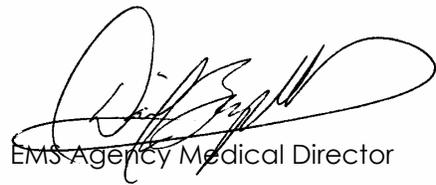


# EL DORADO COUNTY EMS AGENCY

## FIELD POLICIES

Effective: July 1, 2017

Scope: TEMS Qualified Personnel



EMS Agency Medical Director

## TACTICAL MEDIC GUIDELINES

### AUTHORITY:

California POST/EMSA Operational Programs and Standardized Training Recommendations Manual.

### PURPOSE:

The purpose of the El Dorado County Tactical Casualty Care (ELDO-TCC) guidelines is to provide direction for tactical paramedics while assigned to a SWAT team. The goal is to treat preventable causes of death and to evacuate the wounded to a safe place for triage, treatment and transport to definitive care as needed. Never delay casualty evacuation for non lifesaving interventions. The number of casualties and the overall situation will dictate what and when interventions are done. The following guidelines are divided into three phases. *Direct Threat Care, DTC (Hot Zone), Indirect Threat Care, ITC (Warm Zone), Triage and Evacuation Care, TEC (Cold Zone).*

### DEFINITIONS:

Tactical Incident – A law enforcement incident requiring a high level of tactical training and operational support for proper and safe mission success, and execution.

Casualty Collection Point - A cleared area usually within the warm zone where injured patients are extracted to. A hasty Triage and immediate life saving treatments are performed here i.e. controlling massive external hemorrhage, occlusive dressing over wounds of the thoracic cavity, NCD, and basic airway management. Patients should be triaged and transition from the Casualty Collection Point to the formal Triage area with expedient transport per the counties MCI plan.

Hot Zone - The area around the Threat or suspected location of the Threat. This area has not been cleared or secured by Law Enforcement. Only Law Enforcement and Swat Medics should enter the hot zone when part of a team.

Warm Zone - The area immediately outside the Hot Zone that has been cleared by Law Enforcement, but is not completely secured. A controlled number of EMS Personnel who are Rescue Task Force Trained and Equipped for the purposes of extrication of victims and establishing a casualty collection point. Armed Law Enforcement shall accompany EMS Personnel in the Warm Zone.

Cold Zone - The area surrounding the incident that has been secured by Law Enforcement. All other EMS and Fire Resources shall stage in the cold zone. Normal EMS activities and formal triage should take place in the cold zone.

Medical Threat Assessment (MTA) – A medical preplan of a tactical operation.

Special Weapons & Tactics (SWAT) Team - A designated unit of law enforcement personnel that is specifically trained and equipped to work as a coordinated team to resolve critical incidents that are so hazardous, complex, or unusual that they may exceed the capabilities of first responders or investigative units including, but not limited to, hostage taking, barricaded suspects, snipers, terrorist acts and other high risk incidents.

Tactical EMS (TEMS) - The branch of the Emergency Medical System designed to provide support and care during a tactical incident.

Tactical Paramedic - An Emergency Medical Technician-Paramedic trained in the specialized use of tactics and care in austere tactical environments.

Tactical Physician - A physician trained in the specialized use of tactical medicine and care in austere tactical environments.

Remote Medical Assessment- A medical assessment that is conducted from a location that is not next to the patient.

### POLICY:

- 1) Tactical EMS personnel, as part of a SWAT team, will deploy on missions and trainings for the primary purpose of rendering emergency medical care to casualties including (but not limited to) tactical operators, police officers, hostages, bystanders, civilians, victims, and suspects.
- 2) Any ALS agency that wants to utilize a TEMS team will maintain personnel with at least paramedic level licensure in the State of California.
- 3) Paramedics involved in a TEMS team must:
  - a. Be accredited with the El Dorado County EMSA
  - b. Have a minimum of 2 years experience as a licensed paramedic
  - c. Complete an agency approved tactical medic course
  - d. Maintain paramedic license and accreditation
  - e. Approved by the law enforcement SWAT team for which they are associated with
- 4) TEMS personnel must participate in a Continuous Quality Improvement program, to include post incident and/or post training analysis and debriefings.
- 5) Tactical Medics are authorized to use procedures and medications approved by California EMSA in the expanded scope of practice for paramedics. These procedures/medications must be approved by the County EMSA Medical Director.

## PROCEDURE:

### Direct Threat Care (DTC)/ Hot Zone (Immediate threat to life)

**Goals: Accomplish the mission with minimal casualties, prevent any casualty from sustaining additional injuries, and Keep response team maximally engaged in neutralizing the existing threat and Minimize public harm.**

#### Principles:

- 1) Establish *tactical supremacy* and defer in depth medical interventions if engaged in *ongoing direct threat* (e.g. active fire fight, unstable building collapse, dynamic post-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 medical interventions are warranted.

