

CPP

TCCC

**COMBAT PARAMEDIC/
PROVIDER**

TACTICAL COMBAT CASUALTY CARE COURSE

MODULE 2: MEDICAL EQUIPMENT



Committee on
Tactical Combat
Casualty Care
(CoTCCC)

TCCC TIER 1
All Service Members

TCCC TIER 2
Combat Lifesaver

TCCC TIER 3
Combat Medic/Corpsman

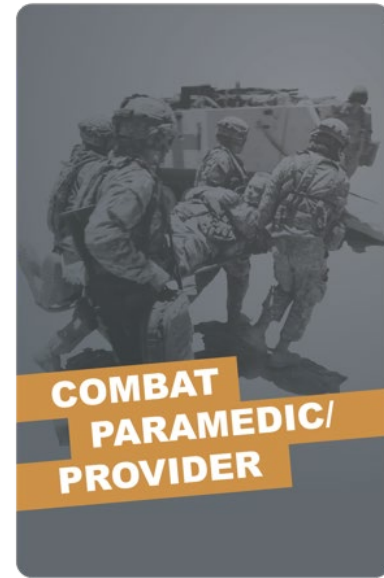
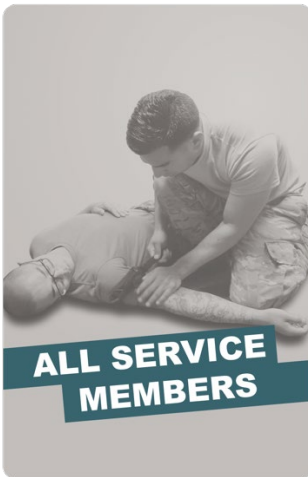
TCCC TIER 4
Combat Paramedic/Provider

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**

02 Describe the use of individual medical equipment components in accordance with CoTCCC Guidelines.

- 2.1 Describe the use of a first aid kit in accordance with Service policy.
- 2.2 Identify the contents of an individual Joint First Aid Kit (JFAK), and/or other Service-specific first aid kits.
- 2.3 Describe the general maintenance and resupply procedures for trauma materials in a first aid kit in accordance with Service guidelines.
- 2.4 Identify the contents of a Combat Lifesaver kit and/or other Service-specific first aid kits.
- 2.5 Describe the use of components of a Combat Lifesaver kit in accordance with Service policy.
- 2.6 Identify the contents of a Combat Medic/Corpsman aid bag and/or other Service-specific first aid kits.
- 2.7 Describe the use of a Combat Medic/Corpsman aid bag, in accordance with Service policy.
- 2.8 Describe the use of Combat Paramedic/Provider kits in accordance with Service policy.
- 2.9 Identify the contents of Combat Paramedic/Provider kits and/or other Service-specific first aid kits.
- 2.10 Identify the importance and relevance of CoTCCC recommendations on specific combat casualty care equipment.

10 x **ENABLING LEARNING OBJECTIVES**

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

FIRST AID KITS WHAT DO I TAKE?



INDIVIDUAL
Joint First Aid Kit (JFAK)



COMBAT LIFESAVER BAG
CLS Bag



Unit Standard Operating Procedures (SOPs) and individual responder capabilities/scope of care will determine what is carried in the First Aid Kits

MEDICAL SUPPLIES

YOU WILL NEED TO PROVIDE AID AND SAVE LIVES



INDIVIDUAL
Joint First Aid Kit
(JFAK)



COMBAT
LIFESAVER BAG
CLS Bag



**COMBAT MEDIC/
CORPSMAN AID**
BAG
CMC Aid Bag



COMBAT
PARAMEDIC/
PROVIDER KITS

JFAK CONTENT AND CAPABILITIES



INDIVIDUAL JFAK

Items included in this kit can treat the following:

M

Tourniquet, hemostatic dressing, and pressure bandages

A

Nasopharyngeal airway

R

Chest seal and NDC 10-14 gauge 3.25" needle catheter

C

H

P

Combat wound medication pack

A


Combat wound medication pack

W

Gauze and rigid eye shield

S

Other:
DD Form 1380 and a marker

 **ALWAYS** use the casualty's JFAK first

COMBAT LIFESAVER BAG CONTENT AND CAPABILITIES

Items included in this kit can treat the following:



BUDDY AID
Combat Lifesaver Bag



Tourniquets, hemostatic dressing, and pressure bandages



Nasopharyngeal airway



Vented chest seal, bag valve mask, and NDC 10-14 gauge 3.25" needle catheter



Gauze and elastic bandage



Active/Passive Hypothermia Kits/Blankets and MACE 2



Combat wound medication pack



Combat wound medication pack



Gauze and rigid eye shield



Splinting material, cravats, and elastic wraps

Other: DD Form 1380 and MEDEVAC Request Card

COMBAT MEDIC/CORPSMAN CONTENT AND CAPABILITIES



ADVANCED TCCC CARE Combat Medic/Corpsman Aid Bag



Stock this bag in accordance with your **SOPs/Protocols**

Items included in this kit can treat the following:

- M** Tourniquet, hemostatic dressing, pressure bandage, junctional tourniquet, X-stat®, and wound closure device
- A** Nasopharyngeal airway, extraglottic airway, cricothyroidotomy kits, and suction devices
- R** Bag valve mask, vented chest seals, NDC 10-14 gauge 3.25” needle catheter
- C** Pelvic compression devices, Intravenous (IV) and Intraosseous (IO) access kits, IV fluids, EldonCard™, tranexamic acid (TXA), blood products, and calcium
- H** Active/Passive Hypothermia Kits/Blankets, IV fluid warmers, and MACE 2

COMBAT MEDIC/CORPSMAN CONTENT AND CAPABILITIES (cont.)



ADVANCED TCCC CARE Combat Medic/Corpsman Aid Bag



Stock this bag in accordance with your **SOP/Protocols**

Items included in this kit can treat the following:

- P** Pain medications, extra combat wound medication packs
 - A** Antibiotics, extra combat wound medication packs
 - W** Gauze, elastic wrap, and rigid eye shields
 - S** Malleable splints, rigid splints, cravats, and elastic wraps
- Other:** DD Form 1380, MEDEVAC Request Card, Mission/Unit specific equipment

COMBAT PARAMEDIC/PROVIDER CONTENT AND CAPABILITIES



ADVANCED TCCC CARE Combat Paramedic/Provider Bag

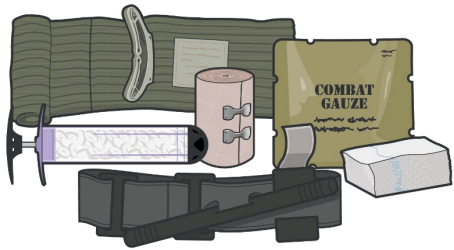
Contents of this kit will be similar to the CMC Aid Bag but will include additional items appropriate for more advanced skill set including:

- Additional medications, including those needed for rapid sequence induction and intubation in more advanced airway management
- Advanced airway equipment including endotracheal tubes, laryngoscope, etc. for endotracheal intubation
- Other advanced equipment specific to provider skill set, mission, unit, etc.



