

DEPRESSION SCREENING IN HOSPICE AND PALLIATIVE CARE

by

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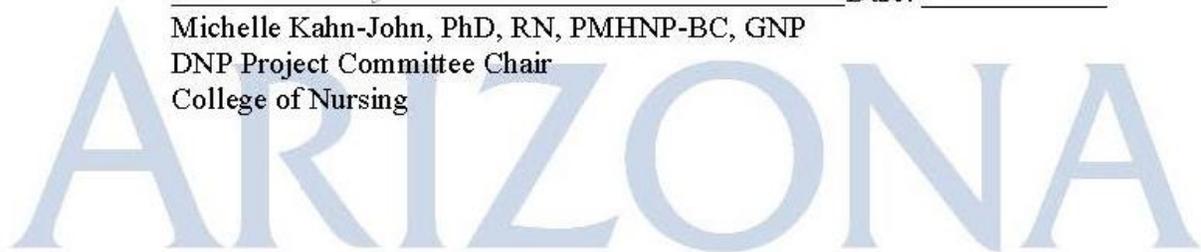
Final approval and acceptance of this DNP project is contingent upon the candidate's submission of the final copies of the DNP project to the Graduate College.

I hereby certify that I have read this DNP project prepared under my direction and recommend that it be accepted as fulfilling the DNP project requirement.

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## DEDICATION

For my daughter Feliz. May you have the confidence to follow your dreams and continue to bring kindness and joy to the world. To my husband Lloyd, you are God's greatest gift, thank you for your love and support. I would not be where I am today without you. To my mother Dolores Arroyo, who inspired me to follow my dreams and follow her footsteps in the nursing profession. To my father Antonio Arroyo thank you for teaching me to never give up and to always persevere. To Sandra Arroyo, thank you for your daily encouragement and for being my best friend. Tiffin Zellers and Cynthia Lee thank you your friendship and being by my side through this process. In memory of my beloved grandmothers Antonia Cordova and Anita Arroyo.

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## ABSTRACT

**Purpose:** The purpose of this DNP quality improvement project was to expand hospice/palliative care nursing knowledge and screening for depression in patients with a life-limiting illness.

**Background:** Data shows that untreated depressive disorders are as high as 25% in patients receiving hospice and palliative care services.

**Methods:** The subjects were registered nurses (RN) providing care to hospice/palliative care patients with a life-limiting illness at a local hospice care center. The Adult Learning Theory (ALT) Andragogy informed the methods and development of this project. The project utilized a one-group pre-test/post-test design with an evidence based educational intervention on the topic of depression screening followed by a recommendation to utilize the patient health questionnaire-9 (PHQ-9) in the clinical care setting. The design is descriptive and utilizes a pre- and post-assessment process offered before and after a targeted education session for RNs on depression and depression screening. Results and recommendations were presented to both the administrators at Casa de la Luz (CDLL) as well as the participant RNs and any interested CDLL team members.

**Results:** The pre- and post-survey evaluated differences in RN's knowledge about depression, familiarity with screening tools, and their inclination to implement depression screenings or use depression screening tools in their future practice at CDLL. The findings from the pre- and post-surveys indicate the CDLL RNs: appreciated the knowledge gained on depression and depression screening specific to the hospice/palliative care setting, were open to the use of the PHQ-9 as a screening tool for depression at CDLL and the majority were agreeable to implementing a screening tool used for depression at CDLL.

**Conclusions:** With the prevalence of underdiagnosed and undertreated depression in patients receiving hospice/palliative care services, the education of RNs is imperative to providing patients with highest quality health care and optimal quality of life. Increasing knowledge and awareness among RNs about depression and depression screening processes can serve as the motivation for implementing change and promotes opportunities to enhance the comprehensive (physical and psychological) care of patients.

## INTRODUCTION

Life-limiting illness is defined as a term used to describe an incurable condition that will shorten a person's life, though they may continue to live active lives for many years. Depressive disorders are prevalent among individuals with life-limiting illness (Noorani & Montagnini, 2007). Individuals with life-limiting illness typically have an option to receive hospice or palliative care services. It's important for hospice/palliative care healthcare teams to be aware of not only symptoms and prevalence of depression but, also the screening options for depression. Depression rates among adults with a life-limiting illness are estimated to range between 5-25%, yet these disorders are often underdiagnosed and undertreated (Noorani & Montagnini, 2007; Rosenstein, 2011). There appears to be a misunderstanding among providers about the differentiation between an appropriate grief response to dying and a treatable psychiatric depressive disorder (Rosenstein, 2011). The stress of a life-limiting illness can generate the onset of a clinical depressive episode (Lloyd-Williams, Payne, Reeve, & Dona, 2014). Patients with co-occurring life-limiting illness and untreated depression may experience worsening of their pre-existing symptoms such as an increase in chronic pain and an overall decrease in quality of life (Grotmol et al., 2017; Chan, Kwan, Chi, & Chong, 2017). Patients with life-limiting illness present unique challenges for healthcare teams as these patients suffer both physically and psychologically and require innovative and effective approaches to address their unique needs (Huey et al., 2018; Little, Dionne, & Eaton, 2005; Widera & Block, 2012)

This doctor of nursing practice (DNP) quality improvement (QI) project will outline the process by which registered nurses (RN), central and consistently present members of hospice and palliative care settings, are educated on depression experienced by those with life-limiting

conditions. In addition, the RNs will be introduced and educated on the use of a structured and evidence based depression screening tool (PHQ-9) for use with patients receiving care in the hospice/palliative care setting.

### **Background Knowledge**

Depression is known to affect many patients with a life-limiting illness. Often providers concentrate on the terminal diagnosis and the relief of symptoms such as pain and discomfort, and the depressive disorder gets overlooked (Knopf & Head, 2012; Bache & Bolton, 2005). According to Knopf and Head (2012), depression contributes to considerable distress in these patients and can become a complicated comorbidity that has the potential to worsen other existing medical and psychological conditions, making the need for depression screening in this population imperative. Research shows that untreated depressive disorders are as high as 25% in patients receiving hospice and palliative care services (Widera & Block, 2012). According to Huey et al. (2018), research shows that by the time the depressive symptoms are acknowledged, the patient is closer to the end of life and often does not have enough time to implement an effective treatment for their depressive symptoms. Untreated depression can hasten a patients desire to die, create barriers to further treatment such as proper pain management, and may disrupt quality time with family and friends at the end of life (Huey et al., 2018; Widera & Block, 2012).

The focus of this quality improvement project is to first educate RNs (because of their central and consistently present role in hospice/palliative care) on the symptoms of depression among individuals with life-limiting illness in hospice/palliative care settings. Secondly, the RNs

in this project received an introduction to an evidence based depression screening tool (PHQ-9) and learned how to implement the screening tool.

In this specific hospice and palliative care setting, a single item from the Edmonton Symptom Assessment System tool is currently used at the point of admission and every four weeks to screen for depressive symptoms. The Edmonton screening tool was not originally designed to screen for depression. The Edmonton screening tool assesses for multiple symptoms to measure the overall symptom burden of depression. The one item from the Edmonton screening tool utilized by the RNs at this southern Arizona location, is a single self-rated question requiring the patient to rate their depression on a 0 to 10 point scale (0 meaning no depression and 10 for worst possible depression). The project director for this doctor of nursing practice (DNP) quality improvement (QI) project has recognized the opportunity to improve the quality of depression screening at this site and will be recommending the use of a standardized depression screening tool (PHQ-9) at this setting.

The patient health questionnaire-9 (PHQ-9) is a standardized and evidenced based screening tool indicated for accurate assessment of clinical depression. This assessment tool has nine questions addressing depressive symptoms and each item is scored on a scale of 0-3. Users rate the severity of the depression utilizing the scoring system, a cumulative score of 10 or greater is indicative of depression. Having a numerical depression score to compare monthly not only provides a quality indicator to track depressive symptoms but greatly improves the capacity for early recognition and careful tracking of depressive symptoms (Grotmol et al., 2017).

When depression screens are in use in healthcare settings, the depression score is either recorded in the medical record and sought out by the medical provider or there is a follow up

process or mechanism established to ensure assessment scores are brought to the attention of the medical provider. At this local setting in southern Arizona, the depression screens are completed by a nurse upon admission, once monthly, and each score is recorded in the medical record. Currently, there is no mechanism to alert a medical provider when a depression screening is positive. The existing system relies on the provider to remember to check on the depression screening results, seek out the assessment scores in the medical record, and then initiate treatment for depression if indicated. The problem with a process of this type, where a provider is expected to look for an assessment score, is that acute or positive scores of depression may be overlooked or a delay in intervention may occur if a provider isn't prioritizing the assessment scores as part of their regular rounding. Opportunities for treatment and positive health outcomes for each hospice/palliative care patient are jeopardized when a positive depression screening is missed or overlooked by a medical provider. Quality and comprehensive (physical & psychological) care and treatment planning for patients in hospice/palliative care settings requires an efficient assessment and follow up process by direct patient care providers (RNs & physicians).

Literature indicates standardized assessment tools to screen for depression are typically not utilized in hospice/palliative care settings, thereby increasing the likelihood of untreated depression among patients in hospice/palliative care settings (Grotmol et al., 2017; Lie et al., 2015). This QI project recognizes the central role of the RN in the hospice/palliative care setting. Because RNs are in greatest direct care roles with patients, the RNs are the focus of this QI project. The goal of this QI project is to first educate the RNs on the recognition of depressive symptoms in patients with a life limiting illness and second, orient them through an educational

session on the use of an evidence based screening assessment for depression. A long-term goal of this QI project is to influence the administrators, RNs, and clinical providers at this local setting to implement an evidence based standardized depression screening tool (PHQ-9) as part of the end of life care protocol.

