Simulation in Nursing Education: Current Regulations and Practices

Jennifer K. Hayden, MSN, RN; Richard A. Smiley, MS, MA; and Lindsey Gross

Regulators have been discussing the issue of allowing simulation to replace clinical time for years and are looking for evidence to guide their decision making. In anticipation of the National Council of State Boards of Nursing National Simulation Study results, a descriptive survey was conducted to document the current regulatory environment on simulation and serve as a benchmark for future regulatory comparisons. This article reports the results of the survey.

The use of high-fidelity simulation in nursing education has increased dramatically in the last 15 years. As programs have acquired this technology and are learning to use it effectively, the benefits to student learning and nursing educators' ability to evaluate student performance are being realized (Cannon-Diehl, 2009; Foronda, Liu, & Bauman, 2013; Manz, Hercinger, Todd, Hawkins, & Parsons, 2013).

Concurrently, educational programs at the registered nurse (RN) and practical and vocational nurse (PN/VN) levels are struggling to obtain adequate clinical placements because there is more competition among nursing programs and hospitals are eliminating or decreasing the number of students allowed in the clinical setting. (Lambton, 2008; Miller, 2014; Nehring, 2008). As programs face these challenges, it is understandable that there is interest in using simulation as a replacement for a portion of clinical-hour requirements.

In 2006, Wendy Nehring conducted a survey of the Boards of Nursing (BON) of the U.S. states, the District of Columbia, and Puerto Rico to determine what regulators allowed regarding the use of simulation as a substitute for clinical hours. At that time, 16 states approved of simulation as a replacement for clinical hours (Nehring, 2008).

Nurse educators new to simulation may be unclear about what is permitted by their BON (Fancher, 2014). Moreover, for BONs that do not currently regulate the use of simulation, requests from programs to use simulation as a substitute for clinical hours can be difficult for regulators to address. To aid these decisions, many BONs have expressed the need for more evidence on the effects of substituting simulation for clinical hours.

Descriptive Survey on Simulation

Since 2011, the National Council of State Boards of Nursing (NCSBN) has been conducting a multisite study on the use of simulation as a substitute for traditional clinical hours in U.S. nursing education programs. The NCSBN National Simulation Study examined the educational outcomes of nursing knowledge, clinical competency, and readiness for practice of hundreds of nursing students who received either traditional clinical experiences, 25% simulation experiences in place of traditional clinical experiences, or 50% simulation experiences in place of traditional clinical experiences. These new graduates were then followed for the first 6 months of their clinical practice to evaluate their clinical competency and readiness for practice. Before the publication of the study results, a descriptive survey was conducted to document the current regulatory environment on simulation and serve as a benchmark for future regulatory comparisons. Surveys were administered to the members of NCSBN.

NCSBN has 60 member BONs from the 50 U.S. states, the District of Columbia, and four U.S. territories. Four states have separate BONs for PNs/VNs, and one state has a separate BON for advance practice registered nurses (APRNs). Also, 16 associate members represent nursing regulatory bodies in five countries.

The purpose of the survey was to describe the regulations or current practices related to using simulation in place of clinical hours. The survey was designed to address the following questions:

1. How many jurisdictions currently have regulations regarding the use of simulated clinical experiences?
2. What percentage of clinical-experience hours may be replaced by simulation?
3. How many jurisdictions plan to revise or create regulations regarding the use of simulation in 2014 or 2015?

Method

An electronic survey was developed to solicit information on regulations regarding the use of simulation in RN, PN/VN, and APRN programs. In February 2014, the link to the survey was e-mailed to the 60 executive officers of NCSBN member BONs and the 16 executive officers of associate members. One e-mailed reminder was sent to nonresponding executive officers. In three

instances, the authors reviewed the jurisdiction's practice act and its rules and regulations to find the information.

Executive Officers were asked if their regulations address the use of simulation, what is the maximum amount of simulation that may replace clinical hours per regulations and, if not stated in regulations, what amount of simulation is generally approved to replace clinical hours. The term *simulation* was intentionally not defined, so respondents could answer the survey questions regardless of how they use the term. As appropriate, respondents could select the answer "None" or "Not applicable." For the purpose of this study, a response of "None" indicated that simulation is not permitted to substitute for traditional clinical hours. A response of "Not applicable" indicated that programs may use simulation experiences at their discretion to meet their educational objectives or that clinical hours and/or simulation is not specified in regulations.

