

## **UCLA develops combat casualty care educational program for US armed forces**

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With American troops leaving Iraq and military efforts continuing in Afghanistan, UCLA has helped develop a first-of-its-kind educational program to train U.S. armed forces medical personnel in critical combat casualty care. The program will not only help advance military care, the program's developers say, but civilian care as well.

Based on lessons gleaned from experiences in the field during Operation Iraqi Freedom and Operation Enduring Freedom in Afghanistan, "Combat Casualty Care: Lessons Learned from OEF and OIF" will first be distributed to care providers in the U.S. armed forces. It represents a synergistic effort between the military and academic medicine.

"We captured the latest medical advances, procedures and patient-care video footage and integrated them into an easy-to-use educational package that will be useful for military as well as civilian medical personnel," said the program's editor-in-chief, Dr. Eric Savitsky, a professor of emergency medicine at the David Geffen School of Medicine at UCLA and a board member of the UCLA Center for Advanced Surgical and Interventional Technology (CASIT).

Savitsky noted that in civilian settings, these new methods are applicable for <u>trauma care</u>, as well as preparation for the possibility of an explosion-related terrorist attack in the U.S.

In collaboration with Pelagique LLC, a spin-out of CASIT, UCLA educators worked with military care providers to develop a computer-



based training program that provides original, evidence-based combat casualty care literature, videos based on real-life cases in the field, and instructional procedure tutorials.

Explosion-related casualties, most often due to improvised explosive devices, or IEDs, make up 80 percent of injuries in a war zone. Military medical personnel frequently encounter wounded individuals suffering multi-system trauma from high-velocity explosive fragments that cause life-threatening hemorrhages, organ injuries and infections. The unique wounding pattern of blast injuries causes more severe and complex injuries relative to those seen in the civilian sector.

Pre-deployment training of combat casualty care providers proved challenging, and more effective training solutions were needed, the program developers said.

"Effective, up-to-date training in combat casualty care is extremely important for deploying military medical personnel," said Col. John Kragh, a U.S. Army orthopedic surgeon featured in the DVD program. "Blast injuries are almost always multi-system wounds that are very different from what you see in civilian settings. The CCC training program has captured lessons learned from Operation Enduring Freedom and Operation Iraqi Freedom medical care and serves as an excellent resource for care providers en route to Afghanistan and other wartorn regions."

More than 100 combat casualty care, trauma care and media experts contributed to the collaborative project, including 35 military experts from the U.S. Joint Services. A recently established patient database known as the Joint Theater Trauma Registry helped provide critical evidence-based medical data that the team used to create the educational program.



In developing the video cases, Pelagique videographers spent six weeks in the Level III Air Force Theater Hospital in Baldad, Iraq, filming more than 100 hours of patient cases, including men, women and children. In fact, 75 percent of the patients treated at the hospital were civilian casualties.

A critical component of the education package is its ultrasound training program. In the field, if evacuation is not possible, medical personnel turn to ultrasound to help triage, assess injuries and guide decisionmaking about patient care. Normally, an instructor and ultrasound machine are needed for training, but the new educational program provides ultrasound-training modules. The team is currently developing a hands-on laptop computer-based ultrasound simulator that will further advance training in the field. This new real-time-based technology will be available next year and released to the military.

Conveniently contained on one DVD, the instruction modules of the educational program include a 712-page digital book comprising 13 chapters peer-reviewed by U.S. armed forces experts on topics ranging from brain and spinal surgery to acute burn care; seven multimedia videos featuring patient cases filmed at the Air Force Theater Hospital in Iraq; eight procedure videos with original footage; and two ultrasound training modules. In all, the program contains 40 hours of predeployment combat casualty care training.

## Provided by University of California -- Los Angeles

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