

PHTLS and TCCC in partnership to improve casualty care

by Dr. Norman McSwain and Dr. Frank Butler

In the mid-1990s, a Special Operations medical research project led by Captain Frank Butler, a former SEAL and Director of Biomedical Research for the Naval Special Warfare Command at the time, conducted an analysis of how best to take the principles of trauma care and incorporate them into the combat environment. This project produced a paper entitled "Tactical Combat Casualty Care in Special Operations," which was published as a supplement to the journal *Military Medicine* in August 1996. This paper included a proposed set of prehospital trauma care guidelines customized for use on the battlefield.

The Committee on Tactical Combat Casualty Care (CoTCCC) was founded in 2001 as a part of the Defense Health Board (DHB), the top medical advisory board to the Department of Defense (DOD). It functions under the DHB's Trauma and Injury Subcommittee and provides expert advice on TCCC-related issues directly to the Assistant Secretary of Defense for Health Affairs and the Surgeons General of the U. S. Armed Services. The CoTCCC is unique; in previous wars and conflicts no similar committee existed as part of the DOD.

Topics expanded in new edition

Much of the trauma in conventional ground combat is penetration wounds, and tactical combat casualty care training emphasizes their care. However, military medics also need to be trained in PHTLS, which strongly focuses on the management of the blunt trauma that many experience on the battlefield.

To ensure complete training, in the fifth edition of the PHTLS textbook, a supplement on TCCC was developed and incorporated into PHTLS courses for the military. TCCC emphasized the need for medics to integrate medical care into tactical situations, and therefore divided battlefield trauma care into three phases:

1. Care Under Fire
2. Tactical Field Care and
3. Casualty Evacuation (or CASEVAC) Care.

The CoTCCC has made significant updates to the TCCC Guidelines and has incorporated them into the training curriculum. For the sixth edition of the PHTLS textbook, the CoTCCC developed a military edition of PHTLS that expanded the discussion of prehospital trauma care in the military. It included such topics as blunt trauma, injuries from explosives, and medical support of urban military operations. These topics also were taught in the emerging TCCC training program.

Material continues to be updated and currently is available on the PHTLS web site as a public document. The updated version of the TCCC Guidelines, along with a rationale for the changes made, will be available in the seventh edition of the military version of the PHTLS course and textbook.

TCCC improves casualty survival

Remarkable improvements in U. S. casualty survival have been seen in the conflicts in Iraq and Afghanistan due to the aggressive employment of



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TCCC principles, first within the Special Operations community and now throughout the U. S. Military. This has resulted in increased demand for TCCC training by U.S. military units, coalition partner countries, and tactical law enforcement agencies. In the past, there were four ways to obtain TCCC training:

- In a U.S. military training course;
- Through a military-to-military training program in foreign countries through coordination between the countries involved and the U.S. embassies in those countries;
- Through commercial vendors of TCCC training;
- By downloading the TCCC course material from the PHTLS web site and teaching it locally.

There is now one more way: a PHTLS-sponsored TCCC program as an official NAEMT course, taught by PHTLS/TCCC qualified instructors.

Through the efforts of Major Bob Mabry and Don Parsons at the Army Department of Combat Medic Training, and Dr. Steve Giebner of the CoTCCC, PHTLS national faculty members have received training in TCCC and have provided this training to other faculty. The new TCCC courses will supplement the trauma training provided in the PHTLS course.

Course participants can sign up for the course with NAEMT. Upon course completion, they receive an official PHTLS TCCC card and certificate bearing the logos of NAEMT, PHTLS, TCCC and The American College of Surgeons. Those taking PHTLS courses at some military sites receive these same cards and certificates.

This cooperative arrangement between NAEMT and CoTCCC lets students complete both PHTLS and TCCC as one combined course or as two individual courses. Continuing education credits are granted through the Continuing Education Coordination Board for EMS (CECBEMS).

How the courses differ

PHTLS and TCCC provide two different answers to two different questions. PHTLS has long emphasized an understanding of *principles* versus *preferences*. A principle is a medical standard of care. The preference is the method the practitioner uses to carry out this principle. That method is based on the condition of the patient; the specific situation; the practitioner's knowledge, skills and experience; and the resources available.

PHTLS teaches the principle and offers various methods of achieving it. The goal is to achieve the principle with quality output. For example: The goal in airway management is to establish an airway. The preference, or method by which this is carried out, can include an oral airway, a nasal airway, an

endotracheal tube, a double lumen esophageal tracheal tube, or a tracheostomy.

In civilian practice, **the patients are the mission**. In the changeable tactical environment, combat medics must take into account **both the patients and the mission**.

The TCCC course is devoted specifically to the care of the injured warrior on the battlefield, the providers of that care, and the equipment that they utilize. Care is rendered in austere environments, usually with very limited equipment, and often under conditions of darkness and extreme heat or cold. The number one goal is completion of the mission and survival of the unit as a whole. In the *Care Under Fire* phase of TCCC, preservation and protection of the unit and completion of the mission may take precedence over providing care, with only life-threatening extremity hemorrhage addressed in this phase. TCCC stresses self-care and buddy-care. As the tactical situation evolves, the combat medic provides additional care as feasible, focusing primarily on the most common causes of death on the battlefield.

While TCCC focuses on these tactical factors, the particulars of care are based on the principles taught in PHTLS, with appropriate modifications. These concepts and principles are taught in detail in the TCCC course. And, as mentioned, the TCCC Guidelines and training are modified as needed based on new data such as medical literature, input from military medical research facilities, feedback from the service 'lessons learned' centers, analysis of causes of death in combat casualties as determined by the Armed Forces Institute of Pathology, and direct input from combat medics.

In Dr. Butler's words: "The United States-led coalition forces at this point in time have the best combat casualty treatment and evacuation system in history. TCCC's job is to make sure that the casualties get to the hospital alive so that they can benefit from it. Seventy-five percent of combat fatalities occur in the prehospital phase, where the casualty is being cared for by the corpsman or medic in the field."

In summary, a unique relationship has been created between the Committee on Tactical Combat Casualty Care, NAEMT and its PHTLS Committee, and the Committee on Trauma of the American College of Surgeons, to provide military medics with the very best education utilizing principles of patient care that are up-to-date, fluid, and based on active patient care research done in both the civilian and military communities. This course is now available to all practitioners through NAEMT.

To learn more about PHTLS or TCCC, please visit the PHTLS page on www.naemt.org.

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