Palliative Care

Improving nursing knowledge, attitudes, and behaviors

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BACKGROUND: Oncology nurses affect patient care at every point along the cancer journey. This creates the perfect opportunity to educate patients and caregivers about palliative care early and often throughout treatment. However, healthcare providers frequently do not have the knowledge and confidence to engage in meaningful conversations about palliative care.

OBJECTIVES: The specific aims were to improve oncology nurses’ palliative care knowledge, attitudes, and behaviors by providing a palliative care nursing education program. An additional aim was to increase the number of conversations with patients and families about palliative care.

METHODS: This project had a pre-/post-test design to assess knowledge, attitudes, and behaviors at baseline and one month after implementation of an established education curriculum. The teaching strategy included one four-hour class for oncology RNs with topics about the definition of palliative care, pain and symptom management, and how to have palliative care conversations.

FINDINGS: Results showed a statistically significant difference after the educational intervention for knowledge, attitudes, and behaviors. The number of conversations with patients and caregivers about palliative and end-of-life care increased significantly.

THE NATIONAL COMPREHENSIVE CANCER NETWORK ([NCCN], 2017) defines palliative care as a special type of patient- and family-centered care emphasizing the management of physical, psychosocial, and spiritual care that is guided by patient goals and values. NCCN (2017) asserts that palliative care should begin at diagnosis of a serious illness and be provided throughout life-prolonging treatment, including end-of-life (EOL) care. Significant improvements in quality of life and mood have been noted when early palliative care was initiated among patients with lung cancer (Temel et al., 2010). In addition, patients with lung cancer who received palliative care had less aggressive care at EOL but experienced significantly longer survival. The Oncology Nursing Society (2014) position on palliative care states that all patients with cancer can benefit from palliative care, and palliative care interventions should always include the patient, the caregiver, and other healthcare disciplines involved in caring for the patient. In addition, Jacobs and Mayer’s (2015) standards of oncology nursing education highlight the need to represent the scope of teaching in all phases of cancer care, including prevention, early detection, rehabilitation, survivorship, and supportive care. Palliative care education for oncology nurses is encompassed in this directive.

Oncology nurses affect patient care at every point along the cancer journey. When nurses continuously provide feedback about the benefits of palliative care and advocate for it, it is more likely to be integrated into a patient’s care (Perrin & Kazanowski, 2015). However, many healthcare providers and leaders are not familiar with the concept of palliative care or choose not to embrace it in their practice (Gibbs, Mahon, Truss, & Eyring, 2015). Therefore, healthcare providers are not equipped with the knowledge or confidence to engage in meaningful conversations about palliative care with patients and their caregivers in a way that will provide patients with that extra layer of palliative care education and support. Pretesting of nursing populations about palliative care concepts continues to show that nurses are not prepared to support patients using palliative care knowledge, skills, and resources. However, research does show that time spent educating nurses about palliative care practice is successful but must be implemented using a variety of methods and sustained over time to fully affect patient care (Broglio & Bookbinder, 2014). Nurses who feel empowered to teach palliative care to patients feel confident in their role of the assessment of patient readiness and can provide education at the appropriate time (Harden & Schembri, 2016). Oncology nurses are expected to participate in the multidisciplinary team coordinating palliative care for patients, but they need structured preparation to feel knowledgeable and comfortable so they can

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engage in conversations with patients and their families and an-
swer questions related to palliative care. Abernathy et al. (2013)
back the notion that healthcare providers should be educated
about palliative care practices and use that knowledge to support
patients and their caregivers. Ongoing education supporting the
palliative care initiative will need to continue to maintain mo-
mentum and sustain the overall initiative.

**Literature Review**

Two major considerations regarding palliative care education
include the essential components of palliative care training pro-
grams for nurses and methods for successful delivery of edu-
cational programs. Three studies have identified the essential com-
ponents for palliative care training sessions. Liu and Yuan (2009)
identified a small panel of experts who determined 69 essential
training components, including palliative care overview, symp-
tom care, psychological care, communication, ethics, and termi-
nal care. Pavlish and Ceronsky (2007) talked to 33 nurses in focus
groups and determined that essential educational components
were (a) “Palliative care should include the family,” (b) “Palliative
care is a process or journey over time,” and (c) “Palliative care
allows patients to focus on goals and quality of life.” Pavlish and
Ceronsky (2007) showed that palliative care creates a shift to
holistic care and symptom management with a focus on patient
and family preferences. White and Coyne (2011) had nurses rank
the core competencies for palliative care education. Symptom
management and how to talk to patients and families about dy-
ing were selected as the top-ranked essential competencies. The
conclusion of these three studies revealed similarities among
core topics considered to be essential for palliative care education
and practice (symptom management; comfort, pain, EOL, and hos-
pice; family focus and patient and family preferences; and quality
of life and psychosocial issues). By identifying these components,
programs can begin to standardize the teaching content and prac-
tice for palliative care.

