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Improving Palliative and Hospice Knowledge Among Nurses in a Long-Term Care Facility

by

Kelly Rae Smith

Paper submitted in partial fulfillment of the
requirements for the degree of

Doctor of Nursing Practice

School of Nursing, University of Louisville

July 30, 2020



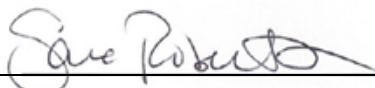
Signature DNP Project Chair

7/30/2020
Date



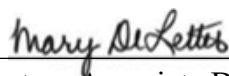
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Acknowledgements

I would like to acknowledge Dr. Mary Skinner for her integral support and commitment to the completion of this project. I would also like to thank my mother for inspiring my pursuit of nursing, being my personal editor, and for always supporting me.

Dedication

I would like to dedicate this project to my mother, Pamela W. Steele, and my children, Ava and Raegan. Their support, patience, and love were pivotal in my academic achievement.

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Abstract

Background: Early referral and implementation of palliative best-practices in patients with chronic diseases and at the end-of-life (EOL) significantly decreases patient symptom burden, increases quality-of-life, contributes to patient and family satisfaction with care, and reduces healthcare costs. Nurses in long-term care (LTC) are poised to help identify patients appropriate for referral, to provide quality palliative and EOL care, but lack adequate knowledge.

Objectives: To determine if a short one-on-one or two-on-one palliative and hospice educational offering can improve (a) knowledge of best-practice palliative and hospice care symptom management techniques (b) the ability of nurses to identify patients appropriate for hospice or palliative care referral (c) increase the number of patients referred to palliative and hospice care.

Methods: A pre-posttest design was used. A paper-pencil survey will be used to administer the Palliative Care Quiz for Nursing (PCQN) to assess palliative and EOL knowledge of best-practice care and self-efficacy.

Results: Out of 24 nurses, 10 (42%) completed the pretest, education, and posttest. A paired t-test was used to compare pretest and posttest PCQN scores ($t = -5.55$, $df = 9$, $p < 0.001$, $d = 1.75$). Analysis revealed a highly significant increase in palliative and hospice best-practice knowledge among nurses in LTC.

Conclusions: Nursing knowledge of palliative and hospice best-practices improved after a brief one-on-one or two-on-one education. It was recommended that hospice and palliative education continue for new hire employees.

Key words: long-term care; nurses; palliative; hospice; end-of-life; education; referral

Improving Palliative Care Knowledge and Self-efficacy among Nurses in a Long-term Care Facility

The World Health Organization (2019) defines palliative care (PC) as a method of healthcare delivery that increases the quality of life (QOL) of patients and their families when faced with a life-threatening illness. Palliative care focuses on symptom relief and QOL at any stage of the illness trajectory. The tenants of palliative care encompass a holistic view of the patient; addressing physical, spiritual, and psychosocial needs (World Health Organization [WHO], 2019). Palliative care is not hospice care, but hospice care encompasses palliative care. Hospice care is considered to be palliative care delivered at the end-of-life, typically during the patient's last six months or less of life.

Nursing staff in long-term care (LTC) facilities are the main providers of patient care; yet, they lack the knowledge necessary to adequately identify the need for palliative and hospice care, the confidence to have difficult discussions with patients and families, and the knowledge to effectively manage chronic and end-of-life (EOL) symptoms. Long-term care facilities today employ fewer registered nurses (RNs) and more licensed practical nurses (LPNs), certified medical technicians, and patient care assistants, each with less palliative nursing education (Mills et al., 2019). While palliative care education has been mandated by the American Association of Colleges of Nursing, older generations of nurses did not receive this education. Despite integration of palliative care into undergraduate curriculums, new graduate nurses who completed an accredited program report they are not confident in their ability to deliver palliative care (Pesut & Greig, 2018). Deficient knowledge among nursing staff results in unresolved symptoms and unnecessary hospitalizations of facility residents; patient distress; misuse of healthcare resources; failure to adhere to patient care preferences; family anxiety and

uncertainty; and decreased family satisfaction with care (Bolt et al., 2019; Fosse et al., 2017; Laging et al., 2018; Pfister et al., 2013). Ong et al. (2011) reported poor health outcomes when the elderly is transferred to the hospital; 13%-40% of treatments received outside of LTC facilities are unnecessary. The opioid epidemic has also contributed to the under treatment of pain in LTC. Misinformed or poorly educated nurses are less likely to administer as needed doses of opiate pain medication for fear of addiction or adverse reaction.