#### Guidelines:

- 1) Mitigate any threat and move to a safer position (cover).
- 2) Direct the casualty to *stay engaged* in any tactical operation if appropriate.
- 3) Direct the casualty to apply self-aid if able.
- 4) *Casualty Extraction*
  - a) If a casualty can move to safety, they should be instructed to do so.
  - b) If a casualty is *unresponsive*, the scene law enforcement commander or law enforcement team leader should weigh the risks and benefits of a rescue attempt in terms of manpower and likelihood of success. Remote medical assessment techniques should be considered.

- c) If the casualty is *responsive* but cannot move, a tactically feasible rescue plan should be devised.
- d) Recognize that threats are dynamic and may be ongoing, requiring continuous threat assessments.
- 5) *Stop life threatening external hemorrhage* if tactically feasible:
  - a) Direct casualty to apply own effective tourniquet if able
  - b) Consider instructing casualty to apply direct pressure to the wound if no tourniquet available or application is not tactically feasible
  - c) Apply a tourniquet over the clothing as high on the limb as possible. Tighten until cessation of bleeding and move to safety. Consider moving to safety prior to application of the TQ if the situation warrants.
  - d) Consider quickly placing casualty, or directing the casualty to be placed, in position to protect airway if tactically feasible

**Skill Sets:**

- 1) Tourniquet application
  - a) Commercially available tourniquets
  - b) Field expedient tourniquets
- 2) Tactical casualty movement and extraction methods
- 3) Rapid placement into recovery position

**Indirect Threat Care (ITC) Warm Zone (An area of relative safety. The area is cleared but not completely safe.)**

**Goals: Stabilize the casualty as required to permit safe extraction to triage area, treatment area or transport area.**

**Principles:**

- 1) Maintain *tactical supremacy* and complete the overall mission.
- 2) Ensure safety of both first responders and casualties by *rendering weapons safe* and/or rendering any adjunct tactical gear safe for handling (flash bangs, gas canisters, etc) Primarily if patient is ALOC or unresponsive.
- 3) Conduct *dedicated patient assessment* and initiate appropriate life-saving interventions as outlined in the ITC guidelines. DO NOT DELAY casualty extraction/evacuation for non life-saving interventions.
- 4) Consider establishing a *casualty collection point* if multiple casualties are encountered.
- 5) Unless in a fixed casualty collection point, triage in this phase of care should be limited to the following categories:
  - a) Uninjured and/or capable of self-extraction (Minor)
  - b) Deceased, or expectant (Deceased)
  - c) All others (Immediate)
- 6) Establish *communication* with the tactical and/or command element and request or verify initiation of casualty extraction/evacuation.
- 7) If possible, update the Incident commander or the Medical group leader of the number of casualties and the need for resources.
- 8) Prepare casualties for extraction and document care rendered for continuity of care purposes.

**Guidelines:**

- 1) Law Enforcement Casualties should have weapons made safe once the threat is neutralized or if mental status is altered.
- 2) *Bleeding:*
  - a) Assess for unrecognized hemorrhage and control all sources of major bleeding. If not already done, use a tourniquet or an appropriate pressure dressing with deep wound packing to control life-threatening external hemorrhage that is anatomically amenable to such treatment.
    - I. 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 2-3 inches above wound (DO NOT APPLY OVER THE JOINT)
    - II. For any traumatic total or partial amputation, a tourniquet should be applied regardless of bleeding.
  - b) Hemostatics: For hemorrhage that is not applicable for tourniquet use, or as an adjunct to **tourniquet removal (if evacuation time is anticipated to be longer than two hours)**, apply a hemostatic agent in accordance to policy along with an appropriate pressure bandage.
  - c) Junctional control: If the bleeding site is not amenable to tourniquet application, cannot be controlled by direct pressure and hemostatics/dressings and a junctional tourniquet device is available, immediately apply a junctional tourniquet device in accordance with directions for its use.
  - d) Reassess all tourniquets that were applied during previous phases of care. Consider exposing the injury and determining if a tourniquet is needed.
    - I. Tourniquets applied hastily during DTC phase that are determined to be both necessary and effective in controlling hemorrhage should remain in place if the casualty can be rapidly evacuated to definitive medical care.
    - II. If ineffective in controlling hemorrhage or if there is any potential delay in evacuation to care, expose the wound fully, identify an appropriate location 2-3 inches above the injury, and apply a new tourniquet directly to the skin. Once properly applied, the prior tourniquet can be loosened.
    - III. Before releasing any tourniquet on a casualty who has received IV fluid resuscitation for hemorrhagic shock, ensure a positive response to resuscitation efforts (e.g. improving mentation and peripheral pulses normal in character).
    - IV. If a tourniquet is not needed, use other techniques to control bleeding and remove the tourniquet.
  - e) When time and the tactical situation permit, a distal pulse check should be accomplished on any limb where a tourniquet is applied. If a distal pulse is still present, consider additional tightening of the tourniquet or the use of a second tourniquet, side by side and proximal to the first, to eliminate the distal pulse.
  - f) Expose and clearly mark all tourniquet sites with the time of tourniquet application.
- 3) *Airway Management:*
  - a) Unconscious casualty without airway obstruction:
    - I. Chin lift or jaw thrust maneuver
    - II. Nasopharyngeal airway
    - III. Place casualty in the recovery position
  - b) Casualty with airway obstruction or impending airway obstruction:
    - I. Chin lift or jaw thrust maneuver
    - II. Nasopharyngeal airway
    - III. Allow casualty to assume position that best protects the airway, including sitting up
    - IV. Place unconscious casualty in the recovery position
  - c) If previous measures unsuccessful:
    - I. Supraglottic Devices (e.g. King LT, CombiTube, or LMA) per protocol.

