CPP TCCC

COMBAT PARAMEDIC/ PROVIDER

TACTICAL COMBAT CASUALTY CARE COURSE

MODULE 22: CARDIOPULMONARY RESUSCITATION IN TACTICAL FIELD CARE

Committee on Tactical Combat Casualty Care (CoTCCC)

TCCC TIER 1
All Service Members

TCCC TIER 2
Combat Lifesaver

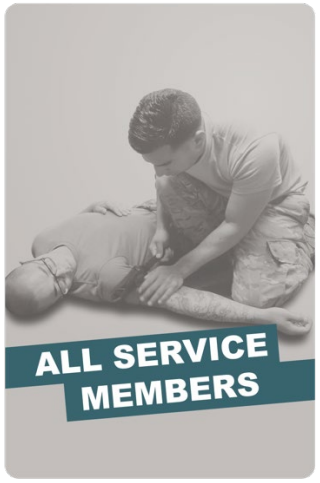
TCCC TIER 3
Combat Medic/Corpsman

TCCC TIER 4
Combat Paramedic/Provider

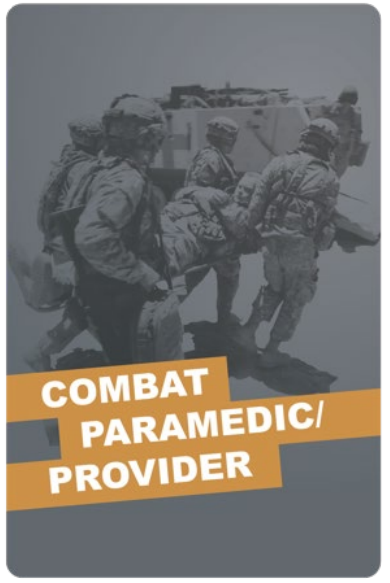
TACTICAL COMBAT CASUALTY CARE (TCCC) ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL



MEDICAL PERSONNEL



YOU ARE HERE

STANDARDIZED JOINT CURRICULUM

1 x TERMINAL LEARNING OBJECTIVES

24 Describe cardiopulmonary resuscitation (CPR) in Tactical Field Care.

- **24.1** Identify the conditions of and considerations for cardiopulmonary resuscitation in Tactical Field Care.
- **24.2** Demonstrate bilateral needle decompression in Tactical Field Care.
- **24.3** Identify any evidence-based medicine, best practices, casualty data, and Subject Matter Expert consensus on the indications of cardiopulmonary resuscitation in Tactical Field Care.

03 x ENABLING LEARNING OBJECTIVES

= **Terminal Learning Objectives** ● = Cognitive ELOs ▨ = Performance ELOs

CARDIOPULMONARY RESUSCITATION IN THE PREHOSPITAL SETTING

BATTLEFIELD CONSIDERATIONS:

- Delays in getting casualty to definitive care
- Responder risk performing CPR in hostile environment
- Taking limited resources away from other casualties while performing CPR

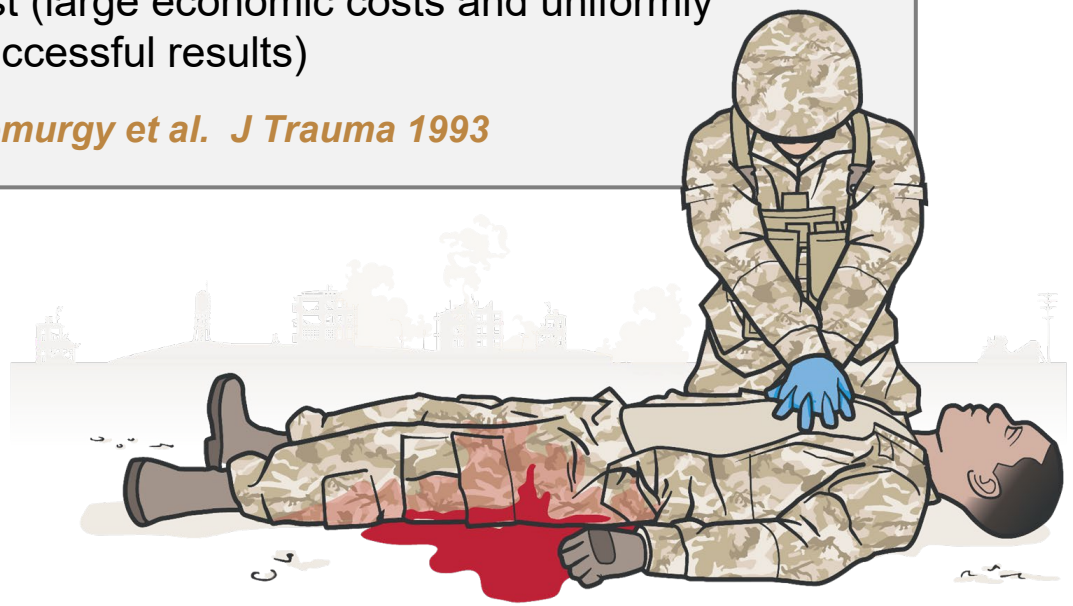
Resuscitation on the battlefield for victims of blast or penetrating trauma who have no pulse, no ventilations, and no other signs of life will not be successful and should not be attempted.

