Tactical Combat Casualty Care for All Combatants
August 2017

(Based on TCCC-MP Guidelines 170131)

Introduction to TCCC
Pre-Test
TCCC

Intro to Tactical Combat Casualty Care (TCCC)

Reviewed and Approved by staff from the Committee on Tactical Combat Casualty Care (CoTCCC)

Web Link to Video
What is TCCC and Why Do I Need to Learn About It??

Military units that have trained all of their members in TCCC have documented the lowest incidence of preventable deaths among their casualties in the history of modern warfare. TCCC is now used by all services in the U.S. Military and many allied nations as well to care for their combat wounded. TCCC-based prehospital trauma training is now becoming widespread in the US civilian sector as well.
Objectives

• List the goals of TCCC.
• DESCRIBE the key factors influencing combat casualty care.
• UNDERSTAND the evidence that documents the lifesaving impact of TCCC use.
• List the battlefield objectives of TCCC.
• DESCRIBE the phases of care in TCCC.
Trauma Care Setting
Tactical Trauma Care Setting – Shrapnel Wound in the Hindu Kush
Prehospital Trauma Care: Military vs. Civilian

- Hostile fire
- Darkness
- Environmental extremes
- Different types of wounds
- Limited equipment
- Need for tactical maneuver
- Long delays to hospital care
- Different self aid/buddy aid training and experience
Tactical Combat Casualty Care in Special Operations

Military Medicine Supplement August 1996

Trauma care guidelines customized for the battlefield
Junctional Hemorrhage

These types of wounds are often caused by IEDs and may result in junctional hemorrhage.
Normal Chest X-Ray
Tension Pneumothorax

Air escapes from injured lung – pressure builds up in chest

Air pressure collapses lung and pushes on heart

Heart compressed - not able to pump well
Airway Trauma
Three Objectives of TCCC

• Treat the casualty
• Prevent additional casualties
• Complete the mission
Changes in TCCC: How Are They Made?

The Committee on Tactical Combat Casualty Care
Committee on Tactical Combat Casualty Care

- The prehospital arm of the Joint Trauma System
- 42 members from all services in the DoD and civilian sector
- Trauma Surgeons, Emergency Medicine, and Critical Care physicians, combatant unit physicians; medical educators; combat medics, corpsmen, and PJs
- 100% deployed experience as of 2017
- Meet periodically; update TCCC as needed
TCCC: How Do We Know That It’s Working?
TCCC Early in the Iraq and Afghanistan Conflicts

- NOT widely used at the start of the wars
- Increased use by both Special Operations and conventional units beginning in 2005

The Drivers:
- Early reports of success with TCCC, especially TQs
- USAISR tourniquet study by Walters et al (2005)
- USSOCON TCCC message - March 2005
- USCENTCOM tourniquet and hemostatic agents (HemCon) message - 2005
Preventable Combat Deaths from Not Using Tourniquets

  - 193 of 2,600
  - 7.4% of total combat fatalities

  - 77 of 982 (in both cohorts of fatalities)
  - 7.8% of total fatalities – no better than Vietnam

- Tourniquets became widely used in 2005-2006

- Eastridge – *J Trauma* 2012: OEF + OIF (to Jun 2011)
  - 119 of 4,596
  - 2.6% of total fatalities – a 67% decrease
Sixty-seven successful tourniquet applications identified in 2005 and 2006

No avoidable loss of limbs due to tourniquet use identified

Butler, Greydanus, Holcomb
2006 USAISR Report
“TCCC: Combat Evaluation 2005”
“The adoption and implementation of the principles of TCCC by the medical platoon of TF 1-15 IN in OIF 1 resulted in overwhelming success. Over 25 days of continuous combat with 32 friendly casualties, many of them serious, we had 0 KIAs and 0 Died From Wounds, while simultaneously caring for a significant number of Iraqi civilian and military casualties.”

CPT Michael Tarpey
Battalion Surgeon 1-15 IN
AMEDD Journal 2005
Tourniquets – Kragh et al: Two Landmark Papers

- Published in 2008/2009
- Tourniquets are saving lives on the battlefield
- 31 lives saved in 6 months by tourniquets
- Author estimated 2000 lives saved with tourniquets in this conflict up to that date (2009)
- No arms or legs lost because of tourniquet use
Eliminating Preventable Death on the Battlefield

- TCCC in the 75th Ranger Regiment
- All Rangers and docs trained in TCCC
- Ranger preventable death incidence: 3%
- Overall U.S. military preventable deaths: 24%
What Do the Soldiers Say?

A recent U.S. Army Training and Doctrine Command survey of Soldiers in combat units found that **TCCC is the second most valued element** of their training, exceeded only by training in the use of their individual weapons.

