

■ Article

# Implementation of an Evidence-Based Education Practice Change for Patients With Cancer

Denise Portz, RN, MSN, ACNS-BC, AOCNS®, and Mary Pat Johnston, RN, MS, AOCN®



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As oncology care continues to move toward delivery in the outpatient setting, oncology nurses must find ways to effectively educate patients about diagnosis, treatment, and symptom management. A cancer diagnosis induces high levels of anxiety, often affecting a patient's ability to retain information about his or her disease, treatment, and symptom management. Based on results from the ONS Foundation–supported Breast Cancer Care Quality Measures Set and Breast Cancer Survivorship Quality Measures Set, a community-based, multisite cancer center located in the midwestern United States embarked on a quality project in patient education. The purpose of this article is to describe a quality project that evolved from a review of the patient education process for patients with cancer in three medical oncology clinics to a pilot of a new model for patient education. The pilot identified gaps, developed and implemented evidence-based improvement strategies, and planned for evaluation of process and patient outcomes of this practice change. A pilot study to assess processes and workflows associated with a one-hour separate patient education visit was designed and initiated. Patients and oncology nurses have expressed satisfaction with standardized patient education. Although processes and workflows continue to be evaluated, a proposal was developed, submitted, and accepted by the institutional review board to evaluate patient-centered outcomes.

Denise Portz, RN, MSN, ACNS-BC, AOCNS®, is a manager of oncology clinical performance and Mary Pat Johnston, RN, MS, AOCN®, is an oncology clinical nurse specialist, both at ProHealth Care in Waukesha, WI. The authors take full responsibility for the content of the article. The authors received editorial support from Kristen Fessele, PhD, RN, AOCN®, in preparation of this article, funded by a grant to the ONS Foundation from the Breast Cancer Fund of the National Philanthropic Trust. The content of this article has been reviewed by independent peer reviewers to ensure that it is balanced, objective, and free from commercial bias. No financial relationships relevant to the content of this article have been disclosed by the independent peer reviewers or editorial staff. Portz can be reached at [denise.portz@phci.org](mailto:denise.portz@phci.org), with copy to editor at [CJONEditor@ons.org](mailto:CJONEditor@ons.org). (Submitted April 2014. Revision submitted June 2014. Accepted for publication June 10, 2014.)

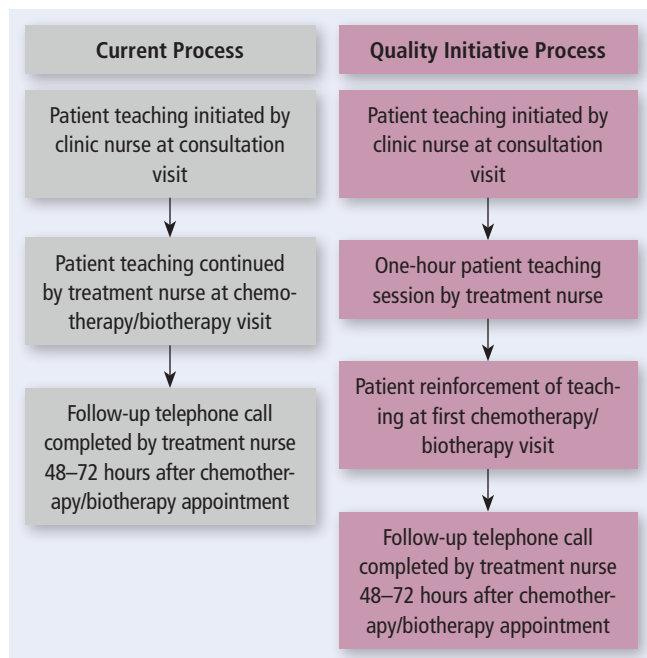
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An estimated 1,665,540 new cases of cancer will be diagnosed in the United States in 2014, and 585,720 patients with cancer will die (American Cancer Society, 2014). Cancer remains the second most common cause of death, exceeded only by heart disease. One in three people will be diagnosed with cancer during his or her lifetime, and one in four will die from the disease (American Cancer Society, 2014). The authors' multisite, community-based cancer center located in the midwestern United States participated in the ONS Foundation–supported Breast Cancer Care Quality Measures Set and Breast Cancer Survivorship Quality Measures Set (Fessele, Yendro, & Mallory, 2014). The emphasis of both projects was on assessment and interventions for managing cancer treatment-related symptoms during treatment or as late and long-term effects. The authors' data identified several symptoms for improvement, such as fatigue, sleep-wake disturbances, pain, and psychosocial distress, including anxiety and depression. The

