EL DORADO COUNTY EMS AGENCY
PREHOSPITAL PROTOCOLS

Effective: July 1, 2015
Reviewed: July, 2019
Revised: June, 2023
Scope: BLS/ALS – Adult/Pediatric

EMS Agency Medical Director

GENERAL TRAUMA

PROTOCOL PROCEDURE *Flow of protocol presumes patient has, or has the potential for, a significant traumatic injury. Rapid transport with IV(s) established en route is a standard. Consider air ambulance response for rapid transport from rural areas.* Amputations not meeting critical trauma criteria should be transported to the closest appropriate hospital. *Early notification to the receiving hospital is essential for proper triage and notification of surgical personnel.*

ADULT/PEDIATRIC

Basic Life Support

EMT

CAB (Circulation, Airway, Breathing) / ROUTINE MEDICAL CARE –

Be prepared to support ventilation with appropriate airway adjuncts

CONTROL BLEEDING:

For uncontrolled extremity bleeding, refer to Hemorrhage Control protocol:

1) Apply direct pressure/pressure bandage.
2) Use hemostatic agent, and if still not controlled:
3) Apply approved tourniquet device:
    - Apply 2-4" (5-8 cm) proximal to wound
    - Tighten until control of bleeding
    - Document time and presence/absence of distal pulses
    - If bleeding not controlled, apply second tourniquet 1-2" (3-5 cm) proximal to first

If bystanders or first responders placed non-approved or improperly placed tourniquet, assess need for tourniquet and re-apply an approved tourniquet if necessary.

For bleeding to head, neck, pelvis, or for penetrating trauma to extremities:

1) Pack wound with an approved hemostatic gauze until external bleeding is controlled (be aware that internal hemorrhage may still occur).
2) Assess airway and support ventilation with appropriate airway adjuncts as indicated.
3) Apply oxygen if pulse oximetry <94% or signs of hypoperfusion or respiratory distress
4) HP-CPR as indicated

SPINAL PRECAUTIONS if indicated

- **KEEP PATIENT WARM**

Have patient packaged prior to the medic unit's arrival, if possible.

SPECIFIC TRAUMATIC INJURIES:

AVULSED TOOTH:

- Replace tooth in socket (if adult tooth and patient is conscious and alert) or place tooth in milk, normal saline, saline soaked, or a commercially available "tooth saver."

EYE INJURIES:

- Stabilize or dress both eyes in place with saline soaked gauze or use cup or eye shield. Avoid applying direct pressure to eye and do not attempt to replace partially torn globe.

EXTREMITY INJURIES:

- Splint extremity in position found unless distal circulation compromised. Return extremity to anatomical position only if signs of distal perfusion absent. Before and after splinting or other manipulation, check distal circulation, sensation, motion (csm) and recheck frequently.
- Cover exposed bone with saline-soaked gauze. Do not reduce exposed bone back into wound.
- Apply Traction splint to isolated closed mid-shaft femur fracture.
- Apply pelvic binder for suspected open-book pelvic fractures. Bed sheet or KED may be used if commercial binder not available.

AMPUTATIONS/AVULSIONS:

- Place amputated/avulsed part in a dry, sterile, and watertight container/bag. Place the sealed container/bag in ice water and transport with the patient.

FLAIL CHEST:

- Closely monitor patient's airway, breathing, and consider CPAP.

OPEN CHEST WOUNDS:

- Cover (do not pack) the wound with occlusive dressing such as Asherman Chest Seal
- Continuously evaluate for the development of tension pneumothorax. If the patient's condition worsens after the application of occlusive dressing, remove dressing momentarily during forceful exhalation. Evaluate patient, then re-apply by securing the dressing on three sides only.

OPEN NECK WOUNDS:

- Cover wound with an occlusive dressing and apply direct pressure
- If uncontrolled hemorrhage occurs, pack wound with hemostatic gauze before covering wound with occlusive dressing
- Closely monitor patient's airway and breathing
- DO NOT apply cervical collar to penetrating neck wounds

IMPALED OBJECTS:

- Do not remove object unless it interferes with CPR or upper airway
- Stabilize object in place

ABDOMINAL EVISCERATIONS:

- Cover injury with a sterile saline-soaked dressing
- Cover saline-soaked dressing with an occlusive dressing

Advanced Life Support

Paramedic

CONTACT BASE - preferably while en route to the scene for early treatment and destination decisions.

RAPID TRANSPORT - as soon as possible with ALS procedures performed en route. Ideally, scene times for critical trauma should not exceed 10 minutes.

VASCULAR ACCESS - establish 2 large bore IVs via blood administration or macro drip tubing. Place IO if unable to establish IV.

NORMAL SALINE - Rate as indicated. If patient is in shock, or is compensating for impending shock, refer to SHOCK protocol.

CARDIAC MONITOR

SECURE AIRWAY – if indicated.

- Consider intubation (adult only) or SGA placement for GCS < 8
- Monitor ETCO2

CONSIDER PAIN MANAGEMENT – refer to Pain Management protocol

BLEEDING - refer to Hemorrhage Control protocol

TRAUMATIC ARREST

- Treat cardiac rhythm per protocol
- Consider bilateral needle chest decompression
- Bolus normal saline aggressively with pressure

TERMINATION OF RESUSCITATION

ADULT traumatic arrest resuscitation may be terminated when patient is:

1. Not hypothermic AND
2. Not victim of submersion AND
3. Not obviously pregnant AND
4. EMS did not witness cardiac arrest AND
5. No shockable rhythm AND
6. No ROSC after five (5) two-minute cycles of HP-CPR

PEDIATRIC traumatic arrest resuscitation may be terminated when patient is:

1. Not hypothermic AND
2. Not victim of submersion AND
3. Not obviously pregnant AND
4. Reversible causes identified/treated AND
5. No ROSC AND asystole on the monitor after:

- Ten (10) two-minute cycles of HP-CPR AND
- Minimum one dose of epinephrine