### **Significance**

As mentioned in the previous section, the process for depression screening in the hospice/palliative care setting requires improvement as many hospice/palliative care settings still do not have a standard depression screening process in place for their patients, nor do they readily prioritize the treatment and stabilization of depressive symptoms in patients with a life-limiting illness. Because of the lack of regular screening and treatment of depression in the hospice/palliative care setting, the quality of care is not as comprehensive as it could be and the comfort level (both psychological & physical) of the terminally ill patient has not been optimized. The goal to improve care at this local hospice/palliative care setting through educating the registered nurses on depression while introducing them to an evidenced based depression screening tool has benefits for the patient and family and ultimately contributes to enhancement of the quality of care provided by the hospice/palliative care team. The development of standard processes for depression screening in the hospice/palliative care setting offers a significant contribution for the advancement of nursing and medical care to patients with a life-limiting illness. This QI project has the potential to greatly improve the identification and treatment of depression among patients with a life-limiting illness at this local setting and may set a precedent for similar settings to follow.

In addition, the discipline of nursing, because of their consistent presence in the hospice/palliative care setting, has an opportunity to be a leader in enhancing care protocols in the hospice/palliative care settings. Education of the hospice/palliative care nurse will not only inform the nurse on developing their assessment skillset to recognize and screen for depression among their patients but, it will also equip them with strategies for monitoring and tracking the assessment findings to promote comprehensive care of the patient. This QI project is focused on offering education to hospice/palliative care RNs because of their roles as patient caregivers and advocates, and because they are key players in communicating patient needs to not only the medical providers, but to the entire multidisciplinary team as well as the patient's family.

A responsibility of advanced practice registered nurses (APRNs) is to help evaluate and implement best evidence to improve patient outcomes. APRNs and other health providers utilize interdisciplinary collaboration to address practice gaps with a goal to develop unique solutions to complex problems. APRNs are in a unique position and are academically prepared to apply a quality improvement intervention while contributing to the developing body of knowledge in the discipline of nursing. This DNP QI project will be led and implemented by an APRN, a DNP student, as part of the completion requirements for a DNP degree.

### **Local Problem**

Once employed as a nurse supervisor at Casa de la Luz (CDLL), a local company providing hospice/palliative care services in southern Arizona, this author identified that there were patients experiencing depressive symptoms that were not being identified or treated appropriately. There appeared to be a gap in the process to identify existing depressive symptoms in patients and this resulted in patients not receiving treatment for existing depression.

The goal at CDLL is to allow the patient to remain in their own home setting during the last months of their life. They provide care and support to the patient whether that be in a private home, nursing home, or assisted living facility. A plan of care is developed for the individual and adjustments are made as the patient's health changes. The care team includes medical providers, nursing, social workers, chaplains, home health aides, nutritionists and volunteers. All medications, equipment and supplies pertaining to the hospice diagnosis and hospice plan of care are provided by the hospice/palliative care service. The social services team is available to assist the patient and their loved ones with the emotional and spiritual aspects of living with a life-limiting illness and the process of death and dying. A counselor is available to provide grief support to the family. Other individuals can be brought in to provide special services like speech and physical therapy when appropriate. Bereavement care, which includes counseling for family members for at least one year following the patient's death, is offered.

CDLL is accredited by The Joint Commission. Although CDLL is nationally accredited, the accrediting agency does not mandate a standardized depression screening of their patients. CDLL does not use a standardized assessment tool to thoroughly assess patients for depressive symptoms leaving patients vulnerable to having an unrecognized and untreated depression. Current literature indicates that the lack of standardized screening and the under treatment of depression in the hospice/palliative care setting is a legitimate concern that requires immediate attention (Rao, Ferris, & Irwin, 2011). According to King, Heisel, and Lyness (2006) as many as 25% of patients facing end-of-life issues in this setting suffer from clinically significant depressive symptoms.

Current literature indicates that depression rates among adults in the United States (U.S.) continues to rise. An estimated 7.1% of U.S. adults experienced at least one episode of major depression in 2016 (National Institutes of Mental Health [NIMH], 2017). About one in six Americans experience at least one depressive episode in their lifetime. People with a life-limiting illness are more likely to experience depression (NIMH, 2017). Individuals who are experiencing depression have an increased risk for suicidal ideation and suicide attempts (Kaur, 2014). According to the NIMH, Arizona ranks 17th, with 1,271 suicides in 2016 making the suicide rate 17 per 100,000 and depression 3,391.9 per 100,000 (NIMH, 2017). Tucson, a city in southern Arizona where this project will be conducted, has 17 hospice and palliative care centers providing in-home and inpatient services. According to the most recent census, Tucson's population is estimated to be 994,000 ("Tucson, Arizona Population 2020," 2019).

As mentioned, the selected implementation site for this DNP QI project does have a marginal screening process for depression in their hospice/palliative care setting. After communicating with the CDLL administrator, she expressed interest in the implementation of a DNP QI project that would focus on offering education for RNs on the symptoms of depression, the depression screening processes, and the use of depression screening tools in the hospice/palliative care settings (A. Poore, personal communication, August 12, 2019). An outcome of this DNP QI project is to offer recommendations on ways CDLL may strengthen their depression screening processes with the anticipated outcome that this DNP project may influence the use of a depression screening tool at CDLL as well as serve as a catalyst that will encourage providers to identify and treat depression among CDLL patients. The combined risk factors of having a life-limiting illness and living in a state that has a high prevalence of

depression indicates that the implementation of this DNP QI project is both timely and of extreme importance.

There are no current studies on the prevalence of depression among hospice and palliative care patients in southern Arizona. There is no known education or training guidelines, nor is there a standardized tool for the screening of depression in hospice/palliative care settings. The lack of standardized depression screening options in the hospice/palliative care setting is the central emphasis and reason for conducting this QI project.

The primary goal in this DNP QI project is to educate the nursing staff on depression in patients with a life-limiting illness and provide an educational session on how to assess for symptoms of depression using the PHQ-9. The PHQ-9 screening tool is a depression screening tool that will be recommended to the team at this local setting. According to Liu and Wang (2015), the PHQ-9 has nine questions addressing depressive symptoms. The benefits of the tool are it is short, easy to administer, can be administered by RNs, is easy to score, and is a valid instrument. These factors make the PHQ-9 an ideal selection for this QI project.

Nurse education and training has been shown to increase provider and nurse confidence and self-efficacy as they provide care for patients (Liu & Wang, 2015). Improved ability to diagnose and treat depression at this local setting has the potential to improve the emotional state and quality of life for patients in this local palliative/hospice care setting. Educating RN staff on depression and its impact on the quality of life will increase their ability to better assess for depression and therefore, promote improved communication of patient care needs between RNs and the treating providers (nurse practitioners & physicians). An additional benefit to educating

the nursing staff is standardization in depression screening, thereby enhancing the quality of care they deliver.

### **Purpose and PICO Question**

The purpose of this DNP quality improvement project is to expand RNs knowledge by offering targeted education on depressive symptoms among patients with life-limiting illness and to introduce the RNs to an evidence based depression screening processes using the PHQ-9. This project will also inform the RNs at the local setting about how untreated depression in patients with a life-limiting illness may cause unwarranted suffering and challenges for patients.

The study question guiding this DNP project is: Will an educational intervention for RNs expand their knowledge of depressive symptoms and influence their willingness to utilize an evidenced based screening tool among patients with life limiting illness in a hospice/palliative setting?

### **Project Aims**

The primary project aim is to increase nursing knowledge of depression among the hospice/palliative care RNs and to introduce RNs to an evidence based depression screening tool, the PHQ-9. Next, the secondary aim is to understand if RNs may be more inclined to implement depression screening in this local hospice/palliative care setting after receiving an educational session on the importance of recognizing depressive symptoms as well as the practice benefits and positive patient outcomes associated with utilizing an evidence based depression screening tool when working with patients with life limiting illness. At the conclusion of the DNP QI project, the CDLL administration and clinical team will have the opportunity to decide on whether they will implement recommendations from this QI project in their care setting.

## **Stakeholders**

Stakeholders in healthcare systems are defined as those involved in or affected by a course of action (Porter-O'Grady & Malloch, 2018). Stakeholders are crucial to a quality improvement project's success. Key stakeholders for this project are the owners, medical director, administrator, providers, nursing educator, nursing staff, patients, and families at Casa de la Luz in Tucson, Arizona.

## **Theoretical Framework**

A theoretical framework has been selected for this DNP QI project. A full explanation of the selected theoretical framework is described below. The informed use of theory can reinforce quality improvement projects and facilitate the evaluation of their effectiveness (Davidoff, Dixon-Woods, Leviton, & Michie, 2015).

The framework selected to guide this DNP project is an adult learning theory by Knowles (1984). The adult learning theory (ALT) andragogy was developed by Malcom Knowles, an American educator (Knowles, 1984). Knowles' theory emphasizes four principles of andragogy. According to Knowles, andragogy is the art and science of adult learning (Knowles, 1984). Knowles' (1984) four principles of andragogy that are applied to adult learning are:

1. Adults need to be involved in the planning and evaluation of their instruction
2. Experience and mistakes provide the basis for learning activities
3. Adults are most interested in learning subjects that have immediate relevance and impact to their job or personal life
4. Adult learning is problem centered rather than content oriented (Knowles, 1984, p. 142).

