Tactical Combat Casualty Care for Medical Personnel
August 2017

(Based on TCCC-MP Guidelines 170131)

Tactical Field Care #3
OBJECTIVES

• DESCRIBE the rationale for early antibiotic intervention in combat casualties.

• DISCUSS the management of burns in TFC.

• EXPLAIN why cardiopulmonary resuscitation is not generally used for cardiac arrest in battlefield trauma care.

• DESCRIBE the procedure for documenting TCCC care with the TCCC Casualty Card.
OBJECTIVES

• DESCRIBE the three ISAF categories for evacuation priority

• LIST the nine items in a MEDEVAC request

• DISCUSS the rules of thumb for calling for Tactical Evacuation and the importance of careful calculation of the risk/benefit ratio prior to initiating the call

• DESCRIBE the appropriate procedures for providing trauma care for wounded hostile combatants.
11. Antibiotics: recommended for all open combat wounds:
   a. If able to take PO meds:
      - Moxifloxacin (from the CWMP), 400 mg PO one a day
   b. If unable to take PO (shock, unconsciousness):
      - Ertapenem, 1 g IV/IM once a day
Outcomes: **Without Battlefield Antibiotics**

- Mogadishu 1993
- Casualties: 58
- Wound Infections: 16
- Infection rate: 28%
- Time from wounding to Level II care – 15 hrs.

*Mabry et al*  
*J Trauma 2000*
Outcomes: With Battlefield Antibiotics

Tarpey – AMEDD J 2005:

- 32 casualties with open wounds
- All received battlefield antibiotics
- None developed wound infections
- Used TCCC recommendations modified by availability:
  - Levofloxacin for an oral antibiotic
  - IV cefazolin for extremity injuries
  - IV ceftriaxone for abdominal injuries.
Outcomes: With Battlefield Antibiotics

- MSG Ted Westmoreland
- Special Operations Medical Association presentation 2004
- Multiple casualty scenario involving 19 Ranger and Special Forces WIA as well as 30 Iraqi WIA
- 11-hour delay to hospital care
- Battlefield antibiotics given
- No wound infections developed in this group.
Battlefield Antibiotics

Recommended for all open wounds on the battlefield!
Battlefield Antibiotics

If casualty can take PO meds:

• Moxifloxacin 400 mg, one tablet daily
  – Broad spectrum – kills most bacteria
  – Few side effects
  – Take as soon as possible after life-threatening conditions have been addressed
  – Delays in antibiotic administration increase the risk of wound infections
Combat Wound Medication Pack

Mobic 15mg
Tylenol ER 650mg, 2 caplets
Moxifloxacin 400mg

Pain Management and Infection Control For Combat Casualties
"Just Got Easier To Swallow"
Battlefield Antibiotics

• Casualties who cannot take PO meds:
  – Ertapenem 1 gm IV/IM once a day

    • IV requires a 30-minute infusion time.
      (1 gram vial of ertapenem in 10ml of 0.9% saline. Shake well to dissolve and immediately transfer to 50ml of 0.9% saline.)
    • IM should be diluted with lidocaine.
      (1 gm vial ertapenem with 3.2cc lidocaine without epinephrine)
Medication Allergies

- Screen your units for drug allergies!
- Patients with allergies to aspirin or other non-steroidal anti-inflammatory drugs should not use Mobic.
- Allergic reactions to acetaminophen are uncommon.
- Patients with allergies to fluoroquinolones, penicillins, and cephalosporins may need alternate antibiotics which should be selected by unit medical personnel during the pre-deployment phase. Check with your unit physician if unsure.
IV Meds Practical

- TXA
- Ketamine
Tactical Field Care Guidelines

12. Inspect and dress known wounds.
13. Check for additional wounds.
14. Burns

a. Facial burns, especially those that occur in closed spaces, may be associated with inhalation injury. Aggressively monitor airway status and oxygen saturation in such patients and consider early surgical airway for respiratory distress or oxygen desaturation.

b. Estimate total body surface area (TBSA) burned to the nearest 10% using the Rule of Nines.
Degrees of Burns

Superficial burn
“First Degree”