All jurisdictions were contacted to verify the survey responses or the information obtained from the NPA reviews or to clarify information provided in the survey.

Results

Overall, information was obtained for 69 of the 76 RN, PN/VN, and APRN BONs surveyed: 59 member BONs and 10 associate members.

Registered Nurse Programs

Information was obtained for 61 of 66 jurisdictions that regulate RNs. Of these, 8 states and 6 international jurisdictions do not allow simulation to replace clinical hours. Four states (California, Florida, Vermont, and Virginia) specifically state per the nursing regulations a maximum amount of simulation that can replace clinical hours, generally up to 25%. Singapore was the only international jurisdiction that specified a maximum amount (10% of clinical hours) of simulated clinical experiences.

For the remaining 38 U.S. states, regulations do not specify an amount of simulation that can be used to replace clinical hours, jurisdictions approve simulation use on a case-by-case basis, or regulations are silent regarding simulation. The District of Columbia's regulations are currently silent regarding simulation; however, draft legislation, if approved, would place a maximum of 20% of clinical hours that could be replaced with simulation. Internationally, three respondents (Nova Scotia, Ontario, and U.S. Virgin Islands) indicated having no regulations or restrictions regarding the use of simulation. Table 1 lists the jurisdictions included in the results, indicating their regulation of simulation in RN and PN/VN programs and the extent that simulation can be used to replace clinical time.

Practical/Vocational Nurse Programs

Information was obtained for 60 of the 66 jurisdictions that regulate PNs and VNs. Of these, 18 have simulation language in their regulations, and 21 do not address the use of simulation. Many approve the use of simulation, even though regulations may be silent on the issue.

Eleven jurisdictions do not allow simulation to substitute for clinical time; five of the 11 state this restriction in regulations. Eight jurisdictions specify in their regulations the percentage of clinical time that may be replaced. Five have regulations allowing the use of simulation but do not specify an amount.

Advanced Practice Registered Nurse Programs

Several jurisdictions used the "Not applicable" option when answering the survey questions about simulation regulation in APRN programs. There were comments from several respondents indicating that the jurisdiction does not regulate graduate programs. Ten jurisdictions, including Hawaii, Iowa, Louisiana, South Carolina, West Virginia, Guam, Northern Mariana Islands, Alberta, Ontario, and Saskatchewan, indicated that they do not allow simulation to substitute for clinical hours.

Future Regulation of Simulation

Eleven jurisdictions said they were planning to create regulations regarding the use of simulation in 2014 or 2015, and 24 indicated they plan to review and possibly revise their regulations in 2014 or 2015.

Discussion

The number of jurisdictions regulating the use of simulation, particularly its use as a substitute for traditional clinical hours, is increasing. Less than a decade ago, five BONs had regulatory language related to the use of simulation, and 16 allowed simulation to replace clinical time (Nehring, 2008). Today, regulations or formal guidance documents exist in 14 U.S. BONs, and 22 U.S. RN BONs allow at least some level of simulation as a clinical substitute. Some jurisdictions provide guidelines on the amount of simulation that can replace clinical time, some remain silent, and some decide on a case-by-case basis. This is true for the associate NCSBN members as well. Of the international members, four jurisdictions do not allow simulation to substitute for clinical hours, while one allows up to 10% simulation use in place of clinical, one is silent and one decides on a case-by-case basis.

Data on the regulatory environment of simulation use in PN/VN programs are similar to data on RN programs. In six jurisdictions (Connecticut, California, Georgia, West Virginia, Nova Scotia, and New Zealand), practices for simulation use differ between RN programs and PN/VN programs. In three of these jurisdictions (California, Georgia, and West Virginia), the differences might result from having separate BONs to regulate RN programs and PN/VN programs. In two jurisdictions (West Virginia and New Zealand), the use of simulation is more restrictive in RN programs than in PN/VN programs. In two others (Connecticut and Nova Scotia), PN/VN programs are