THE BENEFITS OF EARLY REFERRAL TO PALLIATIVE CARE FOR END STAGE RENAL DISEASE (ESRD) PATIENTS ON DIALYSIS

A Scholarly Project

Submitted to the
Faculty of Liberty University

In partial fulfillment of
The requirements for the degree
Of Doctor of Nursing Practice

By
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Liberty University

Lynchburg, VA

October, 2019
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Scholarly Project Chair Approval:

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ABSTRACT

Palliative care provides outstanding holistic nursing for the management of undesirable symptoms and suffering related to chronic illness disease processes such as end stage renal disease. When palliative care services are initiated early in course of a chronic illness, they improve the quality of care and life and reduce stress for patients and their families. While palliative care is slowly being recognized as the most effective means of improving quality of life and care in the management of chronic illness, most health care staff and providers are not aware of the full benefits of palliative care in the management of end stage renal disease patients on dialysis. The lack of knowledge and education of health care staff and providers has led to the underutilization of palliative care services in most health care institutions. Through the use of a palliative care screening tool for ESRD, qualified patients can be referred for palliative care in both community and inpatient settings regardless of age, culture, socioeconomic status, or disease stage. However, patients that have reached a late stage of the disease process and are determined to have less than six months of life may be referred or transitioned to hospice care instead of palliative care services.

Keywords: palliative care, end stage renal disease, dialysis, hospice care, symptom management, quality of life, symptom management, quality of care, renal palliative care
Dedication

To my father, late Francis Akinmadelo.
Acknowledgments

I would like to acknowledge and thank my family, Kunle, Ayo, Lanre, and Sophia-Grace. My mother Margaret Akinmadelo, my siblings (Lara, Akin, Lade, Tunde, and Funmi Akinmadelo), Ms. Funmi Akinduro, Toyin Akinwande, Fade Akinsade, Ms. Lara Akinwande, Ms. Tiwa Akinsade, and Ms. Bukola Ige for encouraging and supporting me while completing this project.
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Centers for Disease Control and Prevention (CDC)

End-Stage Renal Disease (ESRD)

Institute of Medicine (IOM)

Institutional Review Board (IRB)

Intensive Care Unit (ICU)
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PALLIATIVE CARE REFE

SECTION ONE: INTRODUCTION

The use of the palliative care approach to manage symptoms and reduce the stress of a serious illness originated from the quest to find balance in care, reduce suffering, and improve the quality of life and care for cancer patients (Chow & Dahlin, 2018). Palliative care provides patient and family-centered care that improves quality of life by helping to manage undesired symptoms and prevent and treat suffering. It also addresses the patient’s medical needs, and patients’ and their family’s spiritual and psychological needs while focusing on reducing suffering and the burden of illness (National Hospice and Palliative Care Organization, 2015). The palliative team typically consists of an interdisciplinary team of knowledgeable health care personnel working together to provide support and care coordination for patients and their families. Most palliative interdisciplinary teams include specially trained physicians, nurses, pharmacists, social workers, case managers, chaplains, rehabilitation workers, nutritionist, dieticians, and other health care providers capable of providing care and support to patients and family members (Kelley & Morrison, 2015).

The number of chronically ill patients, such as patients with end stage renal disease (ESRD), are living longer due to advanced medical technology and advanced health care in the United States (Brown, 2014). This has greatly contributed to the need to expand palliative care to chronically ill patients suffering from ESRD. ESRD patients between the ages of 35 and 75 make up the largest number of chronically ill patients that are likely to choose a life-prolonging option such as dialysis to manage their disease. For this population of chronically ill patients, the early integration of palliative care can help reduce or prevent symptoms that are likely to contribute to the patients’ suffering (Kelley & Morrison, 2015). Some of the most commonly documented symptoms for this patient population include pain, nausea and vomiting, anemia, infection,
frequent hospitalizations, psychological and emotional distress, loss of time and wages due to long dialysis hours, dyspnea, malnutrition, and other debilitating symptoms that are likely to affect normal daily life functions (Centers for Disease Control and Prevention [CDC], 2019; Institute of Medicine [IOM], 2015; Kelley & Morrison, 2015).

The burden of illness and suffering on patients and their family from ESRD can be greatly reduced if health care staff and providers are knowledgeable about palliative care services. As the most trusted professionals in the United States, nurses are in a good position to assess patients and recommend referrals to palliative care (Zaccagnini & White, 2017). Equipping health care staff and providers with knowledge about palliative care services will help increase their understanding of the care and services available for patients and their families who are suffering from ESRD and lead to increased and timely referrals.

Background

ESRD is overwhelming. It creates a significant financial, physical, and psychological burden on affected patients and their family members (Grubbs, O’Riordan, & Pantilat, 2017). As of 2016, the United States Renal Data System (2019) reported an estimated 124,673 newly diagnosed cases of ESRD annually and that there are over 726,000 people suffering from ESRD on dialysis in the United States. The disease was noted to have a greater prevalence among people between the ages of 45 and 65. It also reported that more than 240 people die on dialysis every day, with highest incidence among people age 65 and older. Overall, an estimated 37 million adults (one in seven) in the United States are suffering from chronic kidney disease (CDC, 2019).

Equipping health care staff and providers with the knowledge of and a screening tool for palliative care can lead to an increase in early referrals to palliative care services for ESRD
patients on dialysis. Large numbers of patients that could benefit from palliative care services are hospitalized in acute care settings annually. The deficiency in the utilization of palliative care services can be attributed to the lack of health care provider knowledge of palliative services and inadequate palliative care screening and assessment of patients (Pandini, Defendi, Scirè, Fiorini, & Fiorini, 2016). Not only will patient referral to palliative care reduce suffering and improve symptom management in this patient population, but it can reduce overall health care utilization and costs if initiated early in the disease course (Center to Advance Palliative Care, 2018).

The CDC (2019) described palliative care as an evidence-based medical model and an acknowledged medical specialty for physicians, nurses, and health care professionals. Palliative care is defined as a treatment given to control pain and unwanted symptoms of chronic or serious illnesses where there is no reasonable expectation of a cure for patients. The CDC further explains the benefits of palliative care as a treatment that focuses on the whole person, addressing the body, mind, and spirit to promote comfort and preserve dignity. Despite the recognition of the benefits of palliative care in the management of chronic and terminal illnesses, many reports continue to show unequal access to palliative care among United States hospitals and community-based health settings. One third of hospitals continue to have no palliative care services or limited access to palliative care services (Dumanovsky et al., 2016).

According to an IOM report (2015), many studies have shown that early integration of palliative care reduces suffering and improves quality of life and care. Palliative care reduces critical care mortality and improves communication, access to home care services, emotional and spiritual support, psychological health, and dignity in end of life for patients. Additionally, palliative care prevents emergency room visits, hospitalizations, and death in acute care hospitals for chronically or seriously ill patients (IOM, 2015).
This finding led the IOM to call for the opportunity to improve access to palliative care for patients suffering from chronic or serious illnesses. The report called for extensive workforce training of the core principles and practices of palliative care, the regulation and accreditation of high-quality palliative care and services in health care settings, investment in research that improves the quality of care, and the development of a robust measure of quality of care for this complex and vulnerable patient population (Dumanovsky et al., 2016; IOM, 2015). Organizations such as the Joint Commission (2019) now recognize hospitals that institute palliative care programs and include patient and family-centered care that improves patients’ quality of life for adults with serious illnesses.

In chronically ill patients such as ESRD patients on dialysis, the goal of palliative care can be accomplished if it is initiated at the time of diagnosis ESRD or initiation of dialysis. Care can be adequately coordinated to address pain and spiritual, social, cultural, psychological, psychiatric, medical needs and provide support to patients and families (Kelley & Morrison, 2015). However, most current health care professionals providing palliative care are noted to have little or no formal palliative care training on providing sufficient holistic care for patients (Kelley & Morrison, 2015). The issue encountered by most chronically ill patients is the late integration of palliative care. In most cases, patients are referred to palliative care during the late stage of disease when hospice care is needed. The majority of health care staff and providers do not understand the difference between palliative care and hospice services.

The goal of both palliative care and hospice is to promote comfort and dignity in seriously ill patients, such as ESRD patients on dialysis. However, each has a different meaning and is initiated at a different time during the course of illness. Palliative care provides an interdisciplinary approach that involves the use of many specialties to address patients’ needs
with the focus of improving quality of life for patients and family at the time of diagnosis or at any stage of illness. Patients utilizing palliative services may also continue treatments focused on prolonging life in both inpatient hospital settings and community settings (Kelley & Morrison, 2015). In comparison, hospice care is provided by an interdisciplinary team to patients of all ages suffering from serious or terminal illness with a prognosis of less than six months of life.

Hospice patients receive palliative care to relieve suffering and promote dignity and comfort at the end of life. Patients on hospice care must relinquish the option to continue form of life-prolonging or curative treatments, while patients utilizing palliative care are able to continue both these types of treatments. Patient eligibility and benefits for both palliative care and hospice care is determined by and stated in insurance policies and federal programs such as Medicare, Medicaid, and Veterans Affairs (Kelley & Morrison, 2015).

**Problem Statement**

The lack of health care staff and provider education on the benefits of palliative care services significantly contributes to the lack of timely provider referrals for palliative care in dialysis patients in the renal and diabetic unit of a hospital in Central Virginia. Researchers have identified the lack of knowledge of providers as a barrier to early integration of palliative care services among chronically ill patients. The concept of palliative care is not well understood by most health care professionals due to the lack of education and guidelines for practice and confusion of palliative care with hospice care in chronic illness management (Kelley & Morrison, 2015; Masumbuku, Kiswaya, Mairiaux, Gillain, & Petermans, 2017). In order to adequately meet the palliative care needs of ESRD patients on dialysis, health care professionals must be educated on palliative care services and its benefits to patients and their family members.
The first and most crucial step to increasing referral and consultation for palliative care in this patient population is providing palliative care education and initiating a unit-based screening for the staff of the diabetic and renal unit in a hospital in Central Virginia. Accomplishing the goal of educating health care professionals on palliative care services significantly alleviates the lack of basic palliative care knowledge among health care providers that negatively impacts patient and family outcomes (Kelley & Morrison, 2015). The use of a palliative screening tool in identifying patients with the possibility of unmet palliative care needs has been found to be useful in the initiation of early palliative care services in intensive care units (ICUs; Lapp & Iverson, 2015). Utilizing screening tools helps to identify patients with a poor quality of life related to the burden of illness and high family or caregiver stress in a timely fashion.

**Purpose of the Study**

The purpose of this scholarly project was to educate the providers on the renal and diabetic unit at a hospital in Central Virginia on the benefits of palliative care in the management of ESRD patients on dialysis. It was expected that by increasing the number of referrals of ESRD patients on dialysis to palliative care, the patients’ needs would be adequately addressed. Unmet needs of this population include chronic pain and symptom management, and caregiver or family support.

**Clinical Question**

Among health care providers working with ESRD patients on dialysis aged 35 to 75 years, does a screening tool for palliative care and an educational intervention lead to an overall increase in knowledge and referrals to palliative care, as compared to the lack of a screening tool or previous provider education?