Partial thickness burn
“Second degree”
Degrees of Burns

Full-thickness burn  
“Third degree”

Deep(subdermal) burn  
“Fourth-degree”
Rule of Nines for Calculating Burn Area

Do not count superficial (first degree) burns in calculating TBSA burned.
14. Burns (cont)

c. Cover the burn area with dry, sterile dressings. For extensive burns (>20%), consider placing the casualty in the Heat Reflective Shell or Blizzard Survival Blanket from the Hypothermia Prevention Kit in order to both cover the burned areas and prevent hypothermia.
14. Burns (cont)

d. Fluid resuscitation (USAISR Rule of Ten)

- If burns are greater than 20% of TBSA, fluid resuscitation should be initiated as soon as IV/IO access is established. Resuscitation should be initiated with Lactated Ringer’s, normal saline, or Hextend. If Hextend is used, no more than 1000 ml should be given, followed by Lactated Ringer’s or normal saline as needed.
14. Burns

d. Fluid resuscitation (USAISR Rule of Ten) (cont)

- Initial IV/IO fluid rate is calculated as %TBSA x 10ml/hr for adults weighing 40-80 kg.
- For every 10 kg ABOVE 80 kg, increase initial rate by 100 ml/hr.
- If hemorrhagic shock is also present, resuscitation for hemorrhagic shock takes precedence over resuscitation for burn shock. Administer IV/IO fluids per the TCCC Guidelines in Section (6).
14. Burns (cont)

e. Analgesia in accordance with TCCC Guidelines in Section (10) may be administered to treat burn pain.

f. Prehospital antibiotic therapy is not indicated solely for burns, but antibiotics should be given per TCCC guidelines in Section (11) if indicated to prevent infection in penetrating wounds.
14. Burns (cont)

g. All TCCC interventions can be performed on or through burned skin in a burn casualty.

h. Burn patients are particularly susceptible to hypothermia. Extra emphasis should be placed on barrier heat loss prevention methods.
Burns in Tactical Field Care

These casualties are “Trauma casualties with burns” - not the other way around.

US Army ISR Burn Center
15. Splint fractures and recheck pulses.
Fractures: Open or Closed

- **Open Fracture** – associated with an overlying skin wound
- **Closed Fracture** – no overlying skin wound

Open fracture

Closed fracture
Clues to a Closed Fracture

- Trauma with significant pain AND
- Marked swelling
- Audible or perceived snap
- Different length or shape of limb
- Loss of pulse or sensation distally
- Crepitus (“crunchy” sound)
Splinting Objectives

• Prevent further injury
• Protect blood vessels and nerves
  - Check pulse before and after splinting
• Make casualty more comfortable
Principles of Splinting

- Check for other injuries
- Use rigid or bulky materials
- Try to pad or wrap if using a rigid splint
- Secure splint with ace wrap, cravats, belts, duct tape
- Try to splint before moving the casualty
Principles of Splinting

- Minimize manipulation of the extremity before splinting.
- Incorporate the joint above and below.
- Arm fractures can be splinted to the shirt using a sleeve.
- Consider traction splinting for mid-shaft femur fractures.
- Check a distal pulse and skin color before and after splinting.
Things to Avoid in Splinting

- Manipulating the fracture too much and damaging blood vessels or nerves
- Wrapping the splint too tight and cutting off circulation below the splint
Commercial Splints
Field-Expedient Splint Materials

- Shirt sleeves/safety pins
- Weapons
- Boards
- Boxes
- Tree limbs
- ThermaRest pad
Don’t Forget!

