TAB 7 GUIDELINE 1

GENERAL TRAUMA CRITERIA

DEFINITION OF “TRAUMA GUIDELINE” PATIENT

1. An injured patient who you think is at significant risk for loss of life or limb, or significant, permanent disfigurement or disability; and the injury is caused by blunt or penetrating injury, exposure to electromagnetic, chemic or radioactive energy, drowning, suffocation, or strangulation, or a deficit or excess of heat.

2. Patients identified below shall be taken to the closest appropriate Level 1 or 2 Trauma Center Hospital or if appropriate Level 3 Trauma Center Hospital for intermediate trauma patient classifications. “Serious Burns” as defined shall be transported to closest burn center.

3. This criterion does not constitute activation of a “trauma” at the receiving facility.

<table>
<thead>
<tr>
<th>Trauma Major Criteria (General)</th>
<th>Adult</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Deterioration in LOC at scene or in transport</td>
<td>• Level 1 or 2 Trauma Center with age &gt; 16 years</td>
</tr>
<tr>
<td>• Failure to localize to pain</td>
<td>• GCS &lt; 12</td>
</tr>
<tr>
<td>• Requires intubation</td>
<td>• Heart Rate &gt; 120 with evidence of hemorrhagic shock</td>
</tr>
<tr>
<td>• Requires relief of tension pneumothorax</td>
<td>• SBP &lt; 90 with absent radial pulse with carotid pulse</td>
</tr>
<tr>
<td>• Penetrating trauma to the head, neck or torso</td>
<td></td>
</tr>
<tr>
<td>• Significant penetrating trauma to extremities proximal to knee or elbow with neurovascular compromise</td>
<td></td>
</tr>
<tr>
<td>• Injuries to head, neck or torso with:</td>
<td></td>
</tr>
<tr>
<td>• Visible crush injury, pelvic fracture, flail chest</td>
<td></td>
</tr>
<tr>
<td>• Amputations proximal to wrist or ankle</td>
<td></td>
</tr>
<tr>
<td>• Fractures of two (2) or more proximal long bones</td>
<td></td>
</tr>
<tr>
<td>• Evidence of neurovascular compromise</td>
<td></td>
</tr>
<tr>
<td>• Signs and symptoms of spinal cord injury</td>
<td></td>
</tr>
<tr>
<td>• 2nd or 3rd degree burns &gt; 10% of total body surface</td>
<td></td>
</tr>
<tr>
<td>• Significant burns of face, feet, hands, genitalia or airway</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trauma Intermediate Criteria (General)</th>
<th>Pediatric</th>
</tr>
</thead>
<tbody>
<tr>
<td>• GCS = 13</td>
<td>• Level 3 Trauma Center with age &lt; 16 years</td>
</tr>
<tr>
<td>• LOC &gt; 5 minutes or witnessed by EMS personnel</td>
<td></td>
</tr>
<tr>
<td>• HR &gt; 120 without evidence of hemorrhagic shock</td>
<td></td>
</tr>
<tr>
<td>• Injuries to head, neck, or torso with abdominal tenderness, distention or seat belt sign</td>
<td></td>
</tr>
</tbody>
</table>

| Geriatric                             |                                                                                |
|---------------------------------------|                                                                                |
| • Level 1 or 2 Trauma Center with age > 70 with modifications |                                                                                |
| • GCS < 14 with suspected TBI          |                                                                                |
| • GCS < 13                            |                                                                                |
| • SBP < 100, absent radial pulse      |                                                                                |
| • Fracture of one long bone in MVA    |                                                                                |
| • Injury to 2 or more body regions    |                                                                                |

<table>
<thead>
<tr>
<th>Adult</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pediatric</td>
</tr>
<tr>
<td>Geriatric</td>
</tr>
</tbody>
</table>
SPECIAL CONSIDERATIONS:

1. **Interventions that delay transport should be minimized except for controlling the airway.**

2. Pediatric trauma patients
   
   a. Pediatric trauma patient is defined by age < 16 years of age. These patients will not be taken to University Toledo Medical Center (UTMC). Any pediatric trauma patient in a cardiac arrest is to be taken to the closest hospital, including UTMC.

