Short-Stay Palliative Pain Management for Southwestern VA: Process Improvement Plan

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Abstract

The increased demand for palliative care services has led to concerns regarding workforce knowledge specific to palliative pain management for patients with life-limiting illnesses. Educational preparedness of nurses along with best processes and practices are necessary to promote optimal care for patients requiring palliative pain management. Through analyzing Veterans Administration (VA) Strategic Analytics for Improvement and Learning (SAIL) data, a deficiency in short-stay self-reported palliative Veteran (patient) pain management at the Southwestern (SWVAMC) a level 1B, tertiary care referral center was identified. Best practices in the palliative care industry were identified, and a quality improvement plan in the form of a nurse driven palliative care pain education hands-on simulation was generated to promote excellence in care. Quality improvement for veteran short-stay palliative pain management at the SWVAMC was the end-goal.

Keywords: palliative; pain; management; veteran
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Palliative care is a multi-disciplinary approach to specialized medical and nursing care for people with life-limiting illness, with the goal of providing patients with relief from symptoms including pain, stress, and anxiety which are necessary to improve quality of life for the individual and their family (National Hospice and Palliative Care Organization, n.d.). Palliative care improves the quality of life for patients and families facing challenges associated with life-threatening illness whether physical, psychosocial or spiritual. Current estimates suggest that approximately three quarters of people approaching end-of-life may benefit from palliative care (Etkind et al., 2017). However, according to the World Health Organization (WHO) (2018), only about 14% of people world-wide who need palliative care currently receive it.

**Background of Problem**

Pain is a common symptom affecting patients with a life limiting diagnosis (National Hospice and Palliative Care Organization, n.d.). Morrow (2016) states that pain is a complex symptom as there are several types of pain and many causes of it. Palliative pain management is essential to provide optimal care for patients with a serious chronic and/or life-limiting diagnosis or disease (Morrow, 2016). Pain is extremely personal and unique to the person experiencing it. According to McTier, Botti, and Duke (2015), most patients do not understand the importance of reporting pain while having limited opportunities to participate in their pain management plan of care. This leads to less than optimal quality of care and subsequent outcomes (McTier et al., 2015). Pathmawathi et al. (2015) notes that lack of knowledge among healthcare providers regarding management of patient pain are the main barrier to pain management success. A
primary goal of palliative care is to provide patients with relief from pain and other associated symptoms (Daly et al., n.d.).

According to Hughes (2012), assessing pain accurately and communicating the diagnosis and plan to the healthcare team are essential for effective palliative pain management. Accurate assessment and effective communication enables the palliative healthcare professional to develop interventions that will control the patient’s symptoms. Studies have shown that nurses and other interdisciplinary personnel are inadequately prepared to care for patients requiring palliative care (Levine et al., 2017). Reasons include, inadequate curriculum, along with a lack of structured education related to palliative care/symptom management.

While Daratsos and Howe (2007) imply that the U.S. Department of Veterans Affairs (USDVA) has been a leader in program development and delivery of palliative care for decades, the Southwestern Veterans Administration Medical Center (SWVAMC) has challenges. Challenges at the SWVAMC are consistent with those faced industry wide. Challenges include inadequate preparation of palliative healthcare professionals with only two Certified Hospice and Palliative Nursing (CHPN) professionals in the facility, a flawed process, and less than optimal delivery (E. Hopkins, personal communication, October 13, 2017). This is evident based on FY18Q1 results for treating short-stay moderate to severe pain for Veterans residing on the SWVAMC Community Living Center (CLC) as reported by Strategic Analytics for Improvement and Learning (SAIL) data. The SWVAMC finished FY18Q1 with 28% of its short-stay palliative pain patients failing to receive adequate treatment to alleviate moderate to severe pain, when compared to the SW regional VA success rate of 19.73%. This prompted further investigation and the subsequent development of a process improvement plan.
Project Site

The SWVAMC serves Veterans in New Mexico, Southern Colorado, and West Texas. The SWVAMC is part of the VA Desert Pacific Healthcare Network, Veterans Integrated Service Network (VISN) 22 which is based in Long Beach, CA. It includes Prescott, Phoenix, Tucson, Albuquerque, Greater Los Angeles, Loma Linda, Long Beach and San Diego. The SWVAMC is a Joint Commission accredited Veterans’ Health Administration (VHA) complexity rating level 1B, tertiary care referral center with a 24-hour Emergency Department. As a teaching facility, the SWVAMC is affiliated with both a two year and four-year college in the southwest region of the United States. The SWVAMC is authorized to operate 310 beds, which are comprised of 184 acute hospital beds, including a 26 bed Spinal Cord Injury Center, and a 36 bed Community Living Center (CLC) which houses the facility’s hospice and palliative care unit and also includes Veterans with acute and skilled rehabilitation needs (U.S. Department of Veterans Affairs, 2016). The entire SWVAHCS has more than 2,100 employees whom an estimated one third is Veterans (U.S. Department of Veterans Affairs, 2016).

Purpose of the Project

The purpose of the project was to enhance the level of palliative pain management at the SWVAMC for short-stay Veterans through optimizing training for RNs/LPNs working on its CLC. The CLC is the SWVAMC unit housing the palliative pain patient population. A detailed examination of the educational preparedness of these nursing professionals, institution-specific palliative pain management processes, and subsequent delivery of care at the SWVAMC was executed and compared to the prescribed standards as outlined by the National Hospice and Palliative Care Organization (n.d.). The previous two quarter average (FY18Q1/Q2) result of 30.5% (67/220) of Veterans at the SWVAMC receiving inadequate short-stay moderate to severe
pain management served as a benchmark. With needed improvement determined, an initiative was developed and launched to optimize the SWVAMC’s pain management program for Veterans. The desired results were to improve palliative pain management for Veterans, enhance nursing educational level, and target additional opportunities to promote continuous quality improvement (CQI) over time.

**Significance of the Project**

SAIL, is a system for summarizing hospital system performance within the VHA, assessing 25 Quality measures in areas such as death rate, complications, patient satisfaction, efficiency (effectiveness), and physician capacity at individual VA Medical Centers (U.S. Department of Veterans Affairs, 2017). After reviewing FY18Q1 SAIL quality management data it was determined necessary for the SWVAMC to improve its short-stay palliative pain management program and subsequent outcomes through enhanced delivery of care, as the facility was performing below VISN standards. According to Chong et al. (2004), improved palliative care processes and interventions are necessary, as quality delivery of care has a vital impact on patient, family, and institutional outcomes as well as costs of care.

The short-stay (patients who spend less than 90 days in a VA Medical Center) palliative pain management quality improvement initiative’s significance/primary purpose was to improve palliative pain management and delivery of care by RNs/LPNs on the CLC at the SWVAMC. Key stakeholders included Veterans, family or friends, and the institution. With deficiencies in care identified and elements of excellence in palliative pain management examined, a quality improvement project in the form of a hands-on, educational simulation with subsequent delivery by the two in house Certified Hospice and Palliative Care Nurse (CHPN) champions was put in place. The immediate goal was to improve short-stay palliative pain management for Veterans
by educating nursing professionals while generating other CQI projects to improve the SWVAMC’s palliative pain offering from FY18Q1/Q2 (pre-implementation) to FY18Q3 (post-implementation).

**Definition of Terms**

According to the National Hospice and Palliative Care Organization (n.d.), features that characterize palliative care philosophy and delivery include care being provided by and services being coordinated by an interdisciplinary team. This includes patients, families, palliative and non-palliative health care providers collaborating and communicating about care needs and services being available concurrently with or independent of curative or life-prolonging care. Also included are patient/family hopes for peace and dignity being supported throughout the course of illness, during the dying process, and after death. The SWVAMC bases its palliative care program around these basic tenets of the National Hospice and Palliative Care Organization (NHPCO).

The SWVAMC has two CHPN nurses. CHPN certification, endorsed by the Hospice and Palliative Nurses Association (HPNA), provides formal recognition of competence in hospice and palliative nursing through the certification of qualified professionals. Certification provides a national standard of requisite knowledge for nurses, assisting the employer, public, and other interdisciplinary healthcare professionals in the assessment of hospice and palliative ability of the nursing professional (Hospice & Palliative Credentialing Center, 2017).

Short-stay palliative pain management is the primary focus of the quality improvement project and data is collected monthly and quantified quarterly for all VA Medical Centers throughout the fiscal year. Short-stay pain data collection is earmarked for those patients remaining in the moderate to severe pain level (to include very severe pain) based on SAIL data.
This data is collected for patients who spend less than 90 days in a VA Medical Center (S. Waltrip, personal communication, October 26, 2017). Data included in the monthly statistic is retroactive 180 days (S. Waltrip, personal communication, October 26, 2017).

For each of the 150 plus VA Medical Center CLC’s (which contain palliative hospice and palliative rehabilitation (rehab) patients), monthly short-stay palliative care statistics are gathered utilizing the Minimum Data Set (MDS) 3.0 Nursing Home Comprehensive Version 1.15.1 and reported to the regional office in Austin, Texas for comparison, analysis, and inclusion in the SAIL report. Regarding assessment, all Veterans are evaluated by a CLC nursing professional utilizing the verbal descriptor scale for rating initial pain upon admission (prior to implementation of a pain management intervention) and follow up pain (after diagnosis and a subsequent nursing intervention) for both palliative hospice and palliative rehab patients who reside on the 36 bed CLC at the SWVAMC. Pain is rated as no pain (0), mild (1-3), moderate (4-6), severe (7-8), or very severe /horrible (9-10) on a 0-10 pain scale according to the pain assessment interview section J0600 completed by the assigned Veteran’s staff nurse (S. Waltrip, personal communication, December 1, 2017). Those patients unable to rate their pain on a 0-10 pain scale are excluded from the reporting data.

