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# Impact of Hospice Nurse Education on After-Hours Calls and Visits

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**IMPACT OF HOSPICE NURSE EDUCATION ON AFTER-HOURS**

**CALLS AND VISITS**

by

**CHERYL SLACK**

**EVIDENCE-BASED PRACTICE PROJECT REPORT**

Submitted to the College of Nursing and Health Professions

Valparaiso University,

Valparaiso, Indiana

in partial fulfillment of the requirements

For the degree of

**DOCTOR OF NURSING PRACTICE**

2015

*Cheryl Slack* 5/11/15  
Student Date

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Advisor Date

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## DEDICATIONS

To my son, Michael, who demonstrates disciplined scholarly inquiry.

To my son, Matthew, who reminds me that life is not always serious.

To my study buddies and discussion board/writing circle partners, thank you for your support and encouragement.

To my network of friends who respected my Friday night social time and supported my “nose to the grindstone” time.

In memoriam to those that have touched my life and shared their individual end-of- life journeys with me, reminding me of the holistic, collaborative roles of hospice nurses:

Uncle Ralph

MOM

Jack

Tammie

Ruth's family

Gina

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Thank you to Sigma Theta Tau International Zeta Epsilon chapter for a Research Grant, which supported my attendance at the Train the Trainer conference by the End of Life Nursing Education Consortium.

## **PREFACE**

Life is a journey, not a destination. Ralph Waldo Emerson

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## Abstract

Medicare-certified hospice home care agencies must provide a 24/7 on call system for after business hours patient concerns. An agency identified a problem with a high volume of after-hours hospice calls for symptom management. How these calls are handled impact patient and family outcomes and satisfaction. A literature review provided evidence that hospice nurse education and appropriate telephone support improves symptom management, enhances family support, provides a sense of security, reduces anxiety, and promotes comfort. Providing hospice nurse education on symptom management supported the goal of this evidence based practice (EBP) project to reduce the family/caregiver need for frequent on-call after-hour calls. Three modules from the End of Life Nursing Education Consortium (ELNEC) were presented with case studies to address pain and symptom management. Benner's model From Novice to Expert and Larrabee's Model for Evidence-Based Practice Change guided this EBP project. Twelve nurses started the EBP project, and six nurses completed all educational sessions and the pre and post quizzes. Questions were taken from ELNEC and the Hospice and Palliative Nurse Association *Core Curriculum* exams. Six hundred and sixty after-hours calls were analyzed before, during, and for three months after the educational sessions were completed. Five hospice nurses managed 90% of the 660 calls that were analyzed. All of them started the educational intervention; four of them completed the sessions and the post quiz. A paired-samples *t* test found no significant statistical difference between the pre and post quizzes ( $t(5) = 0.00, p > .05$ ). However, the mean number of after-hours phone calls decreased 22% with a 7.4% decrease in calls for symptom management after the educational initiative. Further application of this EBP project includes support for hospice nurse education for improving caregiver satisfaction on the new Medicare Consumer Assessment of Healthcare Providers and Systems (CAHPS) surveys.

*Keywords: hospice nurse education, after-hours, on-call, symptom management*

## CHAPTER 1

### INTRODUCTION

#### Background

People prefer to die at home. They wish to avoid hospitalization and instead experience a comfortable, peaceful, quality of life during their final days. Our aging population with multiple chronic illnesses will likely need care from others to achieve the good death that they desire in their homes. Hospice nurses can provide anticipatory guidance to patients and families as they experience their final journey at the end-of-life.

**Hospice Care.** In 2012, nearly 1.6 million patients and their families received hospice services in the United States, according to the National Hospice and Palliative Care Organization (NHPCO). The number of patients and families receiving hospice care has steadily increased during the past decade. The NHPCO (2013) reports the average length of hospice service is 71.8 days; 35.5% of patients die or are discharged within seven days, and 11.5% remain on hospice services longer than 180 days (pp. 3-4).

Modern hospice care came to the United States from London in the 1970's and became a Medicare hospice benefit (MHB) in 1983. To be eligible for hospice care, a physician must certify that the patient has a terminal diagnosis and a life expectancy of six months or less. Hospice care is provided by an interdisciplinary team of healthcare professionals and strives to meet the needs of terminally ill patients and their families in their place of residence. The hospice patient may reside in a private home, a long-term care facility, or a comprehensive care retirement community. The hospice interdisciplinary team is responsible for responding to the patient's and family's needs 24 hours a day, seven days a week, through an after-hours on-call system during evenings, weekends, and holidays.

A hospice patient may be admitted to a general inpatient facility for pain and symptom management related to the terminal illness that cannot be resolved at home with intensive

management. The on-call nurse collaborates with the hospice physician or primary care physician when implementing changes in the plan of care. Hospice nurses with specialized education about pain and symptom management may decrease the need for after-hours calls, visits, and/or transfers, while promoting appropriate care for the patient at home.

**Palliative Care.** Hospital based palliative care began in the United States within the hospice movement in the 1980's. During the past two decades, the palliative care movement has expanded its timeline and scope of practice emphasizing quality of life. Palliative care promotes pain and symptom management for persons with severe, advanced, acute, and chronic illnesses, in any setting, using an interdisciplinary team approach. Palliative care patients do not need to be in their terminal phase of illness. Palliative care has become the umbrella philosophy of care, with hospice care being delivered during the terminal phase of illness, often the final six months of life.

The National Consensus Project (NCP) for Quality Palliative Care released Clinical Practice Guidelines in 2004, 2009, and 2013. The NCP (2013) defines primary palliative nursing as providing "patient and family-centered care that optimizes quality of life by anticipating, preventing, and treating suffering" (p. 9). Palliative care throughout the continuum of illness involves addressing the physical, intellectual, emotional, social, and spiritual needs as well as facilitating patient autonomy, access to information, and choice.

### **Statement of the problem**

Hospice nurses are expected to be the experts in end-of-life pain and symptom management. Terminally ill patients may have a variety of symptoms and distress possibly requiring an after-hours call or visit for management. Continuing education is necessary to maintain expertise grounded in evidence-based practice for symptom management during routine hospice visits and after-hours contacts.

**Literature supporting the need for the project**

**The Institute of Medicine reports.** The Institute of Medicine (IOM) has supported end-of-life care and nursing education for two decades. In 1997, the report *Approaching Death: Improving Care at the End of Life* proposed health professionals become better prepared to care for those who are dying and to understand that these are not patients for whom "nothing can be done." The landmark IOM (2010) report on *The Future of Nursing: Focus on Education* with the Robert Wood Johnson Foundation (RWJF) focused on transforming nursing education. The IOM (2010) was very committed to ensure that nurses engage in life-long learning "to gain the competencies needed to provide care for diverse populations across the lifespan" (p. 5) including end-of-life care.

Recently, the IOM (2014) released their recommendations for improving quality of life through the end-of-life in the report *Dying in America: Improving Quality and Honoring Individual Preferences Near the End of Life*. The document supports person-centered and family-oriented care with improved communication skills and advanced care planning to honor patient choices and preferences. There is ongoing strong support for professional education and development to include palliative and hospice care in health care curricula with an emphasis on inter-professional collaboration.

The IOM (2014) core components of quality end-of-life care include appropriate referral to hospice care when the patient prognosis is six months or less. The care must include round-the clock access to coordinated services including pain and symptom management. End-of-life care must be updated based on the changing needs of the patient and family.

**Other supporting literature.** In 1997, the American Association of Colleges of Nursing (AACN), supported by the RWJF, conducted a roundtable of expert nurses to establish competencies and curricular guidelines for undergraduate nursing students for end-of-life nursing care. The AACN and the City of Hope National Medical Center established the End-of-Life Nursing Education Consortium (ELNEC) in 1999 to develop core curriculum educational

modules addressing critical aspects of end-of-life care. The current ELNEC copyrighted modules and courses are meant to serve as continuing education resources for hospice and palliative care nurses and include pain and symptom management. The modules are updated regularly to reflect current evidence-based practices (EBP) in palliative care and pain and symptom management.

The National Quality Forum (NQF) Consensus Report (2007) identified thirty-eight preferred practices to improve palliative and hospice care services. Pertinent to this project are the steps that include provide continuing education, adequate training, and clinical support. Hospice care professionals should be appropriately trained, credentialed, and/or certified in their area of expertise. At the end-of-life, the NQF prefers that health care providers are able to recognize, document, and educate the family about the active dying phase and signs and symptoms of imminent death fulfilling patient preferences and wishes when possible. Administering adequate dosages of analgesics and sedatives to achieve patient comfort at the end of life is an important preferred practice.

In 2011, the National Institute of Nursing Research (NINR) conducted a summit *The Science of Compassion: Future Direction in End-of-Life and Palliative Care Research* to assess gaps in knowledge in key domains of palliative and end-of-life research. Many barriers were identified including provider lack of knowledge, skill, and time for adequate symptom assessment and management. The NINR remains committed to build a collaborative research base including conducting interdisciplinary prospective longitudinal investigations (Aziz, Miller, & Curtis, 2012, pp. 384-385, 387).

White, Coyne & White (2012) surveyed members of the national Hospice and Palliative Nurses Association (HPNA) to assess their views on core competencies of end-of-life care and their recent continuing education. More than 31% of the respondents indicated they felt adequately prepared to effectively care for their patients and continued to rate pain and symptom management as the top needed core competencies. Eighty percent of the

respondents had seven or more hours of continuing education in the preceding two years (p.133).

Recent international studies found a range of usage of after-hours on-call telephone support from 10% to 66% of the hospice patient population (Brumley, Fisher, Robinson & Ashby, 2006; Phillips, Davidson, Newton, & DiGiacomo, 2008; and Roberts, Tayler, MacCormack & Barwick, 2007). Jiang, Gentry, Pusateri, & Courtney (2012) found that 25.7% of the after-hours calls were for symptom management. All authors found caregivers felt comforted and supported by the telephone support from the knowledgeable palliative care nurses.

### **Data from the clinical agency supporting the need for the project**

The hospice administration requested education to improve pain and symptom management of hospice patients during after-hours calls and visits provided by the hospice nurses. The usual hospice education consists of a few days of partnered visits that include a review of the traditional hospice plan of care and written documentation. During the first six months of 2014, 360 after-hours calls were received from 130 patients/families. More than 25% of the after-hours calls in the project agency were for symptom management.

### **Purpose of the EBP project**

The purpose of this evidence-based project was to provide educational modules on end-of-life final hours, pain management, and other symptom management in an attempt to improve hospice nurses' knowledge, competence, and confidence in anticipating changes in patient needs. The goal was that nurses would discuss anticipated changes in the patient's plan of care during routine visits to minimize the necessity of after-hours calls and visits for pain and symptom management.

**Evidence-based practice.** Melnyk and Fineout-Overholt 's (2011) six-step evidence-based practice process was used to strive for high quality healthcare and best patient outcomes (p. 7). After searching for the strongest levels of evidence, the literature was critically appraised. The keys to best practices are an integration of the best available evidence from the literature

with the professional's assessment and expertise. Then, the patient's and family's preferences, values, wishes, needs, and abilities to participate in the shared decision-making and care-giving processes were incorporated.

**Identify the compelling clinical question.** The compelling clinical question asks whether hospice nurse continuing education can make an impact on the number and frequency of after-hours calls and visits for pain and symptom management.

**PICOT format.** Melnyk and Fineout-Overholt (2011) stated the PICOT format is based on patient population, intervention of interest, comparison intervention, outcome, and timeframe of intervention. A PICOT question was developed to address these parameters. In the adult hospice patient population, what is the impact of selected (ELNEC®) modules, compared to current education, on hospice after-hours on-call requests, in the three months following the education?

