Emergency Response in Outpatient Oncology Care: Improving Patient Safety

Rosalina Schiavone, RN, BSN, OCN®

Treatment of patients continues to shift toward the outpatient setting, with the volume and acuity of patients increasing (Peberdy, Boze, & Ornato, 2002). Patients with cancer who are treated in ambulatory care have the potential to develop life-threatening complications because of their disease and treatments. Many biologic and chemotherapeutic agents given in the outpatient setting can cause anaphylaxis, requiring immediate interventions to prevent further complications and death (Polovich, Whitford, & Olsen, 2009). Consequently, oncology nurses working in outpatient treatment centers are faced with increasing numbers of patients with higher acuity levels, often receiving medications that cause life-threatening complications. The purpose of this article is to demonstrate how one outpatient cancer center responded to such demands and developed a system to rapidly detect changes in patient status and improve responses to emergencies.

Rapid Response Teams

The Joint Commission’s (2008) Patient Safety Goal #16 is to improve recognition and response to changes in a patient’s condition. The Joint Commission further recommended that organizations select a method to enable healthcare staff to request additional assistance from specially trained individuals when a patient’s condition appears to worsen. The Institute of Healthcare Improvement’s (2008) 5 Million Lives Campaign outlined recommendations to significantly reduce morbidity and mortality in health care. One of the recommended strategies is to deploy rapid response teams (also called rapid assessment teams) at the first sign of declining patient status. The concept of rapid response teams developed as a way to identify patients who have a sudden change in status and, thus, prevent cardiac or respiratory arrest (Morse, Warschawsky, Moore, & Pecora, 2007).

Improving Rapid Response: A Case Study

The following case study describes the development and implementation of a process to improve early detection and response to emergencies, including a rapid response team, at Alta Bates Summit Comprehensive Cancer Center (ABSCCC) in Berkeley, CA.

Background

Cancer care at ABSCCC is provided at the Herrick Campus of the Alta Bates Summit Hospital System. The location includes a cancer center and inpatient psychiatric and rehabilitation units but does not maintain an emergency department or intensive care unit. In addition to outpatient infusion treatments for hematologic and oncologic conditions, the center provides radiation therapy, an apheresis unit, access to research services, and a variety of supportive and complementary services, including social services and acupuncture. The center has an examination station, where patients are seen by oncologists for initial consultation, treatment planning, and ongoing evaluation during treatment. Additional services include on-site laboratory services, x-ray, computed tomography imaging, and an oncology pharmacy. Twenty physicians and nurse practitioners specializing in a variety of hematology and oncology issues work at the center. The number of nurses working in various departments throughout the center on any given day can range from 20–30. Having services and personnel dispersed throughout a 54,000-foot center makes rapid response for emergencies challenging.

Life-threatening conditions are handled with an emergency response system. When 911 is dialed, the local paramedics are dispatched to the center two blocks away. Healthcare providers administer cardiopulmonary resuscitation until paramedics arrive. Chemotherapy with a high risk for hypersensitivity reactions or anaphylaxis is covered by a hypersensitivity policy. At the first sign of a reaction, the nurse initiates a standing protocol, which includes stopping the agent, hanging an IV of normal saline, and administering medications such as...
diphenhydramine and steroids. Of the departments at ABSCCC, the treatment room is most accustomed to dealing with treatment-related emergencies, but all patient-care areas are expected to be able to respond to patients who may experience a change in health status.

After several emergent patient events, the nursing staff recognized that they needed to become more organized and efficient during emergency responses. The outdated method of emergency response at the center needed to be updated to meet the growing acuity needs of the patients being seen at the center. The nurses identified that they needed a center-specific policy that outlined who responded, what functions they performed, and appropriate actions. They recognized the need to establish a process for staff education and data collection for evaluation of effectiveness of the process and to meet the Joint Commission’s Patient Safety Goal #16.