Pain is measured for those falling under the hospice palliative care category on admission and after five days of intervention, repeating every five days thereafter for the entire length of the short-stay. However, only the latest measurement is included in the data set. For a rehab palliative care patient, pain is measured on admission (prior to nursing intervention), after fourteen days, thirty days, sixty days, and quarterly. Similar to the hospice palliative care patient, only the latest measurement is included in the short-stay data set for the rehab palliative care patient (S. Waltrip, personal communication, October 26, 2017). The data is then compiled
and the overall number of patients’ falling into the moderate to severe pain category as
documented in section J0600 of the nursing driven pain assessment flow sheet are then taken as a
percentage against those Veterans (patients) that comprise the overall patient population of the
36 bed CLC being measured for short-stay pain management.

Problem Statement

Concerns about Veteran unmet short-stay palliative pain management needs at the
SWVAMC were clearly evident. According to Sheila Waltrip RN, Resident Assessment
Coordinator (RAC) and analytical specialist, self-reported palliative pain management scores at
the SWVAMC, have consistently been worse than the VISN averages (S. Waltrip, personal
communication, October 26, 2017). Also, averages for the SWVAMC were trending above the
VISN benchmark for several quarters preceding, implying a consistent gap in palliative pain
management for the patient population at the SWVAMC. Waltrip stated that the higher the
number, the greater percentage of Veterans not being managed for palliative pain effectively (S.
Waltrip, personal communication, October 26, 2017).

Waltrip implied that after reviewing early return FY18 SAIL data, the SWVAMC was
not providing effective short-stay palliative pain management, thus concluding that a modified
nursing process was necessary to remedy the shortcoming (S. Waltrip, personal communication,
October 26, 2017). Prior interventions included 24-hour chart reviews on new admissions;
weekly randomized audits of nursing shift documentation for pain assessment; subsequent
management, printing, and handing off a prn pain effectiveness list when nurses change shift;
and continued review of the monthly bar-coded medication effectiveness report with staff (E.
Hopkins, personal communication, October 13, 2017).
According to Hopkins RN CHPN, on the 36 bed CLC at the SWVAMC, there was no mandatory education requirement for palliative nursing staff (E. Hopkins, personal communication, October 13, 2017). Hopkins felt that the lack of NHPCO/HPNA level of preparation for palliative care nursing professionals, limited the quality of care provided for the SWVAMC’s patient population with a specific deficiency in nursing’s ability to manage Veteran-centered palliative pain (E. Hopkins, personal communication, October 13, 2017). Institutional processes for patient care were based on the Comfort Care Order Set for Palliative Care Patients as outlined by the Department of Veterans Affairs Hospice and Palliative Care Standards of Care Work-Group (Daly et al., n.d.). While Hopkins verified that this order set was useful as a guideline, she noted challenges of nursing implementation for common palliative care issues to include the formal execution/delivery of palliative patient pain management (E. Hopkins, personal communication, October 13, 2017). Therefore, given the SWVAMC’s difficulty in managing Veteran-centered palliative pain, does simulated palliative care education and standardized preparedness for nursing (RN/LPN) staff when compared to current standards alone, impact the quality of palliative pain management delivered to Veterans as determined by SAIL MDS short-stay pain management data at the SWVAMC with an initial baseline fallout rate of 30.5%?

Theoretical Framework

A successful quality improvement initiative optimally uses change theory or a planned approach to implement an organizational shift to achieve a business or medical related outcome (Shirey, 2013). Lewin’s Theory of Planned Change (TPC) is versatile, practical, simple to use, and easy to understand. Shirey (2013) states that TPC is best used when change is planned, when there is stability and time for the change to occur, and it is done as a top-down effort. With
these elements present, TPC is the theory of choice to institute the change, promoting implementation of an optimal palliative pain care program for the SWVAMC.

TPC consists of three phases; unfreezing, moving (transition), and freezing (refreezing). In order to promote successful change, the “force field” surrounding the change item must be recognized which includes the forces that oppose change and forces that promote or drive change (Sutherland, 2013). When members of the healthcare team fully understand the “force field” surrounding change, members can then work on utilizing TPC to strengthen the positive driving forces while breaking down those motives that impede successful change. This is a relevant concept for optimizing short-stay palliative pain management for Veterans at SWVAMC.

Unfreezing began with reviewing the latest short-stay moderate to severe Veteran palliative pain management data with the nursing staff on the CLC, to introduce areas for improvement and onboard staff for promoting positive change. Unfreezing concluded with announcing the plan for a hands-on palliative pain management simulation training, handing out and reviewing the instructions/evaluation sheet and scheduling each of the 23 nurses for one of planned simulation sessions.

Moving consisted of implementing hands-on simulation training (intervention) as developed by the two CHPN RN’s at the SWVAMC, Christopher Rumsey and Elizabeth Hopkins based on certification standards outlined by the HPNA in accordance with the NHPCO (Hospice & Palliative Credentialing Center, 2017). The theoretical concepts of simulation were built on the principles of palliative pain management which includes, believing the patient; helping the patient to take responsibility for their own pain management as much as possible; making an accurate diagnosis of the causes of pain and planning management accordingly; preventing pain where possible by ordering regular and prn medications, starting with simple
oral analgesics and re-evaluating regularly since patient needs change as the illness progresses; and anticipating medication side effects while prescribing regular aperients and prn anti-emetics (Doran, 2005). Procedure was reviewed based on the following: taking a patient history which includes a subjective evaluation from the patient telling the provider about the pain as well as its location (to help diagnose the cause of the pain); exacerbating/relieving factors to include analgesics that make the pain better or worse (previous drugs, doses and side effects of those medications); and pain character (sharp, shooting, electric shock, burning) (Doran, 2005). Function and understanding was reviewed to include how the pain interferes with the patient’s life and what is the patient’s understanding of their own pain. A review of pain scales was completed to include the 0-10 pain scale, Faces, and Pain Assessment in Advanced Dementia (PAINAD), and then incorporated into the simulated curriculum, concluding with the examination of cultural and psychosocial/spiritual issues that contribute to adequacy of pain assessment and treatment.

Refreezing took place after all nursing staff on the CLC passed through the live hands on simulated program. Success was evaluated based on VA short-stay self-reported moderate to severe Veteran palliative pain SAIL data for the SWVAMC for FY18Q3 when compared to the established internal benchmark from FY18Q1/Q2. Comparative statistics were also computed to determine success/failure and process improvement over time.

Doran (2005) implies that continuous re-evaluation is a necessary step in a palliative pain management program. To promote continuous quality improvement (CQI) over time, ongoing quarterly re-evaluation of short-stay palliative pain management effectiveness on the 36 bed CLC by the Nurse Educator for Hospice/ Palliative Care/Rehab is necessary. Training new staff and/or determining whether staff retraining is necessary over time is also warranted.
Project Objectives

The project objectives were to lower short-stay palliative pain scores (improve palliative pain management for Veterans) using combined FY18Q1/Q2 data as a benchmark, increase palliative nursing knowledge, apply knowledge of palliative pain management in a simulation exercise, and evaluate the effectiveness of the simulation exercise to promote CQI over time which is consistent with American Nurses Association standards (American Nurses Association, n.d.). By identifying CQI based on project palliative pain score outcomes, results of pre- and post testing, the fourteen element participant post education evaluation tool, and post implementation focus group feedback, opportunities for future improvements were identified and will likely be put in place.

According to Knopp de Carvalho et al. (2017), educational process in palliative care seems to be essential for nurses as a way of organizing and systematizing patient care with the short-term goal of reducing Veteran centered palliative pain misses at the SWVAMC below the baseline of 30.5%, based on compiled data from FY18 Q1/Q2. Simulation training for palliative care nurses on the CLC was an optimal intervention to promote application of tools and continued growth through education. According to Kirkpatrick, Cantrell, and Smeltzer (2017), the utilization of real actors for patients and family members improved competence for training palliative care nursing professionals. Kirkpatrick et al. (2017) stated that simulation training showed great potential for supporting the development of nursing competence regarding delivery of specialized palliative care. While video education is useful for teaching nurses the principles of proper pain assessment, in order for nurses to reach an adequate skill level in using the pain assessment tool, additional clinical training including interaction and feedback, is required (Pudas-Tähkä, Bjöörn, Salanterä, & Axelin, 2017). Therefore, a hands-on palliative care
simulation for nurses as outlined by principles of practice determined by the NHPCO and HPNA was developed with the primary objective of improving the process for nurses providing palliative pain management for Veterans on the CLC at the SWVAMC as reflected by improved quality care for short-stay patients. Success was measured by examining post-implementation moderate to severe pain data for this patient population versus the established pre-implementation internal benchmark; pre- and post-palliative pain testing scores; results of the evaluation tool; and descriptive participant feedback.

**Review of Literature**

**Literature Search Criteria and Strategies**

According to Timmins and McCabe (2005), a comprehensive and systematic search of the literature is an essential part of the review process. A literature search helps to identify if the research question has been previously explored and helps the student to develop a research question, aim or hypothesis that is clear, focused, and related to his or her topic of interest (Timmins & McCabe, 2005). It also uncovers all relevant knowledge and research methods related to the topic.