TCCC Guidelines (15 Dec 2021)

138 trauma patients with prehospital cardiac arrest where resuscitation was attempted - **No survivors**

RECOMMENDATION: **CPR not be attempted** for patients with prehospital traumatic cardiac arrest (large economic costs and uniformly unsuccessful results)

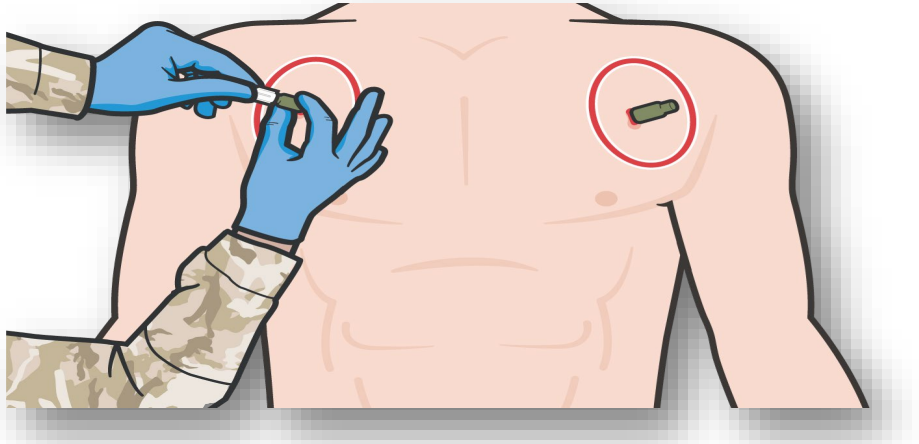
Rosemurgy et al. J Trauma 1993



NON-HYPOVOLEMIC CARDIAC ARREST IN A TRAUMA CASUALTY

TENSION PNEUMOTHORAX can cause cardiac arrest in trauma casualties

- Retrospective civilian prehospital studies indicate needle decompression of the chest (NDC) restored cardiac output
- Anecdotal military cases report return of pulses with NDC
- Armed Forces Medical Examiner data: pneumothoraxes may have played a role in fatalities from recent conflicts



Perform **bilateral NDC** in casualties with no pulses or respirations in Tactical Field Care

> …casualties with torso trauma or polytrauma who have no pulse or respirations during TFC should have bilateral needle decompression performed to ensure they do not have a tension pneumothorax prior to discontinuation of care.
>
> ***TCCC Guidelines (Current Edition)***

Level of Evidence: C-LD

CONSIDERATIONS FOR CARDIOPULMONARY RESUSCITATION

CARDIAC ARREST in the absence of blast or penetrating trauma may warrant consideration for initiation of CPR:

- Hypothermia
- Near drowning
- Electrocution
- Non-traumatic cardiac arrest
- In Tactical Evacuation Phase
  (if casualty does not have obviously fatal wounds and will arrive at a surgical facility soon)