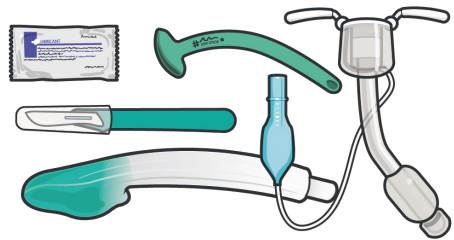
Stock this bag in accordance with your **SOP/Protocols**

Module 2: Medical Equipment



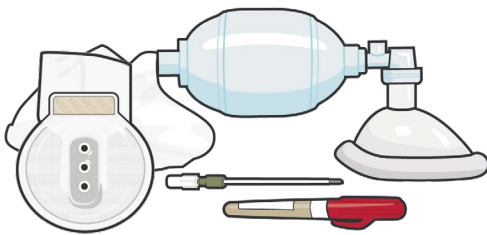
M

**MASSIVE
HEMORRHAGE**



A

AIRWAY



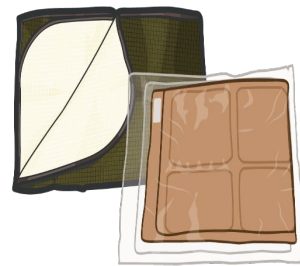
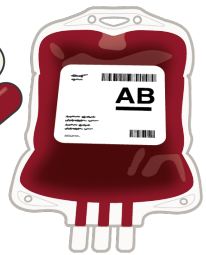
R

RESPIRATIONS



C

CIRCULATION



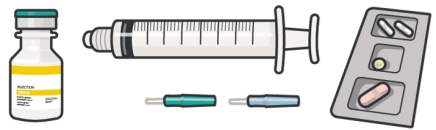
H

**HYPOTHERMIA/
HEAD INJURY**



P

PAIN



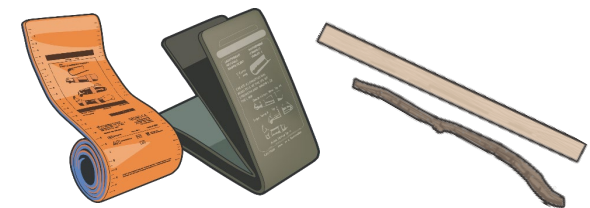
A

ANTIBIOTICS



W

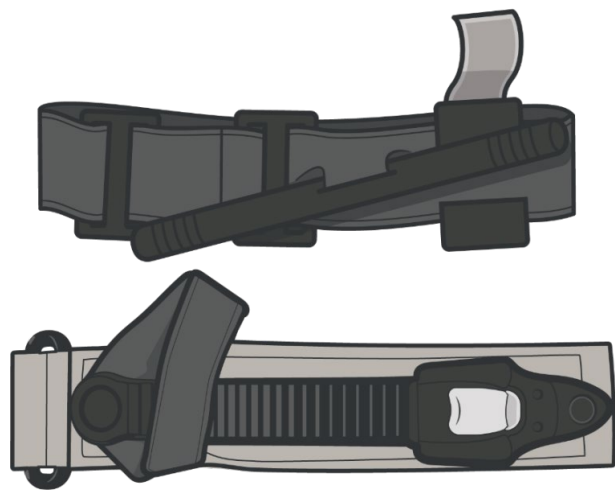
WOUNDS



S

SPLINTING

M MASSIVE HEMORRHAGE EQUIPMENT



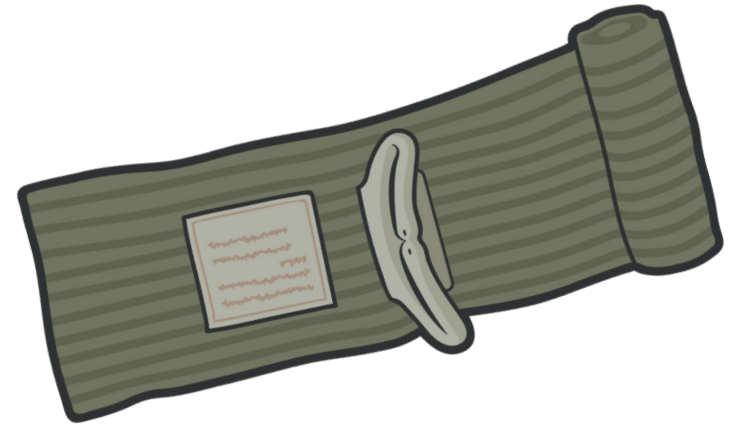
TOURNIQUET

CoTCCC-recommended and is used to control massive or severe hemorrhage of an extremity



HEMOSTATIC DRESSING

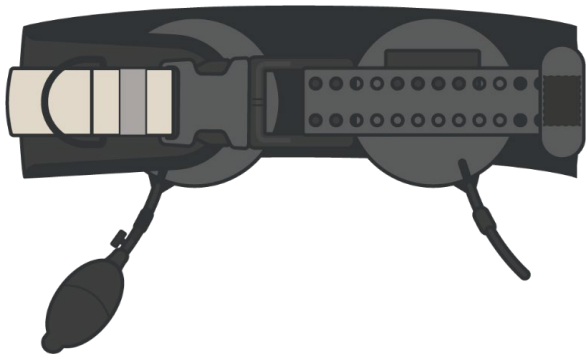
CoTCCC-recommended dressing, contains a chemical that bonds to another chemical in blood and causes clots to form at the source of bleeding



PRESSURE BANDAGE

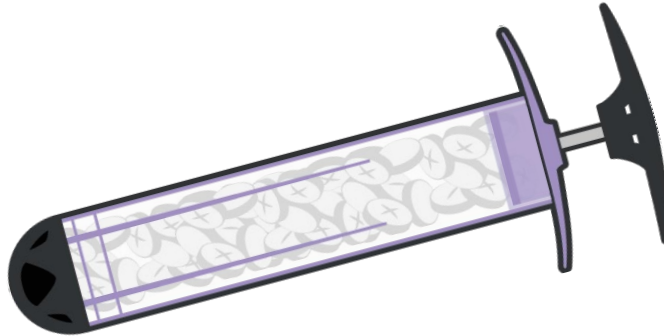
Elastic bandage used as a **pressure** dressing and/or **standard** dressing

M MASSIVE HEMORRHAGE EQUIPMENT (cont.)



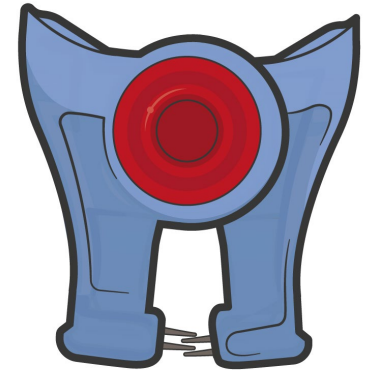
JUNCTIONAL TOURNIQUET

Designed to stop massive hemorrhage from large vessel injuries of the groin or axilla that are too proximal for a limb tourniquet to be used effectively



XSTAT 30 (LARGE) XSTAT 12 (SMALL)

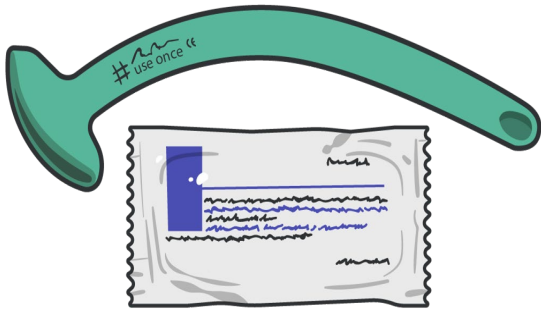
Designed to inject an expandable agent into the wound cavity to create an internal source of pressure at the bleeding site



WOUND CLOSURE DEVICE

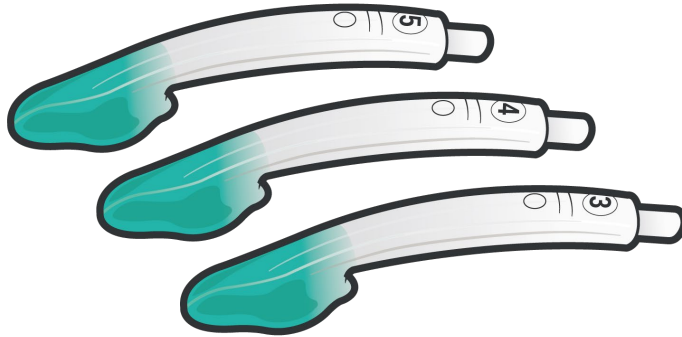
The device seals the edges of a wound closed to mitigate further blood loss until the wound can be surgically repaired

