



ELSEVIER



CrossMark

Featured Article

Embedded, In Situ Simulation Improves Ability to Rescue

Nichole C. Kelsey, BSN, RN, CHSE^{a,*}, Stacey Claus, MSN, RN, GCNS-BC, CNRN^b

^aSimulation Educator, Department of Nursing Education and Professional Practice Development, Cleveland Clinic, Cleveland, OH, USA

^bClinical Nurse Specialist/Magnet Program Coordinator, Fairview Hospital, Cleveland, OH, USA

KEYWORDS

clinical decision-making;
practicing nurses;
clinical nurses;
reasoning-in-transition;
in situ simulation;
neurological assessment;
hospital-based simulation;
medical-surgical

Abstract

Background: A gap exists in providing simulation that incorporates the complexity of a typical work day and its effect on patient safety.

Methods: As part of a quality improvement project for the education of all nurses on a regular inpatient medical-surgical unit, nursing education facilitators embedded a standardized patient scenario into the typical work environment to help nurses understand how to safely prioritize a difficult care situation while managing their entire workload during a full shift.

Results: Using this embedded real-time simulation, nurse educators were able to determine nurses did not consistently recognize subtle signs of clinical deterioration in a patient with a spinal cord injury. Nursing staff reported an increase in knowledge and comfort with spinal cord injury and activation of rapid response at the end of the simulation.

Conclusion: Clinical decision-making appears to be less effective when subtle patient-assessment findings are collected and interpreted over time in the presence of a full patient assignment being cared for by a variety of caregivers. Understanding how nurses work within their typical environment opens the door for innovative approaches to designing future simulation education and hospital-based process changes that create safer environments for patients.

Cite this article:

Kelsey, N. C., & Claus, S. (2016, November). Embedded, in situ simulation improves ability to rescue. *Clinical Simulation in Nursing*, 12(11), 522-527. <http://dx.doi.org/10.1016/j.ecns.2016.07.009>.

© 2016 International Nursing Association for Clinical Simulation and Learning. Published by Elsevier Inc. All rights reserved.

It was a Sunday morning when a middle-aged female presented to the Emergency Department after being found at the bottom of the basement steps. Little was known about the assumed fall except the patient had consumed alcohol

the evening prior. This female patient was calm and cooperative with normal vital signs except a subtherapeutic temperature, which resolved with a warm blanket. Within 36 hours, this patient died from neurogenic shock and multi-organ failure following an undiagnosed spinal cord contusion. During the case review, opportunities to minimize future health care system errors were identified.

* Corresponding author: nickkelsey@gmail.com, kelsey@ccf.org (N. C. Kelsey).

Background

The Institute of Medicine has highlighted medical errors in hospitals dating back to the early 1990s, estimating that 98,000 deaths occurred per year as a result of medical errors (James, 2013). Since that time, multiple data reviews have been performed to further understand the impact of medical errors on patient safety. It is currently estimated that 210,000-400,000 hospitalized patients die each year due to preventable events, and nonlethal serious harm

Key Points

- Innovative in situ simulation design.
- Recognition of subtle signs of neurological deterioration.
- Prioritization and decision-making by nurses.

is 10- to 20-fold higher (James, 2013). James suspects the highly technical and fast-paced hospital environment contributed to the increase in adverse patient events along with an aging patient population and increased transparency of reported safety events. There are many causes for these occurrences; however, they should never happen. Ghaferi and Dimick (2015) wrote, “tragic ending to a patient’s clinical trajectory is not abrupt or wholly unexpected; instead, these failures are preceded by a steady accumulation of small clinical clues.” Duncan, McMullan, and Mills (2012) reported that 84% of hospitalized patients who arrested had documented signs of deterioration within the eight hours before the arrest and that 95% of the arrests could have been avoided. Shubert (2012) described three components to patient safety as it relates to failure to rescue events that occur in the hospital: inaccuracy of nursing assessments, lack of detection of clinical abnormalities/changes in patients, and lack of ability to pull the pieces together/problem recognition. In addition to these, once problems are identified by nurses, the nurse may be slow in reporting the changes to providers and providers may not act or respond quickly to the information they receive.

Implications for patient safety are many when considering factors associated with clinical recognition and decision-making; clinical decision-making may be more complex than expected. A study designed to explore the flow between (a) knowledge, (b) interpretation of symptoms, and (c) clinical decision-making, found disconnects in the clinical decision-making process of nursing students at different interaction points within the same simulation (Shelestak, Meyers, Jarzembak, & Bradley, 2015). Nurses’ ability to intervene effectively when a patient is deteriorating has been shown to improve with targeted education and relevant clinical experience. Early recognition and management of patient deterioration are essential nursing skills (Buykx et al., 2012).

There are benefits to providing a safe simulation environment where the nursing staff are able to practice tasks, increase

confidence in skills, identify process gaps and opportunities, and improve teamwork. Simulation is most beneficial to the health care environment as it relates to decreasing patient risks and improving patient outcomes (Aebbersold & Tschannen, 2013). While these are important outcomes of simulation, typical simulations prevent reasoning-in-transition, further widening the knowledge gap of some health care workers. Reasoning-in-transition is defined as “practical reasoning in an evolving or open-ended clinical situation” (Benner, Kyriakidis, & Stannard, 2011, p. 13). While specifically planned interventions can improve the immediate simulated patient’s outcome, it is possible that the patient’s condition could have been prevented all together with sound patient assessment. Buykx et al. (2012) encourages the use of simulation for both students and nurses to bridge the gap between knowledge and skills learned in nursing school, correct application of knowledge within the clinical environment, and promote more accurate clinical decision-making. More work is needed to better understand the clinical decision-making process and the role of simulation.

In situ simulation with human patient simulators may also be beneficial for practicing nurses. Patterson, Blike, and Nadkarni (2008) describe the differences between simulation center–based scenarios and in situ simulations. Compared to in-center simulations, in situ goals extend beyond the practice of technical and interprofessional skills; participants can actively problem solve within their dynamic setting. Another important benefit of in situ simulation is financial. Nursing units are constantly working to manage their budgets to meet productivity. It can be difficult to organize nursing time away from the patient care area which may require scheduling additional people to cover assignments. In situ simulation allows nurses to work within the timeframe of their scheduled work time, thus decreasing financial strain on the nursing unit.

A typical in situ simulation scenario is a 10- to 15-minute problem-based event that is followed by an immediate debriefing time. Patient symptoms are accelerated to meet the objectives at the detriment of realism. Participating staff step away from their patient care responsibilities and focus solely on the simulated patient. This approach to simulation is helpful but does not allow the participant to identify subtle, yet significant, changes over the course of time. Many articles have shown the benefit and utility of simulation. However, there is a paucity of literature with respect to performing in situ simulation with practicing nurses. No literature was found to have been incorporated into the usual practice environment throughout the course of a typical day. This quality improvement (QI) project was designed with those gaps in mind.

Methods

The institutional review board of the organization reviewed and affirmed the project-met QI standards requiring no

Download English Version:

<https://daneshyari.com/en/article/5567529>

Download Persian Version:

<https://daneshyari.com/article/5567529>

[Daneshyari.com](https://daneshyari.com)