The ALT is an ideal theoretical framework to utilize for this educational intervention at Casa de la Luz. The RNs are all adult learners, and they most certainly need to be involved in the discussion and design of any nursing duties and responsibilities. A trial implementation of a depression screening tool offers a perfect opportunity to “experience mistakes” as outlined by the ALT, which creates a foundation for learning, devising solutions, and finally the collaborative implementation of a plan designed to address the problem. The topics of depression and depression screening for patients with a life-limiting illness has direct relevance to the RNs who provide care in this hospice/palliative care setting, therefore it’s extremely important to include the RNs as key stakeholders and participants in this QI project. ALT indicates that adult learning favors problem centered learning opportunities. A unique aspect of this QI project is that it will also provide an evidence based recommendation to address the identified problem. These are the reasons this ALT framework is ideal for the implementation of this QI project at Casa de la Luz.

### **Concepts and Definitions**

Presented next is a list of concepts and definitions that are relevant to this QI project:

#### **Hospice**

Hospice is a program designed to provide palliative care and emotional support to the terminally ill in a home or homelike setting so that quality of life is maintained, and family members may be active participants in care (Yennurajalingam & Bruera, 2011, p. 252).

#### **Palliative Care**

Palliative care is medical and related care provided to a patient with a serious, life-threatening, or terminal illness that is not intended to provide curative treatment but rather to

manage symptoms, relieve pain and discomfort, improve quality of life, and meet the emotional, social, and spiritual needs of the patient (MacLeod & Van den Block, 2019, p. 377).

### **Life-limiting Illness**

Life-limiting illness is a term used to describe an incurable condition that will shorten a person's life, though they may continue to live active lives for many years (MacLeod & Van den Block, 2019, p. 362).

### **Depression**

Those who suffer from depression experience persistent feelings of sadness and hopelessness and lose interest in activities they once enjoyed. Symptoms of depression might include sadness, changes in appetite, changes in weight, irritability, isolation, decreased interest loneliness and hopelessness. See the DSM-5 for detailed criteria for a diagnosis of various forms of clinical depression (American Psychiatric Association [APA], 2013).

### **Screen**

A preliminary procedure, such as a test or examination, to detect the most characteristic sign or signs of a disorder that may require further investigation (Rollant & Ennis, 2001, p. 127).

## **Literature Review**

To gain a better understanding of how depression impacts adult patients who receive hospice or palliative care services, a literature search was conducted using PubMed and Cumulative Index of Nursing and Allied Health Literature (CINAHL). The following keywords were used: “depression,” “terminal illness,” “dying,” “palliative care,” “hospice,” and “end of life.” Inclusion criteria for articles were: published within the last 10 years, published in the English language, and studies conducted on human species in the U.S. or internationally. There

were few studies conducted and published in the U.S. that met inclusion criteria for this literature review; therefore, the search was expanded to include international studies conducted outside of the U.S., published in the English language and relevant to this project. These searches yielded 47 results. The articles selected each offered insights on the identification, screening and/or treatment of depression at the end of life. The 10 articles selected are presented in Appendix G. Articles were selected if they had relevance or significant insights to the key terms listed above (depression, terminal illness, dying, palliative care, hospice, end of life).

### **Synthesis of Evidence**

A synthesis of the relevant literature was conducted and is presented in the following sections. The first section describes prevalent themes found in the literature followed by strengths and limitations across the literature. The first theme identified in the literature review revealed that treatment of depression among hospice patients resulted in better health outcomes. Fisher et al. (2014) and Lloyd-Williams et al. (2018) explored depression among patients receiving hospice/palliative care and noted an increase in mortality in those experiencing depression. Palliative care patients whose depression was diagnosed and treated appeared to have a longer survival than those who were not treated (Lloyd-Williams et al., 2018).

A second theme in the literature review was the complex clinical manifestations of co-occurring depression and life-limiting illness. Fisher et al. (2014) reported the impact of depression on palliative care patients and emphasized depression reduced immune function, increased the number of physical symptoms, and had a resultant increase in mortality. A close correlation and co-occurrence exists between pain and depression (Chan, Kwan, Chi, & Chong, 2014; Lie et al., 2015). These studies found that physical pain is also closely related to

psychosocial distress (Chan, Kwan, Chi, & Chong, 2014), while depression was associated with increased pain, and poorer than expected physical conditions (Lie et al., 2015). Moreover, untreated depression magnifies and causes pain management to be more difficult to manage (Noorani & Montagnini, 2007).

A third finding in the literature is that depression is often overlooked and undiagnosed in patients receiving care in the hospice/palliative care setting (Huey et al., 2018; Grotmol et al., 2017; Lie et al., 2015). A possible reason that depression goes largely unnoticed is that end of life patients experience multiple losses, loneliness, and are often older adults, and their providers assume that the depression is natural and does not require treatment. Patients with life limiting illness are often older adults so the physical and psychological effects of aging are again assumed natural and normal, making it difficult for practitioners to distinguish between actual depressive symptoms, the normal aging process, and/or the normal transition through end of life processes (Lloyd-Williams et al., 2018).

The final theme discovered in the literature was the confirmation that a standardized protocol to clinically diagnose depression in hospice/palliative care settings has yet to be established (Huey et al., 2018). One tool that is sometimes used to screen for depression in various clinical settings, including palliative care and hospice, is the patient health questionnaire 9 (PHQ-9). The Institute for Clinical Systems Improvement recommends the PHQ-9 for routine screening of depression for adults in primary care (Trangle et al., 2016). According to Huey et al. (2018), using the standardized DSM-5 criteria (APA, 2013) in hospice/palliative care settings may increase false positives due to the somatic and physical symptoms such as decreased appetite, sleep disturbance, and fatigue due to the underlying terminal illness. Moreover, Lie et

al. (2015) suggest a tool that has a scoring method not excluding somatic symptoms for effective assessment outcomes in patients with life-limiting illness who may be at high risk for developing symptoms of depression.

### **Strengths**

Many of the articles reviewed were conducted outside the US and shared consistencies in their findings. The phenomenon of depression at end of life is not unique to the U.S. and is consistently undertreated in all areas of the world, further confirming the need for a quality improvement project that promotes improved depression screening processes. The literature provides diverse insights and points of view on the prevalence of untreated depression and the impact on quality of life in patients receiving hospice/palliative care services. The articles also confirm the lack of depression screening in hospice/palliative care settings.

### **Weaknesses, Gaps and Limitations**

One major weakness is the lack of American, Asian and European articles that were relevant to the topic of the treatment of depression in terminally ill patients receiving palliative or hospice care. The majority of the available literature on hospice/palliative care patients was on patients with a diagnosis of cancer. Current evidence supports the use of depression screening, yet there are still barriers to practice implementation, especially in settings such as hospice/palliative care which is care designed to promote physical, psychosocial, spiritual care and comfort of the patient. There was no specific literature that discussed education available to providers who treat depression in terminally ill patients in hospice/palliative care settings. The US Preventive Service Task Force (USPSTF) recommends screening for depression in the general adult population ensuring the ability to diagnosis, treat and offer follow-up care however,

the guidelines lack recommendations on specific screening tools and on screening intervals (Thase, 2016).

### **Summary of Literature**

This literature review reveals several significant factors: those who experience depression also are more likely to experience increased pain and suffering; depression screening tools are non-existent in palliative care settings for terminally ill patients; and, physical health outcomes are improved in terminally ill patients in palliative care who receive treatment for their depression. This literature review reveals the importance of differentiating between symptoms associated with end of life and symptoms of major depressive disorder in hospice/palliative care patients. The findings in the literature review and synthesis support the hypothesis of this DNP QI project that under diagnosis and lack of treatment of depression in patients in hospice/palliative settings can lead to a decreased quality-of-life, an increase in physical symptoms, and hasten premature death (Appendix G).

### **METHODS**

#### **Design**

The adult learning theory (ALT) andragogy informed the methods and development of this DNP QI project (Langley et al., 2009). This project utilized a one-group pre-test/post-test design with an evidence based educational intervention on the topic of depression and depression screening followed by an introduction to and the recommendation to utilize the PHQ-9 in the clinical care setting. This pre- and post-assessment design creates an opportunity to measure changes after an intervention has been implemented (Polit & Beck, 2017).

### **Study Design and Methodology**

This was a doctor of nursing practice (DNP) quality improvement (QI) project. The design is descriptive and utilizes a pre- and post-assessment process offered before and after a targeted education session for RNs on depression and depression screening. The pre and post survey will evaluate differences in registered nurse knowledge on depression, familiarity with screening tools, and their inclination to implement depression screenings or use depression screening tools in their future practice at CDLL. The step-by-step methodology for this QI project is presented next.

### **Setting**

The setting of the study is a local hospice and palliative care company in Tucson, Arizona. Casa de la Luz (CDLL) provides palliative services for 25 patients and home-based hospice services to approximately 350 patients per month. Approximately 6,000 patients are served per year including both at home and inpatient services. There are three inpatient units with a total capacity of 26. Casa de la Luz employs three physicians, three advanced practice nurses, 45 registered nurses, five licensed practical nurses, 20 certified nursing assistants, seven chaplains, 10 social workers, a music therapist, and an art therapist. Casa de la Luz Hospice, LLC, is locally owned and was formed November of 1998 with the intention of providing superior hospice care to the Tucson community. They built a team of individuals who were committed to guiding patients and their loved ones through the end of life journey with knowledge, compassion, and the highest ethical standards. Casa de la Luz provides services to over 300 square miles covering Tucson, Arizona and its outlying communities.