### **Significance of the project**

During home visits, nurses can implement an education plan that includes anticipatory guidance for what patients and families can expect at the end-of-life. The information may include anticipated changes in symptoms and the non-pharmacological and pharmacological interventions that families may provide. Nurses provide answers to the question of "What might happen next?". Hospice and palliative care nursing standards include modifying the plan of care, interventions and expected outcomes according to situational and status changes of the patient. Nurses must be able to initiate communication about essential issues including prognosis, goals of care and imminent death (American Nurses Association and HPNA, 2014). Education and preparation for death is paramount for the patient and family. Families feel supported and confident when they have knowledge about implementing the treatment plan that respects the patient wishes and promotes comfort. Then, their need to access after-hour on-call nursing staff should be minimized.

## CHAPTER 2

### THEORETICAL FRAMEWORK, EBP MODEL, AND REVIEW OF LITERATURE

This evidence-based project uses Benner's Stages of Clinical Competence as a framework to address nursing clinical competence in implementing end-of-life plans of care. Larrabee's revised Model for Evidence-Based Practice Change outlines the steps for formulating, implementing, and evaluating the EBP project. The literature search is described and outlined, and the selected articles are critically analyzed in this chapter.

#### **Theoretical Framework: Benner's model From Novice to Expert**

Dr. Patricia Benner's model From Novice to Expert that includes the stages of clinical competence was the foundation for this evidence-based project. According to Benner's model, it takes nurses time, experience, and mastery to gain the competence of an expert. Continuing nurse education is one intervention to support nurses on their journey from novice to expert. Saver, Havel, and Alfaro-LeFevre (2014) believe that competency "remains a key component of excellent nursing care. Competency gives us confidence to care for our patients" (p. 55). The hospice agency wants to promote excellent hospice care; therefore, it needs to assure hospice nurse competency and expertise.

Benner applied the Dreyfus model of skill acquisition to nursing. "The Dreyfus model posits that in the acquisition and development of a skill, a student passes through five levels of proficiency: novice, advanced beginner, competent, proficient, and expert" (Benner, 1984, p.13). "Skilled clinical nursing practice includes both skilled nursing interventions and clinical judgment skills" (Benner, 1984, p.14). Benner (1984) also believes "skilled nursing requires well-planned educational programs" because "experience-based skill acquisition is safer and quicker when it rests upon a sound educational base" (p. XIX).

St. Luke's Medical Center in Milwaukee, Wisconsin used Benner's model and consultation to form a clinical development model that included the three themes of caring, clinical

knowledge and decision-making, and collaboration. Excerpts from authors, Benner (1984), Haag-Heitman (1999), and Saver, et al. (2014) will be included in the following description of stages of competency.

**Novice.** Benner (1984) believes nursing students or new graduates with little or no professional experience are novices. The novice may also include an experienced nurse transferring to a new area of nursing care. Rules, policy and procedures, and standards are followed; novices require guidance in applying knowledge to the clinical situation (pg. 21). “Novices have a very limited ability to predict what might happen in a particular patient situation” (Saver et al., 2014, p. 55). Mauk (2010) found “that educational interventions increase knowledge in a specialty area” (p. 22). The nurse experienced in other clinical areas can apply hospice education to the new clinical environment and propel their level of competency.

**Advanced beginner.** Nurses (and some new graduates) are able to recognize recurring, meaningful components of a situation based on their educational knowledge. They can complete required tasks. However, they need practice in discriminating normal versus abnormal assessments and need assistance in setting priorities. A clinical preceptor is used to point out all aspects of a situation and assist in clinical judgment (Benner, 1984, p. 25).

**Competent.** A competent nurse can complete task oriented, standardized care plans with involvement with the patient and family. Competent nurses are able to respond in a conscious and deliberate manner to a changing patient status. They are able to develop relationships within the health care team and delegate appropriately (Haag-Heitman, 1999, pp. 56-57). When Benner (1984) first introduced her levels of competency, a nurse with competent behaviors had worked in the same situation for two to three years. Nurses had a mastery of specific skills, were able to plan for long-range goals, and recognize patterns in clinical situations (p. 25). Today, with strong orientation and preceptor-guided programs, competency may be achieved in six to twelve months, possibly less for very experienced nurses in a new environment.

**Proficient.** The proficient nurse integrates theoretical knowledge and experience, is able to appropriately consult with others, persists in obtaining timely responses, and views patient situations holistically. Proficiency includes knowing when the plan of care must be modified in response to a change in patient status. The proficient nurse remains engaged with families while establishing boundaries of therapeutic relationship and advocacy (Haig-Heitman, 1999, pp. 56-57).

Benner (1984) believes proficient nurses benefit from the use of case studies and are able to cite their experiences related to the case study. The proficient nurse is able to reflect on successful outcomes that increase satisfaction and on situations that need improvement. Proficient nurses are able to recognize early changes in patient status and respond appropriately. Benner states proficient performance is found after the nurse works with the same population for three to five years. Today, with the higher acuity of patients in all settings, proficient performance time may be shortened (pp. 30-31).

**Expert.** The expert nurse has a strong intuitive grasp of the entire patient situation based on knowledge and critical thinking. Expert nurses have extensive experience with a holistic, flexible, and innovative approach. They no longer rely on rules or guidelines, but will use analytical tools when they lack experience in a situation. They recognize very subtle changes in patient assessment and have a sense of “knowing what is possible”. Benner (1984) cautions, “not all nurses will be able to become experts” (p. 35). She describes the expert nurse as the one who can facilitate the patient’s sense of personhood, meaning, and dignity.

Haig-Heitman (1999) describes the expert nurse as one who instinctively responds to rapidly changing situations with a calm presence and coordinates the health care team for the best patient/family outcome. Expert nurses provide consultation and can enhance the knowledge of others (pp. 56-57).

**Application of Benner to EBP project.** Hospice nursing is a specialty field of nursing that includes a changing and deteriorating patient status with intense emotional involvement of

family and caregivers. Hospice nurses need to demonstrate competency in therapeutic communication, comprehensive assessment skills, and proficiency in managing the changing patient care plan that includes standardized suggested orders. Education and experience promote higher levels of competency.

In this EBP project, nurses were asked to indicate their perceived competency level based on statements developed by Benner (1984) and Haig-Heitman (1999). A few educational sessions may increase knowledge and assessment skills, reinforce critical thinking, and advance decision-making skills. The reinforced critical thinking may enhance the nurse's ability to provide "anticipatory guidance" about symptom management to the patient and family during routine, scheduled visits. Patients and families will feel prepared, resulting in a decreased need to contact hospice nurses after-hours. When changes are needed in a patient's plan of care, the hospice nurse will be able to proficiently make the adjustments, further decreasing a need for repeated calls.

### **Model for Evidence-Based Practice Change**

In 2004, the Hospice and Palliative Nurses Association (HPNA) supported the development and implementation of evidence-based nursing practice in hospice and palliative care. This evidence-based project utilizes the Model for Evidence-Based Practice Change by Larrabee, which she modified from the original Rosswurm and Larrabee Model for Change to Evidence-Based Practice. The modified model reflects Larrabee's experience in leading nursing quality improvement programs that include planned changes.

**Six steps to evidence-based practice.** Larrabee's model facilitates evidence-based practice by the following six steps (a) assess the need for change in practice, (b) locate the best evidence, (c) critically analyze the evidence, (d) design practice change, (e) implement and evaluate change in practice, and (f) integrate and maintain change in practice (Larrabee, 2009, p. 23). These steps mirror the EBP project and quality improvement processes.

The need for a change in practice is assessed by collaboration with a team of key stakeholders, collecting internal and external data about current practice, and developing a population-intervention-comparison-outcome-timeframe (PICOT) question (Ciliska et al., 2011, p. 255). A literature search is conducted for the best available evidence in clinical practice guidelines, systematic reviews, single studies, expert opinions, and critical appraisal articles. A rigorous search strategy through multiple databases was planned and conducted with inclusion and exclusion criteria. Critical appraisal forms and checklists were used for critical analysis (Ciliska et al., 2011, p. 256).

The strength of the evidence was evaluated. An evidence table was constructed to assist in synthesis of the literature. The EBP project manager analyzed the feasibility, benefits, and risks of a practice change based on the evidence. During the fourth step, the practice change was designed including needed resources such as personnel, equipment, materials, and/or forms. An implementation plan, timeline, and outcome indicators were formulated. Educational sessions and handouts were included in the plan (Ciliska et al., 2011, p. 256).

The fifth step in the process was implementing and evaluating the change in practice. During implementation, processes, outcomes, and costs were evaluated and conclusions and recommendations were initiated. Minor adjustments to the implementation plan would be made based on verbal feedback from participants and other key stakeholders. After implementation is completed, the data were analyzed with recommendations to administrative leaders to adapt, adopt, or reject the change in practice (Ciliska et al., 2011, p. 256-257).

The final step of the model integrates and maintains a change in practice by sharing recommendations with all stakeholders and incorporating the change in practice into the standards and procedures of care. Internal and external presentations and publications about the EBP project conclude the dissemination of the change process. (Ciliska et al., 2011, p. 257).

**Application of Larrabee Model to the EBP project.** The hospice administrator, clinical supervisor, and quality improvement manager met with the Doctor of Nursing Practice (DNP)

student to discuss a need to improve pain and symptom management at the end-of-life especially after business hours. They did not share any documents or data but reported a perceived excess of after-hours calls for ongoing pain and symptom management. Analysis of after-hours calls with a review of documentation in the patient record was initiated.

The DNP project manager completed steps two and three independently with librarian assistance. The literature review process was difficult since there was limited literature pertaining to hospice after-hour calls and symptom management. However, there was extensive hospice and palliative care literature that includes clinical practice guidelines and standards of care that was utilized during after-hours calls. The literature was critically appraised and the strength of the literature was determined. Education and training of after-hours staff for symptom management was a common thread throughout the literature. The professional organizations, HPNA and ELNEC, support ongoing continuing education for nurses. The DNP project manager attended a Train-the-Trainer ELNEC conference in preparation for providing educational sessions on pain and symptom management and is designated as an ELNEC Trainer, nurse educator.

The fourth step of designing the practice change and educational plan was completed in collaboration with the agency clinical supervisor and quality improvement manager. Valparaiso University Institutional Review Board (IRB) and the hospice agency executive director approved the EBP project design; the hospice agency did not have an IRB. The hospice leaders confirmed the topics to be presented and determined the best dates and times available for nurse participation. The clinical supervisor notified all staff nurses through email of their expected attendance at the educational sessions. The DNP project manager posted flyers with the topics, dates, and times in prominent staff locations. After-hours calls were analyzed for seven months before the project development, during the implementation of the education modules, and for three months after the educational sessions were completed to assess for a change in practice outcomes.

The DNP project manager, using questions from ELNEC© and HPNA examinations, developed a twenty question pre/post quiz. A project consent form and demographic survey including age representation of workplace generation, years of nursing and hospice experience, hospice certification, and indications of level of perceived competence was developed.

Step five of project implementation by the DNP project manager took place during October and November 2014. All hospice nurses were expected to attend the educational sessions with voluntary consent and participation in the EBP project. Staff nurses expressed positive verbal feedback after each class about the value of the sessions that encouraged application of their knowledge with patients and families.

The outcomes of the EBP project were communicated to the internal stakeholders and the hospice leadership for evaluation and possible integration of the practice change. Results were disseminated throughout the agency, at the College of Nursing and Health Professions (CONHP) of Valparaiso University, and the hospice community through poster presentations and publications. A time of celebration was planned with the hospice agency to acknowledge staff participation in the EBP project.

**Strengths and limitations of the EBP Model for the EBP project.** The strengths of the Larrabee Model for Evidence-Based Practice Change were the simplicity, familiarity, and directness of the model. It follows the nursing process with assessment, planning, implementation, and evaluation and is easily applied to hospice care. This evidence-based practice model was selected by HPNA as a foundation for evidence-based nursing in hospice and palliative care. The model also follows the prescribed College of Nursing and Health Professions (CONHP) EBP process. The only limitation of the model was the limited literature available that discusses the Larrabee Model for Evidence-Based Practice Change.

### **Literature Search**

A comprehensive literature search was conducted to find the best evidence for hospice symptom management for after-hours calls and visits. The following sections include a

description of sources examined for relevant evidence, levels of evidence, and an appraisal of evidence.

