CPP TCCC

COMBAT PARAMEDIC/ PROVIDER

TACTICAL COMBAT CASUALTY CARE COURSE

MODULE 1: PRINCIPLES AND APPLICATION OF TACTICAL COMBAT CASUALTY CARE (TCCC)

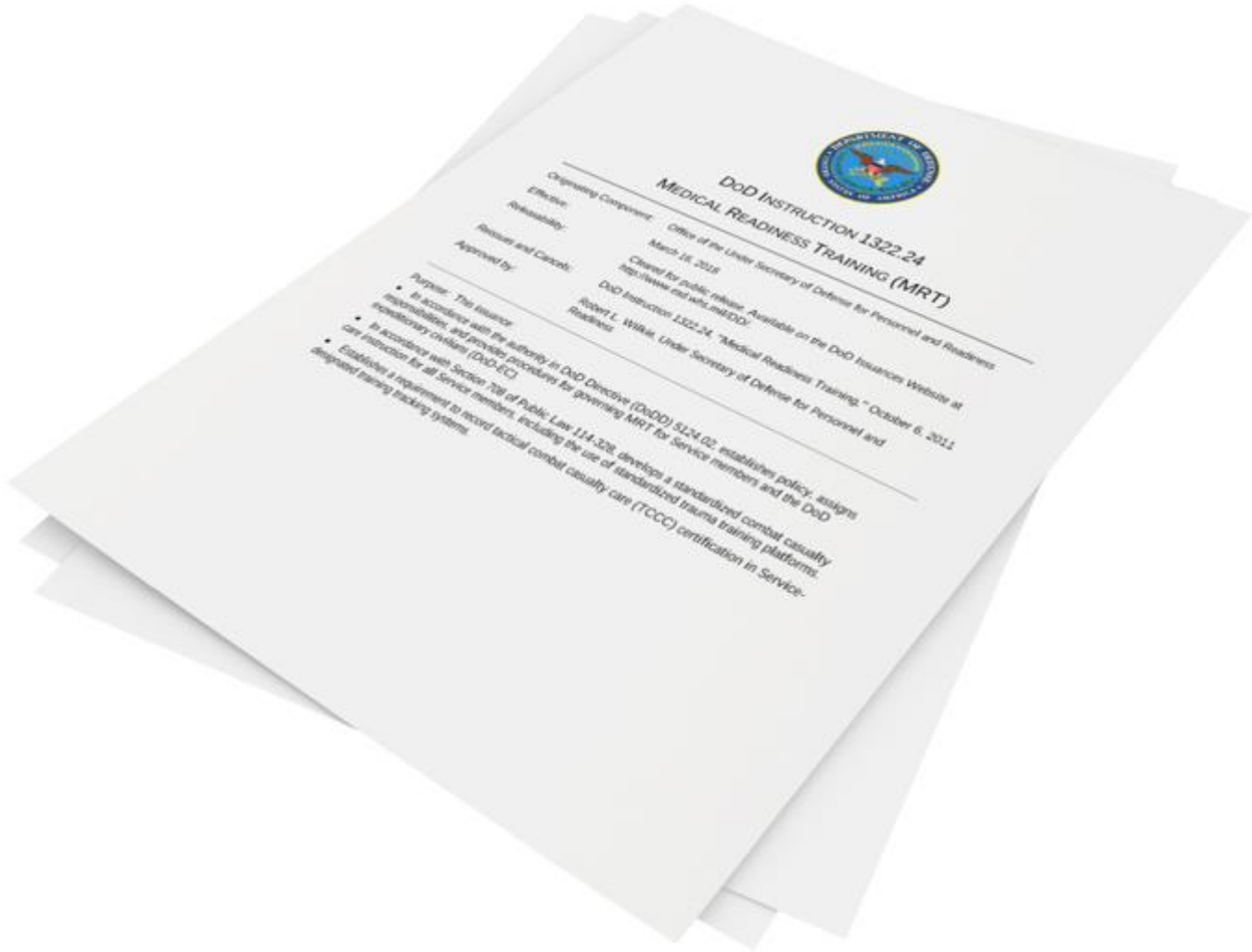
Committee on Tactical Combat Casualty Care (CoTCCC)

TCCC TIER 1	TCCC TIER 2	TCCC TIER 3	TCCC TIER 4
All Service Members	Combat Lifesaver	Combat Medic/Corpsman	Combat Paramedic/Provider

NDAA 2017 section 708

DoDI 1322.24

- Standardizes Combat Casualty Care for all Service members
- Mandates the use of a standardized trauma training platform

