing about a practice change in an organization, there must be sharing of new evidence, which must then be accepted and implemented by the members of the organization. The

theoretical basis for this project was Kurt Lewin's 3-Stage Change Model. Lewin's model describes the change process as creating a perception that change is needed (unfreezing), helping individuals move towards the new, desired level of behavior (changing), and finally solidifying the perception that the new behavior is the norm (refreezing) (Hussain et al., 2018). These three steps are identified in the model as unfreezing, changing, and refreezing.

This model was used for this project to create awareness among providers by "unfreezing" old behaviors such as trying to treat or cure a serious illness. Patients can "change" old behaviors and take actions to improve quality of life by having ACP discussions and MOST form documentation, and thereby reducing the number of unnecessary readmissions to the ED and hospitals while focusing on physical and emotional comfort measures. Clinicians can help patients "refreeze" the change by providing ACP meetings and putting in consults for MOST forms to be documented in the patient's chart by the physician before discharge (Hussain et al., 2018).

Review of Literature

Methods for Search

The goal of the literature search was to provide a foundation of knowledge about the importance of early initiation of AD in seriously ill patients, to improve their quality of life and reduce the cost of hospitalizations in the last six months of life. This search focused on articles and studies that emphasize the importance of early AD consults and suggest tools that help diagnose the patients who meet criteria for ACP. The literature search was conducted using Pub Med, Cochrane, CINAHL, and MEDLINE databases. The key Boolean search terms used were: Advance Directives AND palliative care, AND importance OR readmissions to hospitals, OR quality of life in patients, and early palliative care AND serious illness.

Inclusion criteria were: published in English from 2014 through 2019, peer-reviewed with free full-text available, related to the PICOT question, and conducted in developed countries. Most studies were conducted in the inpatient hospital settings with the patient population that would benefit from AD consults such as the MOST form. Exclusion criteria included publication in a language other than English, a focus on the pediatric population, and studies in the outpatient primary care settings. The initial search yielded approximately 300 articles. After assessing titles and abstracts by of 76 studies by exclusion criteria, 16 studies were selected that were both relevant to this literature review and focused on the benefits of early implementation of AD. The search covered a wide range of study types, including systematic reviews, randomized controlled trials (RCTs), case-control studies, cohort studies, prospective studies, and cross-sectional studies.

The question used to guide the literature search was: In patients diagnosed with a serious illness, does early initiation of MOST form documentation improve quality of life and reduce the costs of hospitalizations in the last six months of life, as compared with only aggressive treatment options?

Synthesis of Evidence

Studies have supported the fact that early inpatient PC consults have been shown to reduce acute care service use and improve the use of ACP facilities in patients with serious illnesses in the last few months of life (Qureshi et al., 2019, Barkley et al., 2019). This literature review specifically focused on the substantial shortcomings in the care of seriously ill hospitalized patients and concluded that greater measures are needed to improve the experience and respect the wishes of these patients at the EOL (Wilson et al., 2017).

Patients who have ADs such as the MOST form on file are twice as likely to receive

out-of-hospital care and to die at home in the presence of family members; in contrast, those patients without these directives tend to remain hospitalized throughout the last two weeks of life (CAPC, 2019; Dunn et al., 2018; Qureshi et al., 2019; Yen et al., 2019). Many studies have concluded that providers initiate ACP later for patients with frailty, organ failure, heart failure, and serious illnesses other than cancer, than they do for cancer patients. This has been associated with a four to five fold higher likelihood of hospitalization and poorer quality of life in the last few weeks of life (Qureshi et al., 2019; Vanbutsele et al., 2018; Gaertner et al., 2017).

It is unclear if attending physicians are adequately prepared to have EOL discussions with patients; therefore, many researchers have developed feasible and comprehensive ACP programs that can be incorporated into the existing healthcare system to identify hospitalized non-cancer patients in need of ADs (Yen et al., 2019; Oriakhi et al., 2019; Sudore et al., 2018; Kavalieratos et al., 2017). These programs provide nurses and providers with easy tools to identify patients who need ADs such as the MOST form before they are discharged from the hospital. The theme of these studies is to focus on ACP which improves the delivery of medical care aligned with patients' values and satisfaction at the EOL.

Along with reduced in-hospital mortality these studies demonstrated that ACP and ADs achieve the goal of cost efficiency because they are part of a broader PC delivery model which replaces unnecessary burdensome treatments with outpatient resources that reduce risks of readmissions and costs (Wilson et al., 2017; Bond et al., 2018; May et al., 2018; May et al., 2014). Many studies suggest that PC team consults have an immediate impact on reducing costs by helping with ACP and ADs which in turn reduces length of stay and hospital utilization (Bond et al., 2018). Therefore, research suggests that early ADs by using MOST

forms for a serious illness can significantly reduce healthcare costs and these resources can be used for better healthcare utilization.

Another important theme that emerged from the literature review is that early integration of ACP plays a major role in improving quality of life and function through engaging, meaningful discussions between providers, patients, and family members. These conversations can both relieve anxiety and improve shared decision-making. An analysis of several studies showed the benefits of improvement in cognitive and physical function due to better symptom management from ACP, which leads to better decision making and increased AD documentation (Abu Al Hamayel et al., 2019; Vanbutsele et al., 2018; Gaertner et al., 2017). Despite these benefits, a lack of training among providers has frequently delayed the initiation of such discussions (Chan, Ng, Chan, Wong, & Chow, 2019). There is a need for ACP training programs that will educate providers about the value of ADs for this patient population, and the importance of starting these discussions while the patients are decisional.

One team of researchers specified that patients believe it is the physician's responsibility to initiate the AD discussion, and that they prefer these discussions to start at an earlier stage than the physicians realize (Oriakhi et al., 2019). However, most physicians who attend to the patients in the inpatient hospital setting are not adequately trained to address end-of-life issues and are uncomfortable with approaching patients and caregivers to discuss patients' wishes; some completely avoid these conversations (Nedjat-Haiem et al., 2019). This is especially difficult when the patients are already terminally ill, and not able to make any decisions for themselves, so it is vital for professionals to start ACP early and have AD documented in a seriously ill patient's chart.

Identification of Knowledge Gap

The role of ACP has been well established in various acute care and out-patient settings and it has contributed to reduced hospital costs and improved quality of life for many patients, but the barriers between the non- PC and PC providers prevent the collaborative effort needed to achieve patient centered care by documenting ADs. One of the barriers for consultation of ACP is miscommunication between the providers due to a lack of informal meetings, or interactions. Other barriers include family members' resistance to ACP , provider attitudes towards ADs, a sense of self-sufficiency by in-patient providers, and lack of education to help providers differentiate between hospice and ACP (McDarby & Carpenter, 2018). These barriers make it difficult to establish a successful collaboration among the providers; therefore, patients leave the hospitals without an AD consult even when they would benefit from it.

Some solutions to these challenges include creating awareness and understanding through education. With better collaboration between providers, it is possible to provide early AD consults and achieve better outcomes. A MOST form is a physician's order that can help a person keep control over their medical care at the end of life. A healthcare professional can help create a MOST form upon entry to a hospital, nursing home, or hospice care in a facility or home. However, to be legally valid in the state of Kentucky the MOST form must be signed by a physician and the patient or the patient's legally appointed healthcare representative.

Expected Outcomes

PC teams exist in various acute care and out-patient settings and they have contributed to reduced hospital costs by preventing symptom crises (Dunn et al., 2018). By having ACP meetings with the patients and family members, PC teams ensure that the patient's goals are consistent with the care and that they have documentation of AD. The expected outcome of this

project was to ensure that an educational platform is built in this hospital to help providers tailor their roles in delivering ACP to patients who are seriously ill and wish to develop specific goals for future treatments. Discussions with providers about advance care and AD have been clearly shown to increase the likelihood that patients will receive care consistent with their preferences (Abu Al Hamayel et al., 2019). This DNP project aimed to promote discussions with patients about AD, specifically the MOST forms, by creating an awareness about ACP in the seriously ill population. Nurses, care-managers, and pharmacists were educated about the trigger model key criteria to identify patients during morning rounds, and providers were notified about these patients so that they are not discharged without a MOST form consult.