**SECTION TWO: LITERATURE REVIEW**
Historically, many health care professionals are known to utilize palliative care services for terminal diseases such as cancer but not for chronic or serious illnesses like ESRD. The need to expand palliative care services to ESRD patients on dialysis should be a priority among health care providers, especially those with palliative care training who are aware of the benefits of the services to chronically ill patients and their families. Recently, the American Association of Critical Care Nurses expressed interest in the use of a palliative care approach in the management of chronic and serious illnesses (Mayer & Winters, 2016). According to the literature, it is critical to educate health care professionals who work with chronically ill patients utilizing palliative care and hospice. Adequate and appropriate education focusing on the benefits of and screening and assessment for palliative care services can help remedy underutilization of palliative care services for patients with chronic and serious illnesses (World Health Organization, 2015).

**Search Strategy**

A thorough literature search was performed using an electronic database that included the Cumulative Index to Nursing and Allied Health, OVID, PubMed, EBSCO host, and the Cochran Database of Systematic Reviews. The search was performed in the English language on the benefits of palliative care, early integration of palliative care in chronic disease management, barriers to early integration of palliative care in chronic illness, hospice, end-of-life care, ESRD, and symptom management in dialysis. The search criteria limited the results to articles published between 2014 and 2019. The keywords for the search were *palliative care, end stage renal disease, dialysis, hospice care, symptom management, quality of life, quality of care, and renal palliative care*. The initial search for palliative care yielded over 32,000 results, symptom
management in dialysis patients yielded over 10,000 results, and the barriers in early integration of palliative care yielded over 4,500 results.

The results for each search term were filtered to include only studies that were related to or associated with palliative care in the management of chronic illness, palliative care services, symptom management in ESRD, quality of life in ESRD and dialysis patients, end-of-life care, hospice, and barriers to initiating palliative care. Once the inclusion and exclusion criteria were applied, 120 articles were examined, of which 30 contained relevant information and were utilized in the literature review.

**Critical Appraisal**

The literature findings included systematic reviews, meta-analyses of cohort studies and randomized controlled trials, descriptive and qualitative studies, quantitative research, nonexperimental descriptive studies, cross-sectional studies, retrospective analyses and studies, prospective observation studies, mixed-method studies, and randomized controlled trials. It revealed various types of evidence to support the premise that the early integration of palliative care in the management of serious illnesses significantly improves quality outcomes for patients and their families. In addition, palliative care leads to reductions in health care costs associated with the management of serious illnesses (Aldridge et al., 2016). Each study chosen to be included in this paper was critically reviewed using a Summary and Synthesis Table Tool.

The tool evaluated the study purpose, sample, methods, results, limitations, and usefulness, as well as the evidence/rationale. The studies were also evaluated for level of evidence according to Melnyk’s system. (Melnyk & Fineout-Overholt, 2011). A table of evidence is provided (Appendix J). It is evident from many of the studies reviewed that the lack of palliative care education and training among health care professionals leads to poor patient
screening and assessment, and underutilization of palliative care services in the management of chronic illnesses. When compared to patients with other serious illnesses like cancer, patients suffering from ESRD or undergoing dialysis are less likely to be recognized as requiring palliative care for symptom management or patient and family support.

**Synthesis**

Throughout the literature review, six themes emerged as dominant factors for the benefits and successful integration of palliative care in chronic illness and ESRD. Palliative care education has been shown to be effective in improving quality of life, decreasing health care utilization, improving family and caregiver stress, and reducing physical, psychosocial, and psychological burdens of illness, as well as facilitating a smooth transition of patients from palliative care to end-of-life care. The majority of the studies reviewed showed a very positive outcome when palliative care was integrated early in the course of chronic illnesses like ESRD.

**Healthcare providers’ lack of knowledge and misconceptions about palliative care.**

Five studies identified the importance of health care professionals’ knowledge of palliative care and palliative care education to improving the utilization of palliative care services for the management of chronic illnesses. Al Qadire (2014), Anderson et al. (2017), Corbett (2018), Kozlov, Reid, and Carpenter (2016), and Pesut et al. (2015) showed increased provider knowledge and increased referrals for palliative care post education intervention on palliative care services. A quantitative and descriptive online survey of 220 Jordanian nursing students’ knowledge of palliative care by Al Qadire (2014) found that palliative care education was critical to improving the students’ knowledge of palliative care services. Pesut et al. (2015) conducted a similar mixed-methods study that evaluated the outcomes of educational interventions of a palliative care approach for rural nurses and health care workers. The sample size for this study
included 1,468 randomly selected health care staff who reported significant increases in self-perceived competence and knowledge post educative intervention of palliative care education.

Corbett (2018) explained the issues relating to low utilization of palliative care services and late referral to palliative care among nephrology providers who care for dialysis patients. Corbett (2018) performed a thorough literature review and a study focusing on nephrology providers’ awareness and knowledge of and education on end-of-life guidelines and quality of life for patients suffering from renal disease. In 12 of the reviewed studies, Corbett (2018) found a need for improved education for nephrology providers in shared decision-making and referral for palliative care. The other nine studies reported that the quality of life and the stress of unmanaged symptoms of renal disease might improve with a palliative care referral and support. Lack of knowledge and training on palliative care, the uneasiness of discussing palliative care with patients and family, and possible nephrology bias regarding previous experience with palliative care referrals and uncertainty of patients’ wishes were all noted as barriers leading to overall underutilization of and low referral to palliative care services (Corbett, 2018).

Several of the studies reviewed by Aldridge et al. (2016) noted that many medical schools provided little or no training in palliative care, and many graduates did not feel confident in handling situations that required palliative consultation. Similarly, Aldridge et al. (2016) identified health care provider and staff perception and inadequate knowledge of palliative care as a deterrent to utilizing palliative care in chronic illness. These authors called for a change in education, implementation, and policy domains affecting patient referral for palliative care services. In the education domain, the lack of adequate education and perception of palliative care as end-of-life care were identified as key concerns. In the implementation and policy domain, the inadequate size of palliative medicine practitioners, a trained workforce, the
difficulty of identifying qualified patients, a need for culture change, and a lack of adequate reimbursement for palliative care were identified as critical to referrals and utilization of palliative care services (Aldridge et al., 2016).

Palliative consultation was more commonly obtained for terminally ill patients than patients with serious or chronic illnesses. In addition, Aldridge et al. (2016) further expressed concern that healthcare providers’ misconceptions of palliative care as end-of-life care are leading to delays in initiating or referring to palliative care early in the course of illness. However, when palliative care was changed to supportive care, there was a 41% increase in the consultation for inpatient palliative care referral and an improvement in outpatient registration for palliative care consultation (Aldridge et al., 2016).

Bull et al. (2014) conducted a retrospective study by auditing patient records and conducting staff surveys to determine the predictors of conservative treatment, which patients were being referred to palliative care, and healthcare professionals’ perception of the role of palliative care in the management of chronic disease. The study reviewed information that was given on the percentage of patients that were offered palliative care, at what stage palliative care was offered, patient demographics, clinical profiles, and the health care professionals that were involved in the care. The result of the study indicated that health care professionals’ beliefs, values, and knowledge of palliative care influence their end-of-life care decisions.

Palliative care education for healthcare providers. Kozlov et al. (2016) conducted a web-based randomized study to determine if a layperson’s knowledge about palliative care can increase with a brief educational intervention. The study utilized video and informational pages to educate and boost confidence of 152 randomly selected individuals without prior knowledge of palliative care. At the conclusion of the educational intervention, there was a substantial
increase in level of confidence and knowledge about palliative care in individuals that participated in the educational intervention. It was evident from the study result that the brief education provided to the participants improved their knowledge significantly. When health care professionals are adequately educated on the benefits and services of palliative care, they will be better able to educate patients and their families on palliative care services.

Anderson et al. (2017) explored and discussed the effects of the lack of palliative care education among nurses as a barrier to adequate integration of palliative care services. The authors studied and explored the benefits of palliative care education for bedside nurses to increase nurses’ ability to screen patients for palliative care needs. In this study, thorough training on palliative care was completed by advanced practice palliative care nurses and nurse educators in five academic medical centers. The bedside nurses were educated on recognizing and addressing palliative care needs in structured intensive care rounds and workshops. An estimated 468 bedside nurses from the five academic medical centers participated in the palliative care education sessions from May 2013 to January 2015. At the end of the education sessions, trained bedside nurses and nurse leaders showed an increase in palliative care communications, assessments, and evaluation skills.

Nurses were more empowered to confidently contribute to communications among families and the interprofessional team about palliative care services. Some of the sites where nurses participated in palliative care education have now extended the training to include personnel from other disciplines. During the education workshop sessions, the bedside nurses were able to identify palliative care needs for 82% of patients, uncontrolled symptoms in 53% of patients, and family distress in 50% of patients. The nurses were also able to identify poor family-clinician communication about patient prognosis as a barrier to integrating palliative care
among seriously ill patients. By the conclusion of the training, the study showed increased knowledge of palliative care among bedside nurses.

Koncicki, Brennan, Vinen, and Davison (2015) explored the under recognition of the prevalence and severity of symptoms, noncompliance, high health care utilization, and barriers to symptom management among ESRD and dialysis patients. In this systematic review, the researchers examined the most common symptoms experienced by ESRD and dialysis patients. The study found that provider education and experience are critical in the management of symptoms experienced by ESRD and dialysis patients. The rate of noncompliance, caregiver stress, and health care utilization was noted to be high among ESRD and dialysis patients due to the lack of provider knowledge on completing adequate assessment of patients’ needs and symptoms. Considering the services provided by palliative care, having basic palliative care knowledge could prevent these barriers of inadequate care and high healthcare utilization among ESRD and dialysis patients.

**Early integration of palliative care.** Dialysis can be challenging for both patients and their families due to the chronic nature of the disease and the process of initiating dialysis at the end stage of renal disease to prolong the patient’s life. The emotional and financial expense to affected individuals, their families, and the health care system is enormous. The associated costs of the disease process can range from frequent hospitalizations to manage symptoms, infection, or complications associated with the disease process. Early referral of ESRD patients on dialysis to palliative care is favorable in improving the overall quality of life, providing support to patients and families, and reducing the associated cost of ESRD and dialysis (Corbett, 2018). In two systematic reviews conducted to evaluate the barriers, facilitators, and the benefits of integrating palliative care services early in the course of chronic illness, Murray et al. (2015)
concluded early initiation of palliative care is beneficial to patients, their families, and healthcare utilization.

Aldridge et al. (2016) conducted a literature review on the barriers of early integration of palliative care in the management of patients with serious illness. The researchers collected data from 405 hospitals from 2005 to 2015. They identified the lack of adequate education as a factor in health care professionals’ perception of palliative care as a method of end-of-life care. It was a key barrier to early palliative care integration in the management of chronic or serious illness. The study further identified the challenges of identifying patients for appropriate screening and assessment for palliative referrals as an implementation barrier to utilizing palliative care.

Zalenski et al. (2017) examined 405 ICU patients with positive palliative care screenings and compared them to 244 patients who had negative palliative care screenings in a retrospective analysis. The number of patients that received an early palliative care consultation were noted to have an overall increase in “do not resuscitate” orders and hospice referrals and a reduction in hospital length of stay, readmissions and cost compared with patients without palliative care consultation. Patients with late palliative care consultations had no significant difference in the length of hospital stay when compared to those without palliative consultations. However, there was a notable reduction in the 30-day readmissions compared to those without palliative care consultations. These findings led to the authors’ recommendation of early integration of palliative care in ICU patient.