3. Pregnant trauma patients
   
   a. Trauma in the 1st trimester will be considered a Trauma Guideline patient.
   
   b. Traumas in the 2nd / 3rd trimester (gestation > 20 weeks) are not to be taken to University Toledo Medical Center (UTMC). 3rd trimester trauma patients in a cardiac arrest are to be taken to the closest hospital, including UTMC.
   
   c. All pregnant patient trauma patients in the 2nd or 3rd trimester that do not meet Adult Trauma Guideline criteria, but have suspected abdominal injuries, pain, vaginal bleeding or discharge, should be taken to the closest acute care facility which provides fetal monitoring (All hospitals except UTMC provide fetal monitoring).

4. Minimal radio report
   
   a. **Trauma guideline:** Patient is a major or intermediate trauma guideline patient.
   
   b. **Age of patient (estimate).**
   
   c. **Gender.**
   
   d. **ETA:** Provide an ETA to the closest facility and identify the facility.
   
   e. **Mechanism of injury:** Briefly describe the mechanism of injury and basis for declaring a trauma.
   
   f. **Vital signs – including HR / BP / RR / SpO₂ and if appropriate EtCO₂**
**TAB 7 GUIDELINE 2**
**MCI START TRIAGE AND JUMPSTART**

**ABLE TO WALK**
- YES → **MINOR** → SECONDARY TRIAGE [Evaluate first all children (using JumpSTART) that did not walk under their own power]
- NO → **BREATHING**

**BREATHING**
- YES → **POSITION UPPER AIRWAY** → BREATHING → **IMMEDIATE**
- NO → **APNEIC**

**APNEIC**
- **PEDIATRIC**
  - NO → **PALPABLE PULSE**
    - NO → **DECEASED**
    - YES → **5 RESCUE BREATHS** → **BREATHING** → YES → **IMMEDIATE**
  - YES → **RESPIRATORY RATE**
    - > 30 ADULT → **IMMEDIATE**
    - < 15 OR > 45 PEDIATRIC → **IMMEDIATE**

**RESPIRATORY RATE**
- **PERFUSION**
  - CAP REFILL > 2 SEC (ADULT) → **IMMEDIATE**
  - NO PALPABLE PULSE (PEDIATRIC) → **IMMEDIATE**

**PERFUSION**
- **MENTAL STATUS**
  - DOES NOT OBEY COMMANDS (ADULT)
    - “P” (INAPPROPRIATE) POSTURING OR “U” (PEDIATRIC) → **IMMEDIATE**
  - OBEYS COMMANDS (ADULT)
    - “A” “V” OR “P” (APPROPRIATE) (PEDIATRIC) → **DELAYED**

**NEUROLOGICAL ASSESSMENT**

<table>
<thead>
<tr>
<th>A</th>
<th>ALERT</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>Responds to verbal stimuli</td>
</tr>
<tr>
<td>P</td>
<td>Responds to painful stimuli</td>
</tr>
<tr>
<td>U</td>
<td>Unresponsive to noxious stimuli</td>
</tr>
</tbody>
</table>
TAB 7 GUIDELINE 3
LOAD AND GO SITUATIONS

1. Load and go situations in trauma are life-threatening situations that exist when the patient must be packaged and transported immediately. Time is of the essence with few exceptions. Specific resuscitative efforts will need to be delegated. The EMS provider must continue with the primary survey as resuscitation continues.
   a. The following patients should not be on scene longer than 10 minutes:
      i. Head injury with decreased level of consciousness.
      ii. Airway obstruction not corrected by mechanical intervention (ie suction).
      iii. Respiratory compromise and / or inadequate perfusion.
      iv. Traumatic cardiac arrest.
      v. Shock.
      vi. Pediatric airway problem / arrest.
      vii. Pediatric Multi-system trauma.
   b. There may be situations to delay transport, they are:
      i. Securing a safe scene.
      ii. Extrication of the victim.
   c. Be cautious of the time spent on the scene for stabilization measures. Ask yourself will the procedure save the patient’s life with immediate intervention or can the procedure be done en route to the hospital.