First Steps

A multidisciplinary emergency response committee was formed. Members included managers and key representatives from the examination station, treatment room, apheresis area, radiation department, pharmacy, and materials management, as well as a physician representative and members of the Clinical Operations Team. The committee’s first priority was to ensure that working emergency equipment and emergency medications were organized and readily available. Code carts were assembled and put on each floor of the outpatient care center.

The second phase of the project started with brainstorming. Case scenarios of emergency situations that might occur at the center were developed. Scenarios included hypersensitivity reactions not resolved with the established protocol and situations when patients had signs and symptoms of instability, hypotension, respiratory distress, or a sudden change in level of consciousness. The scenarios helped to identify a step-by-step process in the formulation of a team response to emergencies. The formation of a rapid response team developed as well as a systematic approach for responding to emergencies that included not only patients but visitors and staff members. A review of the scenarios also helped to identify and reinforce when it was appropriate to activate 911. A mock run of each scenario provided the opportunity for valuable feedback and real-time practice for a practical review of the proposed changes to the process.

Formation of the Rapid Response Team

The rapid response team consists of four members: respiratory, IV access, vital signs monitor and recorder, and the patient’s nurse or the charge nurse if the person is a visitor to the center. Support members to the rapid response team are pharmacy, a clinic assistant, and the unit secretary (see Figure 1). Nurses not assigned to the team for the day are considered nonresponders. Nonresponders are responsible for the ongoing monitoring of patients of the nurses called away to respond to an emergency. During an event, no new patients are brought into the treatment area until the situation is resolved. The new streamlined and focused response eliminates having too many well-intentioned responders, provides for safe coverage of other patients in the unit receiving treatment during an event, and provides daily assignment rotation to the various positions on the team to give each staff member an opportunity to become familiar with the duties of each position on the rapid response team.

Patient and Family Education

Flyers and brochures were developed to encourage patients and family members to notify staff if they believed a patient was experiencing a sudden change in condition. Sample forms were used from the 5 Million Lives Campaign at the Institute for Healthcare Improvement (2008) Web site.

Staff Education

In addition to the rollout of the new center-specific policy and procedure, staff members were invited to attend a presentation of the new emergency response process. Stickers were applied to phones in the center to detail how to page overhead to initiate the rapid response team. An important element added to the process was the addition of quarterly drills. All staff members are required to participate in mock scenarios to reinforce the process and awareness of equipment use so that they feel comfortable initiating the process.

Program Success

The new process has been in place for less than one year, but the response has been positive. Examination station manager Beth Beavers, RN, OCN®, stated “As a former infusion nurse, I think [the rapid response team] is great. It gives the nurse a backup if she needs help and can get help to a patient the first moment a problem is occurring.”

Each event is reviewed for appropriateness of actions and patient outcomes. The information will be compiled to determine the need for any changes in the rapid response team process.

In one instance, a family member alerted a nurse that her family member seemed to be having some trouble breathing. The nurse responding noted a change in the patient’s condition and activated the rapid response team. Team members arrived with all of the necessary equipment, medications, and personnel and provided a quick response. Each responder performed his or her assigned task, managed the IV and pushed medications as the physician ordered, took and recorded vital signs, and adjusted the oxygen setting based on oxygen saturation readings. Everything (e.g., needles, syringes, oxygen tubing) was readily available. The patient required 911 transport to the emergency room because of possible fluid overload. Admission to the hospital may not have been avoided,
but quick action on the part of the rapid response team may have prevented respiratory arrest.

Conclusion

In the outpatient cancer treatment setting, patients’ health status can change with little or no warning. The improvements to the emergency response process for ABSCCC established a cohesive team process for responding to sudden changes in patient conditions, established a centralized location for equipment and supplies for all treatment areas in the center, and developed a process that supports new and experienced nurses in feeling comfortable with initiating the rapid response team. Providing a coordinated team approach for emergencies can improve the overall outcomes of patients who experience sudden changes in health status and also can address the Joint Commission’s Patient Safety Goal #16.

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Author Contact: Rosalina Schiavone, RN, BSN, OCN®, can be reached at bikebird@sbcglobal.net, with copy to editor at CJONEditor@ons.org.

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