Michael et al. (2016) conducted a qualitative study on staff experiences of care, focusing on end-of-life care that incorporated early integration of palliative care services as a model of care. The study took place in a 22-bed palliative care unit and a community palliative care service. The study showed that symptom management was better for the participants that were
cared for using this model. The participants utilizing the new model were more likely to be discharged and less likely to die in the inpatient or acute setting with overall good outcomes compared to patients that were not cared for using the new model.

Identifying patients for appropriate screening and assessment for palliative care referrals. Despite the known facts about the crucial benefits of palliative care education, screening, assessments, and early integration in chronic illness management, most health care organizations continue to fall short in screening and assessing qualified patients for palliative care services. A systematic study conducted by Murray et al. (2015) examined the barriers to and facilitators of palliative care in the community and developed a resource toolkit for palliative care specialists in the community. The palliative care toolkit developed by Murray et al. was found to be very helpful for community-based palliative care approaches. Patients were appropriately identified for palliative care services in the community. However, the authors noted at the conclusion of the study that health care professionals’ resistance to initiating palliative care and their inadequate knowledge of palliative care services were barriers to integrating palliative care. Many of the health care professionals were not aware of services offered by palliative care, while some providers were resistant to the idea of palliative care in the management of chronic illnesses.

A recent retrospective cohort study of 45,368 veterans with chronic kidney disease, stages three through five, recognized high-risk patients and facilitated appropriate palliative care involvement to show that patients with a certain demand for care benefited from palliative care evaluation (Nenova & Hotchkiss, 2019). The researchers examined patient outcomes of chronic renal disease patients before and after dialysis initiation, mainly in patients ages 65 to 85 years old. Appointment records were reviewed to identify patients who attended appointments at a
medium to high frequency. Medium frequency was defined as at least 31 visits per year. Patients with medium to high frequency appointment use were recommended to palliative care introduction based on their appointment records. The study suggested that providers need to identify and initiate palliative care treatment options for medium-frequency appointment utilizers as early integration of palliative care could enable patients to consider end-of-life care options.

Most nephrology fellows are not adequately trained and lack the education and experience needed to provide palliative and end-of-life care. The clinical practice guidelines for oncology state that all cancer patients should be screened for palliative care needs at initial visits, appropriated intervals, and as clinically indicated or when palliative criteria are met (Phua, Peh, Ho, & Yang, 2016). However, the focus of the chronic kidney disease guidelines is dialysis withdrawal while ESRD guidelines focus on conservative therapies (Nenova & Hotchkiss, 2019).

Unlike health care professionals who manage serious chronic illnesses, oncology providers appear to be more knowledgeable and proactive in screening and assessing patients’ palliative and end-of-life care needs. In a study that examined 37 patients in an acute care inpatient facility, the oncology team was able to identify four top criteria for patient referrals for palliative care. The patients were screened for limited anti-cancer treatment options, rapid functional decline, uncontrolled symptoms by standard approach, and moderate to severe distress in patient or family (Phua et al., 2016). Health care professionals managing renal disease and dialysis patients could also be trained to utilize the same skills and criteria to identify patient and family needs by increasing palliative care service referrals for improved patient and family outcomes.
Another cross-sectional retrospective analysis study compared the functionality, advanced care planning, hospital admissions, prognosis, quality of life, pain, dyspnea, fatigue, and depression between cancer patients and ESRD, heart failure, and chronic obstructive pulmonary disease patients. The study examined 879 palliative care patients from 13 participating centers, which included 629 cancer patients and 250 non-cancer patients diagnosed with ESRD, heart failure, and chronic obstructive pulmonary disease. In this study, patients with the primary diagnoses of ESRD, heart failure, and chronic obstructive pulmonary disease and other non-cancers were less functional at the time of referral for palliative care. Most of the patients were referred to palliative care during the later stage of their chronic illnesses. Overall, the study showed that the current use of palliative care in health care is heavily focused on cancer care and treatment rather than other similar life-changing chronic illnesses that have a similar effect on patients (Bostwick et al., 2017).

**Unmet needs for end-stage renal patients on dialysis.** Culp, Lupu, Arenella, Armistead, and Moss (2015) provided great insight into the unmet needs of ESRD patients on dialysis and barriers to utilizing available resources such as palliative care. The study received responses from a total of 487 health care staff, which included 41 nephrologists, six nurse practitioners and physician assistants, 146 nurses, 199 social workers, and 95 dialysis center administrators. Only 4.5% of the 487 health care staff surveyed reported that their dialysis centers provide high-quality supportive care for the patients. The researchers identified bereavement support, spiritual support, and end-of-life care as the most frequently unmet patient needs. Barriers to providing supportive care were identified as a lack of a formal predictive algorithm for identifying patients with a high risk of dying, no specific policy to follow for
providing end-of-life care, no formal assessment of patients that are nearing end of life, and lack of formal goal setting and care planning related to end-of-life care.

This study further reported that nephrologists expressed concerns about not being adequately equipped to treat dialysis patients while non-nephrologist health care professionals stated that they were unaware of supportive care resources for dialysis patients. Education of dialysis professionals on evidence-based clinical practice guidelines to improve decision making in seriously ill patients was described as an urgent need in order to improve the utilization of supportive care (Culp et al., 2015). Davis, Temei, Balboni, and Glare (2015) found palliative care to be beneficial in managing certain undesired symptoms, improving quality of life, reducing aggressive care at the end of life, improving caregiver stress and family satisfaction, reducing healthcare cost, and shortening hospital stays.

Axelsson et al. (2018) examined 472 patients, 188 (40%) women and 284 (60%) men, with chronic kidney disease. They used a questionnaire, retrospective analysis method to shed light on the most common symptoms and unmet needs of ESRD patients. The most prevalent symptoms listed by the participants were pain, respiratory secretion, anxiety, shortness of breath, and nausea. The participants who reported these symptoms described their symptoms as partly relieved or not relieved at all. At the conclusion of the study, 38% of the participants received palliative care. Eight percent died in inpatient hospice and palliative care, 5% in home palliative care, and 19% alone. Bereavement support was offered to 38% of the families that utilized palliative care. The authors noted that most ESRD patients had unmet needs regarding symptom management, advance care planning, and bereavement support even when death was imminent.

Dąbrowska-Bender, Dykowska, Żuk, Milewska, and Staniszewka (2018) studied the quality of life of 140 patients treated with peritoneal dialysis and hemodialysis using a
questionnaire cohort study. The results revealed that the negative effects of dialysis on the quality of life was higher in hemodialysis patients due to the impact of dialysis on health, psychological well-being, travel time, emotional well-being, ability to keep up with work and education, symptoms experienced, pain, and dialysis complications. The study recommended that dialysis patients receive psychological care and address any other symptoms experienced in order to improve their quality of life.

**Palliative care provides more than pain management.** Pandini et al. (2016) discussed the outcome of a six-month correlational study on 781 patients admitted to an acute care unit from an emergency department. The study compared patients who received palliative care services prior to dying and patients who were discharged on palliative care services to patients who received active care until death and patients that were discharged without palliative care services. Patients who received palliative care prior to death and discharge showed significant benefits from the use of palliative care in the management of their chronic illness compared to patients that did not utilize palliative care services. The study further exposed the need to extend the use of palliative care to more chronic illnesses in acute care hospital settings and increase staff education and training in screening and assessing patients for palliative care needs or services.

A single-center prospective cohort study was conducted in a hemodialysis unit by Feely et al. (2016) to determine the feasibility of embedding palliative medicine consultations during treatment. The study also looked at the effect of palliative medicine on advance care planning and symptom management. The study included 91 adult hemodialysis patients who participated in a palliative care consultation. Symptoms were noted to be controlled before the intervention. However, the prevalence of unknown code status was noted to significantly decrease from 23%
to 1%, and goals of care documentation improved from 3% to 59%. The study showed well-controlled symptoms for the 91 hemodialysis patients that underwent palliative medicine consultations at the center. According to the study results, there was a strong correlation between symptom management and the use of palliative care services in hemodialysis patients.

Phongtankuel et al. (2018) examined the delivery of multicomponent palliative care interventions, characteristics of palliative care disciplines, components of care implemented, and whether the number of disciplines being implemented was associated with a positive outcome. The systematic review study examined a total of 159 health care workers, which included 64 nurses, 43 physicians, 33 social workers, and 19 chaplains. The review found no association between the number of disciplines used and positive outcomes. However, the study showed that the most palliative care intervention provided to patients were symptom management, psychological support and counseling, and disease education. The study noted an improved number of positive outcomes for symptom management in chronically ill patients such as those with chronic obstructive pulmonary disease and ESRD.

**Conceptual Framework**

The Iowa Model for Evidence-Based Practice to Promote Quality of Care (Iowa Model) was utilized in this evidenced-based practice project to increase palliative care referrals for ESRD patients on dialysis on the renal and diabetic unit at a Central Virginia hospital. The model was chosen for this project because of its reputation among various academic and nursing researchers as a practical process for promoting evidence-based projects that is easy to use (Buckwalter et al., 2017). The model was developed by a team of nurses to guide clinicians in appraising and introducing research findings to practice. Since the model was developed in 2001,
it has been reviewed and extensively used in various health care organizations and academic settings.

The Iowa Model includes several detailed steps, which are problem and knowledge focused. These steps include identification of the problem and its priority for the organization, team formation, critique and literature review, implementation and intervention, and evaluation of change (Carlton, 2014). It is critical to examine the strengths and weaknesses of evidence-based models to determine which model would be most appropriate when selecting a concept for developing an evidence-based project (Akinmadelo, 2018). For a model to be appropriate, the concepts and organization of the model must be clear, concise, and easy to use when applied directly to evidence-based practice changes and concerns in the clinical settings. It must be generalizable with the ability to be applicable to various patient populations and easily applied to practice problems as evidenced in published literature (White & Spruce, 2015).

This project involved the collaboration of the renal and diabetic unit interdisciplinary team of physicians, nurse practitioners, physician’s assistants, nurses, care managers, social workers, rehabilitation services personnel, dieticians, nursing support staff, and all direct care professionals involved in direct patient care. The support of the palliative care team was sought for this project since the goal of the project was to implement a palliative screening tool and increase palliative care referrals of ESRD patients on dialysis. The permissions to use the Iowa Model and conduct research at the hospital are found in Appendixes C and D.

**Summary**

The purpose of this literature review was to identify a successful intervention for an established clinical problem related to lack of early referrals to palliative care for ESRD patients on dialysis. The critical appraisal of the data provided strong evidence of the effectiveness of
provider and staff education on palliative care and the integration of a palliative care screening tool. The lack of professional knowledge of palliative care, screening, and assessment skills and provider resistance are identified as major barriers to the utilization of palliative care services for the management of serious chronic illnesses. When patients are appropriately screened for palliative care, palliative care professionals can be consulted, which can lead to early integration of palliative services which, in turn, benefits and improves both patient and family outcomes.

This literature review supported the purpose of this scholarly project, which was to educate providers and staff on the renal and diabetic unit at a hospital in Central Virginia on the benefits of palliative care in the management of ESRD patients on dialysis. Hopefully, by increasing the number of referrals of patients with ESRD on dialysis to palliative care, the patients’ needs were adequately addressed. Unmet needs of this population include chronic pain and symptom management, dyspnea, and caregiver or family support.

SECTION THREE: METHODOLOGY

Design

This research was an evidence-based practice project that utilized the Iowa Model to promote the quality of life and care for patients suffering from ESRD on dialysis. The changes were implemented to address the underutilization and untimely initiation of palliative care services in the management of ESRD for patients on dialysis. The project was conducted based on the structure of the Iowa Model. The trigger and organizational priority were identified, and a team was formulated.