For the topic, Short-Stay Palliative Pain Management for SWVAMC, an initial search of the literature was completed utilizing the key words “Palliative Management” in the Cumulative Index of Nursing and Allied Health Literature (CINAHL). This method yielded 907 results. Narrowing the year of publication from 2012-2017 and eliminating magazines, reduced the search to 275 results. Reducing the key words even further to “Palliative Pain Management” with the year of publication from 2012-2017 and eliminating magazines reduced the search to 122 results. Inclusion criteria for the systematic review included need for palliative pain care...
management; VHA palliative care program; role of the palliative pain management nurse; preparedness of palliative pain management nurse; palliative pain simulation education; and continuous quality improvement in palliative pain management.

Need for Palliative Pain Care Management

Current estimates suggest that approximately three quarters of people approaching end-of-life may benefit from palliative care (Etkind et al., 2017; Levine et al., 2017; Chong et al., 2004). Chong et al. (2004) notes that palliative care interventions are necessity to effectively manage palliative pain at the end of life; significantly impacting patient, family, and health care system outcomes. Not to mention Sherman, Matzo, Paice, McLaughlin, and Virani, (2004) suggest that nearly two-thirds of individuals with malignant disease and one-third of individuals who are being treated for cancer experience significant pain. Etkind et al. (2017), states that many more people will need palliative care by 2040 and healthcare systems must now start to adapt to the age-related growth in deaths from chronic illness by focusing on integration and boosting of palliative care across health and social care disciplines. With the rapid increase in demand for palliative care (PC) there are concerns regarding workforce knowledge, shortages, and threats to the resiliency of PC teams (Levine et al., 2017). The increased demand for PC services coupled with the acute shortage of PC professionals, has led to concerns about clinician burnout and threats to long-term sustainability of palliative care programs. With the increased need for palliative care as outlined by Etkind et al. (2017) and Levine et al. (2017) emphasis is being placed on improved training for healthcare professionals.

At the same time, PC was associated with a significantly lower likelihood of Intensive Care Unit (ICU) use and lower inpatient costs (Penrod et al., 2006). Total direct patient costs per day were roughly $300 per patient lower when cared for under a dedicated PC program as
opposed to a traditional acute care setting (Penrod et al., 2006). According to Dicker (2013), developing and implementing palliative care programs are associated with a 40% reduction in ICU costs. Fiscal elements, along with better structured patient care and subsequent outcomes associated with dedicated PC programs suggest both quality and cost incentives for hospitals to develop PC programs. Generating processes that work, putting palliative care in action, and evaluating a plan to assist in monitoring palliative care practices to promote improvement over time is what is needed, especially when it comes to palliative pain management.

Most patients with advanced illness will experience pain in some form, either because of pathological processes or necessary/ experimental treatments designed to manage their condition(s) (Hughes, 2012). Many patients also with cancer and terminal illnesses suffer from poorly controlled pain during the disease process (McHugh, Miller-Saultz, Wuhrman, & Kosharsky, 2012; Chong et al., 2004; Hughes, 2012; Sherman et al., 2004). As improved access to palliative care for patients is promoted worldwide through both private and government initiatives, it is imperative that nurses involved in caring for people with advanced illness have access to didactic and clinical education in multimodal pain management (McHugh et al., 2012). McHugh et al. (2012) and Chong et al. (2004) note that the suffering caused by uncontrolled pain is a significant problem that limits quality of life for patients with a life limiting diagnosis, justifying that pain management for Veterans represents a significant need and adequate management is paramount.

VHA Palliative Care Program

According to Daratsos and Howe (2007), the VA has been a leader in program development and service delivery in palliative care for decades. Commitment to the process of palliative care throughout the VA is suggested as the number of patients who received palliative
care consults more than doubled between FY02 and FY06 in VISN 3 and the proportion of inpatients with a palliative care consultation prior to death increased from 23% in FY02 to 57% in FY06 (Penrod, Cortez, & Luhrs, 2007). This suggests a trend toward an organization-wide initiative to grow and improve the VA palliative care initiative. However, Shreve (2010) notes that disparity of palliative care and its process exists throughout the VA. Shreve (2010) states that the VA, which has a network of interdisciplinary palliative care teams in more than 150 VA medical centers, largely operates its own programs as concerns remain about unmet needs including late referrals and other unmet palliative care needs. This leads to lapses in compliance with patient wishes coupled with unnecessary pain and suffering at the end of life.

The VA Puget Sound Health Care System (VAPSHCS) started a palliative care service (PCS) in October 2001 to provide care for patients with a limited life diagnosis (Back, Li, & Sales, 2005). It was concluded that PCS for 60 or more days prior to patient death was associated with decreased use of acute care hospital resources for terminal patients (Back et al., 2005). Through this study the VA established itself not only as a leader in palliative care and palliative pain management, but verified the fact that dedicated palliative care and palliative pain management is a cost-effective intervention. However, Back et al. (2005) did suggest further randomized studies to strengthen this finding are necessary.

Literature suggests that the VHA is an influential entity for the global palliative care industry (Daratsos & Howe, 2007 & Shreve, 2010). Literature also suggests that a dedicated palliative pain management program is a fiscally responsible intervention for the VA and beyond, which frees up beds on acute units for other Veterans (Back et al. 2005). However, Daratsos and Howe (2007) along with Shreve (2010), conclude that there is no uniform
methodology for practice across the more than 150 VA hospital facilities, leaving a significant opportunity for improvement and trend setting at the SWVAMC.

**Role of the Palliative Pain Management Nurse**

By addressing the pain experienced by patients with life-limiting illnesses, care can be greatly improved as the relief of pain enhances patient quality of life and lessens the stress experienced by family, friends, and caregivers (Sherman et al., 2004). Nursing is front and center for optimal pain management, as the relief of pain and suffering is consistent with the philosophy and goals of nursing as a profession (Sherman et al., 2004 & Oware-Gyekye, 2008). Therefore, optimal patient palliative pain management is a nursing responsibility.

Relief of pain for patients requires that palliative care nurses have knowledge and skill in both pain assessment and the use of pharmacologic and complementary therapies. According to Oware-Gyekye (2008), the nurse serves an essential role in the pain management process. The nurse serves as an educator to the patient and family, empowering them to take control of their own care when appropriate. Oware-Gyekye (2008) goes on to imply that a significant gap exists regarding the ability of nursing as a profession to provide adequate pain management for the global healthcare industry, representing a significant need for immediate improvement. She states that mastering palliative pain management is necessary for nursing and innovation is what is needed in the 21st Century based on knowledge, as education is the key to acquiring expertise (Oware-Gyekye, 2008). Oware-Gyekye (2008) and Switzer (2006) both believe that continuing education is needed for the nursing professional to achieve expert level status in palliative pain management, as it is essential that qualified nursing staff be provided with the appropriate training to enable them to recognize when the Veteran is suffering from pain so the appropriate intervention can be implemented in a timely fashion. Education is the key to mastery as both
Oware-Gyekye (2008) and Switzer (2006) suggest, but more importantly a well-prepared nurse is the key to optimal pain management and palliative care industry wide.

**Preparedness of the Palliative Pain Management Nurse**

Studies have shown that nurses and other health care professionals are inadequately prepared to care for palliative care patients (Prem et al., 2012; McHugh et al., 2012; Pathmawathi et al., 2015; Moir, Roberts, Martz, Perry, & Tivis, 2015; Namasivayam & Barnett, 2016; Thrappel & Rajaram, 2016). Several reasons have been identified including inadequacies in nursing education, absence of curriculum, content related to pain management, and dearth of knowledge related to pain and palliative care (Prem et al., 2012; Pathmawathi et al., 2015; Namasivayam & Barnett, 2016). Thrappel and Rajaram (2016) imply that nurses recognize that the issue of education inadequacy exists and are not satisfied with the amount of understanding that they gain through current professional palliative care initiatives currently in place. Common themes include insufficient content, lack of field work exposure, and lack of continuous education programs/development of basic clinical skills through professional education. Parthmawathi et al. (2015), along with Namasivayam and Barnett (2016) state that proper guidance and information should be given to nursing professionals to improve the quality of pain management and overall patient care.

Namasivayam and Barnett (2016) noted that nurses reported confidence in managing patients’ physical care and providing support but clearly indicated a significant need for additional nursing education and support in all aspects of palliative patient care. This is clear in palliative pain management as patients reported that healthcare providers do not provide them with sufficient information about their treatment and pain management choices, limiting adequacy of delivery (Pathmawathi et al., 2015). According to Pathmawathi et al. (2015), at
times healthcare providers have also been found to disagree with patients regarding their pain intensity, which has been reported as a major factor limiting pain management. This leaves the ability to evaluate and manage pain for the palliative patient in question.

However, Namasivayam and Barnett (2016) note that nurses who completed end-of-life palliative care training were shown to exhibit enhanced knowledge of palliative care practices when compared with nurses who had not participated in a program. Studies suggest that the preparedness of the nursing professional practicing palliative pain management is open to improvement at the SWVAMC and industry-wide (Etkind et al., 2017; Levine et al., 2017). However, while studies note that significant deficiencies for nurse driven palliative care and palliative pain management exist, with additional training, improvements are possible (Prem et al., 2012; McHugh, Miller-Saultz, Wuhrman, & Kosharskyy, 2012; Pathmawathi et al., 2015; Moir, Roberts, Martz, Perry, & Tivis, 2015; Namasivayam & Barnett, 2016).

