

# POWERFUL PRACTICE

*Realistic simulations hone skills and foster teamwork*

Over the past few months, dozens of nurses in the Perinatal and Progressive Care units at Shawnee Mission Medical Center (SMMC) have become familiar with an unusual patient named Noelle.

Noelle is a bit of a chameleon. She can have a heart attack one day and a baby the next. In fact, if you want her to, she can have heart attacks and babies every day of the week.

Noelle is a high-tech medical mannequin who visits SMMC through a partnership with the Healthcare Simulation Center at Johnson County Community College. Staff from the Center bring Noelle to the hospital, allowing teams to take part in highly realistic simulated clinical scenarios.

Thanks to sophisticated computer programming and robotics, Noelle is a very convincing stand-in for a real patient. She has vital signs. She breathes. She blinks. She bleeds. She talks.

And yes, she can even deliver a bouncing baby mannequin.

## HANDS-ON LEARNING

The Progressive Care Unit (PCU) rolled out simulation drills using Noelle in February 2010, with three to five nurses participating in each one-hour session.

Over three weeks, the PCU was able to provide hands-on training to nearly 60 nurses. Drills were scheduled to allow full participation by both day and night shifts, and the unit manager and professional development staff took turns holding nurses' pagers so they could train in a secluded area and focus on the simulation.

SMMC is accredited as a Chest Pain Center of Excellence by the Society of Chest Pain Centers, and the PCU drills were designed to reinforce competencies in chest pain and identify areas where more training was needed.

During the simulations, each nurse was assigned a specific role, and the case scenario took them through three different diagnoses. Noelle wasn't the only lifelike part of the simulations. Everything was as close to real life as possible.

In addition to observing and talking with the

patient, nurses also looked at her chart, called a physician, consulted with the pharmacy, calculated dosages, and even set up a 12-lead EKG.

"During the scenario, we had to stabilize a patient who was experiencing chest pain," said Barbara Gruenfelder, RN, Charge/Staff Nurse in the PCU. "I found the drill extremely helpful because we were able to practice some important skills we don't use very often and do so in a realistic team environment that required collaboration."

Each drill concluded with a debriefing to analyze and discuss the scenario and how well the team had handled the situation. During these discussions, the nurses learned which objectives the scenario was designed to meet.

"For 90 percent of our nurses, except a handful of younger nurses who practiced on mannequins in nursing school, this was a new way of learning," said Mary Wirtz, RN, Clinical Educator for the PCU. "The nurses found it fun and challenging because it felt like the real thing. As result, they were very engaged and open to learning."

Based on the success of the first round of simulations, the PCU is now looking at other competencies that can be practiced and perfected using mannequins like Noelle.

"It took a lot of coordination and teamwork to pull them off, but the drills were extremely valuable," Wirtz said. "The simulations truly demanded the kind of quick, critical thinking required in the PCU."

## BUILDING STRONGER TEAMS

Before Noelle started impersonating a PCU patient, she was already a familiar face in the Perinatal Unit, where she played the part of a pregnant patient in two drills that included doctors as well as nurses.

Just as veteran pilots can benefit from flight simulations, even the most experienced health care professionals can hone in on skills and learn new things during a simulation. As with flight simulations, one of the most powerful aspects of health care simulations is that they require the "flight crew" to practice working together.

In one of the perinatal simulations, Noelle was losing blood due to complications during

childbirth. The unit had recently initiated a new massive transfusion protocol, so this scenario allowed doctors, nurses and ancillary departments – including staff in the blood bank – to rehearse the new procedures.

At the conclusion of the scenario, the team participated in a debriefing to analyze and discuss how well they had performed and identify areas for improvement.

“People engaged far more than I expected them to, including the physicians,” said Nancy Boutte, RN, Perinatal Nurse Educator. “Because doctors work with departments at different hospitals, the drills really helped them better understand how our unit functions and communicates.”

Instead of educating nurses and physicians separately, the simulations put everyone in one room at the same time, where they could learn from each other – and learn from the team’s mistakes.

“I’ve been a nurse for 19 years, and very often the most profound learning comes when something goes wrong,” Boutte said. “Simulations are a safe place to make mistakes and then learn from those mistakes.”

## READY FOR THE REAL THING

The ultimate goal of the simulation drills is improved patient safety. The drills provide a safe place to practice, allowing nurses to be better prepared to react quickly and make the best possible decisions when a patient is in trouble.

David Zamierowski, MD, a plastic surgeon and founder of the Wound Care Centers of Kansas City, is a major proponent of the benefits of simulated learning. He and his wife, Mary Zamierowski, PhD, helped fund the Healthcare Simulation Center at Johnson County Community College, and he encouraged SMMC to embrace this high-tech, hands-on approach to training.

“We’re very fortunate to have access to Noelle and the college’s expertise in simulation. Because the mannequin is so lifelike, the scenarios require realistic application of science and protocol,” said Janet Ahlstrom, RN, MSN, ACNS-BC,

Director of Professional Advancement. “The drills also focus on situations that require effective team communication, which is a huge component of patient safety.”

As nurses in the PCU and Perinatal Unit can attest, simulation drills are ideally suited to adult learners and to the unique demands of nursing, where textbook learning can never substitute for hands-on experience.

Jamie DeLong, RN, BSN, is a Labor and Delivery nurse who has been with SMMC for 11 years. In addition to participating in one of the obstetrics drills, she also provided the voice of Noelle during many of the simulations.

“The drills are very intense and dynamic, just like a real medical emergency, so all your experience and training kick in,” DeLong said. “Then you are able to discuss what happened and make sure everyone on the team is ready for the real thing.” 🌞