A brief education on palliative care was provided to the staff. The education consisted of informative education on the screening tool and the benefits of early integration of palliative care services presented in a group setting, individual sessions, and visits to providers’ offices over a
two-week period. A copy of the palliative screening tool with instructions was provided to all staff and made available on the unit and its substations. A cross-sectional quantitative pretest and posttest questionnaire design was utilized to evaluate the participants’ knowledge of palliative care before educational intervention and postintervention. The pretest and posttest scores were compared to determine the effectiveness of palliative care educational interventions.

A follow-up chart review was conducted for four weeks postintervention to determine the number of palliative care referrals that occurred after the educational intervention, evaluate the timely initiation of palliative care, and measure the use of the screening tool provided. The number of patient referrals to palliative care preintervention was compared to the number of referrals postintervention. An increase in the number of referrals indicated that the educational intervention was effective. Data collected from the providers included the number of years in practice or experience, educational background, job description or title, palliative care experience, and knowledge measured prior to and postintervention as measured by the questionnaire. The chart review included patient demographics, time of referral, and the use of the screening tool. All information identifying patients and participants was excluded from the data that were collected for this project. Approvals were obtained from the Liberty University and the hospital Institutional Review Boards (IRBs) prior to the initiation of the project.

**Measurable Outcomes**

1. After the completion of the educational program on palliative care and ESRD referrals, providers and staff will show an increase in knowledge about palliative care, the screening process, and the use of the screening tool. This will be evidenced by an increase of 10% on the scores of the posttest.
2. After provider completion of the screening tool intervention, a greater percentage of ESRD patients on dialysis will be screened for referral to palliative care. This will be evidenced by an increase in the number of patients screened with the screening tool in a four-week period as compared to the number of patients screened previously without use of a screening tool in a four-week period.

Setting

The project was completed at the renal and diabetic unit of a hospital in Central Virginia. The organization values learning, teaching, support mentoring, and training of healthcare professionals. The hospital’s strategic plan prioritizes work that identifies the needs of the community. It is informed by the evolving policy environment and considers available funding with the goal of increasing access to health care and transforming how it is delivered to further improve the health outcomes of the community it serves. The mission of the hospital is to be the most trusted provider of innovative health care and of excellent care for life. The hospital values teamwork, integrity, respect, the drive for excellence, and patient-centered care. The renal and diabetic unit provides care for renal disease, dialysis, and diabetic patients. It is one of the six medical-surgical specialty units at the hospital.

Care is provided for patients in an environment designed to best meet patient needs and improve overall outcomes. The unit is overseen by a designated unit manager, the leadership team, nursing staff, and a triad staff model of care. The triad staff model consists of registered nurses, licensed practical nurses, and certified nursing assistants working together to meet the needs of the patient population they serve. This setting was chosen for this project based on the patient population served. It is the goal of the hospital that all members of the nursing team adhere to the values of providing excellent nursing service that is consistent with the mission,
vision, and value statements of the organization. The key stakeholders include the team of health care staff on the renal and diabetic unit and the palliative care department. A support letter is provided in Appendix D.

**Population**

This project measured the palliative care referrals for ESRD patients, patients screened with the palliative care screening tool, and health care provider knowledge post palliative care educational intervention. A purposeful sampling method was utilized to select patients based on the criteria established for inclusion in the project. The inclusion criteria were ESRD patients who fell between the stated ages of 35 and 75 and health care staff who were licensed to provide patient assessments and make recommendations for referrals based on patient assessments. The sample size was based on the number of staff members that participated in the interventional education, pretest, and posttest and the number of patients admitted to the unit that met the specified criteria for the study. Participants were selected regardless of race, sex, spoken language, nationality, religion, education level, marital status, religion, or socioeconomic status.

Patients who met the specified criteria that are under palliative care management were automatically excluded from the study. An exception was made for those patients who were noncompliant with palliative care or who wished to re-enroll under palliative care management. Physicians, nurse practitioners, and physician assistants are referred to in this study as health care providers. Registered nurses, licensed practical nurses, medical assistants, social workers, case managers, rehabilitation staff, and all other staff capable of completing patient assessment are referred to as health care staff or personnel for this project.
Ethical Considerations

A statement from the Doctor of Nursing Program student and project chair completed on research ethics training to guarantee the protection of human subjects, the Collaborative Institutional Training Initiative certificate, and the IRB approval letters from Liberty University and the hospital are included in the appendixes. The principles of justice, autonomy, privacy, beneficence, nonmaleficence, and respect for human dignity were considered for this project for all participants (health care professionals) and charts that were reviewed (Hall & Roussel, 2014). Questionnaires did not contain participants’ identifying information. The result of the pretest and posttest questionnaire were examined privately. Extracted data from questionnaire were shredded once extracted onto Microsoft Excel.

Extracted data and their analysis were stored on a password-protected computer. Data will be stored for a maximum of three years after the completion of this study. Chart review was conducted by the hospital’s information technology department to ensure the safety of protected patient health information on electronic chart. A report on the chart review was generated by the hospital’s information technology department excluding all patient information. A master code book was created in an Excel spreadsheet and saved as a password-protected document and saved on a password-protected, Health Insurance Portability and Accountability Act-compliant computer. Data were collected, documented, and analyzed without any patient identifiable information. The data collector (team leader) maintained the password-protected spreadsheet and computer. No provider or staff identifying information is associated with any presentation or publication of this project. A copy of the Collaborative Institutional Training Initiative Certificate is provided in Appendix A.
Data Collection

Data were collected by this student, the hospital’s information technology department, and the health care professionals at the renal and diabetic unit who handle the palliative care screening tools. Charts were analyzed by this researcher to find the number of palliative care referrals and consults, the screening tools utilized, and the education pretest and posttest results. A Microsoft Excel worksheet was utilized for sorting and organizing all information for analysis.

Tools

The pretest and posttest questionnaires were designed by this student using a Likert scale. An ordinal level of measure was utilized based on its reliability and usefulness in describing characteristics, attitude, behavior, and status (Marateb, Mansourian, Adibi, & Farina, 2014). The questionnaire method is inexpensive, offers privacy, and is an excellent data collection tool for this type of study. To improve the participant response rate, questionnaires were completed face to face. Writing instruments were provided for participants. The hospital’s palliative care screening tool was introduced to the participants, which was made available by the palliative care department. The screening tool was a validated trigger tool that has been successfully implemented in the ICU and other units at the hospital. It uses a point system to determine when a palliative care consult should be recommended to patients. Microsoft Excel was utilized for data collection, analysis, and evaluation. The palliative care screening tool, pretest, and posttest are included in Appendixes E, F, and G.

Intervention

Palliative care is a priority on the hospital’s renal and diabetic unit because of the underutilization of palliative care, which is evidenced by the quality of life and number of readmissions among the ESRD on dialysis. While the hospital has a robust palliative care
program for patients, the program continues to be underutilized for ESRD patients on dialysis eligible for palliative care consults. An educational presentation that addressed palliative care approaches to care in chronic illness, the benefits of early integration of palliative care in chronic illness, screening, and completing the patient assessment for palliative care was developed. Education was completed with unit staff during staff meetings and morning and evening huddles, as well as impromptu and scheduled in-service sessions. For providers who are not available during the meeting or in-service hours, training was conducted individually or during morning rounds.

Prior to beginning this project on the renal and diabetic unit, IRB approval was obtained from Liberty University and the hospital. Data on the providers’ knowledge were collected prior to education intervention and post education intervention. The palliative education intervention was presented in a two-week period to reach at least 95% of the staff on the unit. Once the educational intervention was concluded, chart reviews were conducted to determine the number of palliative care referrals and screening tools utilized in the past 30 days. The overall goal of this project was to improve the quality of life and outcomes for ESRD patients on dialysis.

**Timeline.** The proposal was presented to the project chair on Monday, July 5, 2019 and submitted to the Liberty University IRB on the same day as the proposal defense. An IRB application was approved prior to beginning the project. The palliative care education intervention and use of palliative screening tool was presented to the renal and diabetic unit staff from Monday, July 22, to Friday, August 9, 2019. Data were collected for all participants prior to and after implementing the intervention, from Monday July 22, through Friday, August 9, 2019. A period of 30 days from Saturday, August 10, 2019, through Sunday, September 8, 2019, was apportioned for data collection on the utilization of the palliative care screening tool and
referrals. Chart reviews on the utilization of the screening tool and the number of referrals was completed by Friday, September 6, 2019. A statistical analysis of data of collected was completed by Monday, September 16, 2019.

Feasibility analysis. There are some critical factors to consider during the planning phase of a project. These factors include, but are not limited to, time, cost, staff availability, organizational culture, and the vested interest in the topic being studied. For this project, the anticipated challenges were participants accrued time, staff availability, and adequate documentation in the patients’ chart for chart review. Attrition and the flexibility implementing intervention is expected (Sun et al., 2014). When anticipated challenges are identified during the planning phase of the project, it makes it easier to take necessary steps to address feasibility and possibility of carrying out a successful project (Hall & Roussel, 2014).

Data Analysis

SPSS and Microsoft Excel were used to perform the data analysis for this project. Analysis was initiated with a descriptive summary of the variables. All completed pretest and posttest scores were double-checked for accuracy. The pretest questionnaire consisted of 13 questions, which included six generalized demographic questions and seven questions on the presented palliative care education. The posttest questionnaire consisted of the seven questions from the pretest questionnaire, designed to measure the effectiveness of the presented palliative care education. The answers to each question from both pretest and posttest questionnaires were coded as true, false, yes, no, I don’t know, or descriptive statistics of the variables. The scores were displayed in percentages, tables, and graphs.
Measurable Outcomes

1. The staff and providers showed an increase in knowledge about palliative care, the screening process, and the use of the screening tool after the completion of the educational program on palliative care and ESRD referrals. This was evidenced by an increase of greater than 30% on the scores of most of the posttest questionnaire questions.

2. A greater percentage of the ESRD patients on dialysis were screened for referral to palliative care. This was evidenced by an increase to 26 palliative care consults with the screening tool in a four-week period when compared to nine patients screened for palliative care without the use of a screening tool in a four-week period before the palliative care education program.

SECTION FOUR: RESULTS

Descriptive Statistics

The purpose of this scholarly project was to provide education on the benefits of palliative care in the management of ESRD patients on dialysis and implement a standard palliative care screening tool for the providers and health care staff on the renal and diabetic unit at a hospital in Central Virginia. Before the implementation of the palliative care education and screening tool on the hospital’s renal and diabetic unit, a 30-day chart review was conducted from June 23, 2019 to July 22, 2019. The chart review was conducted to retrieve the number of palliative care consults that occurred before the intervention was implemented. The result of the preintervention chart review showed that the unit had nine palliative care consults during the 30 days.
Measurable Outcome 1

The first goal for this project was that providers and staff would show an increase in knowledge about palliative care, the screening process, and the use of the palliative care screening tool after the completion of the educational program on palliative care and ESRD referrals. It was expected that this would be evidenced by an increase of 10% in the scores of the posttest questionnaires. A total of 45 participants attended the voluntary palliative care education sessions that were held multiple times during the day shift, evening shift, and night shift in a two-week period from July 23 to August 6, 2019. Pretest questionnaires were distributed to all participants at the education sessions. All of the 45 (100%) pretest questionnaires were returned for scoring. Thirty-two of the 45 (71%) posttest questionnaires were returned after the education sessions. Twenty-three (51%) of the participants identified as registered nurses (n = 23), six (13%) as licensed practical nurses (n = 13), four (9%) as physicians (n = 4), four (9%) as certified nursing assistants (n = 4), two (4%) as nurse practitioners (n = 2), two (4%) as students (n = 2) (a nursing student and a medical student), two (4%) as other health care provider (n = 2), one (2%) as a case manager (n = 1), and one (2%) as a physician assistant (n = 1).