- II. Needle cricothyroidotomy.
- III. Oral/nasotracheal intubation
- d) Consider applying oxygen if available
- 4) *Breathing:*
  - a) All open and/or sucking chest wounds should be treated by immediately applying a vented or non-vented occlusive seal to cover the defect.  
Monitor the casualty for the potential development of a subsequent tension pneumothorax (e.g. progressive respiratory distress, hypoxia, and/or hypotension in the setting of known or suspected torso trauma). Remove the occlusive dressing and "burp" the chest seal if tension pneumothorax is developing.
  - b) If tension pneumothorax is suspected (Blunt force or penetrating trauma with shortness of breath), decompress the chest on the side of the injury. Needle decompression should be performed with a 10 gauge or 14-gauge, 3.25 inch (8 cm) needle/catheter. \*Perform needle chest decompression per NCD procedure.  
\* The only indications needed for needle chest decompression for this policy only are blunt force or penetrating trauma that is accompanied with shortness of breath.
- 5) *Intravenous (IV) access:*
  - a) Start an IV saline lock if indicated
  - b) If resuscitation is required and IV access is not obtainable, use the intraosseous (IO) route (per agency protocol).
- 6) *Fluid Resuscitation:*
  - a) Assess for hemorrhagic shock.
    - I. Altered mental status (in the absence of head injury) and weak/absent peripheral pulses are the best field indicators of shock.
    - II. Abnormal vital signs (e.g. Systolic Blood Pressure (SBP) < 90mm Hg and Heart Rate > 100 bpm.
  - b) If not in shock:
    - I. No IV fluids necessary
    - II. PO fluids permissible if:
      - 1. Conscious, can swallow, and has no injury requiring potential surgical intervention
      - 2. If confirmed long delay in evacuation to care
  - c) If in shock:
    - I. Administer appropriate IV fluid bolus (500cc NS) and re-assess casualty. Repeat as needed to obtain SPB of 90 or normal mental status and strong palpable Radial pulse.
    - II. If a casualty with an altered mental status due to suspected TBI has a weak or absent peripheral pulse, resuscitate as necessary to maintain a desired systolic blood pressure of 90mmHg or a strong palpable radial pulse.
- 7) *Prevention of hypothermia:*
  - a) Minimize casualty's exposure to the elements. Keep protective gear on or with the casualty if feasible.
  - b) Replace wet clothing with dry if possible. Place the casualty onto an insulated surface as soon as possible.
  - c) Cover the casualty with commercial warming device, dry blankets, poncho liners, sleeping bags, or anything that will retain heat and keep the casualty dry.
  - d) Warm fluids are preferred if IV fluids are required.
- 8) *Reassess casualty:*
  - a) Complete secondary survey checking for additional injuries. Inspect and dress wounds that were previously deferred.

