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Medical professionals get peek at TC technology

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Like a high-tech game of "Operation," medical school staff from all over Texas tried their hands at pulling off "sim-miracles" during a conference at Temple College on Friday.

As one of the newest centers of clinical simulation in Texas, Temple College is hosting the Central Texas Simulation Conference put on by Scott and White Hospital. It concludes today.

Nine different schools showed up for the conference, including Brazos County Medical Residency, McLennan Community College, the University of Texas-San Antonio, the Texas A&M College of Medicine, the Nursing Program at the TAMU Health Sciences, the Baylor College of Medicine, University of Texas Houston, University of Texas Medical Branch at Galveston, and University of Texas-Southwestern.

The conference features lectures from simulation specialists about how to teach from the simulators and hands-on demonstrations of the capabilities of Temple College's surgical simulation mannequins.

The first attendees to get to work the mannequins were a group of volunteers who had never worked together, but were thrust into the midst of a hectic emergency situation.

After a brief orientation, they were rushed into a room with a patient, the simulated victim of a bus crash, and the goal of the scenario was to stabilize the patient.

Dr. John Irwin, a cardiologist at Scott and White took charge of the situation and asked the others to start an IV using the dummy's working blood vein and attach a blood pressure cuff. The patient's condition continued to decline and his heart suddenly stopped beating.

At almost the same time, Dr. Kim van Walsum, who was playing the part of a nurse in the scenario, began convulsing and fell to the ground. Two of the nurses tended to the fallen nurse as she continued to writhe on the floor.

Irwin goes to try out one of the mannequin's more fascinating features; its electrical conductivity. By attaching a real defibrillator to the poles on the dummy's chest, they can administer repeated shocks to "revive" the dummy without damaging any circuitry. With a patient at death's door and a nurse in fits, it couldn't get much worse, but then another doctor burst in with terrible news.

It turns out the bus crash was caused by a terrorist attack and they were all possibly

exposed to toxic chemicals. They were to leave their patients and get a decontamination shower.

This type of exercise is designed to make students think on their feet and be prepared for anything.

A standard car accident was made much more complicated with the addition of the seizing nurse, and when they were told to leave the room, they were faced with an ethical dilemma of choosing to stay and risk the safety of the surgical team to save two lives, or follow procedure and leave to protect the team.

Dr. Jose Pliego of Scott and White Hospital said they try to make sure that each simulation is never routine.

When a doctor asks for blood of a specific type, they give them the wrong blood to see if the mistake will be caught.

They will also switch the X-rays so that the doctors will learn to check the label every time as part of their patient safety training.

Dr. Irwin said that despite his team's difficulty with the dummy, he saw the great potential of sim-men as teaching tools.

"This is the first time I've had any dealings with it," Irwin said. "Obviously it's little different than dealing with a real patient and I didn't know the full capabilities of my team so that made it a little more difficult. It's good, I think that would be a great experience for a resident. It's a great teaching tool."

While this makeshift surgical team was trying to resuscitate the sim man, cameras mounted in the ceiling beamed everything into a classroom on the other side of the building where conference attendees watched every move on the projection screen.

After the surgery the group returned and watched a recording of their performance and had a debriefing, pointing out what went wrong and what went right.

"The purpose of the conference to introduce the concepts of clinical simulation to the group and allow the people that came and are interested in starting a simulation center, so it's a good opportunity to see one in action and take notes and learn and use this information at their own clinics," said Dr. Jose Pliego of Scott and White Hospital.

Dr. van Walsum, who played the seizing nurse, said that she has been delighted with the response so far.

"It's been going wonderfully, people are really engaged," van Walsum said.

"This is the first time that this whole network has gotten together so we're excited about that."

The attendees seemed impressed by the facilities and are looking forward to applying what they have learned at their own clinics or added to their plans on building simulation centers.

UT-Southwestern is adding a sim center in summer, and McLennan Community College already has three with plans for more.

It's not as high-tech as this one. We have all the pieces, we just don't have a huge amount of room," nursing professor Susan Olson said. "I've already got some ideas from the conference. Every conference we go to helps a little bit."

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