**Sources examined for relevant evidence.** The literature search was conducted through the use of databases provided by the Valparaiso University Christopher Center Library Services. Due to limited results for high levels of best practice evidence, the CONHP librarian was consulted several times to aid in the search process.

**Search engines.** The databases searched included the Cochrane Database of Systematic Reviews, Johanna Briggs Institute, Academic Search Complete, the Cumulative Index to Nursing and Allied Health Literature (CINAHL), HealthSource: Nursing/Academic edition, MEDLINE, Proquest Nursing and Allied Health Source (Proquest), and PubMed. The Agency for Healthcare Research and Quality guidelines were also explored.

**Key words.** The key search words and phrases that were successful in searching this topic included “hospice nurses” or “hospice care nurse\*” and then including “on call” or “telephone support” or “after-hours care” or “triage”. Adding additional layers of search to include hospice symptom management for end-of-life symptoms or best practices did not yield any additional articles.

**Inclusion criteria.** The inclusion criteria included adult hospice patients, age 18 years and older, and articles written in English. Articles were accepted from the United States, United Kingdom, British Columbia, and Australia, which were countries that have strong and well-established hospice and palliative care programs. The timeline was 1997-2015, because 1997 is when AACN first published recommended competencies for end-of-life nursing care.

**Exclusion criteria.** Articles were excluded if they were exclusively about cancer patients, hospital-based hospice units, pediatrics, or exclusively about physicians practicing in primary care or emergency services. Countries, such as Jordan, where palliative care efforts were expanding, were excluded after initial consideration.

**Expert opinions.** This EBP project was reviewed with doctorally prepared nurses with experience in hospice practice. ELNEC is a consortium of palliative care experts who develop and update educational modules for nurses to provide end-of-life care. The intervention of hospice education using ELNEC© modules to promote competency of hospice nurses in providing symptom management during after-hours was supported.

**Levels of evidence.** Melynck and Fineout-Overholt (2011) define seven levels for ranking the hierarchy of evidence. The highest level is considered a level one rating with evidence from a systematic review or meta-analysis of random controlled trials. Level two is a single randomized control trial, while level three is a control trial without randomization. Level four evidence includes cohort and case-control experimental designed studies. Level five includes systematic reviews of descriptive and qualitative studies, while level six is a single descriptive or qualitative study. Quasi-experimental or non-experimental designs are included in the level six rating. The bottom level seven rating of evidence is from opinions, or reports from authorities or expert committees such as clinical practice guidelines from specialty professional or governmental organizations.

The Johanna Briggs Institute (Chen, 2014) and the Agency for Healthcare Research and Quality (McCusker, et al., 2013) literature address best practice recommendations for adult palliative care that include symptom management guidelines. However, after-hours telephone support is not addressed within those guidelines or levels of evidence. A Cochrane Collaboration Intervention Review evaluated the effectiveness of home palliative care services, but did not specifically address after-hours telephone support (Gomes, Calanzani, Curiale, McCrone and Higginson, 2013).

**Appraisal of relevant literature.** Eight articles met the inclusion criteria pertaining to hospice and palliative after-hours care and were analyzed using the Critical Appraisal Skills Programme© (CASP) Checklists. A quasi-experimental study represented a level three rating

for Melnyk and Fineout-Overholt's level of evidence; patients were assigned to the control or experimental group based on the last digit of their medical record number. Seven articles represented a level six rating for Melnyk and Fineout-Overholt's level of evidence. A variety of study designs existed, including, an action research project, a phenomenological interview study, two retrospective studies, and three mixed-method studies.

**Level III evidence: A quasi-experimental design.** Fontaine & Rositani (2000) compared two different models of hospice after-hours nursing care in a California health maintenance organization for two months. The usual use of contract agency nurses was compared to the use of experienced staff hospice nurses. Fontaine & Rositani (2000) used Benner's Model focusing on knowledgeable, experienced expert nurses for their ability to "effectively manage rapidly changing situations" and to "respond more appropriately" (pp. 3, 13). The purpose of the study was to compare costs, documentation of nursing quality, and patient/family satisfaction.

Patients were alternately assigned to either the control or experimental group by the last digit of their medical record number. They were given the corresponding after-hours telephone number to use when needed. Results compared the percentage of cases for the control and experimental groups positive or negative responses to the survey.

Costs were higher for the control contract nurses and they had a mean 0.5 more days in the hospital per patient than the experimental group of employed hospice nurses. Quality of care was not statistically different for five out of six components. However, the experienced hospice employees had significantly higher documentation of the follow-up plan than the control contract nurses.

Patient and family satisfaction responses were similar for timeliness of responses and overall timeliness. All other areas of patient and satisfaction had higher satisfaction scores for the experimental experienced hospice employees. These areas included the nurse's understanding the patient problem and providing clear information and services that were

requested. The experimental group of experienced nurses was more respectful, courteous, and delivered the promised follow-up care more than the control group of contract nurses. Based on the results, the organization discontinued the use of contract nurses for after-hours hospice nursing care and continued to use their own experienced nurses.

**Level VI evidence: An action research project.** Brumley, et al. (2006) wanted to improve access to unstable palliative care patients' clinical information during after-hours care. They believed effective palliative care needs to be anticipatory for clinical events and possible crisis situations. Patient preferences for end-of-life care need to be respected and communicated between the designated general practitioner, palliative care nurses, and the on-call hospice nurse.

Following Lewin's action research process, thirteen Australian general practitioners and seven hospice nurses changed the verbal handover process to a computer Microsoft Word document. The new document and all other relevant patient records were shared and available to the hospice on-call nurse's Palm Pilot™. The new process was used for 53 adult hospice patients who required a call-out during the following two months. The general practitioners found the information valuable.

The palliative nurses reported improved and immediate access to patient information with the Palm Pilot™, especially the expectations of care document. They also saved time from traveling to the office to retrieve records and provided quicker response time to patients. "Nurses felt more confident with assessments, which led to patients' outcomes being improved due to nurses' increased knowledge" (Brumley et al., 2006, p. 30). The success of this action research project will be continued with a Palm Pilot™ provided to each nurse with access to necessary patient information that may be updated daily in anticipation for use after-hours.

The project from Brumley, et al., (2006) supports communication and access to patient information as important tools for proficient after-hours nursing care. The nurses' confident knowledge reportedly improved patient outcomes during after-hours. Nurses would be able to

implement interventions that respected the patient and family's expectations of care at the end-of-life.

**Level VI evidence: A phenomenological interview study.** Carlebach and Shucksmith (2010) conducted qualitative in-depth interviews, focus groups, and an open-ended questionnaire with a convenience sample of 27 participants. The participants were English specialist palliative care nurses, patients, and their carers. The study was part of an evaluation of an out-of-hours telephone support service. Both reactive and proactive follow up phone calls were made by the telephone service to patients and carers. Special palliative care nurses from a local hospice answered calls. "This study adds to the evidence base for the value of out-of hours services, with users' and patients' voices coming through to support the value of a service which offers individualized and tailored care and support at this most difficult time" (Carlebach & Shucksmith, 2010, p. 449).

The study introduces the benefits of proactive telephone support as part of after-hours care. The patients felt supported and reassured when they were called "at a certain time mutually convenient for both the patient and the service" (Carlebach & Shucksmith, 2010, p. 446). Proactive calls could also be made as a follow up method after a change in the plan of care, to validate effectiveness of the intervention, or if ongoing changes need to be instituted.

**Level VI evidence: Retrospective designs.** Jiang, et al. (2012) retrospectively examined a year of after-hours calls for a hospice serving eleven counties in Pennsylvania. Over 4400 calls were coded to identify a call timing pattern, call reasons, and the predominant nursing interventions. "Triage services were utilized most frequently to request assistance with signs and symptom control (25.7%), to report death (17.8%), to request a home visit (15.3%), and to inquire about medication (14.7%). The top nursing interventions included updating case managers or supervisors about the needs for follow-up (29.5%), coordinating home visits (20.5%), instructing caregivers or patients on how to control new signs and symptoms (19.8%), and resolving medication-related problems (12.3%)" (Jiang et al., 2012, p. 343).

Patient and caregiver satisfaction or nurse perspectives about after-hours calls were not included in this study. The authors intended to use the results to design “proactive interventions to improve care, and enhance training for new and existing hospice triage nurses” (Jiang et al., 2012, p. 343). This study validates the timing of after-hours call patterns with the need for symptom management and assistance with medication administration. This evidence supports education for symptom management as a highly needed priority.

Roberts, et al. (2007) reported on an innovative partnership in British Columbia to serve the after-hours needs of hospice and palliative care patients and their families. This large geographical area of 364,000 square miles has an average census of 750 hospice and palliative care patients living in rural, rural-urban, or urban settings. Two years of calls were analyzed after the partnership was implemented to improve around the clock access to support during end-of-life care.

The British Columbia Ministry of Health Services supported the project between Fraser Health Hospice Palliative Care, a home-based program, and NurseLine, a provincial 24/7 tele-triage and health information call centre. NurseLine is a leader in information and communication technology, while Fraser Health is an expert in community-based palliative care services. Hospice and palliative care patients were given a 24/7 phone number which was triaged by a RN at NurseLine, who listened to the concerns and completed a telephone assessment. After determining if the patient had new or changing symptoms, the NurseLine RN contacted the Fraser Health palliative care clinical resource nurse who was on-call, relayed the assessment, and then assured the patient that the on-call nurse would be contacting them soon.

The on-call nurse called and determined the patient’s current condition and possible options after consulting the patient database. She instructed and supported the caregiver in medication administration and prepared for further end-of-life changes. The caregiver is reminded to call again, as needed, for further telephone assistance. Both the NurseLine nurse

and the on-call nurse documented in the patient database for access and follow up by the local home care nurse during usual business hours (Roberts, et al., 2007, p. 2-3).

Outcomes of the innovative partnership revealed NurseLine provided the needed support for 49% of the calls, with 51% requiring further support from the on-call nurse. The symptoms that required assistance were pain, delirium, nausea, and shortness of breath. Twenty per cent of the calls handled by the on-call nurse required further consultation or new orders by a physician. Only 9% of the calls received by the on-call nurse required an emergency visit within the next 24 hours. Demand for after-hours service by on-call nurses decreased by 50% because of the success of the HealthLine triage support, reducing the need for hiring additional on-call nurses. The after-hours telenursing model will be implemented in other Canadian provinces to improve access to quality end-of-life care (Roberts et al., 2007, p. 27).

The Roberts et al. (2007) article confirms knowledgeable, trained nurses can provide telephone support at the end-of-life. It also confirms the symptoms that require assistance in management from the after-hours nurse. A reduction in call frequency because of appropriate triage of needs of patients and families makes the program cost-effective.

**Level VI evidence: Mixed-method studies.** Tan, O'Connor, Miles, Klein, and Schattner (2009) used a follow up comparative analysis of perspectives about gaps in care from palliative care nurses and general practice physicians in Victoria, Australia. The researchers used questionnaires with structured and open-ended questions to “explore the challenges of providing after hours care for people receiving palliative care at home” (Tan et al., 2009, p. 15).

Results validated the need for educational tools and palliative care training for health professionals and respite carers. Increased after-hours access to individual plans of care and specialist palliative care consultants and nurses was suggested. Multidisciplinary communication about palliative care patients advanced care plans and after hours services were also needed in the mixed population region. In addition, the researchers recommended

evaluating the use of locum physicians, which are prevalent in 83% of urban and semi-rural areas but in only 6% of rural-remote areas.

Nurses identified additional barriers to after-hours palliative care to include after-hours nurse safety, limited access to medications, and limited availability of consultative physicians. Additional palliative care trained nurses for home visits and after-hours telephone service were among the seven strategies identified for improving after-hours palliative care.

