

Do-it-yourself battlefield medicine saves lives

August 15 2011, By LINDSEY TANNER , AP Medical Writer

When Army Ranger Leroy Petry's hand was blown off by a grenade as he was saving his comrades in battle, he knew just what to do. He used his remaining hand to twist a tourniquet around his arm to avoid bleeding to death.

Sgt. 1st Class Petry, awarded the Medal of Honor last month, was with a regiment trained in do-it-yourself battlefield treatment. That kind of quick care on the field led to a 92 percent survival rate for the regiment over more than seven years, a study found.

Of the 32 deaths, just one had wounds considered potentially survivable, in this case massive bleeding. That Ranger died from post-surgery complications.

The study found a 3 percent death rate from potentially survivable causes in the 75th Regiment between October 2001 and April 2010. That compares with a 24 percent rate in a previously reported set of U.S. military deaths in Iraq and Afghanistan, which included troops who didn't have the Ranger-style training, the study authors said.

Petry "is a prime example of how this works," said lead author Dr. Russ Kotwal of the Special Operations Command at Fort Bragg, N.C. President Barack Obama awarded Petry his medal in a ceremony where he shook the Ranger's new [robotic hand](#).

Historically, about 90 percent of combat-related deaths have occurred in the field, before troops reached a medical facility. Mindful of that, the

Rangers adopted a new approach more than a decade ago, focusing on certain types of injuries, after a review of casualties in previous wars.

The idea is straightforward: There aren't enough doctors or medics to treat battlefield wounds, so Rangers must be equipped with their own first aid devices and trained to use them.

"If you can't do it to yourself, then you grab somebody to do it for you," Kotwal said.

The study, published Monday in [Archives of Surgery](#), details the Rangers' approach, which also has been adopted in some other parts of the military.

The Rangers are part of the Army's Special Operations Command. They undergo training over a couple of days in how to treat battlefield wounds.

The focus is immediately treating the three main types of "potentially survivable" injuries: extreme bleeding from arms or legs, collapsed lungs from chest trauma, and airway blockage, including blood or tissue caught in the throat.

Soldiers are equipped with tourniquets, special wound dressings and needles used to treat major chest injuries. Their medical training is considered "as important as shooting," said Dr. John Holcomb, the study's senior author.

"To really inculcate this training and mentality into the entire regiment takes a couple of years," Holcomb said.

Master Sgt. Harold Montgomery, a medic, said he's "an absolute believer" in the approach.

He said he has seen non-medics administer treatment without qualms. "The one time you see them flustered" is treating severe chest wounds, which can cause air to fill the chest cavity and collapse the lungs. Treatment "is sticking a big needle into somebody's chest" to deflate the air build-up. "It can quickly save a life," but non-medics sometimes seek assurance from more medically experienced comrades about when it's really needed, Montgomery said.

Causes of injuries and deaths examined in the study included explosive devices and gunshot wounds, which accounted for half of the deaths. Most battlefield treatment focused on controlling bleeding and non-medical personnel applied 42 percent of the tourniquets.

The approach studied teaches soldiers "to take a deep breath" in the middle of combat and "fall back on a basic set of concepts and maneuvers shown by this study to increase survival of those wounded," said Dr. Todd Rasmussen, an Air Force surgeon who is the deputy commander of the U.S. Army Institute of Surgical Research in San Antonio, Texas.

It is being adopted in some military settings and by police in nonmilitary settings, "to overcome the chaos of these types of events, whether it is an explosion on the battlefield or a live shooter at a mall," Rasmussen said. He was not involved in the study.

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