The majority of the providers (71.4%) that participated in the study had over 10 years of experience, while 64% of the health care staff reported that they have over four years of experience. Of all the 45 participants, 20 (44%) participants reported that they had some form of training or education on palliative care. Nineteen of the 45 participants reported that they have never heard of the palliative screening tool, while only three of the participants reported knowing about and using the palliative care screening tool in the past. On the question that addressed the use of the hospital’s palliative care education video, only five participants reported knowing about the video and only one of those five reported using the video at least once for patient
education. Seventy-six percent of the participants indicated plans to use the palliative care screening tool and educate ESRD patients on palliative care services on the pretest questionnaire. The number of participants who plan to continue palliative care assessment and utilize the palliative care screening tool and educational video increased to 97% at the conclusion of the palliative care education.

The correct pretest and posttest scores are tabulated in the tables and graphs below. Seven questions focused on the participants’ demographics. The remaining seven questions focused on the participants’ knowledge of palliative care services and plans to utilize the palliative screening tools and educational materials on palliative care to educate patients on palliative care services. It is evident from the pretest and posttest questionnaire score table that the education intervention was effective. There was a significant increase in the percentage of correct answers on the posttest scores when compared to the pretest scores. The increase in the score on the posttest questionnaire indicated that the participants understood the appropriate time to refer patients to palliative care. The increase in the number of correct responses on the questions regarding the difference between palliative care and hospice, the utilization of a standard palliative care screening tool, and resources for patient education also signifies an increase in knowledge and improved attitude on the benefits of palliative care.

The responses from posttest questions one to six indicated an improvement in palliative care knowledge and an improved attitude on the importance of utilizing a standard screening tool for screening. The comparison of the pretest and posttest results also showed a significant improvement in palliative care knowledge. It further indicated that the staff understood the importance of early integration of palliative care in ESRD and dialysis patients and that a standard screening tool is effective for inpatient screening and referral. There was a 21%
increase in the number of participants from the pretest response who planned to utilize the palliative care screening tool and provide patient education using the hospital’s palliative care resources for patient education. Overall, the staff showed an increase in knowledge of more than 10% about palliative care, the palliative care screening process, and the use of the screening tool after the completion of the educational program on palliative care and ESRD referrals. This is evidenced by an increase of greater than 5% to 21% on the scores of most of the posttest questionnaire questions as shown below.
Table 1

Demographics and Participant Data

<table>
<thead>
<tr>
<th>Professional Role</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Nurse Practitioner</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Physician Assistant</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Registered Nurse</td>
<td>23</td>
<td>51</td>
</tr>
<tr>
<td>Licensed Practical Nurse (LPN)</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>Case manager</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Certified Nursing Assistant (CAN)</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Student</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>100</td>
</tr>
</tbody>
</table>

Pretest Results

Do you know about the hospital palliative care screening tool
- Yes: 19 (42%)
- No: 26 (58%)

Have you used the hospital palliative care screening tool
- Yes: 3 (7%)
- No: 28 (62%)
- No Answer: 14 (31%)

Do you know about the hospital EMMI video on palliative care
- Yes: 5 (11%)
- No: 40 (89%)

Have you used the palliative care EMMI video for patient education
- Yes: 1 (2%)
- No: 22 (49%)
- No Answer: 22 (49%)

Palliative care training
- Yes: 20 (44%)
- No: 25 (56%)

Table 2

Years of Experience

<table>
<thead>
<tr>
<th>Years of Experience</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>10+</td>
<td>18</td>
<td>40</td>
</tr>
<tr>
<td>7–9</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td>4–6</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>1–3</td>
<td>14</td>
<td>31</td>
</tr>
<tr>
<td>0–1</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Table 3

Pretest and Posttest Score Correct Answers

<table>
<thead>
<tr>
<th>Question</th>
<th>Pretest (n)</th>
<th>Pretest (%)</th>
<th>Posttest (n)</th>
<th>Posttest (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>When is the best time to refer end stage renal disease patients on dialysis to palliative care?</td>
<td>33</td>
<td>73</td>
<td>28</td>
<td>88</td>
</tr>
<tr>
<td>Palliative care can be initiated at any time during the course of an illness?</td>
<td>39</td>
<td>87</td>
<td>31</td>
<td>97</td>
</tr>
<tr>
<td>Palliative care and hospice are mainly the same?</td>
<td>42</td>
<td>93</td>
<td>30</td>
<td>94</td>
</tr>
<tr>
<td>In most states, palliative is initiated only when the patient has less than six months of life expectancy?</td>
<td>28</td>
<td>62</td>
<td>24</td>
<td>75</td>
</tr>
<tr>
<td>Hospice care provides patient and family support, while palliative care supports the patients.</td>
<td>27</td>
<td>60</td>
<td>22</td>
<td>69</td>
</tr>
<tr>
<td>Only physicians, nurse practitioner/physician’s assistants are important patient advocates to early integration of palliative care services to end stage renal disease patients on dialysis?</td>
<td>40</td>
<td>89</td>
<td>30</td>
<td>94</td>
</tr>
<tr>
<td>I plan to use the hospital’s palliative care screening tool and educate end stage renal disease patients on dialysis on palliative care services from now on.</td>
<td>34</td>
<td>76</td>
<td>31</td>
<td>97</td>
</tr>
</tbody>
</table>
Measurable Outcome 2

The second goal of this project was that a greater percentage of ESRD patients on dialysis would be screened for referral to palliative care after the completion of the screening tool intervention. This was expected to be evidenced by an increase in the number of patients screened with the tool in a 30-day period as compared to the number of patients screened previously without use of a screening tool in a 30-day period. The 30-day post chart review was conducted from August 7 to September 6, 2019. It showed a more than 48% increase when compared to the 30-day preintervention chart review with an increase from 9 to 26 palliative consults. The significant increase in the number of ESRD patients on dialysis for palliative care services utilizing the screening tool showed that the palliative care education and the screening tool was effective.
The results also indicate participants confidence in the screening process for palliative care and effectively utilizing the screening tool for screening and referral as evidenced by the greater percentage of the ESRD patients on dialysis that were screened for referral to palliative care. The result of the 30-day post intervention is tabulated in a table and a graph below.

Table 4

30-day Post Intervention Chart Review

<table>
<thead>
<tr>
<th>Period of chart review</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-day preintervention</td>
<td>9</td>
<td>26</td>
</tr>
<tr>
<td>30-day post intervention</td>
<td>26</td>
<td>74</td>
</tr>
</tbody>
</table>

Graph 2

Figure 2. 30-day preintervention chart review vs. 30-day post intervention chart review.
SECTION FIVE: DISCUSSION

Implication for Practice

A diagnosis of ESRD is a life-changing experience for patients and their families. Often, these patients and their families or caregivers are overwhelmed due to the stress of managing the illness and the symptoms associated with the disease process. The stress of treatment and related symptoms usually leads to family or caregiver burnout, decreased quality of life, decreased quality of care, and increased health care utilization (Scherer, Wright, Blaum, & Wall, 2018). For ESRD and dialysis patients, it is critical to integrate a holistic approach such as palliative care into the treatment plan. The palliative care approach is applicable to patients with all kinds of chronic and life-threatening illnesses, including ESRD.

Palliative care provides holistic care by adequately addressing the patients’ symptoms and needs, providing support for both patients and their families, and addressing the stress related with managing chronic illness (Simon, 2018). Most chronically ill patients are not adequately referred to palliative care due to lack of knowledge about palliative care by most health care providers and staff and lack of a standard screening tool to adequately screen patients for palliative care referrals. The outcome of the palliative education and initiation of a standard palliative care screening tool on the hospital’s renal and diabetic unit shows the need to use standard palliative screening tools and incorporate palliative care into continuing education for health care providers and staff.

The brief two-week palliative care education outcome, the posttest questionnaire scores, and the 30-day chart review post palliative care education when compared the 30-day preintervention chart review and pretest questionnaire score showed a favorable outcome. There was significant improvement in number of palliative care consults initiated by the use of
palliative care screening tools and improvement in the participants’ posttest questionnaire scores, indicating improved knowledge on the benefits and services provided by palliative care.

From this outcome, it is highly recommended that palliative care education and a standard palliative screening tool be incorporated in the hospital competencies and continuing education curriculum for providers and health care staff. Continuation of the palliative care education and utilization of the palliative screening tool will positively impact the patient population served on the hospital’s renal and diabetic unit as evidenced by the outcome of this two-week palliative care education session and implementation of the palliative care screening tool. There is no doubt that utilizing a standard screening tool is effective in assessing patient needs helps provides initiate palliative care services in ESRD and dialysis patients.

Limitations

The outcome of this study highly favors the implementation of a standard screening tool for palliative care and educating health care providers and staff on palliative care. However, a few limitations were identified. The limitations identified for this project are time and implementation setting. The project was implemented on one unit at one hospital, and the post intervention chart review was conducted 30 days after the palliative care education intervention. It is not clear if the outcome would have remained the same if the project was conducted on multiple units or if chart review was conducted after 60 days or 90 days post intervention.

Sustainability

The rising demand for the use of palliative care services in the management of chronic and life-threatening illness is steadily gaining attention among health care organizations. This has propelled palliative care to become a priority topic among most health care organizations that provide care for chronically ill patients such as the population served at the site hospital’s renal
and diabetic unit. To successfully refer patients for palliative care services, health care providers and staff need to possess adequate knowledge and the confidence to assess patients’ unmet needs. The site hospital supports and values the provision of excellent care to the patient population it serves. This mission aligns with the goal of palliative care, which is to provide effective, timely, patient-centered, and holistic care to all patients by focusing on the quality of life and symptom management for chronically ill patients (Jones, 2015).

This project was well received by the leadership council, health care providers, and staff of the renal and diabetic unit. During the interactive education sessions, the majority of the staff expressed interest in how palliative care would benefit their patients. However, most of the staff were not aware of how to assess palliative care needs, consult palliative care, or refer patients for palliative services prior to the education intervention session. Almost all the staff that participated in the education sessions were not aware of how to utilize the palliative care screening tool or how to access the screening tool. The majority of the nursing staff expressed great interest in utilizing the palliative care screening tool and hospital palliative care educational videos and resources for patient and family education.

Two of the physicians who participated in the study reported that they were not aware of the palliative care screening tool. They expressed that it was a nursing duty to assess patients for palliative care and report findings to the provider to place a consult or refer a patient for palliative care. The goal of palliative care, the process for screening for palliative care using a standard tool, and the benefits of early integration of palliative care were revisited with the physicians. It was also reinforced that it is the responsibility of the entire health care team to recognize and screen patients for palliative care. All concerns about the benefits of palliative care in renal disease and dialysis patients, the palliative screening tool, and the hospital’s palliative
care resources were addressed. The screening tool with instructions and palliative care educational resources were made available to all staff in the main nursing station and substations of the renal and diabetic unit.

