TRAUMA PATIENT CARE

Adult | **Pediatric**

Purpose

To identify trauma patients who are at the greatest risk for serious injury and determine the most appropriate destination.

- Trauma Centers improve outcomes for patients with significant traumatic injuries. Patients meeting Critical Trauma Criteria should be transported as soon as possible. On scene procedures should be limited to patient assessment, airway management, external hemorrhage control, and spinal motion restriction procedures. Additional interventions should take place en route with the exception of those incidents requiring prolonged extrication.

Physiological Criteria

- All Patients
  - Unable to follow commands (motor GCS < 6)
  - RR < 10 or > 29 breaths/min
  - Respiratory distress or need for respiratory support
  - Room-air pulse oximetry < 90%
- Age 0–9 years
  - SBP < 70 mm Hg + (2 x age in years)
- Age 10–64 years
  - SBP < 90 mmHg or
  - HR > SBP
- Age ≥ 65 years
  - SBP < 110 mmHg or
  - HR > SBP

Anatomical Criteria

- Penetrating injury to head neck, torso, or extremities proximal to knee or elbow
- Depressed or suspected open skull fracture
- Chest wall instability or deformity or suspected flail chest
- 2 or more proximal long bone fractures in an adult or 1 or more proximal long bone in patient < 14yrs.
- Paralysis
- Crushed, de-gloved, mangled extremity or pulseless extremity
- Amputation proximal to wrist and ankle
- Suspected Pelvic fracture

Adult	Pediatric

Mechanism of Injury Criteria

- High risk automobile crash
  - Intrusion into the passenger compartment (including roof): occupant side > 12 inches, any side > 18 inches
  - Death of occupant in the same compartment
  - Ejection from vehicle (partial or complete)
  - Child (age 0-9) unrestrained or in unsecured child safety seat
  - Vehicle telemetry data consistent with severe injury
- Pedestrian/bicycle rider thrown, run over, or with significant impact Falls from height greater than 10 feet (all ages)
- Rider separated from transport vehicle with significant impact (e.g., motorcycle, ATV, horse, etc.)

Special Considerations

- Patients 55 years or older
- Low-level falls in young children (age ≤ 5 years) or older adults (age ≥ 65 years) with significant head impact
- Anticoagulant use or bleeding disorder
- Time sensitive extremity injury including tourniquet application
- Suspicion of child abuse
- End stage renal disease requiring dialysis
- Pregnant patients > 20 weeks
- Blunt trauma involving large livestock

Contact Base Hospital if there is any concern about appropriate destination.

BLS

Open and position the airway
Airway Adjuncts: OPA/NPA as needed to control the airway
O_2, titrate SpO_2 to $\geq$ 94%
SMR if indicated
Control external bleeding
Prevent hypothermia
Treat suspected shock

ALS

Cardiac Monitor, Waveform $EtCO_2$, Vascular Access

SBP < 90 mmHg	If poor perfusion or suspected shock
Fluid Bolus NS 250 mL IV/IO • Titrate SBP ≥ 90 mmHg Initiate second large bore IV	**Fluid Bolus NS 20 mL/kg** IV/IO • Titrate to age appropriate SBP Initiate second large bore IV

ALS *cont.*

Adult

Trauma patients with signs and symptoms of hemorrhagic shock meeting all of the following criteria:

1. Blunt or penetrating trauma to the chest, abdomen, or pelvis
2. Total time from Time of Injury to Trauma Center (ED) is > 30 minutes
3. Within 3 hours of injury
4. SBP < 90

TXA Bolus drip 1gm in NS 50 - 100 mL IV/IO over 10 minutes
- No repeat

Fluid Bolus NS 250 mL IV/IO
- Repeat as needed to maintain SBP ≥ 90

* **Place the approved neon green wristband on patient**

TXA Contraindications

- Active thromboembolic event (within the last 24 hours); i.e., active stroke, myocardial infarction, pulmonary embolism or DVT
- Hypersensitivity or anaphylactic reaction to TXA
- Traumatic arrest with > 5 minutes of CPR without return of vital signs
- Suspected traumatic brain injury
- Drowning or hanging victims
- Cervical cord injury with motor deficits

Consider

Consider advanced airway if GCS is ≤ 8 and BLS airway is ineffective
- IV/IO access should be initiated en route
- Consider pain management
- **Pregnant patients** meeting criteria should be taken to a **Trauma Center** with **obstetric** services.
- Air ambulances should only be used when they offer a measurable advantage to ground transport and/or those in need of immediate procedures available to a Flight Nurse but outside the scope of practice of Paramedics.
- Patients with an uncontrolled airway may be considered for transport to the closest hospital.
- For trauma meeting burn criteria - refer to burn triage criteria
- This policy does not apply to Multi-Casualty Incidents

Direction

- If patient meets trauma triage criteria transport to a designated Trauma Receiving Center
- Contact the Trauma Center and advise them of a **"TRAUMA ALERT"** (preferably from the scene)
- If TXA administered advise the Trauma Hospital of **"TRAUMA ALERT TXA"**
- On scene time should be ≤ 10 minutes
- Contact the Base Hospital for additional treatment or transport decisions
- When in doubt, transport to the closest Trauma Center