Phillips, et al. (2008) described a mixed method evaluation of an after-hours telephone support service in a rural, remote part of the mid north coast of Australia. Generalist nurses in a Multipurpose Service were trained and given a procedure manual with evidence-based palliative care standards and access to patient electronic health records. Ten percent of the registered palliative care patients and their caregivers used the after-hours telephone support service during the twenty months of the study. Reasons for calls included reassurance about medication usage, anxiety, and other symptom management. Only six percent of the patients who called were referred to the emergency department.

The mixed-method evaluative design was completed twenty months after telephone support service was implemented. All stakeholders and participants who had had used the service were encouraged to give their feedback. The process included consultation from administrators and policy makers, a review of case notes, audit of call sheets, a review of quality assurance activities, and minutes of the rural palliative care project meetings. Interviews were conducted with the specialist palliative care providers, general practitioners, family members and the generalist nurses involved in providing after hours telephone support (Phillips et al., 2008, p.16).

Phillips et al. (2008) reported “staff conveyed their admiration for the after-hours nurses’ capacity to problem solve and think laterally to ensure that patient and caregiver needs were effectively addressed” (p. 17). Protocols were followed, and the nurses used the electronic health record. Caregivers expressed their gratitude for the support and advice they received

when they needed it, mostly during the evening hours of 6 pm to midnight. The cost of the after-hours telephone support was reasonable to be absorbed into the current operating budget.

The study by Phillips et al. (2008) provided further evidence that nurses must be prepared to address symptom management during after-hours telephone calls. The mixed-method results also guided the plans for additional symptom management education.

Wilkes, Mohan, White, and Smith (2004) introduced and evaluated a pilot study of an after-hours telephone support service for palliative care patients and their families in rural New South Wales, Australia. Based on the success of the pilot study, the area health service continued funding for the service and extended into other regions.

The mixed method evaluation conducted eight weeks after introducing the after-hours telephone support service included an audit of the telephone logbook and text analysis of a reflective journal completed by a variety of health professionals using the palliative care services. Telephone interviews were conducted with four out of the twelve nurses who provided the on call services.

Twelve calls were received during the eight-week pilot study requesting assistance with symptoms of vomiting, pain, agitation, use of oxygen, and coping with end-of-life issues. The nurses reported the workshop that was conducted prior to the initiation of the after-hours telephone support was supportive in preparing them to be on call; they recommended annual updates. Hospital admissions were reduced due to the support of the after-hours telephone support service. Area health professionals requested additional marketing of the service despite being notified by a letter with a refrigerator magnet (Wilkes et al., 2004, p. 96).

This final small study by Wilkes et al., 2004, further confirms the evidence that telephone support is helpful to palliative care patients and their families. Pain and other symptom management are the reasons for the calls especially during the evening hours. Annual workshops and educational sessions on symptom management assist nurses to provide anticipatory guidance when on-call.

**Construct Evidence-based Best Practice**

The best practice evidence was determined after completing the appraisal of the relevant literature. The synthesis of the literature overwhelmingly supports after-hours telephone support as a valuable and beneficial manner to meet the needs of palliative and hospice care patients, their families and caregivers.

**Literature synthesis.** A variety of nurse staffing models were presented to provide after-hours telephone support. The best model included experienced and trained nurses. Access to the patient information through an electronic health record improved communication with patients, caregivers, and other health professionals. End-of-life training assisted nurses in their comprehensive phone assessment and clinical decision-making skills. Symptom management areas that were requested from caregivers included pain, anxiety, delirium, nausea, vomiting, shortness of breath, medication administration assistance, and end-of life changes. Nurses recommended annual education updates and valued support from other palliative care nurses and multidisciplinary team members.

The nurses' knowledge in symptom management assists in proactively providing individualized anticipatory care that can improve outcomes and satisfaction. Reactive and proactive telephone calls provide appropriate interventions, comfort, and support to caregivers. Many issues can be addressed by phone instruction and support during after-hours calls that occur mostly in the evening. Telephone support is cost-effective and decreases emergency room visits and hospitalizations for symptom management. It supports the patients' wish to remain in the place they call home at the end-of-life.

**Palliative care education.** Bugge and Higginson (2006) concluded in their limited systematic review of palliative care education that, "palliative care needs to adopt multifaceted education" (p. 110). They supported Malcolm Knowles adult learner principles in palliative care education. These principles include adults' sense of a need to know and information that is individually tailored and relevant to current practice.

Adriaansen and von Achterberg's (2008) palliative care education literature review also concluded the "greatest effects on nurses are attained with a mix of didactical methods, and a combination of multiple themes, where, during a period of several weeks, these aspects are integrated with practical experiences that can be reflected upon" (p. 482). They identified palliative care education, that included communication training, provided a positive effect on patient satisfaction.

Waling, Fineberg, Brown-Saltzman, and Wenger (2011) evaluated their practical, interactive, interdisciplinary brief education presentation on end-of-life symptom management protocol implemented at a tertiary hospital (p. 309). The majority of nurses improved their knowledge, attitude, and comfort with the protocol after attending the hour-long program. This reference supports effectiveness of shorter programs about practical end-of-life information.

McGuire, Grant, and Park (2012) conducted a literature search on palliative care caregivers prior to the National Institute of Nursing Research Summit on End-of Life and Palliative Care. They confirmed the majority of the studies are low level evidence descriptive qualitative and quantitative studies usually in a single setting with a retrospective secondary analysis. One of the main interventions was education and support for symptom management. The authors concluded the science on caregivers is in the early state and encourages development of intervention studies for caregiver outcomes. Knowledgeable nurses can facilitate caregiver knowledge and support for their difficult role at the end-of-life.

A national program to improve nursing continuing education about end-of-life care was initiated by a collaborative effort between the City of Hope National Medical Center and the American Association of Colleges of Nursing. The resulting End-of- Life Nursing Education Consortium (ELNEC©) curriculum was launched in 2001 with eight modules. The use of the modules with the copyrighted slides and materials by the ELNEC Trainer are intended to be used during in-person classes. Additional creative teaching strategies and use of case studies are highly encouraged during the education sessions (ELNEC, 2014).

The evidence-based project implemented three ELNEC® modules over three weekly dates. The selected modules reflected the agency administration's request for further education on pain and symptom management to assist the nurse in managing after-hours calls. Titles for the modules were *Final Hours*, *Pain Management*, and *Symptom Management*.

***Best practice to answer the clinical question.*** Improving hospice nurses' knowledge about pain and symptom management will assist them during routine, scheduled visits and after-hours calls and visits. The resulting improved comprehensive assessment skills will assist them in selecting interventions and further their "anticipatory guidance" education for caregivers (Roberts et al., pp. 2-3). When caregivers feel knowledgeable, prepared, and supported, they will be less likely to use the after-hours call system or call repeatedly.

## CHAPTER 3

### IMPLEMENTATION OF PRACTICE CHANGE

#### **Purpose of EBP project**

The goal of this evidence-based project was to improve hospice nurses' knowledge, competence, and confidence in anticipating changes in patient needs at the end-of-life. The improved knowledge and confidence will assist nurses in implementing the appropriate pain and symptom management plan of care. By anticipating patient and family needs during routine hospice home visits, the necessity for after-hours calls and visits for pain and symptom management may be minimized.

The PICOT question focuses the EBP project: in the adult hospice patient population, what is the impact of selected (ELNEC®) modules, compared to current education, on hospice after-hours on-call requests, in the three months following the education? Authors Ferrell and Malloy (2014, p. Intro-1) believe that nurses' knowledge in symptom management assists in proactively providing individualized anticipatory care that can improve outcomes and satisfaction.

**Participants and setting.** The setting for this evidence-based practice project was a home hospice agency in Northwest Indiana with an average daily census of approximately 30 patients. Registered and licensed practical nurses who conduct routine and on-call visits and/or respond to after-hours phone calls participated in the educational sessions at the home hospice agency.

**Outcomes.** The after-hours on-call payroll log and the answering service call log were the initial sources of information about documented calls to the hospice agency when the office was closed. These calls were tabulated including the date, timeframe of the call, identification of who called, purpose of call request, and the nurse's response to the call. The patient record and other agency records were reviewed for hospice admission date, death or discharge date, and

terminal diagnosis. Additional extrapolated call information included whether the call occurred within three days of hospice admission or death/discharge. The nurse's response to the calls was identified from the on-call payroll log or the individual patient chart.

Nurses' knowledge was evaluated by an identical 20-question quiz completed before and after participating in the educational intervention. Additional nurse information was obtained through the demographic sheet.

**Intervention.** A nursing continuing education series was planned to promote hospice nurse knowledge and competency in managing end-of-life symptoms. The educational intervention was three modules taken from the ELNEC© course. Specifically, *Final Hours*, *Pain Management*, and *Symptom Management* modules were presented using the ELNEC© PowerPoint slides and handouts. Each module was scheduled for a two hour time period to include time to complete consent forms, demographic forms, and pre or post quizzes. The slides were presented using an interactive discussion format, incorporating recent patient scenarios as case studies.

**Planning.** The Executive Director of the home hospice agency met with the DNP student to discuss the need to decrease the volume of after-hours calls and visits with an improvement of symptom management. An additional meeting was conducted with the clinical hospice administration to further identify issues about symptom management and select the best dates and times for educational sessions.

The DNP student attended a Train-the-Trainer conference, sponsored by ELNEC, in Minneapolis, Minnesota in July 2014. Three out of the eight ELNEC© modules were selected to meet the urgent educational needs of the nurses for improved symptom management. The DNP student reviewed the PowerPoint slides and other resource materials. Relevant handouts were selected and copied for the participants prior to the scheduled sessions.

**Recruitment of participants.** The hospice administration determined all hospice nurses would be required to attend the educational sessions; nurses were notified about the scheduled sessions through staff email. The DNP student posted a flyer announcing the EBP project on the refrigerator in the staff break room and on the designated wall in the staff meeting room. The flyer identified the titles, dates, and times of the educational sessions, which were repeated twice at times chosen by the hospice administration. The DNP student personally encouraged attendance and participation whenever present at the agency. All nurses at the home hospice agency were eligible to attend the educational sessions; however, their participation in the EBP project was voluntary.

**Data.** Primary sources of data for this EBP project included nurse participant demographics and the pre and post quiz results. Nurses were asked to indicate their workforce generation, total years of nursing and hospice experience, years of experience at the current agency, hospice certification status, highest degree in nursing, employment full-time equivalent, and to select a description of their competency in hospice nursing practice.

Secondary data sources included the nurse on-call payroll log of calls and patient chart information. Information extrapolated from the on-call log and other agency records included the date and time of call, identification of who called, purpose or reason for the call, and possibly the nurse intervention or response to the call. Additional documentation of information located in the patient chart included the date of hospice admission, date of death, terminal diagnosis, and nursing patient care documentation.

**Measures and their reliability and validity.** The pre and post quizzes possessed content validity because the questions were taken from published questions from the HPNA *Study Guide for the Generalist Hospice and Palliative Nurse* and the End of Life Nursing Education Consortium.

Intra-rater reliability for coding was established after completion of data collection. Using a table of random numbers, a 10% sample of coded calls from November and January were reviewed. The discrepancies were evaluated, and the coding was revised.

**Collection.** After completing the consent form, nurses completed a demographic survey and the pre quiz at their first educational session. Nurses completed the post quiz after attending the third educational session.

The DNP student obtained, coded, and entered on-call data into an Excel spreadsheet, which was later transferred to SPSS® format. On-call logs were reviewed from January 2014 through February 2015. Initial data from January through April 2014 represented calls under a previous hospice administration. Additional preliminary results from May through July 2014 represented a time of administration transition. The data from August through November 2014 represented the time period when the EBP project was planned and implemented. The final period December 2014 through February 2015 represented the three months after the educational intervention was completed.

Patient names were immediately number coded, and the DNP student secured the coded information as required. The time of call was coded either as Monday thru Friday 5:00 pm until 12:00 am or overnight hours of 12:01 am until 8:00 am. The options were during daytime hours on Saturday, Sunday or a holiday 8:00 am to 4:00 pm or evening/overnight hours from 4 pm until 7:59 am. The date of hospice admission was recorded and the call date was evaluated as either within or not within three days of the hospice start of care. Similarly, the hospice discharge date was recorded and evaluated as within or not within three days of the hospice discharge. Discharge criteria were further coded as expired, discharged from hospice care, revocation of the hospice plan of care, or still alive at the end of the EBP project.