Evidence-based Intervention

The original effort on increasing PC consults started with the work of Dr. Katie Roach, who found in 2017 that a screening tool was effective in increasing the number of ICU patients referred to palliative care. The next year, Dr. Amber Folske built on that project and sought to assess the effects of palliative care education with nurses on the rate of inpatient palliative care consults. She found in her study that an educational intervention was effective for increasing the knowledge of bedside nurses, but education alone was not effective in increasing the overall rate of inpatient palliative care consults. Dr. Folske recommended that further study should involve provider input and attempt to identify the best educational tools for palliative care on specific units of the hospital.

This project expanded on the previous work of Dr. Michael Myers, whose 2019 palliative care needs assessment showed that there was a great area of opportunity at Norton Women's and Children's Hospital for introducing patients to early AD consults such as the MOST form. His study revealed that there are many other conditions besides cancer that may

be missed when considering an AD consult, including multiple admissions from subacute rehab (SAR) and organ failure. His study also concluded that several seriously ill patient populations, such as those affected by COPD, CHF, and ESRD, disproportionately died in the hospital without ADs (Myers, 2019). His survey of providers indicated a need to educate providers and nurses about the purpose and benefits of PC and ACP to patients, family members, and the hospital.

PC services help with EOL care planning and result in high family satisfaction and emotional support compared to usual care, resulting in lowered costs to the organization (Hua et al., 2014). The purpose of this DNP project was to establish the importance of PC services and promoting early MOST form consults in patients with serious illnesses by increasing awareness about ADs.

Project Design

A quasi-experimental design was used for pre and post evaluation of an educational tool to promote utilization of MOST forms and increase the number PC consults in the seriously ill patient population at Norton Women's and Children's Hospital. The Lewin's three stage model was used in the project as a foundation to bring about an organizational change. To "unfreeze" the attitudes of the providers and nurses, it was important to understand why the documentation of MOST forms and PC consults were needed. Therefore, the first part of the project was a retrospective chart review to determine the number of patients discharged from the PCU and ICU units of the hospital in the three months before implementation of the project and without documentation of ADs, a MOST form, the number of PC consults, the number of patients who died in the hospital and at home, and the rate of 30-day readmissions in the seriously ill population.

The second part of the project was a pre-implementation questionnaire about the knowledge of ADs, MOST forms, and Palliative Care which was sent out by email to the staff before the implementation of the educational intervention to assess the knowledge of the providers and the nurses. This was a simple multiple-choice quiz that did not take more than 5-10 minutes to complete. Data was collected in aggregate form and no names, IP addresses, email addresses, or any other identifiable information were collected from the responses.

After completing initial assessments through the chart review and pre survey, it was time to bring about the “change” and resolve the uncertainty of the unfreezing stage by understanding the benefits of ADs and PC consult. The third part of the project included educating providers and nurses to screen patients using appropriate tools such as The Gold Standards Framework Proactive Identification Guidance (PIG) and establishing criteria for ACP and PC consults. Information sessions were held through Zoom meetings with the unit staff and during rounds with the providers and the multi-disciplinary team in the morning and the evening shifts to provide education. Patients who met criteria were screened, and recommendations were made to providers for a MOST form consult during daily rounds. Input was accepted by patient’s nurse, care manager, family members, pharmacists, and other interprofessional staff involved in the patient’s care. The provider then filled out the MOST form in the presence of the patient or their surrogate and the form was documented in the electronic health record. The fourth part was a post evaluation including chart reviews to compare the initial and final rates ADs, MOST forms, PC consults, mortalities and 30-day readmissions on the same units.

Once the changes were taking shape, with providers, nurses, and other staff on the unit embracing the new evidence-based protocol, the organization was ready to “refreeze.” A post

implementation questionnaire was sent again to the participants to assess the impact of the education and the information provided to them. Responses from the participants helped in understanding more about the benefits and use of ACP, PC consults and the importance of MOST forms in the seriously ill population to reduce readmission rates and improve quality of life. The fifth part of the project was a post evaluation including chart reviews to compare the number of ADs, a MOST form, the number of PC consults, the number of patients who died in the hospital and at home, and the rate of 30-day readmissions in the seriously ill population.

Agency Description

The setting for this project was the Norton Women’s and Children’s Hospital in Louisville, Kentucky. This facility was planning to implement a new PC team in June 2020, but this was not materialized due to administrative difficulties. The Universalia Institutional and Organizational Assessment Model (IOA) model provided a framework for assessing the organization’s culture, readiness, and ability to change, along with a SWOT analysis of its strengths, weaknesses, opportunities, and threats (Universalia, 2017). The IOA model framework is divided into four areas: organizational performance, capacity, motivation, and external environment. The outline of the IOA framework also assisted in examining how MOST form consults could be initiated in this organization and how this project could help improve the role of PC in seriously ill patients (see Appendix).

Norton Women’s and Children’s Hospital is a 373-bed community hospital in suburban Kentucky. It provides full inpatient and outpatient medical surgical services, with specialties in bariatric surgery, orthopedic surgery, gynecological care, oncology and 24-hour emergency care for men, women, and children. The hospital specializes in comprehensive cancer prevention,

detection, and treatment; orthopedics and bone health; pelvic health services; migraine treatment; breast health diagnostics; and surgical weight loss services. For children, the hospital offers pediatric surgery, inpatient care including a 44-bed Level III neonatal intensive care unit, a sleep center, a rehabilitation center and pediatric emergency services, plus specialized care for pediatric urology and gynecology patients. It is also approved as a certified Acute Stroke Ready Hospital and has been a primary provider of obstetrical services in Kentucky for years (Norton Women's and Children's Hospital., n.d.).

For the purpose of this project, the units that were congruent with treating seriously ill patients were included for collecting and assessing data, and areas such as the ED, labor and delivery, and surgery were excluded due to the transient nature of their patients. The focus of this project was the adult patient population with seriously ill patients. The hospital is divided into four categories based on the type of patients normally treated there, which include the intensive care unit (ICU), the progressive care unit (PCU), the oncology unit, and the medical surgical telemetry units (Med/Surg). The PCU and ICU units were the focus of the educational intervention for this project and were considered the alpha unit to test the success of the intervention.

Congruence with Organizational Values

The mission of this organization is to “provide quality health care to all those they serve, in a manner that responds to the needs of the communities” (Norton Women's and Children's Hospital., n.d.). This goes hand in hand with providing ACP for patients through completion of MOST forms, which is centered on what matters most to patients and their families (Oriakhi, Sealy, Adenote, Alabi, & Ahluwalia, 2019). The vision of the organization is to be the region’s strongest, most comprehensive, and preferred healthcare organization, setting the standard for

quality and caring. Their values include: “set the standard for quality and caring,” “continually improve care and service,” and “demonstrate stewardship of resources.” This project embodied these values by introducing early ADs by promoting the MOST forms to seriously ill patients, with the aim of relieving physical distress; providing emotional, spiritual, or practical support; and allowing individuals greater quality of life despite serious illness (CAPC, 2019). In congruence with the organization’s values to reduce overall healthcare costs, the primary aim of this DNP project was to reduce inpatient utilization by increasing MOST form documentation.