A literature search was done to thoroughly examine the research pertaining to nursing education in regards to palliative and EOL care. Multiple search engines were used to gather evidence, including CINAHL, PubMed, and MEDLINE. Search terms, using Boolean logic terms of “AND” and “OR,” were used searching the following terms: educating, education, nurses, palliative, hospice, EOL, LTC, nursing home, knowledge, attitudes, continuing education. A secondary search of article reference lists was then performed.

The body of literature provides consistent evidence that educational offerings increase nurses’ knowledge of palliative and EOL care; however, few studies exist specifically measuring knowledge of nurses in the LTC setting. Of the eight articles reviewed, six focused on providing continued palliative and EOL education in nursing homes (Anstey et al., 2016; Di Giulio et al., 2019; Ghandehari et al., 2013; Lo et al., 2010; Long, 2013; Tse & Ho, 2014). All studies reviewed implemented some form of didactic presentation. Studies with this method of delivery all demonstrated statistically significant knowledge gains. Didactic presentations provided training in areas, such as communication with patients and families, pain assessment, and pharmacologic and non-pharmacologic treatments; all demonstrated statistically significant knowledge gains (Di Giulio et al., 2019; Harden et al., 2010; Long, 2013; Tse & Ho, 2014). Discussion about the length and format of educational offerings was limited in one of the articles

reviewed, providing no specific details as to the methods employed to educate staff or the time span between the education and evaluation (Ghandehari et al., 2013). One of the systematic reviews included identified lack of consistent data collection methodologies and questionable credibility of educational offerings as limitations in the body of literature (Pesut & Greig, 2017). The systematic review by Pesut and Greig (2017) recognized large disparities in the frequency and duration of educational offerings from study to study. Studies did determine that regardless of the method and length of delivery, education in LTC successfully increased nursing palliative care knowledge, self-efficacy, and communication among care providers and patients; additionally, it improved attitudes regarding delivery of palliative and EOL patient care. Pesut and Greig (2017) reported that supplemental resources for participants, such as standards of practice, reinforced palliative care education.

Theoretical Framework

The conceptual framework for this quality improvement project is based on Mezirow's (1991) Transformative Theory of Adult Learning. The theory postulates that adult learning is a stepwise process, beginning with the learner recognizing their own beliefs, revising those beliefs, and adopting a behavior change.

Patients are frequently referred to hospice late in their disease processes because of stigma surrounding EOL care; palliative care is underutilized because of misconceptions of palliative care and hospice being synonymous. Nurses in LTC have frequent face-to-face contact with patients; however, nursing curricula does not prepare nurses to recognize appropriateness for referral, the skill to have difficult conversations with families, or the ability to understand the rationale of treatments used in this patient population. Providing palliative and hospice best practice, in the continuing education setting, allows participants to evaluate their own personal

cultural practices, previous patient care experiences, and buy-in to social misconceptions of palliative and hospice care. Providing LTC nurses with adequate palliative and hospice knowledge strengthens self-efficacy. An increase in self-efficacy positively reinforces education and influences the nurses' ability to help identify patients appropriate for referral, and deliver competent, quality care to those with chronic illness and at the EOL.

Setting and Organizational Assessment

The LTC facility, where the project was implemented, admits an average of 1,200 patients per year. The facility has four LTC units, one of which is a 31-bed locked memory care unit. A post-acute rehab unit at the facility was excluded from the project because they do not typically care for patients long-term or at the EOL. Each LTC unit staffs one nurse, a certified medical technician, and three nurses' aides during the day shift; at night, one nurse and three nurses' aides. The dementia unit staffs one nurse, one CMT, and four nurses' aids in the daytime. In the evening, the dementia unit is staffed with one nurse and three aids. The facility is on a large campus that provides a continuum of care: independent living, assisted living, rehab and LTC.

Stakeholders for this project included: the facility nurse practitioner (NP), director of nursing (DON), assistant director of nursing (ADON), clinical nurse educator, four-unit nurse managers, and staff nurses. The target population was registered nurses (RNs) and LPNs. The facility NP, DON, and ADON provided accessibility for the identified the educational needs of the nursing staff for the project, provided access to the staff to measure knowledge and provide the education, and then to measure effectiveness of the intervention.

The facility NP, DON, ADON, and clinical nurse educator facilitated the implementation of the project. Written approval for project implementation at the site was obtained from the

facility DON on company letterhead. The main barrier identified to project implementation was time. Staffing shortages at the facility, combined with the patient care demands of 30 patients per one to two nurses were identified as barriers to participation and learning.