### **Participants**

A convenience sample of approximately 15 (n=15) RNs from CDLL were recruited to participate in this QI project. The inclusion criteria for these RNs included: adult RNs at least 18 years of age or older who work at CDLL full-time providing care to hospice/palliative care patients in either the inpatient and/or home based settings; and each nurse must have had an active registered nursing (RN) license. At the time of project implementation, CDLL had 45 RNs who were invited to participate in the project. The target goal number of RN participants invited to participate in the educational intervention in this QI project was 15 (n=15). Demographic information obtained on each project participant included: years of practice as a registered nurse, number of years practicing as a hospice nurse, and gender. The reasoning for collection of these demographic data are simply to offer descriptions of the participant population and demographic factors will not be analyzed or applied in analysis of the pre and post survey comparisons.

### **Intervention**

The intervention for this DNP QI project was to offer an educational presentation delivered in a PowerPoint presentation that focused on depressive symptom recognition, the unique features of depression among patients with life limiting illness who receive hospice/palliative care, and an introduction to the use of an evidenced based depression screening tool (PHQ-9). The presentation took place at CDLL via web-based Zoom presentation (web based technology was utilized due to the 2020 COVID-19 restrictions) (Appendix E). There was a pre- and post-survey which took approximately five minutes each to complete (Appendix C & D). The presentation was shared with participants remotely via PowerPoint using the Zoom web-based platform and lasted approximately 10 minutes. Initially, breakfast was to be

provided to each participant along with a \$5 Starbucks gift card for those who submit a pre- and post-survey. Breakfast was canceled due to the recommendations for widespread physical distancing recommended across the globe as a result of the COVID-19 pandemic. The Starbucks gift cards were delivered to the CDLL nursing supervisor for distribution.

### **Data Collection**

Before any data collection took place, Institutional Review Board (IRB) approval was obtained from the University of Arizona (Appendix B). Local site approval was documented and informed consent from each participant was obtained (Appendix A). Each survey contained a written clause at the top of the survey that reads “Your completion of this survey implies consent to participate in this anonymous quality improvement project.” Each survey assessed three demographic areas including gender, number of years practicing as a registered nurse and years practicing as a hospice nurse. All information was de-identified and participant responses were analyzed and presented in a collective format in the form of matched pre- and post-comparisons. Responses to the closed ended questions (one on each pre- & post-survey) were categorized and reported. Descriptive approaches were utilized to report the demographic characteristics of the project participants and the pre and post comparisons.

This QI project assessed pre- and post-intervention knowledge of depression, familiarity with screening tools for depression, and impressions among hospice and palliative care RNs on the use and implementation of an evidenced based depression screening tool in hospice and palliative care settings. There were five questions on the pre-survey and six questions on the post-survey. The pre- and post-surveys used Likert type scales measuring baseline knowledge on depression, self-rated competence in screening for depression, self-rated competence in

administration of the PHQ-9 and self-rating of both clinical expertise in depression assessment and self-rated willingness to implement the PHQ-9. There was one closed ended question on both the pre- and post-surveys which queries on the frequency of depression screening (pre-survey) patterns and how often they anticipate they will screen for depression in the future (post-survey). Again, a pre- and post-survey was used to assess RNs knowledge on depression, what they found to be most significant in the presentation, their familiarity with the use of depression screening tools, their inclination to use a depression screening tool in the hospice/palliative care setting and their impressions of future practice patterns specific to the care of patients with a life-limiting illness with depression in the hospice/palliative care setting. Pre- and post-surveys are presented in Appendix C and D.

### **Data Analysis**

The pre- and post-surveys were distributed to the participants by the CDLL nurse educator via an email attachment prior to the scheduled web-based zoom presentation (Appendix E). The completed surveys were then scanned and emailed back to the CDLL educator who then scanned and emailed the pre- and post-surveys to the DNP QI project director, who then tallied and compared. All information collected was de-identified and numbered to protect the privacy of each participant. All survey responses were sent electronically to the QI project leader and then stored in a locked file, password protected electronic computer database. All copies of survey data were kept in a locked desk at the project leader's home office. The only people who had access to view the de-identified survey and demographic data were the project leader and her DNP committee chair. All electronic transfer of de-identified data was password protected,

encrypted, and stored in password protected computer data files with access authorized for only the project leader and her DNP project chair.

Descriptive statistics were used to present demographic characteristics of the participants in this QI project. The pre- and post-surveys were analyzed, tallied, and compared using raw percentage scores to assess pre- and post-differences in knowledge on depression and familiarity with use of the PHQ9. The responses to the two closed ended question (one question on the pre- and one question on the post-survey) were tallied and reported. Upon completion of data analysis and comparison of the pre- and post-survey responses, the results were compiled, and an executive summary was created for the purpose of sharing the results with the CDLL administrators and RN participants.

### **Dissemination of Results**

Upon completion of data analysis, an executive summary with the project results and recommendations was presented to the both the administrators at CDLL as well as the participant RNs and any interested CDLL team members. Results from this QI project may also be published at a future time to ensure dissemination of recommendations on the importance of utilizing an evidenced based depression screening tool when caring for patients with life limiting illness in the hospice/palliative care setting.

### **Ethical Considerations**

Approval for this quality improvement project was attained from the University of Arizona College of Nursing Department. Institutional Review Board (IRB) indemnity was obtained affirming the project does not require oversight by the University of Arizona. The necessary IRB forms and documents are attached (Appendix B). An email with site approval

from the administrator at CDLL is attached (Appendix A) indicating that CDLL agrees and supports the implementation of this QI project at CDLL in the Spring of 2020.

This project did not involve working with a vulnerable population. Patient health information (PHI) or medical records were not used. Participants' contributed to this QI project on a volunteer basis and the participants remained anonymous. Full disclosure of the project and information to partake without coercion was implemented to warrant respect of persons (Polit & Beck, 2017). All components of the pre-test survey, the educational intervention, and the post-test survey were completed remotely with the use of email communication and the educational session was delivered via a web based Zoom session during the pre-scheduled date and time. Participants had the option of withdrawing from QI project participation at any time without penalty. The pre- and post-surveys offered a clause in the beginning of the survey, indicating that completion of the surveys implied informed consent to participate in this quality improvement project.

## **RESULTS**

### **Design**

The adult learning theory (ALT) andragogy was used to inform the methods and development of this DNP QI project. This project utilized a one-group pre-test/post-test design with an evidence based educational intervention on the topic of depression screening followed by a recommendation to utilize the PHQ-9 in the clinical care setting.

### **Study Design and Methodology**

This doctor of nursing practice quality improvement project utilized a descriptive design. Pre- and post-surveys were offered to RN participants before and after a targeted education

session on depression, depression screening and the use of depression screening tools. The pre- and post-survey evaluated differences in RNs knowledge on depression, familiarity with screening tools, and their inclination to implement depression screenings or use depression screening tools in their future practice at CDLL. Details of the results of the QI project are presented next.

### **Setting**

The QI project was conducted and delivered remotely to a local hospice and palliative care company in Tucson, Arizona on March 25, 2020.

### **Participants**

A convenience sample of 11 (N=11) RNs were recruited from CDLL to participate in this QI project. Before the COVID-19 restrictions were implemented, the CDLL RNs were invited to participate in this QI project both verbally and face-to-face at staff meetings by the CDLL nurse educator. The inclusion criteria for RN participants included: adult RNs at least 18 years of age or older who work at CDLL full-time providing care to hospice/palliative care patients in either the inpatient and/or home based settings; and each nurse must have an active registered nursing (RN) license. Of the 45 RNs employed at CDLL at the time of the project, 15 were invited to participate and 11 (N=11) consenting and eligible registered nurses participated. The following demographic information was collected solely for descriptive purposes and is depicted in Table 1. Two participants were male (N=2, 18%), while eight were female (N=8, 72%) and, one did not disclose their gender (N=1, 0.9%). One participant had practiced 0-5 years as an RN (N=1, 0.9%), six had between 6-10 years of practice as an RN (N=6, 54%) and four had greater than 10 years of practice as an RN (N=4, 36%). Nine participants had 0-5 years of practice in

hospice/palliative care (N=9, 82%), two had 6-10 years of practice (N=2, 18%). The demographics of this participant sample indicate there is mostly a female registered nurse cohort at CDLL and the majority of the RNS had greater than five years work experience in a hospice/palliative care setting.

TABLE 1. *Participant demographics.*

|  | <i>Males</i>                  | <i>Female</i>                  | <i>Didn't Answer</i>             |
|--|-------------------------------|--------------------------------|----------------------------------|
| Gender Participants (N=11)                   | 18% (N=2)                     | 72% (N=8)                      | 10% (N=1)                        |
| Years of Practice as RN                      | <i>0-5 years</i><br>10% (N=1) | <i>6-10 years</i><br>54% (N=6) | <i>&gt;10 years</i><br>36% (N=4) |
| Years of Practice in Hospice/Palliative Care | <i>0-5 years</i><br>81% (N=9) | <i>6-10 years</i><br>18% (N=2) | <i>&gt;10 years</i><br>0% (N=0)  |

### **Intervention**

An educational presentation (Appendix E) delivered remotely via a Zoom webinar was shared in a Power Point presentation with the CDLL RNs. The educational session focused on informing the RNs about depressive symptom recognition, the unique features of depression among patients with life limiting illness who receive hospice/palliative care, and an introduction to the use of an evidenced based depression screening tool (PHQ-9), see the Power Point presentation in Appendix E. The 11 RNs participated from independent remote locations through a Zoom webinar. A global public health pandemic restricted gathering of groups larger than 10 therefore the PowerPoint presentation was delivered to participants via a remote webinar. An innovative solution to the public health emergency was the decision to deliver this educational session using free and easily accessible computer based webinar technology. The presentation, shared via PowerPoint, lasted 10 minutes. The participants who engaged in the webinar consisted of only the 11 CDLL RNs, each met the inclusion criteria, and each offered informed consent for participation.

