**Lifesaving lessons from the battlefield**

*By Patricia Kime Staff writer*

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The fatality rate for U.S. troops in World War II was 19.1 percent.

In Vietnam, it fell to 16.1 percent.

And in the last 13 years, it has dropped even further — to roughly 10 percent of those wounded in Iraq and Afghanistan.

As the war in Afghanistan winds down, the new challenge for Army, Navy and Air Force doctors is to ensure those tremendous strides in casualty care not only are preserved, but continue to flourish throughout the force.

In March, Marine Gen. Joseph Dunford, commander of U.S. and NATO forces in Afghanistan, ordered all practicing medical personnel in his combat zone to learn the techniques of tactical combat casualty care, or TCCC — lifesaving procedures developed in the late 1990s by special operations units that may offer the best chance for injured troops to survive otherwise fatal wounds.

While TCCC has been around since 1996 and became the Defense Health Board’s recommended standard of casualty care response in 2011, training and mastery of those techniques have been spotty, said Army Lt. Col. David Marcozzi, Army Special Operations Command deputy surgeon.

“There is variation, not only across the forces but across individual services,” Marcozzi said. "We need to go beyond the ‘I’m aware, I’ve had a PowerPoint on it’ to ‘I’m trained and competent and can save a person’s life.’ ”

A 2012 Army Institute of Surgical Research study found that 24 percent of the 4,596 combat deaths in Iraq and Afghanistan from 2001 to 2011 were potentially survivable. Since 87 percent of deaths occurred before the victim reached a military treatment facility, TCCC protocols represent the best chance to increase battlefield survivability, proponents say.

They point to data showing the preventable death incident rate in the 75th Ranger Regiment, where all medics and Rangers are TCCC-trained, has been just 3 percent in the past decade.

“The best opportunity to further improve survivability is, without a doubt, at the point of injury,” said Army Col. Kirby Gross, director of the Joint Theater Trauma System.

3 survivable battlefield injuries

TCCC teaches those who first respond to a combat casualty how to swiftly identify three major causes of
potentially survivable battlefield injuries — hemorrhage, pneumothorax and blocked airway — and treat them aggressively.

The instruction teaches regular soldiers to use tourniquets effectively, while it educates medics and corpsmen to be proficient at advanced techniques using various supplies in their aid bags, such as abdominal aortic tourniquets for pelvic, groin and thigh injuries, ketamine nasal spray for pain and cricothyrotomy kits to open airways.

“We have really advanced the practice of cricothyrotomies. We want you to cut the neck so ... so no one dies on the battlefield without having a clear airway,” Marcozzi said.

Under Dunford’s order, all physicians, physician assistants, nurse practitioners, medics, corpsmen, parajumpers and nurses in Afghanistan were required to be proficient in TCCC by May 2.

Marcozzi said he’d like to see a similar emphasis across the services.

“This isn’t just for CENTCOM. We have colleagues in Pacific Command who are using TCCC practices. These life saving practices are CPR for the battlefield, for special operations and conventional forces,” he said, adding officials are “pushing out” the techniques to U.S. Africa Command and others.

TCCC guidelines are available to all troops on the Joint Trauma System. The course is available to instructors with a Common Access Card on the Defense Health Agency’s website.

With his order, Dunford, who was named Afghanistan commander in 2012, demonstrated he is a fan. “TCCC guidelines are evidence-based, lifesaving techniques and strategies for providing the best trauma care on the battlefield. ... [They] effectively reduce the incidence of preventable death and improve recovery outcomes,” he wrote.

Troops in the field also appreciate the training. According to a 2010 Army Training and Doctrine Command survey of combat soldiers, TCCC was the “second most valued element of their training,” topped only by their training on their individual weapon.

“I visited 24 [field hospitals] in December and talked to medics. They are always looking for better ways to do something, and they are all for TCCC,” said Staff Sgt. Michael Smith, Joint Theater Trauma System.