A second important consideration from the literature focuses
on the training of nurses on the topic of palliative care and in-
cludes the method of education. Most training programs involve
lecture and discussion formats (Coyne et al., 2007; Ferrell, Virani,
Paice, Coyle, & Coyne, 2010; Lippe, Volker, Jones, & Carter,
2017; Paice, Ferrell, Coyle, Coyne, & Callaway, 2008; Steginga et
al., 2005). A few programs are associated with the EOL Nursing
Education Consortium (ELNEC), which is a successful education-
al initiative for palliative and EOL care (Coyne et al., 2007; Ferrell
et al., 2010; Lippe et al., 2017; Paice et al., 2008). Studies using
the ELNEC content for palliative care demonstrated high partic-
ipant satisfaction scores (Coyne et al., 2007; Ferrell et al., 2010;
Paice et al., 2008). Participants from ELNEC courses taught other
nurses in their work settings and participated in additional pallia-
tive care activities, such as conferences and journal sub-
scriptions (Coyne et al., 2007; Ferrell et al., 2010; Paice et al., 2008). David
and Banerjee (2010) created a palliative care educational booklet
and found a significant improvement in nursing knowledge after
using the booklet. Henoch, Danielson, Strang, Browall, and Melin-
Johansson (2013) realized that, with a cancer diagnosis, patients
tend to engage in more existential thinking, and nurses are not
always equipped to help them. A randomized, controlled trial
showed significant improvement in confidence in communication
with a group that received training in existential support (Henoch
et al., 2013). Steginga et al. (2005) delivered general oncology edu-
cation classes using small-group, interactive, and didactic meth-
ods to 53 RNs at a cancer control agency in Australia. The nurs-
es in the intervention group reported increased cancer-related
knowledge and confidence in discussing care holistically with pa-
ients and physicians. Witkamp, van Zuylen, van der Rijt, and van
der Heide (2013) described a successful 25-day educational pro-
gram with lessons, examinations, and assignments that improved
nursing knowledge, attitudes, and skills regarding palliative care,
showing a significant increase in post-test scores from pretest
scores. The combination of experiential and didactic learning
continues to be the mainstay of successful education about palli-
ative care. In addition, the creation of measurable goals for par-
icipants to develop projects at their own institution and ongoing
mentoring are key components of palliative care education initia-
tives (Dahlin, Coyne, & Cassel, 2016).

Barriers continue to prevent nurses from being able to imple-
ment successful palliative care programs. Common barriers in-
clude lack of adequately trained palliative care physicians, nurses,
and social workers; lack of knowledge among patients and fami-
lies; and lack of training opportunities for existing healthcare team
members, all of which add to implementation difficulties (Gibbs et
al., 2015). Sato et al. (2014) determined barriers to be lack of con-
fidence of nurses; low support by experts; and difficulty managing
pain, delirium, and general symptoms. White and Coyne (2011)
concluded that nurses need better continuing education based on
top-ranked competencies to move palliative care initiatives to-
ward realization for patients and families.

“When the care team and family understand their role in palliative
care, conversations will be early, deep, and meaningful.”
The specific aims of this project were to improve oncology nurses’ palliative care knowledge, attitudes, and behaviors by providing a palliative care nursing education program. The definition of palliative care in this project was inclusive of EOL care. An additional aim was to increase the number of conversations with patients and their families about palliative care as a result of nurses’ improved knowledge, attitudes, and behaviors.

**Methods**

This project had a pre-/post-test design to test knowledge, attitudes, and behaviors at baseline and one month after implementation of an established education curriculum for palliative and EOL care. The setting for this palliative care education project was a 32-bed oncology unit at Michigan Medicine in Ann Arbor.

**FIGURE 1.**

**PALLIATIVE CARE EDUCATION CLASS OUTLINE**

**CONCEPTS HIGHLIGHTED IN FOUR-HOUR CLASS**

Vision for the future
- Conversations with all patients with cancer about palliative care
- New mindset
- Nurses provide palliative care every day
- Expectations going forward
- Initiate conversations about palliative care
- Assess and manage pain and symptoms
- Discuss patient goals and values
- Record conversations about palliative care

**SAMPLE FOUR-HOUR PALLIATIVE CARE COURSE CONTENT**

Overview of palliative care
- Dying in America
- What is palliative care?
- Difference between hospice and palliative care
- Quality of life
- Pain management
- Pain assessment
- Pain medications
- Pain management strategies
- Chronic pain
- Symptom management
- Common symptoms at the end of life (e.g., dyspnea, gastrointestinal, psychosocial, fatigue)
- Strategies for symptom management
- Communication
- Barriers to and myths about communication
- Active listening
- Empathy
- Nonverbal communication

Note. Based on information from Ferrell et al., 2010.

