

Simulation training saves precious minutes in speeding the treatment of trauma patients

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When a trauma patient enters the emergency room, the medical team has what is known as the "golden hour," a window of time to evaluate and stabilize the patient to prevent death. To help trauma teams optimize that limited time frame, trauma surgeons have developed a simulation training program that cuts precious minutes off evaluation times and gets trauma patients to medical imaging tests faster, investigators reported at the 2015 Clinical Congress of the American College of Surgeons.

"Identifying injuries and getting <u>patients</u> to treatment within the first hour after trauma can be the difference between life and death," said lead study author Andrea M. Long, MD, a clinical instructor and acute care surgery fellow at Wake Forest School of Medicine in Winston-Salem, N.C. "With <u>simulation</u> training, we were able to reduce the time for assessment of real <u>trauma patients</u> and get them to the CT scan quicker to evaluate for serious injuries."

Emergency room doctors and <u>trauma surgeons</u> developed the simulation sessions and conducted them along with other members of the emergency and trauma teams, including nurses, radiology technicians, respiratory therapists, and paramedics/emergency medical technicians. Simulation specialists helped design the scenarios and ran the patient simulator.

"This study actually started as a performance improvement project to reduce times to get patients to CT scan," Dr. Long said. "We then developed this project into a research study to evaluate exactly how our



training impacted real patients in real trauma emergencies."

One unique feature of the Wake Forest simulation model was the involvement of members of the Trauma Survivors Network (TSN), an advocacy organization for trauma survivors and their families, who observed the simulation sessions and gave feedback at debriefings. "As care providers, we can sometimes get focused on identifying and treating injuries, especially in a patient who is very unstable," Dr. Long said. "The TSN reminded us that many of our trauma patients are scared, confused, and in pain, and can't always see or understand what is going on as we try to take care of them. They stressed the importance of talking to the patients, making them understand what we are doing as we are doing it, and doing what we can to ease their anxiety as we treat all their other problems. We immediately saw a positive change in our interaction with patients after the first scenario and debriefing."

To evaluate the impact of the simulation training, the study's authors compared time to completion in minutes of three different aspects of the initial assessment of <u>trauma</u> patients—primary survey, or the "ABCs" (airway, breathing, and circulation), secondary survey (full head-to-toe assessment), and the time from patient arrival to transport to a computer tomography (CT) scan—before and after the <u>simulation training</u>.

While the time to ABCs did not change, the time to complete the headto-toe assessment dropped from 14 minutes before the simulation to six minutes after, and the time to CT scan fell from 23 minutes before to 16 minutes post-simulation.

The Wake Forest researchers are already doing more simulation scenarios and plan to do more throughout the year to see if they can continue to increase their efficiency and decrease the time it takes to get patients to CT scan, Dr. Long explained.



Provided by American College of Surgeons

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