**COL Karen O’Brien**  
**TRADOC Surgeon**  
**CoTCCC Meeting April 2010**
Conclusion:
“For the first time in decades, the CF has been involved in a war in which its members have participated in sustained combat operations and have suffered increasingly severe injuries. Despite this, the CF experienced the highest casualty survival rate in history. Though this success is multifactorial, the determination and resolve of CF leadership to develop and deliver comprehensive, multileveled TCCC packages to soldiers and medics is a significant reason for that and has unquestionably saved the lives of Canadian, Coalition and Afghan Security Forces…..”
Limb Tourniquets in the U.S. Military

In 2001, almost nobody in the U.S. Military had a tourniquet.

In 2017, thanks to TCCC, no American Soldier, Sailor, Airman, or Marine goes onto the battlefield without a tourniquet.
Hartford Consensus
2 April 2013

- Working group organized by American College of Surgeons Board of Regents and FBI
- In response to Sandy Hook shootings
- Excerpt from findings:

Life threatening injuries in active shooter incidents such as those in Fort Hood, Tucson, and Aurora are similar to those encountered in combat settings. Military experience has shown that the number one cause of preventable death in victims of penetrating trauma is hemorrhage. Tactical Combat Casualty Care (TCCC) programs, when implemented with strong leadership support, have produced dramatic reductions in preventable death. Recognizing that active shooter incidents can occur in any community, the Hartford Consensus encourages the use of existing techniques and equipment, validated by over a decade of well-documented clinical evidence.
MEMORANDUM FOR DIRECTOR, DEFENSE HEALTH BOARD

SUBJECT: Tactical Combat Casualty Care Training for Deploying Personnel, 2011-02

Please accept my appreciation for your continued efforts to provide the Department of Defense with constructive recommendations to help maximize the health, safety, and effectiveness of the U.S. Armed Forces. As we continue to seek opportunities to improve and standardize medical training, we have reviewed and will accept your recommendations related to "Tactical Combat Casualty Care (TCCC) Training for Deploying Personnel." We will incorporate training guidance as described in your recommendation to facilitate uniform TCCC training throughout the Department.

The point of contact for questions regarding this action is Ms. Elizabeth Fudge. Ms. Fudge may be reached at (703) 681-8295, or Elizabeth.Fudge@dha.mil.

[Signature]
Jonathan Woodson, M.D.
Secretary of Defense
James Mattis

General Mattis letter to Service Chiefs
Written during his time as CENTOM Commander
Highlights Ranger success with TCCC
Stresses importance of TCCC training
3. In November 2012 my Command Surgeon and pre-hospital trauma experts from the JTS traveled to Afghanistan to survey pre-hospital medical teams from both the conventional and SOF perspective. Findings on the difference between the Ranger experience and DoD at large appear attributable to the Ranger Casualty Response System, which is a command-directed program that aggressively teaches the Tactical Combat Casualty Care (TCCC) curriculum to all unit personnel, integrates TCCC into small unit tactics and battle drills, and uses a unit-based trauma registry for performance improvement and directed procurement. This system was in place prior to the onset of hostilities. It has undergone continuous updates throughout the current conflict via a unit-based trauma registry and by the expert recommendations from the Committee on TCCC. The unprecedented low incidence of preventable deaths achieved by the Ranger Casualty Response System may serve as a model for improving pre-hospital trauma care and saving lives on the battlefield.

4. My Command Surgeon and the JTS team will be contacting your staff personally to share more information about this promising program. I urge each of you to take their briefing outlining the importance of TCCC training for your combat troops, the criticality of command ownership of this process, and other aspects of this response system.

     v/r

JAMES N. MATTIS  
General, U.S. Marines
Summary of Key Points

• Prehospital trauma care in tactical settings is very different from civilian settings.
• Tactical and environmental factors have a profound impact on trauma care rendered on the battlefield.
• Good medicine can be bad tactics.
• Up to 24% of combat deaths today are potentially preventable.
• Good first responder care is critical.
• TCCC will give you the tools you need!
Summary of Key Points

• Three phases of care in TCCC
  – Care Under Fire
  – Tactical Field Care
  – TACEVAC Care
Official TCCC Education Sites

www.cotccc.com
or
www.deployedmedicine.com
Follow TCCC on Social Media

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@CoTCCC
https://www.facebook.com/CoTCCC/

Twitter
@CommitteeonTCCC
https://twitter.com/CommitteeonTCCC

LinkedIn
https://www.linkedin.com/company/jointtraumasytem

Join the LinkedIn TCCC Discussion Group:
TCCC (https://www.linkedin.com/groups/12036508)

YouTube
Channel Name:
CoTCCC Committee-on-TCCC
http://www.youtube.com/c/CoTCCCCommitteeonTCCC

Instagram
tc3committee
https://www.instagram.com/tc3committee/
Questions?

Photo courtesy MSG (Ret) Harold Montgomery
75th Ranger Regiment