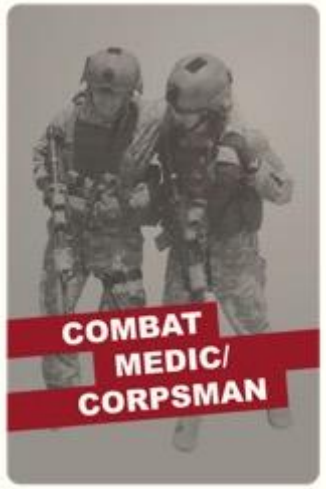


TACTICAL COMBAT CASUALTY CARE (TCCC) ROLE-BASED TRAINING SPECTRUM

ROLE 1 CARE

NONMEDICAL PERSONNEL

MEDICAL PERSONNEL



YOU ARE HERE

STANDARDIZED JOINT CURRICULUM

This isn't your typical first aid training

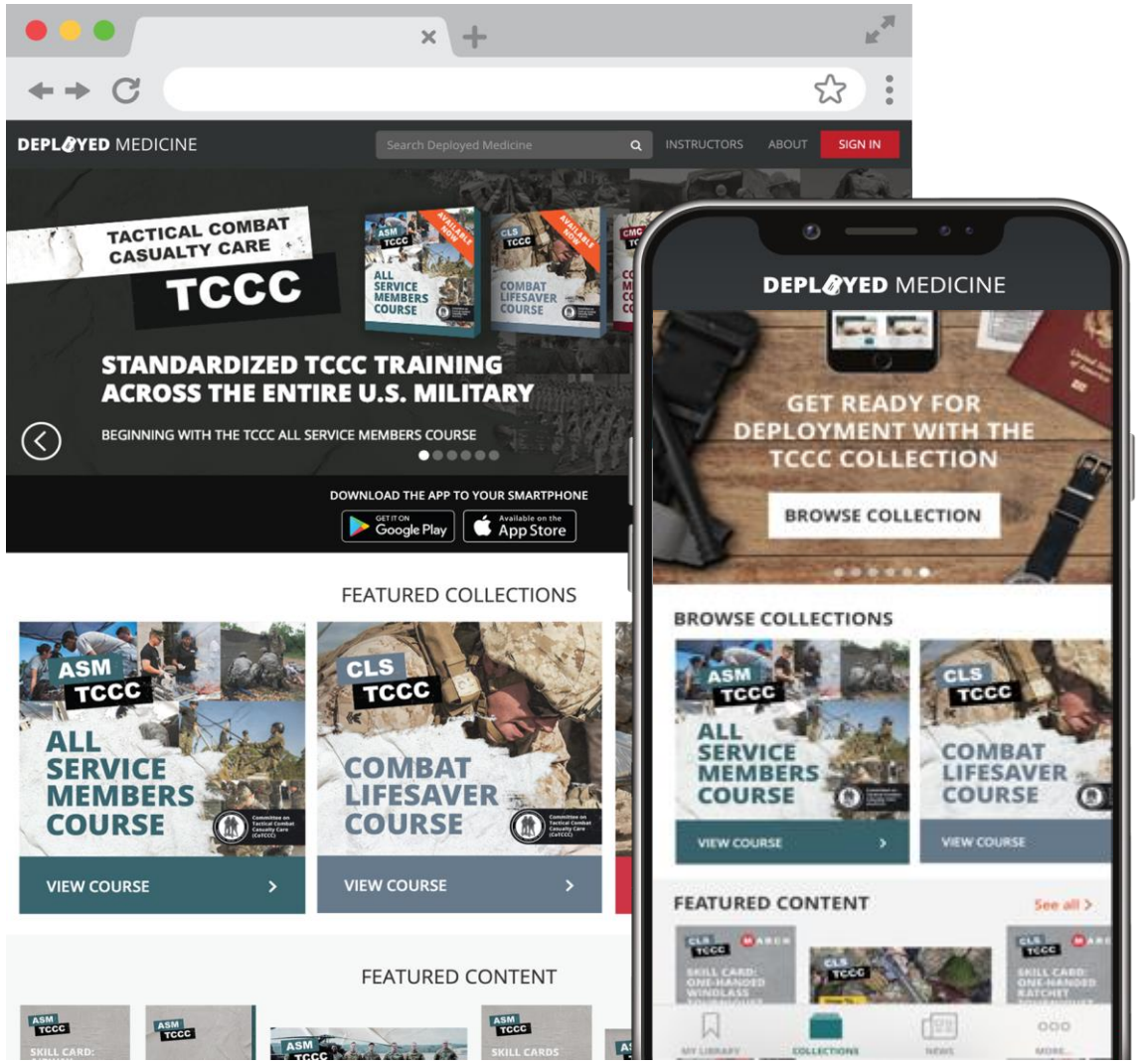
DEPLOYED MEDICINE

- Training & Education Resource
- All Service Members (ASM),Combat Lifesaver (CLS), Combat Medic /Corpsman (CMC), and Combat Paramedic/Provider (CPP) TCCC Curriculum
- Updated videos, podcasts, and resources
- Download CPGs to your phone

www.deployedmedicine.com

Available on the App Store

GET IT ON Google Play



WHAT THIS COURSE CONTAINS

- Principles and Applications of TCCC
- Medical Equipment
- Care Under Fire
- Principles and Application of Tactical Field Care
- Tactical Trauma Assessment
- Massive Hemorrhage Control
- Airway Management
- Respiration Assessment and Management
- Circulation/Hemorrhage Control
- Shock Recognition and Management
- Hemorrhagic Shock Fluid Resuscitation
- Hypothermia Prevention and Treatment
- Head Injuries
- Eye Injuries
- Pain Medications (Analgesia)
- Antibiotic Administration
- Wound Management
- Burns
- Fractures
- Casualty Monitoring
- Communication
- Cardiopulmonary Resuscitation
- Documentation
- Preparation for Evacuation

Module 1: Principles and Application of TCCC

1 x TERMINAL LEARNING OBJECTIVE

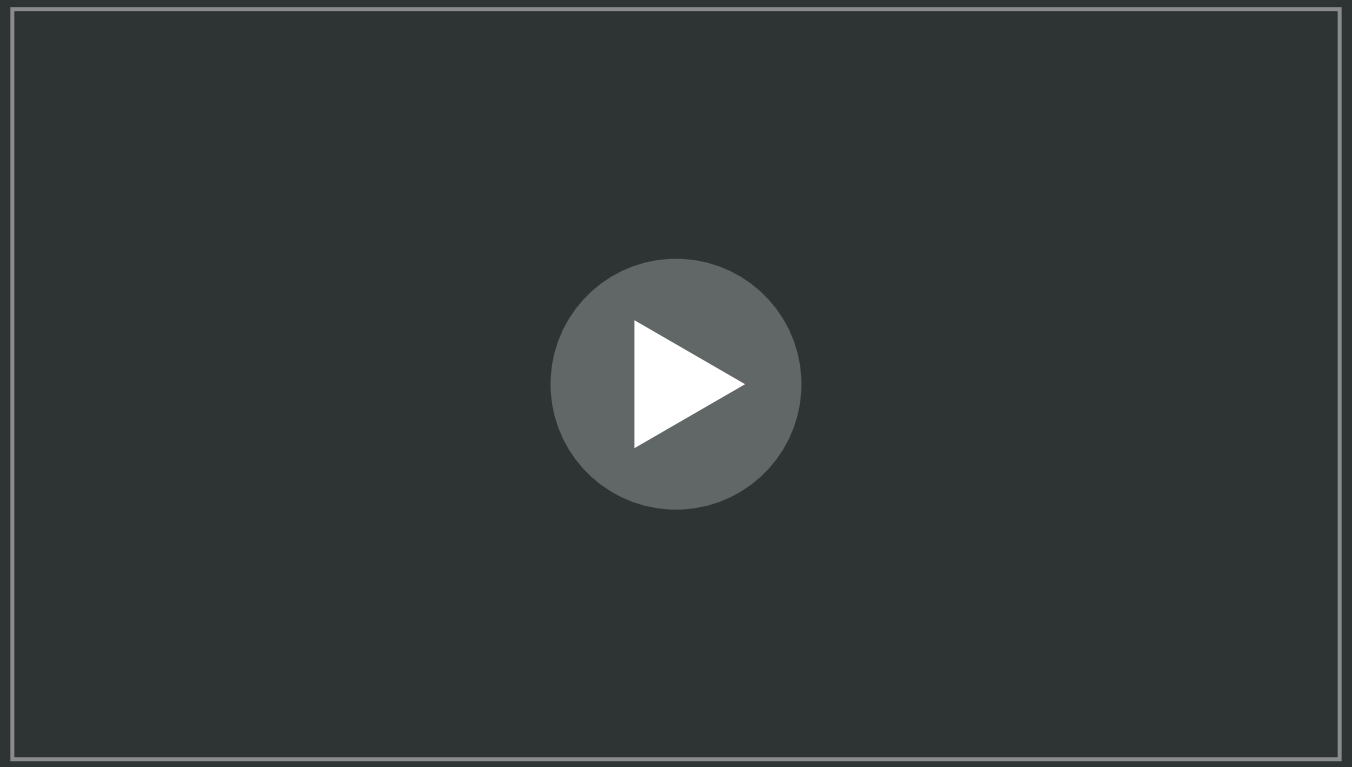
01 Describe the practice of TCCC in accordance with CoTCCC Guidelines.