nurse manager and clinical nurse specialist focused on data that indicated a lack of documentation of evidence-based interventions for managing those symptoms because the core of symptom management is patient education.

Patients anecdotally shared their experiences with trusted oncology nurses. A patient with colon cancer said, "Sometimes I get confused as to what to do. . . . One nurse will tell me one thing to control my diarrhea, and then another nurse will tell me something else. There has to be a better way." Medical oncology nurses also shared their experiences with providing symptom management education, saying that the patients are too overwhelmed and anxious during their first chemotherapy or biotherapy treatment to retain much of the information given to them, and nurses feel pressured to deliver an abundance of education among many time constraints. These stories led to the question: How do we teach patients about evidence-based interventions for managing symptoms? With exploration of



**FIGURE 1. Differences Between Current and Quality Initiative Processes**

processes, the authors discovered that inconsistencies existed between oncology nurses with the information provided to newly diagnosed patients and their families.

McCaughan and McKenna (2007) noted evidence that educational needs of patients with cancer regarding their diagnosis, treatment, and side-effect management are not being adequately met. In many cases, patients do not recall much information at the time of diagnosis. Of the medical information provided by healthcare practitioners, 40%–80% is forgotten immediately, and, for many patients, a cancer diagnosis is a time of crisis with high anxiety and an inability to think clearly (Kessels, 2003). As oncology care continues to move toward delivery in the outpatient setting, providers must be able to find ways to effectively educate patients about diagnosis, treatment, and symptom management. As described in a report by the Institute of Medicine (IOM), (2001), *Crossing the Quality Chasm: A New Health System for the 21st Century*, a healthcare system that achieves improvements in safety, effectiveness, and patient-centered care, timely and efficient care would be far better at meeting patient needs. Oncology nurses who frequently teach people about the disease, treatments, and symptom management may experience increased satisfaction as patients acquire self-management and coping skills, which may improve overall wellness. With consideration of current evidence, further exploration of patient-education processes led to the development of a team and quality project. According to the IOM (2013) report, *Delivering High-Quality Cancer Care: Charting a New Course for a System in Crisis*, cancer care teams focused on patient-centered, high-quality care through quality initiatives, evidence-based practice, and research, which supported the development and implementation of innovative programs and identified effective interventions for managing patients with cancer within their communities. When nurses are engaged, seek opportunities to lead, and are supported

in practicing their leadership skills, innovative, patient-centered, high-quality programs are achieved (IOM, 2010).

The purpose of this article is to describe a quality project reviewing the current state of patient education for patients with cancer in three medical oncology clinics of a community-based, multisite cancer center, identifying gaps, developing and implementing evidence-based improvement strategies, and evaluating practice changes.

## Methods

The team was established through a call for volunteers to oncology nurses in the cancer center. The 12-person team was led by the nurse manager and included seven frontline nurses, a clinical nurse specialist, a nurse practitioner, an inpatient oncology manager, and an educator. The team charter was developed by the nurse manager, approved by the director of the cancer center, and reviewed and approved by the team at the first meeting. The aim was to identify, develop, implement, and evaluate current and evidence-based patient education for patients with cancer and their families. Key deliverables included a review of current patient education materials and workflows for patient education delivery, including nurse roles and documentation; a search for evidence and best practices to optimize patient education strategies and resources; the development of new patient education materials; and training on new processes, workflows, and expectations. The team decided to limit this project's focus to one clinical setting with a small team of clinic and treatment nurses to explore current processes in patient education and develop evidence-based improvement strategies.

