

UF'S BURN CENTER TESTS VIRTUAL REALITY DISASTER TRAINING

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ATTENTION EDITOR: Photos available at www.news.health.ufl.edu/media/recentNews.aspx.

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GAINESVILLE, Fla. — Forget the stethoscope — the video game controller could be the newest item you find in your doctor's black bag.

Medical trauma doctors and nurses throughout Florida are testing an interactive training program developed by University of Florida experts to model a mass disaster involving patients with burn injuries. The Web-based program goes live for testing this October.

The federally funded program, "Burn Center," simulates an explosion at a theme park and teaches life-saving skills needed to treat up to 2,000 victims of burns, bombs and blasts. Health professionals care for virtual patients, making crucial decisions and dealing with potential complications from their injuries. The game features multiple scenarios, and players receive scores based on response time and accuracy of care provided.

"Burn Center targets trauma surgeons and nurses to provide training regarding what they would encounter in burn and blast injuries — something they may not see every day," said David W. Mozingo, M.D., a professor of surgery in the UF College of Medicine and director of the Shands Burn Center at UF, who collaborated with UF simulation expert Sergei Kurenov, the Florida Department of Health, ProMedia, and Orlando-based 360Ed, to create the fast-paced training program to simulate a terror attack involving mass casualties.

"Every time you play the game it is going to be different because the complications and patient problems are put in a 'controlled randomness' where it is an appropriate complication to occur, but may not occur every time you play the game," said Mozingo, who developed the patient training scenarios with the help of other Florida burn and trauma physicians.

Disaster preparation and response training are crucial to victim survival after a mass casualty incident, Mozingo said. The nation only has about 1,800 burn beds, with just 60 in Florida, limiting opportunities to care for patients in the aftermath of a mass disaster. Opportunities also are limited to

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prepare key medical practitioners for the unexpected. Eventually the program will be made available nationally.

“We knew we would have to provide some training so that the burn care usually provided at burn centers could be applied in other hospitals, specifically trauma centers for the more seriously injured,” said Mozingo.

The game offers three educational components to teach skills needed to treat patients with burns or other injuries from bombs and blasts. The first requires players to make quick decisions at the disaster site about initial medical care and then triage patients to the appropriate hospital. The next interactive element focuses on in-hospital care, where players manage the patients’ care over a 36-hour (time-elapsd) period. The final part offers multimedia lectures, which also involve immersive learning elements such as engaging background scenery to keep the learner interested.

“We looked toward innovative, new technologies of teaching to provide a product that would fulfill a unique training need,” added Mozingo.

Ben Noel, chief executive officer of 360Ed, said the program’s video game format enables players to become fully immersed in the training experience.

“One of the early problems with online learning was that content was often just as stale as our textbooks,” said Noel. “Today’s rich media and gaming culture offers endless options to dramatically improve the value of the content and engage learners in the subject. When that is accomplished, the learner will do the rest.”

Richard Gamelli, M.D., a former president of the American Burn Association, said the program’s range of learning levels, ability to test players’ decisions, and self-study format give the game diverse utility.

“There are few things out there that can do what this program does,” said Gamelli, who is chairman of the department of surgery at the Loyola University Chicago Stritch School of Medicine. “What is nice about this program is that it builds on existing programs and that someone can do the training program over and over.”

Burn Center is UF’s second project prompted by the Florida Department of Health’s response to a nationwide directive from the Office of Homeland Security to ensure effective disaster response. The first program, a lecture-based format also developed by Mozingo, was adopted by the U.S. Health Services and Resources Administration in 2005 and is now used nationally.