- b) Consider splinting known/suspected fracture to include applying pelvic binding techniques for suspected pelvic fractures.
- 9) *Analgesia:*
- a) Provide adequate analgesia as necessary for the injured.
    - I. Have naloxone readily available whenever administering opiates.
    - II. Monitor for adverse effects such as respiratory depression or hypotension.
  - b) For operational personnel:
    - I. If able to continue mission:
      - 1. Consider oral non-narcotic medications such as Tylenol.
      - 2. Avoid the use of non-steroidal anti-inflammatory medications (e.g. aspirin, ibuprofen, naproxen, ketorolac, etc.) in the trauma patient as these medications interfere with platelet functioning and may exacerbate bleeding.
    - II. If unable to continue the mission:
      - 1. Consider oral non-narcotic medications for mild to moderate pain.
      - 2. Consider use of Fentanyl for moderate to severe pain.
      - 3. Consider adjunct administration of anti-emetic medicines.
- 10) *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 definitive airway management for respiratory distress or oxygen desaturation.
  - b) Smoke inhalation, particularly in a confined space, may be associated with significant carbon monoxide and cyanide toxicity. Patients with signs of significant smoke inhalation plus:
    - I. Significant symptoms of carbon monoxide toxicity should be treated with high flow oxygen if available
  - c) Estimate total body surface area (TBSA) burned to the nearest 10% using the Rule of 9's chart.
  - d) Cover the burn area with dry, sterile dressings and initiate measures to prevent heat loss and hypothermia.
  - e) If burns are Partial or Full Thickness and greater than 10% of Total Body Surface Area, fluid resuscitation should be initiated as soon as IV/IO access is established. Fluid Challenge of 1000cc-2000cc Normal Saline IV/IO If hemorrhagic shock is also present, resuscitation for hemorrhagic shock takes precedence over resuscitation for burn shock.
  - f) All previously described casualty care interventions can be performed on or through burned skin in a burn casualty.
  - g) Analgesia in accordance with El Dorado County EMSA Prehospital Formulary may be administered.
  - h) Aggressively act to prevent hypothermia for burns greater than 10% TBSA.
- 11) *Monitoring:*
- a) Apply appropriate monitoring devices and/or diagnostic equipment if available. Obtain and record vital signs.
- 12) *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 within appropriate harness, equipment assembled, and anchor points identified.
- 13) *Communicate with the casualty if possible.*
- a) Encourage, reassure and explain care.
- 14) *Cardiopulmonary resuscitation:*

- a) CPR within a tactical environment 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.
    - l. However, consider bilateral needle decompression for victims of torso or polytrauma with no respirations or pulse to ensure tension pneumothorax is not the cause of cardiac arrest prior to discontinuation of care.
  - b) In certain circumstance, such as electrocution, drowning, atraumatic arrest, or hypothermia, performing CPR *may* be of benefit and should be considered if the tactical situation allows.
- 15) *Documentation of Care:*
- a) Document clinical assessments, treatments rendered, and changes in the casualty's status. Forward this information with the casualty to the next level of care.
  - b) Consider implementing the approved El Dorado County EMSA Triage Tag.

**Indirect Threat Care / Warm Zone Skill set:****1) Hemorrhage Control**

- a) Apply Tourniquet
- b) Apply Direct Pressure
- c) Apply Pressure Dressing
- d) Apply Wound Packing
- e) Apply Hemostatic Agent

**2) Airway**

- a) Apply Manual Maneuvers (chin lift, jaw thrust, recovery position)
- b) Insert Nasal pharyngeal airway
- c) Insert Supraglottic Device (LMA, King-LT, Combitube, etc.)
- d) Perform Tracheal Intubation
- e) Perform Needle Cricothyrotomy

**3) Breathing:**

- a) Application of effective occlusive chest seal
- b) Assist Ventilations with Bag Valve Mask
- c) Apply Oxygen
- d) Apply Occlusive Dressing
- e) Perform Needle Chest Decompression

**4) Circulation:**

- a) Gain Intravascular Access
- b) Gain Intraosseous Access
- c) Apply saline lock
- d) Administer IV/IO medications and IV/IO fluids

**5) Wound management:**

- a) Apply Dressing for evisceration
- b) Apply Extremity Splint
- c) Apply Pelvic Binder
- d) Initiate Basic Burn Treatment

e) Initiate Treatment for Traumatic Brain Injury

**6) Prepare Casualty for Evacuation:**

- a) Move Casualty (drags, carries, lifts)
- b) Apply Spinal Immobilization Devices
- c) Secure casualty to litter
- d) Initiate Hypothermia Prevention

**7) Other Skills:**

- a) Perform Hasty Decontamination
- b) Initiate Casualty Monitoring
- c) Establish Casualty Collection Point
- d) Perform hasty Triage

**Evacuation Care and Triage / Cold Zone**

**Goals:**

- 1) Maintain any life-saving interventions conducted during DTC and ITC phases
- 2) Provide rapid and secure extraction to a formal Triage area.
- 3) Avoid additional preventable causes of death

**Principles:**

- 1) Reassess the casualty or casualties.
- 2) Utilize the El Dorado County EMSA MCI Plan.
- 3) Utilize additional resources to maximize advanced care.
- 4) Avoid hypothermia.
- 5) Communication is critical, especially between tactical and non-tactical EMS teams.
- 6) Maintain situational awareness- In dynamic events, there are NO threat free area.

**Guidelines:**

- 1) Reassess all interventions applied in previous phases of care.
- 2) If multiple wounded, implement the El Dorado County EMSA MCI Plan.
- 3) Follow all El Dorado County EMSA policies, procedures and protocols.

**Evacuation Care and Triage / Cold Zone Skill Set:**

- 1) Familiarization with advanced monitoring techniques
- 2) Advanced airway management
- 3) Familiarization with the El Dorado County MCI plan