Committee on Tactical Combat Casualty Care (CoTCCC) Update

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> "Nothing gets a pass because 'That's the way we've always done it."
>
> —Frank Butler[1]

The quote above from Dr. Frank Butler has truly become a running theme of the committee over the last couple of years and for the foreseeable future. We are taking a hard look at everything Tactical Combat Casualty Care (TCCC) has been doing for the last 25+ years. There is a plethora of data, studies, and publications from the last 20 years of combat operations as well as evolving feedback from ongoing global conflicts. All of this has prompted us to look at every portion of the TCCC Guidelines to ensure we are producing the evidence-based and best-practice–based guidelines for Role 1 combat casualty care.

There will be changes to TCCC! Many of the forthcoming changes will cause significant shifts in priorities of long-standing interventions and management schemes within TCCC. These changes are based on *evidence*! Some of the changes will represent significant paradigm shifts for those that have been teaching and practicing TCCC for the last couple of decades. As with all TCCC guideline changes, an accompanying article will be published with details explaining each change and presenting the supporting evidence.

The dynamic nature of combat medicine necessitates continual refinement of TCCC guidelines. Since its inception, TCCC has emphasized the importance of addressing the leading causes of preventable death on the battlefield: exsanguination, airway compromise, and tension pneumothorax. However, as combat scenarios evolve and new technologies and research emerge, the guidelines must adapt.

Proposed Changes Under Review by COTCCC

Needle Decompression (NDC)/Chest Trauma

- What is the incidence of tension pneumothorax as a cause/contributing factor in death? (updated data)
- Do the indications for decompression need to be updated?
- Do the recommendations for the site of decompression need to be changed?
- Is needle thoracostomy preferred over simple?
- How many needle attempts should be made?
- How deep should the needle be inserted?
- Does the size of the angiocatheter matter?
- Should simple thoracostomy be a Combat Medic/Corpsman (Tier 3) skill?
- Should NDC be removed from Combat Lifesaver (Tier 2)?
- Is tube thoracostomy needed in TCCC or can it be deferred to PCC?
- Should the emphasis on chest seals be re-evaluated?

Hemorrhagic Shock

- What is the priority of hemorrhagic shock resuscitation over other TCCC interventions?
- Should hypocalcemia be added to the lethal triad?
- Should calcium redosing be adjusted?
- What does the current evidence suggest concerning redosing tranexamic acid (TXA) in patients with ongoing non-compressible torso hemorrhage in the setting of TCCC, as well as prolonged field care?
- Is intramuscular administration of TXA a feasible, safe, and effective alternative to intravenous/intraosseous administration?
- Is the speed of administration of 2g TXA associated with adverse events?
- Should the TCCC guidelines for circulation in tactical field care (TFC) reflect assessment for shock and resuscitation, then TXA, before considering tourniquet conversion?

Antibiotics

- Are antibiotics best suited for TCCC or PCC?
- Do the antibiotic choices need to be updated?
- Do antibiotic recommendations change if invasive procedures are performed?
- What is the best timing for antibiotic administration?
- Should topical administration of antibiotics be included in TCCC?

Hemorrhage Control

- Should direct pressure be applied while devices are being prepared?
- Should pressure points be used to control distal bleeding while devices are being prepared?
- Are prefabricated junctional devices superior to improvised devices?
- Are external abdominal pressure/abdominal tourniquet devices recommended in TCCC?
- Are devices that deliver hemostatic agents into the chest/abdomen recommended in TCCC?
- Are any hemostatic agents preferred over devices for junctional injuries?

- What are the specific wound patterns that junctional devices should be used for?
- Are pelvic binders a hemorrhage control measure or a splint?

Hemostatic Agents

- Should additional hemostatic agents be considered?
- Is one agent preferred over another?
- Are there any hemostatic agents that require less than 3 minutes of pressure?
- Do hemostatic agents need to be removed/replaced? At what intervals?
- Do hemostatic agents result in infectious complications? At what time interval?
- Is there a need to "convert" hemostatic agents (similar to tourniquets)?

March Sequence

- Should the MARCH sequence be adjusted to prioritize the management of hemorrhagic shock over less common or less life-threatening conditions?
- Are there changes to the top known preventable combat death injury patterns?
- Should reassessment of casualty condition and interventions be a dedicated paragraph/section of the TCCC guidelines?

Pediatric Considerations in TCCC

- What interventions can be employed on pediatric patients with adult sets/kits/outfits?
- What TCCC medications can be used for both pediatric casualties and how do the doses change?

Tactical Combat Casualty Care continues to evolve in response to emerging evidence and the operational demands of modern warfare. By prioritizing rapid intervention, streamlined protocols, and practical solutions, these updates reaffirm TCCC's role as a cornerstone of military medicine. Ongoing research and training will be essential to sustaining and enhancing these advancements.

The CoTCCC meets in January 2025 for final review of the topics above with change proposal voting occurring immediately afterward. The projected 2025 TCCC Guidelines are expected to be published in February 2025 on the Deployed Medicine website and mobile application.

Reference

1. **Butler FK.** Leadership lessons learned in Tactical Combat Casualty Care. *J Trauma Acute Care Surg*. 2017;82(6S Suppl 1):S16–S25. doi:10.1097/TA.0000000000001424

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