- **1.1** Identify the leading causes of preventable death due to traumatic injuries and the corresponding interventions to help increase chances of survival.
- **1.2** Describe the TCCC Phases of Care and how intervention priorities differ in each phase, in accordance with CoTCCC Guidelines.
- **1.3** Describe the application of TCCC in combat and noncombat settings across different environments.
- **1.4** Describe the role and responsibilities of all non-medical and medical personnel in rendering TCCC care in accordance with Joint Publication 4-02 and DoDI 1322.24.
- **1.5** Identify the key factors influencing TCCC.
- **1.6** Identify the importance of TCCC training.
- **1.7** Identify the three objectives (or goals) of TCCC.
- **1.8** Identify the lifesaving impacts of TCCC implementation in prehospital trauma care.
- **1.9** Identify methods used to stay current and up-to-date with TCCC Guidelines and protocols.
- **1.10** Identify the origins of TCCC, including the Committee on Tactical Combat Casualty Care (CoTCCC), and define the importance of CoTCCC Guidelines/Recommendations.
- **1.11** Identify the methodology for TCCC Guideline changes and revisions.
- **1.12** Identify TCCC training methods ensuring unit readiness in achieving no losses due to preventable combat deaths.
- **1.13** Identify the mission and purpose of the Joint Trauma System and its role in combat casualty care at the unit level.

13 x ENABLING LEARNING OBJECTIVES

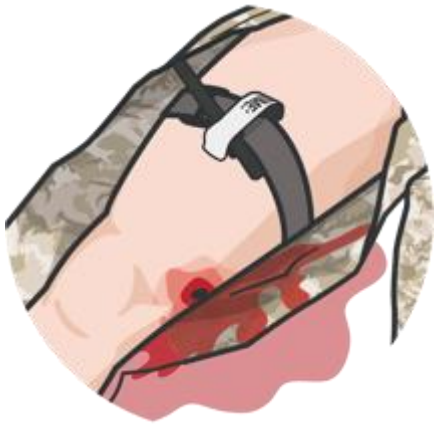
= **Terminal Learning Objectives** ● = Cognitive ELOs ○ = Performance ELOs

Intro to Tactical Combat Casualty Care (TCCC) Overview



Video can be found on deployedmedicine.com

LEADING CAUSES OF PREVENTABLE COMBAT DEATH DUE TO TRAUMATIC INJURIES



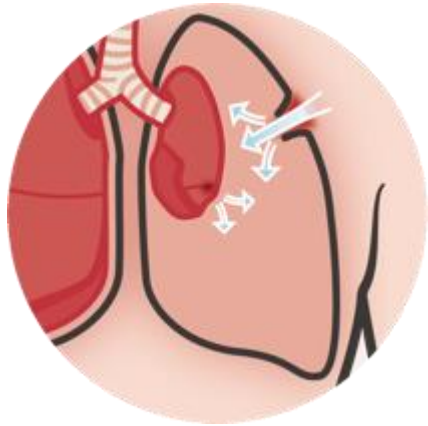
EXTREMITY HEMORRHAGE

Intervention:
Limb tourniquet

JUNCTIONAL HEMORRHAGE

Intervention:
Hemostatic dressing and wound packing;

Junctional tourniquet



TENSION PNEUMOTHORAX

Intervention:
Needle decompression of the chest (NDC)

Chest tube insertion

AIRWAY TRAUMA/ OBSTRUCTION

Intervention:
Airway maneuvers, nasopharyngeal airway

Advanced surgical airways or ETT intubation

Three PHASES of TCCC

1. **CARE UNDER FIRE (CUF) / THREAT**
   - RETURN FIRE AND TAKE COVER
2. **TACTICAL FIELD CARE (TFC)**
   - WORK UNDER COVER AND CONCEALMENT
3. **TACTICAL EVACUATION CARE (TACEVAC)**
   - MORE DELIBERATE ASSESSMENT AND PRE-EVACUATION PROCEDURES

PHASE 1: CARE UNDER FIRE / THREAT

RETURN FIRE AND TAKE COVER

<u>NEVER</u> ATTEMPT to rescue a casualty until hostile fire is **suppressed**

Using available resources, **ensure scene safety**

DIRECT CASUALTY TO REMAIN ENGAGED

HAVE CASUALTY MOVE TO COVER AND APPLY SELF-AID *(if able)*

or

MOVE OR DRAG CASUALTY TO COVER *(if tactically feasible)*

KEEP CASUALTY FROM SUSTAINING ADDITIONAL WOUNDS

PHASE 1: CARE UNDER FIRE / THREAT *(CONT.)*

CASUALTIES SHOULD BE EXTRACTED AND MOVED to relative safety once scene is secure

Stop the burning process, if relevant

STOP LIFE-THREATENING EXTERNAL HEMORRHAGE
(if tactically feasible)

For life-threatening bleeding, place a tourniquet over the uniform **"proximal"** to the bleeding site(s)

NOTE: If life-threatening bleeding is **not readily apparent**, place tourniquet as proximal as possible on injured limb

MOVE the **CASUALTY** to cover

IMPORTANT CONSIDERATION:
Continuously assess risks and make a plan before moving a casualty

MARCH PAWS

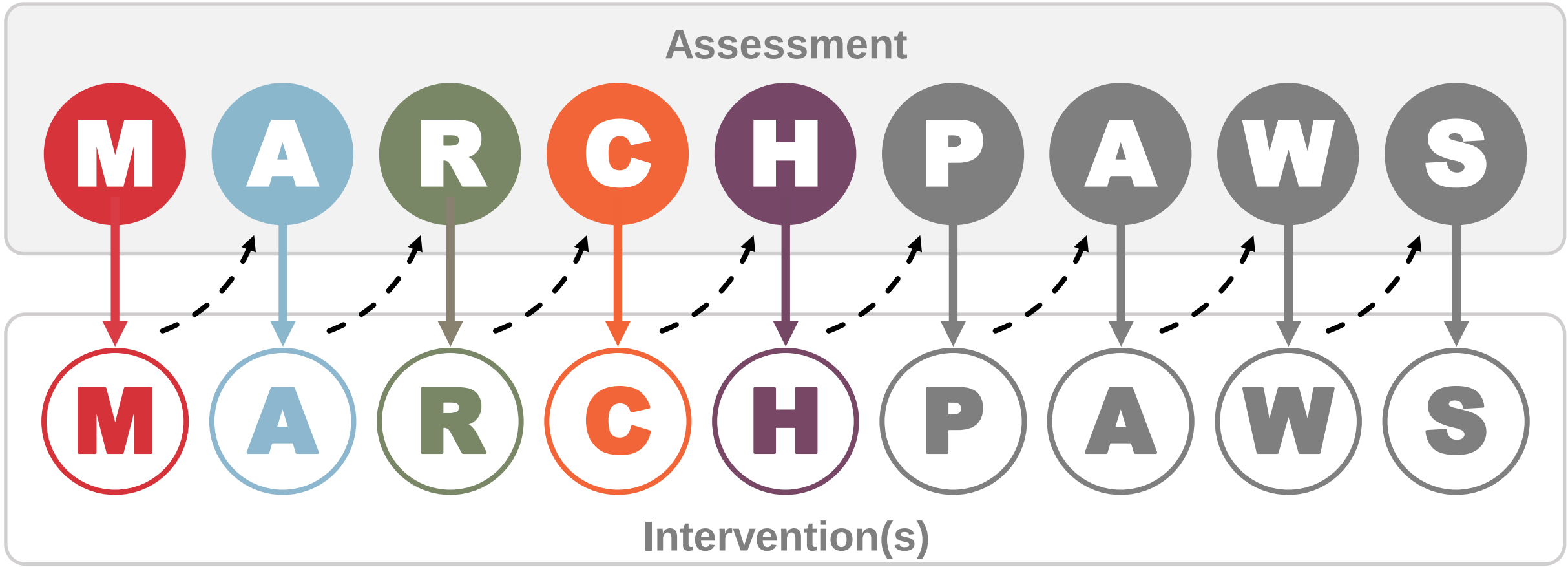
POTENTIALLY LIFE-THREATENING

- **M** MASSIVE BLEEDING — #1 priority
- **A** AIRWAY
- **R** RESPIRATION *(breathing)*
- **C** CIRCULATION
- **H** HYPOTHERMIA / HEAD INJURIES