Description of Stakeholders

The main stakeholders for this project included leadership, patients and family members, nurses, clinicians, providers, other interdisciplinary staff, financial supporters, informatics, and outpatient care centers. The nurses were significant stakeholders, as they were at the forefront of identifying the at-risk population with AD needs; therefore, it was important to get buy-in from nurses for this project. Individuals who had high interest, but little power include the seriously ill patients and their caregivers and/or families. Support for these key stakeholders was important, as this project had the potential to affect outcomes for patients and families. The stakeholders within the organization were the most important group, as they had both interest and power in this project. This group included organizational leaders, hospitalists, nurse practitioners, and physician assistants. These individuals are always working for the best interest of the organization and value the organizational goals; therefore, it was important to convince them of the benefits of this program for patients, the community, and the organization. It was important to get an authorization from the insurance company to approve and cover the early ACP consults for these patients. They were convinced by proving that early documentation of MOST forms in this population is evidence-based and cost effective. The organization itself is also an important

stakeholder in this project. It was invested in the project to bring about a better distribution of resources and more satisfied patients and families.

Site-specific Facilitators and Barriers

There were very few site-specific barriers for the implementation of this project, but the lack of collaborative effort between non-PC and PC providers was a potential obstacle to the successful implementation of this project. One of the common barriers to PC consults in hospitals is miscommunication among providers due to a lack of informal meetings or interactions (McDarby & Carpenter, 2018). In seriously ill patients, the discussion of ACP starts with a PC consult and although ADs such as the MOST forms can be documented by any provider, they are usually initiated by the PC team. Other barriers included family resistance to ACP, provider attitudes towards ADs, a sense of self-sufficiency by in-patient providers, and a lack of provider education on benefits of ADs (McDarby & Carpenter, 2018).

It is often challenging to make decisions about EOL care, and it helps to use effective, structured, decision-making techniques when it comes to starting these discussions. Lewin's Force Field Analysis was used to assess the forces that would help drive the change of increasing MOST forms, versus the ones that would resist it. The mission, vision, and culture within this organization supports improving healthcare for the community and providing safe, quality patient care. This culture of the organization focuses on reducing 30-day readmissions, improving patient outcomes, and increasing the use of evidence-based care while reducing healthcare costs. Therefore, the culture facilitated the implementation of the early MOST form consults program by screening the at-risk population and providing them the services they need. There was also a strong and leadership engagement to promote the MOST form program, which provided the support and backing needed. As this hospital has many readmissions of patients

with serious illness, it was an appropriate setting for this project.

Target Population

The lower age limit of this patient population was 18 years, and there was no upper age limit. Race, ethnicity, and gender were not recorded, as they do not have any significant impact on the patient's eligibility for MOST form, and therefore, were not relevant to the study data. All adult ICU, PCU, oncology and Med/Surg patients who were mentally and physically competent to participate and who were admitted with serious illness over the three-month study period were included. A retrospective chart review was completed using the criteria identified by CAPC to diagnose the population at risk for unnecessary suffering to determine if they might benefit from an AD consult. All the patients admitted to these units during the three-month period were assessed for the three key criteria: diagnosis, functional impairment, and high utilization of medical services; therefore, there was no need for random sampling. Patients in procedural areas such as surgery, labor and delivery, and the ED were excluded, as patients spent less time in these areas.

Procedure

Approval was obtained from both the Norton Healthcare and University of Kentucky Institutional Review Boards. This study did not involve performing any treatments on patients, but a waiver for informed consent was obtained as this study posed minimal risk to the patients and providers involved.

Prior to starting the evidence-based intervention, an interdisciplinary team of professionals, including physicians, nurses, nurse leaders, pharmacists, financial advisers, and statisticians, was formed to oversee the operations and implementation of the project. This team guided the project, gave suggestions, gained organizational support, and promoted

palliative care education and consults in the hospital. A pre-implementation questionnaire to assess the knowledge of ADs and PC was sent to 103 email recipients, which included all nurses and providers who cared for patients on the previously specified units before the implementation of the educational intervention. The survey contained 3 identifiable information questions and 10 questions each about knowledge of ADs and PC. The maximum score was 43, with higher scores indicating higher knowledge of ADs and PC. The Cronbach's Alpha calculated for the survey was 0.71, indicating an acceptable degree of reliability and validity. A link to the survey questionnaire was included in the e-mail, which was administered through Qualtrics. The survey was voluntary, and only identified participants by role (nurse or provider), years of experience, and type of unit.

A total of 200 randomly selected charts of patients discharged from the PCU and ICU between 1st July 2020 and 31st September 2020 were reviewed prior to implementation of EBP. The PI requested access to the charts from the Norton Research Data Services, to determine the number of ADs, MOST forms ordered, PC consults, readmissions, inpatient and at-home mortality rates, and hospice consults in the seriously ill patient population before discharge. The data collected on the patients included age and comorbidities that met the AD and PC criteria such as congestive heart failure (CHF), chronic obstructive heart failure (COPD), end stage renal disease (ESRD), cancer etc.

After the chart audits were completed and data were collected, the providers and the staff of the ICU and PCU units where the MOST form program was implemented were notified about the EBP, the upcoming education and the tool to diagnose patients. The Gold Standards Framework (GFS), Proactive Identification Guidance (PIG) tool was used to identify patients who qualified for the MOST form consult. This updated 6th edition of the

GSF PIG enables earlier identification of people nearing the EOL who may need additional supportive care, by following the three main trajectories of illness for expected deaths – rapid predictable decline (e.g. cancer), erratic decline (e.g. organ failure), and gradual decline (e.g. frailty and dementia; see Appendix B). Additional contributing factors for predicting patients’ needs include current mental health, co-morbidities, and social care provision (The GSF PIG, 2011). Providers and nurses identified patients during morning rounds and recommended patients who met the above criteria for an early MOST form consult. The attending provider was then notified of the consult and the patient received all the benefits of an early MOST form consult before discharge from the hospital.

After implementing this program for one month, a chart audit was completed again, using 200 charts of patients discharged between December 1st and February 14th and randomly selected by Norton Research Data Services. A manual chart review was done to compare ADs, MOST forms ordered, PC consults, readmissions, inpatient and at-home mortality rates, and hospice consults. During the time of implementation, the interdisciplinary team met every two weeks to assess the progress of the program. Suggestions for improvement by staff and committee members were reviewed. A post-implementation questionnaire with the same questions about knowledge of ADs and PC was sent to staff again via 103 email invitations to assess whether there was any improvement in the knowledge. Score and knowledge of each question was compared between the pre and post questionnaire.

Data Analysis

All data analysis was conducted using SPSS version 27 with an alpha level of 0.05 throughout. The variables that were measured include the number of MOST forms before and

after implementing the intervention (ratio), number of AD (ratio), number of PC consults before and after implementing the intervention(ratio), number of readmissions (ratio) before implementing the program, in hospital and at home mortality rates (ratio), and hospice consults, before and after implementation of the program (See Table 1). Although assignment of the ADs, PC education and consults is not random, the program was rolled out in phases leaving a cohort for comparison pre and post implementation. As all the variables being tested were discrete variables, descriptive statistics with mean and standard deviation was used to analyze the data. The chi-square test of association was used to examine differences between ADs, PC consults and 30-day readmissions pre and post education. The data from the survey were analyzed using Independent Samples T-Test in SSPS to determine association between the pre and the post education scores. Mean differences and standard deviations were used to compare scores and p-value of 0.05 was used to determine the statistical significance of the scores pre and post education.