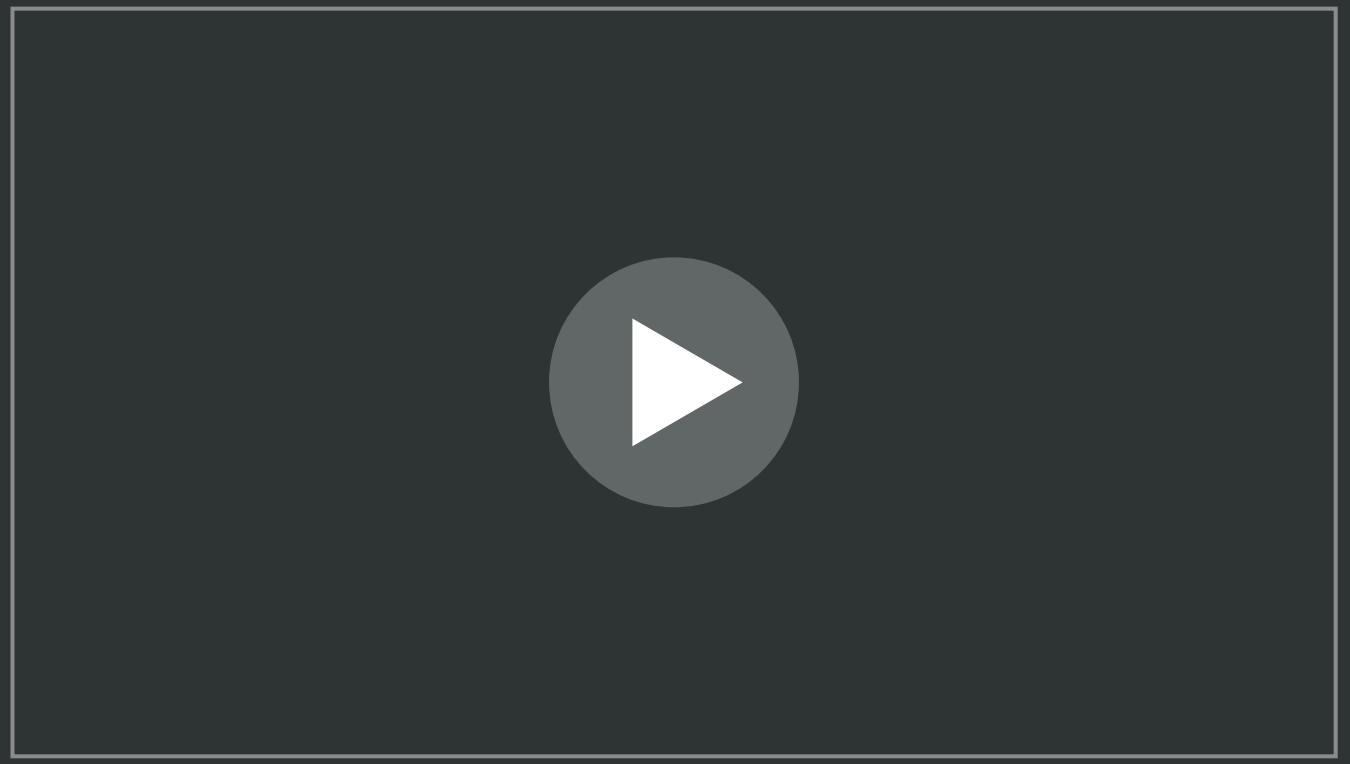
Level of Evidence: C-LD

REMINDER: Disadvantages to CPR in TFC:

- Responder risk in hostile environment
- Taking limited resources away from other casualties

As **Combat Paramedic/Provider** you will need to weigh all factors when deciding initiation and discontinuation of any CPR attempts

NEEDLE DECOMPRESSION OF THE CHEST (VIDEO)



Video can be found on deployedmedicine.com

CPR IN TFC
SKILL STATION

- Bilateral Needle Decompression of the Chest

EVIDENCE SUPPORTING CPR IN TACTICAL FIELD CARE

Subject Category	Study Types	Level of Evidence
CPR in TFC	Meta-analysis of observational studies, lab evaluations and case studies	**C-LD**
Bilateral NDC in TFC	Meta-analysis of observational studies, lab evaluations and case studies.	**C-LD**

ASSESSING THE EVIDENCE FOR GUIDELINES

Level of Evidence	AHA Recommendation System Terminology Explanation	Why the AHA Classification System?
A	Evidence from multiple randomized clinical trials (RCT) with concordant results or from **HIGH-QUALITY** meta-analyses.	• The level of evidence recommendations allow readers to quickly glean information on the strength, certainty, and quality of evidence supporting each recommendation. • A recommendation with Level of Evidence (LOE) C does not imply that the recommendation is weak. • Although, RCTs are unavailable, there may be a very clear clinical consensus that a particular test or therapy is useful or effective.
B-R	Evidence from moderate-quality trials, or a meta-analysis of moderate quality (RCT) followed by an R to denote **RANDOMIZED** studies	
B-NR	Evidence from moderate-quality trials, or a meta-analysis of moderate quality followed by NR to denote **NON-RANDOMIZED** studies	
C-LD	There is no convincing evidence and is followed by LD to indicate **LIMITED DATA**	
C-EO	There is no convincing evidence and is followed by EO if the consensus is based on **EXPERT OPINION**, case studies or standards of care.	

