

Tactical Emergency Casualty Care (TECC)

Guidelines for First Responders with a Duty to Act

(Law Enforcement, Fire fighters not trained as EMS providers)

Current as of March 2019

DIRECT THREAT CARE (DTC) / HOT ZONE Guidelines:

1. Mitigate any threat and move to a safer position (e.g. Return fire, utilize less lethal technology, assume an overwhelming force posture, etc.). Recognize that threats are dynamic and require continuous threat assessments.
2. Direct the injured law enforcement/first responder to stay engaged in the operation if able and appropriate.
3. Move casualty to a safer position:
 - a. Instruct the alert, capable casualty to move to a safer position and apply self-aid.
 - b. If the casualty is responsive but cannot move, a rescue plan should be devised.
 - c. If a casualty is unresponsive, weigh the risks and benefits of an immediate rescue attempt in terms of manpower and likelihood of success. Remote medical assessment techniques to assess survivability should be considered.
4. Stop life-threatening external hemorrhage if present and reasonable depending on the immediate threat, severity of the bleeding and the extraction distance to safety. Consider moving to safety prior to application of the tourniquet if the situation warrants.
 - a. Apply direct pressure to wound, or direct capable patient to apply direct pressure to own wound and/or own effective tourniquet.
 - b. Tourniquet application:
 - i. Apply the tourniquet as high on the limb as possible, including over the clothing if present.
 - ii. Tighten until cessation of bleeding and move to safety.
5. Consider quickly placing unresponsive casualty in recovery position to protect airway.

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INDIRECT THREAT CARE (ITC) / WARM ZONE Guidelines:

1. Any casualty with a weapon should have that weapon made safe and secured once the threat is neutralized and/or if mental status is altered.
2. Perform systematic assessment and intervention. Mnemonics such as MARCH or X-ABCDE to guide priorities may be of assistance.
3. ***Massive Hemorrhage (Bleeding):***
 - a. Assess for and control any unrecognized major bleeding.
 - b. Extremity hemorrhage:
 - i. Use a tourniquet or an appropriate pressure dressing with deep wound packing (either plain gauze or, if available, hemostatic gauze) to control life-threatening bleeding in an extremity:
 - Apply the tourniquet over the clothing as proximal (high on the limb) as possible, or if able to fully expose and evaluate the wound, apply directly to the skin at least 2-3 inches above wound (DO NOT APPLY OVER THE JOINT).
 - For any traumatic total or partial amputation, a tourniquet should be applied as high on the extremity as possible regardless of bleeding.
 - A pressure dressing with deep wound packing (either plain gauze or, if available, hemostatic dressing) applied directly to the skin is an acceptable alternative for moderate to severe hemorrhage.
 - c. Junctional hemorrhage
 - i. Use direct pressure and an appropriate pressure dressing with deep wound packing (plain gauze or, if available, hemostatic gauze)
 - ii. If available, immediately apply a junctional tourniquet device for anatomic junctional areas where bleeding cannot be easily controlled by direct pressure and hemostatics/dressings.
 - d. Reassess all tourniquets that were hastily applied during Direct Threat/Hot Zone Care and evaluate the wound for continued bleeding or a distal pulse in the extremity. If there is continued bleeding or a distal pulse is still present:
 - i. Tighten the existing tourniquet further, or
 - ii. Apply a second tourniquet, side-by-side and, if possible, proximal to the first, to eliminate the distal pulse.

65 e. If possible, mark all tourniquet sites with the time of tourniquet application.

66 **4. Airway Management:**

67 a. If the casualty is unconscious or is conscious but unable to follow commands:

68 i. Clear mouth of any foreign bodies (e.g. vomit, food, teeth, gum, etc.).

69 ii. Apply basic chin lift or jaw thrust maneuver to open airway.

70 iii. Consider placing a nasopharyngeal airway.

71 iv. Place casualty in the recovery position to maintain the open airway.

72 b. If the casualty is conscious and able to follow commands:

73 i. Allow casualty to assume position of comfort, including sitting up.

74 ii. Do not force to lie down.

75 **5. Respiration (Breathing):**

76 a. Immediately apply a vented or non-vented occlusive seal to cover the defect from
77 any open and/or sucking torso wounds.

78 b. Monitor any casualty with penetrating torso trauma for the potential development
79 of a tension pneumothorax. Most common presentation will be penetrating chest
80 injury with subsequent increasing shortness of breath, difficulty breathing and/or
81 increasing anxiety/agitation, often after the application of a chest seal.

82 i. If tension pneumothorax appears to be developing, remove the occlusive
83 dressing and “burp” the wound by applying gentle pressure around the wound
84 to allow any air to escape.

85 ii. Casualties with concern for developing tension pneumothorax should be
86 prioritized for evacuation to higher level of care.