Results

Timeline of Project

IRB approval was obtained through the Norton Healthcare IRB and the University of Kentucky before August 2020. A pre-implementation questionnaire about the knowledge of Advance Care Planning, MOST forms, and Palliative Care was sent out in October by email to the staff before the implementation of the educational intervention to assess the knowledge of the providers and the nurses. Primarily chart audits were be completed by October 2020. During the monthly staff meeting in December held on the units, the idea of the EBP was introduced to the staff, and the importance, implications, and expected results of the program were explained. Providers were informed via emails and by having an educational

presentation via Zoom. An evidence-based power point presentation was created before December with the help of the committee to educate providers, nurses and other staff about the diagnostic tool, PC, and importance of early MOST form consults. Staff members were educated via Zoom meetings by the PI, with the help of the PowerPoint presentations. Nurse educators and the PI provided training and support to staff between 12/18/2020 to 02/12/2021 during daily rounds on the unit. Implementation of the program occurred from 12/1/2020 to 02/12/2021. A post implementation questionnaire was sent in January to the participants to assess the impact of the education. Post intervention chart audits were completed at the end of February. Data evaluation and analysis was done in March 2021. Finally, after the approval of the paper and the project from the committee, the DNP presentation was held in April 2021.

Manual Chart Review

The randomly selected patients from chart review ranged from 18 to 98 years with a mean age of 62.15 years. Of the 200 randomly selected patients pre implementation 67 met criteria and of the 200 randomly selected patients post implementation 65 met criteria. No MOST form documentation was found on any patients pre or post implementation. The manual chart review revealed that although there was no significant difference in the number of readmissions (60%/58%), AD (51%/48%), PC (4%/5%) consults pre and post implementation, there was a significant reduction in the number of patients deceased in hospital post implementation (34%/22%) (see Figure 1). The total number of home deceased patients pre-education was 6 and post-education was 2. The chi-square test of association did not show a statistical significance in the readmissions (p-value is .884), AD (p-value is .725), and PC consults (p-value is .969) pre and post implementation of the educational intervention

(see Table 2).

The prevalent diagnosis that met criteria for MOST form and PC were CHF, COPD followed by Cancer (see Figure 2). Patients admitted with CHF diagnosis pre-education were 34 out of 67, and post-education were 26 out of 65. There were no appreciable common diagnoses among the patients deceased at home or in the hospital, although 17 patients had hospice consult pre implementation and 8 post.

Survey

The anonymous, voluntary questionnaire was emailed to a total of 103 nurses and providers pre and post implementation, with a response rate of 48.5% pre and 35% post implementation. In the pre questionnaire responses 89% were nurses and 11% were providers and in the post questionnaire responses 84% were nurses and 16% were providers. Median years of experience among the participants was 5 to 9 years.

The mean score pre implementation was 34.36 and post was 35.32 out of a total score of 43, with a p value of 0.613 from the independent samples test; therefore, the mean difference between the scores pre and post survey was not statistically significant (see Table 3). There was no correlation between years of experience, unit worked, and knowledge of AD or PC. However, the mean score showed 79% understanding of the content pre implementation and 81% understanding post in the knowledge of ADs and PC in the seriously ill patients. The question that showed the most improvement in knowledge after education was about adequate training through formal education and/or on the job training in ACP (see Figure 3) 65%/79%. Also, on the question- Which staff member of a facility/hospital should be the one to complete the MOST form with a patient in state of Kentucky? The score improved from 69% to 84% on the post questionnaire. This indicates that the most significant

finding of this study was that knowledge of AD and ACP improved post education on some key education points.

The knowledge on PC questions did not show any significant improvement (see Figure 4). The knowledge on one question showed a decline post education- Despite growth in Palliative Care specialists and services, capacity is far outstripped by the numbers of patients and families in need of this care 89% -74%, indicating a lack of understanding in this area.

Discussion

The manual chart review indicated that there was no significant improvement in the number of readmissions, ADs, and PC consults after the implementation of the educational intervention at Norton Women's and Children's Hospital. Also, the lack of MOST form documentation completed by a provider reflected the low input and participation from the providers, which is consistent with the national attitude of providers who prefer not to engage in ACP discussions with seriously ill patients when they are not well (Nedjat-Haiem et al., 2019).

This program was started anticipating there would be a PC team on board to help guide ACP and bring an improvement in the PC consults. However, due to administrative delays amidst of the COVID-19 pandemic there was no establishment of PC team in the hospital, which significantly affected the outcomes of the project. Prior research has established clear benefits of integrating PC teams to manage symptoms in seriously ill population along with disease directed treatments to improve patients' physical, mental, and psychosocial wellbeing. However, during the pandemic outpatient services such as PC consultation had to be closed due to COVID social distancing protocols. At such times having PC teams in the hospital could help enhance prognostic discussions and ACP through a

dedicated focus on eliciting patients' values, illness understanding, and expectations for the future (Agarwal & Epstein, 2018). Starting this process early in the hospital would have significantly reduced the number of readmissions of the patients who met the ADs criteria and increased the PC consults post education.

Furthermore, this chart review revealed that CHF was the most prevalent of the comorbidities that met criteria for ADs and PC consults. According to World Health Organization the aim of PC in CHF is to prevent and relieve suffering, to promote the best quality of life for patients and their families by optimizing evidence-based therapy, sensitively breaking bad news to the patient and family, and establishing documentation of the AD, which can be done through MOST forms (2016).

There was a significant reduction in the number of patients deceased in the hospital on the alpha unit after the implementation of the intervention, indicating a positive effect of AD and PC education and less aggressive approach from providers towards life-saving treatments at end-of-life. Perhaps eliminating organizational barriers in educating patients about ACP such as lack of time, lack of simple educational materials, and lack of collaboration between providers can promote the process of ACP and documentation of MOST forms.

The survey data revealed that there was a significantly low response from the providers compared to the nurses, although there was some response in comparison to the previous projects on the units, where there was no response from providers. This was due to an information session provided separately to the provider group via zoom session other than the education provided to the nursing staff in their monthly staff meetings. These findings concur with the research from other studies which suggest that providing education focused on skills practice for providers through reflective dialogs using cognitive roadmaps for

common communication tasks, such as giving bad news and discussing transitions to PC can help providers learn when to start EOL conversations with patients (Nedjat-Haiem et al., 2019).

The survey indicated that 89% of the participants in the pre and 84% in the post questionnaire were nurses. This suggests that while it is encouraging to know that nurses have the interest in participating in the education of ADs and PC, there is a lack of interdisciplinary collaboration among providers and nurses which can be a barrier to referrals or consultation about AD discussions.

Although there was no significant difference between the pre and the post education scores, the overall mean post score showed 81% understanding suggesting most participants were knowledgeable about ADs and PC education and viewed the education beneficial to their practice. There was no correlation between years of experience, unit worked, type of provider and knowledge of AD or PC. This indicates that there is an area of opportunity for education for all healthcare workers regardless of their years of experience or expertise.

Implications for Future Practice

Development of an Educational Platform

Ongoing provider education about the importance of ACP and PC education for patient care is needed to improve missed opportunities to educate patients about ADs. The ICU and PCU of this hospital were chosen as an alpha unit for trial of the educational intervention due to the large number of seriously ill patients admitted to these units who could benefit from having a documentation of ADs such as the MOST form that was promoted. These unit already follows the established policies and procedures that indicate the methods for AD utilization; however, for the MOST form documentation providers must embrace

strong leadership roles to support meaningful AD communication. As literature, this project, and the ones before this confirm, without providers as leaders to champion this important patient education in the hospital, patients, families, and other providers may continue to experience confusion about ACP, ADs, and MOST forms (Nedjat-Haiem et al., 2019).

ACP discussions are often facilitated by interprofessional team members in this hospital such as nurses, care managers, and chaplains with physicians providing input on prognosis and treatment options. If there is a push from the organization to educate providers about the provider billing option created by Center for Medicare and Medicaid Services (CMS) for ACP in January 2016, we can expect an increase in physician engagement which will result in increased ADs and possible increase in MOST forms (2016). More ADs mean that more patients possibly express their need or spending the EOL with their loved ones and dying in the comfort of their home, leading to enormous amount of cost saving.