AIRWAY CONTROL EQUIPMENT



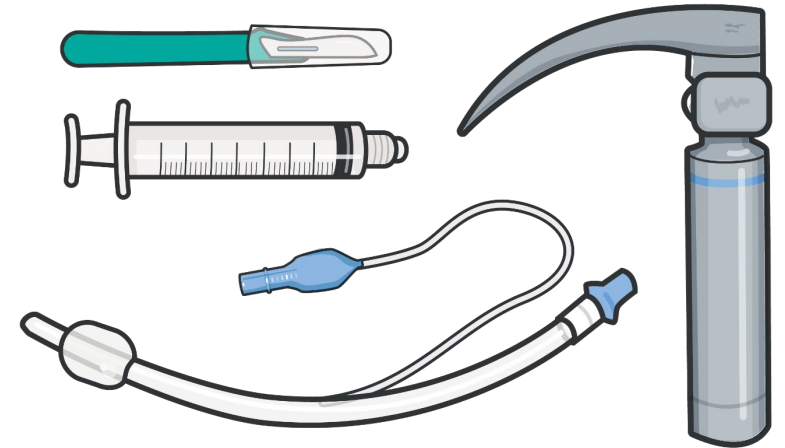
NASOPHARYNGEAL AIRWAY (NPA)

Nonsterile rubber tube-shaped device inserted into the casualty's nostril



EXTRAGLOTTIC AIRWAY (EGA)

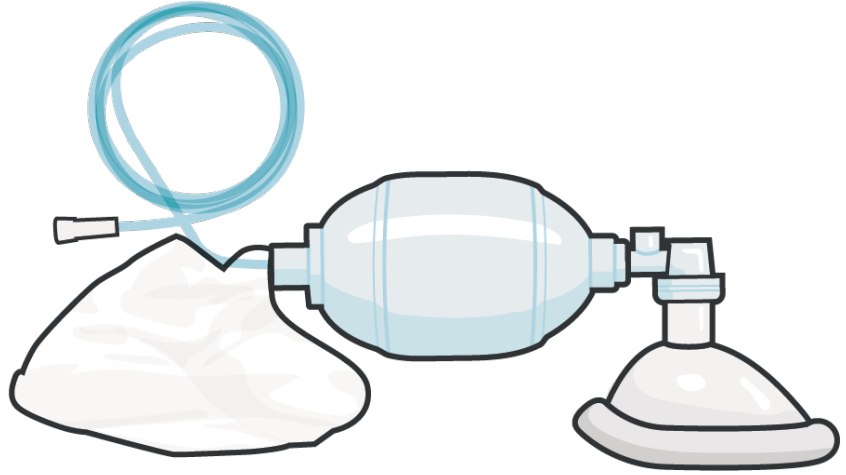
Used to establish an airway for oxygenation and ventilation without entering the trachea



SURGICAL AIRWAY/ETT INTUBATION KIT

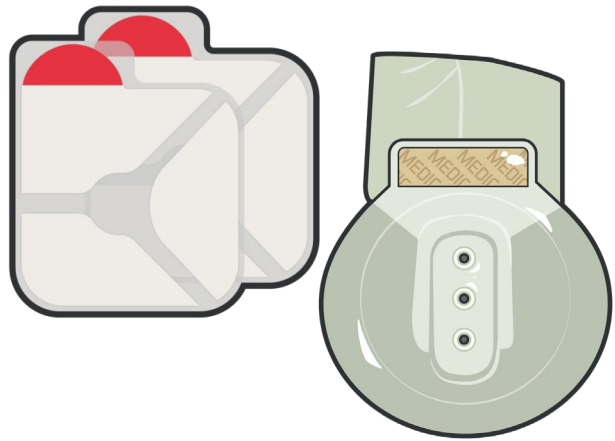
An advanced surgical airway/ETT intubation kit is used when other airway adjuncts have failed, as well as an airway obstruction or pending airway obstruction

R ESPIRATION SUPPORT EQUIPMENT



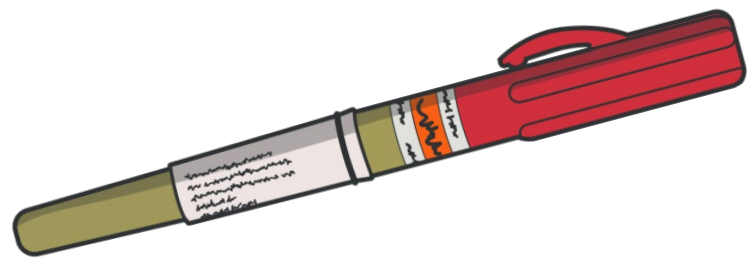
BAG VALVE MASK (BVM)

Provides positive pressure ventilations to a patient who is inadequately breathing or not breathing at all



VENTED CHEST SEAL

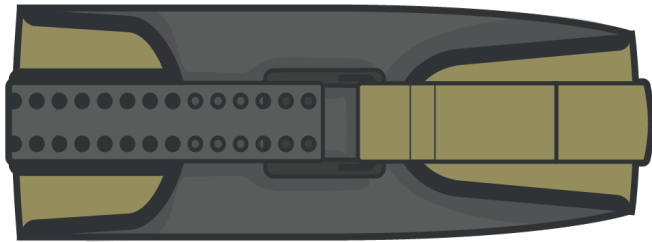
Vented and adhesive chest seal for treating **penetrating chest wounds**, if a vented chest seal is not available use a non-vented chest seal



10-14 GAUGE 3.25" NEEDLE CATHETER

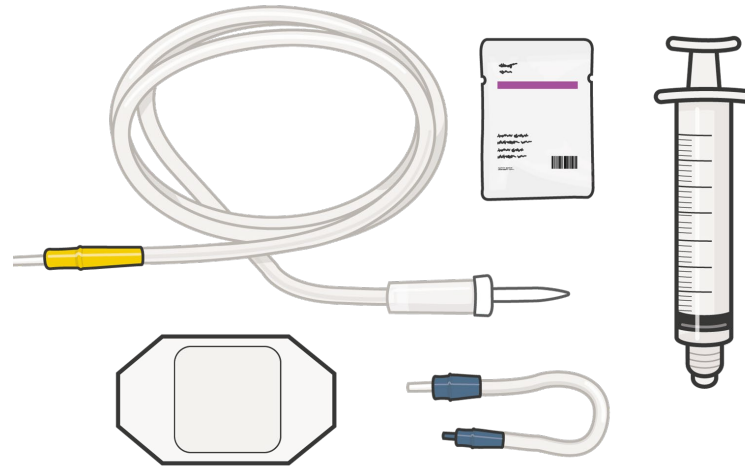
Catheter-over-needle device inserted into the chest to **treat tension pneumothorax**

CIRCULATION EQUIPMENT



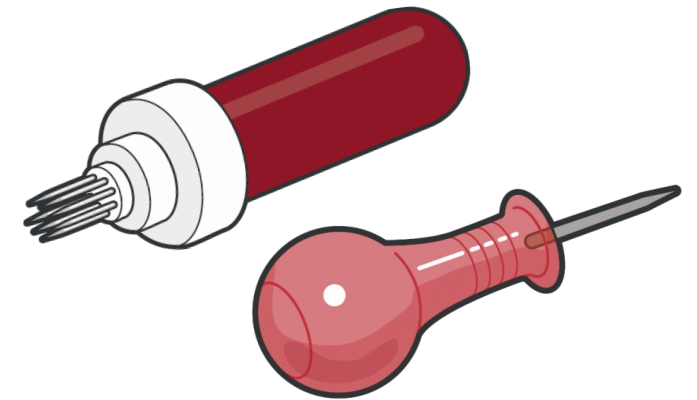
PELVIC COMPRESSION DEVICE

Designed to compress a pelvis fracture, providing stability and preventing ongoing hemorrhage



