Shifting the clinical teaching paradigm in undergraduate nursing education

February 22 2012

To address the faculty shortage problem, schools of nursing are reexamining how they provide clinical education to undergraduate students to find ways to use faculty resources more efficiently so they can maintain student enrollment and meet the future need for nurses.

To this end, researchers from the New York University College of Nursing (NYUCN), funded with a grant from the Robert Wood Johnson Foundation's Evaluating Innovations in Nursing Education Program, have just published a description of an evaluation study, "Shifting the Clinical Teaching Paradigm in Undergraduate Nursing Education to Address the Nursing Faculty Shortage," in the on-line edition *Journal of Nursing Education*.

The NYUCN researchers, in collaboration with the National Development Research Institute, USA and the Johns Hopkins School of Nursing, are evaluating a new and unique clinical teaching model, using high-fidelity human patient simulation to partially substitute for traditional clinical teaching approaches.

The new clinical teaching model increased faculty capacity by increasing student-to-teacher ratios per semester, but actually decreases student to teacher ratios in each individual teaching session, .

The previous traditional laboratory and hospital based instruction model required 4.5 faculty instructors for 24 students. With the incorporation of this model using high-fidelity human patient simulation, now only

three faculty instructors are needed for the same 24 students. Additionally, with the NYUCN model, student group sizes decreased by 25% for both hospital-based clinical and classroom-based laboratory sessions.

"This model gives us a win-win during the current faculty shortage-- by reducing the demand for high quality clinical instructors while simultaneously reducing the number of students an instructor teaches each simulation lab or clinical session," said Dr. Hila Richardson, Principal Investigator for the evaluation and Clinical Professor for the NYUCN. "We feel more confident that patient safety is protected by allowing closer supervision of students on the clinical unit and preparing them for 'real-life' clinical practice in the safety of the simulation lab," Dr. Richardson said.

The educational advantage of using high-fidelity simulation in conjunction with or as a substitute for hospital-based clinical education is that it provides a safe learning environment where errors can be made and students have time for self-reflection and learning.

"In a typical high-fidelity clinical experience, students can reason through a clinical situation, make decisions about interventions, and make mistakes without harming a patient," said Dr. Mattia J. Gilmartin, the study's co-author and NYUCN senior research fellow. "At the end of the simulation session, an opportunity for students to reflect on their performance occurs during a guided debriefing, and our students frequently commented that they appreciated the opportunity to practice skills and critical thinking in a controlled environment," Dr. Gilmartin said.

Students who have had the high-fidelity clinical experience often feel more confident to work with patients and ensure their safety when they are in the hospital setting. Additionally, faculty can feel more confident

that students have experiences across the range of common clinical situations rather than relying on the ad hoc nature of a hospital day to provide the needed experiences to meet learning objectives.

"Our support for evaluation of NYU's use of clinical simulation reflects our belief that the findings will provide critical evidence of the impact on teaching productivity and faculty work-life," said Dr. Michael Yedidia, director of the Evaluating Innovations in Nursing Education, a National Program Office of the Robert Wood Johnson Foundation. "We eagerly await the results from the controlled evaluation. In the interim, the recently published article on the model provides useful guidance to those nursing programs considering replication of this model," Dr. Yedieia said.

With the new model, students spend half of their clinical days in a simulated clinical learning experience. The simulation and hospital-based days are scheduled for alternate weeks. For example, a clinical group of students would be in simulation on week 1 of the semester and in a hospital or health care agency setting on week 2, rotating back to the simulation laboratory on week 3, and so on. The clinical faculty remains in the hospital setting alternating clinical groups of six students each week, thus supervising a total of twelve students per semester, Before the model was implemented, the hospital-based faculty supervised 8-10 students each week for the semester.

To reinforce the integration of the two experiences, the simulation experience is called an "on-campus" clinical day and the hospital or health care agency experience is called an "off-campus" clinical day. Students must follow the same policies for uniform, attendance, preparation, and professional behavior in both on-campus and off-campus clinical experiences. To the extent possible, the off-campus instructors are asked to find patient care experiences that align with both the lecture and the simulation content.

"This evaluation of a new clinical teaching model will directly contribute and positively enhance the current evidence-base of the effects of using clinical simulations in nursing education," said Dr. Pamela R. Jeffries, Professor and Associate Dean for Academic Affairs, Johns Hopkins University School of Nursing. "I see the integration of clinical simulations to combat the nursing faculty shortage as one of most impactful new models on the forefront of addressing the Future of Nursing Education report," Dr. Jeffries said.

This evaluation will provide the information needed to better understand how this model can assist in mitigating the nursing faculty shortage and simultaneously allows nursing school enrollment to keep pace with future needs. Further, the evaluation should show that when this model is used as an equally sound and valued educational approach, it can enhance the traditional model of clinical learning to prepare new nurses for increasingly complex health settings.

Provided by New York University