This project was planned around having an expansion of inpatient PC team at Norton Women's and Children's Hospital to support the multidisciplinary staff of nurses, providers, and care managers to increase PC referrals in the seriously ill population and have MOST forms documented when appropriate. However, due to administrative delays there was no inpatient PC team to capture these consults and showcase the benefits of PC in comorbidities other than the diagnosis of cancer. Therefore, the hospital and the manager of the alpha unit should continue to work on educating the staff on the initiative to establish the inpatient PC team as soon as possible.

Opportunities for Further Study

ACP is a collaborative effort that requires input from a multidisciplinary team, innovative communication strategies, values-focused care models, standardization of core

ACP principles and documentation, and integration of inpatient PC. There are many areas where more research is needed to improve this process and make the trajectory of PC services more acceptable to providers, patients, and family members. One potential change to the method of staff education would be to demonstrate the data collected on ADs and PC consults on the unit and show how communication with patients about their EOL care can reduce readmissions.

Another worthwhile study would be to evaluate the use of trigger models and flagging tools for seriously ill patients who need ACP and MOST form documentation before discharge, and to provide them with informational materials on this topic. According to Agarwal and Epstein (2018), a video representation of care options can provide clarity about what kind of care patients want when they have only a few days left to live. Furthermore, an informational video about preferences for life-sustaining, basic, and comfort care can influence patients to opt for comfort care and symptom relief instead of resuscitation efforts (Agarwal & Epstein, 2018). Therefore, educational videos about resuscitation are more likely than written or verbal materials to guide patients to choose PC instead of life sustaining treatments and tend to encourage AD documentation as well.

In Kentucky, the MOST form can only be reviewed, prepared, and signed by the patient's physician in personal communication with the patient, the patient's surrogate, or the responsible party, and not by any other provider (e.g. an NP or PA). Future researchers would benefit from investigating what authority other states give providers other than physicians regarding the MOST form, and what progress they have made at improving ACP. If there are any positive results, the future project can help build a platform for political change in Kentucky to include NPs and PAs.

Resources, Feasibility and Plan for Sustainability

Leaders in the organization, including the Chief Nursing Officer, House Supervisor, Unit Manager, and the Physicians on the PC team were major supporters of this EBP because readmissions are a major concern for the organization due to zero reimbursements from Medicare, added healthcare costs, and increased morbidity and mortality for the patients (Centers for Medicare and Medicaid Services, 2017). The most important resource needed for this project was the time invested by the leaders, managers, clinicians, information specialists, IT professionals, and nurses on the units. A standardized educational process was developed by the leaders of the committee with the help of IT professionals to educate the staff members on the unit.

Other hospital leaders have expressed plans to support this EBP financially for sustainability and further development of the educational process for MOST form documentation. The nurses, physicians, and the managers of this hospital have genuinely showed interest in this program and are interested in supporting the efforts needed for this program, providing feasibility to implement the program. The success of the program will generate more supporters and finances for extending the program to the other hospitals in the organization.

Limitations

The quasi-experimental design of this project had several limitations due to its design, and as this intervention was designed with the goal of promoting the MOST forms on the chosen ICU and PCU units of this hospital. The lack of random assignment is the major weakness of the quasi-experimental study design. This intervention aimed to study the cause

and effect of education on ADs, MOST forms, and PC consults. Also, both the pre-intervention and post-intervention measurements were included as well as nonrandomly selected control groups, which was the whole alpha unit. The findings are therefore not generalizable as the location, or the control group where the surveys were taken was not randomized. Also, as the data was extracted by the means of retrospective and perspective manual chart review; therefore, accuracy was highly dependent on the assessments and documentation done by the nurses, and the providers on the unit. For example, many charts indicated that the patients had AD but not documented in the chart, and nurse had requested family to bring a copy in.

This project was planned before the COVID 19 pandemic but implemented during the height of the pandemic. There was a direct effect of nurse and staff burnout on this project as the unit faced issues with redistribution of staff due to shortage when the hospital was overwhelmed with coronavirus patients, straining the resources, and stretching the workforce thin. Many nurses who took the post implementation survey were new to the unit and were not there long enough to take the pre implementation survey. During some selected weeks the ICU and PCU units were designated as COVID units, leaving less room for other sick seriously ill patients. COVID was a new lethal diagnosis that was the cause for many in hospital deaths without ADs or PC consults.

Another important limitation of this project was the time constraint for providers to fill out the MOST forms, as in the state of Kentucky this form can only be filled out by a physician. The goal of the project to educate the staff was achieved by the intervention and the patients were recommended to the provider in the daily rounds by the nurses and the care managers, but there must be a time allotted and a “trigger model” developed for the providers

to complete the MOST forms with the patients or their surrogate.

Lastly the intervention was planned with the hopes that there would be a PC team in the hospital to promote the ADs and MOST form consults and educate the staff and patients about the benefits of this initiative. However, this project lacked this support of PC consultation that would help to significantly reduce hospital costs through ACP meetings for patients with comorbidities through a multidisciplinary approach to reduce aggressive treatments. Having an inpatient PC team would have increased the number of ADs, PC consults, MOST forms, and possibly reduced readmissions.

Conclusion

Research indicates that patients with serious illness and multiple comorbidities are at increased risk for adverse outcomes, hospital admissions, and poor quality of life. Referring these patients to early AD consult is a cost-effective method of reducing futile hospital care and providing options to manage care without providing extreme lifesaving measures that conflict with the patients' wishes. It is therefore important for providers to acknowledge that AD is not applicable only at the EOL but earlier in the course of the disease process of seriously ill patients, when they are able to make decisions about what treatments they wish to have when they are nearing death. It gives autonomy to patients and families to plan about what kind of life they want when they know that death is eminent. This educational intervention showed a modest reduction in hospital deaths but was not effective by itself in increasing ACP discussions, PC consults, or completion of MOST forms. The projected impact of this project is an improved system of AD consultation that contributes to the overall work of the PC team as well as the triple aim of improved patient care, enhanced quality of life, and reduced healthcare costs.

References

- Advance Care Planning: ICN909289. (n.d.). Retrieved March 10, 2021, from <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/MLN-Publications-Items/ICN909289>
- Agarwal, R., & Epstein, A. S. (2018). Advance Care Planning and End-of-Life Decision Making for Patients with Cancer. *Semin Oncol Nurs*, 34(3), 316-326.
doi:10.1016/j.soncn.2018.06.012
- Abu Al Hamayel, N., Isenberg, S. R., Sixon, J., Smith, K. C., Pitts, S. I., Dy, S. M., & Hannum, S. M. (2019). Preparing Older Patients With Serious Illness for Advance Care Planning Discussions in Primary Care. *J Pain Symptom Manage*, 58(2), 244-251.e241.
doi:10.1016/j.jpainsymman.2019.04.032
- Barkley, J. E., McCall, A., Maslow, A. L., Skudlarska, B. A., & Chen, X. (2019). Timing of Palliative Care Consultation and the Impact on Thirty-Day Readmissions and Inpatient Mortality. *J Palliat Med*, 22(4), 393-399. doi:10.1089/jpm.2018.0399
- Bond, W. F., Kim, M., Franciskovich, C. M., Weinberg, J. E., Svendsen, J. D., Fehr, L. S., . . . Asche, C. V. (2018). Advance Care Planning in an Accountable Care Organization Is Associated with Increased Advanced Directive Documentation and Decreased Costs. *J Palliat Med*, 21(4), 489-502. doi:10.1089/jpm.2017.0566
- Chan, C. W. H., Ng, N. H. Y., Chan, H. Y. L., Wong, M. M. H., & Chow, K. M. (2019). A systematic review of the effects of advance care planning facilitators training programs. *BMC Health Serv Res*, 19(1), 362. doi:10.1186/s12913-019-4192-0