2. The Glasgow Trauma Scale may be a useful tool in the evaluation of trauma victims and aid in critical care transport decisions; it may also give on-line MEDICAL CONTROL a better picture of the patient’s condition.

   a. Consider air medical transport.
**TAB 7 GUIDELINE 4**

**HEMORRHAGE CONTROL**

**INDICATIONS**
- Life threatening extremity hemorrhage that cannot be controlled by other means
- Life threatening torso hemorrhage that cannot be controlled by other means
- Serious or life threatening extremity hemorrhage and tactical considerations that prevent the use of standard hemorrhage control techniques

**CONTRAINDICATIONS**
- Hemostatic Dressing
- Wounds involving open thoracic or abdominal cavities.
- Tourniquet
- Non-extremity hemorrhage
- Proximal extremity location where tourniquet application is not practical

**DIFFERENTIAL**
- Multi system trauma
- Abrasion
- Contusion
- Laceration
- Sprain
- Dislocation
- Fracture
- Amputation

---

**LEGEND**
- EMR
- EMT
- A-EMT
- EMT-P
- MC Order

---

**Universal Patient Care**

- Direct Pressure
  - Bleeding Controlled
  - NO
  - Pressure Bandage
  - Bleeding Controlled
  - NO
  - Hemostatic Dressing / Agent
  - Bleeding Controlled
  - NO
  - Wound amenable to tourniquet placement (extremity injury)
    - YES
    - Tourniquet
    - Bleeding Controlled
    - NO
    - Contact Medical Control
    - Transport to Appropriate Facility
# TAB 7 GUIDELINE 5
## ABDOMINAL TRAUMA

### HISTORY
- Type of Injury
- Mechanism: crush / penetrating
- Time of injury
- Open vs. closed wound
- Wound contamination
- Medical History
- Medications

### SIGNS / SYMPTOMS
- Abdominal shape / bowel sounds
- Wounds / Contusions / Eviscerations
- Palpate for:
  - Rigidity
  - Tenderness (Pain)

### DIFFERENTIAL
- Intra-abdominal bleeding
- Pelvis / Femur fracture

---

<table>
<thead>
<tr>
<th>Multi-System or Pediatric Trauma Guidelines</th>
<th>Universal Patient Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>Isolated Abdominal Injury</td>
</tr>
<tr>
<td>YES</td>
<td>Spinal Immobilization (If indicated)</td>
</tr>
<tr>
<td></td>
<td>Airway Management</td>
</tr>
<tr>
<td></td>
<td>Rapid Transport for Penetrating Trauma</td>
</tr>
<tr>
<td></td>
<td>Stabilize Fractures Wound Care Hemorrhage Control</td>
</tr>
<tr>
<td></td>
<td>Cardiac Monitor / Pulse Oximetry</td>
</tr>
<tr>
<td></td>
<td>Contact Medical Control</td>
</tr>
<tr>
<td></td>
<td>Transport to Appropriate Facility</td>
</tr>
<tr>
<td></td>
<td>Consider Air Medical Transport</td>
</tr>
</tbody>
</table>

### LEGEND

- EMR
- EMT
- A-EMT
- EMT-P
- MC Order
**TAB 7 GUIDELINE 6**

**CHEST TRAUMA**

<table>
<thead>
<tr>
<th>HISTORY</th>
<th>SIGNS / SYMPTOMS</th>
<th>DIFFERENTIAL</th>
</tr>
</thead>
</table>
| - Type of Injury  
- Mechanism: crush / penetrating  
- Time of injury  
- Open vs. closed wound  
- Wound contamination  
- Medical History  
- Medications | - Inspect for wounds, ecchymosis,  
- Flail segments,  
- Tracheal deviation, JVD and symmetry  
- Auscultate for  
  - Breath sounds  
  - Heart tones  
- Palpate for  
  - Crepitus  
  - Deformity | - Chest Injury  
  - Tension pneumothorax  
  - Flail Chest  
  - Pericardial Tamponade  
  - Open chest wound  
  - Hemothorax |