**Simulated Palliative Pain Education**

Knopp de Carvalho et al. (2017); McHugh et al. (2012) and Wilson, Avalos, and Dowling (2016) imply that a structured palliative care education model is essential for nurses, as a way of organizing and systematizing patient care and nurses who can participate in palliative pain education should do so to develop a more in-depth knowledge of palliative care. Dzulkarnain, Wan Mhd Pandi, Rahmat, and Zakaria (2015); Kirkpatrick et al. (2017); Pudas-Tähkä et al. (2017) and Salam, Saylor, and Cowperthwait (2015) state that simulated learning is an optimal and effective tool for clinical training.

According to Salam et al. (2015), with simulated learning followed by a debriefing period, learners reported an increased level of confidence in their ability to assess and manage acute pain. Participants’ attitudes regarding education to enhance inter-professional
collaboration improved after the simulated training. Learners felt that simulation was an
effective way to develop skills relative to the care of inpatients and is essential to refining their
skills in inter-professional practice (Salam et. al, 2015). While Salam et al. (2015) implied that
utilizing multiple educational methods to include interactive conferencing, didactic sessions, and
faculty-facilitated small group seminars with associated quizzes produced best results,
Kirkpatrick et al. (2017), Dzulkarnian et al. (2015) and Pudas-Tähkä et al. (2017) stated
otherwise.

Kirkpatrick et al. (2017) stated that the use of high-fidelity simulators and/or use of real
actors for patient and family education versus manikins and other forms of education to include
video visualization produced optimal results. According to Pudas-Tähkä et al. (2017), while
video education is highly useful, it is incomplete. They stated that additional clinical training is
required for nurses to reach an adequate skill level when performing palliative pain management
(Pudas-Tähkä et al., 2017). Dzulkarnian et al. (2015) and Pudas-Tähkä et al. (2017) both noted
positive results of stimulated training. However, it was mentioned that results should be treated
with caution based on the limited number of studies published as future research is necessary to
verify benefits of simulated educational initiatives, to promote nurse education for palliative pain
management. Another limitation to simulated training for the palliative care nurse would include
the preparedness and teaching skills of the instructor(s) (Waldron, Hasson, Kernohan, Whittaker,
& McCloughlin, 2008). While simulated training shows great promise, future investigations
examining the relationships between palliative pain care simulation and students’ role in
simulation, instructor preparedness and effects on student knowledge, self-awareness, and
clinical performance are warranted (Kirkpatrick et al. 2017). Also, specifically for palliative
pain management education, future study is needed to capture learners’ biases towards patients’
chronic narcotics use for pain, and assessment and management as it relates to simulated patient/family education. Overall, simulated palliative pain management education for nursing is the optimal intervention to ensure best care practices are communicated, verified, and implemented. **Continuous Quality Improvement in Palliative Pain Management**

Quality improvement is defined as a formal organizational approach to analyzing processes and outcome data and applying systematic efforts to improve performance, leading to measurable improvements in palliative pain care and health status of patients. While Oware-Gyekye (2008) and Switzer (2006) imply that a well-prepared nurse is the key to optimal pain management for palliative care patients and Dzulkarnain et al. (2015); Kirkpatrick et al. (2017); Pudas-Tähkä et al. (2017); Salam et al.(2015); state that simulated learning is an optimal and effective tool for clinical training, it is apparent what is needed to make immediate improvements. However, project success is truly determined by effective QI over time.

Nursing as a profession exists in an open system and is influenced by and must be responsive to society’s needs. Nursing initiatives in the areas of education, practice, research, and health policy are ongoing and represent important contributions toward improving palliative care (Reb, 2003). Lindley, Herr, and Norton (2017) imply that it is essential for palliative care nurse leaders to be directly involved in the QI effort.

Since nurses are integral to the delivery of palliative pain care, their continued participation in the improvement process is pivotal to enhancing quality patient care over time (Lindley et. al. (2017). According to Reb (2003), nursing involvement in QI initiatives helps to improve care in their institutions. Reb (2003) notes, that nurses play a key role in advancing improvements in palliative and end-of-life care through their involvement in education, quality
improvement, and research. She implies that nursing activities may contribute to improved quality of care in managing patient palliative pain in advanced illness over time (Reb, 2003).

Daratsos and Howe (2007) imply that the VA has been a leader in palliative care development and service for decades and developing CQI initiatives is expected from the federal sector industry wide. With the completion of any process improvement project, additional related initiatives will be identified and those with the ability to take on those roles earmarked. Lindley et al. (2017) identified these individuals as palliative care quality champions who are defined as individuals who dedicate themselves to supporting, marketing, and driving change within an organization and beyond. As the stakes for palliative care services and palliative pain management grow, new initiatives are essential and CQI is necessary to promote process improvement over time (Reb, 2003; Lindley et al., 2017).

**Project Design/ Implementation**

**Plan**

The process for delivering optimal palliative pain management as determined by the HPNA in association with the NHPCO for Veterans at the SWVAMC was examined. A process improvement plan was then developed which included a hands-on palliative pain simulation based on verbal and non-verbal patient care scenarios, a palliative pain pre-test/post-test for nurses undergoing training, and a series of follow up focus groups to extract elements of excellence and elements of process improvement.

**Palliative pain simulation.**

The palliative pain management simulation was delivered to the 23 RNs/LPNs working on the 36 bed CLC based on theoretical concepts endorsed by the NHPCO and HPNA. The live simulated training exercise involved the nurse interacting with a SWVAMC approved volunteer.
actor who simulated a short-stay palliative care patient pain scenario, followed a pre-arranged script and stayed in character for the entire time the CLC nurse was present. Each of the three actors recruited were healthcare professionals working in other areas of the SWVAMC. Training was provided by the two CHPNs at the SWVAMC. The group training session took place over four hours in which the line items of the three scenarios were discussed and rehearsed. A period of time for questions and answers was provided.

Each actor followed a pre-arranged script which included both verbal and non-verbal palliative patient care scenarios (Appendix C). Scenarios were original written constructs by the doctoral candidate (author) who is a CHPN. They were based on palliative pain performance items coming directly from the established requirements necessary to become a CHPN as defined by the HPNA and endorsed by the NHPCO (Appendix D).

Each nurse participated in one of three established randomized scenarios (Appendix C). The goal was for the nurse to interact with the simulated short-stay palliative pain patient (actor) just as the RN/LPN would with a real patient. This included performing assessments and/or interventions, evaluating previous interventions for effectiveness, asking the patient specific questions, and involving another staff member/provider, and/or significant other. During the simulated patient interaction, the participant was observed by two CHPN RN’s and up to two additional nursing team members in the identified training cohort. All were taking notes. After the interaction was complete, the participant received joint feedback from both CHPNs on what went right and areas that required process improvement based on the fourteen-item evaluation tool mirrored after CHPN best practice palliative pain management elements (Appendix D). Each individual evaluation item was rated satisfactory, if the participant addressed and performed the task to CHPN standards and unsatisfactory if the task was omitted or incorrectly
addressed. The other team members present repeated the process respectfully, utilizing different scenarios. Upon conclusion, the CHPNs demonstrated each of the three scenarios with the opportunity for a question and answer period.

Each group simulation session was allotted 2.5 hours of time. A total of 27.5 hours was needed over the course of the training period beginning on February 5, 2018 and concluding on March 23, 2018. The intervention was implemented for 20 out of 23 nurses, accounting for off tour shifts, annual and sick leave, and other classifications of missed time. After implementation was complete quarterly SAIL data regarding short-stay Veteran self-reported moderate to severe pain was gathered for the SWVAMC and compared against the established internal benchmark to determine success/failure and CQI opportunities. After implementation of the scripted hands-on simulation for the nurse participants on the CLC in regard to short-stay palliative pain management for Veterans at the SWVAMC a joint evaluation containing no identifiers based on essential palliative pain practices was completed on each participant by the CHPNs and the overall results were analyzed (Hospice & Palliative Credentialing Center, 2017). Each of the fourteen essential items on the palliative pain management evaluation (PPME) worksheet (Appendix D) was reviewed as being satisfactory (addressed and completed by nurse), unsatisfactory (not addressed/ not completed by nurse), or non-applicable (based on the acted-out scenario/ dialogue) for the participant by the CHPN RNs. After all evaluations were complete, a combined “satisfactory” group (unit) average was compiled for each evaluation item. Satisfactory scores equaled 1 point, unsatisfactory equaled 0 points, and a N/A response was omitted from the calculation. The total percentage equaled earned points divided by total points for each of the 14 items. Any item falling below 80% (rating of good) was reviewed for a separate quality improvement (QI) initiative.
Pre-test/Post-test.

Prior to implementation each of the RN/LPN participants were presented with an ANCC endorsed ten question pre-test to measure general palliative pain knowledge (Appendix B). This same test was repeated post-implementation of the hands-on palliative pain simulation after each nurse received CHPN nurse feedback and had time to ask questions and receive answers, occurring immediately prior to the conclusion of the session. Both tests were scored to determine level of knowledge gained by each participant. According to O’Connell et al. (2017) when appropriately applied, simplifying repeated measure outcomes to only two-time measurements (pre-test and post-test) in this instance as well as others is done because the response of educational participants at a certain final point in time has greater clinical relevance when compared to trends over time. Measuring responses at pre and post implementation time intervals confirmed participant engagement, learning, and retention.

Focus groups.

According to Mayer, Nuzzo, and Dagenais (2013) focus groups have been used to identify key barriers and facilitate process improvement to promote CQI over time. Focus groups are essential to gather descriptive (qualitative) data on whether the implementation has been effective. Four weeks after the final simulation session, three one-hour focus groups were conducted on the CLC. One focus group covered the day shift, one covered the evening shift, and the other covered the night shift. The information gathered was used to identify study effectiveness and CQI initiatives moving towards the future.