INTRAVENOUS (IV) ACCESS KIT

The necessary supplies to establish intravenous access



INTRAOSSIOUS (IO) ACCESS EQUIPMENT

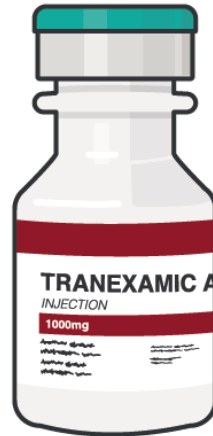
Equipment necessary to establish sternal, humeral, or tibial intraosseous access

CIRCULATION EQUIPMENT (cont.)

| | | | |
|--------|------------|-----------|--------|
| | | | |
| Anti-A | Anti-B | Anti-C | Anti-D |
| Name | | Address | |
| Born | | Signature | |
| ABO | Rhesus (D) | Date | |

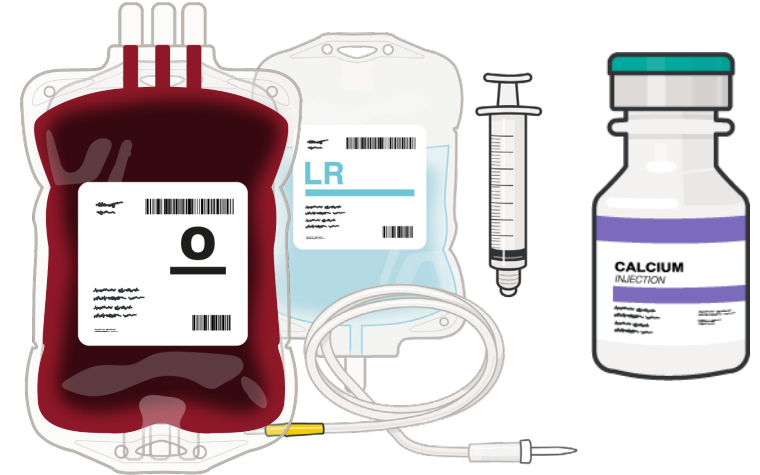
ELDONCARD™

A card used to determine blood type



TXA

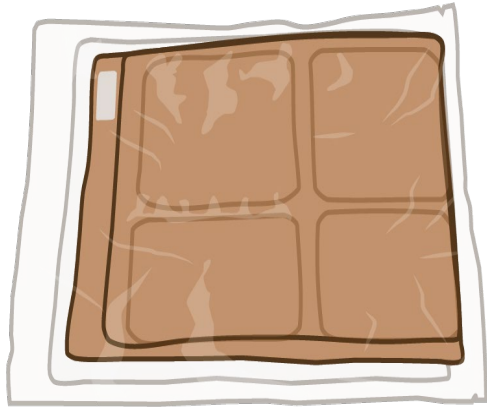
Tranexamic acid – to help the casualty’s blood clotting process



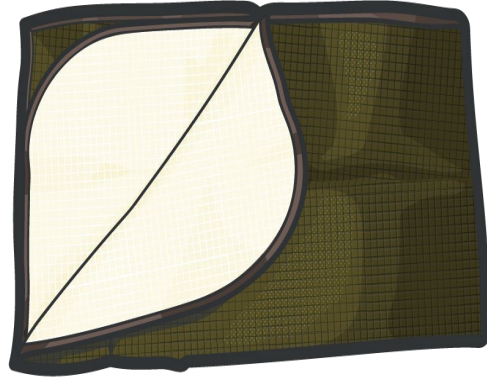
BLOOD PRODUCTS, IV FLUIDS, AND CALCIUM

Blood products and fluids – to replace casualty losses due to hemorrhage

HYPOTHERMIA AND HEAD INJURY



ACTIVE



PASSIVE

ACTIVE/PASSIVE HYPOTHERMIA KITS/BLANKETS

Used to prevent and manage hypothermia

MACE 2
Military Acute Concussion Evaluation

Use MACE 2 as close to time of injury as possible.

Service Member Name: _____
DoD/EDI/ISSN: _____ Branch of Service & Unit: _____
Date of Injury: _____ Time of Injury: _____
Examiner: _____
Date of Evaluation: _____ Time of Evaluation: _____

Purpose: MACE 2 is a multimodal tool that assists providers in the assessment and diagnosis of concussion. The scoring, coding and steps to take after completion are found at the end of the MACE 2.

Timing: MACE 2 is most effective when used as close to the time of injury as possible. The MACE 2 may be repeated to evaluate recovery.

RED FLAGS

Evaluate for red flags in patients with Glasgow Coma Scale (GCS) 13-15.

- Deteriorating level of consciousness
- Double vision
- Increased restlessness, combative or agitated behavior
- Repeat vomiting
- Results from a structural brain injury detection device (if available)
- Seizures
- Weakness or tingling in arms or legs
- Severe or worsening headache

Defer MACE 2 if any red flags are present. Immediately consult higher level of care and consider urgent evacuation according to evacuation precedence/Tactical Combat Casualty Care (TCCC).

- Negative for all red flags

Continue MACE 2, and observe for red flags throughout evaluation.

Revised 10/2018 dv/bio.dcoe.mil Page 1 of 14

MILITARY ACUTE CONCUSSION EVALUATION (MACE 2)

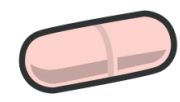
Used to identify **possible traumatic brain injury (TBI)**



NOTE: DD Form 1380 is also used in AVPU (alert, verbal, pain, unresponsive) assessment as part of head injury documentation

PAIN and ANTIBIOTIC MEDICATIONS

COMBAT WOUND MEDICATION PACK



Moxifloxacin
400 mg tablet



Meloxicam
15 mg tablet



Acetaminophen
x2 500mg



PAIN MEDICATIONS

For pain not controlled by the CWMP, other pain medications that can be administered by many different routes are available.



ANTIBIOTICS

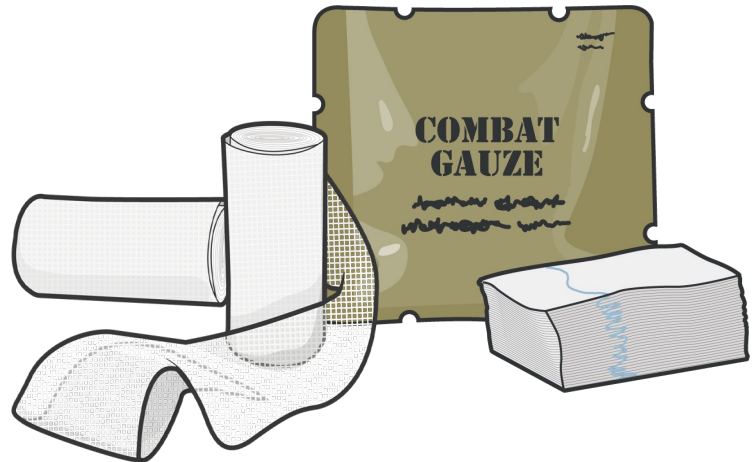
If time and situation allow, IV antibiotics can be administered, if indicated.