### **Data Collection**

Before the implementation of this QI project, IRB approval was obtained (2003460163) from the University of Arizona (Appendix B). Local site approval was obtained (Appendix A). Completion of the pre- and post-surveys (Appendix C & D) implied informed consent by each CDLL nurse for participation in this QI project. Each survey assessed three demographic areas including gender, number of years practicing as a registered nurse and years practicing as a hospice nurse. Each survey was numbered and pre- and post-surveys were matched. There was no identifying information on the surveys. The nurse educator assisted the QI project director in distributing and collecting the matched de-identified (pre- and post-) surveys from participants via email, scanned them and emailed them in a password protected and encrypted email system to the QI project director. The 11 participants participated via Zoom and despite the changes in the mode of delivery for this educational session (Appendix E), the process went very smoothly and participation in the QI project was considered a success by the QI project director as well as this group of RNs. The RNs participated from a variety of locations including their cars and homes. All de-identified participant responses were analyzed and presented in a collective format via matched pre and post comparisons. The single closed ended questions on the pre- and post-surveys were also analyzed, tallied, and reported.

This QI project assessed pre- and post-intervention knowledge of depression, familiarity with screening tools for depression, and impressions among hospice and palliative care RNs on the use and implementation of an evidenced based depression screening tool in hospice and palliative care settings. There were five questions on the pre-survey and six questions on the post-survey. The pre- and post-surveys are Likert type scales measuring baseline knowledge on

depression, self-rated competence in screening for depression, self-rated competence in administration of the PHQ-9 and self-rating of both clinical expertise in depression assessment and self-rated willingness to implement the PHQ-9. There was one question on both the pre- and post-surveys which queried on the frequency of present depression screening (pre-survey) patterns and how often they anticipate they will screen for depression in the future (post-survey). Pre- and post-surveys are presented in Appendix C and D.

### Data Analysis

Presented next are tables of the pre- and post-surveys (Tables 2-6). The findings from the pre- and post-surveys indicate CDLL RNs: appreciated the knowledge gained on depression and depression screening specific to the hospice/palliative care setting, most were open to the use of the PHQ-9 as a screening tool for depression at CDLL and the majority (90%) were agreeable to implement a screening tool used for depression at CDLL.

Item number one in the pre-survey asked participants to self-rate their baseline knowledge of depression. Measures of self-rated RN baseline knowledge on depression screening was assessed in the pre-survey and is presented in Table 2. The RNs indicated their baseline knowledge was adequate and self-rated in the pre-survey by indicating 63% of them in felt “somewhat” knowledgeable while 36% of them indicated they felt “completely knowledgeable” about depression even before attending the educational session.

TABLE 2. *Self-rate baseline knowledge on depression.*

| N=11      | I don't know | Not knowledgeable | Minimally knowledgeable | Somewhat knowledgeable | Completely knowledgeable |
|-----------|--------------|-------------------|-------------------------|------------------------|--------------------------|
| Pre-test  | 0/11= 0%     | 0/11= 0%          | 0/11= 0%                | 7/11=63%               | 4/11=36%                 |
| Post-test | 0/11= 0%     | 0/11= 0%          | 1/11= .09%              | 7/11= 63%              | 3/11= 27%                |

Item number two on the pre- and post-surveys asked participants to self-rate their nursing competence in screening for depression. The RNs indicated their competence in screening for depression in the pre-survey by indicating 45 % of them felt “minimally competent” while 45% of them indicated they felt “somewhat competent” before attending the educational session. In the post-survey 63% felt “somewhat competent” and 36% of them felt “completely competent” after the educational session, indicating an improvement in their competence in screening for depression.

TABLE 3. *Self-rate your nursing competence in screening for depression.*

| <b>N=11</b> | <b>I don't know</b> | <b>Not competent</b> | <b>Minimally competent</b> | <b>Somewhat competent</b> | <b>Completely competent</b> |
|-------------|---------------------|----------------------|----------------------------|---------------------------|-----------------------------|
| Pre-test    | 0/11= 0%            | 0/11= 0%             | 5/11= 45%                  | 5/11= 45%                 | 0/11= 0%                    |
| Post-test   | 0/11= 0%            | 0/11= 0%             | 0/11= 0%                   | 7/11= 63%                 | 4/11= 36%                   |

Item number three on the pre-survey was a closed-ended question and asked how often the nurses screen for depression at CDLL. Item number three on the post-survey was also a closed-ended question and asked how often nurses would now screen for depression at CDLL, after having received the educational intervention. The results on the pre-survey, open-ended question indicate the majority of the CDLL RNs screen for depression once every 14 days. The results on the closed ended question on the post-survey indicated that participants would screen for depression “more often” and “more frequently,” indicating the RN’s were more inclined to screen for depression after receiving an educational session on depression and after being introduced to a screening tool (PHQ-9).

Table 4 highlights the results of item number four on the pre-survey. Item number four evaluated the participant comfort level in administering a screening tool such as the PHQ-9.

Table 4 indicates that in the pre-survey the majority of participants (45%) did not feel comfortable using a depression screening tool before the educational session. In addition, it was great to see that 100% of the 11 RN participants had increased self-reported comfort levels in administering a screening tool with 63% indicating they felt “completely comfortable” and 36% indicating they were “somewhat comfortable” administering the PHQ-9 to screen for depression at CDLL after participating in the educational session (Table 4).

TABLE 4. *Self-rate your comfort in administering the depression screening (PHQ-9).*

| <b>N=11</b> | <b>I don't know</b> | <b>Not comfortable</b> | <b>Minimally comfortable</b> | <b>Somewhat comfortable</b> | <b>Completely comfortable</b> |
|-------------|---------------------|------------------------|------------------------------|-----------------------------|-------------------------------|
| Pre-test    | 2/11= 18%           | 5/11= 45%              | 2/11= 18%                    | 2/11= 18%                   | 0/11= 0%                      |
| Post-test   | 0/11= 0%            | 0/11= 0%               | 0/11= 0%                     | 4/11= 36%                   | 7/11= 63%                     |

Tables 5 and 6 present the results for the remaining items of the pre and post surveys. These remaining items assessed self-rated clinical expertise in assessing for depression in the pre and post survey and item number six, was only offered in the post survey and assessed willingness to implement a screening tool at CDLL. In the pre-survey, participants indicated they had “moderate expertise” when only 27% of them self-rated. In the post-survey, the RN participants indicated greater expertise by a result of 90% of the participants indicating they now felt they possessed “moderate expertise” levels in assessing for depression. 90% of the CDLL participants indicated they were now willing to implement a screening tool for depression at CDLL. Overall, this QI project implemented at CDLL validated the RNs did expand their knowledge on depression, depression screening and validates the RN participant willingness to implement a screening tool such as the PHQ-9 to screen for depression in the hospice/palliative care setting.

TABLE 5. *Self-rate your clinical expertise assessing for depression in patients with a life-limiting illness.*

| N=11      | I don't know | No expertise | Minimal expertise | Moderate expertise | Total expertise |
|-----------|--------------|--------------|-------------------|--------------------|-----------------|
| Pre-test  | 0/11= 0%     | 0/11= 0%     | 7/11= 63%         | 3/11= 27%          | 0/11= 0%        |
| Post-test | 0/11= 0%     | 0/11= 0%     | 1/11= .09%        | 10/11= 90%         | 0/11= 0%        |

TABLE 6. *Self-rate your willingness to implement the PHQ-9.*

| N=11  | I don't know | Not interested in implementing | Minimally interested in implementing | Moderately interested in implementing | Completely interested in implementing |
|---|--------------|--------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|
| Self-rate your willingness to implement the PHQ-9 | 0/11= 0%     | 0/11= 0%                       | 0/11= 0%                             | 1/11= .09%                            | 10/11= 90%                            |

### Dissemination of Results

A written executive summary with the project results and recommendations were presented to both the administrators at CDLL as well as the participant RNs and any interested CDLL team members. The CDLL site administrators were happy with the results of this QI project and invited the project director to meet in person with the CDLL administration to review the executive summary and share her recommendations once the COVID-19 restrictions are lifted. The recommendations offered to the CDLL RNs was to begin to utilize their new clinical skillset to screen for depression using the PHQ-9 when a patient is exhibiting symptoms of depression, when a patient appears depressed, shows symptoms of depression such as, sadness, emptiness, irritability, decreased interest, poor concentration, decreased energy, hopelessness, irritability, decreased or increased appetite, feelings of guilt and/or isolation which last at least two weeks or more and significantly effects an individual's capacity to function. RNs were encouraged to document the results of the PHQ-9 and were advised to develop a mechanism at CDLL to ensure the patient's provider was alerted when findings were positive for depression in CDLL patients. RNs were also encouraged to develop a new documentation system in the

patient's medical record or a flagging system to ensure the provider has the opportunity to easily access the depression screening results. Results from this QI project may be published at a future time to ensure dissemination on the confirmation of the importance of educating RNs on depression and depression screening skills and the use of an evidenced based screening tool when caring for patients with life limiting illness in the hospice/palliative care setting

### **DISCUSSION**

Embarking on this new role as an advanced practiced registered nurse (APRN) brought great insight to the impact one can make by providing educational interventions to the nursing profession. This project is an excellent exemplar of the Knowles Adult Learning Theory and reinforces that adult learners are most interested in learning subjects that have immediate relevance and impact to their job or personal life, and most importantly have a positive impact on improved patient outcomes. After the educational session the RNs were inclined to implement the use of the PHQ-9 and showed a greater interest in screening more frequently for depression. The RNs at CDLL were very responsive to the educational session, they were engaged and even participated via a web-based zoom session. I believe the RNs were engaged because this was not only an important topic of interest that was relevant to their practice but, it was also a brief , informative, and easily accessible learning format. The outcome of this QI project has several benefits to the patient, the RNs, and the CDLL setting as previously mentioned. This QI project was empowering to the RN participants as it helped expand their knowledge base on depression and depression screening, equipped them with greater and improved nursing skills and ultimately translates to improved patient care delivery. A sudden challenge that emerged in midst of this project was the Global Coronavirus COVID-19 pandemic which resulted in the mandatory

restrictions placed on the public. The restrictions resulted in the decision to offer the education portion of this QI project via a zoom web-based learning platform. Having used Zoom throughout my DNP education made the implementation of a virtual Zoom webinar a seamless transition. This project is an exemplar of the innovative use of Zoom for RN education. The recorded Zoom educational session will be made available to the CDLL team for future use by CDLL team members. I thoroughly enjoyed this project and believe that it will provide insight and benefit to CDLL team and will definitely enhance the quality of RN and overall care delivered at CDLL.

