

New Hampshire Board of Nursing Simulation in Pre-licensure Nursing Education

Guideline

Introduction

This paper provides guidance for pre-licensure nursing programs regarding the use of simulated experiences in substitution of required clinical hours. Simulation is a valuable addition to nursing programs because it provides students with opportunities to develop and refine knowledge, skills and attitudes (KSAs) required for safe care by allowing uniform experiences in a controlled environment they may or may not encounter in the clinical area. Additionally, by replacing some of the clinical hours with simulation may alleviate the challenge of finding appropriate clinical placements for students. According to the literature, simulation when combined with deliberate practice is superior to traditional clinical learning strategies (McGaghie, 2011). The fact that simulation provides a valuable adjunct to traditional clinical learning experiences is well documented (Jeffries, 2007). However, according to the Texas BON, Education Guideline, Simulation in Pre-licensure Nursing Education, 2015, challenges of implementing simulation into programs exist, these include:

- Need for faculty training
- Lack of administrative support
- Lack of positive attitudes of faculty toward simulation; and
- Budgetary restraints.

Currently the New Hampshire Board of Nursing (BON) does not regulate the use of simulation in pre-licensure nursing education. Notably the regulation of simulation by other state boards of nursing across the country varies by educational programs and percentages of use (Hayden, Smiley, & Gross, 2014). The BON Simulation in Pre-licensure Nursing Education

Guideline is an effort to clarify the role and limitations of simulation in pre-licensure education so that educators can best develop simulation experiences that meet International Nursing Association for Clinical Simulation and Learning (INASCL, 2013) standards: evidence based, educationally sound, and contextually rich.

Background Information

An increase in undergraduate nursing programs has created competition for a small number of clinical placement sites. Additionally, some acute-care facilities, concerned with patient safety, have reduced the number of nursing students allowed on a patient unit at one time. Other clinical facilities have even restricted the role of students by limiting what students may do during their time while on the unit (Hayden, Smiley, Alexander, Kardon-Edgren & Jeffries, 2014, p. S5). Based on this research and the knowledge that there is a shortage of traditional clinical placement, an increasing number of nursing schools are seeking alternative ways that replace clinical experience with simulation.

A survey conducted in 2002 found that 66 nursing programs identified themselves as using simulators (Nehring & Lashley, 2004). Eight years later, a NCSBN survey found 917 nursing programs were using medium - or high fidelity patient manikins in their curriculum (Hayden, 2010). In the past decade, Boards of Nursing have begun to receive appeals from nursing programs asking for "permission to use simulation to replace some of the traditional clinical experience hours" (Hayden et al., 2014, p. S5). In response, the NCSBN initiated a study in 2011 to monitor pre-licensure RN students (n=666) from ADN and BSN programs engaged in a standardized simulation curriculum. One group of students received 25% simulation, another 50% simulation, and a control group of students participated in 10% or less simulation.

Simulation scenarios followed the NLN/Jeffries Simulation Framework (Hayden et al, 2014, p. S5). The findings from the NCSBN (2014) study suggests that up to 50% simulation can be effectively substituted for traditional clinical experiences in all pre-licensure core nursing courses under conditions comparable to those described in the study. These conditions include:

- faculty members who are formally trained in simulation pedagogy;
- an adequate number of faculty members to support the student learners;
- subject matter experts who conduct theory-based debriefing; and
- equipment and supplies to create a realistic environment.

Additionally, the BONs should be assured by nursing programs that they have enough resources, including dedicated staff and facilities, as well as program commitment and support to develop and maintain a quality simulation program. (Hayden et al., 2014, p. S38).

Definition of Simulation

In their Position Paper, *Clinical Instruction in Pre-licensure Nursing Programs* (2005), the NCSBN defined simulation as "activities that mimic the reality of a clinical environment and are designed to demonstrate procedures, decision-making and critical thinking through techniques such as role playing and the use of devices such as interactive videos or mannequins. A simulation may be very detailed and closely imitate reality, or it can be a grouping of components that are combined to provide some-semblance of reality" (p. 2). The International Nursing Association for Clinical Simulation and Learning (INACSL, 2013) broadens the definition of simulation to include a simulated-based learning experience as an array of structured activities that represent actual or potential situations in education and practice and allow

participants to develop or enhance knowledge, skills, and attitudes or analyze and respond to realistic situations in a simulated environment or through an unfolding case study.

TERMS:

Low Fidelity. “Experiences such as case studies, role-playing, using partial task trainers or static mannequins to immerse students or professionals in a clinical situation or practice of a specific skill.” (National League for Nursing Simulation Innovation Resource Center (NLN-SIRC, 2013).

Moderate. The participant relies on a two-dimensional focused experience to problem solve, perform a skill and make decisions. Experiences are more technologically sophisticated such as computer based, self-directed learning systems or the use of mannequins more realistic than static low fidelity ones having breath sounds, heart sounds and/or pulses. (NLN-SIRC, 2013).