RSI MEDICATIONS

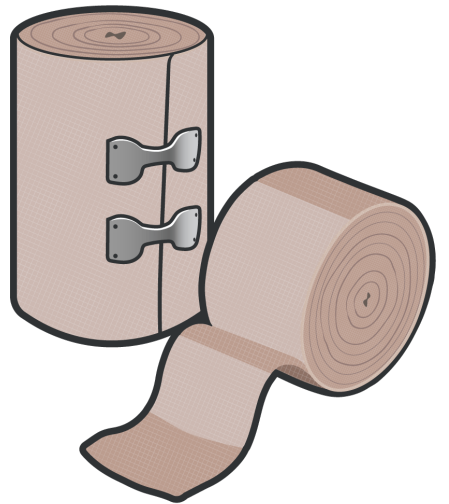
Needed to support rapid sequence induction (RSI) and intubation for advanced airway management.

WOUND MANAGEMENT EQUIPMENT



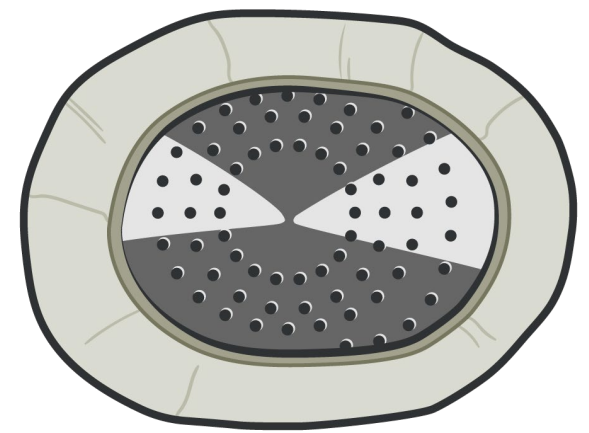
GAUZE

Gauze rolls used to **stop minor bleeding** or as **bulky material** for wound packing, hemostatic properties to promote wound clotting



ELASTIC WRAP

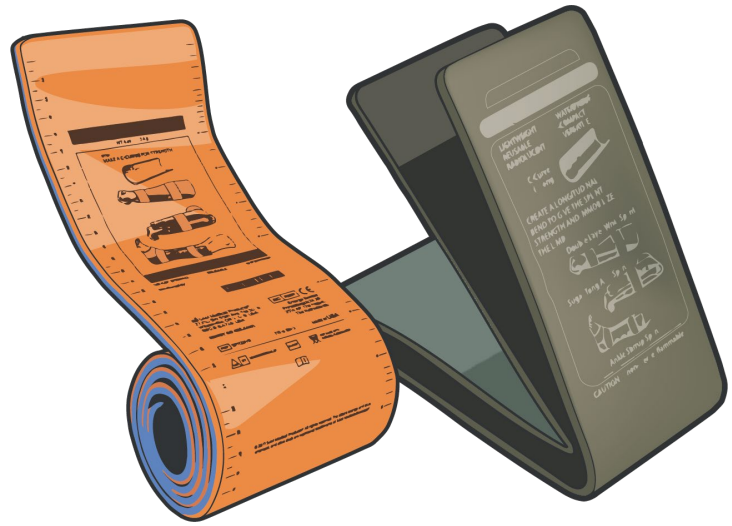
Stretchable cloth like wrap used to hold medical different types of medical intervention equipment in place



RIGID EYE SHIELD

A shield that provides domed **protection** of the **eye** **WITHOUT** applying pressure

SPLINT EQUIPMENT



MALLEABLE SPLINTING

Semi-rigid material used to immobilize an injured limb



RIGID SPLINTING

Rigid splinting material that stabilizes the limb and protects the injury

DOCUMENTATION/MEDEVAC REQUEST

FRONT

BACK

TACTICAL COMBAT CASUALTY CARE (TCCC) CARD
BATTLE ROSTER #:

EVAC: Urgent Priority Routine

NAME (Last, First): _____ LAST 4: _____
GENDER: M F DATE (DD-MMM-YY): _____ TIME: _____
SERVICE: _____ UNIT: _____ ALLERGIES: _____

Mechanism of Injury: (X all that apply)
 Artillery Blunt Burn Fall Grenade GSW IED
 Landmine MVC RPG Other: _____

Injury: (Mark injuries with an X)

TQ: R Arm

TYPE: _____

TIME: _____

TQ: L Arm

TYPE: _____

TIME: _____

TQ: R Leg

TYPE: _____

TIME: _____

TQ: L Leg

TYPE: _____

TIME: _____

Signs & Symptoms: (Fill in the blank)

| Time | | | | |
|-------------------------|---|---|---|---|
| Pulse (Rate & Location) | | | | |
| Blood Pressure | / | / | / | / |
| Respiratory Rate | | | | |
| Pulse Ox % O2 Sat | | | | |
| AVPU | | | | |
| Pain Scale (0-10) | | | | |

DD Form 1380, JUN 2014 TCCC CARD

BATTLE ROSTER #:

EVAC: Urgent Priority Routine

Treatments: (X all that apply, and fill in the blank) Type

C: TQ- Extremity Junctional Truncal
Dressing- Hemostatic Pressure Other _____
A: Intact NPA CRIC ET-Tube SGA _____
B: O2 Needle-D Chest-Tube Chest-Seal _____

C:

| | Name | Volume | Route | Time |
|---------------|------|--------|-------|------|
| Fluid | | | | |
| Blood Product | | | | |

MEDS:

| | Name | Dose | Route | Time |
|---|------|------|-------|------|
| Analgesic (e.g., Ketamine, Fentanyl, Morphine) | | | | |
| Antibiotic (e.g., Moxifloxacin, Ertapenem) | | | | |
| Other (e.g., TXA) | | | | |

OTHER: Combat-Pill-Pack Eye-Shield (R L) Splint
 Hypothermia-Prevention Type: _____

NOTES:

FIRST RESPONDER
NAME (Last, First): _____ LAST 4: _____
DD Form 1380, JUN 2014 (Back) TCCC CARD

MEDEVAC REQUEST FORM GTA 08-01-004

| LINE | ITEM | EVACUATION REQUEST MESSAGE |
|------|---|----------------------------|
| 1 | Location of Pickup Site. | |
| 2 | Radio Frequ., Call Sign, & Suffix. | |
| 3 | No. of Patients by Precedence. | |
| 4 | Special Equipment Required. | |
| 5 | Number of Patients by Type. | |
| 6 | Security of Pickup Site (Wartime). | |
| 6 | Number and Type of Wound, Injury, or Illness (Peacetime). | |
| 7 | Method of Marking Pickup Site. | |
| 8 | Patient Nationality and Status. | |
| 9 | NBC Contamination (Wartime). | |
| 9 | Terrain Description (Peacetime). | |

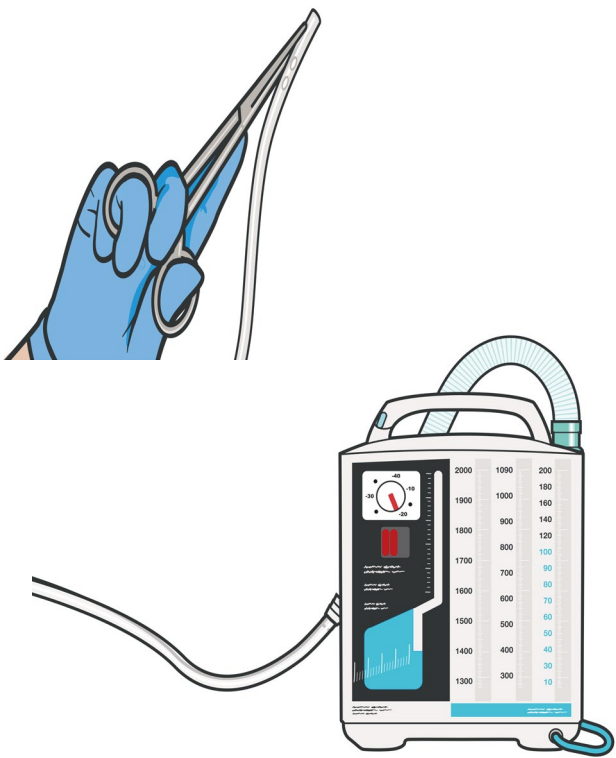
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AUG 2002 (This supersedes GTA 08-01-004 MAY 1997) DISTRIBUTION: US ARMY TRAINING SUPPORT CENTERS (TSCs) HEADQUARTERS, DEPARTMENT OF THE ARMY, ATTN: ATIC-ITST-T, GTA Program, Fort Eustis, VA 23064-5166

