The Good News—Simulations Work, So Now What?

Over the past several decades, new and advanced technologies, a shift in focus from acute to primary care, and a federal health care reform law have changed the way we deliver and practice patient care. This overhaul of the health care environment has created new expectations of nursing students, evidenced by evolving nursing graduate competencies and essentials, as required by regulators and health care institutions that employ nurse graduates. In spite of these myriad changes, the way we teach clinical nursing has remained the same. The traditional model continues to be the gold standard, with one clinical instructor taking a group of nursing students to a clinical unit where each student is assigned one or two patients to care for that day. The instructor has to run from student to student to be with him or her as a task or psychomotor skill, such as medication administration, injections, and other types of skills, is performed. However, a fair amount of evidence exists that alternative models have supplemented this traditional approach (e.g., dedicated education units or employment of hospital nurses to precept students, with the instructor supporting and guiding the preceptors instead of students directly as another clinical redesign model). Despite these new models, direct patient care and clinical placements are still needed, thus perpetuating the strain on clinical environments to serve as learning sites for students. By the end of the day in a traditional type of clinical experience, the instructor is exhausted, students have been able to focus only on their individual patients, and, more often than not, whether the students have understood the complexity of the health care environment or the need to multitask and problem solve goes unassessed because they typically do not get to make decisions.

Simulations allow students to obtain that experience, and findings from the landmark National Council of State Boards of Nursing (NCSBN) National Simulation Study indicate that replacing some clinical time with simulations will not adversely affect a student’s education (Hayden, Smiley, Alexander, Kardong-Edgren, & Jeffries, 2014). The longitudinal, multisite study was invaluable in providing evidence to simulation proponents and skeptics alike, among both faculty and board regulators, some of whom worry that the nursing education community might be compromising student learning by substituting clinical simulations for real clinical time. Critics maintained that it is not known whether students can develop the psychomotor and clinical judgment skills from this type of pedagogy, given that students would be talking and working at times with a patient simulator, rather than a live person. Now the evidence is in!

The critical conclusion from the NCSBN study (Hayden et al., 2014) is that up to 50% of simulated learning can be effectively substituted for traditional clinical experience in all core courses across the prelicensure nursing curriculum without compromising learning outcomes. Specifically, the NCSBN study demonstrated that:

- Comparable outcomes were achieved by the three study groups from 10 educational programs, which consisted of students from associate degree and baccalaureate degree in nursing programs, in urban and rural communities across the country.
- Up to 50% of the simulation experiences was effectively substituted for traditional clinical experience without affecting NCLEX-RN® pass rates.
- All three study groups were equally prepared for entry into practice as new graduate RNs.
- Policy decisions regarding the use and amount of simulation in nursing education programs should be guided by these demonstrated best practices in simulation.

Elements controlled for and important in the study included learner support; a well-prepared, competency simulation team of educators conducting theory-based debriefing; equipment and supplies to facilitate realism of the simulation; and commitment to ensure high-quality clinical education.

In another research study conducted on clinical education (McNelis et al., 2014) the researchers found four emergent themes when observing different traditional-based clinical sites across three different geographical locations (Midwest, West, and East Coast) schools of nursing. The four themes included: (a) measuring a successful clinical day by completing the tasks; (b) using only one type of pedagogy to teach in clinical settings; (c) missed opportunities for teaching the students; and (d) lack of teamwork, with the focus typically on one patient. Those findings are not surprising, given that nurse educators tend to teach the way they were taught.

Until clinical simulations escalated and achieved recognition as a viable
clinical education solution, nurse educators rarely used anything other than traditional types of clinical teaching strategies. As the evidence indicates, prelicensure nursing students miss important learning opportunities in traditional clinical teaching arrangements and fail to gain experience practicing their full scope of practice.

Other well-known challenges to the current model of clinical education include the shrinking availability of clinical sites due to competition among nursing programs and the changing regulations of the health care environment; inefficiencies and inconsistencies in the student clinical experience, such as the time wasted waiting for faculty to be available, and variations of sites and preceptors; and difficulty securing preceptors due to issues such as burnout, fatigue, and concerns about loss of clinical practice productivity (Barker & Pittman, 2010).

Some may argue that these are external factors over which nurse educators have little control. However, I would argue that these problems demonstrate the paradox that nursing education has become. In the attempt to address nursing and faculty shortages—at the bedside and in the classroom—we have created the conditions where the demand is exceeding and exhausting the supply. To continue to provide the mandated and much needed clinical training for nursing students, clinical education must be redesigned to align with the resources available.

The time is right to transform, create, innovate, and embrace experiential learning for nursing students; let them learn and be immersed in their full scope of practice; and rehearse the critical decision-making, delegation, prioritization, and teamwork skills that are essential for beginning professional nursing practice, in a safe, nonthreatening environment.

In addition to using the traditional clinical setting for experiential learning, we now have the liberty to use more simulation experiences, particularly for those low-incidence, high-risk critical behaviors our students need to learn and experience. The NCSBN study (Hayden et al., 2014) results indicate that educators can confidently increase simulations to alleviate the growing shortage of clinical space, without adversely affecting educational outcomes. We have this evidence—now what?

For nurse educators and researchers to develop and fully realize a robust integration of simulation in the prelicensure nursing curricula, some essentials need to be considered when adopting this trajectory of a simulation-based curriculum to facilitate a successful, effective program for the prelicensure student clinical education experience. These essentials include:

- Commitment on the part of the school and program leaders to create and support a simulation-integrated program, adequate and appropriate facilities, simulation technology, related learning resources, and operational support to support a robust simulation program as an integrated part of the nursing curriculum. Faculty and other personnel need to be developed and trained to be qualified to conduct simulations.
- An evaluation plan that focuses on the effectiveness of simulation learning experiences in achieving the prescribed learning outcomes, namely the knowledge, clinical judgment, technical skills, and attitudes that students are expected to attain through simulation. Also, the overall assessment of the simulation experiences and pedagogy to ensure that quality, clinical education is being implemented is necessary.
- Simulation program policies and guidelines to ensure the quality and integrity of the simulation experiences for the learners.

Fortunately, several exemplary programs have proven effective in integrating simulation into their curricula and can serve as models for other nursing schools and programs. These include the nursing programs at Oregon Health and Sciences University, Boise State University (which offers an online health care simulation certificate), Johns Hopkins University, New York University, Robert Morris University, and Florida International University. At George Washington University, we have incorporated simulation activities for our accelerated baccalaureate program and for our graduate nursing program, where distance-learning graduate students come to campus for simulation experiences to demonstrate their attainment of the required clinical competencies.

As nursing programs across the country struggle to balance the conflicting realities of the declining availability of clinical sites and preceptors with the need to sustain or increase enrollment numbers in prelicensure programs, reliable evidence exists that simulation is an efficient, safe, and cost-effective means by which students can develop beginning clinical competence, as well as confidence in their clinical practice knowledge and skills. Simulation technology must become an integral part of the teaching–learning process in prelicensure nursing curricula today. Now, with the added evidence provided by the NCSBN study, I foresee clinical simulation advancing to a level in health professions education and practice as never before. The time to act is now.

References


Pamela Jeffries, PhD, RN, FAAN, ANEF
Dean of Nursing
George Washington University
Foggy Bottom Campus
2030 M Street, NW, Suite 300
Washington, DC 20037

The author has disclosed no potential conflicts of interest, financial or otherwise. doi:10.3928/01484834-20151016-10