Pulse, motor and sensory checks before and after splinting!
Splinting Practical
16. Communication

a. Communicate with the casualty if possible. Encourage, reassure and explain care
16. Communication (cont)

b. Communicate with tactical leadership as soon as possible and throughout casualty treatment as needed. Provide leadership with casualty status and evacuation requirements to assist with coordination of evacuation assets.
16. Communication (cont)

c. Communicate with the evacuation system (the Patient Evacuation Coordination Cell) to arrange for TACEVAC. Communicate with medical providers on the evacuation asset if possible and relay mechanism of injury, injuries sustained, signs/symptoms, and treatments rendered. Provide additional information as appropriate.
Talk to the Casualty

- Encourage, reassure and explain care.
- Talking with the casualty helps assess his mental status.
- Talking through procedures helps maintain your own confidence and the casualty’s confidence in you.
Talk to Leadership

- Communicate with tactical leadership ASAP and throughout the treatment process.
- Provide the casualty’s status and evacuation requirements.
- Develop unit-level casualty reports and rehearse them frequently.
- Initiate the MEDEVAC request.
Tactical Casualty Information

Tactical Data
• Threat Identification
• Casualty Identification
• Casualty Location
• Casualty Weapon Systems
• Can casualty shoot, move, communicate?
• Does casualty need assistance?
• C2 notification

Medical Data
• Injuries?
• Conscious/Unconscious?
• Treatment rendered / required?
• Get Medic to Casualty OR Casualty to Medic?
• Evacuation requirements?
• Triage for multiple casualties?
• Casualty evac category?
• Need more Class VIII?
Communicate with Evac System

• Evacuation Request (9-Line MEDEVAC)
• MIST Report
9-Line Evacuation Request

Required if you need to have a casualty evacuated by another unit.
9-Line Evacuation Request

• Request for resources through tactical aircraft channels.
• **NOT** a direct medical communication with medical providers
• Significance
  – Determines tactical resource allocation
  – **DOES NOT** convey much useful medical information
9-Line Evacuation Request

Line 1: Pickup location

Line 2: Radio frequency, call sign and suffix

Line 3: Number of patients by precedence
   (evacuation category)
   A – Urgent
   B – Urgent-Surgical
   C – Priority
   D – Routine
   E – Convenience
9-Line Evacuation Request

Line 4: Special equipment required

A – None
B – Hoist
C – Extraction equipment
D – Ventilator

* Blood
9-Line Evacuation Request

Line 5: Number of casualties by type
L – Number of litter patient
A – Number of ambulatory patients

Line 6: Security at pickup site
N – No enemy troops in area
P – Possible enemy troops in area (approach with caution)
E – Enemy troops in area (approach with caution)
X – Enemy troops in area (armed escort required)
9-Line Evacuation Request

Line 7: Method of marking pickup site

A – Panels
B – Pyrotechnic signal
C – Smoke signal
D – None
E – Other - specify

Line 8: Casualty’s nationality and status

A – US military
B – US civilian
C – Non-US Military
D – Non-US civilian
E – Enemy prisoner of war
9-Line Evacuation Request

Line 9 (Wartime): CBRN Contamination
- C – Chemical
- B – Biological
- R – Radiological
- N - Nuclear

Line 9 (Peactime): Terrain Description
MIST Report

- Conveys additional evacuation information that may be required by theater commanders.
- A MIST report is supplemental to a MEDEVAC request, and should be sent as soon as possible.
- MEDEVAC missions should not be delayed while waiting for MIST information.
- MIST information helps the receiving MTF better prepare for the specific casualties inbound.
MIST Report

- M: Mechanism of injury
- I: Injury type(s)
- S: Signs & Symptoms
- T: Treatment
17. Cardiopulmonary resuscitation (CPR)

a. 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. However, 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. The procedure is the same as described in section (5a) above.
NO battlefield CPR
CPR in Civilian Trauma

• This is a series of 138 trauma patients with prehospital cardiac arrest and in whom resuscitation was attempted.
• There were no survivors.
• The authors recommended that trauma patients in cardiopulmonary arrest not be transported emergently to a trauma center even in a civilian setting due to large economic cost of treatment without a significant chance for survival.