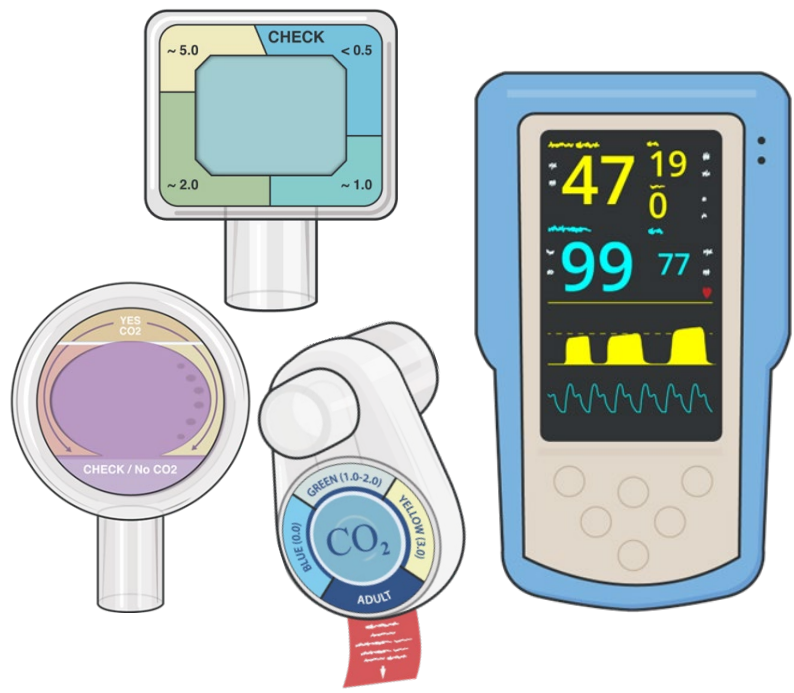
DD Form 1380 TCCC CARD
DoD-approved standard for documenting ALL assessment and treatment provided to casualties before **evacuation** or handoff to other **medical personnel**

MEDEVAC Request
Call procedure that is divided into nine lines of information for evacuation crews

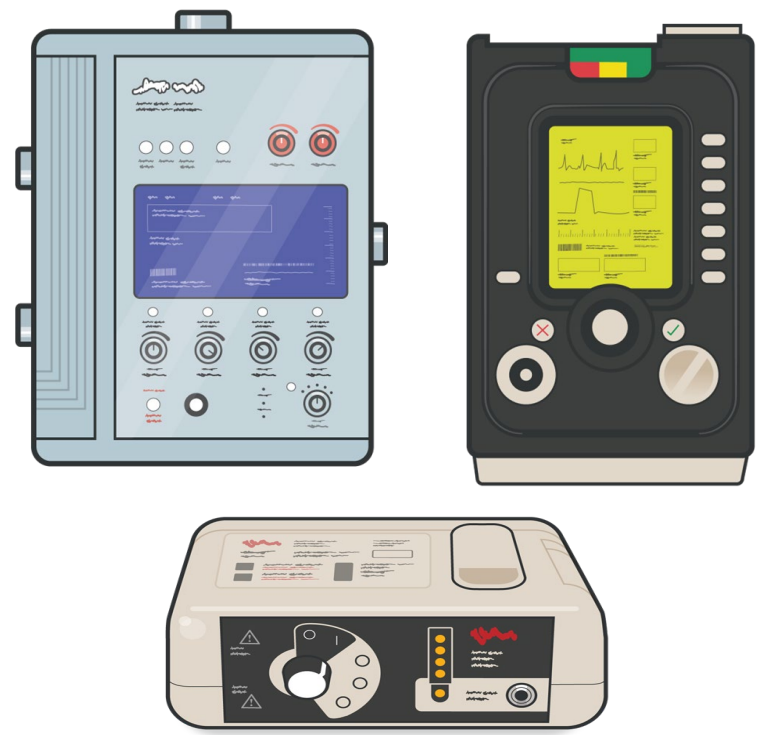
ADDITIONAL MEDICAL EQUIPMENT



TUBE THORACOSTOMY SET



END-TIDAL CARBON DIOXIDE (ETCO2) DEVICES



AUTOMATED VENTILATOR DEVICES



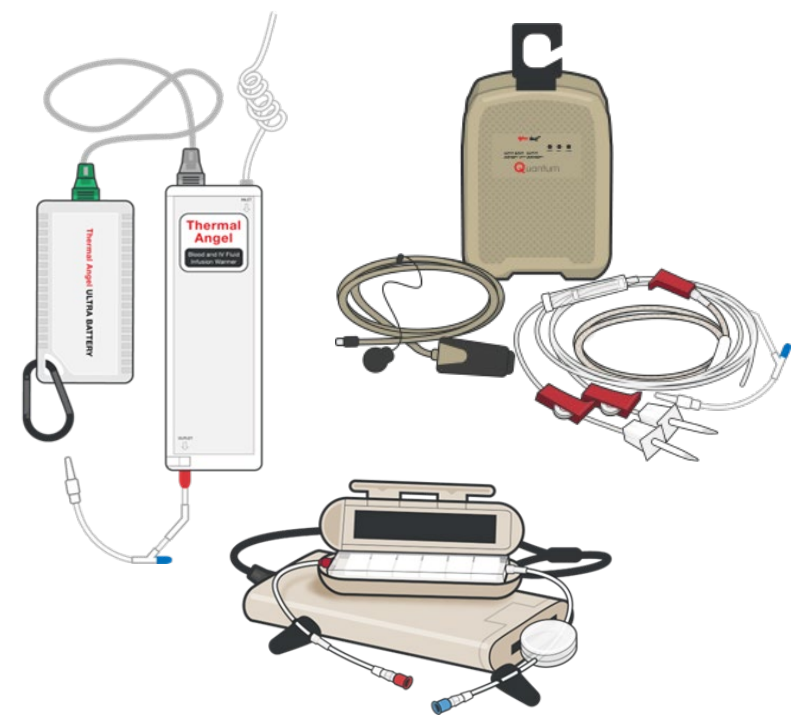
ADDITIONAL MEDICAL EQUIPMENT (cont.)