AFTER LIFE-THREATENING

- **P** PAIN
- **A** ANTIBIOTICS
- **W** WOUNDS
- **S** SPLINTING

TACTICAL TRAUMA ASSESSMENT PROCESS



PHASE 2: TACTICAL FIELD CARE

ESTABLISH SECURITY PERIMETER

TRIAGE CASUALTIES

ASSESSMENT AND TREATMENT

COMMUNICATION

DOCUMENTATION OF CARE

PREPARATION FOR EVACUATION

PHASE 2: TACTICAL FIELD CARE *(cont.)*

TACTICAL FIELD CARE

- The casualty and the person rendering care are **NOT** under direct fire
- TFC can turn into Care Under Fire unexpectedly
- Personnel should maintain **SITUATIONAL AWARENESS**

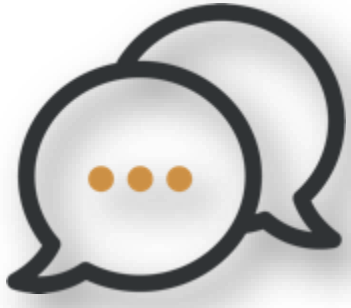
LIMITED SUPPLIES

- Medical equipment and supplies are limited to what is carried into the field by the **CPP**, any **CMC**, **CLS,** and the **INDIVIDUAL SERVICE MEMBER**
- Always use the casualty's **Joint First Aid Kit (JFAK)** first

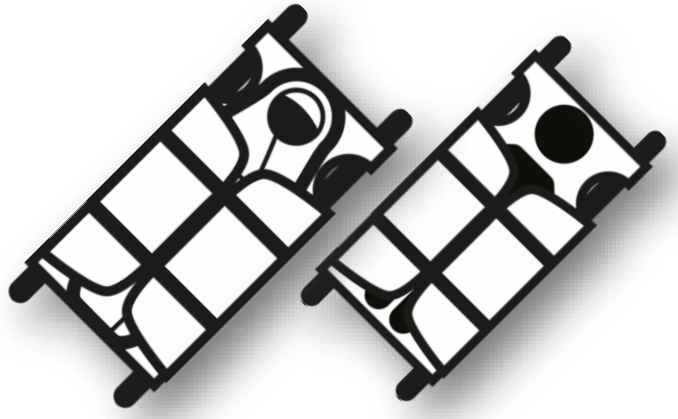
⚠ **REMEMBER:** Intervention priorities should follow **MARCH PAWS**

PHASE 3: TACTICAL EVACUATION CARE

ESTABLISH EVACUATION POINT SECURITY/STAGE CASUALTIES FOR EVACUATION



COMMUNICATING CASUALTY INFORMATION



STAGING/LOADING CASUALTIES

LOAD/SECURE CASUALTIES

REASSESSING/ RE-EVALUATING

Three PHASES of TCCC

1 CUF / Threat

RETURN FIRE AND TAKE COVER

- Direct the casualty to remain engaged
- Direct the casualty to move to cover
- Keep casualty from sustaining additional wounds
- Stop life-threatening external hemorrhage
- Move casualty to cover

2 TFC

WORK UNDER COVER AND CONCEALMENT

- Establish a security perimeter and maintain tactical situational awareness
- Triage casualties
- Assess and treat following MARCH PAWS sequence
- Communicate
- Document care
- Prepare casualty for evacuation

3 TACEVAC

DELIBERATE ASSESSMENT PRE-EVACUATION PROCEDURES

- Establish evacuation point security and stage casualties
- Communicate casualty information to TACEVAC
- TACEVAC personnel stage casualties on evacuation platforms
- Secure casualties in evacuation platform
- Re-assess and re-evaluate all injuries / interventions

APPLICATION OF TCCC IN COMBAT VERSUS NONCOMBAT SETTINGS

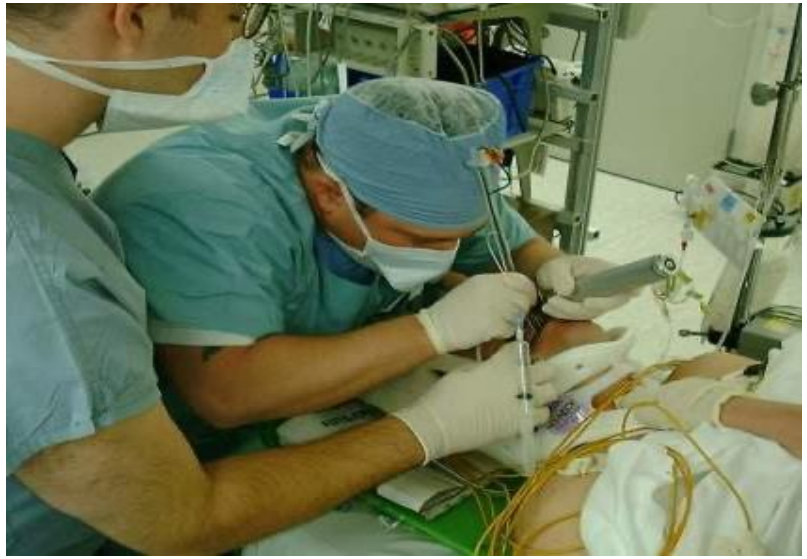
MOTOR VEHICLE ACCIDENT

ACTIVE SHOOTER

WORKPLACE ACCIDENT

REMEMBER! The principles of TCCC apply to all of these varied-use cases

APPLICATION OF TCCC IN DIFFERENT ENVIRONMENTS



CIVILIAN OR MILITARY HOSPITAL SETTING

VS

COMBAT OR AUSTERE FIELD SETTING

ROLES AND RESPONSIBILITIES OF ALL SERVICE MEMBERS

CARE UNDER FIRE/THREAT

In a **CUF** situation the All Service Member should:

- Ensure scene safety
- Move casualty to safety
- Identify and control life-threatening bleeding

TACTICAL FIELD CARE

In a **TFC** situation, the All Service Member should:

- Perform a Rapid Casualty Assessment
- Follow MARCH sequence & render any treatments they have been trained on
- Seek help as directed by unit standard operating procedure(s)

ROLES AND RESPONSIBILITIES OF COMBAT LIFESAVERS

CARE UNDER FIRE/THREAT

In a **CUF** situation the Combat Lifesaver should:

- Suppress hostile fire to minimize the risk of injury to personnel and minimize additional injury to previously injured Service members
- Assist in providing self-aid and moving casualties, if feasible

TACTICAL FIELD CARE

In a **TFC** situation, the Combat Lifesaver should:

- Maintain security and situational awareness
- Perform casualty assessments
- Follow MARCH PAWS protocol to render any treatments they have been trained on
- Support the CMC or CPP, as directed

ROLES AND RESPONSIBILITIES OF THE COMBAT MEDIC/CORPSMEN

CARE UNDER FIRE/THREAT

The **CMC** should:

- Suppress hostile fire to minimize new or additional injury to casualties
- Assist in providing self-aid and moving casualties, if feasible

TACTICAL FIELD CARE

The **CMC** should:

- Assume the **primary role** for casualty assessment and treatment
- Manage and direct casualty response efforts utilizing all available responders
- Support the CPP, as directed

TACTICAL EVACUATION CARE

The **CMC** should:

- Reassess casualties before arrival of evacuation assets
- Communicate findings to the TACEVAC medical personnel
- Ensure proper staging and support loading
- Secure casualties on the evacuation platform

ROLES AND RESPONSIBILITIES OF THE COMBAT PARAMEDIC/PROVIDER

CARE UNDER FIRE/THREAT

The **CPP** should:

- Suppress hostile fire to minimize new or additional injury to casualties
- Assist in providing self-aid and moving casualties, if feasible

TACTICAL FIELD CARE

The **CPP** should:

- Provide casualty assessment and treatment when functioning as the unit medic
- Manage and direct casualty response efforts utilizing all available responders

TACTICAL EVACUATION CARE

The **CPP** should:

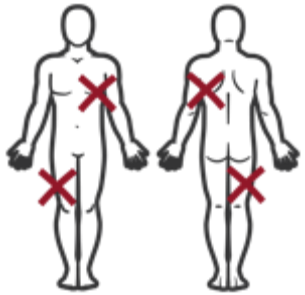
- Reassess casualties, communicate findings to TACEVAC medical personnel, ensure proper staging and support loading, and secure casualties on the evacuation platform

Additional roles include medic training program development and management and the overall direction of the Role 1 medical response system

KEY FACTORS INFLUENCING TCCC

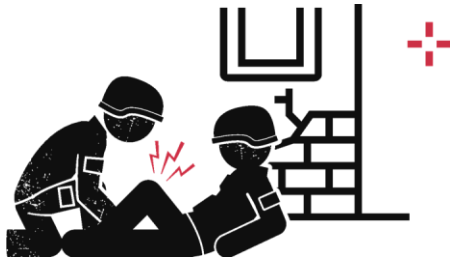
Hostile fire

Tactical considerations



Wounding patterns

Environmental considerations



Level of first responder training and experience

Equipment constraints

Delays in reaching higher levels of care

IMPORTANCE OF TCCC TRAINING

Application of TCCC has resulted in the lowest preventable death rate ever

- Individuals who are regularly trained in **TCCC** are **COMBAT-READY** when they deploy
- Units that train together perform more efficiently in an operational setting
- During training, CPPs can refine the Role 1 medical response, ensure unit CMC readiness, and identify outstanding performers to use as extenders and first responders who might benefit from additional mentorship