**Dissemination Plan**

The results of this evidence-based scholarly project validates the utilization of a standard palliative care screening tool for ESRD and dialysis patients, as the tool effectively increased referrals to palliative care over a 30-day period. This scholarly project achieved two measurable outcomes over a one-month period after provider and staff education on palliative care and palliative care screening tool. First, the providers and staff showed an increase in knowledge about palliative care, the screening process, and the use of the screening tool after completing the educational program on palliative care and ESRD referrals. This is evidenced by a 5% to 21% increase on the posttest scores. The second measurable outcome achieved was a significant increase in the number of ESRD patients on dialysis screened for referral to palliative care in a four-week period after completing the screening tool intervention. When compared with the number of patients previously screened for palliative care in a four-week period prior to the screening tool intervention, there was 48% increase in the number of ESRD patients referrals for palliative care.

Based on the positive measurable outcomes of the palliative care education program and the step-by-step instructions on utilizing the palliative care screening tool, the program and tool will be made available to all staff at the hospital renal and diabetic unit as a continuing education module that will contribute to staff knowledge, confidence, and improved patient outcomes. Continuing education credit will be awarded to all staff on the renal and diabetic unit who complete the education module. Efforts will be made to participate in poster presentations for
nurses, providers, and in conferences. The scholarly project chair plans to submit a letter to the editor of the *Nephrology Journal of Nursing* on the value and effectiveness of implementing a standard palliative care screening tool and palliative care education for health providers and staff as evidenced by the outcome of this project.

**Conclusion**

The outcome of the palliative care education and the implementation of a standard screening tool for the purpose of increasing palliative care consultations for ESRD patients and dialysis patients on the renal and diabetic unit showed a very positive outcome. These outcomes support the effectiveness of implementing a palliative care education intervention and a standard palliative care screening tool for increasing palliative care knowledge and confidence among health care providers and staff. This increase in knowledge and confidence led to an increased use of the palliative care screening tool on the hospital’s renal and diabetic unit, which resulted in increased palliative care referrals. With an increase in palliative care referrals to palliative care, ESRD patients and their families can experience a better quality of life, improved quality of care, and burden of disease on caregivers and patients.
References


Brown, G. C. (2014). Living too long: The current focus of medical research on increasing the quantity, rather than the quality, of life is damaging our health and harming the economy. *EMBO Reports, 16*(2), 137–141. doi:10.15252/embr.201439518


qualitative research study of staff’s perspectives. *Palliative Medicine, 30*(3), 303–312. doi:10.1177/0269216315598069


Appendix A
July 8, 2019

To Whom it May Concern,

Omooola Akinmadele has permission to utilize the Palliative Care Trigger Tool as part of her DNP project. If you have any questions, please feel free to contact us at [redacted].

Sincerely,

[Redacted Name]
Managing Director

[Redacted Name]
Director of Palliative Care Services
Appendix C

You have permission, as requested today, to review and/or reproduce Click the link below to open.

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Citation: Worldviews on Evidence-Based Nursing, 14(3), 175-182. doi:10.1111/wvn.12223

In written material, please add the following statement:

Used/reprinted with permission from the University Hospitals and Clinics, copyright 2015. For permission to use or reproduce, please contact the University of Iowa Hospitals and Clinics at [contact information].

Please contact [contact information] or [contact information] with questions.
Appendix D

April 18, 2019

Attention: IRB
Liberty University
Lynchburg, Virginia

IRB Members:

Losa Akinmadele, BSN, RN, Liberty University Doctor of Nursing Practice Student (Principal Investigator) and [redacted] Assistant Professor of Nursing, and DNP Scholarly Project Chair (Faculty Chair) have proposed to conduct Mrs. Akinmadele’s Doctor of Nursing Practice Scholarly Project: The benefits of early referral to palliative care for end stage renal disease (ESRD) patients on dialysis.

[redacted] Diabetes/Renal Unit is committed to providing excellent, comprehensive care for our patients, facilitated by the pursuit of quality improvement. Mrs. Akinmadele’s Doctor of Nursing Practice Scholarly Project reflects our commitment that every patient receives optimal quality health care.

[redacted] Diabetes/Renal Unit is pleased to support Mrs. Akinmadele’s Scholarly project: The benefits of early referral to palliative care for end stage renal disease (ESRD) patients on dialysis.

Feel free to contact me if I can be of further assistance.

Respectfully,

[redacted] MSN, RN
Unit Manager Diabetes/Renal Unit

Email: [redacted]
Appendix E

Palliative Care Screening Tool Trial

This form is not part of the patient’s permanent record

<table>
<thead>
<tr>
<th>Criteria – Please consider the following criteria when determining the palliative care score of this patient</th>
<th>SCORING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Advanced Criteria</td>
<td>Score 6 points if any present</td>
</tr>
<tr>
<td>□ Stage IV cancer</td>
<td></td>
</tr>
<tr>
<td>□ Documented Class IV-Stage D Heart Failure</td>
<td></td>
</tr>
<tr>
<td>□ Arrest with unknown downtime</td>
<td></td>
</tr>
<tr>
<td>□ Intracranial hemorrhage on ventilator</td>
<td></td>
</tr>
<tr>
<td>□ Family request Palliative Care or desires comfort care</td>
<td></td>
</tr>
<tr>
<td>□ Mechanical ventilation &gt;72 hours</td>
<td></td>
</tr>
<tr>
<td>□ Physician, nurse, patient, or family request assistance with goals of care</td>
<td></td>
</tr>
<tr>
<td>2. Disease Process Affecting Patient (check all that apply)</td>
<td></td>
</tr>
<tr>
<td>□ Cancer (Metastatic/Recurrent)</td>
<td>□ End stage renal disease/Chronic Kidney Disease</td>
</tr>
<tr>
<td>□ COPD (Oxygen dependent)</td>
<td>□ Advanced cardiac disease – e.g. CHF, severe CAD, CM (LVEF &lt; 25%)</td>
</tr>
<tr>
<td>□ Stroke (with hemiparesis)</td>
<td></td>
</tr>
<tr>
<td>□ Advanced Dementia</td>
<td>2 points/ EACH = _____________</td>
</tr>
<tr>
<td>□ End Stage AIDS</td>
<td></td>
</tr>
<tr>
<td>□ End Stage Liver Disease</td>
<td></td>
</tr>
<tr>
<td>3. Functional status of patient prior to admission</td>
<td>Score as specified below</td>
</tr>
<tr>
<td>Using ECOG Performance Status (Eastern Cooperative Oncology Group)</td>
<td></td>
</tr>
<tr>
<td>ECOG</td>
<td>Description</td>
</tr>
<tr>
<td>□ Fully Active, able to carry on all pre-disease activities without restriction.</td>
<td>Score 0</td>
</tr>
<tr>
<td>□ Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, e.g., light housework, office work.</td>
<td>Score 0</td>
</tr>
<tr>
<td>□ Ambulatory and capable of all self-care but unable to carry out any work activities. Up and about more than 50% of waking hours.</td>
<td>Score 1</td>
</tr>
<tr>
<td>□ Capable of only limited self-care; confined to bed or chair more than 50% of waking hours.</td>
<td>Score 2</td>
</tr>
<tr>
<td>□ Completely disabled. Cannot carry on any self-care. Totally confined to bed or chair.</td>
<td>Score 3</td>
</tr>
</tbody>
</table>

4. Other criteria to consider in screening | Score 1 point EACH |
| Two or more ED/hospital visits in past month for same diagnosis (e.g. COPD,CHF, ESRD) | |
| Increase in dependence in ADL’s over last 3 months | |
| Uncontrolled symptoms (e.g. pain, dyspnea, nausea/vomiting ≥ 24 hours) | |
| Age > 80 years old | |
| Long-term care facility patient | |

5. Add areas 1, 2, 3, and 4 | Total Score: |

Scoring/Risk Stratification Higher scores indicate increased risk of increased LOS, worsening symptoms, increased readmission rate:

| TOTAL SCORE | LOW RISK |
| TOTAL SCORE | 0-2 MEDIUM RISK – Consider Palliative Care Consult in appropriate patients. (Provider to order.) |
| TOTAL SCORE | 6 or greater HIGH RISK- Palliative Care Consult Recommended. (Order placed under attending of record.) |

Score 6 or greater:

- □ Palliative Care Consult Ordered
- □ Palliative Care meeting scheduled

Name of physician reviewing Palliative Care Screening Tool

Signature Staff Member Completing Screen/Date

Patient Sticker Here
Appendix F

1. Which of the following describes your current position?
   Registered Nurse  Physician  Student  Other (Pls Specify)_______

2. Years of experience?
   0 – 1 yr.  1 – 3 yrs.  4 – 6 yrs.  7 – 9 yrs.  Over 10 yrs.

3. Have you had any form of training (formal or informal) on palliative care and hospice care?
   Yes  No

4. Do you know about the Centra palliative care screening tool?
   Yes  No

5. If you answered yes to question 5, have you used the palliative care screening tool?
   Yes  No

6. Do you know about IMMI video on palliative care?
   Yes  No
   If you answered yes, have you utilized for patient education of palliative care?
   Yes  No

7. When is the best time to refer end stage renal disease patients on dialysis to palliative care?
   a. At the time of diagnosis of end-stage renal disease
   b. During an acute or chronic illness episode
   c. When the patient can longer tolerate dialysis
   d. No need to refer end-stage renal disease to palliative care

8. Palliative care can be initiated at any time during the course of an illness?
   Yes  No  Don’t know

9. Palliative care and hospice are mainly the same?
   Yes  No  Don’t know

10. In most states, palliative is initiated only when the patient has less than 6 months of life expectancy?
    Yes  No  Don’t Know

11. Hospice care provides patient and family support, while palliative care supports the patients.
    True  False  Don’t know

12. Only physicians, Nurse practitioner/Physician Assistants are important patient advocates to early integration of palliative care services to end stage renal disease patients on dialysis?
    True  False  Don’t know

13. I plan to use the Centra palliative care screening tool and educate end stage renal disease patients on dialysis on palliative care services from now on
    Yes  No  Don’t know
Appendix G

1. When is the best time to refer end stage renal disease patients on dialysis to palliative care?
   a. At the time of diagnosis of end-stage renal disease
   b. During an acute on chronic illness episode
   c. When the patient can longer tolerate dialysis
   d. No need to refer end-stage renal disease to palliative care

2. Palliative care can be initiated at any time during the course of an illness?
   Yes        No           Don’t know

3. Palliative care and hospice are mainly the same?
   Yes        No           Don’t know

4. In most states, palliative is initiated only when the patient has less than 6 months of life expectancy?
   Yes        No           Don’t Know

5. Hospice care provides patient and family support, while palliative care supports the patients.
   True       False        Don’t know

6. Only physicians, Nurse practitioner/Physician Assistants are important patient advocates to early integration of palliative care services to end stage renal disease patients on dialysis?
   True       False        Don’t know

7. I plan to use the Centra palliative care screening tool and educate end stage renal disease patients on dialysis on palliative care services from now on
   Yes        No           Don’t know
Appendix H

LIBERTY UNIVERSITY
INSTITUTIONAL REVIEW BOARD

July 12, 2019

Omolola A. Akinmadelo
IRB Application 3886: The Benefits of Early Referral to Palliative Care for End Stage Renal Disease (ESRD) Patients on Dialysis

Dear Omolola A. Akinmadelo,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study does not classify as human subjects research. This means you may begin your research with the data safeguarding methods mentioned in your IRB application.