SUMMARY

Knowledge Topics

- Identify conditions and considerations for cardiopulmonary resuscitation
- Evidence for the indications of cardiopulmonary resuscitation in Tactical Field Care

Skills and Abilities

- Bilateral needle decompression of the chest

CHECK ON LEARNING

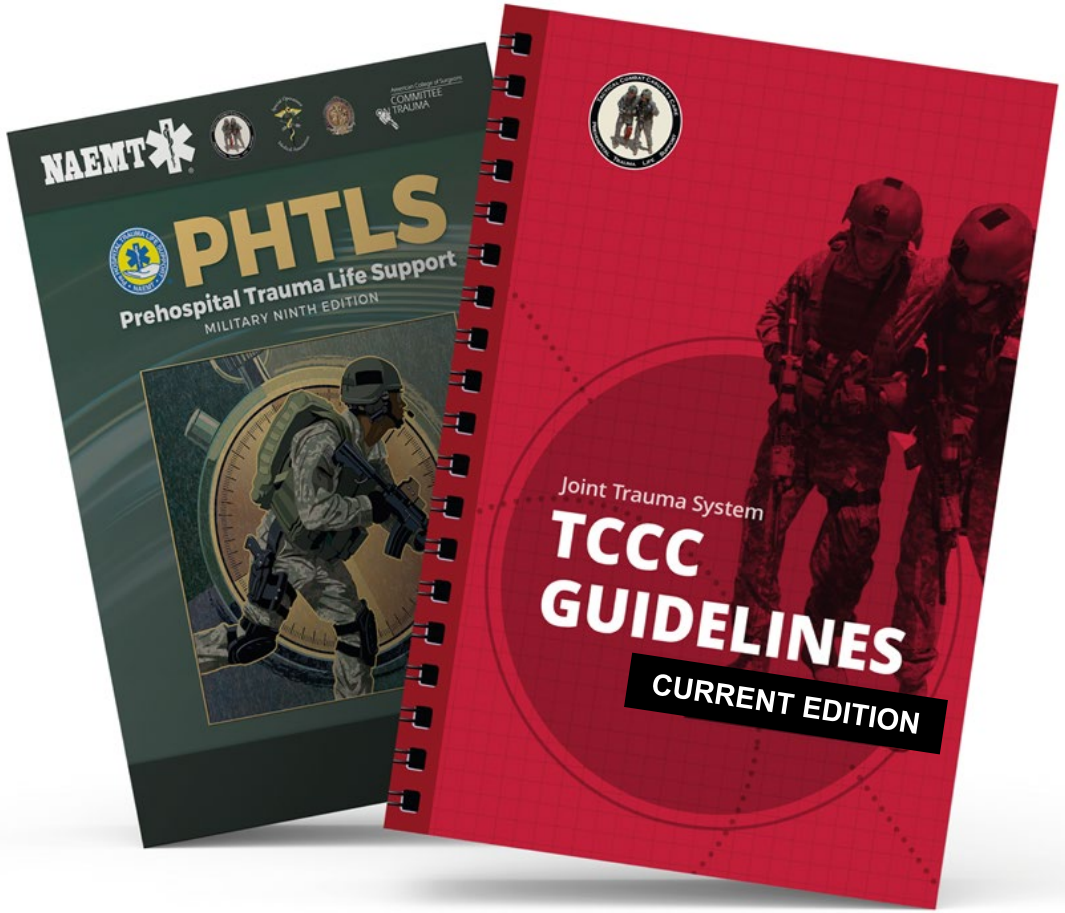
Should you initiate CPR for a casualty with blast or penetrating trauma who has no pulse, respirations, or signs of life?

When should you perform a bilateral needle decompression of the chest?

In what circumstance might you consider CPR in the Tactical Field Care phase?

ANY QUESTIONS?

REFERENCES



TCCC: Guidelines

by JTS/CoTCCC

These guidelines, updated regularly, are the result of decisions made by CoTCCC in exploring evidence-based research on best practices.

PHTLS: Military Edition, Chapter 25

by NAEMT

Prehospital Trauma Life Support (PHTLS), Military Edition, teaches and reinforces the principles of rapidly assessing a trauma patient using an orderly approach.