THE THREE OBJECTIVES OF TCCC

1

Treat the casualty

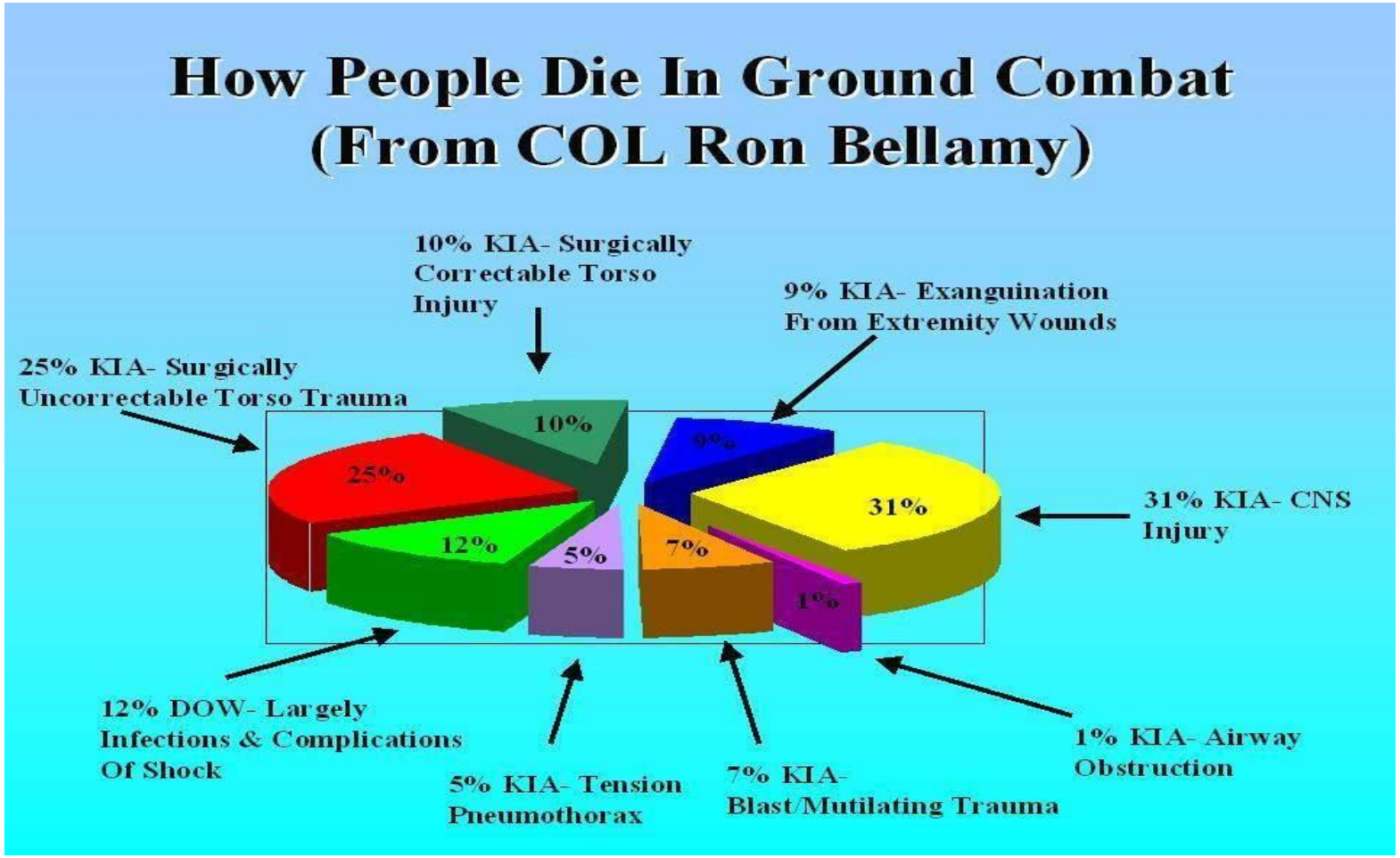
2

Prevent additional casualties

3

Complete the mission

PREHOSPITAL TRAUMA CARE IN VIETNAM



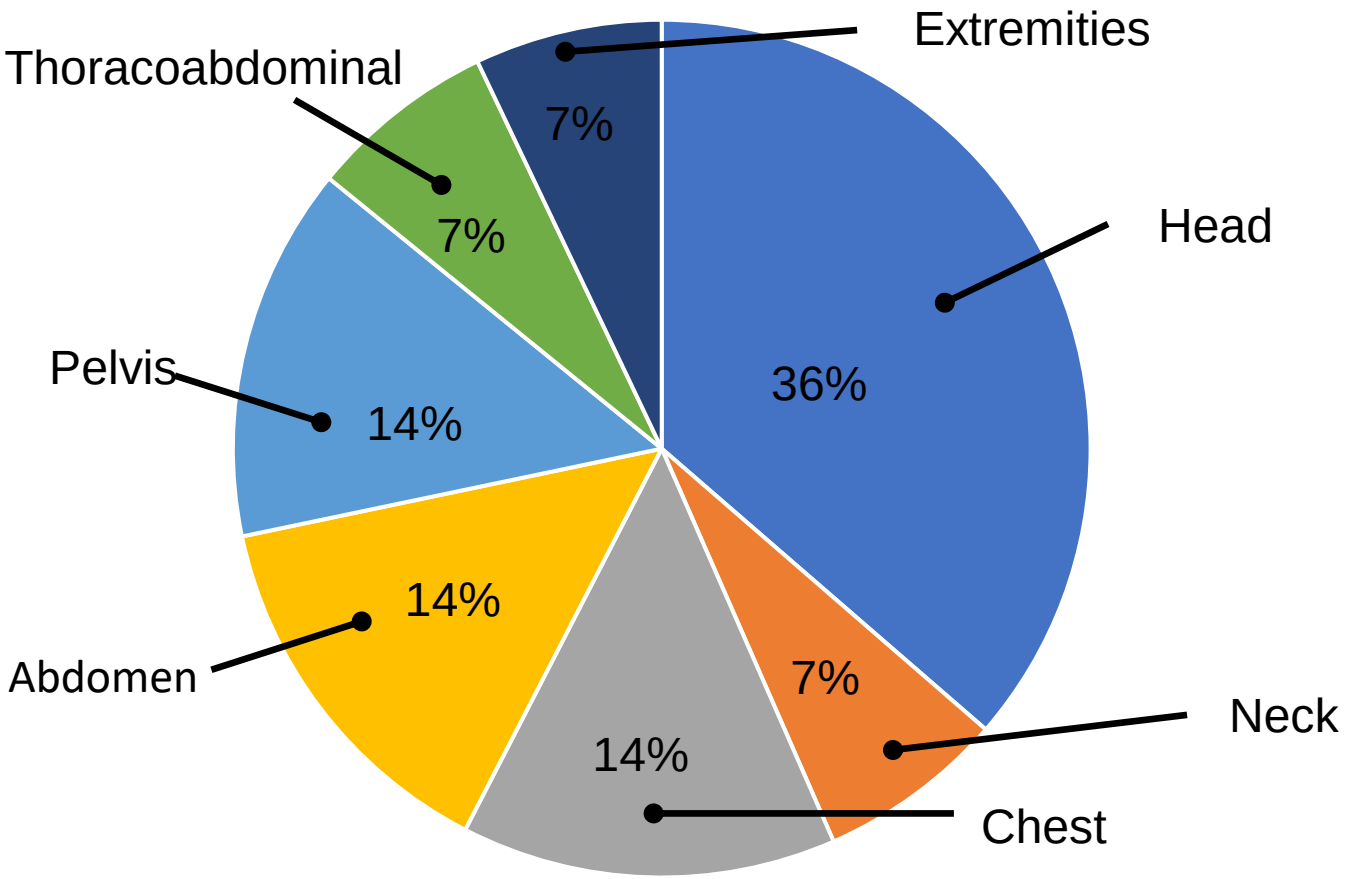
Over **2500 PREVENTABLE DEATHS** from **EXTREMITY HEMORRHAGE** occurred in Vietnam.

These casualties had no other injuries!

25 years later, we have still not learned the tourniquet lesson from Vietnam.

LIFESAVING IMPACTS OF IMPLEMENTING TCCC IN PREHOSPITAL TRAUMA CARE MID-1990s

FATAL PENETRATING INJURIES MOGADISHU



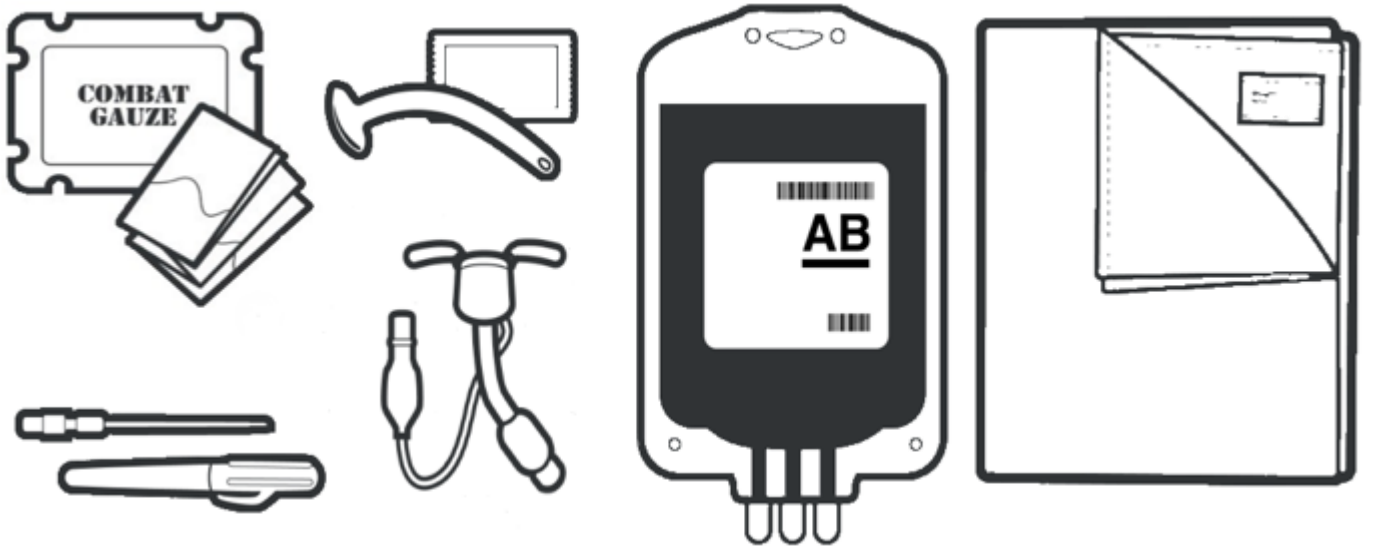
- **22%** of these casualty's died from **UNCONTROLLED HEMORRHAGE** in Mogadishu
- **HEMORRHAGE** is the leading cause of combat death when evacuation is delayed for more than **6 hours**
- Though upgrades in body armor helped protect those that were injured, there is a need to improve the field management of hemorrhage

