An Innovative Educational Approach Integrating Simulation, Classroom, and Clinical Practice for Teaching Pediatric Nursing

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Pediatrics is a challenging population in which to prepare nursing students for practice. There are multiple reasons for this. First, the curriculum may allow limited class and clinical practice time to learn about pediatric nursing. Second, as students begin clinical practice in caring for children, they are frequently fearful of the hospital setting and the acuity level of pediatric patients. Third, they may have anxiety talking to parents. Fourth, within our school of nursing, we have experienced a major growth in the number of students admitted to the undergraduate nursing program. Because of this growth, administrators and faculty are increasingly challenged to ensure that students are fully prepared for practice. Student preparation includes a strong knowledge base in clinical care of the pediatric patient. Finally, there are comparatively few quality clinical sites available for student practice in pediatrics.

To address these concerns, faculty were asked to develop a new course in pediatric clinical simulation. Through the use of simulation, classroom lecture was matched with simulated patient scenarios. Concurrent with simulation, the instructors teaching students in the practice setting review the simulation materials for each week. In this way, clinical practice assignments are matched with simulation scenarios and lecture content. As students practice in the safe environment of the simulation laboratory, they develop confidence in communication, clinical skills, and knowledge as they prepare for clinical practice. The purpose of this article is to describe an innovative approach to teach pediatric nursing in a prelicensure program. Through the use of pediatric simulation experiences that are integrated with classroom content and supported by instructors in the clinical setting, students experience a strong connection between practice and didactic learning.

Patient simulation is an innovative teaching strategy to expose health care students to real-life situations. In simulation, students can gain confidence with clinical skills. Furthermore, simulation is a practice ground for students to develop strong clinical skills. National guidelines and nursing experts recommend the use of simulation to either replace or augment nursing student hospital-based clinical time. However, there is limited guidance suggesting best methods to integrate pedagogy and clinical nursing knowledge with simulation for large groups of nursing students. The impetus for our innovative approach to teaching pediatric nursing with simulation came from the need to expand our prelicensure program without having to secure additional pediatric clinical sites. A team of pediatric faculty developed a new clinical course for second-semester students in pediatric simulation as an adjunct to hospital based clinical practice. Students have a strong foundation in assessment, pathophysiology, and basic skills before entry into pediatric nursing. Concurrent courses for students include pediatric lecture, pharmacology lecture, and the first of a 2-course medical surgical course sequence.

Development of the Pediatric Simulation

The faculty team was led by 2 expert clinical educators in pediatrics who carefully designed content for the simulations based on weekly lecture. The simulation team guiding students through the scenarios in the laboratory consists of nurses from the local children’s hospital. These nurses are expert practitioners who provide a link between the clinical and academic settings. Collaboration among the pediatric faculty who teach in the classroom, simulation team, and instructors in the clinical setting is key to this innovative approach. Weekly content for each simulation scenario integrates knowledge learned in the classroom with hospital-based clinical experiences. Selection for simulation content is based on cases seen most often in clinical practice and/or extracted from web-based cases generated from practitioners internationally. Overall goals for the simulation
experience include improved patient care, enhanced safety in clinical practice, and encouragement of interprofessional collaboration in a pediatric clinical setting.

In total, 19 simulation scenarios (including scenarios for student make-up sessions) were developed for the course. To ensure local practice relevance, reports about common admission diagnoses from our pediatric clinical practice partner were obtained and used for guidance in the development of scenario content. On the basis of the current literature and the pediatric textbook, material for each scenario was identified; in this way, students were able to apply classroom content, pathophysiology, and evidence-based interventions to each simulated case. Although scenarios were developed by the simulation educator, they were reviewed by one or more of the pediatric clinical instructors who were content experts for each topic. Content was further refined as the simulation team reviewed and revised the scenarios before each weekly offering. The local children’s hospital donated equipment and supplies for the simulations.

**Simulation Implementation**

Students participate in 1 simulation scenario each week for either 5 or 6 consecutive weeks based on the need for clinical practice. Each weekly simulation counts for 3 clinical practice hours, using a 1:1 ratio of simulation to clinical practice. On the basis of the number of students, 2 or 3 case scenarios are offered each week, each with a different patient problem. Four groups of students attend simulation each day with approximately 12 students in each group for 2 days with 3 scenarios for each group. Supplemental Digital Content, Table, http://links.lww.com/NE/A792, provides a sample rotation schedule for each day. There are 4 identified roles for each scenario: nurse, charge/resource nurse, parent, and debriefer. Students rotate roles each week of the simulation experience. Clinical instructors follow the simulation curriculum coordinating assignments with simulation content.

In preparation for pediatric simulation, relevant student information is posted in the Learning Management System. Presimulation information includes a short video recording, which reviews pathophysiology of the disease state(s) for each scenario as well as medications and necessary skills. Skills are scaffolded each week beginning with least to most complex. Other resources, such as parent teaching sheets developed by the local children’s hospital, are also included. Pediatric patient conditions that are not part of the simulations but are pertinent to the case, such as seizures, are posted in short video vignettes to expose students to the full clinical picture.

**Student Feedback**

Student comments were positive overall. Students reported in an anonymous evaluation that they felt better prepared for clinical practice, a sentiment echoed by their clinical instructors. In the clinical setting, students perceived improved critical thinking, confidence in medication administration, and communication skills. In addition, they reported satisfaction in the opportunity to provide acute pediatric care that they would not typically be able to do without the simulated experience.

**Conclusion**

The process of integrating classroom instruction, clinical practice, and simulated experiences allows for increased continuity between the experiences to enhance student learning as well as support greater skill acquisition and proficiency in the transition of knowledge to practice. This innovative use of simulation exposes students to content and experiences that didactic and inpatient clinical experiences alone do not typically permit.

**References**