Terminal diagnoses were categorized either as cancer, cardiovascular, respiratory, dementia, or other that included renal failure, sepsis, or amyotrophic lateral sclerosis, etc. Indicators of who called included, the patient, family members, equipment vendors, pharmacies,

extended care facility staff or other, such as referral sources. Reasons to call during after-hours were coded either to report a death, for symptom management, other patient concerns, end-of-life issues, medication questions, requests for medication refills, durable medical equipment issues, hospice staff scheduling or a new referral. The on-call nurse responses were coded as phone instructions, a home visit for symptom management, changing medications, organizing a transfer to the inpatient unit, making arrangements for delivery of medications, durable medical equipment or supplies, contacting the physician for a change in the plan of care, or completing a home visit at the time of death.

**Management and analysis.** The on-call data were collected by hand, entered into an Excel spreadsheet and transferred to the SPSS® format. A paired *t*-test was run on the pre and post quizzes. Descriptive analysis was completed on the on-call data including frequencies and percentages of the number and time of calls, calls within three days of admission or discharge, terminal diagnoses, identification of the callers, reason for calls, and response to calls. The mean frequencies were compared between the preliminary time period, project development and implementation time period, and post education intervention. Kruskal-Wallis *H* tests were conducting comparing the on-call data categories across the different timeline groups.

**Protection of human subjects.** The EBP project manager successfully completed the National Institutes of Health course on Protecting Human Research Participants. The IRB of Valparaiso University approved the EBP project including the procedures to protect human subjects. All nurses at the home hospice agency were eligible to attend the educational sessions; however, their participation in the EBP project was voluntary.

The consent form stated there were no physical or legal risks to participating in the educational sessions. Psychological and social stresses, including test anxiety, were a possibility while completing an assigned patient care workload and attending the educational sessions in the same day. These risks were to be minimized by the Clinical Supervisor by assuring adequate staffing and payroll reimbursement for education hours. Hospice

administration supported advancing nurse knowledge with a capacity to improve hospice patient symptom management.

Patient and nurse data were de-identified, coded and recorded as aggregate data. The coded patient names and nurse documents were transported and stored by the DNP student using a Health Insurance Portability and Accountability Act (HIPAA) locked document bag. Original nurse consent forms, demographic forms, quizzes, and coded patient names were stored in a designated locked filed cabinet in the DNP student's office.

## CHAPTER 4

### FINDINGS

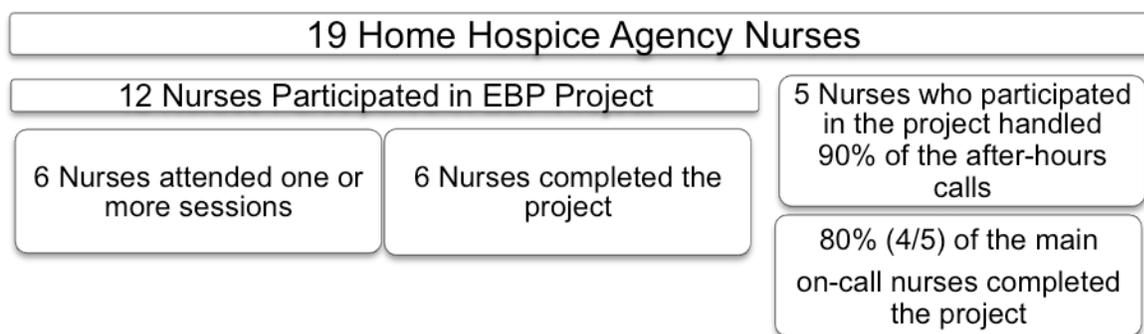
The goal of this evidence-based project was to provide educational modules on end-of-life final hours, pain and symptom management in an attempt to improve hospice nurses' knowledge, competence, and confidence in anticipating changes in hospice patient needs. The improved knowledge and confidence will assist nurses in implementing the appropriate pain and symptom management plan of care. It was hoped that hospice nurses would discuss anticipated changes in the patient's plan of care during routine visits. As a result, the number and frequency of after-hours calls and visits for pain and symptom management would be decreased. Specifically, the PICOT question was: in the adult hospice patient population, what is the impact of selected (ELNEC®) modules, compared to current education, on hospice after-hours on-call requests, in the three months following the education?

#### **Nurse participant characteristics**

Nineteen nurses were employed by the EBP project hospice home health care agency that included an inpatient hospice unit. All of the nurses were informed that attendance at the educational sessions was required; participation in the EBP project was voluntary. Three of the fulltime registered nurses (RN's) served in administrative roles. Thirteen RN's and three licensed practical nurses (LPN's) were on the staff roster at the start of the planning phase of the EBP project. Several fulltime nurses worked primarily in the inpatient unit, but also made home visits or responded to after-hours calls from patients and families. All of the home hospice nurses also worked in the inpatient unit on an as needed basis. Eight nurses (42% of the nursing staff) responded to after-hours calls from patients and families during the planning, implementation, and evaluation of the EBP project. However, five nurses handled 90% of the after-hours calls and attended the majority of the sessions.

**Size.** Twelve nurses (63% of all nurses) completed the consent form to participate in the EBP project. These twelve nurses also completed the demographic survey and the pre quiz and attended an educational session. Attendance was variable at the educational sessions. Six nurses completed the final educational session and the post quiz; the other six nurses attended one of more sessions, but did not complete the project. Eighty percent of the main nurses who responded to after-hours calls completed the educational sessions and the post quiz.

Figure 4.1 Nurse Participants



**Characteristics.** Eight of the participants (66%) represented the Baby Boomer generation while four (33%) were from Generation X. Four nurses (33%) had more than twenty-five years of total nursing experience and six nurses (50%) had accumulated ten to twenty-five years of total nursing experience. Two nurses (16%) had more than five years of total nursing experience.

The nursing staff was experienced in providing hospice care. Two (16%) nurses had less than a total of two years of hospice nursing experience, and it was with the EBP project agency. Three (25%) nurses had more than two years of hospice nursing experience, but less than two years were at the EBP project agency. Four (33%) nurses had five to ten years of hospice nursing experience, and three (25%) nurses had ten to twenty-five years of hospice nursing experience. Two (16%) nurses were previously (not currently) certified in hospice nursing.

The educational background of the participants also was varied including licensed practical nursing, diploma graduate, associate degree, or baccalaureate preparation. Two (16%) nurses had a diploma education, with seven (54%) nurses with an associate in nursing degree. Two (16%) nurses had a baccalaureate degree in nursing.

Employment status was indicated as fulltime (FT) working at 0.7-1.0 fulltime equivalent (fte), part-time (PT) at .2-.6 fte or on a casual as needed (PRN) basis. Eight (66%) nurse participants worked fulltime, with two nurses (16%) each working part time or as needed.

Table 4.1 Nurse Demographics

<b>NURSES</b>	<b>LPN</b>	<b>ASSOC</b>	<b>DIP</b>	<b>BSN</b>	<b>NURS &gt;25yr</b>	<b>NURS 10-25yr</b>	<b>NURS 2-10yr</b>	<b>FT</b>	<b>PT</b>	<b>PRN</b>
<b>BOOMERS</b>		4	2	2	3	5		6	2	1
<b>GEN X</b>	1	3			1	1	2	2		1

In addition to the demographic information, the nurses were asked to indicate their comfort level of nurse competency in providing hospice care, based on Benner’s levels of competency. An advanced beginner was described as being able to implement guidelines with the ability to prioritize. A competent nurse is able to work independently, while identifying relevant and irrelevant information, and is able to manage changes in the patient’s condition. The competent nurse prefers the status quo.

A proficient nurse functions as a team leader and responds to changing situations. The proficient nurse provides holistic care, is a patient advocate, and is able to establish the boundaries of a therapeutic relationship. The proficient nurse integrates their knowledge and experience. An expert nurse uses their intuitive skills, practicing from extensive clinical experience with flexibility and innovation. The expert nurse instinctively responds to rapidly changing situations and demonstrates a sense of presence with patients and families. They coordinate other health care team members for the best patient and family outcomes.

Three (25%) nurses indicated they were either advanced beginners or competent level nurses. Four (33%) nurses indicated they were proficient hospice nurses providing holistic care, responding to changing situations and preparing the patient/family for future changes in care. Five (41%) nurses were confident that they provided expert hospice care using intuition and instinct to implement changes in the patient plan of care based on their extensive clinical experience.

Table 4.2 Benner Levels of Competency

BENNER	ADV BEG	COMPETENT	PROFICIENT	EXPERT
	1	2	4	5

Six (50%) nurse participants completed both the identical pre-quiz and post-quiz. Scores ranged from 65% to 95% on the pre-quiz, and from 70% to 95% on the post-quiz. The majority (66%) of these nurses maintained their same score between the pre-quiz and the post-quiz.

Table 4.3 Paired Nurse Quiz Scores

NURSE	PRE QUIZ SCORE	POST QUIZ SCORE
A	65	70↑
B	80	80
C	95	95
D	85	80↓
E	75	75
F	85	85

**After-hours call characteristics**

Patient and family after-hours calls were reviewed from January 2014 through February 2015. The period between January and July 2014 was prior to the DNP student arrival at the agency. August through November 2014 was during the EBP project development and implementation phases. December 2014 through February 2015 represented the three months of the evaluation phase after the EBP educational intervention.

**Size.** Seven hundred after-hours calls were reviewed during the EBP project timeline. Of these after-hours calls, 660 calls were further analyzed from 216 admitted patients. The calls that were deleted were related to patients that were not admitted to hospice or seeking other hospice related information during after-hours. Prior to the DNP student arrival the after-hours calls totaled 376 for a mean average of 53.7 per month. During the planning and implementation phases of the DNP project, the mean number of calls per month was 39.5. The calls averaged 42 per month during the three months of the EBP project evaluation phase.

**Characteristics.** The mean number of monthly after-hour calls decreased by 22% from the preliminary EBP project phase to the evaluation phase. Overall, the time of after-hours calls had minimal (2-4%) changes in from the preliminary to the post intervention time period. The weekly evening hours call frequency remained stable, while the weekly overnight frequency decreased 2%. The frequency of calls during daytime weekend and holidays decreased 2.5%; but the frequency of evening and overnight calls during weekends and holidays increased 4.1%.

Patients, themselves, made 2-6% of the calls during after-hours with no significant change during the EBP project. Pharmacies initiated the most consistent and least number of calls at less than or equal to one per month throughout the project. Calls about durable medical equipment (DME) issues and deliveries had a 50% improvement in the percentage of calls. DME related calls were at a high of 8% of the calls and decreased to 4% of all of the after-hours calls.

Calls from referral sources and other sources represented 5.6% of the after-hours calls overall. However, there was a significant 66% reduction in the percentage of after-hours calls from referral sources, to an average of one call per month. The calls from family members or in-home caregivers maintained a fairly consistent percentage of calls (60.6%) throughout the EBP project.

Extended care facilities (ECF) including assisted living facilities (ALF) increased their after-hours calls throughout the EBP project from a low of 15.7% to a high of 31.8% despite a reported stable census of ECF/ALF patients.

The percentage of calls received within three days of an admission to hospice care rose from 20.5% prior to the EBP project to a high of 26.2% of the calls after the EBP project implementation. The percentage of calls received within three days of death remained consistent between 37-38% of all after-hours calls. However, 29.6% of patients/families who called during the final phase were still alive at the end of the project.

Call frequency percentages based on duplicated patients' terminal diagnoses varied between the different project time periods. Cancer remained the highest diagnosis frequency for calls.