### **Implications for Nursing**

This project will impact nursing knowledge on depression and depression screening among patients in hospice/palliative care settings who are experiencing a life-limiting illness. It will also encourage the use of a standardized evidence-based depression screening tool, the PHQ-9. This QI project has the potential to impact nursing practice by influencing hospice and palliative care settings to implement standardized depression screenings as a mechanism to improve patient care and outcomes. Offering targeted education to practicing RNs will positively impact the quality of the nursing care delivered to patients. Introducing the PHQ-9 equips the RNs with the ability to utilize an evidenced based screening tool and may influence their advocacy for the importance of depression screening and treatment for patients in a hospice/palliative care setting. Dissemination of published results and recommendations of this QI project will contribute to nursing education, science, knowledge development, and future practice.

## **Conclusion**

With the prevalence of underdiagnosed and undertreated depression in patients receiving hospice/palliative care services, the education of RNs is imperative to providing patients in the hospice or palliative care setting with highest levels of health care quality as well as an optimal quality of life. Increasing knowledge and awareness among RNs about depression and depression screening processes when working with patients with a life-limiting illness can improve the comprehensive (physical & psychological) care of patients. This QI project enhanced nursing knowledge and if changes are implemented at CDLL as recommended, the quality of care and treatment of patients experiencing depression in the hospice/palliative care setting will be enhanced. The executive summary was provided to the CDLL administrative staff and was made available to the RN participants. It is now up to the CDLL healthcare delivery team as to whether they will implement the suggested depression screening tool recommended through this DNP QI project.

## **OTHER INFORMATION**

### **Projected Budget**

There was an expense of \$230 for the completion of this DNP QI project. All costs associated with the project were covered by the project leader (Appendix F).

APPENDIX A:  
SITE APPROVAL AUTHORIZATION LETTER



**Piper Frithsen** <PiperF@casahospice.com>

Tue, Aug 6, 5:16 PM (8 days ago)



to Jommel, Diane, me

Hi Tonia,

Just confirming you would like to do a presentation to nursing staff, and at the completion of the presentation have them complete a survey on their knowledge obtained? If this is your request, we are happy to support. I have included Diane our Nurse Educator to facilitate.

**Piper Frithsen, M.Admin, RN**

*Administrator*

Casa de la Luz

7740 N Oracle Road

Tucson, AZ 85704

520.544.9890

[PiperF@casahospice.com](mailto:PiperF@casahospice.com)

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APPENDIX B:  
THE UNIVERSITY OF ARIZONA INSTITUTIONAL REVIEW BOARD APPROVAL  
LETTER



Human Subjects  
Protection Program

1618 E. Helen St.  
P.O.Box 245137  
Tucson, AZ 85724-5137  
Tel: (520) 626-6721  
<http://rgw.arizona.edu/compliance/home>

**Date:** March 13, 2020

**Principal Investigator:** Tonia Anne Isotalo

**Protocol Number:** 2003460163

**Protocol Title:** DEPRESSION SCREENING IN HOSPICE AND PALLIATIVE CARE

**Determination:** Human Subjects Review not Required

**Documents Reviewed Concurrently:**

**HSPP Forms/Correspondence:** *312 Revised Isotalo determination.pdf*

**Regulatory Determinations/Comments:**

- Not Research as defined by 45 CFR 46.102(l): As presented, the activities described above do not meet the definition of research cited in the regulations issued by U.S. Department of Health and Human Services which state that "Research means a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge. Activities that meet this definition constitute research for purposes of this policy, whether or not they are conducted or supported under a program that is considered research for other purposes. For example, some demonstration and service programs may include research activities. For purposes of this part, the following activities are deemed not to be research."

The project listed above does not require oversight by the University of Arizona.

If the nature of the project changes, submit a new determination form to the Human Subjects Protection Program (HSPP) for reassessment. Changes include addition of research with children, specimen collection, participant observation, prospective collection of data when the study was previously retrospective in nature, and broadening the scope or nature of the study activity. Please contact the HSPP to consult on whether the proposed changes need further review.

The University of Arizona maintains a Federalwide Assurance with the Office for Human Research Protections (FWA #00004218).

APPENDIX C:  
PARTICIPANT PRE-SURVEY

### Participant Pre-Survey

Completion of this survey implies your consent to participate in this quality improvement project. Your responses will remain private and all surveys will be de-identified before analysis to ensure the privacy and confidentiality of your responses.

How many years have you practiced as a registered nurse?

How many years have you practiced as a hospice/palliative care nurse?

Please circle your gender:

Male  Female

1. Self-rate your baseline knowledge on depression.

|                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| I don't know             | Not knowledgeable        | Minimally knowledgeable  | Somewhat knowledgeable   | Completely knowledgeable |
| <input type="checkbox"/> |

2. Self-rate your nursing competence in screening for depression.

|                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| I don't know             | Not competent            | Minimally competent      | Somewhat competent       | Completely competent     |
| <input type="checkbox"/> |

3. How often do you screen for depression in your patients at CDLL?

4. Self-rate your comfort in administering the depression screening, the Patient Health Questionnaire (PHQ9).

|                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| I don't know             | Not comfortable          | Minimally comfortable    | Somewhat comfortable     | Completely comfortable   |
| <input type="checkbox"/> |

5. Self-rate your clinical expertise assessing for depression in patients with a life-limiting illness?

|                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| I don't know             | No expertise             | Minimal expertise        | Moderate expertise       | Total expertise          |
| <input type="checkbox"/> |

APPENDIX D:  
PARTICIPANT POST-SURVEY

## Participant Post-Survey

Completion of this survey implies your consent to participate in this quality improvement project. Your responses will remain private and all surveys will be de-identified before analysis to ensure the privacy and confidentiality of your responses.

1. Self-rate your baseline knowledge on depression.

|                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| I don't know             | Not knowledgeable        | Minimally knowledgeable  | Somewhat knowledgeable   | Completely knowledgeable |
| <input type="checkbox"/> |

2. Self-rate your nursing competence in screening for depression.

|                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| I don't know             | Not competent            | Minimally competent      | Somewhat competent       | Completely competent     |
| <input type="checkbox"/> |

3. How often will you screen for depression among CDLL patients with life-limiting conditions?

4. Self-rate your comfort in administering the depression screening, the Patient Health Questionnaire (PHQ9).

|                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| I don't know             | Not comfortable          | Minimally comfortable    | Somewhat comfortable     | Completely comfortable   |
| <input type="checkbox"/> |

5. Self-rate your clinical expertise assessing for depression in patients with a life-limiting illness?

|                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| I don't know             | No expertise             | Minimal expertise        | Moderate expertise       | Total expertise          |
| <input type="checkbox"/> |

6. Self-rate your willingness to implement the Patient Health Questionnaire-9 (PHQ-9)?

|                          |                                |                                      |                                       |                                       |
|--------------------------|--------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|
| I don't know             | Not interested in implementing | Minimally interested in implementing | Moderately interested in implementing | Completely interested in implementing |
| <input type="checkbox"/> | <input type="checkbox"/>       | <input type="checkbox"/>             | <input type="checkbox"/>              | <input type="checkbox"/>              |

APPENDIX E:  
EDUCATIONAL INTERVENTION



## HOSPICE AND PALLIATIVE CARE SCREENING FOR DEPRESSION

Tonia A. Isotalo, BSN, RN  
University of Arizona



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### Depression Prevalence

- ❖ Depression is characterized by feeling sad, empty, or irritable and significantly effects the individuals capacity to function which last at least 2 weeks' duration.
- ❖ An estimated 17.3 million adults in the United States had at least one major depressive episode. This number represented 7.1% of all U.S. adults. The prevalence of major depressive episode was higher among adult females (8.7%) compared to males (5.3%).
- ❖ About one in six Americans experience at least one depressive episode in their lifetime.