- Centers for Medicare and Medicaid Services. (2017). Readmissions Reduction Program (HRRP).
<https://www.cms.gov/Medicare/Medicare-Fee-for-ServicePayment/AcuteInpatientPPS/Readmissions-Reduction-Program.html>
- Cohen, S. R., Mount, B. M., Strobel, M. G., & Bui, F. (1995). The McGill Quality of Life Questionnaire: a measure of quality of life appropriate for people with advanced disease. A preliminary study of validity and acceptability. *Palliat Med*, 9(3), 207-219.
- Dunn, E. J., Markert, R., Hayes, K., McCollom, J., Bains, L., Kahlon, D., & Kumar, G. (2018). The Influence of Palliative Care Consultation on Health-Care Resource Utilization During the Last 2 Months of Life: Report From an Integrated Palliative Care Program and Review of the Literature. *Am J Hosp Palliat Care*, 35(1), 117-122.
doi:10.1177/1049909116683719
- Feeley, T. W. (2016). The value of ICU care at the end of life. Retrieved from
<https://catalyst.nejm.org/value-icu-care-end-of-life/>
- Gaertner, J., Siemens, W., Meerpohl, J. J., Antes, G., Meffert, C., Xander, C., . . . Becker, G. (2017). Effect of specialist palliative care services on quality of life in adults with advanced incurable illness in hospital, hospice, or community settings: systematic review and meta-analysis. *Bmj*, 357, j2925. doi:10.1136/bmj.j2925
- Ghosh, A., Dzung, E., & Cheng, M. J. (2015). Interaction of palliative care and primary care. *Clin Geriatr Med*, 31(2), 207-218. doi:10.1016/j.cger.2015.01.001
- Higginson, I. J., Bausewein, C., Reilly, C. C., Gao, W., Gysels, M., Dzingina, M., . . . Moxham, J. (2014). An integrated palliative and respiratory care service for patients with advanced disease and refractory breathlessness: a randomised controlled trial. *Lancet Respir Med*, 2(12), 979-987. doi:10.1016/s2213-2600(14)70226-7

- Hua, M. S., Li, G., Blinderman, C. D., & Wunsch, H. (2014). Estimates of the need for palliative care consultation across united states intensive care units using a trigger-based model. *Am J Respir Crit Care Med*, 189(4), 428-436. doi:10.1164/rccm.201307-1229OC
- Hussain, S. T., Lei, S., Akram, T., Haider, M. J., Hussain, S. H., & Ali, M. (2018). Kurt Lewin's change model: A critical review of the role of leadership and employee involvement in organizational change. *Journal of Innovation & Knowledge*, 3(3), 123-127. doi:http://doi.org/10.1016/j.jik.2016.07.002
- Kitson, A., Harvey, G., & McCormack, B. (1998). Enabling the implementation of evidence-based practice: a conceptual framework. *Quality in Health Care*, 7, 149-158. DOI: 10.1136/qshc.7.3.149. Retrieved from: <http://qualitysafety.bmj.com/content/7/3/149.abstract>
- Kavalieratos, D., Gelfman, L. P., Tycon, L. E., Riegel, B., Bekelman, D. B., Ikejiani, D. Z., . . . Arnold, R. M. (2017). Palliative Care in Heart Failure: Rationale, Evidence, and Future Priorities. *J Am Coll Cardiol*, 70(15), 1919-1930. doi:10.1016/j.jacc.2017.08.036
- May, P., Normand, C., Cassel, J. B., Del Fabbro, E., Fine, R. L., Menz, R., . . . Morrison, R. S. (2018). Economics of Palliative Care for Hospitalized Adults With Serious Illness: A Meta-analysis. *JAMA Intern Med*, 178(6), 820-829. doi:10.1001/jamainternmed.2018.0750
- May, P., Normand, C., & Morrison, R. S. (2014). Economic impact of hospital inpatient palliative care
- McDarby, M., & Carpenter, B. D. (2018). Barriers and Facilitators to Effective Inpatient Palliative Care Consultations: A Qualitative Analysis of Interviews With Palliative Care

- and Nonpalliative Care Providers. *Am J Hosp Palliat Care*, 1049909118793635.
doi:10.1177/1049909118793635 consultation: review of current evidence and directions
for future research. *J Palliat Med*, 17(9), 1054-1063. doi:10.1089/jpm.2013.0594
- Myers, Michael S., "Development of Unit-Specific Educational Interventions for Inpatient
Palliative Care Needs" (2019). DNP Projects. 278.
https://uknowledge.uky.edu/dnp_etds/278
- Nedjat-Haiem, F. R., Cadet, T. J., Amatya, A., & Mishra, S. I. (2019). Healthcare Providers'
Attitudes, Knowledge, and Practice Behaviors for Educating Patients About Advance
Directives: A National Survey. *Am J Hosp Palliat Care*, 36(5), 387-395.
doi:10.1177/1049909118813720
- Norton Women's and Children's Hospital. (n.d.). Retrieved from
<https://nortonhealthcare.com/location/hospitals/norton-womens-and-childrens-hospital/>
- Oriakhi, M., Sealy, C., Adenote, A., Alabi, O., & Ahluwalia, M. (2019). Improving residents'
skills and confidence on advance directive discussion: a quality improvement project. *J
Community Hosp Intern Med Perspect*, 9(5), 419-421.
doi:10.1080/20009666.2019.1643218
- Palliative care. World Health Organization. (2016, May 17).
<https://www.who.int/cancer/palliative/en/>.
- Price, D. M., Strodman, L., Montagnini, M., Smith, H. M., Miller, J., Zybert, J., ... Ghosh, B.
(2017). Palliative and end-of-life care education needs of nurses across inpatient care
settings. *Journal of Continuing Education in Nursing*, 48(7), 329-336.
- The Case for Hospital Palliative Care. (2019, February 25). Retrieved from
<https://www.capc.org/documents/246/>

The GSF Prognostic Indicator Guidance. (2011, October).

[https://www.goldstandardsframework.org.uk/cd-content/uploads/files/GeneralFiles/Prognostic Indicator Guidance October 2011.pdf](https://www.goldstandardsframework.org.uk/cd-content/uploads/files/GeneralFiles/Prognostic%20Indicator%20Guidance%20October%202011.pdf)

Qureshi, D., Tanuseputro, P., Perez, R., Pond, G. R., & Seow, H. Y. (2019). Early initiation of palliative care is associated with reduced late-life acute-hospital use: A population-based retrospective cohort study. *Palliat Med*, 33(2), 150-159. doi:10.1177/0269216318815794

Universalialia. (2017). Institutional and organizational performance assessment. Retrieved from <http://www.universalialia.com/en/services/institutional-and-organizational-performanceassessment>

Vanbutsele, G., Pardon, K., Van Belle, S., Surmont, V., De Laat, M., Colman, R., . . . Deliens, L. (2018). Effect of early and systematic integration of palliative care in patients with advanced cancer: a randomised controlled trial. *Lancet Oncol*, 19(3), 394-404. doi:10.1016/s1470-2045(18)30060-3

Wilson, D. G., Harris, S. K., Peck, H., Hart, K., Jung, E., Azarbal, A. F., . . . Moneta, G. L. (2017). Patterns of Care in Hospitalized Vascular Surgery Patients at End of Life. *JAMA Surg*, 152(2), 183-190. doi:10.1001/jamasurg.2016.3970

Yen, Y. F., Lee, Y. L., Hu, H. Y., Lai, Y. J., Sun, W. J., Ko, M. C., . . . Chu, D. (2019). An Interventional Study for the Early Identification of Patients with Palliative Care Needs and the Promotion of Advance Care Planning and Advance Directives. *J Pain Symptom Manage*. doi:10.1016/j.jpainsymman.2019.10.006

Tables

Table 1. Study measures.