Goals

The primary goal of the project was to improve short-stay palliative pain management for Veterans at the SWVAMC when compared against recent results prior to implementation of the
hands-on simulation (combined FY18Q1/Q2 data). CQI initiatives were also identified to improve nurses’ functional ability to provide better palliative pain management over time which was based on a pre-test/post-test education model, individual evaluation worksheet, and descriptive feedback. VISN and national results were also viewed to establish an external benchmark for future projects. This was intended to help the facility improve its palliative care offering to Veterans at the SWVAMC. As Daratos and Howe (2007) implied, the U.S. Department of Veterans Affairs (USDVA) has long been a leader in program development and service delivery in palliative pain management. Therefore, process improvement within the VHA is likely to set industry standards for palliative pain management over time.

Cost

Costs associated with the project were negligible. Costs included time for the researcher to develop the scenarios, teach and train actors, implement the palliative pain scenarios to RNs/LPNs on the 36 bed CLC, and gather/analyze subsequent data. All actors recruited were approved hospital volunteers generating no cost for time or labor. Videotaping was not utilized for this process improvement initiative. There were also no overtime costs associated with this project for participating staff members. IRB approval through the SWVAMC and Jacksonville University did not generate any cost with the exception of the researcher’s time to fill out and submit the necessary paperwork.

Ethics

There was not any subject or participant recruitment and the presentation itself was given to a captive audience. Implementation of the project was approved by Jacksonville University and SWVAMC Institutional Review Boards. Self-determination, full disclosure, and consent to participate by hospital actors were obtained (Driscoll & Brizee, 2012). All questions were
answered prior to launching the implementation and consent was not necessary regarding nursing staff as the simulated training was part of mandatory hospital based education.

**Data Analysis Plan**

Quantitative data was analyzed to determine whether project objectives were met. The ANCC pre-test/post-test palliative pain data was analyzed to determine educational improvement for RNs/LPNs and SAIL data was analyzed to determine quality improvement for Veteran pain management. Descriptive analysis was conducted to explain outcomes as determined by the PPME. Monitoring and analysis of data will continue post-implementation as timely and meaningful data about the process and outcomes of a QI project on a regular basis is needed in order to make informed decisions about whether to expand the project, change it or discontinue certain aspects of it (Sylvia & Terhaar, 2014).

Regarding measurement of educational improvement for nurses before and after receiving the pain simulation educational training, a paired sample T-test measuring pre-test / post-test scores was utilized for the 20 participants. A paired sample T-test, is a statistical procedure used to determine whether the mean difference between two sets of observations is zero, where each subject is measured twice, and two observations are produced (Statistics Solutions, 2018). This test is optimal for measuring pre-test/post-test results of a training program and was utilized in this project.

When measuring whether palliative pain simulation made a difference in quality short-stay Veteran patient care based on FY18Q1/Q2 versus FY18Q3 for the SWVAMC, the two-sample Z-test of proportions was utilized. The two sample Z test is an appropriate analysis when the sample size is greater than 30 and variance is known. The end-goal is to examine if a statistical proportional differences exists between two independent samples on a single
characteristic (Statistics Solutions, 2018). From statistical testing magnitude and direction of change was determined for both educational advancement for palliative nurses and quality pain management for Veterans. Once significance was determined both sets of results were compared with confidence.

Each of the fourteen essential items on the palliative pain management evaluation worksheet (Appendix D) was reviewed as being satisfactory (addressed and completed by nurse), unsatisfactory (not addressed/ not completed by nurse), or non-applicable (based on the acted-out scenario/ dialogue) for the participant by the CHPN RNs. After all evaluations were complete, a combined “satisfactory” group (unit) average was compiled for each evaluation item. Satisfactory scores equaled 1 point, unsatisfactory equaled 0 points, and a N/A response was omitted from the calculation. The total percentage equaled earned points divided by total points for each of the fourteen items. Any item falling below 80% (rating of good) was descriptively reviewed for a separate QI initiative.

**Sustainability**

According to Heathfield (2016), in order to sustain a process improvement project over time the nurse leader must have insight which includes being able to create a vision, articulate the vision, drive it to completion, and inspire others, getting team members on board with the idea, in order to promote organizational goals and achieve positive outcomes. The palliative pain simulation was only the first step in the process to educate nurses to provide better pain management for the SWVAMC’s Veteran population. With 14 essential elements as outlined by the PPME for CHPN certification, it is likely that champions will need to be identified to build on project gains and learn from mistakes to promote future installments of the palliative pain
Having initial and continued organizational executive leadership buy in is equally crucial as staff commitment to promote sustainability. This project has been endorsed by nursing executive leadership at the SWVAMC as an essential item to promote just in time improvement for Veteran-centered short-stay palliative pain management. Identifying champions to go above and beyond to promote process improvement, identifying areas of improvement in which to focus on over time, and maintaining support from upper management is how change will be sustained. Implementing a process improvement plan is important but embedding it into the corporate culture is essential. By adding to the pain simulation, implementing it to all new nurses, and offering refreshers it is likely to not only be sustained but grow over time.

However, challenges to sustainability include the CLC not currently having a designated education champion for palliative care, high turnover, and unit based leadership having little to no background in palliative pain management. So, while a succession plan has been put in place and executive nursing leadership supports CQI, it is questionable whether personnel are available and qualified to sustain the initiative over time.

**Results**

**Population**

Of the twenty-three RNs/ LPNs currently employed on the 36 bed CLC at the SWVAMC, twenty participated in the palliative pain management simulation for a participation rate of 87%. Two of the three nurses who failed to participate were absent for an extended period due to the Family Medical Leave Act (FMLA), while the third refused to participate after multiple scheduling attempts. There were eleven sessions, at 2.5 hours each session. Four
sessions were attended by a single participant, where seven sessions were attended by multiple RN/LPN participants.

**Project Outcomes**

**Palliative pain management of Veterans.**

The primary purpose of the project was to improve short-stay palliative pain management for Veterans at the SWVAMC evidenced by SAIL MDS short-stay pain management data for FY18Q3 (post-implementation) versus FY18Q1/Q2 (pre-implementation). While FY18Q1/Q2 data showed a combined 30.5% (67/220) failure in the ability for nursing staff to adequately meet the pain needs for short-stay patients at the SWVAMC, FY18Q3 data showed a 41.4% (58/140) failure rate. At the same time $p = .0354$ and $Z = -2.12$. Upon analysis, with $p <= 0.05$ significance of the data is supported. However, significance supports quality care for palliative pain Veterans getting worse as opposed to better, suggesting that palliative pain simulation for palliative RNs/LPNs does not have a positive effect on quality care for short-stay palliative pain Veterans when comparing FYQ3 data versus FYQ1/Q2 data for the SWVAMC. Overall, project results showed that the pain simulation education did not produce quality improvement for short-stay Veterans at the SWVAMC.

**Palliative pain management knowledge.**

Pre-tests/post-tests are a necessary teacher diagnostic tool for measuring the learning of students and should be utilized as a diagnostic instrument so that teaching can be more effective (Kuehn, 2017). A pre-test/post-test design was implemented to measure nursing knowledge regarding pain management prior to and post the palliative pain simulation implementation for each participant. Shuttleworth (2009) and Kuehn (2017) stated that for many true experimental designs, pre-test/post-test designs are the preferred method to compare participant groups and
measure the degree of change that occurred as a result of a treatment or an intervention. For the project at hand it was necessary to measure participant knowledge pre-implementation versus post-implementation.

The first and last step in the hands-on palliative pain simulation implementation process was for each participant attending each session to take a ten question ANCC endorsed multiple choice pain management examination (Appendix B) to measure knowledge possessed at the beginning and knowledge gained at the end. When comparing all participants over the eleven sessions, sixteen out of twenty participants showed improvement on the post-test versus the pre-test for an 80% improvement rate. At the same time the remaining four participants (20%) performed the same, with one of the four participants receiving a perfect score on the pre-test and post-test. Statistical results also showed positive outcomes for palliative pain education. With DF=19, \( p=0.0001 \) \((p<0.05)\), and \( T= 6.05 \), there is significance, suggesting that palliative pain simulation does have a positive educational effect on RN/LPN nurse participants.

Even though, the pre-test/post-test design was utilized as a basic tool to measure knowledge gained, Shuttleworth (2009) implies that the main problem with this design is that it improves internal validity but sacrifices external validity to do so as there is no way of judging whether the process of pre-testing influenced the results because there is no baseline measurement against groups that remained untrained. However, since the contents of the test for this project was built around elements of the simulation it can be concluded with a reasonable level of confidence that with 80% of the participants improving their knowledge on the post-test, participating in the pain simulation led to increased knowledge for the RN/ LPN contingent.
**Simulation pain competency assessment.**

All twenty participants were evaluated by two CHPNs utilizing fourteen essential palliative pain management items (Appendix D) taken directly from the requirements necessary to become a CHPN as defined by the HPNA and endorsed by the NHPCO (HPCC, 2017). Nursing staff of the 36 bed CLC were able to assess pain, identify its etiology, and type with a satisfactory level of success. The ability to identify factors such as fear, depression, and patient’s experience of pain were only addressed satisfactorily by eleven out of fifteen participants (73%). CLC nursing professionals were also able to identify appropriate route and scheduling and titration of palliative pain medication with a satisfactory result. However, palliative nurses struggled slightly with the utilization of non-pharmacologic interventions such as ice, heat, positioning, distraction, etc. with sixteen out of twenty participants (80%) addressing it satisfactorily during the palliative pain simulation.