Rosemurgy et al. J Trauma 1993
The Cost of Attempting CPR on the Battlefield

- CPR performers may get killed
- Mission gets delayed
- Casualty stays dead
CPR on the Battlefield (Ranger Airfield Operation in Grenada)

- Airfield seizure operation.
- A Ranger was shot in the head by a sniper.
- Casualty had no pulse or respirations.
- CPR attempts were unsuccessful.
- The operation was delayed while CPR was performed.
- Ranger PA finally intervened: “Stop CPR and move out!”
CPR in Tactical Settings

Only in the case of cardiac arrest due to:

- Hypothermia
- Near drowning
- Electrocution
- Other non-traumatic causes

should CPR be considered prior to the Tactical Evacuation Care phase.
Traumatic Cardiac Arrest in TCCC

- Mounted IED attack in March 2011
- Casualty unconscious from closed head trauma
- Lost vital signs prehospital
- CPR on arrival at hospital
- **Bilateral needle decompression** done in ER
- Rush of air from left-sided tension pneumothorax
- Return of vital signs – life saved
- This procedure is routinely performed by Emergency Medicine physicians and Trauma Surgeons for trauma victims who lose their pulse and heart rate in the hospital Emergency Department.
Questions?
18. Documentation of Care

a. Document clinical assessments, treatments rendered, and changes in the casualty’s status on a TCCC Casualty Card (DD Form 1380). Forward this information with the casualty to the next level of care.
TCCC Card

- Designed by combat medics
- Used in combat since 2002
- Replaced old DD Form 1380
- Only essential information
- Can be used by the receiving hospital to document injuries sustained and field treatments rendered
- Heavy-duty waterproof or laminated paper
In order to know if we are doing the right thing, we must first know what we did.

This paper was made possible by the Ranger TCCC Card.
TCCC Card

- This card is based on the principles of TCCC.
- It addresses the initial lifesaving care provided at the point of wounding.
- It should be filled out by *whoever* is caring for the casualty.
- Its format is simple with a circle or “X” in the appropriate block.
TCCC Card

Back
Instructions

• A TCCC Card should be kept in each Individual First Aid Kit.
• Use an indelible marker to fill it out.
• When used, attach it to the casualty’s belt loop, or place it in their upper left sleeve, or the left trouser cargo pocket.
• Include as much information as you can.
• Record each intervention in each category.
• If you are not sure what to do, the card will prompt you where to go next.
• Simply circle the intervention you performed.
• Explain any action you want clarified in the remarks area.
Documentation

• The card does not imply that every casualty needs all the interventions listed.
• You may not be able to perform all the interventions that the casualty needs.
• The next person caring for the casualty can add to the interventions performed.
• This card can be filled out in less than two minutes.
• It is important that we document the care given to the casualty.
TCCC Card Abbreviations

- DTG = Date-Time Group (e.g. – 160010Oct2009)
- NBC = Nuclear, Biological, Chemical
- TQ = Tourniquet
- GSW = Gunshot Wound
- MVA = Motor Vehicle Accident
- AVPU = Alert, Verbal stimulus, Painful stimulus, Unresponsive
- Cric = Cricothyroidotomy
- NeedleD = Needle decompression
- IV = Intravenous
- IO = Intraosseous
- NS = Normal Saline
- LR = Lactated Ringers
- ABX = Antibiotics
• This electronic AAR is intended to be completed when the first responder returns to base.
• It is more complete than the TCCC Card.
• It should be submitted to the Joint Theater Trauma System Director within 72 hours of casualty evacuation.

• **Both the TCCC Card and the TCCC AAR are required for optimal patient care documentation.**
TCCC After-Action Report
Questions ?
Tactical Field Care Guidelines

19. Prepare for Evacuation

a. Complete and secure the TCCC Card (DD 1380) to the casualty.

b. Secure all loose ends of bandages and wraps.

c. Secure hypothermia prevention wraps/blankets/straps.

d. Secure litter straps as required. Consider additional padding for long evacuations.
19. Prepare for Evacuation (cont)

e. Provide instructions to ambulatory patients as needed.

f. Stage casualties for evacuation in accordance with unit standard operating procedures.

g. Maintain security at the evacuation point in accordance with unit standard operating procedures.
Secure Loose Ends

- Secure all loose ends of bandages, wraps and hypothermia prevention materials.
- Consider padding for long evacuations.
Package the Casualty

• Secure the casualty’s weapons/equipment as required.
Prep for Evacuation

- Evacuation equipment should be prepped by unit personnel while treatment continues.
Casualty movement in TFC may be better accomplished using litters.
Litter Selection

• Selection is based on the mission and the unit type.
• Rigid litters work better than pole-less or improvised.
• Consider terrain and obstacles in the operating area.
Be Prepared for the Operating Environment
Evacuation Equipment

• All unit members should know how to open and set up litters and rehearse their use during pre-mission training.