LIFESAVING IMPACTS OF IMPLEMENTING TCCC IN PREHOSPITAL TRAUMA CARE CURRENTLY

8 of 12

Deaths from potentially survivable injuries might have been prevented by the proper application of TCCC principles

LIFESAVING IMPACTS OF IMPLEMENTING TCCC IN PREHOSPITAL TRAUMA CARE (*cont.*)



In addition to tourniquet guidance, many other TCCC advances have now been widely adopted

Including: Hemostatic dressing and wound packing; junctional tourniquet, needle decompression of the chest, nasopharyngeal airway, cricothyroidotomy, extraglottic airway, resuscitation with blood products, and hypothermia prevention, to mention a few

TCCC TRAINING METHODS TO ENSURE UNIT READINESS

2018 TCCC Baseline Training Assessment

Main findings responsible for variations in training:

- **Inconsistent instructor training and selection**
- **Variable methods of assessment**
- Lack of adequate physical space
- Variations in simulation capabilities

TCCC TRAINING METHODS TO ENSURE UNIT READINESS

Recommendations to optimize training outcomes

- **Ensure line leadership prioritizes TCCC training**
- Use the **approved** Joint Trauma System resources
- **Properly-trained** and **up-to-date** instructors
- Incorporate **real-world experiences** and **case scenario-based** examples
- Provide the most **realistic training environment** you can
- Use **standardized** assessments, **constructive** feedback and **remediation**
- Incentivize training outside of formal classes (e.g., **Deployed Medicine**)

THE ORIGINS OF TCCC AND THE COMMITTEE ON TCCC (CoTCCC)

1940-1975	WWII, Korea, Vietnam conflict experiences
1992	Somalia
1996	Initial TCCC Guidelines
Late 1990s	NAVSPECWARCOM, 75th Rangers, USAF PJs adopt TCCC
2001	CoTCCC chartered by USSOCOM
2002	CENTCOM Joint Theater Trauma System established
2003	1st TCCC Guideline update
2004	DOD Trauma Registry chartered
2006	Joint Trauma System (JTS) established
2007	CoTCCC moves to Defense Health Board
2013	CoTCCC moved under JTS
2021	Most recent TCCC Guideline update

The **CoTCCC** mission is

"To develop on an ongoing basis the best possible set of trauma care guidelines customized for the tactical environment and to facilitate the transition of these recommendations into battlefield trauma care practice."

THE IMPORTANCE OF CoTCCC GUIDELINES & RECOMMENDATIONS

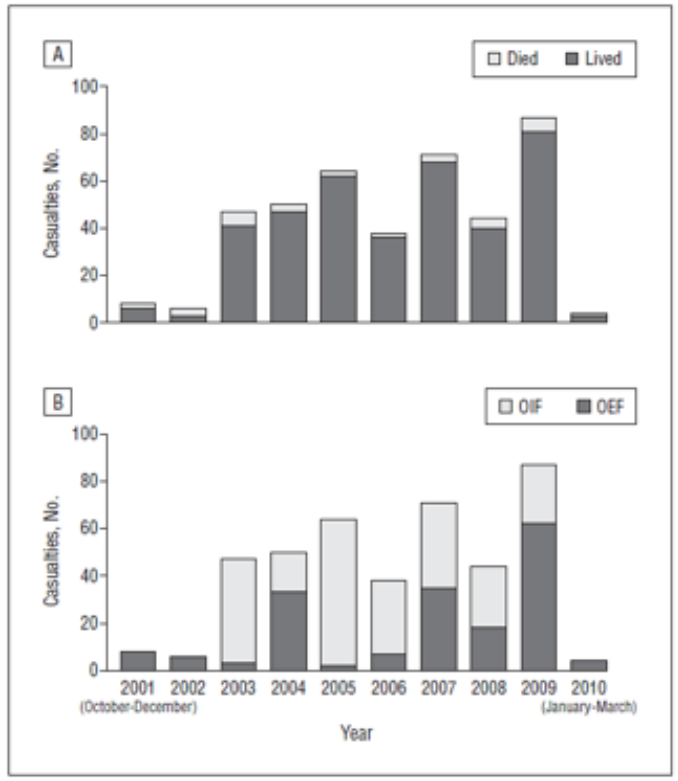


Figure 1. The 75th Ranger Regiment casualties by survival (A) and theater of operation (B) between October 1, 2001, and March 31, 2010. OIF indicates Operation Iraqi Freedom; OEF, Operation Enduring Freedom. Of the 419 casualties incurred, 32 (8%) died and 387 (92%) lived; 239 (57%) occurred in OIF and 180 (43%) occurred in OEF.

Prehospital advances implemented by TCCC have improved the probability that casualties will arrive at the hospital alive so they can benefit from the trauma care system now in place.

Highlighted in Key DOD Policies

- ASD-HA Policy: Institutionalization Milestones of TCCC Training
- ASD-HA Policy: DOD Lifesaving Materiel
- DODI 1322.24: Medical Readiness Training

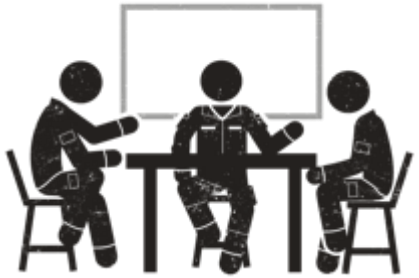
TCCC GUIDELINE CHANGE METHODOLOGY

Identify issues for consideration

- New technologies
- Lessons identified
- Research findings
- Routine guideline reviews

Initial review by **CoTCCC** Subject Matter Expert(s)

- Consider further
- Collect more information
- Hold off on moving forward for the time



CoTCCC-appointed panel research and review

- Literature reviews
- Focused additional research
- Coordination with other subject matter experts

Findings presented to **CoTCCC** membership

- Materials studied in advance
- Deliberations/ discussions
- Vote on need to change and final recommendations

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.	

JOINT TRAUMA SYSTEM MISSION AND ROLE AT THE UNIT LEVEL

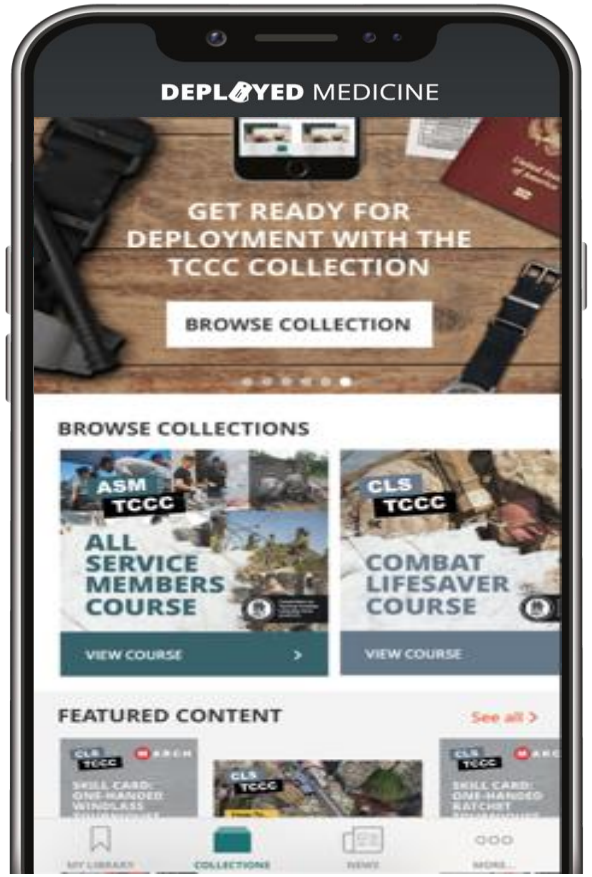
The mission of the **Joint Trauma System (JTS)** is to improve trauma readiness and outcomes through evidence-driven performance improvement.