Table 4.4 Call Frequencies by Terminal Diagnoses (by per cent)

<b>DIAGNOSIS</b>	<b>PRELIMINARY</b>	<b>DURING EBP</b>	<b>POST EBP</b>
CANCER	42.6	53.2	38.1
CARDIOVASCULAR	19.7	17.1	31.7
RESPIRATORY	7.7	0	3.2
DEMENTIA	16.5	15.2	20.6
OTHER	13.6	13.9	6.3

There were nine codes for reasons for after-hours calls. They included to report a death, symptom management issues, other patient concerns, end-of-life issues, medication questions, need for medication refills, durable medical equipment or supply issues, hospice staff scheduling concerns, or a new hospice referral. These results also varied from each EBP project time period with a noticeable 7.4% decrease in calls for symptom management during the evaluation phase. Requests for medication refills increased from 5.9% of the after-hours calls to 15.1% with a corresponding increase in the nurses' response to the call by scheduling a delivery.

There was a tremendous 64% decrease in after-hours calls from other sources, especially referral sources related to patients that were admitted. The on-call nurses received many calls about 20 potential referrals for patients who were not admitted during the preliminary, planning and implementation phases of the EBP project. These were the calls that were not included in the EBP project analysis. During the evaluation period, there were no after-hours calls from referral sources about potential hospice patients.

Table 4.5 Reasons for After-hours Calls (by per cent)

<b>REASON</b>	<b>PRELIMINARY</b>	<b>DURING EBP</b>	<b>POST EBP</b>
REPORT DEATH	13.8	18.4	15.9
OTHER CONCERN	10.4	19.0	11.9
SYMPTOMS	44.7	37.3	37.3
MED QUESTIONS	6.4	9.5	5.6
MED REFILLS	5.9	3.8	15.1
DME	8.0	3.8	4.0
END-OF-LIFE	4.5	3.8	3.2
SCHEDULING	2.1	0	5.6
REFERRAL/misc	4.3	4.4	1.6

Seven different codes were used to indicate the nurses' response to after-hours calls. They included a nurse's response with a telephone conversation, a home visit for symptom management, arrangements for a patient transfer to the inpatient unit, a change in the medications, a call to the physician for a change in the plan of care, arranging for delivery of durable medical equipment, supplies, or drugs, or a home visit conducted at the time of death. Small decreases in the frequencies of phone consults were noted. Increases were noted in after-hours arrangements for deliveries, most likely, corresponding to the noted increase in medication refills.

Table 4.6 Responses to After-hours Calls (by per cent)

RESPONSE	PRELIMINARY	DURING EBP	POST EBP
VISIT	10.4	13.3	11.1
CHANGE MEDS	2.1	2.5	4.0
TRANSFER IPU	2.4	1.3	0
DELIVERY	12.8	8.9	16.7
PHONE CONSULT	56.6	54.4	50.8
CALL MD	1.6	1.3	0.8
DEATH VISIT	14.1	17.7	16.7

### Changes in outcomes

The nurses' mean pre and post quiz scores remained unchanged.

There was a 22% decrease in the mean number of after-hours calls from the preliminary time frame to the evaluation time frame of the EBP project. The percentage of evening and overnight calls during weekends and holidays increased 4.1%, while other time periods saw 2% decreases in percentage of calls. There was a 7.4% decrease in request for symptom management and a 9.2% increase in request for medication refills during after-hours calls.

**Statistical testing.** A paired samples *t*-test for the six matched pre and post quizzes was calculated for computing statistical significance between the quizzes. No further statistical testing was completed for the quiz results.

Sums, frequencies, and percentages of the different codes for after-hours calls were calculated and compared between the different time periods. Kruskal-Wallis *H* tests were conducted for statistical significance comparing the on-call counts of the different coded variables across the different project timeline groups. Specifically, the categories that were examined included terminal diagnoses, calls within three days of admittance and within three days of death, who called, reason for call, and the nurses' response to the call.

**Significance.** The pre and post quizzes of the six nurses who completed both quizzes shared an identical mean quiz score of 80.83. There was no significant statistical difference between the quizzes ( $t(5) = 0.00$ ,  $p > .05$ ). One nurse improved her score by one question and

one nurse decreased her score by one question. Other nurses maintained the same scores but may have changed which question was marked with an incorrect answer.

The Kruskal Wallis  $H$  test was conducted comparing the coded after-hours categories with the different project timeline groups. No significant difference was found for most of the categories ( $H(2) = .365 - 2.93, p > .05$ ) which indicated that the groups did not differ significantly from each other. Specifically, there was no significant difference for who called, terminal diagnoses, calls within three days of admittance and within three days of death, who called, and the nurses' response to the call. A significant result was found for the reasons for calls ( $H(2) = 7.271, p < .05$ ) indicating there was a significant statistical difference between the reasons for calls and the different project timelines.

## CHAPTER 5

### DISCUSSION

#### Explanation of Findings

This EBP project was designed to answer the PICOT question: “In the adult hospice patient population, what is the impact of selected (ELNEC©) modules, compared to current education, on the hospice after-hours on-call requests, in the three months following the education?” At the end of the EBP data collection period, there was a 22% decrease in the mean number of monthly after-hours call requests with a 7.4% decrease in the calls for symptom management. There was a small 0.7% increase of after-hours visits in the evaluative period. In this chapter an explanation of the findings, evaluation of the applicability of the theoretical and EBP frameworks, strengths and limitations of the EBP project, and implications for future research will be reviewed.

**Nursing staff demographics.** As reported in chapter four (see Figure 4.1 Nurse Participants), twelve nurses started the EBP project by completing the consent form and demographic information sheet; they also completed the pre quiz and attended one or more of the educational sessions. Six nurses completed all three ELNEC© modules and both quizzes. Five nurses who participated in the project handled 90% of the after-hours calls and attended the majority of the sessions. The experienced nurses enjoyed discussing the case studies, but did not immediately implement the evidence-based interventions. They first needed to request evidence-based practice changes to the hospice standing orders.

Overall, this was an experienced group of nurses, with 66% representing the Baby Boomer generation with the remaining nurses from Generation X. Different generations are noted to have different learning styles and strengths in the workplace. Baby Boomers were born from 1946 to 1964 and Generation X'ers were born from 1964 to 1980. Ulrich (2012) reports Baby Boomers are team players who are used to learning in a didactic environment where their

experiences are connected to the subject matter. Nurses from Generation X handle change well, learn quickly, and benefit from connecting the subject matter to specific applications in their future work experiences. These workplace generation characteristics supported the successful use of the patient case studies. Every nurse had more than five years of nursing experience. Fifty-four per cent of the nurses had an associate degree with more than five years of hospice experience.

The six nurses who completed the post quiz were equally divided between the Baby Boomer and Generation X generations. Hospice experience varied from two to 25 years. Their educational backgrounds varied from a licensed practical nurse to a BSN graduate.

The five main on-call nurses reported their sense of competency according to Benner as providing competent, proficient, or expert levels of hospice care. Their average quiz scores did not reflect their years of hospice experience and perceived sense level of competency.

**Nursing quiz results.** The mean pre quiz score for all participants was 82.91. The six nurses who completed all three modules, and both the pre quiz and the post quiz, maintained a mean quiz score of 80.83 with no statistical difference between the quizzes,  $p > .05$ . Four nurses who did not complete the post quiz, scored higher on the pre quiz than the others with an average of 87%. These higher scoring pre quiz nurses had the same variability in nursing degrees, years of hospice experience, and competency levels as their peers who completed both quizzes.

The post quiz group had unchanged scores, with one nurse improving her score by one question and another decreasing her score by one question. The others changed which question was marked incorrectly. There is a possibility that the majority of the nurses had not experienced the challenge of multiple choice questions in a while. However, the content of the questions were reviewed in the educational modules. The experienced nurses may have been more comfortable with the interventions listed in the standing orders rather than the recent evidence-based practice interventions reviewed in the educational modules.

**Call results.** There was a significant 22% decrease in the mean number of monthly after-hours call requests from the preliminary to the evaluation phase of the EBP project. The percentage of calls for symptom management also decreased significantly by 7.4%. The 4.1% increase in evening and overnight calls during weekends and holidays may be due to the winter holidays; this may have contributed to an increased end-of-life emotional turmoil and anxiety for patients and families during those hours.

The nurses' responses to calls showed no significant differences. However, there were small changes from the preliminary period to the evaluation period. The number of visits on-call increased 0.7% while phone consultation decreased 5.8%. Perhaps, a nurse made a on-call visit for a comprehensive assessment and face-to-face caregiver instructions to decrease frequent repetitive calls. Medication changes increased 1.9% with an increase in deliveries of 3.9%.

Calls to report a death increased 2.1% with the response of a death visit increased by 2.6%. This suggests that calls were not needed for support or symptom management during the dying process, but the agency was contacted upon the death of the patient.

The goal of the EBP project to decrease the frequency of calls for symptom management was achieved. The educational modules strengthened the on-call hospice nurses' passion for hospice nursing and a commitment to quality patient care. The nurses reported a renewed spirit to provide anticipatory education to patients and caregivers. It was hoped that the nurses would improve their patient and caregiver education about the dying process during routine visits and after-hours calls to decrease the need for frequent calls. Perhaps, the communication during routine visits and after-hours calls was more effective which decreased the need for repeated calls.

The literature review documented caregivers are grateful and satisfied with appropriate telephone assessment and support during after-hours calls from experienced and trained hospice nurses. Roberts et al. (2007) and Phillips et al. (2008) found additional education

assisted nurses in providing comprehensive phone assessment skills and clinical decision-making skills with effective support for families. Emergency room visits and hospitalizations for symptom management were also reduced.

### **Evaluation of Frameworks**

This EBP project utilized Benner's model From Novice to Expert to address nursing clinical competence in implementing end-of-life plans of care. Larrabee's Model for Evidence-Based Practice Changed outlined the steps for formulating, implementing, and evaluating the EBP project. The next paragraphs will evaluate the applicability of these frameworks.

**Benner model From Novice to Expert.** According to Benner's model it takes nurses time, experience, and mastery to gain the competence of an expert. Continuing nurse education is one of the interventions to support nurses to become experts. Benner (1984) discusses how clinical judgment is a complex process that includes objective knowledge and the nurses' subjective experiential knowledge. As nurses become more comfortable with their knowledge, they will grow in confidence in their clinical judgment.

Benner describes competent nurses as being able to implement task-oriented standardized plans of care with family involvement. They are able to respond to a hospice patient's change in status in a prescribed, deliberate manner. The proficient hospice nurse integrates knowledge and experience in a holistic manner in consultation with other team members. Benner describes proficient nurses as able to recognize early changes in patient status with an appropriate response. Proficient nurses benefit from the use of case studies because proficient nurses relate their experiences to the study. The EBP project hospice nurses eagerly discussed the care of their patients including possible changes to the plan of care based on the ELNEC© module suggestions.

Benner describes the expert nurse as possessing a strong intuitive grasp of the entire patient and family situation based on knowledge and critical thinking. Expert nurses are able to recognize very subtle changes and are able to respond with a holistic, flexible, and innovative

approach, when necessary. The Level III evidence article from Fontaine & Rositani (2000) referenced Benner's model focusing on knowledgeable, experienced expert nurses for their ability to "effectively manage rapidly changing situations" and to "respond more appropriately" (pp. 3, 13).

The Benner model From Novice to Expert was an excellent choice for this EBP project. The nurse participants were asked to choose a description of their practice when completing the demographic form. The descriptions were a summary sentence of the different Benner levels of competency without naming them. One nurse who had worked in hospice less than two years chose advanced beginner. Two nurses chose the competent description, although their years of hospice experience varied from less than two years to five to ten years. The four nurses who selected proficient had varying nursing degrees, years of hospice experience and workplace generation and work schedules. Five nurses checked the expert description. Similarly, they also had differences in educational preparation from LPN to BSN, marked two to twenty-five years of hospice nursing experience, and represented both the Generation X and Baby Boomer generations and worked either full or part-time.