• All unit members should know who will carry litters and/or where litters are located on vehicles.
Package the Casualty

- Secure litter straps.
  - Know your litter! Does it have attached straps or does it need supplementary strapping?
Package the Casualty
Walking Wounded

• Provide instructions or assistance to ambulatory patients as needed.

• Depending on the nature of their injuries, they may be able to assist with carrying litters or providing security.

• Best to guide disoriented or visually impaired casualties hand-to-shoulder to the evacuation platform.

• Instruct them on repeatedly checking their own wounds and dressings to ensure that bleeding remains controlled.
Stage Casualties for Evac

- Be prepared for the arrival of the evacuation platform.
- Stage the casualties in the loading sequence of the evacuation platform.
Instructions from Platform Crew

Take direction from the crew of the evacuation platform on approaching the platform, loading casualties, and turnover with receiving medics.
SECURITY

Maintain security at the evacuation point in accordance with unit SOP.
Litter Carry Video

• Secure the casualty on the litter.
• Bring his weapons.
• Maintain security.

Courtesy 75th Ranger Regiment

Link to Online Video
Questions?
JTS-Recommended Standard
Evacuation Categories

- Specifies three categories for casualty evacuation:
  - A - Urgent
  - B - Priority
  - C – Routine
JTS-Recommended Standard Evacuation Categories

• CAT A – Urgent (denotes a critical, life-threatening injury)
  – Significant injuries from a dismounted IED attack
  – Gunshot wound or penetrating shrapnel to chest, abdomen or pelvis
  – Any casualty with ongoing airway difficulty
  – Any casualty with ongoing respiratory difficulty
  – Unconscious casualty
CAT A – Urgent (continued)

– Casualty with known or suspected spinal injury
– Casualty in shock
– Casualty with bleeding that is difficult to control
– Moderate/Severe TBI
– Burns greater than 20% Total Body Surface Area
• CAT B – Priority (serious injury)
  – Isolated, open extremity fracture with bleeding controlled
  – Any casualty with a tourniquet in place
  – Penetrating or other serious eye injury
  – Significant soft tissue injury without major bleeding
  – Extremity injury with absent distal pulses
  – Burns 10-20% Total Body Surface Area
JTS-Recommended Standard Evacuation Categories

• CAT C – Routine (mild to moderate injury)
  – Concussion (mild TBI)
  – Gunshot wound to extremity - bleeding controlled without tourniquet
  – Minor soft tissue shrapnel injury
  – Closed fracture with intact distal pulses
  – Burns < 10% Total Body Surface Area
Tactical Evacuation:
Nine Rules of Thumb
TACEVAC  9 Rules of Thumb: Assumptions

• These Rules of Thumb are designed to help the corpsman or medic determine the true urgency for evacuation.
• They assume that the decision is being made at 15-30 minutes after wounding.
• They also assume that care is being rendered per the TCCC guidelines.
• These considerations are most important when there are tactical constraints on evacuation:
  – Interferes with mission
  – High risk for team
  – High risk for TACEVAC platform
TACEVAC Rule of Thumb #1

Soft tissue injuries are common and may look bad, but usually don’t kill unless associated with shock.
Bleeding from most extremity wounds should be controllable with a tourniquet or hemostatic dressing. Evacuation delays should not increase mortality if bleeding is fully controlled.
Casualties who are in shock should be evacuated as soon as possible.

Gunshot wound to the abdomen
Casualties with penetrating wounds of the chest who have respiratory distress unrelieved by needle decompression of the chest should be evacuated as soon as possible.
Casualties with blunt or penetrating trauma of the face associated with airway difficulty should have an immediate airway established, and should be evacuated as soon as possible.