**LEGEND**

- EMT
- EMT-P
- A-EMT
- EMR
- MC Order

**Universal Patient Care**

- NO

**Multi-System or Pediatric Trauma Guidelines**

- YES

**Isolated Chest Injury**

- Spinal Immobilization
  *(If indicated)*

- Airway Management

- Rapid Transport for Penetrating Trauma

- Cover open wound with occlusive dressing on (3) sides

- Stabilize Fractures  
  - Wound Care  
  - Hemorrhage Control

- Contact Medical Control

- Transport to Appropriate Facility

- Consider Air Medical Transport
HISTORY
- Type of Injury
- Mechanism: crush / penetrating / amputation
- Time of injury
- Open vs. closed wound / fracture
- Wound contamination
- Medical History
- Medications

SIGNS / SYMPTOMS
- Pain, swelling
- Deformity
- Altered sensation / motor function
- Diminished pulse / capillary refill
- Decreased extremity temperature

DIFFERENTIAL
- Abrasion
- Contusion
- Laceration
- Sprain
- Dislocation
- Fracture
- Amputation

Universal Patient Care
  ➔ Spinal Immobilization
    (If indicated)
  ➔ Airway Management
  ➔ Stabilize Fractures
    Wound Care
    Hemorrhage Control
  ➔ Pulseless Extremity
    Reposition extremity and reassess
  ➔ Albuterol
    10 – 20 mg Nebulized
  ➔ Contact Medical Control
    Transport to Appropriate Facility
    Consider Air Medical Transport

LEGEND
- EMR
- EMT
- A-EMT
- EMT-P
- MC Order
TAB 7 GUIDELINE 8

EYE INJURY

<table>
<thead>
<tr>
<th>HISTORY</th>
<th>SIGNS / SYMPTOMS</th>
<th>DIFFERENTIAL</th>
</tr>
</thead>
</table>
| • Type of Injury  
• Mechanism: blunt / chemical / foreign object / penetrating  
• Time of injury  
• Open vs. closed wound / fracture  
• Wound contamination  
• Medical History  
• Medications | • Pain, swelling  
• Deformity  
• Pupil Dilation  
• Extra Ocular Eye Movement  
• Visual disturbance  
• Facial Swelling | • Corneal abrasion  
• Globe rupture  
• Periorbital Ecchymosis  
• Subconjunctival Hemorrhage  
• Facial Fractures |

Multi-System or Pediatric Trauma Protocol

NOT NO

Blunt Eye Injury

Patch both eyes

Penetrating Eye Injury

DO NOT Remove Object

Stabilize object with gauze and patch unaffected eye

Foreign Body / Chemical Exposure

Continuous saline flush to affect eye (s)

Universal Patient Care

Isolated Eye Injury

Spinal Immobilization (If indicated)

Stabilize Fractures Wound Care Hemorrhage Control

Cardiac Monitor / Pulse Oximetry

Contact Medical Control

Transport to Appropriate Facility

LEGEND

EMR  
EMT  
A-EMT  
EMT-P  
MC Order
SPECIAL CONSIDERATIONS:

1. Irrigation of the eye, when appropriate, should be initiated immediately, even if transport is delayed. Irrigation may continue during transport to the hospital. **All alkali chemical burns** to the eye should have immediate irrigation started prior to transporting.

2. Avoid touching the eye

3. Patients with glaucoma should receive prompt transport, as their condition may be an acute emergency
TAB 7 GUIDELINE 9
HEAD TRAUMA

**HISTORY**
- Time of injury
- Mechanism (blunt vs. penetrating)
- Loss of consciousness
- Bleeding
- Past medical history
- Medications
- Evidence of multi-trauma

**SIGNS / SYMPTOMS**
- Pain, swelling, bleeding
- Altered mental status
- Unconscious
- Respiratory distress / failure
- Vomiting
- Major traumatic mechanism of injury
- Seizure

**DIFFERENTIAL**
- Skull fracture
- Brain injury (concussion, contusion, hemorrhage or laceration)
- Epidural hematoma
- Subdural hematoma
- Subarachnoid hemorrhage
- Spinal injury
- Abuse