There were several areas in which the actors did not adequately role play leading elements which included having nurses identify dosage equivalents when changing analgesics or route of administration, administration of adjuvant medications, and identifying the potential benefit of following complementary and alternative therapies to include Reiki, hypnosis, acupressure, massage, pet therapy, and music therapy. Other areas were addressed well by participants when the palliative pain simulation actor addressed the items. Six out of seven participants (86%) responded to psychosocial, cultural and spiritual issues satisfactorily related to patient pain however, this element was not addressed in thirteen scenarios. Ten out of eleven participants (91%) identified the potential benefit of following non-pharmacologic interventions to include palliative surgery, procedures, radiation, counseling, or psychological therapy on palliative pain management but in nine scenarios this element was not covered by the actor. One
hundred percent of participants assessed for and responded to complications in a satisfactory manner to include side effects, interactions of medication given, and promoted overall patient efficacy.

**Qualitative evaluation of project.**

According to Mayer, Nuzzo, and Dagenais (2013) focus groups have been used to identify key barriers and facilitate process improvement to promote CQI over time. Focus groups are essential to gather “feedback” data on whether the implementation has been effective. Qualitative feedback was procured from a five question focus group questionnaire (Appendix E) delivered to all twenty participants during three in person sessions which covered the day shift, the evening shift, and the night shift. The focus group questions identified what people liked best about the training; least about the training; whether the training enabled the nursing professional to perform their job as a palliative pain nurse to a greater degree; what the participant would do the same and differently in regard to the training; and whether the training sparked participant interest to become involved in CQI palliative pain initiatives for the SWVAMC in the future.

This data was gathered four weeks after the last palliative pain simulation training took place which was determined by both CHPNs as adequate time for CLC nurses to incorporate the palliative pain education into their daily workflow. Out of twenty participants, six completed questionnaires over three focus group sessions for a 30% feedback rate. Participants cited the ability to refresh skills; work with other staff to learn new skills in an interactive, simulated forum; receive valuable feedback and demonstration from CHPN professionals; and the post discussion with immediate feedback as elements of value. Three individuals stated that the training would have been more valuable if it was done during off tour hours, as some individuals
were required to have other nurses cover their patients during attendance. Others cited that they were not allowed to assist their fellow staff member during the individual training sessions and that the experience would have been more valuable if it was a true group effort for each palliative pain simulation scenario. Three cited the length of the session (2.5 hrs.) as being a limiting factor in the learning experience. Also, being “on stage” in front of their colleagues limited the performance of several participants due to nervousness. Unfortunately, there were four sessions where there was only one participant due to no shows/call offs. One participant cited this as a limiting factor. Five out of six participants stated that the palliative pain simulation helped to refresh their skills as well as develop new skills to enhance their job performance moving forward.

All six focus group participants took the time to state suggested enhancements for the training moving forward. One person cited an optimal level of four participants per scenario so multiple participants can benefit from a team building group effort. Also noted, was that the training should be included as part of orientation for all new nurses at the SWVAMC. Another nurse stated that a badge attachment for the PAINAD scale for quick reference would be helpful. Two nurses cited that the training would be equally sufficient if completed in a web based format. Out of the six participants, two expressed interest in being a continuous quality improvement (CQI) champion for palliative pain management at the SWVAMC moving forward. However, out of those two, one stated that he/she is currently too busy with other responsibilities to be a champion at this time.

**Project Objectives**

The desired result was to improve palliative pain management for short-stay Veterans, while enhancing provider educational level, quality of Veteran care, and targeting additional
opportunities to promote CQI over time. It has already been concluded when comparing short-stay palliative pain data from FY18 Q1/Q2 vs. FY18 Q3 data, the primary objective of improved palliative pain management has not been met and has been steadily on the rise since FY18Q1.

At the same time, it can be said that the palliative pain provider education level has improved, with 80% showing post pain simulation improvement on the palliative pain examination. Also, several CQI items have been identified from the evaluation tools. According to the evaluation tool, as a unit the palliative nursing care team is not proficient identifying factors such as fear, depression, and patients experience of pain; palliative nurses struggled slightly with the utilization of non-pharmacologic interventions such as ice, heat, positioning, distraction, etc.; assisting staff to identify dosage equivalents when changing analgesics or route of administration; administration of adjuvant medications; psychosocial, cultural and spiritual issues satisfactorily related to patient pain; the potential benefit of following non-pharmacologic interventions to include palliative surgery, procedures, radiation, counseling, or psychological therapy on palliative pain management and the ability to respond to complications in a satisfactory manner to include side effects, interactions of medication given, and promotion of overall patient efficacy.

Discussion

Final Outcomes

Even though the goal of quality improvement for veteran short-stay palliative pain management at the SWVAMC was not achieved, nursing professionals have been educated and showed improvement regarding knowledge of how to manage short-stay palliative pain management patients. At the same time, CQI initiatives have been identified at the SWVAMC through fall out in certain areas and or lack of coverage noted on the PPME form (Hospice &
Palliative Credentialing Center, 2017). Areas for future improvement include the ability of the nursing professional to identify factors such as fear, depression, and patient experience in regard to pain; proper utilization of non-pharmacologic interventions such as ice, heat, positioning, distraction; and identifying dosage equivalents when changing analgesics or route of administration, administration of adjuvant medication, and identifying the potential benefit of following complementary and alternative therapies to include Reiki, hypnosis, acupressure, massage, pet therapy, and music therapy.

Two palliative pain management champions were also identified to formulate future CQI projects at the SWVAMC, to promote growth in quality care for Veterans requiring short-stay palliative pain management over time. However, it should be noted that only one out of twenty participants (5%) stated that he/she had the time to be a champion for palliative pain management at the SWVAMC. This suggests that CQI over time, enhancements, and sustainability may be in jeopardy.

Limitations

Quality improvement for Veteran short-stay palliative pain management at the SWVAMC fell short and limitations are several. Short-stay self-reported moderate to severe pain results are highly dependent on patient acuity and census (S. Waltrip, personal communication, October 26, 2017). It can be argued that it is much more difficult for the palliative pain nurse to manage high volume, high acuity patients when compared to the inverse. Also, the CLC receives numerous post-operative and chronic pain Veterans which makes pain management difficult (S. Waltrip, personal communication, October 26, 2017). Factors that were not analyzed in this study were how acuity and staffing affect care. Even though nurses have shown through test results to be well educated in palliative pain management after
completion of the project, patient load in relation to acuity may have an effect on adequacy of care. Pain acuity is currently not factored into nurse assignment on the CLC (S. Waltrip, personal communication, October 26, 2017).

Also, Veterans don’t seem to change their answers or respond to education which requires further study (S. Waltrip, personal communication, December 1, 2017). Ability for patients to learn was not addressed in this project and may have affected the study results. Many factors influence a patient’s readiness to learn which includes anything that affects physical or psychological comfort such as pain, fatigue, anxiety, or fear (EuroMed Info, n.d.). Limited Veteran understanding of what constitutes moderate to severe pain can significantly affect the results.

Medication seekers may also report higher pain numbers to receive the higher dose in regard to medication orders written with a dosing range (ex. reported pain 5-6, 1 tab oxycodone; reported pain > 6, 2 tabs oxycodone). Many Veterans have multiple comorbidities, due to unique exposures and have been on pain control medication for years. In order to produce the most accurate assessment and develop the best plan of care, further information must be gathered to include how long the individual has been on pain control substances and if the patient’s pain baseline is at 0 on a 0-10 scale or closer to the moderate pain degree mark. This may affect the quality care results and the overall project outcome.

In regard to the palliative pain educational simulation, quality of the hospital approved actor to include optimal training and his/her ability to adhere to the script is a major component and can be a large-scale limitation to the project’s success. The three actors all were educated healthcare professionals. However, the researcher cannot control mood, effort, or biases. Even though the actors were familiarized with all three scripts it is difficult to keep them from
deviating from the script. This would affect the level of equal education that was provided to each participant. Having more than one designated actor could affect outcome as well.

Nurse participant limitations included interest in the material, desire to engage in the palliative pain simulation, single attendees at multiple sessions, employee turnover, and post-implementation follow through (evaluation). Interest, desire, and single attendees can be controlled to a degree. Nurses were tasked with completing the pain simulation during regular working (tour) hours with many of them trying to take care of patients while attending. Two new employees also started after the implementation was complete, never receiving training. By their results being included into the post-implementation SAIL data, this could significantly skew the results and affect outcome. Also, there was not any post-implementation follow through on how nurse participants were utilizing their new palliative pain management tools in the field. After implementation of the palliative pain simulation was complete the CHPN RN educator (researcher’s partner) took a new job and the researcher and /or identified nurse champions were not available to monitor the “live” post-implementation process. This lack of reinforcement and verification likely had a negative effect on the SAIL data and subsequent outcome.

At the same time numerous items on the HPNA endorsed evaluation tool that fell out were not immediately corrected for, likely affecting the results. With a sample size of 20 participants and the fact that the project took place at only the SWVAMC during an abbreviated sampling period of two quarters prior and one quarter post-implementation, data was limited and unlikely reflective of process improvement or failure. More time is necessary to determine true magnitude and direction of change. These limitations contributed significantly to the short-term
failure of the hands-on palliative pain simulation making an immediate difference for Veterans at the SWVAMC.