The target sample consisted of 54 RNs working on the inpatient oncology unit with varying levels of nursing experience, oncology experience, and palliative care experience. Advanced practice nurses and other RNs working in non–direct-staffing roles on the unit were excluded from the project. The implementation strategy began with key stakeholders on the unit (members of the leadership team and a staff nurse) who confirmed palliative care as a priority initiative for the unit.

The intervention consisted of delivery of palliative care education to oncology nurses on the inpatient unit to positively affect their knowledge, attitudes, and behaviors and to increase their engagement in conversations with patients and their families about palliative care. Education was based on a curriculum from the City of Hope, ELNEC (Ferrell et al., 2010). The curriculum and training were specific to oncology nurses, and each nurse received training using a modified version of the ELNEC materials (see Figure 1). Teaching strategies included one four-hour class using didactic methods, discussion, case studies, and small group exchanges. A total of six classes during a three-month period were offered to include all nurses on the unit. After completing the class session, nurses were asked to evaluate the class and comment about what they learned. They were given access to a learning management system online, which included all course materials and resources to use in their ongoing practice. During class sessions, nurses were taught about the definition of palliative care, pain and symptom management, and strategies for communicating. To begin developing their new mindset, nurses were empowered to initiate specific actions in their practice, which included discussing palliative care with every patient, assessing and managing symptoms, and talking about patients’ values and goals. Nurses were given a calendar during the class session to help track their conversations throughout the month to aid in reporting numbers on the post-test questionnaire.

The outcome measures for this project were mean subscales for knowledge, attitudes, and behaviors, and the number of conversations per month that nurses had with patients and their families about palliative care. Using a self-reporting questionnaire, nurses answered questions about knowledge, attitudes, and behaviors related to palliative and EOL care and reported the number of palliative care conversations they had with patients or their families in the past month prior to the educational intervention and about one month following the intervention.

Montagnini, Smith, and Balistrieri (2012) created the Scale of EOL Care in the Intensive Care Unit (EOLC-ICU), which allows nurses to self-report how prepared and comfortable they feel and their behaviors regarding aspects of palliative care practices pertinent to seven EOL care domains. These domains were identified using a consensus process and also are included in the subscales of the Scale of EOL Care (EOLC-Q). These domains are (a) patient/family-centered decision making, (b) communication, (c) continuity of care, (d) emotional and practical support, (e) symptom
management and comfort care, (f) spiritual support, and (g) emotional and organizational support for clinicians (Clarke et al., 2003). The scale consists of questions that are answered on a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree), including options for “neutral” and “not applicable.” Twelve knowledge questions ask whether nurses are prepared for certain aspects of care, five attitude questions ask if nurses feel comfortable about aspects of EOL care, and 11 behavior questions ask how nurses provide care. The EOLC-ICU scale has been deemed reliable and valid in ICU settings for providers working with patients with higher-level care needs (Montagnini et al., 2012). The ICU version of the tool was modified to be used in settings beyond the ICU, with alterations only to remove wording specific to the ICU. This new version, the EOLC-Q, does not have reliability or validity data but has been used in other studies (Price et al., 2017). The same number of questions remains in each domain for knowledge (12), attitude (5), and behavior (11). This version of the tool was used for the current study. Demographic information was also obtained by self-report, including how long nurses have worked on the unit, age, gender, level of education, and number of palliative care conversations had. The questionnaires were distributed on paper and in Qualtrics® electronic format. Nurses were informed by email and weekly updates on the unit to complete either the paper or electronic format of the questionnaires. Paper forms were returned to a secure container on the unit to maintain confidentiality.

Data from the paper questionnaires were manually entered into SPSS®, version 23.0, and electronic data from Qualtrics were downloaded into SPSS for analysis. Data on knowledge, attitudes, and behaviors were grouped into subscales and analyzed using descriptive statistics and a t test to evaluate the difference of the mean scores pre- to post-test.

Results
Forty-six of 54 nurses on the unit attended the four-hour class. Seven nurses were deemed temporary employees and were not enrolled into a class; only one nurse was a no-show to the class. Forty-eight nurses completed the pretest questionnaire, and 36 completed the post-test questionnaire. Forty-one nurses were female, and all validated that they frequently worked with patients with potentially life-limiting illness. Other sample characteristics from the pretest questionnaire are listed in Table 1. As documented by post-class evaluations, participants were engaged and energized during the palliative care classes. Evaluative comments by the participants at the end of class showed evidence of this positive experience (see Figure 2).