## Current Process

In the authors' medical oncology clinics, cancer treatment education begins at the patient's first physician visit and continues at the first treatment appointment with an oncology-certified RN. During this treatment visit, patients are often anxious and overwhelmed and retain little information. Nurses often struggle with being able to comprehensively educate patients about the side effects and symptom management because of time constraints. The team identified a significant gap in the lack of standardization of the content, which oncology nurse teaches, at what visit type the information is given, the resources used, and how the education is documented. Although the current process has been to

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**FIGURE 2. Patient Education Resources**

conduct patient learning needs assessment prior to education and to conduct follow-up telephone calls by an oncology nurse within 48-72 hours after IV chemotherapy or biotherapy treatment, adherence to these processes has been inconsistent (see Figure 1).

## Improvement Strategies

The team standardized evidence-based content for teaching patients and identified evidence-based resources to teach the content (see Figure 2). Criteria were then developed for what is taught by the clinic nurse on the consultation visit with the oncologist and what content is taught by the treatment nurse on the day of treatment. The team organized tools for patient education that included a teaching script for consistent language during the education session. If the patient's learning needs assessment reveals that this time frame is not an optimal time for learning, the script indicates what is critical for the patient to know prior to beginning IV chemotherapy or biotherapy. Adult learning principles were incorporated to assess what the cancer patient is most interested in learning, using screening questions such as, "What concerns you the most about the chemotherapy treatment?" In addition, the team identified how to best document education within the electronic health record (see Table 1). Finally, the team reviewed the chemotherapy and biotherapy discharge instructions and revised them with current evidence for consistency with the core content of the oncology nurse's teaching script, emphasizing self-management strategies and evidence-based interventions for each symptom, problems to report to the physician or oncology nurse, and contact information. A clinic nurse and three treatment nurses reviewed the script, and two advanced practice nurses and a nurse educator provided content expert review. Subsequently, the discharge instructions were converted into the authors' electronic health record as text for inclusion in the patient instructions of the after-visit summary or discharge instructions, making it accessible to all oncology nurses for all patients receiving IV chemotherapy or biotherapy.

To best address the challenges of patient education, the team designed a pilot offering a separate patient visit for newly diagnosed patients with cancer who will receive their first IV chemotherapy or biotherapy treatment. A patient visit type was created in the electronic health record scheduling system for the clinic with two one-hour time slots each weekday afternoon.

## Implementation Plan

Five one-hour staff education sessions were held in the first quarter of 2014 for medical oncology clinic nurses. They were offered on multiple dates on three campuses to provide education on the updated evidence-based chemotherapy and biotherapy patient teaching script, and 22 of 25 nurses attended a session. The objectives were to (a) review the new evidence-based chemotherapy and biotherapy patient teaching script, (b) describe the role of the oncology nurse in educating patients about chemotherapy and biotherapy, (c) demonstrate documentation of patient education in the electronic health record, and (d) review patient education resources, including chemotherapy and biotherapy discharge instructions. Several strategies were used to increase program attendance (e.g., nursing contact hours were provided), and WebEx technology was used to increase participation at the