**Nursing Implications**

What has been identified in this project will serve the SWVAMC, United States Department of Veterans Affairs (USDVA) and others well over time. A deficiency in short-stay palliative pain management for the SWVAMC compared to the VISN was identified in FY18Q1 and a process improvement plan was put in place in the form of a palliative pain simulation intervention for palliative care nursing staff. Peer based literature identified this methodology as a best practice to promote nursing education and process improvement (Knopp de Carvalho et al., 2017; McHugh et al., 2012; Wilson, Avalos, and Dowling, 2016). Through a pre-test/post-test verifier most nurses that attended the palliative pain simulation at the SWVAMC exhibited improved knowledge regarding palliative pain and enhanced tools to conduct patient care. While the pre-test/post-test design was utilized as a basic method to measure knowledge gained for palliative care nurses it can be implied that the main problem with this design is there is no way of judging whether the process of testing influenced the results because there is no baseline measurement against groups that remained untrained (Shuttleworth, 2009). This is a large-scale nursing implication.

This project served as an initial platform for CQI palliative pain management for the SWVAMC, the nursing department and its Veterans over time. Value achieved from this study and how it impacts nursing process is that it identified and communicated to staff that palliative pain management and execution is a significant problem, a CQI process improvement plan is necessary, and continued education is needed in the future to promote best practices and outcomes for Veterans at the SWVAMC. While this project did strengthen a commitment to a
culture (from executive nursing to staff) which focuses on better palliative pain management for Veterans at the SWVAMC there is still necessary elements of improvement. Manojlovich and Ketefian (2002) state nursing professionalism and hospital environment featuring a strong organizational culture are essential items that can promote improved patient outcomes.

In order to produce success and promote quality improvement for Veteran short-stay palliative pain management at the SWVAMC, over time, numerous things must be done. Acuity must be accounted for and a staffing matrix put in place at the SWVAMC for palliative pain patients. The nursing staff must have adequate amount of time to focus on palliative pain management for each patient to have an optimal chance to achieve effective treatment. Patients learning techniques must be examined and incorporated into the nursing workflow when dealing with palliative pain management. If the nurse cannot properly educate the patient on palliative pain, it limits their effect to provide adequate treatment. Also, patients that rate their pain at a baseline anywhere greater than 0 on a 0-10 scale must be identified for special notation. This one element can skew level of successful short-stay palliative pain management for Veterans. Having one dedicated actor may help to achieve true uniform learning for nursing staff as it is easier to filter out subjective particles which could skew breadth of learning and subsequent outcomes. Most important would be post-implementation field monitoring of nurses performing care on “live” patients. A designated champion or nurse educator is a necessity to evaluate participant delivery and outcomes. With neither a nurse educator nor nurse champion in place results are likely to be negatively skewed. So upon review, the implementation is not optimal from a nursing perspective but from a nursing process perspective the palliative pain simulation delivered is a start and even though immediate improvement cannot be seen, success is likely over time.
What was produced is an effective evaluation piece in the form of the RN/ LPN PPME tool and a module based hands-on palliative pain simulation which can be modified and added to over time. Two potential palliative care champions have also been identified who can assist in developing CQI to the hands-on simulation moving into the future, making it more robust and comprehensive.

With knowledge comes power and this is no different in the field of nursing as it relates to palliative pain management at the SWVAMC. At the conclusion of the palliative pain simulation it can be confirmed that nearly all nurses working on the CLC can perform a comprehensive evaluation of pain from the verbal and non-verbal patient, can identify types of pain, etiology of pain, identify non-pharmacologic interventions and identify appropriate medication to implement in order to provide relief. Elements for improvement include nurses understanding how fear, depression, spiritual, and cultural issues contribute to Veteran Centered palliative pain and how complementary therapies / alternative therapy can provide significant benefit reducing and/or eliminating the need for pharmacologic intervention. It was also discovered that nurses have a challenging time converting dosage equivalents when changing routes of administration. Therefore, education was acquired, skills were mastered but future CQI projects and/or modifications are still necessary to improve holistic management for moderate to severe palliative pain short-stay Veterans at the SWVAMC.

Future Projects

Implementation of the palliative pain simulation must be expanded across the VISN and nationally so it can be determined if “gold standard” elements of the HPNA RN/LPN PPME are being met as an integrated unit, if items must be added, but most importantly if the conclusions supported by this study in regard to nursing education and the effective management of short-
stay palliative pain for Veterans can be validated in a larger forum. According to Sham and Purcell (2014) with larger studies across multiple facilities the power, significance, and success of implementing the palliative pain simulation can be determined more definitively. Therefore, it is necessary that additional studies that involve a greater number of facilities, more nurse participants, and larger amounts of short-stay palliative pain patients be conducted over time to not only validate study results but promote additional CQI projects.

The Primary focus for future projects will center on elements that fell out on the RN/LPN PPME during the pain simulation. Mastering the 14 elements of the HPNA evaluation tool is necessary to promote optimal palliative pain management (Hospice & Palliative Credentialing Center, 2017). The first project will center on nurses understanding how fear, depression, spiritual, and cultural issues contribute to Veteran centered palliative pain and how complementary therapies/alternative therapies can provide significant benefit, reducing and/or eliminating the need for pharmacologic intervention. Nursing education, understanding, application, and execution is necessary for a holistic approach to Veteran centered palliative pain management. It was also discovered that nurses have a challenging time converting dosage equivalents when changing routes of medication administration. A nursing seminar will be implemented to address this item as dosage conversion is not only applicable to palliative pain management but integral to patient safety. Therefore, larger, broad based studies will be pursued to verify the project’s outcomes while focusing on educating nurses on items which appeared to have fallen out, to promote CQI and advancement regarding palliative pain management for short-stay Veterans at the SWVAMC. Over time a new nurse educator, along with palliative pain care champions will develop a more comprehensive palliative pain simulation, building off the lessons learned from the first-generation model.
Other elements to focus on to produce a more comprehensive palliative pain simulation offering include establishing a nurse staffing matrix for palliative pain care patients, studying how to best incorporate palliative pain patients’ ability to learn into the training, adjusting for baseline above 0 on a 0-10 pain scale, improved uniformity of the acted script, and offering the mandatory training during off tour hours to improve focus and retention for nurses. With a more robust, comprehensive module, improved learning, quality patient management, and short-stay palliative pain SAIL statistics at the SWVAMC are likely to improve over time.

Conclusion

Dedicated educational preparedness for nurses along with best processes and practices are necessary to promote optimal care for Veterans requiring palliative pain management at the SWVAMC. Project deficiencies in short-stay palliative patient pain management for Veterans at the SWVAMC were identified and expanded upon, best practices in palliative care researched and defined, and a quality improvement plan put into place with subsequent recommendations for future initiatives to promote excellence. Hands-on palliative pain management simulation has proven to be an effective educational tool to enhance nurse knowledge and quality of practice at the SWVAMC. While immediate improvement in short-stay palliative pain management for Veterans at the SWVAMC cannot be realized, nurses have been educated and CQI has been identified which will likely lead to a more robust, comprehensive plan for expanded educational opportunities and improved Veteran centered short-stay palliative pain management at the SWVAMC.
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Appendix A

Nursing (RN/LPN) Palliative Pain Patient Simulation

2.5 HR Training Exercise

Dear CLC/ Palliative Care Team Member:

- Today, you will be participating in a live simulated “hands on” training exercise that involves interacting with a volunteer actor who will be simulating a short-stay palliative care patient with a diagnosis of pain. The actor will be following a pre-arranged script and will stay in character for the entire time you are present. You will be participating in one of three randomized scenarios.

- Your goal for this scenario is to interact with the simulated short-stay palliative pain patient just as you would with a real patient. This may include performing assessments and/or interventions, evaluating previous interventions for effectiveness, asking the patient specific questions, or involving another staff member/provider/ significant other.

- You will be given a written scenario that outlines the Veteran’s situation. Please read over the outline and ask any questions prior to starting because once we start you are expected to remain engaged in the role.

- You will be observed by two Certified Hospice and Palliative Care (CHPN) RN’s and two additional team members during the simulated patient interaction, all of who will be taking notes. After the interaction is complete you will receive joint feedback from the CHPNs on what went right and areas needing improvement.

- After all three nursing team members complete one scenario each, the CHPN’s will demonstrate proper protocol regarding each scenario with time for follow up questions
from team members. Elements of collective un-satisfactory performance by the three person cohort will be emphasized in the demo.

- A short 10 question multiple choice pre and post palliative pain assessment will be completed by nursing participants pre and post simulation.
- The total time for this training exercise will be 2.5 hours.

Participant Schedule:

A. Pretest (10 minutes)

B. Verbal/ Nonverbal scenario (30 minutes each)

- Introduction to the training (2 minutes)
- Review of the Randomized Scenario (3 minutes)
  - Review of the CHPN evaluation tool
- Palliative Pain Scenario: Interaction with patient actor (20 minutes)
- Debrief/Feedback (5 minutes) (Evaluation tool)
  - How did it go?
  - What did you do well?
  - What could you do better?
  - What will you do differently next time?

C. CHPN Demo Scenarios (1 Verbal/ 1 Nonverbal) (40 minutes)

D. Posttest (10 minutes)
Appendix B

Pre-Test /Post-Test:

Palliative Pain Management

Please answer the following (10) multiple choice questions below by circling the best response to each. You will have 10 minutes to complete this examination.