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

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

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

Sincerely,

[Signature]

Administrative Chair of Institutional Research
Research Ethics Office

Liberty University | Training Champions for Christ since 1971
Appendix I

**EXEMPT RESEARCH CHECKLIST**

*Version 6, February 19, 2019*

**Date:** 7/1/2019

**IRB of Record:** [Redacted]

**Facility:** [Redacted] Renal and Diabetic Unit

**Principal Investigator:** Omolola A. Akinmadelo

**Email address:** [Redacted]

**Phone number:** [Redacted]

**Title of Research Project/Study Title:** The benefits of early referral to palliative care for end-stage renal disease (ESRD) patients on dialysis

**Supplemental documentation is required for consideration of exemption status.**

<table>
<thead>
<tr>
<th>Criteria that must be met for the research to be determined to be consistent with IRB ethical standards.</th>
<th>True</th>
<th>Not True</th>
</tr>
</thead>
<tbody>
<tr>
<td>The research holds out no more than minimal risk to subjects.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Selection of subjects is equitable.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>If there is recording of identifiable information, there are adequate provisions to maintain the confidentiality of the data.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>This study does not require an Informed Consent Form completed on the subjects. If you have checked “Not True” because your study requires consent of subjects, please stop and complete the full IRB application.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>There are adequate provisions to maintain the privacy interests of subjects.</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

**Checklist Statements**

<table>
<thead>
<tr>
<th>Category 1 – For Educational Settings</th>
<th>True</th>
<th>Not True</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The research will only be conducted in established or commonly accepted educational settings including but not limited to schools and colleges. (May include other sites where educational activities regularly occur.)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>2. The research will involve only normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>3. The research will not involve individuals as participants who are known to be prisoners.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>4. The research is not subject to FDA regulations.</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

**Category 2 – For Educational Tests, Surveys, Interviews, Public Behavior Observation:**

| | X |
5. The research will involve only the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior.

Address statement 6 only if the research will involve children as participants. If children will NOT participate, state N/A and continue with statement 7.

6. The procedures will be limited to the use of educational tests (cognitive, diagnostic, aptitude, achievement) or observation of public behavior where the investigator will NOT participate in the activities being observed.

7. The information obtained from educational tests, survey procedures, interview procedures or observation of public behavior will be recorded in such a manner that human subjects CANNOT be identified, directly or through identifiers linked to the subjects.

"True" to either statement 7 or 8 will qualify for exemption provided that statements 9 and 10 are true.

8. Any disclosure of the human subjects’ responses outside the research could NOT reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects’ financial standing, employability, or reputation.

9. The research will not involve individuals as participants who are known to be prisoners.

10. The research is not subject to FDA regulations.

Category 3 – For Educational Tests, Surveys, Interviews, Public Behavior Observation of Public Officials:

11. The research will involve only the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior AND the human subjects are elected or appointed public officials or candidates for public office.

(Appplies to senior officials such as mayor or school superintendent rather than a police officer or teacher.)

"True" to either statement 11 or 12 will qualify for exemption provided that statements 13 and 14 are true.

12. The research will involve only the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior AND federal statute(s) require without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

13. The research will not involve individuals as participants who are known to be prisoners.

14. The research is not subject to FDA regulations.

Category 4 – For Existing Data, Documents and Specimens:

15. The research will involve only the collection or study of existing data, documents, records, pathological specimens or diagnostic specimens.

("Existing" means existing before the research is proposed to the IRB to determine whether the research is exempt. All materials to be reviewed currently exist at the time of this exemption request.)

16. The sources of the existing data, documents, records or specimens are publicly available OR the information will be recorded by the investigator in such a manner that participants cannot be readily identified either directly or through identifiers (such as a code) linked to...
<table>
<thead>
<tr>
<th>Category 5 – For Public Benefit or Service Programs (Federal):</th>
</tr>
</thead>
<tbody>
<tr>
<td>19. The project is a research or demonstration project conducted by or subject to the approval of a (federal) Department or Agency head and which is designed to study, evaluate, or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those public benefit or service programs.</td>
</tr>
<tr>
<td>N/A</td>
</tr>
<tr>
<td>20. The research will not involve individuals as participants who are known to be prisoners.</td>
</tr>
<tr>
<td>X</td>
</tr>
<tr>
<td>21. The research is not subject to FDA regulations.</td>
</tr>
<tr>
<td>X</td>
</tr>
<tr>
<td>22. The program under study delivers a public benefit (e.g., financial or medical benefits as provided under the Social Security Act) or service (e.g., social, supportive, or nutrition services as provided under the Older Americans Act).</td>
</tr>
<tr>
<td>N/A</td>
</tr>
<tr>
<td>23. The research or demonstration project will be conducted pursuant to specific federal statutory authority.</td>
</tr>
<tr>
<td>X</td>
</tr>
<tr>
<td>24. There is no statutory requirement that the project be reviewed by an IRB.</td>
</tr>
<tr>
<td>X</td>
</tr>
<tr>
<td>25. The project does not involve significant physical invasions or intrusions upon the privacy of participants.</td>
</tr>
<tr>
<td>X</td>
</tr>
<tr>
<td>26. The exemption has authorization or concurrence by the funding agency.</td>
</tr>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category 6 – For Taste and Food Quality and Consumer Acceptance Studies:</th>
</tr>
</thead>
<tbody>
<tr>
<td>27. The research involved only a taste and food quality evaluations or a food consumer acceptance study in which (i) wholesome foods without additives will be consumed OR (ii) food will be consumed that contains a food ingredient, agricultural chemical or environmental contaminant that is at or below the level found to be safe by the Food and Drug Administration or is approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.</td>
</tr>
<tr>
<td>N/A</td>
</tr>
<tr>
<td>28. The research will not involve individuals as participants who are known to be prisoners.</td>
</tr>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

**Emergency Use of an Unapproved Test Article (i.e., a drug, device or biologic that is not FDA-Approved)**

- The activity involves emergency use of an investigational drug, device or biologic. Such an activity is not exempt from IRB review. However, this emergency use may occur prior to IRB review and approval (see Category A and B in the Emergency Use Policy for details.) Note that such an emergency use must be reported to the IRB within five business days.
- The activity does not meet with DHHS definition of "research." | N/A | N/A |

**Signature of Principal Investigator:**
PALLIATIVE CARE REFERRAL

Omolola A. Akinmade

Typing my name on the line above constitutes an electronic signature.

Printed Name: OMOLOLA A. AKINMADELO
Date: 7/1/2019

FOR THE IRB REVIEWER ONLY:

Is the activity exempt? YES [X] NO [   ]

Does the research meet the standards of ethical conduct? YES [X] NO [   ]

Which exemption category or categories apply to the activity? Category 1 (One)

Approved by IRB Exempt Committee (date): 7/6/19

Signing: [Redacted]

Typing my name on the line above constitutes an electronic signature.

Printed Name: [Redacted]
Date: 7/1/19

APPENDIX A

EXEMPT SUBMISSION CHECKLIST

____X____ Letter of support from Unit Manager (if applicable)
____X____ Primary Investigator's resume
____X____ All educational materials for staff and patients (if applicable)
____X____ Research or EBP project proposal form
____X____ Data collection tools/instruments (surveys, etc.)

Any additional subject information materials

____X____ Any other pertinent documents related to this study
### Appendix J

<table>
<thead>
<tr>
<th>Article Title</th>
<th>Study Purpose</th>
<th>Sample</th>
<th>Methods</th>
<th>Study Results</th>
<th>Level of Evidence (Melnyk Framework)</th>
<th>Study Limitations</th>
<th>Evidence/Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al Qadire, M. (2014). Knowledge of palliative care: An online survey. Nurse Education Today, 34(5), 717-718. doi:10.1016/j.nedt.2013.o8.019</td>
<td>To evaluate Jordanian nursing students' knowledge about palliative care</td>
<td>220 3rd and 4th year students enrolled in five nursing schools</td>
<td>Quantitative research method and descriptive online-survey design</td>
<td>Study showed that surveyed students had insufficient knowledge about palliative care</td>
<td>Level 4: Cohort study</td>
<td>Small sample and single setting, the convenience sampling method used, the participant who completed survey may not entirely reflect the knowledge of those who did not. Study was conducted on students with internet access only</td>
<td>This study showed the importance of palliative education to nurses, especially the benefits of incorporating palliative care education in nursing school education</td>
</tr>
<tr>
<td>Aldridge, M. D., Hasselaar, J., Garralda, E., van der Eerden, M., Stevenson, D., McKendrick, K., … Meier, D. E. (2016). Education,</td>
<td>To shed light on the barriers to more</td>
<td>Literature review of primary data</td>
<td>Systematic review of descriptive &amp;</td>
<td>Identified key barriers to palliative care</td>
<td>Level 5</td>
<td>None pertaining to integration of palliative care</td>
<td>Yes: identified the barriers to integrating</td>
</tr>
</tbody>
</table>

https://doi.org/10.1016/j.jpainsymman.2017.09.015

| Author(s) | Describes the symptom prevalence, relief, and management during last week of life, as well as end-of-life communication, in patients with end stage kidney disease | 472 patient with chronic kidney disease which includes 188 (40%) were women and 284 (60%) men | The study sheds light on the most common symptoms and unmet needs of end stage renal disease patients. Listed from the most prevalent symptoms as pain, respiratory secretion, anxiety, shortness of breath, and nausea | Level 4 | Not all patients with end stage renal disease were represented in the registry of -- ---. The number of unknown responses may be due to lack of documentation in patient records, data collected were reported by clinician and not patients or patients family. | Yes. The study the examined the unmet needs of end stage renal disease patients and was able to categorize these needs according to prevalence of symptoms as reported |
|---|---|---|---|---|
| Comparisons of functionality, advanced care planning, hospital admissions, prognosis, quality of life, pain, dyspnea, fatigue, and depression between patients with cancer and three non-cancer diagnoses: end-stage renal disease (ESRD), heart failure, and chronic obstructive pulmonary disease (COPD) | Cross-sectional, retrospective analysis | 879 palliative care patients from 13 participating centers. 629 cancer patients and 250 non-cancer patients | Patients with primary diagnoses (ESRD, COPD, HF) other than cancer were less functional at time of referral for palliative care | Level 4: correlational design | The study is exploratory, there are no previous studies to compare the two groups compared in this study, patient and provider questionnaire completion was optional | This study showed that the current use of palliative care in healthcare is heavily focused on cancer care and treatment rather than other similar life changing chronic illness that have a similar effect on patients like cancer (ESRD, HF, and COPD) |

| Bull, R., Youl, L., Robertson, I. K., Mace, R., Challenor, S., & Fassett, R. G. (2014). Pathways to palliative care for patients with chronic kidney disease. *Journal of Renal Care, 40*(1), 64-73. doi:10.1111/jorc.120 | Patient records audit and a staff survey. All patients with CKD in the renal service who died between 1 January 2006 and 31 December 2008. The audit recorded the proportion of patients that were offered palliative care and at what stage palliative care consult occurred, patient demographic and clinical profiles, and the health professions | To identify the predictors of conservative treatment decisions and their associations with referral to palliative care, and to determine the perceptions that health professionals have about the role of palliative care | Retrospective study | Healthcare professionals’ beliefs, values and knowledge of palliative care influence their end-of-life care decisions | Correlational design | None specified | Yes: The article provided information audit on the proportion of patients that were offered palliative care and at what stage palliative care consult occurred, patient demographic and clinical profiles, and the health professions |
|---|
| Increase advance care planning and palliative care referrals, improving quality of life for 25 healthcare providers from 2 urban academic medical centers' nephrology. | Conveniencesampling, retrospective analysis pre- and post-quasi-experiment | The result of this study revealed the need for education or increased knowledge | Level 3: Quasi-experimental design | Use of convenience sampling limiting internal validity which may include bias, generalizability of the study due to | Yes: this study showed increased providers knowledge post intervention (palliative care in management of chronic kidney disease). |

| Patients with chronic kidney disease by increasing nephrology providers' knowledge on shared decision making in dialysis care. | Gy practices in Kansas City, Missouri. Nurses caring for patients in the chronic dialysis setting were excluded. | Nontal design | Regarding advance care planning and renal palliative care referrals as post intervention showed an increase in planning and referrals for palliative care for renal disease | A small sample size, care education |}