## Depression in Hospice and Palliative Care Patients

- ❖ Depressive disorders are prevalent in terminally ill patients receiving hospice and palliative care services
- ❖ Often providers concentrate on the terminal diagnosis and the relief of its terminal symptoms such as pain and discomfort, and the depressive disorder gets overlooked
- ❖ There appears to be a misunderstanding about the differentiation between an appropriate grief response to dying and a treatable psychiatric depressive disorder
- ❖ Research shows that by the time the depressive symptoms are acknowledged, the patient is closer to the end of life and often does not have enough time remaining for the common antidepressants to work optimally

3

## Depression in Hospice and Palliative Care Patients

- ❖ The stress of a terminal illness can generate new onset of depression
- ❖ There appears to be a misunderstanding about the differentiation between an appropriate grief response to dying and a treatable psychiatric depressive disorder
- ❖ Depression rates in this population are estimated to range between 5-25%, yet these disorders are often underdiagnosed and undertreated

4

**Table 1. Distinguishing Characteristics of Grief and Depression in Terminally Ill Patients**

| Characteristic                  | Normal grief  | Depression  |
|---------------------------------|---|---|
| Nature of response              | Adaptive  | Maladaptive   |
| Focus of distress               | Distress is in response to a particular loss and does not affect all aspects of life  | Distress is pervasive and affects all aspects of life                     |
| Symptom fluctuations            | Comes in waves but generally improves with time   | Constant  |
| Mood                            | Sadness and dysphoria   | Protracted and constant depression or flat affect                         |
| Interests/capacity for pleasure | Interests and capacity for pleasure intact, although engagement in activities may be diminished because of functional decline | Anhedonia with markedly diminished interest or pleasure in all activities |
| Hope                            | Episodic and focal loss of hope; hopes may change over time, giving persons positive orientation toward the future            | Hopelessness is persistent and pervasive                                  |
| Self-worth                      | Maintained self-worth, although feelings of helplessness are common   | Worthlessness with feeling that one's life has no value                   |
| Guilt                           | Regrets and guilt over specific events  | Excessive feelings of guilt   |
| Suicidal ideation               | Passive and fleeting desire for hastened death  | Preoccupation with a desire to die  |

*Information from references 17 and 28.*

5

## Depression Screening

According to the most current studies, there is no known education or training guidelines nor is there a standardized tool for screening of depression in hospice and palliative care settings.



6

## Depression Treatment in Hospice and Palliative Care

- ❖ Cognitive Behavioral Therapy
- ❖ Eye Movement Desensitization and Reprocessing (EMDR) Therapy
- ❖ SSRI
- ❖ Abilify-for depression related to terminal illness and treatment resistant depression
- ❖ Methylphenidate can also be used for the treatment of depression in hospice patients
- ❖ Ketamine rapidly treats refractory depression for those patients who do not have enough time to wait for the standard anti depressant to work

7

## Patient Health Questionnaire-9

- ❖ The Patient Health Questionnaire-9 (PHQ-9) is a valid instrument used to rate depression severity.
- ❖ It's benefits are; it is short, easy to administer and easy to score.
- ❖ This assessment tool can be administered by a nurse and it's findings can be communicated to the provider.

8

## Patient Health Questionnaire-9

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

Over the last 2 weeks, how often have you been bothered by any of the following problems? (use "✓" to indicate your answer)

|   | Not at all | Several days | More than half the days | Nearly every day |
|---|------------|--------------|-------------------------|------------------|
| 1. Little interest or pleasure in doing things  | 0          | 1            | 2                       | 3                |
| 2. Feeling down, depressed, or hopeless   | 0          | 1            | 2                       | 3                |
| 3. Trouble falling or staying asleep, or sleeping too much  | 0          | 1            | 2                       | 3                |
| 4. Feeling tired or having little energy  | 0          | 1            | 2                       | 3                |
| 5. Poor appetite or overeating  | 0          | 1            | 2                       | 3                |
| 6. Feeling bad about yourself...or that you are a failure or have let yourself or your family down  | 0          | 1            | 2                       | 3                |
| 7. Trouble concentrating on things, such as reading the newspaper or watching television  | 0          | 1            | 2                       | 3                |
| 8. Moving or speaking so slowly that other people could have noticed. Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual | 0          | 1            | 2                       | 3                |
| 9. Thoughts that you would be better off dead, or of hurting yourself   | 0          | 1            | 2                       | 3                |

add columns:      •      •      •      •

(Healthcare professional: For interpretation of TOTAL, please refer to accompanying scoring card)

TOTAL: \_\_\_\_\_

10. If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all \_\_\_\_\_  
 Somewhat difficult \_\_\_\_\_  
 Very difficult \_\_\_\_\_  
 Extremely difficult \_\_\_\_\_

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### PHQ-9 Patient Depression Questionnaire

#### For Initial Diagnosis:

- Patient completes PHQ-9 Quick Depression Assessment.
- If there are at least 4 ✓'s in the shaded section (including Questions #1 and #2), consider a depressive disorder. Add score to determine severity.

#### Consider Major Depressive Disorder

- if there are at least 5 ✓'s in the shaded section (one of which corresponds to Question #1 or #2)

#### Consider Other Depressive Disorder

- if there are 2-4 ✓'s in the shaded section (one of which corresponds to Question #1 or #2)

**Note:** Since the questionnaire relies on patient self-report, all responses should be verified by the clinician, and a definitive diagnosis is made on clinical grounds taking into account how well the patient understood the questionnaire, as well as other relevant information from the patient. Diagnosis of Major Depressive Disorder or Other Depressive Disorder also require impairment of social, occupational, or other important areas of functioning (Question #10) and ruling out normal bereavement, a history of a Manic Episode (Bipolar Disorder), and a physical disorder, medication, or other drug as the biological cause of the depressive symptoms.

#### To monitor severity over time for newly diagnosed patients or patients in current treatment for depression:

- Patients may complete questionnaires at baseline and at regular intervals (eg, every 2 weeks) at home and bring them in at their next appointment for scoring or they may complete the questionnaire during each scheduled appointment.
- Add up ✓'s by column. For every ✓' Several days = 1 More than half the days = 2 Nearly every day = 3
- Add together column scores to get a TOTAL score.
- Refer to the accompanying PHQ-9 Scoring Box to interpret the TOTAL score.
- Results may be included in patient files to assist you in setting up a treatment goal, determining degree of response, as well as guiding treatment intervention.

#### Scoring: add up all checked boxes on PHQ-9

For every ✓' Not at all = 0; Several days = 1;  
 More than half the days = 2; Nearly every day = 3

#### Interpretation of Total Score

| Total Score | Depression Severity          |
|-------------|------------------------------|
| 1-4         | Minimal depression           |
| 5-9         | Mild depression              |
| 10-14       | Moderate depression          |
| 15-19       | Moderately severe depression |
| 20-27       | Severe depression            |

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9

## Significance of Untreated Depression at the End of Life

- ❖ Terminally ill patients with an untreated depression experience a decreased quality of life, increase in pain and poor quality of life in the time they have remaining
- ❖ Depression can hasten the terminally ill patients desire to die, prevent them for further treatment, proper pain management, and spending quality time with family and friends at the end of their life



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APPENDIX F:  
PROJECTED BUDGET

| <b>Expense Items</b>                          | <b>Requested Amount</b> |
|---|-------------------------|
| <b>Travel</b>                                 | \$0.00                  |
| <b>Operations</b>                             |                         |
|   |                         |
| <b>Materials and Supplies (Snacks, Paper)</b> | \$100.00                |
| <b>Printing/Marketing (Fliers)</b>            | \$5.00                  |
| <b>Participant Payments/incentives</b>        | \$125.00                |
| <b>Other</b>                                  | \$0.00                  |
| <b>Total</b>                                  | <b>\$230.00</b>         |

APPENDIX G:  
SYNTHESIS OF EVIDENCE TABLE

| Reference   | Research Question/Hypothesis   | Study Design                                 | Sample and Setting   | Methods for Data Collection and Data Analysis   | Findings  |
|---|--|--|--|---|---|
| Chan, W. C. H., Kwan, C. W., Chi, I., & Chong, A. M. L. (2014). The impact of loneliness on the relationship between depression and pain of Hong Kong Chinese terminally ill patients. <i>Journal of Palliative Medicine</i> , 17(5), 527-532. <a href="https://doi-org.ezproxy3.library.arizona.edu/10.1089/jpm.2013.0555">https://doi-org.ezproxy3.library.arizona.edu/10.1089/jpm.2013.0555</a>                        | Examine the relationship between pain depression and pain in terminally ill.           | Quantitative quasi experimental cohort study | <b>Sample:</b><br>115, 209 elders completed the MDS-HC between 2004 and 2009. Aged 60 or above with a prognosis of 6 months or less to live. 312 elders meet criteria. Mean age of 77.43<br>Male=52.24%<br>Female=47.76%<br><br><b>Setting:</b><br>Community dwellings in China. | Secondary analysis of data collected from a large cohort of community dwellings.<br><br>The variables were summarized in mean, standard deviation (SD), frequency counts, and percentages when appropriate. | Depression was found positively associated with the pain score among terminally ill Chinese elders ( $B=0.185$ , $P=<0.001$ ).<br><br>This finding shows that terminally ill elders who were more depressed experienced a higher level of pain. |
| Fisher, K. A., Seow, H., Brazil, K., Freeman, S., Frise Smith, T., & Guthrie, D. M. (2014). Prevalence and risk factors of depressive symptoms in a Canadian palliative home care population: A cross-sectional study. <i>BMC Palliative Care</i> , 13(1), 10-22. <a href="https://doi-org.ezproxy3.library.arizona.edu/10.1186/1472-684X-13-10">https://doi-org.ezproxy3.library.arizona.edu/10.1186/1472-684X-13-10</a> | Determine the prevalence of depressive symptoms and risk factors associated with them. | Cross-sectional study                        | <b>Sample:</b><br>The sample consisted of 5,144 palliative care home patients residing in Ontario, Canada (n = 5144)<br><br><b>Setting:</b><br>Six home care provider palliative care organizations in Ontario, Canada.  | <b>Data Collection:</b><br>The data was collected from interRAI Palliative Care assessments completed between 2006 and 2012.  | The prevalence of depressive symptoms was 9.8%. Risk factors associated with depressive symptoms include sleep disorders, health and stability, caregiver distress, pain, cognitive impairment, being female and gastrointestinal symptoms.     |
| Grotmol, J. S., Lie, H. C., Hjermland, M. J.,   | To examine whether depression contributes  | Multi-centered, cross-sectional study        | <b>Sample:</b><br>Included patients n=563  | <b>Data Collection:</b>   | Depression severity was the strongest single  |

