Standardization of Initial Chemotherapy Teaching to Improve Care

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Recognizing that each nurse approaches patient education differently, a team of nurses at Dana-Farber Cancer Institute satellite facilities employed quality improvement strategies to develop a standardized approach to patient education. The goal was to eliminate variation in teaching and improve patient satisfaction scores.

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liminating process variation is key to reducing waste and improving efficiency and quality (Langley et al., 2009). At the Dana-Farber Cancer Institute (DFCI) satellite practices, chemotherapy teaching has always been provided to patients prior to the first infusion or initiation of oral chemotherapy. However, the tools used for teaching and the point in time the teaching occurred have varied across practices. Each site provides Chemotherapy and You and Eating Hints (National Cancer Institute, 2011a, 2011b) as well as two general safety guideline handouts developed at DFCI. The sites also provide varied location-specific resources, such as information about local support groups and financial resources, as indicated. Recognizing the variation, the authors of this article brought staff from each satellite location together to share current tools and processes and to develop a standard approach to patient education, documentation, and follow-up using a standard checklist, written materials, and teaching processes.

Strengthening Patient Education

The American Society of Clinical Oncology and the Oncology Nursing Society recently updated the standards for chemotherapy, which include patient education (Neuss et al., 2013). Although oncology nurses strive to meet these standards, processes need to be developed and monitored to ensure the desired outcomes can be achieved. To guide the work, the authors conducted a review of the literature related to approaches for patient and family education about chemotherapy treatment. Chan, Webster, and Marquart (2011) assessed interventions to orient patients to a cancer care facility. However, because of small sample sizes and design limitations, no single intervention could be recommended. Mueller and Glennon (2007) described the implementation of a prechemotherapy education checklist as a method to provide better organization and consistency in nursing staff education sessions. Van Weert et al. (2009) evaluated the psychometric properties of QUOTEchemo, an instrument used to measure needs and actual experiences with communication preceding chemotherapy treatment. Their findings provided evidence of reliability and validity for using QUOTEchemo in this patient population. However, the instrument is lengthy, unavailable in English, and, therefore, not applicable to the current setting. Gawande (2009) demonstrated the value of checklists in the operating room to ensure safety measures are in place prior to providing patient care. The use of checklists and education has demonstrated positive patient outcomes by reducing ventilator-associated pneumonia (Tablan, Anderson, Besser, Bridges, & Hajjeh, 2003) and central line infections (Pronovost et al., 2006).

Oncology nurses are committed to providing patient education prior to chemotherapy to ensure patient understanding of what to expect, how to provide self-care, and when to access additional medical assistance. Chemotherapy educational content is broad, and patients present with diverse learning needs and barriers to learning. Although the nursing staff at the authors’ institutions strive to meet all patient learning needs, they are challenged to do so by competing responsibilities, time limitations, and finite resources. To optimize resource use and provide high-quality care, a reassessment of education processes was indicated.
Aim of the Study

Baseline patient satisfaction data from the satellite practices revealed that 91% of patients understand what to expect during chemotherapy treatment and 87% reported having knowledge about managing chemotherapy side effects. The aim of this project was to achieve a 95% score in each of these areas by January 1, 2013.

To achieve the aim, the authors developed a standardized teaching checklist that included all necessary educational elements for patient understanding prior to the first chemotherapy infusion or start of oral chemotherapy. In addition, the authors sought to examine patient understanding of what to expect during chemotherapy, as well as their understanding of how to manage side effects during treatment.

Variables

Three interventions were implemented: a checklist, a treatment-specific calendar, and a patient education assessment survey.

Checklist: A component of successful process improvement work is to create a team of individuals with fundamental knowledge of the process being improved (Deming, 1986). Using Deming’s (1986) plan-do-study-act framework, a team comprised of nursing representatives from each satellite location, a clinical nurse specialist, and a quality improvement expert was assembled. The team grouped the required teaching elements for the new checklist into four categories: patient-specific information, treatment regimen, how and what to communicate with clinicians, and available patient resources. Decisions regarding which elements should be included in the checklist were determined by voting. Only infusion nurses involved in day-to-day care of patients were included in the voting process. After content consensus was obtained, a teaching checklist was created (see Figure 1) and distributed to staff at each site for feedback.

Use of treatment-specific calendars: Nurses in two satellite locations shared patient calendars already in use, which were subsequently merged into one document. The calendar includes information about symptom management, when to access medical assistance, and how to contact the patients’ providers. These electronically generated calendars also allow nursing staff to include unique relevant patient information, such as treatment schedule, blood test schedule, and other testing and support interventions.