REMEMBER to let the casualty sit up and lean forward if that helps him or her to breathe better!
Casualties with blunt or penetrating wounds of the head where there is obvious massive brain damage and unconsciousness are unlikely to survive with or without emergent evacuation.
Casualties with blunt or penetrating wounds to the head - where the skull has been penetrated but the casualty is conscious - should be evacuated emergently.
TACEVAC Rule of Thumb #8

Casualties with penetrating wounds of the chest or abdomen who are not in shock at their 15-minute evaluation have a moderate risk of developing late shock from slowly bleeding internal injuries. They should be carefully monitored and evacuated as feasible.
Casualties with TBI who display “red flag” signs - witnessed loss of consciousness, altered mental status, unequal pupils, seizures, repeated vomiting, visual disturbance, worsening headache, unilateral weakness, disorientation, or abnormal speech – require urgent evacuation to a medical treatment facility.
Questions?
Further Elements of Tactical Field Care

• Reassess regularly.
• Minimize removal of uniform and protective gear, but get the job done.
• Replace body armor after care, or at least keep it with the casualty. He or she may need it again if there is additional contact.
Summary of Key Points

- Still in a hazardous environment
- Limited medical resources
- Hemorrhage control
- Airway management
- Breathing
- Transition from tourniquet to another form of hemorrhage control when appropriate
- For hemorrhagic shock, resuscitate with blood products per the TCCC Guidelines when they are available
Summary of Key Points

- Hypotensive resuscitation with Hextend for hemorrhagic shock when blood products are not available
- Hypothermia prevention
- Shield and antibiotics for penetrating eye injuries
- Pain control
- Antibiotics
- Reassure casualties
- No CPR
- Documentation of care
Questions?

Wear your body armor!
Casualty Collection Point Operations

This section is adapted from:
Casualty Collection Points in the Evacuation Chain

Casualty flow from target to hospitalization.
CCP Site Selection

• Should be reasonably close to the fight.
• Located near areas where casualties are likely to occur.
• Must provide cover and concealment from the enemy.
• Inside a building or on hardstand (an exclusive CCP building limits confusion).
• Should have access to evacuation routes (foot, vehicle, aircraft).
• Proximal to “Lines of Drift” or paths across terrain that are the most likely to be used when going from one place to another.
CCP Site Selection

• Adjacent to Tactical Choke Points (breeches, HLZ’s, etc…)
• Avoid natural or enemy choke points.
• Choose an area providing passive security (inside the perimeter).
• Good drainage
• Accessible to evacuation assets
• Expandable if casualty load increases

(continued)
CCP Operational Guidelines

• Typically, a First Sergeant (1SG) or Platoon Sergeant (PSG), or equivalent, is given responsibility for casualty flow and everything outside the CCP:
  – Provides for CCP structure and organization (color coded with chemlights).
  – Maintains command & control and battlefield situational awareness.
  – Controls aid & litter teams, and provides security.
CCP Operational Guidelines

• First Sergeant (1SG), Platoon Sergeant (PSG) or equivalent:
  – Strips, bags, tags, organizes, and maintains casualties’ tactical gear outside of treatment area.
  – Accountable for tracking casualties and equipment into and out of CCP and reports to higher command.
  – Moves casualties through CCP entrance/exit choke point which should be marked with an IR chemlight.
Medical personnel are responsible for everything inside the CCP:

- Triage officer sorts and organizes casualties at choke point into appropriate treatment categories.
- Medical officers and medics organize medical equipment and supplies and treat casualties.
- EMTs, First Responders, and Aid &Litter Teams assist with treatment and packaging of casualties.
Casualties with minor injuries should remain with their original elements or assist with CCP security if possible.

Those killed in action should remain with their original elements.
Questions?
Management of Wounded Hostile Combatants
Objective

• DESCRIBE the considerations in rendering trauma care to wounded hostile combatants.
Care for Wounded Hostile Combatants

• No medical care during Care Under Fire
• Though wounded, enemy personnel may still act as hostile combatants
  – May employ any weapons or detonate any ordnance they are carrying
• Enemy casualties are *hostile combatants* until they:
  – Indicate surrender
  – Drop all weapons
  – Are proven to no longer pose a threat
Care for Wounded Hostile Combatants

• Combat medical personnel should not attempt to provide medical care until sure that the wounded hostile combatant has been rendered safe by other members of the unit.