High Fidelity. “Experiences using full scale computerized patient simulators, virtual reality or standardized patients that are extremely realistic and provide a high level of interactivity and realism for the learner.” (NLN-SIRC, 2013) The simulation environment “mimics the clinical setting, and provides the learner with the cues necessary to suspend their disbelief during the immersive, hands-on scenarios” (NCSBN, 2009) and helps prepare them for actual clinical experiences (Nehring & Lashley, 2010; Sanford, 2010).

Debriefing. “An activity that follows a simulation experience, is led by a facilitator, encourages participant’s reflective thinking, and provides feedback regarding the participant’s performance (NCSBN Simulation Guideline for PreLicensure Nursing Programs, 2015).

Traditional Clinical Experience. “Practice in an inpatient, ambulatory care or community setting where the student provides care to patients under the guidance of an instructor or preceptor” (NCSBN Simulation Guideline for PreLicensure Nursing Programs, 2015).

Expanding the Use of Simulation

Simulation offers opportunities for students to increase self-confidence, critical decision making skills, knowledge, and competence in clinical practice. Skills learned in simulation can be readily transferred to clinical practice (Fisher & King, 2013), and students can practice nursing skills in a safe environment that allows for errors and professional growth without risk to patient safety (Galloway, 2009). Student cohorts can practice skills on the same simulated patient to enhance critical thinking skills, an opportunity not available in traditional clinical settings when students are each assigned a different live patient. Today, with the advent of medium and high fidelity simulators, scenarios provided for student learning are more realistic than ever. They include all levels of nursing skills, from basic assessment to trauma, allowing students to practice skills in a non-threatening, low-risk environment and providing them with patient care experience they may not have an opportunity to otherwise encounter in the clinical setting (Virginia Board of Nursing, 2013). Aware of the increased realism of high-fidelity simulation, the Virginia and Texas Boards of Nursing, among others, have issued position statements and guidelines on simulation that ameliorate faculty and clinical site shortages.

Benefits and Limitations of Expanded Simulation

The benefits of simulation are well documented. Simulation allows students’ the opportunity to deliberately practice and refine skills in a controlled, safe environment prior to performance on a live patient (Jeffries, 2007). Simulation promotes active learning and

participation to enhance students' critical thinking skills (Billings & Halstead, 2005). Educators can apply well-founded simulation approaches not only to help students in clinical rotations to attain educational goals, but also to evaluate teaching methods and investigate alternatives to the goals and methods themselves (Kyle & Murray, 2008). In this way, simulation can be used to demonstrate competence outcomes in nursing programs (Luttrell, Lenburg, Scherubel, Jacob, & Koch, 1999). In addition, simulated experiences provide the opportunity for diverse styles of learning not offered in the classroom environment and can result in increased student confidence (Jeffries & Rizzolo, 2006).

The Texas Board of Nursing (2015) supports the use of simulation as an effective teaching method to prepare students for clinical practice when used in combination with traditional skills lab practice and direct patient care experiences. Implications of the guideline suggest that there should be a reasonable balance between simulation and direct patient care, and that the learning experiences, both clinical and simulated, should include actual patients across the life span, be supervised by qualified faculty, and provide experiences with actual patients sufficient to meet program outcomes. Furthermore a specific ratio of simulation to actual clinical learning education is not provided. Rather it suggests that the ratio be based on "sound educational principles" (AACN 2008). Quality indicators for simulation based on the NLN/ Jefferies Simulation Framework were established in the NCSBN (2014) study, these include:

- Clear learning objectives
- Designated simulation team
- Adequate simulation resources to include educator training
- Incorporation of best practices in simulation
- Debriefing grounded in evidence based teaching (Dreifuerst, 2010)

While there is recognition that simulation preparation and development in conjunction with monitoring and debriefing is a significant workload, there is no conclusive data that provides a clear method on how best to calculate simulation responsibilities into faculty workload. The most significant finding of this study is the effectiveness of two types of educational methods: traditional clinical and simulation experiences. In both environments, excellent student outcomes are achieved when structure, an adequately prepared faculty with appropriate resources, dedication, foresight and vision are incorporated into the pre-licensure nursing program. (Hayden et al., 2014, p. S40). Along with studies previously discussed, these findings support the use of simulation as clinical learning in pre-licensure nursing education.

Conclusion

The New Hampshire BON believes that simulation can be an effective teaching method to prepare students for clinical practice when used in combination with traditional skills lab practice and direct patient care experiences across the lifespan. Based on current research, the New Hampshire BON recognizes that in any given population up to 50% of evidence-based simulation may be used in combination with traditional clinical experiences (Hayden et al, 2014). Nursing education should be based on educationally sound principles, the BON will require reasonable balance between simulation and direct patient care; and sound rationale supporting the appropriateness of the simulated experiences to achieve technical/professional nursing outcome.

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