However, during the completion of the demographic surveys, there were spontaneous conversations among the staff about their perceived confidence and competence levels. They could freely express their uncertainties and areas where they perceived a lack of knowledge. They also identified the nurses whom they would consult about difficult situations. Even the expert nurses reminded the others of their need to involve other hospice team members including the physician, social worker, and hospice manager for unusual scenarios. These conversations became the introduction to a spirit of excellent sharing of ideas and case studies during the educational sessions. The strength of the model was the nurse's spontaneous discussion of their performance differences as they selected their competency levels on the demographic information sheet.

The weakness of using the Benner model From Novice to Expert for this EBP project, is that Benner believed it takes years of clinical experience to move from one level to another. Three educational sessions are not an adequate amount of time or experience to change from one Benner competency level to another.

**Larrabee model for Evidence-Based Practice Change.** Larrabee's modifications of her model from experience in leading quality improvement programs made it useful for planning this EBP project. The six steps of the model are (a) assess the need for change in practice, (b) locate the best evidence, (c) critically analyze the evidence, (d) design practice change, (e) implement and evaluate change in practice, and (f) integrate and maintain change in practice (Larrabee, 2009, p. 23). All steps were followed during the EBP project with the final step of integration of practice change is in process at the agency as the project closed. This model was strong and a good fit because it was succinct, familiar, and mirrored the EBP project guidelines. It could be argued that implementation and evaluation of change could possibly be divided into two steps, since each part is large in scope. No other changes to the implementation of the EBP process were needed.

### **Strengths and Limitations of the EBP project**

The strengths and limitations of this EBP project will initially be described through the steps of the evidence-based process. A discussion of other factors that affected the project will follow.

Hospice administrators presented the initial step of the need for change in the frequency of after-hours calls to the DNP student in a collaborative manner. Specific supportive information about the need for improvement and a specific agency goal for after-hours calls would have been useful. Locating the best evidence about after-hours calls was difficult due to the limited evidence available; earlier use of librarian support would have been beneficial. Critical analysis of the literature following the CASP© Checklists was a good organizational step. Creating an evidence table enabled the DNP student to evaluate the differences in

settings and findings. Designing the educational intervention practice change was guided by the literature that supported trained and experienced nurses have an improved response to after-hours calls from patients and families.

The implementation phase went smoothly except for the limited attendance by all hospice nursing staff, although 80% of the main on call staff completed the project implementation. Nursing administrative staff did not attend the educational sessions after initial participation in the project. Nursing staff reported funding to support educational time was limited. During the implementation phase, the agency also changed pharmacy and durable medical equipment vendors, which probably affected after-hours calls. There were fewer calls and questions from DME vendors and increased requests for medication refills.

Data collection during all phases of the project was tedious due to the lack of an electronic patient record, a variety of information on paper formats that were difficult to ascertain and obtain, and the DNP students' inexperience with the use of Excel spreadsheets. The inconsistent documentation in both the patient record and the payroll on-call record made coding of calls a challenge. A joint meeting with hospice administrators and support staff about the EBP project and the data collection tool may have facilitated an improved understanding of the information needs.

Evaluation of the EBP project began spontaneously during implementation of the education intervention. Nurses eagerly verbalized what they learned during each session and excitedly reported their call experiences each time they encountered the DNP student. They noticed a decrease in calls and appreciated "quieter" on call periods.

Challenges during the evaluation phase included the ongoing three months of tedious data collection. Descriptive statistics of frequencies and percentiles about the nurse demographics and the extensive call data had to tell the story about after-hours calls. Quiz scores and paired *t*-testing examined the testing outcomes of the six nurses who completed both quizzes and all educational sessions.

The results of the EBP project were presented to the hospice nursing and administrative staff. The hospice agency is in the midst of planning and implementing several future transitions during the next fiscal year that include implementation of an electronic patient record, support for hospice nurse certification, implementation of the new electronic reporting of the Medicare Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey, and modification of the hospice standing orders and the pharmacy formulary. This EBP project and the results played a small part in the overall quality improvement processes.

**Nursing staff response.** As previously stated, the nurses who participated in the EBP project and educational sessions were positive, appreciative, and engaged. The few nurses who started but did not complete the sessions reported conflicts with scheduling, staffing relief, and funding for attendance. Nurses on the staff roster who did not participate at all, worked on an as needed basis, and usually did not participate in after-hours calls, beyond answering questions during their time in the hospice inpatient unit. The hospice nursing administrative staff was supportive of the EBP project, but they did not actively participate beyond initial consent, completion of the demographic survey, and the pre quiz. They did not clarify the change in expectations from “all staff are expected to attend” to “there is no funding to support your attendance”. The reduced number of nurse participants resulted in a small sample size that reduced the ability to evaluate the learning that occurred as measured by the quiz results.

**Call results.** Data collection of the calls was a lengthy process with results from all time periods calculated at the end of the data collection period. Nurses were variable in their length and content of documentation of calls on the payroll record and in the patient record. The nurses call documentation often did not differentiate pain or symptom management or specify which symptoms were requiring interventions. Sometime, the answering service call log report gave the DNP student information that may have been missing from the nurse.

### **Implications for the Future**

The results of this EBP project have positive implications for the future for patients and

their family members/caregivers, staff nurses in any hospice care setting, administrators, educators, palliative care researchers, and other hospice leaders. This EBP project was developed and implemented as part of a quality improvement plan for a home hospice agency. The nurses who participated had positive verbal comments about their commitment to the mission and purpose of interdisciplinary hospice care. They also expressed interest in modifying some of the agency's standing orders to follow the ELNEC© curriculum best practices. The participants demonstrated a renewed commitment and passion for quality hospice care during routine hospice home care and after-hours calls. The following sections will discuss the effects of the EBP project focusing on nursing practice, theory, research, and education.

**Practice.** Hospice nurses and their employers need to remain committed to lifelong learning, workforce development, annual updates, or other forms of professional development. Changes in evidence-based practice for pain and symptom management protocols need to be reviewed and discussed during in-services. Then, the changes need to be implemented in practice in a timely manner to maximize patient and family outcomes, especially during after-hours care. As hospice nurses stay abreast and implement evidence-based practice, patient and family outcomes and satisfaction will be improved around the clock including during after-hours care. The consultative and leadership skills of an advance practice nurse can assist agencies in quality improvement and evidence-based practice. This fulfills one of the IOM 2010 recommendations in *"The Future of Nursing: Leading Change, Advancing Health"* to "prepare and enable nurses to lead change to advance health" (Williamson, 2015, p. 8).

There are many collaborative sources of hospice evidence-based practice starting with the Agency for Healthcare Research and Quality National Guideline Clearinghouse available at [www.guideline.gov](http://www.guideline.gov) website. The National Consensus Project for Quality Palliative Care provides detailed information about clinical practice guidelines that can be implemented. HPNA and other organizations (as mentioned above) have a commitment to ongoing validation of the best available evidence. HPNA recently published their Research Agenda for 2015 – 2018 that

includes exploring the roles of family caregivers in symptom management, especially dyspnea, fatigue and constipation (Lunney, 2015, p. 121).

**Theory.** Benner's model From Novice to Expert in clinical competency worked well for this EBP project for nurses to identify their perceived level of clinical competency or expertise. Perhaps, Knowles Adult Learning Theory would also be appropriate to implement changes in symptom management or prepare for hospice certification. Knowles respects the learner's experience, self-direction, and motivation. Adult learners are motivated to acquire knowledge when it can be applied toward achieving specific competency improvements, outcomes and goals (Ulrich, 2012, p. 18).

**Research.** Palliative care and hospice research will continue to be important areas as members of the large Baby Boomer generation approach end-of life. Gomes and Higginson (2013) warn "tougher challenges are yet to come as population needs become more complex, adding to aging, and the growing demand for palliative care" (p. 211). Additional research will provide additional evidence upon which to build and support additional hospice practices, especially in symptom management. HPNA and Sigma Theta Tau International (STTI) have collaborated in offering research grants to nurses to benefit hospice and palliative care nursing by enhancing care. The Hospice Palliative Nurses Foundation also supports research related to hospice certification.

Evidence-based hospice practices must continue to be validated and implemented. Advance practice nurses with DNP and PhD preparation can assist with collaborative knowledge-generating research in palliative care. Klein-Fedyshin (2015) concluded in her study of translating evidence into practice at the end of life that "enhancing knowledge dissemination could reduce the gap to evidence implementation and help meet performance improvement requirements" (p. 29).

Gomes and Higginson (2013) report the Cicely Saunders Institute has three priorities for future research on home palliative care: "(1) seeking to develop robust data on cost-

effectiveness, (2) comparing the effectiveness of different models of home care, and (3) testing interventions for non-malignant conditions” (p. 211).

The National Institute of Nursing Research (NINR) is part of the National Institutes of Health and leads the research for end-of-life. They support science to assist individuals, families, and health care professionals in managing the symptoms of life limiting conditions and planning for end-of-life decisions. NINR also recognizes that high-quality, evidence-based palliative care is a critical component of maintaining quality of life at any stage of illness, not just at the end of life. Two current funding opportunities include building evidence for effective palliative/end of life care interventions and an arts-based approach to symptom management in palliative care ([www.ninr.nih.gov/eolpc-theme](http://www.ninr.nih.gov/eolpc-theme)). These contributions are important to evidence-based palliative care practice.

**Education.** One of the IOM 2010 Report recommendations included “ensure that nurses engage in lifelong learning” (Williamson, 2015, p. 8). There are many ongoing opportunities for lifelong education in palliative and hospice care especially from HPNA. They include clinical practice forums for symptom management and annual meetings. The End-of-Life Nursing Education Consortium is expanding training opportunities for doctorally prepared nurses in palliative oncology care. A new Train-the-Trainer course for Veteran Care is now available in addition to the Core, Pediatric, and Geriatric courses. HPNA and ELNEC collaborate and support educational and certification activities. Hinds & Meghani (2014) note that ELNEC needs to evaluate the effectiveness of the curriculum in improving outcomes.

These training opportunities in palliative care support the implementation of two of the recommendations from the IOM’s 2014 Committee on Approaching Death Report. Professional education/development and public education/engagement were listed as priorities for care of people with advanced serious illness. The IOM also supports public reporting on quality measures, outcomes, and costs regarding care near the end of life (Hinds & Meghani, 2014). The Medicare Consumer Assessment of Healthcare Providers and Systems (CAHPS) program

for determining caregiver satisfaction represents one of those new public reporting measures. After-hours management of pain and symptom control are key elements of caregiver satisfaction that nurses must be prepared to handle in home hospice care. Using the ELNEC© modules are one method of educational preparation for hospice nurses.

The National Board of Certification of Hospice and Palliative Nurses lists the benefits and value of certified hospice nurses to include the following qualities: 1) proven and tested competency, 2) an increase in knowledge with achieving and maintaining competency, 3) a commitment to specialty practice, 4) demonstrated dedication to professional development, 5) improved patient outcomes, and 6) a recognition of achieving quality for the employer.

### **Conclusion**

The purpose of this evidence-based project was to provide educational modules on end-of-life final hours, pain management, and other symptom management in an attempt to improve hospice nurses' knowledge, competence, and confidence in anticipating changes in patient needs. The goal was that nurses would discuss anticipated changes in the patient's plan of care during routine visits to minimize the necessity of after-hours calls and visits for pain and symptom management. This EBP project was part of quality improvement measures implemented by a new hospice administration.

Three ELNEC© modules were presented including the use of case studies to hospice home care agency nurses, especially those who managed 90% of the after-hours calls. A small sample size of nurses completed the EBP project and did not demonstrate any change in their quiz scores. However, there was a 22% reduction in the mean number of after-hour calls with a 7.4% decrease in calls for symptom management and a 0.7% increase for a visit response for symptom management. There was a significant statistical difference in the reasons for after-hours calls.

Despite the limitations of this EBP study, there is great support for ongoing professional development in palliative and hospice nursing care especially for symptom management during after-hours calls and visits. Research into the effectiveness of education in improving care outcomes with evidence-based practice is the agenda item for the next decade in palliative and hospice nursing. This will provide further evidence to strengthen hospice and palliative nursing practice.