To describe dialysis professionals' perceptions of the adequacy of supportive care in dialysis

A convenience sample of possibly over 9,500 healthcare professionals

Non experimental, descriptive survey method

Only 4.5% of 487 respondents believed their dialysis centers were presently providing high-quality care

Level 3: Quasi experimental design

Lack of formal survey instrument development and the use of a convenience sample, which precludes generalizability

Provided an extensive insight to general unmet needs of ESRD patients on dialysis, resources provided to
| Dąbrowska-Bender, M., Dykowska, G., Żuk, W., Milewska, M., & Staniszewska, A. (2018). The impact on quality of life of dialysis patients with renal insufficiency. *Patient Preference and Adherence, 12*, 577–583. doi:10.2147/PPA.S156356 | Subjective assessment of the quality of life patients treated with peritoneal dialysis | 140 peritoneal and hemodialysis | Patients receiving peritoneal dialysis assessed their quality of life in its different dimension as much | Level 4 | Longer travel and more frequent visit for hemodialysis patients must have resulted in more | Yes: Confirmed the poor quality of life associated with hemodialysis |
and hemodialysis

higher than patients receiving hemodialysis. The most negative impact on quality of life was higher in hemodialysis patients.


To review and discuss randomized control trials examining the integration of palliative care earlier in the course of the disease

Review of 15 randomized control trials of outpatient palliative care and 13 randomized control trials of palliative home care

Systematic review

Early integration of palliative care is beneficial to patients and caregivers wellbeing and to health care utilization

Level 1 - Systematic review and meta-analysis of randomized controlled trials.

Limitation noted in assessment tools, conclusion of larger studies on palliative care at home and inpatient were not clearly presented

Yes: Shows evidence that early integration palliative care improves the quality of life of patients and their families facing

<p>| Path for patients with serious illnesses as an outpatient and at home | Underutilization of palliative services for patients dying from advanced chronic disease | 436 patients | Cross sectional interview | Only 22.2% and 17.9% of 436 patients surveyed possessed a correct understanding of palliative and hospice care, respectively, and perceptions were mostly negative. Sources of knowledge of these services | Level 4 | Selection bias (participants must understand and able to write in English to complete survey), White patients were slightly over-represented (83.4% of the study population compared with approximately 75% of the total) | Yes: Explores patients knowledge and attitude to palliative care and hospice care |
|---|
| To determine the feasibility of embedding palliative medicine consultati ons in hemodialysis unit during treatment runs and the impact of palliative medicine on advance care planning and symptom well control symptoms for 91 hemodialysis patients that underwent palliative medicine consultati ons. | 92 adult hemodialysis patients at a single outpatient hemodialysis unit | Single center, prospective cohort study | Level 4: Cohort study | Study was conducted in a single center, majority of patient’s population studied were Caucasian with suburban or rural demographics. The results may not be generalizable to other populations for these reasons. | Yes: Student showed a strong correlation between symptom management in hemodialysis patients utilizing palliative care services. | rarely involved healthcare professionals (3.1%-7.7%) | dialysis population studied). |
|------------------------------------------------|
| This article defines palliative medicine and its components. It describes the rare use of care pathways providing palliative care services, and further discusses models of palliative medicine practice, including the cost and quality of care that should allow for | Review of several palliative and end of life care pathways | Examined randomized control trials, mixed method | Level 1 | None specified | Yes; Clearly define palliative care and hospice care. It also specified the benefits of palliative care pathways and models |</p>
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Description</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grubbs, V., O’Riordan, D., &amp; Pantilat, S. (2017)</td>
<td>Characteristics and outcomes of in-hospital palliative care consultation among patients with renal disease versus other serious illness. <em>Clinical Journal of American Society of Nephrology, 12</em>(7), 1085-1089. doi: <a href="https://doi.org/10.2215/CJN.12231116">https://doi.org/10.2215/CJN.12231116</a></td>
<td>Compare outcomes of inpatient palliative care services for renal disease compared to other serious illness. Total of 33,183 patients of which 1057 patients with renal disease utilized palliative care services. There was improved symptom management, goals clarification, and easy referral to hospice for renal patients who had palliative care consultation in hospital setting.</td>
<td>Level 4</td>
</tr>
<tr>
<td>Koncicki, H. M., Brennan, F., Vinen, K., &amp; Davison, S. N. (2015)</td>
<td>An approach to pain management in end stage renal disease: Considerations for general management and Discussed the under recognition of the prevalence and controlled symptoms in advanced</td>
<td>Examined adults patient with advanced uncontrolled symptoms leads to noncompliance and Systematic review. Limited evidence regarding the pharmacology of many</td>
<td>Level 1</td>
</tr>
</tbody>
</table>

Yes. The study has extensive information on the benefits of palliative care consultation or referral for end stage renal disease.

Kozlov, E., Reid, M. C., & Carpenter, B. D. (2016). Improving patient knowledge of palliative care: A randomized controlled trial. To determine if layperson versus expert knowledge levels are different.

<table>
<thead>
<tr>
<th>Study</th>
<th>Design</th>
<th>Sample Size</th>
<th>Data Collection</th>
<th>Level</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kozlov et al.</td>
<td>Randomized controlled</td>
<td>152 adults</td>
<td>Web-based randomization</td>
<td>Level 2</td>
<td>Collection of data over a short period of time</td>
</tr>
<tr>
<td>Michael, N., O’Callaghan, C., Brooker, J. E., Walker, H., Hiscock, R., &amp; Phillips, D. (2016). Introducing a model incorporating early integration</td>
<td>To determine staff experiences of care</td>
<td>32 medical, nursing, allied health</td>
<td>Qualitative research</td>
<td>Participant s that were care for by the new model of</td>
<td>Level 4</td>
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<td>intervention study. <em>Patient Education and Counseling, 100</em>(5), 1007–1011. doi:10.1016/j.pec.2016.12.022</td>
<td>s’ knowledge about palliative care can improve with a brief education intervention</td>
<td>knowledge of palliative care</td>
<td>interventional trial</td>
<td>n can improve knowledge of palliative care in lay persons</td>
<td>time, the study utilized a community sample rather than sample of patient population that showed best practices for improving knowledge about palliative care knowledge deficits of palliative care may be related to poor utilization, their relationship remains untested</td>
</tr>
<tr>
<td>Murray, S. A., Firth, A., Schneider, N., Van, D. E., Gomez-Batiste, X., Brogaard, T., . . . Moine, S. (2015). Promoting palliative care in the community: Production of the primary palliative care toolkit by the European association of palliative care taskforce in primary palliative care. <em>Palliative Medicine, 29</em>(2), 101-111. doi:<a href="http://dx.doi.org.ezproxy.liberty.edu/10.1177/0269216314545006">http://dx.doi.org.ezproxy.liberty.edu/10.1177/0269216314545006</a></td>
<td>To find the barriers and facilitators of palliative care in the community and to produce a resource toolkit for</td>
<td>Adults patients from general practice offices in 20 different European question s with life threateni ng</td>
<td>Systemati c review</td>
<td>Many barriers and facilitators were identified. The primary palliative care toolkit was found to be helpful in communit</td>
<td>Level 5: Systematic review of descriptive &amp; qualitative studies</td>
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<td>Palliative care specialist</td>
<td>Illnesses</td>
<td>y-based palliative care</td>
<td>Level</td>
<td>Study limitation</td>
<td>Generalizability</td>
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<tr>
<td>Nenova, Z., &amp; Hotchkiss, J. (2019). Appointment utilization as a trigger for palliative care introduction: A retrospective cohort study. <em>Palliative Medicine, 33</em>(4), 457–461. <a href="https://doi.org/10.1177/0269216319828602">https://doi.org/10.1177/0269216319828602</a></td>
<td>To identify high-risk patients from administrative data and facilitate timely and uniform palliative care involvement</td>
<td>45,368 Veterans with chronic kidney disease monitored for 6 years and categorized into 3 groups (dead, started dialysis, avoided both)</td>
<td>Retrospective cohort study.</td>
<td>Treatment education improved patient outcomes and could be cost effective. Timely palliative care introduction could allow for a more thorough consideration of patient references regarding end of life care</td>
<td>The study is limited by the gender homogeneity and the race information incompleteness of the prevalence of cohort study. The findings cannot be generalized across groups underrepresented in the dataset. Yes: The study justified the use of creation of a novel palliative care introduction trigger large sample size</td>
</tr>
<tr>
<td>Pandini, S., Defendi, S., Scirè, C., Fiorini, F., &amp; Fiorini, G. (2016). Biases in palliative care access for elderly patients dying in hospital: A prospective study in acute care.</td>
<td>To evaluate the clinical and epidemiologic information</td>
<td>781 patients admitted to the acute medical ward</td>
<td>Prospective observational study</td>
<td>The use of palliative care in the management of chronic disease</td>
<td>Conducted in one setting and an acute care setting Yes: This article provides good information on the...</td>
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</table>
logical features of patients deceased in an acute care settings who had entered palliative care pathways compared to patients discharged alive in palliative care and to those who died under active care, and to determine if there were biases in referral to unit from the emergency department during 6 months period
disease needs to be increased and better targeted in acute care settings. Education and training on palliative care is are crucial to reducing bias in the activation of palliative care.

benefits of early initiation of palliative care in chronic disease management
<table>
<thead>
<tr>
<th>Study</th>
<th>Design</th>
<th>Methodology</th>
<th>Level of Evidence</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pesut, B., Potter, G., Stajduhar, K.,</td>
<td>To evaluate the outcomes of an educational intervention in a palliative approach for rural</td>
<td>Mixed method study</td>
<td>Level 2 - One or more randomized controlled trials</td>
<td>Health care workers reported significant gains in self-perceived competence and knowledge while nurses failed to show statistically significant pre–post gains</td>
</tr>
<tr>
<td>Sawatzky, R., McLeod, B., &amp; Drabot, K.</td>
<td>nurses and health-care workers</td>
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<td>doi:10.1177/1049909116674669</td>
<td>Characterizes the palliative care discipline delivering care, identifies the components being implemented, and analyzes whether the number of disciplines or components being implemented are associated with positive outcomes</td>
<td>67%), Social workers (n = 33, 52%), chaplains (n = 19, 30%)</td>
<td>(chronic obstructive pulmonary disease, end-stage renal disease)</td>
<td>Conclusions regarding efficacy was a challenge given the heterogeneity of the quality of the studies and how interventions were implemented and social work impact in delivering palliative care services. It also examined the components of palliative care implemented, and number of positive outcomes such as pain, quality of life</td>
</tr>
</tbody>
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