TABLE 1. Minimum Required Documentation for Patient Education	
Question	Response
Who will be taught?	Teach the patient, family member, and caregiver.
What are the individual learner's needs for the teaching session?	Assess education priorities (e.g., perceived need), barriers to learning (e.g., health literacy, language barriers, cultural barriers, physical or cognitive limitations), readiness to learn (including emotional barriers), and learning preferences (e.g., verbal, written, hands-on activity).
What was taught?	Teach about the disease and the goal of chemotherapy and biotherapy treatment regimens. Review each medication, documenting which drug sheets were used. Advise patients of potential side effects and adverse reactions. Inform patients of symptom prevention and management practices, as well as community resources. Tell the patient who and when to call for potential problems.
What teaching materials were given to the patient and how were they provided?	Give the patient verbal explanation, written materials, and a link to an online video <sup>a</sup> .
What content can the patient or family recall or restate? Are they comfortable with their understanding?	Assess patient comprehension and understanding through the teach-back method, which allows the patient or family member to repeat what he or she has learned back to the healthcare provider. Restating the information allows the healthcare provider to determine which pieces of information were confusing or not understood by the patient. For example, a healthcare provider could say, "I want to be sure I was clear. Can you tell me, in your own words, what potential problems you should call your physician or oncology nurse for?"
<sup>a</sup> Online video available at <a href="http://www.my-emmi.com/acs/cancer-education.html">www.my-emmi.com/acs/cancer-education.html</a> Note. Based on information from National Quality Forum, 2005.	

program at the three sites. One session was recorded for those nurses who were unable to participate on the designated dates. With the introduction of the teaching script, emphasis was on the consistency and accuracy of the message. The script does not negate the art of how the nurse delivers the message. One nurse said, "I always find it difficult to talk about fatigue. This script helps me with it." Another nurse described how hard it is to talk about some of the more personal symptoms, such as constipation, diarrhea, or sexual health, perceiving discomfort from patients. The teaching script generated discussion about current interventions and resources for managing symptoms like fatigue, neuropathy, and psychosocial distress. The expectation was set for oncology nurses to use the new evidence-based interventions for symptom management and tools with all patients receiving IV chemotherapy or biotherapy.

The pilot was initiated with one oncologist's practice to assess the processes and workflows of offering a separate education

visit. The sample size was set for 10 newly diagnosed patients with cancer. The clinic nurse, working with the physician, offered these patients the option of teaching about their IV chemotherapy or biotherapy at the time of the first treatment visit or in a separate patient education visit. For both visit types, oncology nurses (specifically treatment nurses) conduct the education visit, and the length of time blocked on the schedule is one hour. The infusion coordinator facilitates scheduling a future date for the treatment nurse to complete the education and deliver the chemotherapy and biotherapy treatment. For the patients with a separate education visit, the teaching session was completed in a small, private consultation room with appointments available at 2 p.m. and 3 p.m. The treatment nurse completed this one-hour education session by handing off the telephone and current patient care responsibilities to the infusion coordinator to ensure a time that is uninterrupted from the busy treatment area. The same treatment nurse delivered the first chemotherapy or biotherapy treatment and completed a follow-up phone call to the patient 48–72 hours after chemotherapy or biotherapy to discuss any concerns or symptoms the patient may be experiencing.

## Evaluation and Outcomes

As of May 2014, 8 of 10 separate one-hour patient education visits were completed. The clinic nurse and receptionist collaborated to schedule the one-hour education sessions prior to the first chemotherapy or biotherapy appointment. After scheduling the first session, the team identified that open communication with other disciplines that have established relationships with the patient, such as oncology nurse navigators, social workers, and receptionists, is necessary to reinforce the importance of the patient education appointment.

The infusion coordinator identified challenges on days when the acuity level for patient care is high and a patient education visit is scheduled. She reported that, although the education session is planned for ahead of time, it is difficult to have one nurse absent in the treatment area. Further evaluation of the workflow and processes for scheduling time for the treatment nurse is necessary because of competing factors.