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## BIOGRAPHICAL MATERIAL

Cheryl graduated from Valparaiso University in 1978 with her BSN. She began her pediatric nursing career in the PICU at Children's Memorial in Chicago. In 1983, she earned her MS in Parent Child Health Nursing from Rush University under the Luther Christman Rush Model for Nursing. Ms. Slack became the first Staff Development Coordinator/Clinical Nurse Specialist at LaRabida Children's Hospital serving special needs children and their families. As a CNS, she spent two years in Green Bay, Wisconsin, directing outpatient services for high-risk pregnant women and special needs children. Then, she returned to Valparaiso, working full-time while raising her family. Cheryl managed a pediatric home health agency, worked at St. Margaret Hospital in the PICU, and transferred to ER when the PICU closed. Cheryl has also enjoyed a twenty year career with the Visiting Nurse Association in a variety of full and part time positions including resource nurse, patient care coordinator, director of private duty/support services, and influenza immunization coordinator. Ms. Slack has served as a Clinical Assistant Professor at Valparaiso University in the undergraduate program for the past ten years. She is a Certified Nurse Educator. Prof. Slack enjoys teaching nursing students as a clinical instructor for their obstetric, pediatric, critical care, rehabilitation, community home health, and final practicum rotations. Cheryl became interested in hospice and palliative care many years ago when her family members benefitted from hospice services. She attended the End-of-Life Nursing Education Consortium, which promotes ongoing nurse education in palliative and end-of-life nursing care. She presented her EBP "project in process" poster at the 2014 Northwest Indiana Research Consortium. Ms. Slack will teach the inaugural online nursing elective on *End of Life Issues Across the Lifespan* during the Summer 2015 session for the CONHP. Cheryl is a member of HPNA, AACN, and STTI; she is the current Sigma Theta Tau International Zeta Epsilon chapter secretary.

**ACRONYM LIST**

AACN: American Association of Colleges of Nursing

ALF: Assisted Living Facility

ANA: American Nurses Association

APA: American Psychological Association

CAHPS: Consumer Assessment Healthcare Providers and Systems

CDC: Centers for Disease Control

CONHP: College of Nursing and Health Professions

DME: Durable Medical Equipment

DNP: Doctor of Nursing Practice

EBP: Evidence Based Practice

ECF: Extended Care Facility

ELNEC: End of Life Nursing Education Consortium

EOL: End of Life

FT: Full-time

FTE: Full time Equivalent

HIPAA: Health Insurance Portability and Accountability Act

HPNA: Hospice and Palliative Nurses Association

IOM: Institute of Medicine

IPU: Inpatient Unit

IRB: Institutional Review Board

LPN: Licensed Practical Nurse

MED: Medication

MHB: Medicare Hospice Benefit

NCP: National Consensus Project

NHPCO: National Hospice and Palliative Organization

NINR: National Institute of Nursing Research

NQF: National Quality Forum

PICOT: Problem Intervention Comparison Outcome Time

PRN: Casual, as needed

PT: Part-time

RN: Registered Nurse

RWJF: Robert Wood Johnson Foundation

STTI: Sigma Theta Tau International

TEFRA: Tax Equity Fiscal Responsibility Act

## APPENDIX A

### CONSENT FORM

**Study Title:** The impact of hospice nurse education on after hour calls.

**Researcher:** Cheryl Slack MS RN CNE, DNP Student, Clinical Assistant Profession of Nursing, Valparaiso University

**Purpose:** I, \_\_\_\_\_, understand that I am being asked to take part in an educational intervention evidence-based project to improve hospice patient/caregiver outcomes at the end-of-life with pain and other symptom management, to decrease the need for after hour calls.

**Procedure:** The EBP project manager/DNP student will conduct three two-hour educational sessions using copyrighted End-of-Life Nursing Education Consortium modules with discussion and case studies on End-of-Life, Pain Management, and Symptom Management. Hospice home care and inpatient unit nurses will be assigned to attend the sessions either for the October or November dates. I consent to completing this consent form, the demographic form, and a pre and post quiz.

**Risks:** There should be no physical or other known risks to participating in the project; test anxiety should be minimal. No invasive techniques are used.

**Benefits:** This project is designed to increase hospice nursing knowledge and competence in assessment, implementation of appropriate interventions, and teaching/anticipatory guidance for caregivers. Education presents a sense of greater competence in implementing the hospice plan of care. Nurses are paid their usual salary for education attendance.

**Voluntary participation/withdrawal:** I understand that I am required to attend the educational sessions as a Hospice Franciscan Communities employee. My participation in the DNP evidence based practice project/study is voluntary. This includes completing this consent form, a demographic form, and a pre and post quiz. I may withdraw from participating in the EBP study at anytime.

**Questions:** If I have any questions about being in the project/study now or in the future, Cheryl Slack may be contacted at 219-241-0677. If I have any questions about your rights as project participant, Rasha Abed at Valparaiso University Institutional Review Board may be contacted a [valpoirb@valpo.edu](mailto:valpoirb@valpo.edu) or 219-464-5798.

**Confidentiality/anonymity:** The information and answers that I give may be used and reported by the researcher, with my identity kept strictly confidential.

**Consent to participate in the Evidence-based Project:** I have read or had read to me all the above information about this project the procedure, possible risks, and potential benefits to me and I understand them. All of my questions have been answered. I give my consent freely, and offer to participate in this project. I understand that I may have a copy of my signed consent form.

\_\_\_\_\_  
Participant signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
EBP Project Manager

**APPENDIX B**

Slack EBP Demographic Survey

Please print your name clearly \_\_\_\_\_

ID Assigned \_\_\_\_\_

1. Please indicate your age by choosing which **generation** you represent in the workforce.

- a. Traditionalists (born 1945 or before) \_\_\_\_\_
- b. Baby Boomers (born 1946-1964) \_\_\_\_\_
- c. Generation X'ers (born 1965-1980) \_\_\_\_\_
- d. Millenials (born 1981-2001) \_\_\_\_\_

2. Please indicate your years of **total** nursing experience.

- a. 0-2 yrs \_\_\_\_\_
- b. 2-5 yrs \_\_\_\_\_
- c. 5-10 yrs \_\_\_\_\_
- d. 10-25 yrs \_\_\_\_\_
- e. > 25 yrs \_\_\_\_\_

3. Please indicate your years of **hospice** experience (in any setting).

- a. 0-2 yrs \_\_\_\_\_
- b. 2-5 yrs \_\_\_\_\_
- c. 5-10 yrs \_\_\_\_\_
- d. 10-25 yrs \_\_\_\_\_
- e. >25 yrs \_\_\_\_\_

4. Please indicate your years of hospice experience with Franciscan Communities.

- a. 0-2 yrs \_\_\_\_\_
- b. 0-5 yrs \_\_\_\_\_
- c. 5-10 yrs \_\_\_\_\_
- d. 10-25 yrs \_\_\_\_\_
- e. >25 yrs \_\_\_\_\_

Demo Survey continued

5. Have you been **certified** in hospice nursing? YES \_\_\_\_\_ NO \_\_\_\_\_

6. Is your hospice certification **current**? YES \_\_\_\_\_ NO \_\_\_\_\_ NA \_\_\_\_\_

7. What is your **highest** degree in nursing?

a. LPN \_\_\_\_\_

b. Diploma \_\_\_\_\_

c. Associate \_\_\_\_\_

d. BSN \_\_\_\_\_

d. MSN \_\_\_\_\_

8. How many hours do you work per **pay-period**?

a. fulltime (fte .7-1.0) \_\_\_\_\_

b. part-time (fte .2-.6) \_\_\_\_\_

c. casual or prn as needed \_\_\_\_\_

9. Choose **one** description that best fits your practice:

\_\_\_\_\_ I can provide nursing care incorporating standards of hospice nursing while implementing suggested hospice orders with the support of more experienced nurses, as needed.

\_\_\_\_\_ I can work independently and collaboratively, developing priorities in providing hospice care to determine what to teach patients and caregivers about their condition.

\_\_\_\_\_ I am able to provide holistic hospice care, integrating my knowledge and experience, while responding to changing situations and being a patient/family advocate and preparing them for future changes.

\_\_\_\_\_ I am able to intuitively and instinctively implement changes in a patient's plan of care, based on extensive clinical experience, while maintaining a sense of presence with the patient and family.

10. Thank you for participating in this EBP and being an awesome hospice nurse!

## APPENDIX C



*Advancing End-of-Life Nursing Care*

END - OF - LIFE NURSING EDUCATION CONSORTIUM

**NOTIFICATION TO ELNEC PROJECT OFFICE OF  
UP-COMING ELNEC COURSE**

Trainer Name: Cheryl Slack Institution: Valparaiso University

E-mail Address: [cheryl.slack@valpo.edu](mailto:cheryl.slack@valpo.edu) Office Phone: 219-464-5289 Cell Phone: 219-241-0677

When did you complete your ELNEC "train-the-trainer" course? June 2014

Have you taught ELNEC courses in the past? NO

Date of Course A series repeated twice of three dates for two hours each  
Total Length (in hours) of Course six hours total includes time for case studies, forms, presentations

Proposed Number of Participants: Twenty total proposed participants

Will this be

\_XX\_A Training Course Modules: End-of-Life, Pain Management, Symptom Management

**OR**

\_A 2-3 day Train-the-Trainer Course (must include all modules--approximately one hour in length for each module + inclusion of teaching strategies)

Which ELNEC curriculum will you be teaching? **ELNEC-Core**

Do you expect healthcare providers, other than nurses, to attend? XX Yes invited

If YES, which other healthcare providers will be attending? Possibly pastoral care, social worker, volunteer coordinator, home health aides, medical director

Will other educators be assisting you in teaching this course? \_\_\_Yes \_\_\_XX No

If YES, are they all ELNEC trained? \_\_\_Yes \_\_\_ No

If YES, please list their names and which module(s) they will be teaching\_\_\_\_\_

If NO, how will you assure that the ELNEC curriculum will be implemented?

Using ELNEC curriculum slides and handouts.

To the best of your ability, please answer the following:

What % of your participants will be from the following clinical areas?

\_\_\_clinic/out-patient organization

**100% hospice**

\_\_\_home health

\_\_\_community

acute care facility       palliative care       long-term care facility       other

What % of your participants will represent the following nursing roles?

Up to 85% are staff RN

Up to 15% staff development/QI/administration

advanced practice RN

college/university faculty:    ADN faculty    BSN faculty    Graduate faculty

other: \_\_\_\_\_

Other than lecture, what other teaching methods will you use (check what applies)

case studies       role plays       round-table discussions       videotape(s)

other: \_\_\_\_\_

Do you have plans for any of the following? **NO**

posting curriculum on intranet       offer classes via distance technology

preparing self-study packets       have audience other than nurses

entrepreneurial approach       ELNEC handouts

(Remember: ELNEC content may **NOT** be posted on the Internet or published by ELNEC Trainers, other individuals, organizations or corporations. If you plan to post ELNEC on your work-related intranet site, contact Pam Malloy at [pmalloy@aacn.nche.edu](mailto:pmalloy@aacn.nche.edu))

Would you like to have your course dates posted on the ELNEC website?  Yes     No

If so, list name of contact person, e-mail address and phone number, if other than yourself

CE's will **NOT** be provided, as deemed unnecessary by administration, not required in Indiana. **(Remember: Your objectives are already written for you per each module)**

\*\*\*Send flyer/brochure of your up-coming event to AACN Project Office, showing attribution statement and agenda reflecting approximately 1 hour spent on each module. **Send notification form and flyer/brochure electronically, directly to Pam Malloy at: [pmalloy@aacn.nche.edu](mailto:pmalloy@aacn.nche.edu)**

**Don't Forget to Review Introduction Section of your Workbook for**

- **News Release for your community/local newspaper**
- **ELNEC Textbook Ordering Information**
  - **Copyright Permission**
  - **Use of ELNEC Materials**

Further Questions: Contact Pam Malloy at AACN, [pmalloy@aacn.nche.edu](mailto:pmalloy@aacn.nche.edu) or call 202-463-6930, Ext. 238 (vm)

