

Trauma Administrative Guideline



History <ul style="list-style-type: none"> • Time/mechanism/speed • Damage/intrusion • Restraints or protective equipment 	Signs and Symptoms <ul style="list-style-type: none"> • Pain • Deformity • Bleeding • ALOC • Shock 	Differential <ul style="list-style-type: none"> • Chest injuries • Intraabdominal injuries • Pelvic fractures/bleeding • Head injury • Extremity trauma
---	--	---

<u>Dead on Scene AG</u> or <u>Traumatic Cardiac Arrest AG</u> if indicated	
B	Hemorrhage control Airway maintenance Breathing and ventilation Circulation Time critical procedures as part of primary survey ***Minimize scene times***
P	18 g IV/IO placement Cardiac monitor

Shock Index =
HR/SBP

For peds, use
age-appropriate BP
goals

Blunt trauma at risk for hemorrhage	
B	Apply Spinal Motion Restriction
P	<p>≥14 years: Administer TXA 2 g slow IV/IO push (over at least 2 minutes) if shock index >1 or SBP <90 mmHg</p> <p>Peds <14 years: Administer TXA 30 mg/kg (max 2 g) slow IV/IO push (over at least 2 minutes) for patients with shock (per age-based cutoff)</p> <p>Administer NS/LR fluid bolus to keep SBP >110 mmHg</p>

Penetrating or isolated extremity trauma at risk of hemorrhage	
B	If isolated penetrating trauma to head, follow EPIC TBI for fluid resuscitation BP goals
P	<p>≥14 years: Administer TXA 2 g slow IV/IO push (over at least 2 minutes) if shock index >1 or SBP <90 mmHg</p> <p>Peds <14 years: Administer TXA 30 mg/kg (max 2 g) slow IV/IO push (over at least 2 minutes) for patients with shock (per age-based cutoff)</p> <p>Administer NS/LR fluid bolus to keep SBP >70 mmHg</p>

EPIC TBI GCS <15 or loss of consciousness	
B	<p>O₂ to target saturation of 100%</p> <p>20 mL/kg NS/LR fluid bolus to keep SBP >110 mmHg [70+(agex2) for peds]</p> <p>EtCO₂ target for all mechanically or manually ventilated patients 40 (range 35-45)</p>
P	Advanced airway management <u>only</u> if unable to oxygenate/ventilate with BLS airway interventions

Trauma Procedures

Control massive hemorrhage
 Needle decompression for tension pneumothorax
 Splint obvious fractures



Education/Pearls

The treatment of traumatic injury focuses on ABCs and prevention of further or secondary injury. Interventions are aimed at preventing overt hypoxemia, hypotension, and hyperventilation.

- Transport patients based on **SAEMS Regional Trauma Triage Guidelines**.
- **Airway/Breathing:** Prepare for a difficult airway, as traumatic airways are made difficult by trauma conditions, including spinal motion restriction, patient mentation, and bloodied airways.
 - For advanced airway, anticipate the need for suction and video laryngoscopy, if available.
 - Use care during intubation to maintain in-line stabilization, as cervical spine fractures may be present.
- **Circulation:** The most common cause of shock following trauma is hemorrhage. Scalp wounds, abdominal organ injury, and long-bone fractures can cause rapid blood loss.
 - Shock: For any evidence of shock, obtain two points of access (IV/IM/IO).
 - Bleeding - apply anticoagulant gauze wound packing until resistance is met and/or apply tourniquet until bleeding is stopped.
 - Pulseless - refer to **Traumatic Cardiac Arrest AG**; may terminate as per **Dead on Scene AG** if blunt trauma mechanism or for penetrating trauma if transport will take > 15 min to Level 1 Trauma Center.
- **Immobilization:**
 - Long spine board use in trauma patients should be restricted to extrication procedures only and should be avoided in patients with penetrating trauma.
 - Spinal motion restriction procedure should be followed for all trauma patients with neck or back pain, neurologic deficit, or other risk factor for spine trauma. The elderly are at high risk for spinal injury with lower mechanism injury.
 - Patients with isolated blunt injuries may not warrant SMR.
- **Temperature:** Prevent hypothermia, as this contributes to a harmful acid/base status and bleeding abnormalities.
 - Expose the patient for rapid trauma assessment/treatment only.
 - Cover patient and rewarm as soon as possible.

Moderate or severe TBI: defined as anyone with physical trauma and a mechanism consistent with the potential to have induced a brain injury, and:

- Any injured patient with loss of consciousness, especially those with GCS <15 or confusion OR
- Multisystem trauma requiring intubation whether the primary need for intubation was from TBI or from other potential injuries OR
- Post-traumatic seizures, whether ongoing or not
- For pediatric patients or infants, when GCS may be difficult to obtain or interpret: any evidence of decreased level of consciousness, decreased responsiveness, or deterioration of mental status

Patients with dementia or cognitive disorder that are baseline impaired but have evidence of a fall with head strike should be treated empirically for TBI.

See next page (**EPIC TBI**) for TBI management guidelines.

Emergency Surgical Airway

- In the event oxygenation and ventilation of the patient cannot be achieved either by BLS maneuvers, placement of a SGA or Endotracheal Intubation, perform surgical cricothyrotomy.
 - Surgical Cricothyrotomy: 12 years of age and above
 - Needle Cricothyrotomy: Under 12 years of age