| Reference   | Research Question/Hypothesis   | Study Design                              | Sample and Setting   | Methods for Data Collection and Data Analysis  | Findings   |
|---|--|---|--|--|--|
| <p>Aass, N., Currow, D., Kaasa, S., Moum, T. A., Pigni, A., Loge, J. H., &amp; European Palliative Care Research Collaborative (EPCRC). (2017). Depression – A major contributor to poor quality of life in patients with advanced cancer. <i>Journal of Pain and Symptom Management</i>, 54(6), 889-897.</p> | <p>to impairment of quality-of-life irrespective of prognostic factors and symptom burden.</p> <p>To assess rates of depression in palliative care inpatients using the CSDD</p> |   | <p>Not included patients n=488<br/>Women=55%<br/>Men=45%<br/>Median age 64</p> <p><b>Setting:</b><br/>European Palliative Care Research Center</p> | <p>563 patients were included</p> <p>The quality of life scores were assessed using a hierarchical multiple regression model.</p>  | <p>predictor of poorer quality of life in this sample of patients with advanced cancer</p>                         |
| <p>Huey, N. S., Guan, N. C., Gill, J. S., Hui, K. O., Sulaiman, A. H., &amp; Kanagasundram, S. (2018). Core symptoms of major depressive disorder among palliative care patients. <i>International Journal of Environmental Research and Public Health</i>, 15(8), 1758.</p>                                  | <p>To determine the prevalence of depression and the discriminant validity of the items off four sets of diagnostic criteria I palliative care.</p>                              | <p>Multi-center cross-sectional study</p> | <p><b>Sample</b><br/>n=150<br/>Female=57.1%<br/>Male=42.9%<br/>Mean age of 62.13</p> <p><b>Setting:</b><br/>University Malaya Medical Center</p>   | <p><b>Data Collection</b><br/>Patients were recruited from both the palliative clinic and palliative inpatient ward. Inclusion criteria were 18 years of age and older who were receiving palliative care.</p> <p>Depressive symptoms were screened along with symptoms of distress in patients</p> <p>Descriptive analyses were conducted to examine the depressive</p> | <p>Dysphoric mood, loss of interest, and pessimism are the main features of depression in palliative patients.</p> |

| Reference   | Research Question/Hypothesis  | Study Design               | Sample and Setting   | Methods for Data Collection and Data Analysis   | Findings  |
|---|---|----------------------------|--|---|---|
|   |   |                            |  | sub-scores and its correlation to distress scores.  |   |
| Lie, H. C., Hjermsstad, M. J., Fayers, P., Finset, A., Kaasa, S., Loge, J. H. & European Palliative care Research Collaborative (EPCRC). (2015). Depression in advanced cancer – Assessment challenges and associations with disease load. <i>Journal of Affective Disorders</i> , 173(1), 176-184. | The effect of different scoring methods of depressive symptoms on detecting depression and the relationship between disease load and depression among patients with advanced cancer | Quantitative study         | <p><b>Sample</b><br/>n=969<br/>Women=46%<br/>Men=54%<br/>Mean age of 72</p> <p><b>Setting</b><br/>Inpatient and outpatient hospice units</p> | <p><b>Data Collection</b><br/>Patients with advanced cancer were recruited from 17 centers in 8 different countries. Patients meet criteria by being over the age of 18, with incurable cancer on hospice services. Data analysis was conducted using SPSS. Agreement between the prevalence rates of depression were calculated using Cohen's Kappa.</p> | Depression was significantly associated with more pain and lower performance irrespective of scoring method used. |
| Liu, Y., Liu, F., Yu, Y., Li, Q., Jin, X., & Li, J. (2017). Symptom frequencies and intensities in hospitalized patients with advanced cancer having depressive disorder. <i>American Journal of Hospice and Palliative Medicine</i> , 34(5), 456-460.  | To explore the frequencies and intensities of depressive symptoms associated with hospitalized patients with advanced cancer.   | Retrospective cohort study | <p><b>Sample</b><br/>n=196<br/>males=59%<br/>Females=41%<br/>Mean age 58</p> <p><b>Setting</b><br/>Xuzhou Central Hospital</p>               | <p><b>Data Collection</b><br/>Patients with advanced cancer stage IV, 18 years of age and older whom were hospitalized. SPSS was used for statistical analyses. The frequencies were compared between patients with and without depressive</p>  | Depression was diagnosed in 39% of the patients (76 of the 196).  |

| Reference   | Research Question/Hypothesis  | Study Design             | Sample and Setting   | Methods for Data Collection and Data Analysis   | Findings   |
|---|---|--------------------------|--|---|--|
|   |   |                          |  | disorders using an <i>X2 test</i> . Relationship between depression and symptoms were analyzed with Spearman correlation test.  |  |
| Lloyd-Williams, M., Payne, S., Reeve, J., & Dona, R. K. (2014). Thoughts of self-harm and depression as prognostic factors in palliative care patients. <i>Journal of Affective Disorders, 166</i> , 324-329. | Explored whether scores indicating depression on the Patient Health Questionnaire 9 and patient thoughts of self-harm were prognostic factors for survival in advanced cancer | Quantitative study       | <p><b>Sample:</b><br/>Patients with advanced or metastatic cancer over the age of 18 on hospice with a life expectancy less than 6 months<br/>n=628<br/>Male=207<br/>Female=422<br/>Mean age 66</p> <p><b>Setting:</b><br/>20 palliative care day units in England</p> | <p><b>Data Collection:</b><br/>Data was managed via the MACRO database. Statistical significance was set at <math>p &lt; 0.05</math>. Descriptive statistics were calculated along with confidence intervals. A non-parametric version of the paired t-test was used to assess whether there was any difference between baseline and final visit since patients scores were not normally distributed.</p> | Moderate to severe depression as measured by PHQ9 and patient reports of thoughts of self-harm were associated with earlier mortality  |
| Lloyd-Williams, M., Shiels, C., Ellis, J., Abba, K., Gaynor, E., Wilson, K., & Dowrick, C. (2018). Pilot randomized controlled trial of focused narrative intervention  | Determine the effect of a focused narrative intervention on depression in palliative care patients when used in addition to usual care.                                       | Randomized control trial | <p><b>Sample</b><br/>n=57<br/>Female=71%<br/>Male=29%<br/>Mean age 65.1</p> <p><b>Setting</b></p>  | <p><b>Data Collection</b><br/>Palliative care patients aged over 18 recruited from hospice day services</p>   | The pilot trial suggests a focused narrative intervention in patients with moderate to severe depression. This can reduce depression scores more than usual care alone. Patients |

| Reference   | Research Question/Hypothesis  | Study Design             | Sample and Setting   | Methods for Data Collection and Data Analysis  | Findings  |
|---|---|--------------------------|--|--|---|
| for moderate to severe depression in palliative care patients: DISCERN trial. <i>Palliative Medicine</i> , 32(1), 206-215.  |   |                          | Hospice day care services  |  | receiving intervention appeared to have longer survival.  |
| Price, A., Goodwin, L., Rayner, L., Shaw, E., Hansford, P., Sykes, N., Monroe, B., Higginson, I., Hotopf, M., & Lee, W. (2012). Illness perceptions, adjustment to illness, and depression in a palliative care population. <i>Journal of Pain and Symptom Management</i> , 43(5), 819-832. | To describe illness representations in a population with advanced disease receiving palliative care and to examine the relationship between illness perceptions adaptive coping and depression. | Cross-sectional survey   | <p><b>Sample</b><br/>n=301<br/>Female=49.3%<br/>Male=50.7%<br/>Mean age 68.5</p> <p><b>Setting</b><br/>Hospice patients both in home and inpatient in London</p> | <p><b>Data Collection</b><br/>Patients were recruited from a palliative service</p>  | Assessment of illness perceptions in palliative care is likely to yield important information about the risk for depression in patients on hospice and palliative care services |
| Robinson, S., Kissane, D. W., Brooker, J., Hempton, C., & Burney, S. (2017). The relationship between poor quality of life and desire to hasten death: A multiple mediation model examining the contributions of depression, demoralization, loss of control, and low self-                 | To investigate whether depression, demoralization, loss of control, and low self-worth mediated the relationship between global quality of life and desire to hasten death.                     | Randomized control study | <p><b>Sample</b><br/>n=162<br/>Female=48.1%<br/>Male=51.9%<br/>Mean age 69.91</p> <p><b>Setting</b><br/>Inpatient hospital in Australia</p>                      | <p><b>Data Collection</b><br/>Patients with advanced progressive disease were recruited from three hospitals in Melbourne, Australia</p> <p>Descriptive statistics were used to analyze the data</p> | Depression, loss of meaning and purpose, loss of control, and low self-worth are strong clinical markers for desire to hasten death   |

| Reference  | Research Question/Hypothesis | Study Design | Sample and Setting | Methods for Data Collection and Data Analysis | Findings |
|--|------------------------------|--------------|--------------------|---|----------|
| <p>worth. <i>Journal of Pain &amp; Symptom Management</i>, 53(2), 243-249. <a href="https://doi-org.ezproxy3.library.arizona.edu/10.1016/j.jpainman.2016.08.013">https://doi-org.ezproxy3.library.arizona.edu/10.1016/j.jpainman.2016.08.013</a></p> |                              |              |                    |   |          |

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