Score: /10

1. A 45-year-old patient who reports pain in the foot that moves up along the calf says: "My right foot feels like it is on fire." The patient reports that the pain started yesterday, and he or she has no prior history of injury or falls. Which components of pain assessment has the patient reported?
   A. Aggravating and alleviating factors.
   B. Exacerbation, with associated signs and symptoms.
   C. Intensity, temporal characteristics, and functional impact.
   D. Location, quality, and onset.

2. A 53-year-old patient who is receiving ibuprofen (Motrin) 400 mg twice a day, for chronic, low back pain develops lower-extremity edema. The pain management nurse suspects that the edema is caused by:
   A. a decrease in renal function.
   B. a low creatinine level.
   C. an increase in glomerular filtration rate.
   D. an increase in plasma proteins.
3. A 73-year-old patient with cancer is in the hospital for pain control and rates pain as a "12" on the Numeric Rating Scale of 0 to 10. Thirty minutes after receiving IV pain medication, the patient reports no pain relief. The pain management nurse calls the physician for additional orders for pain medication. The nurse's actions demonstrate:

A. analgesic titration.
B. empathy.
C. independence.
D. patient advocacy.

4. Which behavioral therapy works best to relieve pain with muscle tension and spasms in patients who are anxious about their pain?

A. Distraction.
B. Hypnosis.
C. Relaxation.
D. Stress management.

5. The palliative pain management nurse follows the recommended protocol for preventing constipation when starting a patient on opioids by:

A. adding bulk fiber to the diet.
B. giving the patient enemas as needed.
C. increasing fluids and exercise.
D. using a bowel stimulant and stool softener.
6. Which non-pharmacologic intervention is difficult to use with older adults who are cognitively impaired?

A. Aromatherapy.
B. Distraction.
C. Guided imagery.
D. Heat application.

7. The palliative pain management nurse notices a male patient grimacing as he moves from the bed to a chair. The patient tells the nurse that he is not experiencing any pain. The nurse's response is to:

A. clarify the patient's report by reviewing the patient's nonverbal behavior.
B. confronting the patient's denial of pain.
C. obtaining an order for pain medication.
D. supporting the patient's stoic behavior.

8. When assessing an infant for pain, the palliative pain management nurse recognizes that:

A. a lack of a physiologic or behavioral response means a lack of pain.
B. if something causes pain in an adult, it can cause pain in an infant.
C. the parent's observations should not be included in the patient's assessment of pain.
D. Wong-Baker FACES Scale is an appropriate assessment tool.
9. The main responsibilities of the palliative nurse case manager on the interdisciplinary, chronic pain management team are to:
   A. assess level of function; design a therapeutic exercise plan; and monitor functional progress.
   B. provide a comprehensive, psychosocial evaluation; implement cognitive behavior interventions; and teach problem-solving techniques.
   C. provide ergonomic training; develop pain management strategies to apply in the workplace; and facilitate the return to work.
   D. review the medical history; monitor medications; and provide education for the patient and family.

10. The pain management nurse is assessing a palliative patient's readiness for discharge, by determining the level of comfort the patient prefers. The nurse completes this portion of the pain assessment by asking about the patient's:
   A. aggravating and alleviating factors.
   B. intensity of pain.
   C. onset of pain.
   D. pain goal.

Answers:
1. D
2. A
3. D
4. C
5. D
6. C
7. A
8. B
9. D
10. D

Source: 2018 American Nurses Credentialing Center
(http://www.nursecredentialing.org/PainMgmt-SampleTest2014)
Appendix C

Participant Scenarios

Palliative Pain Management Scenario #1

**RN/LPN Scenario**

- Transfer from ICU prior to shift change. It is 8am and you have received report from the ICU nurse and are walking in to perform your initial assessment as the CLC nurse. In report, you learned that your patient, Mrs. Walker, who has a diagnosis of cancer with bone and brain metastasis, has received a dose of PRN Roxanol 20mg/ml 0.5ml 1hour ago for breakthrough pain (6/10).
  - **Scheduled Medications**
    - Roxanol 20mg/ml 1ml q4 hr SL (0400, 0800, 1200, 1600, 2000, 0000)
  - **As Needed**
    - Atropine gtts 1% 2 gtts q 4hr prn excessive secretions
    - Roxanol 20mg/ml 0.5ml q2 hr SL prn pain or sob
    - Lorazepam 0.5mg tab PO/SL q 4hr prn anxiety
    - Haldol 0.5mg tab PO/SL q 4hr prn delirium/agitation
    - Phenergan suppository 12.5mg q 6hr prn nausea or vomiting
    - Tylenol 650mg suppository q 8hr temp >100 prn

Palliative Pain Management Scenario #2

**RN/LPN Scenario**

- New admission prior to shift change. You received report and are walking in to perform your start of shift assessment. In report you learned that your patient, Mr. Walker who has
liver cancer with metastasis to bone and brain, received the following medications:
Roxanol 20mg/ml 0.5ml SL and 600mg ibuprofen 1 hour ago (for pain of 9/10). He had his scheduled MS Contin 60mg 4 hours ago.

- **Scheduled Medications**
  - MS Contin 60mg po BID (0800, 2000)
  - Senna Plus 2 tablets po BID (0800, 2000)

- **As Needed**
  - Roxanol 20mg/ml 0.5ml SL q 2 hr prn pain or SOB
  - Haldol 0.5mg po q 6 hour prn delirium or agitation
  - Ibuprofen 600mg po tid prn
  - Zofran (solutab) 8mg po bid prn

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**Palliative Pain Management Scenario #3**

**RN/LPN Scenario**

- New admission prior to shift change. You received report and are walking in to perform your start of shift assessment. In report you learned that your patient, Mr. Perez who has pancreatic cancer received the following: Roxanol 20mg/ml 1.5ml SL 30 minutes ago (for pain 10/10) and is gaging on sips of water. Mr Perez also had his scheduled MS Contin 60mg 4 hours ago.

- **Scheduled Medications**
  - MS Contin 60mg po BID (0800, 2000)
  - Senna Plus 2 tablets po bid (0800, 2000)

- **As Needed**
- Roxanol 20mg/ml 1.5ml SL q 2 hr prn pain or SOB
- Haldol 0.5mg po q 6 hour prn delirium or agitation
- Ibuprofen 600mg po tid prn
- Zofran (solutab) 8mg po bid prn
Dear Participant:

Below is an evaluation of your performance on the palliative pain simulation. These items come directly from the requirements necessary to become a Certified Hospice and Palliative Nurse as defined by the Hospice and Palliative Nurses Association and endorsed by the Hospice and Palliative Care Organization (HPCC, 2017)

Key:

Satisfactory: Addressed and Completed by nurse

Unsatisfactory: Not addressed / Not completed by nurse

N/A: Based on the acted out scenario/ dialogue

Date:
Pain Management

A. Assessment

1. Performed comprehensive assessment of pain (e.g., verbal vs. non-verbal)

Satisfactory: □

Unsatisfactory: □

N/A: □

Comments:
2. Identified etiology of pain

Satisfactory: □

Unsatisfactory: □

N/A: □

Comments:

3. Identify types of pain or pain syndromes

Satisfactory: □

Unsatisfactory: □

N/A: □

Comments:

4. Identified factors that may influence the patient’s experience of pain

(e.g., fear, depression, cultural issues)

Satisfactory: □

Unsatisfactory: □

N/A: □

Comments:

B. Pharmacologic Interventions

1. Identified medications appropriate to severity and specific type of pain

(e.g., routes, initiation, scheduling)

Satisfactory: □
2. Titrated medication to effect using baseline and breakthrough doses

Satisfactory: □

Unsatisfactory: □

N/A: □

Comments:

3. Administered analgesic medications

Satisfactory: □

Unsatisfactory: □

N/A: □

Comments:

4. Identified dosage equivalents when changing analgesics or route of administration

Satisfactory: □

Unsatisfactory: □

N/A: □

Comments:

5. Administered adjuvant medications
(e.g., NSAIDS, corticosteroids, anticonvulsants, tricyclic antidepressants)

Satisfactory: □

Unsatisfactory: □

N/A: □

Comments:

C. Non-pharmacologic and Complementary Interventions

1. Responded to psychosocial, cultural, and spiritual issues related to pain

Satisfactory: □

Unsatisfactory: □

N/A: □

Comments:

2. Implemented non-pharmacologic interventions (e.g., ice, heat, positioning, distraction, etc.)

Satisfactory: □

Unsatisfactory: □

N/A: □

Comments:

3. Identified the potential benefit of the following non-pharmacologic interventions (e.g., palliative surgery, procedures, radiation, counseling, or psychological therapy)

Satisfactory: □
4. Identified the potential benefit of the following complementary and alternative therapies (e.g., Reiki, hypnosis, acupressure, massage, pet therapy, music therapy)

Satisfactory: □

Unsatisfactory: □

N/A: □

Comments:

D. Evaluation

1. Assessed for and responded to complications (e.g., side effects, interactions) and promoted overall patient efficacy

Satisfactory: □

Unsatisfactory: □

N/A: □

Score

# Satisfactory:

# Unsatisfactory:

# N/A:

Instructor Comments:
Appendix E

Focus Group Questions

Palliative Pain Management Nurse Simulation

Please answer the following 5 questions regarding the palliative pain management “hands on” simulation education that you received.

1. What did you like best about the training?

2. What did you like least about the training?

3. Did the training enable you to perform your job as a palliative pain nurse to a greater degree (please explain the impact it had on your direct patient care approach)?

4. What about the training would you do the same? What would you do differently?

5. Did the training spark additional interest to become involved in continuous quality improvement palliative pain initiatives on the unit (please explain)?