Purpose

The purpose of this quality improvement project was to determine the effectiveness of palliative care and EOL education to improve nursing knowledge among nurses in a LTC facility in order to increase the number of patients identified as appropriate for hospice and palliative care and referred to the local hospice and palliative care agency. All project aims align with facility goals of maintaining quality care and meeting minimum standards of care for Medicaid reimbursement.

Intervention

The intervention team consisted of the project coordinator, nursing staff at the LTC facility, facility NP, facility nurse educator, facility ADON and DON. Educational training focused on identification of palliative care and hospice program patient eligibility as well as palliative and EOL best practice interventions, medicinal treatments, and effective communication techniques. Stakeholders were updated in person by the project coordinator when in the facility or through messages left on unit bulletin boards.

The project coordinator conducted one-on-one or two-on-one educational sessions lasting 30 minutes. The educational session was provided during the nurses' scheduled shift, during a period of time that management established as not patient care intensive. Each session used a PowerPoint presentation that was developed in conjunction with a local certified palliative and hospice physician. The presentation was reviewed with the nurse; the discussion included the staff members' previous experiences with providing nursing care to palliative and hospice

patients. Pretest surveys were reviewed with the participant and the correct rationale explained for questions answered incorrectly by the participant. Laminated pocket reference cards were provided to the participants for future reference.

The proposal was submitted to the University of Louisville Institutional Review Board (IRB) for approval on December 19, 2019. The project was deemed exempt from IRB oversight in January 2020, as this was a quality improvement project and not human subject research.

Participants

Potential participants were identified by the clinical educator. Participation in the quality improvement project was strictly voluntary. Informed consent was deemed unnecessary, as this was a quality improvement initiative and not a research project. No protected patient information was collected. All participant data collected was deidentified.

Inclusion criteria for participation in the quality improvement project stipulated that the participant must be a full-time employee of the facility and be responsible for resident physical assessments. Agency employees, full-time employees of the facility on medical leave, and those hired during the implementation of the project were excluded from participation.

Data Collection

Data were collected pre- and post-intervention. The project coordinator distributed paper-pencil pre- and post-intervention surveys on the units. This method of survey administration was employed because it affords participants flexibility for completion around the demands of patient care. Each survey was marked with a pre-printed participant number identifier. A participant knew which survey to complete by a removable name label that they removed when they completed the survey. Once completed, the participant placed the completed survey in an envelope for the project leader or facility NP to collect. The project leader kept completed

questionnaires in the locked nurse educator's office. Only deidentified information was recorded in a spreadsheet maintained on a password protected computer. Response rate was calculated using the number of questionnaires completed verses the number of surveys distributed.

The pretest was administered at least one week prior to the education intervention. Originally, the posttest was to be administered two weeks after the educational offering, and again at four weeks after the intervention; however, when administering pre-tests, it became evident that time constraints would be prohibitive of serial post-testing. It was decided to omit the two-week posttest and measure knowledge at four weeks after participants received the education. During the course of the project, any patients identified as meeting palliative or hospice care criteria were referred to the appropriate local agencies, such as Hosparus Health; provided patient and family agreed with goals of care. If the patient or family did not wish to involve an outside agency in care planning, the facility continued to manage care and offer evidence-based palliative treatments.

The cost for printing and laminating pocket reference cards for distribution to nursing staff was \$75; this cost was paid for by the project coordinator. The project coordinator was not compensated by the facility for implementation or evaluation of the project. Staff at the facility did not incur overtime for participation in the quality improvement project.

Measurement

The Palliative Quiz for Nursing (PCQN) by Ross, McDonald, and McGuiness (1996) was used to measure the palliative and EOL knowledge of the nurses at the facility. The PCQN consisted of 20 "True" and "False" questions. Each question also provided the option for the respondent to answer "I do not know." An answer of "I do not know" was counted as an

incorrect response. Each participant was administered a paper-pencil PCQN questionnaire by the project coordinator and placed in an envelope which was collected by the project coordinator.

Several tools are available for measuring palliative knowledge, but most tools are quite lengthy in comparison to the PCQN. The project coordinator was concerned about time constraints of the nursing staff if a lengthy assessment tool was used. The PCQN was ultimately chosen based upon their brevity, reliability, and validity.