PULSE OXIMETRY & OXYGEN DELIVERY DEVICES

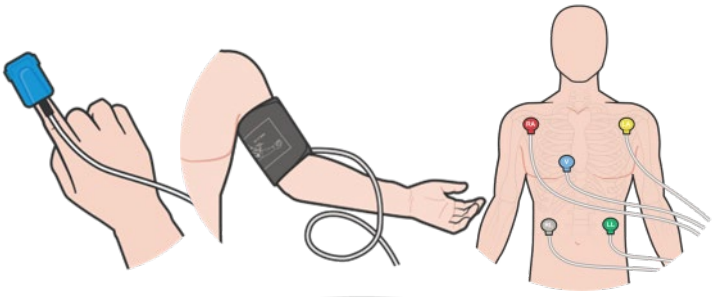


BLOOD STORAGE DEVICES

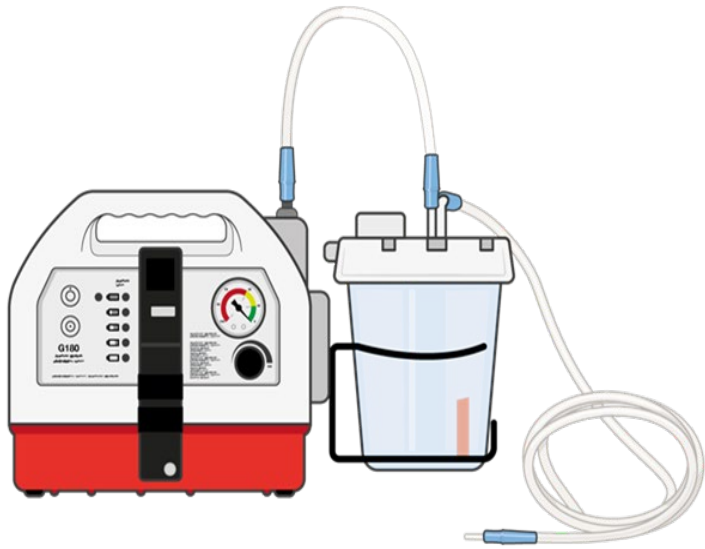


BLOOD WARMING DEVICES

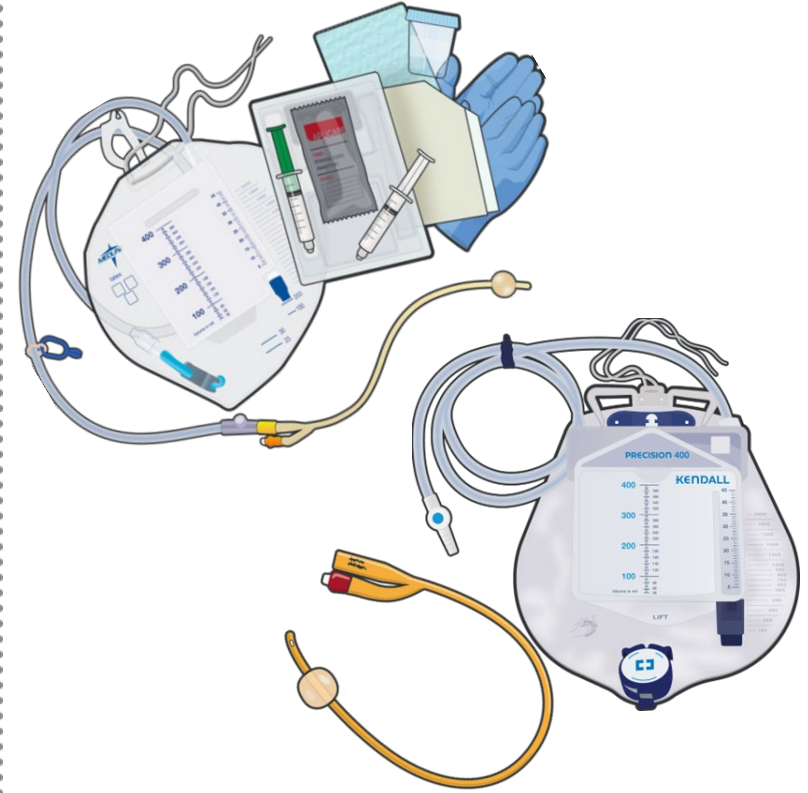
ADDITIONAL MEDICAL EQUIPMENT (cont.)