87 **6. Circulation (Shock Management/Resuscitation):**

88 a. Assess for hemorrhagic shock: Altered mental status (in the absence of head injury)
89 and weak or absent radial pulses are the best austere field indicators of shock.

90 b. If in shock:

91 i. Prioritize for rapid evacuation any patient, especially those with penetrating
92 torso injury, displaying signs of shock.

93 c. If not in shock:

94 i. Casualty may drink clear liquids if conscious, can swallow, and there is a
95 confirmed delay in evacuation to care.

96 **7. Hypothermia Prevention:**

97 a. Minimize casualty’s exposure and subsequent heat loss.

98 i. Place the casualty onto an insulated surface to reduce conductive heat loss as
99 soon as possible

100 ii. For injured public safety personnel, keep equipment on or with casualty if
101 feasible.

102 b. Keep casualty covered, warm and dry.

103 i. Replace wet clothing with dry if possible.

104 ii. Cover casualty with commercial warming device, blankets, jackets, or anything
105 that will retain heat and keep the casualty dry.

106 **8. Reassess casualty:**

107 a. Perform a rapid blood sweep, front and back, checking for additional injuries.

108 b. Expose the wound for further evaluation. Balance this with the goal of preventing

109 heat loss.

110 **9. Burns:**

111 a. Stop the burning process.
112 b. Cover burns with loose dry dressings if available.
113 c. Large area burns and signs of significant airway burns or smoke inhalation (e.g.
114 singed facial hair, soot/burns/swelling around the nose or mouth) should be
115 prioritized for rapid evacuation.
116 d. Burn patients are more susceptible to hypothermia – minimize heat loss as above.

117 **10. Analgesia**

118 a. If possible, provide analgesia as necessary for the patient. Adequate pain control can
119 reduce physiologic stress, may decrease post-traumatic stress, and may help to
120 prevent chronic pain syndromes.
121 i. Decreasing/limiting movement of a wounded extremity may be effective as the
122 initial intervention.
123 ii. If prolonged evacuation, consider oral acetaminophen if the patient is not
124 vomiting and can swallow.
125 iii. Avoid the use of traditional non-steroidal anti-inflammatory medications (e.g.
126 aspirin, ibuprofen, naproxen) as these medications interfere with platelet
127 functioning and may exacerbate bleeding. Celecoxib, a selective Cox-2 inhibitor,
128 has no effect on platelets and may also be considered as a non-sedating oral
129 analgesic.

130 **11. Prepare casualty for movement:**

131 a. Consider operational and environmental factors for safe and expeditious evacuation.
132 b. Secure casualty to a movement assist device when available.
133 c. If vertical extraction required, ensure casualty secured appropriately.

134 **12. Communicate** with the casualty if possible.

135 a. Encourage, reassure and explain care.

136 **13. Cardiopulmonary resuscitation:**

137 a. CPR within this phase of care for victims of blast or penetrating trauma who have no
138 pulse, no ventilations, and no other signs of life will likely not be successful and
139 should not be attempted.
140 b. In other circumstances, performing CPR *may be* of benefit and may be considered in
141 the context of the operational situation. For example, CPR may be considered if
142 evacuation time is less than 5 minutes from point of injury to first receiving facility.

143 **14. Documentation of Care:**

144 a. Communication of assessments and treatments rendered should be passed along to
145 the next level of care, ideally on a simple standardized medical treatment care card.

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EVACUATION CARE (EVAC) Guidelines:

1. Reassess all interventions applied in previous phases of care.
2. If multiple wounded, perform primary triage for priority and destination of evacuation to a higher level of care.
3. ***Reassess for massive hemorrhage (Bleeding):***
 - a. Fully expose wounds to reassess for and control any unrecognized major bleeding.
 - b. Utilize the appropriate hemorrhage control technique (i.e. tourniquet, pressure dressing, hemostatic wound packing, or junctional device as described in ITC phase).
4. ***Reassess airway:***
 - a. The principles of airway management in Evacuation Care / Cold Zone are similar to that in ITC / Warm Zone.
 - b. If the casualty is unconscious or is conscious but unable to follow commands:
 - i. Clear mouth of any foreign bodies (vomit, food, teeth, gum, etc.).
 - ii. Apply basic chin lift or jaw thrust maneuver to open airway.
 - iii. Consider placing a nasopharyngeal airway.
 - iv. Place casualty in the recovery position to maintain the open airway.
 - c. If the casualty is conscious and able to follow commands:
 - i. Allow casualty to assume position of comfort, including sitting up. Do not force to lie down.
5. ***Reassess respirations (Breathing):***
 - a. All open and/or sucking chest wounds should be treated immediately by applying a vented or non-vented occlusive seal to cover the defect. Monitor the casualty for the potential development of a subsequent tension pneumothorax.
 - b. Reassess casualties who have had chest seals applied. Any developing tension pneumothorax should be treated as described in ITC / Warm Zone.
 - c. If available, administration of oxygen may be of benefit for all traumatically injured patients, especially for the following types of casualties:
 - Chest injuries
 - Torso injuries associated with shortness of breath
 - Unconscious or altered mental status
 - Post-blast injuries