Ross, McDonald, and McGuiness (1996) report the internal consistency of the PCQN is 0.78 and that no statistically significant difference exists between test to retest. Nakazawa et al. (2009) report known-group validity in each domain is as follows: philosophy, $p < 0.001$; dyspnea, $p < 0.001$; psychiatric problems, $p < 0.001$, pain $p < 0.001$; gastrointestinal problems, $p < 0.001$; overall score of $p < 0.001$ between the groups. Permission for use of the PCQN was obtained from Dr. Fothergill-Bourbonnais, a representative for Dr. Ross, via electronic mail.

Demographic data were collected to describe project participants. Information collected included respondent age, gender, highest level of nursing education completed (doctoral, masters, bachelors, associate degree, licensed practical nurse), number of years as a nurse, number of years in LTC, normal shift worked, previous palliative or EOL care experience (in years), and previous palliative or EOL care education (none, one to two offerings, three to four offerings, five or more offerings, or do not know).

The number of referrals made to the local hospice and palliative care agency pre and post intervention were obtained from the local agency that the facility refers patients. Data received was strictly numerical and contained no patient protected health information.

Results

The completed pretest and posttest surveys were collected and hand-scored by the project coordinator. Data was then entered into a spreadsheet database. Data analysis was performed using Statistical Package for Social Sciences (SPSS) version 26. Data was double-checked for accuracy by the project coordinator and by a third party. Frequency and percentages were run for demographic variables. A paired sample *t*-test was performed to evaluate the differences between pretest and posttest total PCQNs scores.

A total of 24 nurses were identified to participate in the quality improvement project. Of the participants identified, a total of 23 nurses agreed to participate, completed the pretest and received the palliative and hospice education intervention. A total of 10 participants completed the pretest, education, and posttest. The other participants were unable to participate as four (4) nurses quit, five (5) nurses did not complete posttest for unknown reasons and four (4) were out on medical leave.

Demographic data were used to describe project participants. The mean age of participants was 43 years old. The majority of participants were female (80%); males comprised 20% of participants in the project. Sixty (60%) percent of participants were LPNs and 40% were associates degree RNs. Participants work experience as a nurse ranged from one year to more than 25 years; the median number of years as a nurse was 10 years. Participants work experience in the LTC setting ranged from one year to 11 years; the median number of years working in LTC was 8 years. Most participants worked night shift (60%); 20% worked day shift. Exposure to previous hospice or palliative education varied widely among participants: 20% reported they did not know if they had any previous palliative or hospice education; 20% reported they had never attended any hospice or palliative care educational offerings; 20% reported attending one to two hospice or palliative care educational offerings; 30% reported attending three to four

hospice or palliative care educational offerings; 10% reported attending five or more hospice or palliative educational offerings.

The overall mean of correct answers on the PCQN pretest was 11 with a standard deviation of 2.26; an overall mean of correct answers on the PCQN posttest was 15 with a standard deviation of 2.91. The paired difference of the pretest and posttest PCQN scores were calculated using a paired *t*-test which resulted a *t*-value of -5.55, *df* = 9, *p* < 0.001. This result indicates a high statistical significance in the improvement of palliative and EOL knowledge after a one-on-one or two-on-one, brief nursing education session. Cohen's *d* was calculated, resulting in a *d* = 1.75, indicating a large effect size.

The number of patient referrals made from the LTC facility to the local palliative and hospice agency, during the month before the intervention, was three (3). The number of patient referrals made from the LTC facility to the local palliative and hospice agency, during the month following the intervention, was one (1).

Discussion

Interpretation

The project findings demonstrated a significant increase in palliative and hospice care knowledge after the educational intervention. While many participants had many years of experience and had previously attended multiple hospice and palliative care educational offerings, their baseline scores indicated the need for further education on best practice nursing care for the chronically and terminally ill. The project suggests that providing a brief educational intervention on a one-on-one or two-on-one basis is a successful means of educating LTC nurses of best-practice nursing care for palliative and hospice care patients.

The intended outcome of the project was to increase knowledge of best-practice nursing care and identification of patients appropriate for hospice and palliative care referral. Referrals to the local hospice and palliative care agency decreased the month following the intervention. There were three (3) referrals from the LTC facility in January, the month before project implementation, and only one (1) referral from the LTC in March, the month following project implementation of the education.

Limitations

The implementation of a one-on-one or two-on-one educational offering was identified as a limitation. While conducting an intervention during a nurse's scheduled shift sounds feasible and convenient, unpredictable patient care demands and staffing shortages can interrupt the ability to participate. During implementation, multiple attempts were made to provide the education to some nurses before they were available for participation; even when a nurse was available, it was rarely without interruption.