One treatment nurse said her education session was “very effective because I had uninterrupted time to develop rapport with the patient and relieve her anxiety about her chemotherapy/biotherapy treatment. I did feel the session made a positive difference.” The same nurse delivered the IV chemotherapy or biotherapy to this patient a few days later and described how great it was to be able to reinforce the education. Another nurse identified the importance of encouraging the patient to bring a family member, friend, or caretaker to the education session and the first chemotherapy or biotherapy treatment, when possible, allowing them to hear and reinforce the education. The treatment nurses unanimously agree that they valued the individual attention they were able to give the patients and families. Patients commented that they felt prepared and knew what to expect on their first treatment day.

Few models to enhance the delivery of patient education to patients with cancer have been proposed or evaluated. To more effectively measure patient outcomes, a proposal was developed and submitted to the authors’ institutional review board for a

## Implications for Practice

- ▶ Standardize patient education to provide a foundation from which new models for oncology nurse–led patient education will be evaluated.
- ▶ Establish standardized, evidence-based symptom management education to set the stage for a descriptive study to evaluate patient-centered outcomes of oncology nurse–led cancer patient education for newly diagnosed patients with cancer receiving IV chemotherapy or biotherapy.
- ▶ Apply similar quality project models to oral chemotherapy or biotherapy, radiation therapy, and cancer treatment options in multidisciplinary cancer center clinics to establish and improve patient education.

descriptive study to evaluate the quantitative and qualitative outcomes of oncology nurse–led patient education for newly diagnosed patients with cancer who will be receiving IV chemotherapy or biotherapy, comparing the outcomes of the current process of providing education during the treatment visit to a separate patient education visit. The outcomes include psychosocial distress, acute symptom visits, symptom telephone calls, and hospitalizations for symptom management (Flannery, 2013).

## Conclusions and Implications for Practice

The standardization of patient education provided a foundation from which new models for oncology nurse–led patient education will be evaluated. From the small pilot, an anecdotally reported increase was found in patient and nurse satisfaction. Scheduling the education session as an appointment was useful; however, appointment times may need to be adjusted. The infusion coordinator is a critical role in reviewing the schedule and coordinating the assignment of a consistent treatment nurse from a separate education visit to a treatment visit to a follow-up telephone call. In addition, communication with other multidisciplinary team members cannot be underestimated. Further evaluation of processes and workflow will be completed to identify strategies to overcome barriers prior to the initiation of the study. The proposal to evaluate patient outcomes was accepted by the institutional review board. Based on the results of this quality project, teams will be established with a similar model to evaluate current and redesign of patient education applied to oral chemotherapy or biotherapy, radiation therapy, and cancer treatment options in multidisciplinary cancer center clinics.

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## References

- American Cancer Society. (2014). *Cancer facts and figures, 2014*. Atlanta, GA: Author.



- Fessele, K., Yendro, S., & Mallory, G. (2014). Setting the bar: developing quality measures and education programs to define evidence-based, patient-centered, high-quality care. *Clinical Journal of Oncology Nursing*, 18(Suppl.), 7-11. doi:10.1188/14.CJON.S2.7-11
- Flannery, M., McAndrews, L., & Stein, K.F. (2013). Telephone calls by individuals with cancer. *Oncology Nursing Forum*, 40, 464-471. doi:10.1188/13.ONF.464-471
- Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington, DC: National Academies Press.
- Institute of Medicine. (2010). *The future of nursing: Leading change, advancing health*. Washington, DC: National Academies Press.
- Institute of Medicine. (2013). *Delivering high-quality cancer care: Charting a new course for a system in crisis*. Washington, DC: National Academies Press.
- Kessels, R.P. (2003). Patients' memory for medical information. *Journal of the Royal Society of Medicine*, 96, 219-222.
- McCaughan, E., & McKenna, H. (2007). Never-ending making sense: Towards a substantive theory of the information-seeking behavior of newly diagnosed cancer patients. *Journal of Clinical Nursing*, 16, 2096-2104.
- National Quality Forum. (2005). Implementing a national voluntary consensus standard for informed consent: A user's guide for healthcare professionals. Retrieved from <http://bit.ly/1rEE1wT>