183 - Casualty in shock
184 - Casualty at altitude

185 **2. *Reassess circulation (Shock Management/Resuscitation):***

186 a. Re-assess for developing hemorrhagic shock
187 i. Altered mental status (in the absence of head injury) and weak or absent
188 peripheral pulses are the best field indicators of shock.
189 ii. Utilize additional medical assessment and monitoring equipment that may be
190 available in this phase.
191 b. If not in shock:
192 i. No further intervention required. Allow casualty to assume position of comfort.
193 ii. Casualty may drink clear liquids if conscious, can swallow, and there is a
194 confirmed delay in evacuation to care.
195 c. If in shock:
196 i. Prioritize for rapid evacuation any penetrating torso injury patient displaying
197 signs of shock.
198 d. If altered mental status due to suspected TBI and casualty not in shock, position the
199 casualty supine and raise the casualty's head to 30 degrees.

200 **6. *Prevention of hypothermia:***

201 a. Minimize casualty's exposure and subsequent heat loss as per ITC guidelines.
202 b. Keep protective gear on or with law enforcement casualty if feasible.
203 c. Move into a vehicle or warmed structure if possible.

204 **7. *Reassess casualty:***

205 a. Complete full front and back re-assessment checking for additional injuries. Inspect
206 and dress known wounds that were previously deferred.
207 b. Frequently re-check the casualty for any changes in condition. Worsening status at
208 any point should prompt priority evacuation.
209 c. Consider alternative methods of transportation to definitive medical care if
210 traditional methods delayed or unavailable. Ensure coordination of patient
211 distribution to avoid overwhelming any one medical receiving facility.

212 **8. *Burns:***

213 a. Cover burns with loose dry dressings if available. Clean, dry sheets are effective for
214 casualties with large area burns.
215 b. Large area burns and signs of significant airway burns or smoke inhalation (e.g.
216 singed facial hair, soot/burns/swelling around the nose or mouth) should be
217 prioritized for rapid evacuation.
218 c. Burn patients are more susceptible to hypothermia – minimize heat loss as above.

219 **9. *Analgesia***

220 a. Provide analgesia as necessary for the patient. Adequate pain control can reduce
221 physiologic stress, may decrease post-traumatic stress, and may help to prevent
222 chronic pain syndromes.
223 i. Non-pharmacologic interventions such as ice, elevation and immobilization may be
224 effective as the initial intervention.
225 ii. Consider oral non-narcotic medications if the patient is not vomiting and can
226 swallow. Acetaminophen can provide effective pain control.

- iii. Avoid the use of traditional non-steroidal anti-inflammatory medications (e.g. aspirin, ibuprofen, naproxen) as these medications interfere with platelet functioning and may exacerbate bleeding. Celecoxib, a selective Cox-2 inhibitor, has no effect on platelets and may be considered as a non-sedating oral analgesic.

10. Prepare casualty for movement:

- a. Consider environmental factors for safe and expeditious evacuation.
- b. Secure casualty to a movement assist device when available.
- c. If vertical extraction required, ensure casualty secured appropriately.
- d. Consider alternative evacuation platforms such as law enforcement vehicles. Ensure proper communication with EMS and first receiving facilities.

11. **Communicate** with the casualty if possible, and with the operational medical provider or medical facility assuming care of the casualty.

- a. Encourage, reassure and explain care and expectations to patient, family and/or caregivers.
- b. Notify receiving provider or facility of wounds, patient condition, and treatments applied.

12. Cardiopulmonary resuscitation:

- a. CPR may have a *larger role* during the evacuation phase especially for patients with electrocution, hypothermia, non-traumatic arrest or near drowning.
- b. CPR may be considered if evacuation time is less than 5 minutes from point of injury to first receiving facility.

13. Documentation of Care:

- a. Continue or initiate documentation of clinical assessments, treatments rendered, and changes in the casualty's status in accordance with local protocol.
- b. Forward this information with the casualty to the next level of care.

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GOALS, PRINCIPLES, SKILL SETS

Care provided within the TECC guidelines is inherent upon individual first responder training, available equipment, local medical protocols, and medical director approval.

I. Direct Threat Care (DTC)/Hot Zone

Primary Goals:

1. Accomplish the mission with minimal additional casualties.
2. Prevent any casualty from sustaining additional injuries.
3. Keep response team maximally engaged in neutralizing the existing threat (e.g. active shooter, barricade, high threat warrant, etc.).
4. Minimize public harm.