Patient education assessment survey: To measure each patient’s level of understanding of key educational content, the authors collaborated with the DFCI Patient Family Advisory Council (PFAC) to create a patient education assessment survey. The survey was designed to measure patients’ levels of understanding and was completed at the third infusion visit. In addition to completing the survey, the PFAC encouraged staff to use this time to reassess educational needs, reinforcing key content from the chemotherapy teaching session.

**FIGURE 1. Chemotherapy Teaching Checklist**

*Note. Courtesy of Dana-Farber Cancer Institute. Used with permission.*
Process

After the work group planning was completed, nursing staff in each satellite location were taught how to use the checklist, how to create patient calendars, and when to distribute patient surveys. The authors implemented the checklist and calendar, and daily discussions took place to gain staff feedback regarding the elements of the new process. The feedback identified opportunities for improvements that were incorporated into the process.

One month after implementing the checklist and calendar, nursing staff began distributing the educational survey at patients’ third infusion visit. Using a five-point Likert-type scale, patients reported their understanding of what to expect when receiving chemotherapy and how to manage treatment side effects. Nursing staff reviewed patient feedback, provided follow-up education and written material reinforcing which symptoms to report to the provider, and provided tips for preventing and managing treatment side effects.

Measurement

This pilot project was conducted during the course of four months. The authors used patient satisfaction scores from the Press Ganey (2013) Survey for Adult Oncology as a baseline measurement of patient perception of chemotherapy teaching processes prior to the intervention. The authors continued to monitor patient satisfaction scores during and after intervention. The anonymous patient education assessment surveys were collected weekly and entered into a secure database. Staff satisfaction data also were collected through a postintervention survey to measure their perceptions of the new process.

Outcomes

Patients (N = 53) who completed the surveys reported an average satisfaction score of 4.86 (on a scale of 0–5, with higher scores indicating greater satisfaction) regarding knowledge of management of chemotherapy side effects. The most significant results were seen in the change in satisfaction related to patient education and feeling prepared for treatment (see Figures 2 and 3). At baseline, knowledge of what to expect during
chemotherapy was 91% and knowledge regarding how to manage chemotherapy side effects was 87%. After four months, patients reported a satisfaction score of 97% in both knowledge regarding what to expect during chemotherapy and knowledge of how to manage chemotherapy side effects. Results of the patient assessment education survey, administered after the third infusion visit, reported a mean score of 4.5 (on a scale of 0–5, with higher scores indicating greater satisfaction) in knowledge regarding how and when to contact their provider and what to expect during chemotherapy. Three months after the project was initiated, the patient satisfaction scores remained high in both categories, and have dropped only marginally since project implementation. Patient satisfaction scores will continue to be monitored monthly.

In addition to positive patient outcomes, staff who responded to an online survey (N = 23) reported high satisfaction with the new process. Eighty-eight percent of staff found the new checklist helpful, 100% felt the materials were comprehensive, and 80% felt the follow-up teaching materials were useful for ongoing patient education.

Discussion

Standardizing chemotherapy education processes can contribute to improved patient understanding and high patient and staff satisfaction. The standardized checklist is easy to use, establishes consistency with educational materials, and provides a framework for teaching sessions. In addition, the calendars are helpful to patients, well received by staff, and have been implemented into practice at all three infusion centers.

A few limitations exist related to this project. Although each site conducted a one-hour teaching session prior to each new chemotherapy regimen, the timing of the teaching sessions was not standardized or altered in the project. Two sites scheduled the teaching session no more than one week prior to the first chemotherapy infusion. One site taught patients the same day as their first infusion. The authors of this article do not know if the timing of these sessions had any impact on the measured outcomes. The scope of the initiative was limited to the DFCI satellite facilities. In addition, the number of patients who received the patient education assessment survey is not inclusive of all patients who received the DFCI patient satisfaction survey during the intervention time period. Each data point represents two different sample populations: those who received the survey and may or may not have received the hospital-initiated satisfaction survey, and those who received only the hospital-initiated satisfaction survey. However, patients completing the hospital-initiated patient satisfaction survey also would have received teaching during the project. Although the significant change in patient satisfaction scores is correlated to the initiation of the intervention, it cannot be determined to be causal because patient satisfaction is a compilation of many factors that were not controlled for this analysis.

The next step is to expand the use of the teaching checklist and patient calendar to other areas of the hospital. Within the satellite locations, the authors plan to standardize the time of the chemotherapy education session and avoid teaching on the same day of treatment. In addition, the authors plan to develop electronic versions of both tools and embed them in the medical record so they can be used widely throughout the organization.

Variation in care can be minimized by standardizing processes. The development of clinical pathways in oncology has been shown to reduce cancer care costs and improve quality (Scott et al., 2013). By implementing checklists to guide chemotherapy education, oncology nurses have an opportunity to lead the standardization of chemotherapy education, which could result in better care and increased patient satisfaction.

References


