BLUE RIDGE BUSINESS JOURNAL

Date: Monday, May 19, 2008
Location: ROANOKE, VA
Circulation (DMA): 13,000 (68)
Type (Frequency): Magazine (BW)
Page: 36,37,38
Keyword: College of Health Sciences

Program attacks the nursing shortage head-on

Training by simulation helps solve some of the major problems facing schools who train nurses

By Rachael Garrity

While contention may reign right now over the candidates and their rhetoric in what seems to be an interminable presidential campaign, there is one issue within the debate that most every American agrees on: the health care system is in grave need of repair.

A crucial aspect of that need is the rising shortage of qualified nurses in this country. Last month, the council on Physicians and Nurse Supply, an independent research group at the University of Pennsylvania, determined that to meet the nation's needs, 30,000 nurses should be graduated annually, an increase of more than 30 percent.

Yet the Health Resources and Services Administration, (part of the U.S. Department of Health and Human Services) reports that for the 2007-2008 year, U.S. nursing schools turned away 40,285 qualified applicants because of insufficient faculty.

The problem is not new, and in some communities, leaders have begun to develop solutions that are already making a difference. The Blue Ridge Region is one of them. Here is the story.

In June 2005, the State Council of Higher Education for Virginia (SCHEV) met with nursing educators and the executive director of the Roanoke Higher Education Center to discuss how to deal with the faculty shortage and devise new ways to deliver hands-on clinical education for nursing students. In response, the Radford University School of Nursing submitted a proposal for the development of two clinical simulation centers (CSC): training facilities where simulation technologies provide a hands-on learning experience. With SCHEV support, the proposal was included in the governor's budget and funding allocated to RU in July 2006.

The centers, one at Radford's West Campus and the other at the Roanoke Higher Education Center, are a collaborative effort among RU, the Jefferson College of Health Sciences, Wytheville Community College, New River Community College in Dublin, Virginia Western Community College in Roanoke and Patrick Henry Community College in Martinsville. They officially opened in August of last year, and expect to serve 1,200 students annually, according to Cindy Cunningham, director of the CSC.

"An important and effective way to address the faculty shortage is to create ways of doing clinical rotations that don't require additional clinical faculty involvement," Cunningham explains. "Simulation that is realistic gives students a way to develop their critical thinking abilities operating basically independently and at the same

See PROGRAM, Page 37

time avoid the introduction of any patient safety issues."

Human element

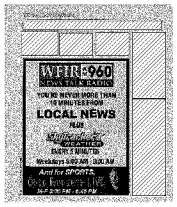
There are essentially two kinds of patients at the CSC: human and electromechanical. Referred to as "standardized patients," the human element is provided by individuals who are trained to act out medical conditions accurately. As Cunningham describes it, "We put a lot of emphasis on standardization when we train these people, because it is important that each student receive exactly the same information so that we can adequately measure their communication and assessment skills."

Some of those recruited to work as standard patients are professionals in the field, whose clinical knowledge is essential since students will be performing actual physical examinations. Others are staff members (not necessarily full-time) who are trained to act either as patients or as family members of patients.

The electromechanical patients are a bit like a mixture of a department store mannequin and a robot. Some are described as "high-fidelity," meaning that they are sophisticated representations that "breathe" (their chests rise and fall), have heart, lung and abdominal sounds, feature a flexible tongue, can speak, and come with a critical care monitor that displays the readings important to critical care—heart rhythm, respiratory rate, oxygen saturation. The centers have an adult male, an adult female and a baby of this kind.

Then there are three "mid-fidelity" patients, a mother that can give birth, a child and a nursing baby. With Noelle, the birthing robot, nursing students can actually listen to fetal heart sounds, and experience what happens throughout the birth process, so that they will know how to care for patients with complications.

And, yes, nursing students learn to insert intravenous cath-



See PROGRAM, Page 38

BLUE RIDGE BUSINESS JOURNAL

Date: Monday, May 19, 2008
Location: ROANOKE, VA
Circulation (DMA): 13,000 (68)
Type (Frequency): Magazine (BW)
Page: 36,37,38
Keyword: College of Health Sciences

eters that are necessary for administering IV fluids and medication, as well as for drawing simulated blood from the veins of the robots, a potential boon to those of us who've heard multiple times the sigh and the "Oh, your veins really roll."

Measuring results

While students receive their orientation to the center in large groups and can participate in what Cunningham calls "boot camps," the majority of the training is in groups of no more than three. Faculty members are not in the room, but all sessions are video- and audio-taped.

"I really believe that in addition to addressing the faculty shortage we may be materially improving the critical thinking skills of these students," says Cunningham, who received her own bachelor's and master's degrees in nursing at RU. "When you don't have anyone to consult, you're on the line to listen, evaluate and deliver."

Such skills are particularly important in high-risk situations or those that rarely arise in the day-to-day nursing world.

Each of the two centers is designed to include an intensive care room, a medical/surgical room, a pediatric room, an obstetrics room, two standardized patient rooms and an apartment for simulation of home care and mental health care. In addition, there are state-of-the-art classrooms and debriefing areas.

The projected increase in the number of RN program graduates this first year of operation is 250, a 43 percent jump over May, 2005.

While simulation centers have been used in medical schools for some time, this is one of the few regional centers in the nation. Much of the credit, Cunningham points out, goes to Drs. Marcella Griggs and Karma Castleberry, both of whom retired from Radford last year, Griggs as director of the school of nursing and Castleberry as the vice provost of academic enhancement. She had been dean of the Waldron College of Health and Human Services.

"It is their vision, their work and their success to whom we owe a real boon to health care, not just in this area but everywhere our students go to practice their profession," she says.

(Rachael Garrity is a Radford-based freelance writer.)

Nurse Christy Callahan (right) and Millie Sowder work with a grown-up 'patient'

Printing imperfections present during scanning