

Collaborative Hospital Orientation: Simulation as a Teaching Strategy

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Abstract

For nurses, the stress caused by entering a new place of employment may give rise to insecurity and a lack of confidence. Lack of confidence in one's nursing skills can affect performance and, ultimately, patient care and safety. In healthcare, growing fiscal constraints have resulted in lost resources, and support for new nursing staff is limited by both time and cost considerations. Clinical educators therefore must find innovative ways to provide education and support, including creative learning modalities that facilitate nurses' transition into a new role and work environment.

This is the spirit in which clinical educators in the Medicine Program at London Health Sciences Centre – Victoria Hospital (LHSC-VH) adopted a new continuous quality improvement (CQI) initiative, aimed at advancing the nursing orientation program for new nurses entering into medicine.

Nursing staff recruited to the LHSC-VH Medicine Program attend a five-day central nursing orientation (CNO) along with an additional day of unit-specific orientation and education. It is during this phase of orientation that valuable information regarding organizational processes and policies is introduced, primarily through didactic measures such as lectures and slide presentations. However, critical thinking and decision-making skills needed to attain confidence in practice are difficult to learn in a classroom setting. Nursing programs in most academic centres across Canada have adopted simulation into their undergraduate nursing curricula as an adjunct to clinical placements. This paper will outline how, through the use of simulation, the clinical educators within the Medicine Program at LHSC-VH transformed the medical orientation program from the classroom to the bedside, offering a more engaging and interactive experience for new nurses.

Introduction

Orientation for all new nurses entering LHSC consists of five days of central nursing orientation (CNO) followed by one day of unit-specific orientation preparing nurses for their introduction to clinical practice with the aid of a preceptor. The purpose of CNO is to welcome new staff to LHSC and provide information regarding hospital policy, organizational strategy, infrastructure, corporate identity and institutional values, as well as a review of the basic nursing skills that are needed to practise independently. Clinical educators then require an additional day to present focused content that is unit-specific and geared towards providing specialized nursing care. Traditionally, both the CNO and unit-specific orientation programs were delivered using formal means of instruction, where minimal time was permitted for hands-on demonstrational learning.

Nursing staff are hired into the Medicine Program with varying degrees of experience and exposure to clinical settings. With a high percentage of new graduate nurses entering our workforce, clinical educators are challenged to engage all practice levels in critical thinking and problem-solving activities necessary to perform safely in a highly acute and complex patient care environment. It is expected that “faced with increasingly complex clinical situations, nurses must respond with accurate clinical judgment” (Yuan et al. 2011: 26). A number of barriers exist to providing education to new nurses in a formal academic setting, including information overload, inability of participants to concentrate, lack of retention, use of distractible devices and diminished participation, which collectively have a negative impact on the effectiveness of the orientation program.

In retrospect, we asked ourselves how we might improve the learning experience for new nurses in the medicine program. Upon deeper reflection and a subsequent litera-

ture search, the answer to this question came in the form of an idea of using simulation as an added teaching modality for our unit-specific orientation. Simulation has been widely accepted as a highly effective teaching strategy for use with healthcare providers (Lapkin et al. 2010). It has been utilized in a broad scope of healthcare education programs, resulting in positive outcomes with regard to knowledge acquisition, skill competency and building confidence in dealing with complicated clinical scenarios. With more attention given to performance, simulation-based education allows nurses to actively demonstrate skills, recognize and recall knowledge, and develop technical and communication techniques that contribute to high-quality, safe patient care (Beauchesne and Douglass 2011).

High-fidelity medical simulation is the use of technology for replicating a life-like clinical situation involving a virtual patient. With the aid of this specialized equipment, healthcare professionals can practise both procedural and decision-making skills in an environment that is safe from judgment or any potential harm. In collaboration with simulation specialists at Fanshawe College (a local community academic centre), LHSC clinical educators were supported in adopting simulation as an interactive tool for providing a new and innovative program for nurses' orientation to the medicine floor. By creating a multidimensional clinical case scenario executed by simulation technology, clinical educators were better able to synthesize the various concepts involved in the nursing process, facilitate reflection and critical thinking skills, integrate corporate initiatives and reinforce standards of practice as outlined by the College of Nurses of Ontario (2006). In addition, supportive measures were implemented during structured debriefing sessions that coincided with each segment of the simulation scenario, thereby encouraging participants to voice their concerns, ask questions, discuss specific observations and reflect on past experiences.

Background

The use of simulation as an educational tool in nursing is guided by the principles underlying various adult learning and education theories. Malcolm Knowles and colleagues (1998) carried on the tradition of adult learning theory designed by his mentor Eduard Lindeman (1926), yet Knowles went on to develop theories of his own which highlight the difference between formal and informal adult education. Although, like Lindeman, he recognized the importance of encouraging social participation, Knowles was more interested in building a framework by which to execute this form of teaching (Smith 2002).