Sample size was identified as a limitation in the project. Twenty-two participants received the education prior to the 2020 COVID-19 pandemic; however, only a total of 10 participants completed the posttest. The LTC facility preemptively shut down the facility to non-essential visitors the first week of March, in order to prevent resident exposure to COVID-19. A state mandate followed on March 10, 2020 preventing the project coordinator's entry into the LTC. Additionally, due to COVID infection amongst the residents and staff of the facility, many nurses quit or became ill, preventing the completion of the post-test. Due to restricted access to the facility, the project coordinator was unable to maintain a strict administration of posttests at the specified follow-up interval of four weeks. The facility NP placed surveys on the unit at a minimum of four weeks post participant education, but exact dates of completion are unknown.

Given that a greater time had most likely elapsed between participation in intervention and taking the posttest and the significant knowledge increase, it suggests that the one-on-one or two-on-one education format is a valuable learning modality for nurses in LTC.

Although knowledge of best practice hospice and palliative care modalities improved, it is unknown if the gain in knowledge translates to an increased quality of nursing care, improved patient and family satisfaction with care, or better patient outcomes. Additionally, the PCQN does not assess participants ability to identify patient appropriateness for palliative or hospice referral. Recognizing signs and symptoms of patient decline was part of the material covered in the education intervention; however, the project coordinator could not identify an established tool to measure this type of knowledge.

The project coordinator anticipated an increase in both knowledge and number of patient referrals to the local palliative and hospice agency after the educational intervention; however, patient referrals to the agency decreased for two consecutive months post intervention. It is believed that the 2020 COVID-19 global pandemic adversely affected this measure, as it greatly restricted family access to both patients and healthcare providers in the facility; thus, decreasing goals of care discussions between parties and initiation of the referral process.

Conclusion

The project showed a significant increase in hospice and palliative care knowledge among nurses in the LTC setting, even though the number of referrals from the facility did not increase. While the one-on-one or two-on-one format was difficult for the project coordinator to implement, this method may prove successful for the facility nurse educator who has daily access to employees. It was recommended that the facility educator implement hospice and

palliative care knowledge in this format for new nursing employees, after they have acclimated to their new roles on the unit.

With an aging baby boomer population, the number of people in LTC is on the rise. Nurses in LTC are the healthcare professionals who have the most face-to-face interaction with residents and, with the knowledge of how to identify patient decline, the ability to impact timeliness of referrals. More research is needed to validate the one-on-one or two-on-one method of continuing education and reinforce the findings in this quality improvement project. Additional research is also needed to find out if palliative and hospice education for nurses translates to identifying patients earlier in their disease process for referral and increased quality of care.

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Appendix A

PCQN

Answer questions as either True or False

Philosophy

1. Palliative care should only be provided for patients who have no curative treatments available. **F**
2. Palliative care should not be provided along with anti-cancer treatments. **F**

Pain

3. One of the goals of pain management is to get a good night's sleep. **T**
4. When cancer pain is mild, pentazocine should be used more often than an opioid. **F**
5. When opioids are taken on a regular basis, non-steroidal anti-inflammatory drugs should not be used. **F**
6. The effect of opioids should decrease when penta-zocine or buprenorphine hydrochloride is used together after opioids are used. **T**
7. Long-term use of opioids can often induce addiction. **F**
8. Use of opioids does not influence survival time. **T**

Dyspnea

9. Morphine should be used to relieve dyspnea in cancer patients. **T**
10. When opioids are taken on a regular basis, respiratory depression will be common. **F**
11. Oxygen saturation levels are correlated with dyspnea. **F**
12. Anticholinergic drugs or scopolamine hydrobromide are effective for alleviating bronchial secretions of dying patients. **T**

Psychiatric problems

13. During the last days of life, drowsiness associated with electrolyte imbalance should decrease patient discomfort. **T**
14. Benzodiazepines should be effective for controlling delirium. **T**
15. Some dying patients will require continuous sedation to alleviate suffering. **T**
16. Morphine is often a cause of delirium in terminally ill cancer patients. **F**

Gastrointestinal problems

17. At terminal stages of cancer, higher calorie intake is needed compared to early stages. **F**
18. There is no route except central venous for patients unable to maintain a peripheral intravenous route. **F**
19. Steroids should improve appetite among patients with advanced cancer. **T**
20. Intravenous infusion will not be effective for alleviating dry mouth in dying patients. **T**