Measures	Description	Level of Measurement	Data Source
Demographics			
Age	18- No limit	Ratio	Medical Records
Current Role	Nurse/Provider	Nominal	Survey
Primary Unit	ICU, PCU	Nominal	Survey
Years of Experience	NA	Ordinal	Survey
Admission and Discharge Information			
Month of admission	Month of admission	Nominal	Medical Records
Unit of Admission	Unit to which patient is admitted out of 2 units	Nominal	Medical Records
Diagnosis that meets AD Criteria (CHF, COPD etc.)	Based on PIG diagnostic criteria	Nominal	Medical Records
Outcomes Pre and Post Intervention			
Readmissions	30-day readmissions before and after implementing the program	Ratio	Medical Records
Advance Directives	Number of AD Pre and Post Education	Ratio	Medical Records
Palliative Care Consults	Number of PC Pre and Post Education	Ratio	Medical Records
Home/ Hospital Deceased	Patients Deceased in the hospital or after discharge at home	Ratio	Medical Records
Hospice Consults	Number of hospice Consults	Ratio	Medical Records

Table 2. Pre and Post – Chi-square Test.

Medical Records	Pre (n = 67) n (%)	Post (n = 65) n (%)	p value
Advance Directives			
Yes	51%	48%	.725
No	49%	52%	
Palliative Consult			
Yes	4%	5%	.969
No	96%	95%	
30-day Readmission			
Yes	60%	58%	.884
No	40%	42%	

Table 3. Pre and Post Score - Independent Samples Test.

Survey	N	Mean	Std. Deviation	Levene's Test for Equality of Variances	p value
Pre	36	34.36	6.33	Equal variances assumed	0.613
Post	19	35.32	7.15		

Figures

Figure 1. Variables Recorded Pre and Post Educational Intervention

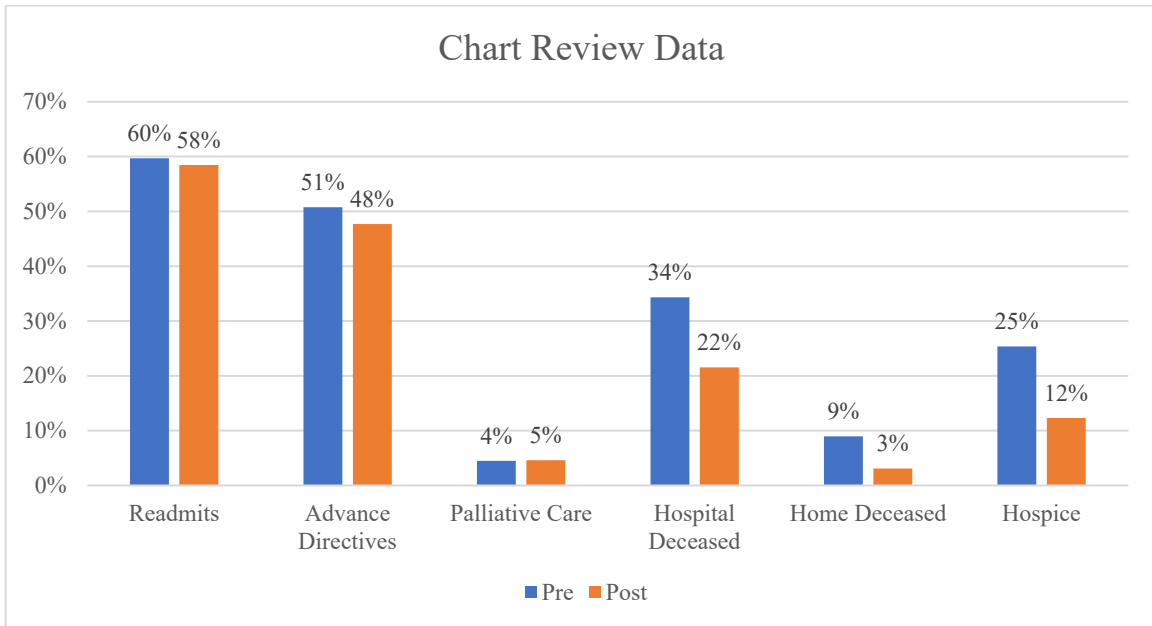


Figure 2. Prevalent Diagnoses that Met MOST form and Palliative Care Criteria

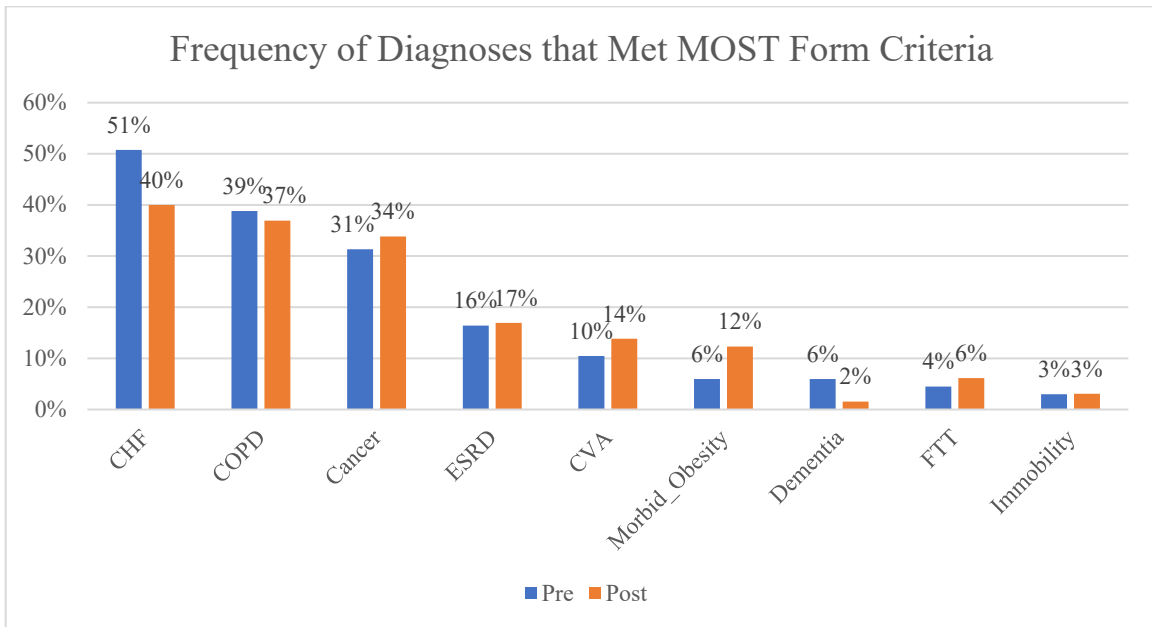


Figure 3. Questions on Advance Directives Answered Correctly Pre and Post Educational Intervention