JTS SUPPORT TO UNITS

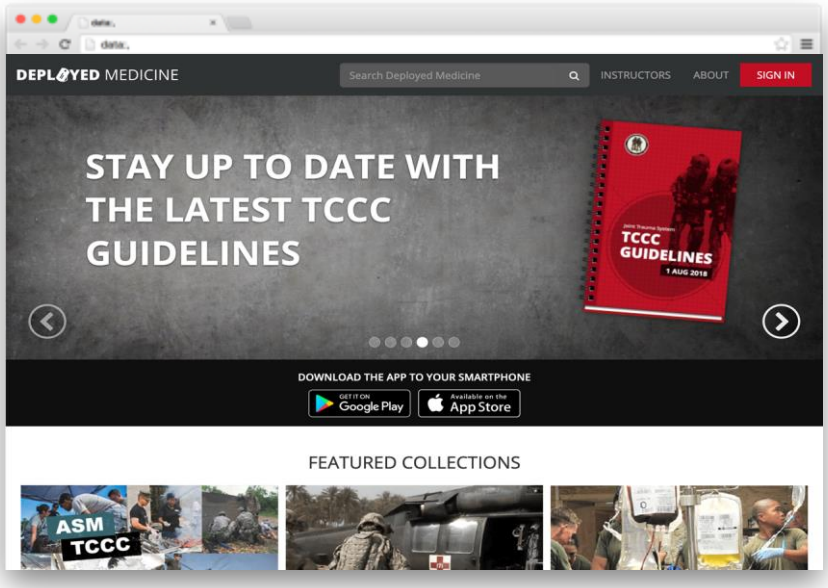
- Developing and maintaining clinical practice guidelines (CPGs) and TCCC Guidelines
- Recommending combat casualty care training requirements
- Evaluating and recommending new equipment or medical supplies
- Providing units with up-to-date information to help tailor unit training and procedures
- Improving communication and facilitating movement, collection, and sharing of theater combat casualty data
- Maintaining the Department of Defense Trauma Registry
- Improving the organization and delivery of trauma care

STAYING UP-TO-DATE WITH TCCC GUIDELINES AND PROTOCOLS

The TCCC Guidelines are reviewed quarterly and updated as needed by CoTCCC



Once approved by the Director of the Joint Trauma System (JTS), the updated version of the TCCC Guidelines is published through:



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SUMMARY

Knowledge Topics

- Leading causes of preventable death due to traumatic injuries and the corresponding interventions
- TCCC Phases of Care and how intervention priorities differ in each phase
- Application of TCCC in combat and noncombat settings across different environments
- Role and responsibilities of all non-medical and medical personnel in rendering TCCC care
- Key Factors influencing and the importance of TCCC training
- The three objectives or goals of TCCC
- Lifesaving impacts of TCCC implementation in prehospital trauma care

Knowledge Topics

- Methods used to stay current and up to date with TCCC Guidelines and protocols
- Origins of TCCC, including the Committee on Tactical Combat Casualty Care (CoTCCC)
- Methodology for TCCC Guideline changes and revisions
- TCCC training methods ensuring unit readiness in achieving no losses due to preventable combat deaths
- The mission and purpose of the Joint Trauma System and its role in combat casualty care at the unit level

CHECK ON LEARNING

Which factors influence TCCC?

What are the phases of care in TCCC?

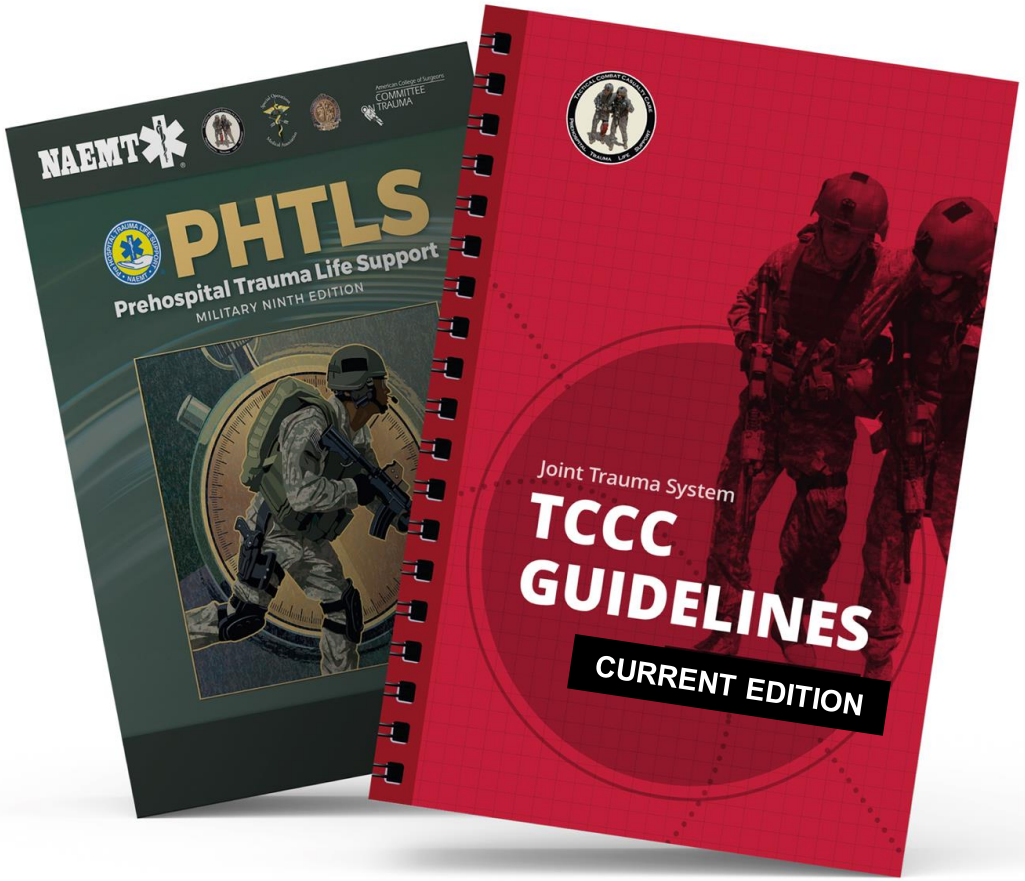
What is the most essential treatment task in CUF / Threat?

What is every first responder's role in CUF / Threat?

What does MARCH PAWS stand for?

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.