Twelve questions on the EOL questionnaire regarding preparedness examined the impact of the education innovation on knowledge. A statistically significant increase was seen in the overall mean scores from before the educational intervention ($\bar{X} = 3.5, SD = 0.64$) compared to after the intervention ($\bar{X} = 4.2, SD = 0.54; p = 0.000$) (see Figure 3). Three questions had a large effect size and included increasing knowledge in the areas of neuropsychiatric issues, such as delirium, seizures, anxiety, and restlessness ($p < 0.000$, Cohen’s $d = 0.92$); withdrawing life support from a dying patient ($p < 0.000$, Cohen’s $d = 1.03$); and identifying cultural needs of dying patients and their families ($p < 0.000$, Cohen’s $d = 0.93$).

Five questions on the EOL questionnaire were used to evaluate the impact of the education on attitudes. A statistically significant increase was seen in the overall mean scores from before the intervention ($\bar{X} = 3.5, SD = 0.74$) compared to after the intervention.
(X = 4, SD = 0.58, p = 0.002). Statistically significant changes were noted for the nurse feeling comfortable discussing advanced care planning (p = 0.011), talking about code status (p = 0.004), and withdrawing life support from a dying patient (p = 0.000).

To evaluate the impact of the education on behaviors, nurses completed 11 questions on the EOL questionnaire and reported the number of palliative care conversations with patients or families. The questionnaire responses showed a statistically significant increase in behavior scores from pre- to postimplementation, with a mean score of 2.9 before the education and a mean score of 3.4 after the education (p = 0.002). Oncology nurses reported increases in conversations about palliative care from pre- to postimplementation. Prior to the palliative care education, 29 nurses had zero to two conversations, and only 15 had more than three conversations, whereas after the education, the number of nurses who had zero to two conversations was 22, and the number of nurses with more than three conversations per month increased to 19. Although a statistically significant increase was not seen from the number of palliative care conversations pre- to post-test (p = 0.06), a notable increase occurred in the percentage of nurses having three or more conversations after the intervention (34% compared to 54%).

**Discussion**

Based on the pre-/post-test results, the project demonstrated a significant increase in knowledge, attitudes, and behaviors among oncology nurses participating in a palliative care educational program. The rate of compliance for attending the classes was high because of managerial support and scheduling of each nurse into one of six classes. Classes were held on-site and usually occurred before or after a shift. In addition, continuing education credits and salary were provided for attending a class. The population was a homogeneous group of oncology nurses who were primarily aged younger than 40 years who had earned their Bachelor of Science in Nursing degree. Additional projects evaluating the merit of palliative care education can target nurses who represent more diverse levels of education or clinical specialties.

Education initiatives for nurses provide the foundation for changes in knowledge, attitudes, and behaviors regarding palliative care. A significant increase was seen in the knowledge category regarding symptom management, cultural needs, and nurses feeling prepared to support the withdrawal of life support from a dying patient. In the oncology setting, the question about withdrawing life support may have been interpreted as care for a patient receiving comfort care. Oncology nurses do not withdraw life support as is seen in the ICU, but they often care for patients who have chosen the comfort care option at EOL.

During the education session, nurses were given specific actions to put into practice, which led to comments and engagement that the authors interpreted as positive feelings about the education and a considerable feeling of empowerment in delivering palliative care to their patients and families. A statistically significant increase was seen in three of five questions under attitudes. These three items addressed nurses’ confidence, showing a change in attitude, whereas the final two questions addressed interdisciplinary collaboration and benefits of commemorating a death. Although interdisciplinary collaboration and benefits of commemorating death are important in palliative care, this educational program did not focus on this content, so the lack of improvement is not surprising. Additional projects could involve providing education to interdisciplinary team members to incorporate the importance of team collaboration.

Overall, the behavior questions were significantly improved, even though the palliative care classes did not specifically address many of the topics. The change in behavior could reflect an overall sense of how nurses learning about palliative care benefits patients and families and represents an environment where nurses are beginning to take ownership of their own practice. Scores were lower for behavior in comparison to knowledge and attitudes. Behaviors are always the last to change, and whether this education has had a clinical impact will be seen with time. Barriers, such as lack of education or lack of experience, continue to play a role but have the capacity to improve as nurses embrace palliative care in their practice (Espinosa, Young, & Walsh, 2008; Gibbs et al., 2015).

Oncology nurses initiated more conversations with patients and their families about palliative care after attending the formal palliative care education class. Numbers of conversations increased, showing that nurses felt more empowered to teach their patients about the benefits of palliative care. Ongoing educational initiatives and inclusion of the multidisciplinary team may help to increase these types of discussions. The leadership team and nurses on the unit are excited to continue this palliative care for patients.
When each facet of the care team and family understands his or her role in palliative care, conversations will be early, deep, and meaningful and will be focused on the patient’s goals, values, and preferences.

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