Avoiding Failure to Rescue Situations: A Simulation Exercise for Oncology Nurses

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This project aimed to improve RNs’ recognition of and appropriate responses to failure to rescue situations on a surgical oncology unit. Simulation exercises played a key role in identifying areas of strength, opportunities for improvement, and development of a personalized education plan. In addition, the exercises improved RNs’ clinical confidence.

The National Quality Forum (2012) selected failure to rescue (FTR) as a core measure for evaluating nursing care in acute care hospitals. The Agency for Healthcare Research and Quality (2010) defines FTR as factors that lead to health deterioration or death, such as an underlying disease, complication of medical care, and response to an acute situation. That definition of FTR goes beyond medical conditions to include the evaluation of how healthcare providers react to the emergency.

Often, nurses are the first contact in detecting and managing FTR and are positioned to intervene (Friesen & Aiken, 2008). FTR risk factors most often are associated with postsurgical patients’ high-acuity illness and nurse staffing (Friesen, Earle, Silber, & Aiken, 2010; Kutney-Lee & Aiken, 2008). Implications of FTR have a critical bearing on the quality indicators of hospitals and healthcare professionals. This article illustrates issues associated with FTR, the need for acute care education of oncology nurses, and a description of a nursing simulation exercise program personalized to a surgical oncology unit.

Failure to Rescue

Nurse staffing and job satisfaction affect hospital-related mortality (Kane, Shamliyan, Mueller, Duval, & Wilt, 2007; Sasichay-Akkadechanunt, Scalzi, & Jawad, 2003). A low patient-to-nurse ratio improves patient outcomes, job satisfaction, and quality of care (Aiken, Clarke, & Sloane, 2002; Aiken et al., 2011). Ratios of 3.5 patients to one nurse and the addition of one nursing full-time equivalent per patient on surgical units are associated with a significant reduction in patient mortality (Donaldson et al., 2005). Each additional patient assigned to a nurse is associated with a 7% increase in the likelihood of dying within 30 days of hospital admission and a 7% increase in FTR (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002).

Inpatient mortality is reduced by 5% at hospitals that predominately employ nurses who have a bachelor’s of science in nursing rather than nurses who have earned a two-year associate degree in science (Aiken, Clarke, Cheung, Sloane, & Silber, 2003). Specialty nurse certification also is associated with better patient outcomes, such as reduced mortality and FTR occurrences (Kendall-Gallagher, Aiken, Sloane, & Cimiotti, 2011). The positive effect of hiring bachelor’s-prepared nurses has been observed at all types of hospitals (Aiken et al., 2011); however, only 34% of RNs have a bachelor’s of science in nursing (U.S. Department of Health and Human Services, 2010).

Simulation Exercise for Hospital-Based Nurses

Simulation in nursing staff education helps improve self-confidence, clinical judgment, and problem-solving abilities (Classen, 2010; Ellis et al., 2008). Simulation also offers opportunities for unlimited practice of rare and critical events in a safe and controlled environment without risk to patients (Decker, Sportsman, Puetz, & Billings, 2008; Friese & Aiken, 2008). High-fidelity simulation using scenarios of various health problems and complications tends to foster team collaboration and communication (Johnson, Zerwic, & Billings, 2008; Friese & Aiken, 2008).

Recommendations from the 2009 Institute of Medicine Forum on the Future of Nursing encouraged healthcare providers to focus on interdisciplinary teamwork and establish training programs that incorporate simulation in patient safety (Nagle, McHale, Alexander, & French, 2009). Simulation training in the hospital leads to improved patient outcomes and a reduction in errors as it strengthens cohesiveness and communication among the entire team (Granger, Hebb, Lavallee, & Murray, 2011).
High-fidelity simulation for staff nursing education can help reduce FTR events.

**Simulation on an Oncology Unit**

Hospitalized patients with cancer may experience adverse acute medical events, particularly after surgery, cancer treatments, or other invasive procedures. National Cancer Institute (NCI)-designated cancer centers tend to have a younger patient population diagnosed with more advanced cancers compared to non-NCI-designated cancer centers; however, many oncology nurses may not have much experience with acute or intensive care (Fries et al., 2010). Training in early recognition and potential intervention strategies is critical so that oncology nurses can prevent fatal events in hospitalized patients with cancer.

A review of unit-specific quality data associated with critical medical events revealed a failure to recognize increased oxygen requirements and mental status changes as early warning signs of an acutely decompensating patient. Data were extracted from chart reviews of critical medical events and interviews with nursing personnel involved in those critical medical events.

In conjunction with a local college of nursing, simulation training was offered to every staff nurse on a high-acuity oncology unit. Prior to the simulation training, the unit had experienced three to four episodes of FTR per month. The exercise was conducted with nurses in groups of two or three based on critical events that had occurred on the unit. The goal was to see whether the nurses would recognize signs of an acutely decompensating patient and how they would respond during the simulation.

The exercises also provided valuable insight into the educational needs of the nursing staff.

The simulation included 45 nurses, 40% of whom had five years of nursing experience or less. Participants worked in teams of two or three during the training. Communication, navigating the crash cart, ability to recognize serious signs and symptoms of pending decomposition, and ability to start chest compressions and respirations were common among teams during the first simulation. Each element of the simulation was addressed by the clinical instructors. All teams performed better during the second simulation and were able to address each element of the simulation exercise effectively.

However, nurses also received additional educational opportunities between the first and second simulation exercise to help develop and strengthen their skills in recognizing acutely decompensating patients. Nurses expressed more confidence after the exercise.

**Conclusions**

During the year following the simulation exercise, no FTR occurrences were experienced. Monthly outcomes data from January 2010 to February 2011 demonstrated that cardiac and respiratory arrest events were decreased by an average of 300%, and emergency response team events were increased by an average of 60%. One year and two months after implementation of the initial simulation exercise and education on acutely decompensating patients, the surgical oncology unit was designated to house and staff a six-bed progressive care unit for surgical patients with cancer. Despite the higher acuity of patients that may remain on the unit, the nursing staff continue to demonstrate improved ability to recognize acutely decompen-
sating patients.

The simulation exercise helped nurses to gain knowledge, skills, and confidence and validated the importance of communication not only between the nursing staff, but also with the medical team. After attending the simulation exercise, nurses had additional classroom and
bedside learning opportunities that complemented the simulation experience. Nurses realized a need existed to focus on acute care management of patients presenting with multiple comorbidities that may impact their hospital stay. The nurses on the surgical oncology unit now readily seek acute care educational opportunities to complement their nursing skills.

References