Operational Principles:

1. Establish *tactical supremacy* and defer in-depth medical interventions if engaged in *ongoing direct threat mitigation* (e.g. active fire fight, dynamic explosive scenario, etc.).
2. *Threat mitigation* techniques will minimize risk to casualties and the providers. These should include techniques and tools for rapid casualty access and egress.
3. Triage should be deferred to a later phase of care. Prioritization for extraction is based on resources available and the tactical situation.
4. Minimal trauma interventions are warranted during this phase.
5. *Consider* bleeding control.
 - a. Tourniquet application is the primary “medical” intervention to be *considered*.
 - b. For response personnel, tourniquet should be readily available and accessible with either hand.

DTC/Hot Zone Required Skill Set (applied per approved SOP/protocol only):

1. Direct pressure and hasty tourniquet application
 - a. Consider PACE Methodology- Primary, Alternative, Contingency, Emergency
 - b. Commercially available tourniquets
 - c. Field expedient tourniquets
2. Tactical casualty extraction
3. Rapid placement in recovery position

288 **II. Indirect Threat Care (ITC) / Warm Zone**

289 **Primary Goals:**

290 1. Goals 1-4 as above with DTC / Hot Zone care
291 2. Stabilize the casualty as required to permit safe extraction to dedicated treatment
292 sector or medical evacuation assets.

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294 **Operational Principles:**

295 1. Maintain *tactical supremacy* and complete the overall mission.
296 2. As applicable, ensure safety of both first responders and casualties by *rendering*
297 *weapons safe* and/or rendering any adjunct tactical gear safe for handling (flash bangs,
298 gas canisters, etc.).
299 3. Conduct *dedicated patient assessment* and initiate appropriate life-saving interventions
300 as outlined in the ITC / Warm Zone guidelines. DO NOT DELAY casualty
301 extraction/evacuation for non-lifesaving interventions.
302 4. *Consider* establishing a *casualty collection point* if multiple casualties are encountered.
303 5. Unless in a fixed casualty collection point, triage in this phase of care should be limited
304 to the following categories:
305 a. Uninjured and/or capable of ambulation or self-extraction
306 b. Deceased / expectant
307 c. All others
308 6. Establish *communication* with the tactical and/or unified command and request or verify
309 initiation of casualty extraction/evacuation.
310 7. Prepare casualties for extraction and document care rendered for continuity of care
311 purposes.

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313 **ITC/Warm Zone Required Skill Set (applied per approved SOP/protocol only):**

314 1. Hemorrhage Control:
315 a. Application of direct pressure
316 b. Application of tourniquet
317 i. Consider PACE Methodology- Primary, Alternative, Contingency, Emergency
318 ii. Commercially available tourniquets
319 iii. Field expedient tourniquets
320 c. Perform wound packing with gauze or hemostatic agent
321 d. Application of pressure dressing
322 2. Airway:
323 a. Perform manual maneuvers (chin lift, jaw thrust, recovery position)
324 b. Insert nasal pharyngeal airway
325 3. Breathing:
326 a. Application of effective occlusive or non-occlusive (vented/channeled) chest seal
327 b. Apply oxygen if available
328 c. Recognize the symptoms of tension pneumothorax
329 d. "Burp" occlusive dressing
330 4. Circulation:
331 a. Recognize the symptoms of hemorrhagic shock

- 332 5. Hypothermia prevention:
 - 333 a. Apply available materials to prevent heat loss
- 334 6. Wound management:
 - 335 a. Initiate basic burn treatment
- 336 7. Casualty evacuation:
 - 337 a. Move casualty (drags, carries, lifts)
 - 338 b. Secure casualty to litter
- 339 8. Other Skills:
 - 340 a. Monitor casualty
 - 341 b. Recognize need and requirements for, and establish Casualty Collection Point.

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III. Evacuation Care (Evac)

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Primary Goals:

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1. Maintain any lifesaving interventions applied during DTC and ITC phases.
2. Provide rapid and secure evacuation to an appropriate medical receiving facility.
3. Provide good communication and patient care data between field medical providers and fixed receiving facility.
4. Avoid additional preventable causes of death.

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Operational Principles:

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1. Reassess the casualty or casualties for efficacy of all applied medical interventions.
2. Utilize a triage system/criteria per local policy that considers priority AND destination to ensure proper distribution of patients.
3. Utilize additional available resources to maximize advanced care.
4. Avoid hypothermia.
5. Communication is critical, especially between tactical elements and non-tactical EMS teams.
6. Maintain situational awareness: in dynamic events, there are NO threat free areas.

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Evacuation Care Required Skill Set (applied per approved SOP/protocol only):

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1. Same as ITC/Warm Zone
2. Apply triage prioritization of casualties
3. Communicate effectively between non-medical, pre-hospital and hospital medical assets