

Clinical Practice

New USF Health Simulation Center at Tampa General Hospital provides realistic, risk-free training for students and health professionals.

THE LIGHTS ARE LOW AND THE EKG monitor beeps as the vascular surgery fellow, observed by an attending physician, begins inserting a balloon catheter to open the blocked kidney artery of a “patient” lying on the table. It looks and feels like an operating room, but it’s not.

The 2,800-square-foot USF Health SimSuite Education Center opened on the first floor of Tampa General Hospital in November. The state-of-the-art center provides a realistic but risk-free clinical training environment for all levels of health care professionals, including medical students, physicians, nurses, therapists and technologists. The facility includes six simulation rooms with computerized mannequins that mimic the breathing, blood pressure, heart rate and other physiologic responses of living patients under varying medical scenarios. A conference area and a



USF vascular surgeon Dr. Murray Shames injects contrast dye into the kidney arteries of patient simulator Simantha™ as Dr. Patrick Austin observes. Above, the test results are displayed on a monitor.



control room where training sessions can be recorded and replayed for evaluation are also housed in the center.

“Simulation training allows students to gain hands-on experience and build confidence in a controlled setting. They can become really familiar with a technique and all its nuances before going into a real OR and performing the procedure on a live patient,” says USF vascular surgeon Dr. Murray Shames, who uses the patient simulation system Simantha™ to teach medical students and new physicians endovascular procedures like placing stents to prop open clogged blood vessels. The life-like simulator is so realistic that physicians can “feel” lesions in the blood vessel and the resistance of a catheter as they insert it.

USF partnered with Medical Simulation Corporation (MSC) to create the new center, the only one of its kind in the Southeast. The technology housed here can be used to teach basic techniques like cardiopulmonary resuscitation, intubation and tying surgical knots; to practice endovascular and cardiovascular procedures and critical care cases; and to hone surgical skills, particularly for laparoscopic and minimally invasive surgeries. Stephanie McKown, a full-time clinical education specialist with MSC, oversees all the SimSuite programmed simulator training scenarios.



PHOTOS: ERIC YOUNGHANS / USF HEALTH MEDIA CENTER

Simulation is rapidly becoming a key component of graduate medical education. In addition to being a resource for USF Health’s faculty and students, the facility will provide simulation training and continuing medical education to health professionals in the Tampa Bay area and nationally.

“At USF Health, we are transforming the way we educate the next generation of health professionals and challenging the way we practice health care,” says Stephen Klasko, CEO for USF Health and dean of the College of Medicine. “The new SimSuite Education Center fits in with our creation of an innovative curriculum that strives for excellence in clinical skills development. The goal is to promote patient safety and better outcomes by reducing the chances for medical errors.”

“A wide range of health professionals will have access to all sorts of high-level surgical and interventional simulators designed to develop their technical expertise and problem-solving skills,” says Deborah Sutherland, associate dean of the nationally prominent USF Health Continuing Professional Development Program. “These simulators can provide distinct experiences based on individual response times, decisions and actions.”

The placement of the simulation suite at teaching affiliate Tampa General made strategic sense because nearly half of USF’s 650 resident physicians practice there and virtually

SimSuite Clinical Education Specialist Stephanie McKown (pointing) prepares a simulation training scenario for, left to right, Dr. Murray Shames, USF vascular surgeon; medical student Arelia Thibbonier; and Dr. Patrick Austin, vascular surgery fellow.

all residents and medical students rotate through the affiliate hospital at some time in their training. Health professionals can repeatedly rehearse procedures or test new devices without putting real patients at risk. Complex training scenarios mimic the potential unpredictability of patient outcomes as care unfolds, giving practitioners the opportunity to manage complications—like what to do if a patient has a heart attack while an IV is being inserted.

Simulators “absolutely shorten the learning curve” for mastering surgical skills, says Dr. Alexander Rosemurgy, professor of surgery and medicine at USF. “The simulators can help teach team coordination and emergency protocols. Simulation is a very valuable tool for evaluating how well a surgical team communicates and manages decisions when confronted with an unexpected problem or crisis situation.”

Sutherland sees the SimSuite Education Center as a steppingstone to the Center for Advanced Medical Learning and Simulation that USF Health wants to develop in partnership with the Museum of Science and Industry’s proposed conference center.

— Anne DeLotto Baier