One of the major components of Knowles's theory is the premise of "life-centered orientation to learning," which describes the adult learner as one whose perception of knowledge shifts from a "still" application to an immediacy for "action", or rather

from “subject-centeredness” to “problem-solving” (Knowles et al. 1998). Simulation offers nursing education a unique venue for knowledge translation that is both pragmatic and relevant to “real life,” with opportunities for problem-solving in a broad spectrum of clinical scenarios (Knowles et al. 1998).

Concomitantly, clinical educators also recognize the need for nurses to develop specialized knowledge and skills that are best characterized by another education theory known as Bloom’s Taxonomy. Benjamin Bloom’s Taxonomy Theory (1956) outlines three separate yet interrelated learning domains – cognitive, psychomotor and affective – that are essential to understanding practice development.

The cognitive domain involves the initial learning and application of knowledge. Nurses develop skills related to recall and recognition of knowledge and develop the ability to comprehend and apply various concepts. Professional development encourages advanced skill acquisition including critical thinking, problem-solving and conflict resolution. Furthermore, the integration and synthesis of knowledge acquired through clinical practice equips the nurse with the capacity to meet even the most complex needs of patients (Bloom 1956).

The psychomotor domain is concerned with technical skills associated with performing tasks. Skills acquired from this domain are relevant to various nursing practices, as competencies are gained by “imitating” or reproducing the observed skill (Bloom 1956). The College of Nurses of Ontario instructs nurses to “ensure that they are competent in both the cognitive and technical aspects of a procedure prior to performing it” (CNO 2006: 8).

The affective domain relates to values, attitudes and behavioural competencies such as integrity, communication, commitment to professional development and reflective practice. Nurses require these skills to interact effectively with patients, families and other members of the healthcare team (Bloom 1956). Simulation-based education serves to consolidate the learning needs of all three domains by providing opportunities to assimilate the necessary knowledge, skill and clinical judgment to practise both confidently and competently. That is to say, “Simulation-based learning provides a risk-free environment where students can incorporate cognitive, psychomotor and affective skill acquisition” (Yuan et al. 2011: 30).

Design and Implementation

In consultation with the simulation specialists at Fanshawe College, an “evolving” case scenario was created that incorporated all the elements of Bloom’s learning domains. Details relating to the simulated environment were given to

participants in preparation for the exercise to ensure meaningful engagement throughout the simulation learning experience. The clinical case scenario that was presented to new nurse hires reflects some of the more common clinical situations encountered by acute care nurses. The clinical case study involves an elderly patient admitted from the emergency department with a diagnosis of urinary tract infection (UTI). Complex, multiple co-morbidities are identified in the patient's past medical history. The patient is diagnosed with an antibiotic-resistant organism and has recently experienced a fall. The patient's condition then deteriorates to sepsis with resulting cardiac arrest and death. Clinical educators perform the role of the apprehensive daughter, adding to the complexity of the case. Furthermore, the scenario highlights various aspects of LHSC's corporate call to action regarding infection control and patient safety (LHSC 2012). Critical incident management and best practices guidelines are also emphasized.

Historically, simulation has catered to the psychomotor domain, referring only to technical and performance skills. However, now the perfect platform for learning has been created with the evolution of high-fidelity simulators that interact and communicate with participants. With the added capability of changing vital signs and the progression and deterioration of patient condition, simulation provides a more realistic patient experience. In addition to hands-on simulation, we recognized the need to test skills from all three learning domains. Therefore, we added the patient admission process at the beginning of the scenario in order to achieve this objective. The admission process requires psychomotor skills to carry out and document an appropriate nursing history and physical assessment. It requires effective communication skills and appropriate therapeutic interactions with the patient who is being admitted to hospital. It also involves the cognitive ability to delineate relevant data and exercise critical thinking skills needed to formulate an individualized nursing care plan. Additionally, we highlighted such attributes as communication and teamwork, thereby reinforcing the notion that effective communication reduces the risk of adverse events in our complex work environment (Beauchesne and Douglas 2011).

The patient case scenario was divided into several segments, allowing nurses to rotate through the simulation as participants while other members of the team congregated in a classroom to observe via video-conferencing technology. Each segment was followed by a structured debriefing session to facilitate group discussion and reflective practice. "Debriefing and reflection have been credited as the most critical element of a simulation scenario because this is where the most learning occurs" (Beauchesne and Douglas 2011: 32). Debriefing promotes further

knowledge application, emphasizes patient safety strategies and stresses documentation requirements as focal points of the preceding segment. Dreifuerst (2009: 10) states that “by providing opportunities to review events and make visible their meaning, debriefing offers a way to draw out the participants’ critical thinking and helps to develop their complex decision-making skills.”