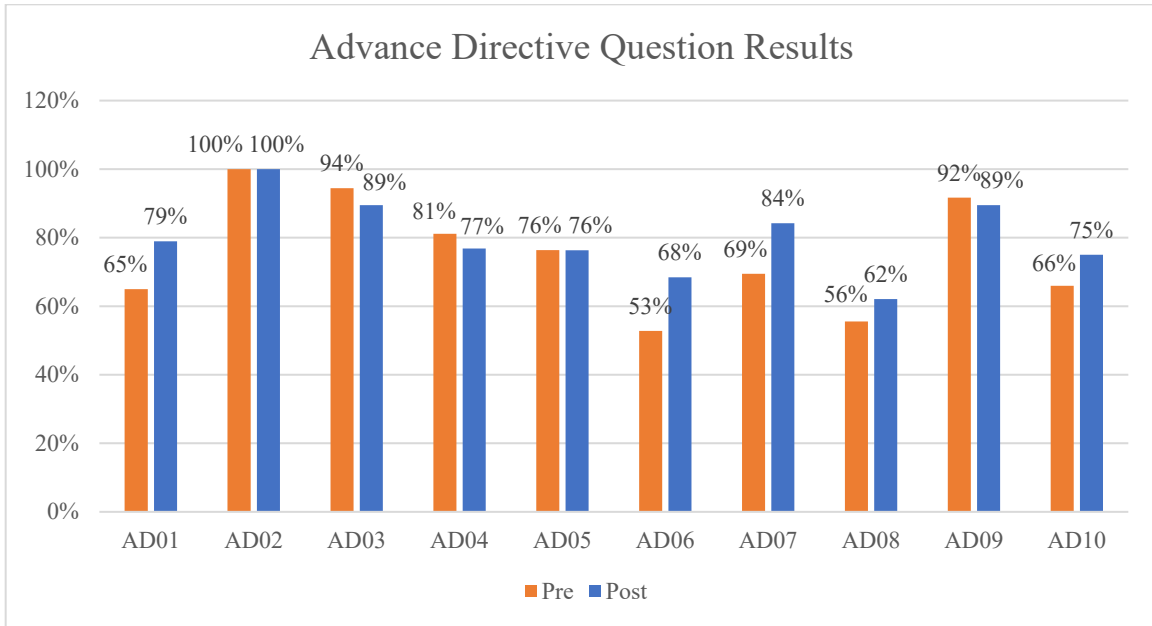
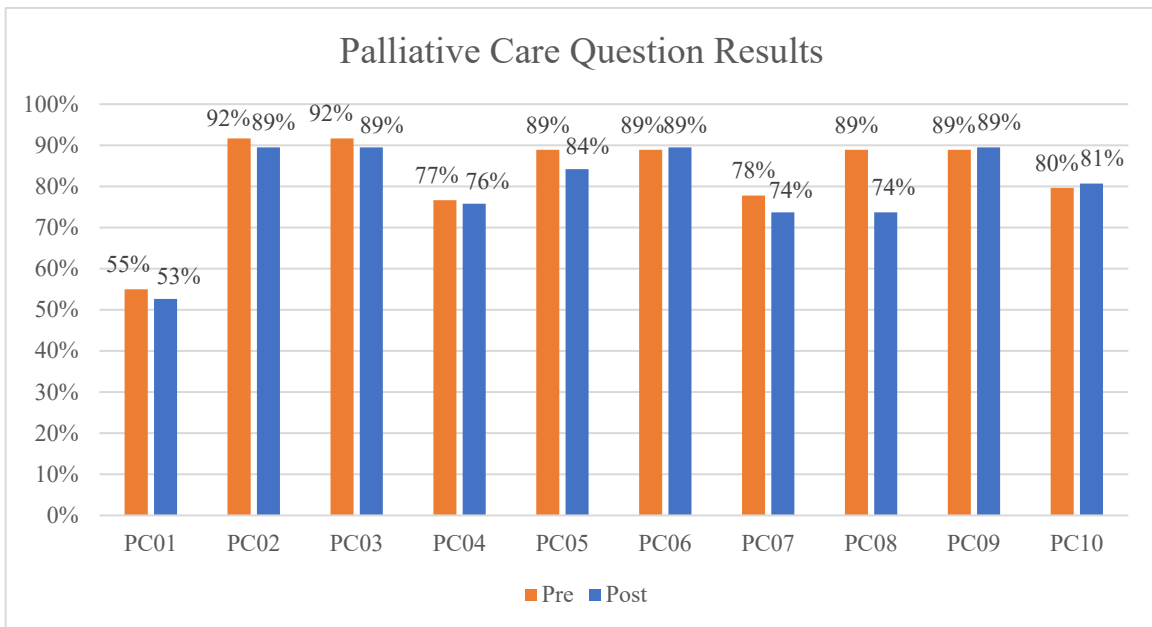


Figure 4. Questions on Palliative Care Answered Correctly Pre and Post Educational Intervention



Appendix A

The Universalia Institutional and Organizational Assessment (IOA) Model



(Universalia, 2017)

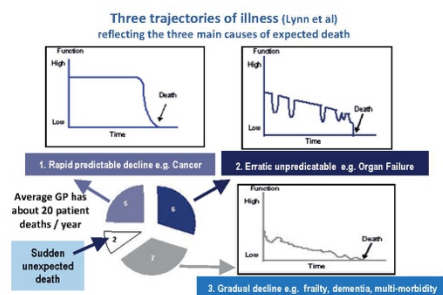
Appendix B

The National GSF Centre's guidance for clinicians to support earlier identification of patients nearing the end of life leading to improved proactive person-centred care

GSF PIG 6th Edition Dec 2016 K Thomas, Julie Armstrong Wilson and GSF Team, National Gold Standards Framework Centre in End of Life Care
<http://www.goldstandardsframework.org.uk> for more details see **GSF PIG**

Proactive Identification Guidance – proactively identifying patients earlier.

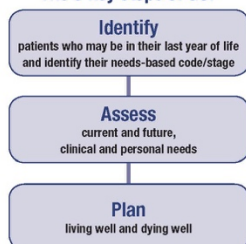
This updated 6th edition of the GSF PIG, renamed as Proactive Identification Guidance and formally known as Prognostic Indicator Guidance, aims to enable the earlier identification of people nearing the end of their life who may need additional supportive care. This includes people who are nearing the end of their life following the three main trajectories of illness for expected deaths – rapid predictable decline e.g. cancer, erratic decline e.g. organ failure and gradual decline e.g. frailty and dementia. Additional contributing factors when considering prediction of likely needs include current mental health, co-morbidities and social care provision.



Why is it important to identify patients early?

Earlier identification of people who may be in their final stage of life leads to more proactive person-centred care. About 1% of the population die each year, with about 30% hospital patients and 80% of care homes residents in their last year of life. Most deaths can be anticipated though a minority are unexpected (estimated about 10%). Earlier recognition of decline leads to earlier anticipation of likely needs, better planning, fewer crisis hospital admissions and care tailored to peoples' wishes. This in turn results in better outcomes with more people living and dying in the place and manner of their choice. Once identified, people are included on a register and where available the locality/electronic register, triggering specific active supportive care, as used in all GSF programmes and in GSF cross boundary care sites.

The 3 key steps of GSF



PIG and GSF – Early proactive identification of patients is the crucial first step of GSF, used by many thousands of doctors and nurses in the community and hospitals. For more information on GSF, how it is used in practice to help identify patients early, assess needs and wishes through advance care planning discussions and plan care tailored to patient choices, see the GSF website.

National Policy support for earlier identification.

General Medical Council – 2010

www.gmc-uk.org/static/documents/content/End_of_life.pdf

The GMC definition of End of Life Care; 'People are 'approaching the end of life' when they are likely to die within the next 12 months. This includes people whose death is imminent (expected within a few hours or days) and those with:

- Advanced, progressive, incurable conditions.
- General frailty and co-existing conditions that mean they are expected to die within 12 months.
- Existing conditions if they are at risk of dying from a sudden acute crisis in their condition.
- Life threatening acute conditions caused by sudden catastrophic events.'

NICE Guidance in End of life care 2011 Quality statement 1

<https://www.nice.org.uk/guidance/qs13/chapter/Quality-statement-1-Identification>

- **Identification** – People approaching the end of life are identified in a timely way.
- **Systems** – Evidence of local systems in place to document identification of people approaching the end of life.'

Proactive Identification Guidance – GSF PIG Flow-chart