CASUALTY MONITORING DEVICES



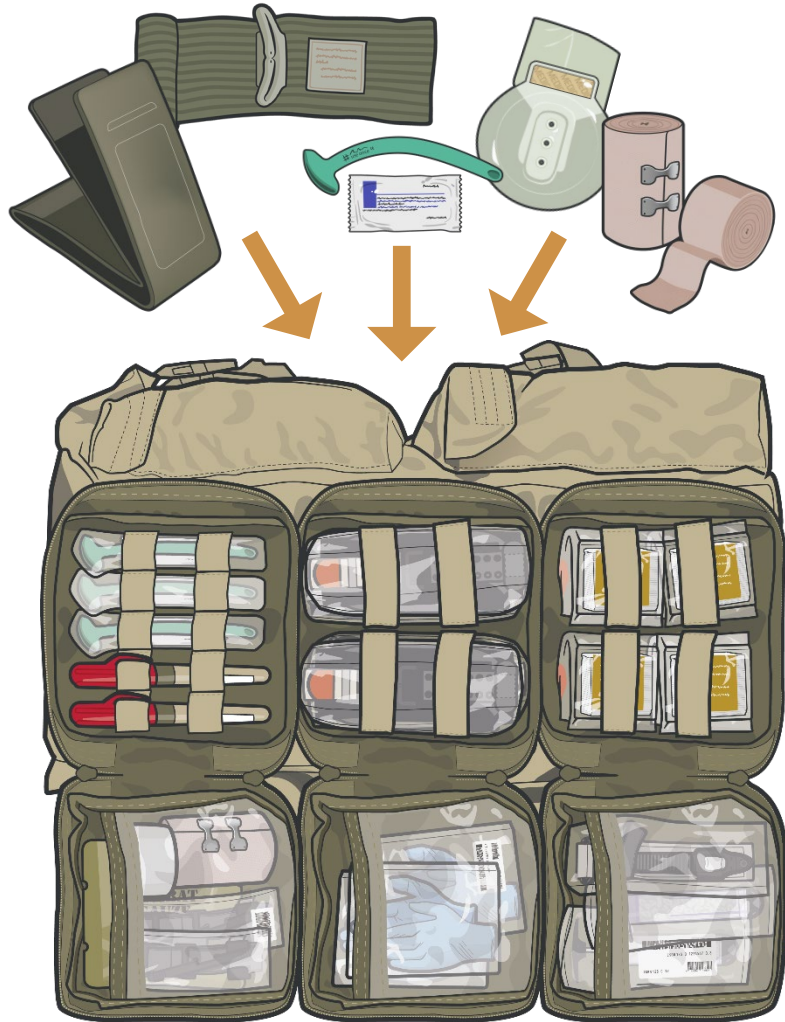
MECHANICAL SUCTION DEVICES



FOLEY CATHETERIZATION KIT

MARCH PAWS

MAINTENANCE AND RESUPPLY



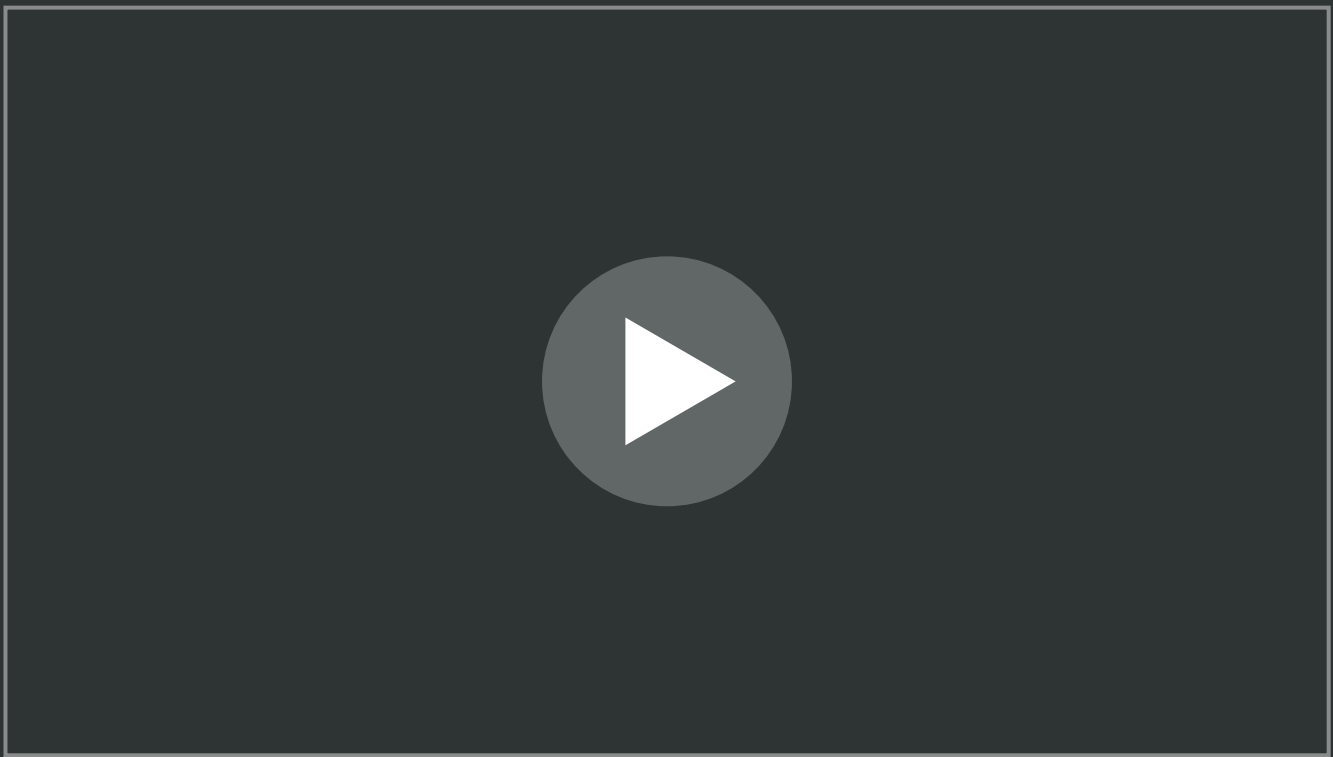
REMEMBER:

Regularly inspect your **JFAK**, **CLS bag**, **CMC bag**, **CPP kits**, and other Service-specific medical kits

- ✓ **BEFORE**
- ✓ **DURING**
- ✓ **AFTER**

ALL training events and missions

CAT QUICK LAUNCH CONFIGURATION VIDEO



Video can be found on deployedmedicine.com

MAINTENANCE AND RESUPPLY



- ✓ Check to be sure all required equipment is in your Service-specific kits and bags
- ✓ Check **seals** and **wrappers** **REPLACE** items with **broken** or **unsealed** wrappers
- ✓ Check **expiration** dates **REPLACE** if **expired** or the expiration date **DOES NOT** exceed your expected deployment timeframe



Do **NOT** use equipment that is **NOT** CoTCCC-Recommended



Do **NOT** deploy with **MISSING, PREVIOUSLY USED** for training, or **EXPIRED** equipment

OTHER CONSIDERATIONS



TRAIN on the equipment you will use

PREPARE for mass casualties by triaging and staging your medical equipment

EVENLY DISTRIBUTE equipment amongst the unit

TRAIN with a completely stocked bag/kit to help simulate the deployed environment

Check unit-specific evacuation equipment

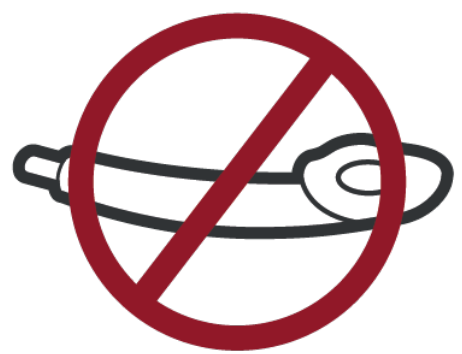
CoTCCC EQUIPMENT RECOMMENDATIONS



Beware of **UNAPPROVED EQUIPMENT**



Beware of **FAKE EQUIPMENT**



SUMMARY

Knowledge Topics

- Know the basic contents of JFAKs, CLS, CMC, and CPP bags
- Understand how the equipment in each kit and bag supports the various skill levels of prehospital care providers in delivery of TCCC
- Maintain and replace equipment before deploying, as needed
- Describe proper usage and implementation of DD 1380 TCCC Card and MEDEVAC Request Card
- **TRAIN, TRAIN, TRAIN!!!**
Check your durable (non-disposable) equipment to make sure that it works after repeated training

CHECK ON LEARNING



What type of tourniquet found in the CMC Aid Bag is used to control massive hemorrhage in the axilla that is too proximal for effective limb tourniquet application?



What equipment is available in the CMC Aid Bag and/or CPP kit that can be used to establish access for fluid and blood administration if IV access cannot be obtained?



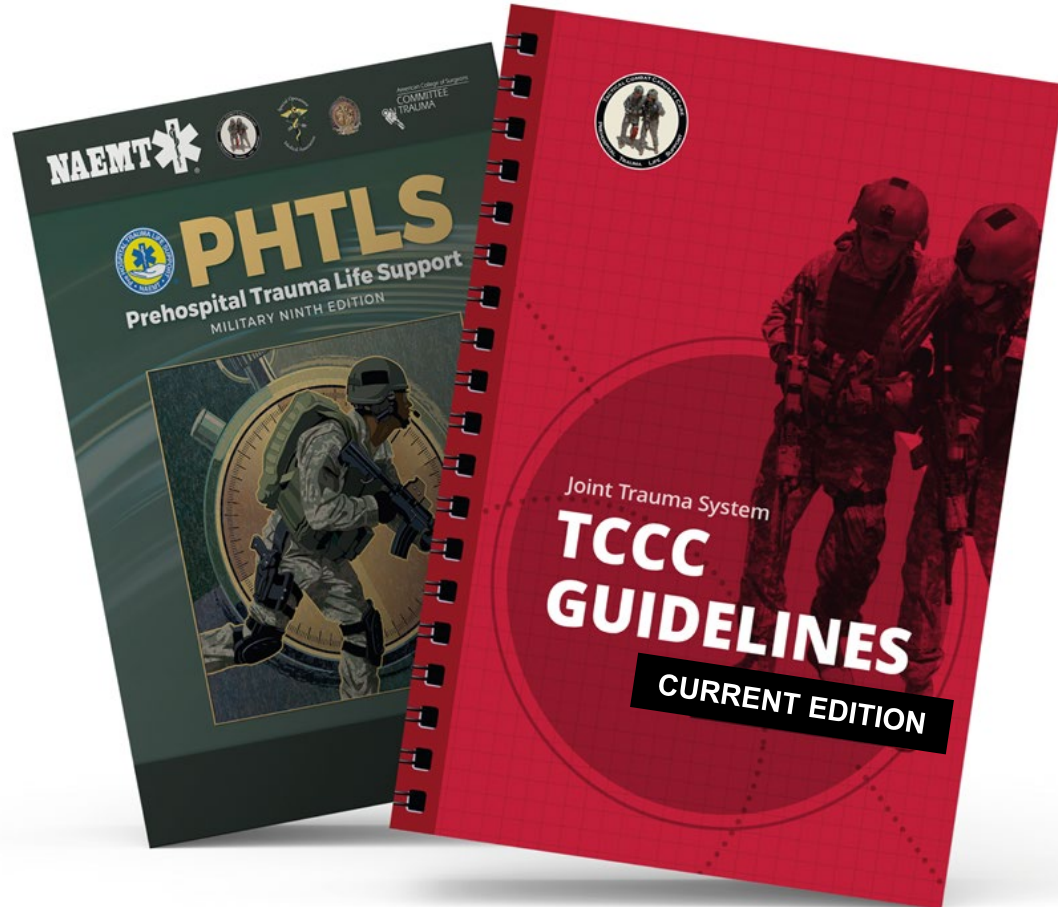
When should you inspect your JFAK, CLS bag, CMC bag, CPP kit and other Service-specific medical kits?



Why is it important to consider CoTCCC recommendations on specific combat casualty care equipment?

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.