Simulation as a teaching strategy for new nurse employees has many benefits. Nurses will perform more naturally in a life-like scenario, with each nurse demonstrating varying degrees of ability; this provides clinical educators an opportunity to assess individual learning needs based on observed strengths and weaknesses. In addition, simulation offers a safe learning environment that facilitates the transfer of skill and knowledge to the clinical setting, thereby keeping the entire experience interactive and engaging.

The simulation specialists involved in this project also acknowledged the benefit of interdisciplinary collaboration. Both simulator specialists and clinical educators play a vital role in preparing nurses for the workforce and have been given a unique opportunity to foster new and innovative ways of learning for new nurses in the Medicine Program at LHSC-VH.

Objectives

Despite the polarizing skill mix among new nurse employees in the Medicine Program, there is an ever-growing demand for higher levels of knowledge and professional competency at entry-level positions. This situation explains the emphasis placed on revitalizing the unit-specific orientation program for medicine. Initially, clinical educators hoped that the simulation would promote interest and engagement on the part of learners while adding context and meaning to the materials reviewed. Ultimately, however, the outcome has far exceeded our expectations and proved to be highly interactive, promoting critical thinking and problem-solving skills that align with LHSC’s vision of achieving excellence in patient care and safety.

Positive Outcomes

To assess the impact and satisfaction of using simulation as a teaching strategy, each new employee completed an evaluation questionnaire consisting of 10 Likert-type questions (see Appendix A at: <http://www.longwoods.com/content/23323>). The data collected demonstrate the success of this collaboration: 94% of participants agreed or strongly agreed that simulation with the added debriefing sessions was an effective method of learning. One nurse wrote, “I wish we had done more simulation when I was in school.” Additionally,

94% agreed or strongly agreed that this exercise provided an understanding of nursing protocols. Another nurse who was asked what she liked best about the orientation day replied, “It clarified expectations.” The most validating outcome measure was that 100% agreed or strongly agreed that the simulation learning experience was worthwhile. As described by one of the learners, “the day was interactive and interesting.” These results indicate that new employees were satisfied with the new unit-specific orientation program. According to Lapkin and colleagues (2010: 221), “Learner satisfaction is important as it may potentially enhance engagement and thereby facilitate learning.” The educators all agree that the simulation and debriefing provoked more meaningful discussion among the participants than traditional methods. Moreover, debriefing sessions are more focused, and gaps in knowledge can be clearly identified as a result of the concurrent participation–observation style of simulation.

The effectiveness of the facilitators was endorsed by 100% of the learners who answered the survey. The provision of learning is undoubtedly more comprehensive when working in a simulated clinical environment. Simulation proved to be a superior venue through which to reinforce expectations of nursing practice, policies and procedure. We argue that simulation, as a form of knowledge acquisition and skill attainment, is superior to traditional learning modalities.

Challenges and Recommendations

Transforming the Medicine Program orientation from the classroom to a simulation-based learning environment proved to be a seemingly smooth transition. Most of the challenges were related to such factors as cost, availability of resources and group size. There was no staff resistance, and the approach was readily accepted by all participants. The initiative was further endorsed by corporate leadership and fully embraced by our own departmental managerial team.

Group size was an important factor, as having few participants did not permit optimal intraprofessional dialogue and therefore would not justify the cost of providing this service. In order to overcome this challenge, clinical educators invited the Medicine Program at LHSC’s University Hospital campus to join the unit-specific orientation. Notwithstanding, we are forever indebted to Fanshawe College for the opportunity to participate in this collaborative endeavour at no extra cost.

In light of an obvious gap in the research data linking simulation training to improved patient safety and clinical performance, we have contemplated the idea of pursuing research in order to study the relationship between simulation and positive outcomes for both staff and patients. Potential research questions

include: Will simulation reduce the amount of clinical orientation needed by new nurses? Are documentation requirements improved by simulation training according to the standards of practice? Does simulation training have an effect on future nursing performance evaluations?

Conclusion

Preliminary feedback indicates that simulation-based training programs are more relevant to and better accepted by adult learners than traditional programs. “The instructional methodologies used in simulation-based training programs are more in line with the tenets of adult learning” (Yaeger et al. 2004: 326), as are the functional learning domains required for effective nursing practice.

Interest in simulation training has been heightened throughout the organization as news of our orientation program spreads. With the support of simulations specialists, we were able to create a superior learning environment for unit-specific orientation. Although simulations are not routinely used in hospitals, our work has validated their use as a meaningful experience for training new employees. The clinical educators in medicine at LHSC-VH have led the way with their innovative use of simulation as a means of improving the effectiveness of orientation of new nurses to this specialty. With this success, it is hoped that simulation will be incorporated into future hospital education programs.

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