• Restrain with flex cuffs or other devices if not already done.

• Search for weapons and/or ordnance.

• Silence to prevent communication with other hostile combatants.
Care for Wounded Hostile Combatants

- Segregate from other captured hostile combatants.
- Safeguard from further injury.
- Care as per TFC guidelines for U.S. forces after the steps above are accomplished.
- Speed to the rear as medically and tactically feasible
QUESTIONS?
Convoy IED Scenario

• Recap from Care Under Fire:
  • Your last medical decision during Care Under Fire:
    – Placed tourniquet on left stump
  • You moved the casualty behind cover and returned fire.
• You provided an update to your mission commander.
Convoy IED Scenario

Assumptions in discussing TFC in this scenario:

• Effective hostile fire has been suppressed.
• Team Leader has established a security perimeter.
• Pre-designated HLZ for helicopter evacuation is 15 minutes away.
• Flying time to the hospital is 30 minutes.
• Ground evacuation time is 3 hours.
• Enemy threat to helicopter at HLZ estimated to be minimal.
Convoy IED Scenario

Next decision (Command Element)?

• How to evacuate the casualty?
  – Helicopter
    • Longer time delay for ground evacuation.
    • Enemy threat at the HLZ is acceptable.
Convoy IED Scenario

Next decision (Command Element)?

• Load first and treat enroute to the HLZ or treat first and load after?
  – Load and Go
  – Why?
    • You can continue treatment enroute.
    • Avoids potential second attack at the ambush site.
Casualty is still conscious and has no neck or back pain.

Next decision?

– Do you need spinal immobilization?
– No
  • Not needed unless casualty has neck or back pain
    – Why?
      – There is little expectation of a spinal fracture in the absence of neck or back pain in a conscious casualty.
    – Speed is critical.
    – NOTE: Casualties who are unconscious from blast trauma should have spinal immobilization if feasible.
Ten minutes later, you and the casualty are in a vehicle enroute to HLZ.

Next action?

• Reassess the casualty.
  – Casualty is now unconscious.
  – No bleeding from first tourniquet site.
  – The other stump is bleeding severely.
Convoy IED Scenario

- Next action?
  - Place a tourniquet on the 2\textsuperscript{nd} stump.
- Next action?
  - Remove any weapons or ordnance that the casualty may be carrying.
- Next action?
  - Place a nasopharyngeal airway.
- Next action?
  - Make sure he’s not bleeding heavily elsewhere.
  - Check for other trauma.
Convoy IED Scenario

• Next action?
  – Pelvic binder
  – Establish IV access - need to give TXA and then resuscitate for shock
• Next action?
  – Administer 1 gram of tranexamic acid (TXA) in 100 cc NS or LR
  – Infuse slowly over 10 minutes
Convoy IED Scenario

• Next action?
  – Begin fluid resuscitation – your convoy carries cold-stored, type O, low-titer whole blood.

• Next actions?
  – Hypothermia prevention
  – IV antibiotics
  – Pulse ox monitoring
  – Continue to reassess the casualty.
Convooy IED Scenario

What is your 9-line?

Line 1: Grid NS 12345678
Line 2: 38.90, Convoy 6
Line 3: 1 Urgent
Line 4: Whole blood, oxygen, advanced airway
Line 5: 1 litter
Line 6: Secure
Line 7: VS-17 (Orange Panel)
Line 8: U.S. Military
Line 9: Flat field

* Some individuals recommend adding a tenth line: the casualty’s vital signs
Your convoy has now arrived at the HLZ. 

Next steps?

• Continue to reassess the casualty and prepare for helo transfer.
  – Ensure the casualty has no remaining weapons or comms gear before loading him on the helo.
  – Secure the casualty’s personal effects per unit SOP.
Remember

• The TCCC guidelines are not a rigid protocol.
• The tactical environment may require some modifications to the guidelines.
• Think on your feet!
Questions?