**LEGEND**
- EMR
- EMT
- A-EMT
- EMT-P
- MC Order

---

**Multi-System or Pediatric Trauma Guidelines**

**Airway Management**
- Maintain EtCO₂ 35-45
- Suspected Hemiation
- maintain EtCO₂ 30 - 35

**Seizure Guidelines**

---

**Universal Patient Care**

---

**Isolated Head Trauma**

---

**Spinal Immobilization**

---

**Obtain and record GCS**

---

**GCS < 8**

---

**Gag Reflex**

---

**GCS > 8**

---

**Basic Airway Maneuvers**

---

**Maintain Pulse Ox > 92%**

---

**Cardiac Monitor / Pulse Oximetry**

---

**Seizure**

---

**Monitor and Reassess every 5 minutes**

---

**Contact Medical Control**
- Transport to Appropriate Facility
- Consider Air Medical Transport

---

**Glasgow Coma Score (GCS)**
(Minimum 3, Maximum 15)

**Eyes**
(4) Opens eyes spontaneously
(3) Opens eyes to voice
(2) Opens eyes to pain
(1) Does not open eyes

**Verbal**
(5) Oriented
(4) Confused, disoriented
(3) Inappropriate words
(2) Incomprehensible sounds
(1) No sounds

**Motor**
(6) Obey commands
(5) Localizes to painful stimuli
(4) Withdrawal to painful stimuli
(3) Flexion to painful stimuli
(2) Extension to painful stimuli
(1) No movement
### TAB 7 GUIDEライン 10
### MULTI-SYSTEM TRAUMA

#### HISTORY
- Time and mechanism of injury
- Damage to structure or vehicle
- Other injured or dead
- Speed and details of MVC
- Restraints / Protective equipment
- Ejection
- Loss of consciousness
- Past medical history
- Medications

#### SIGNS / SYMPTOMS
- Pain, swelling
- Deformity, lesions, bleeding
- Altered mental status
- Respiratory status
- Hypotension or shock
- Arrest
- Pulse rate / rhythm / quality
- Systolic blood pressure
- External hemorrhage
- Skin color
- Unconscious

#### DIFFERENTIAL
- Chest Injury
- Tension pneumothorax
- Flail Chest / Open chest wound
- Pericardial Tamponade
- Hemothorax
- Intra-abdominal bleeding
- Pelvis / Femur fracture
- Spine fracture / Cord injury
- Head injury (see Head Trauma)
- Extremity fracture / dislocation
- HEENT (Airway obstruction)

---

**Universal Patient Care**

- **Spinal Immobilization**
- **Obtain and record GCS**
  - GCS < 8
  - Gag Reflex
    - YES
    - Basic Airway Maneuvers
    - Maintain Pulse Ox > 92%
  - NO
    - Airway Management
      - Maintain EtCO₂ 35-45

- **Cardiac Monitor / Pulse Oximetry**
  - Vital Signs / Perfusion
    - Abnormal
    - Normal

- **Rapid Transport**

- **Focused History and Physical Exam**

- **Continued Hypotension**
  - Control of external hemorrhage
  - Splinting of long bone fracture
  - Splinting of pelvic fracture
  - Wound care

- **Contact ALS Intercept**

---

**Focused History and Physical Exam**

- **Transport**
  - **Body Specific Trauma Guideline**
    - **Contact Medical Control**
      - Transport to Appropriate Facility
      - Consider Air Medical Transport
### TAB 7 GUIDELINE 11

**MUSCULOSKELETAL TRAUMA | AMPUTATED BODY PART**

<table>
<thead>
<tr>
<th>HISTORY</th>
<th>SIGNS / SYMPTOMS</th>
<th>DIFFERENTIAL</th>
</tr>
</thead>
</table>
| • Type of Injury  
• Mechanism: crush / penetrating / amputation  
• Time of injury  
• Open vs. closed wound / fracture  
• Wound contamination  
• Medical History  
• Medications | • Pain, swelling  
• Deformity  
• Altered sensation / motor function  
• Diminished pulse / capillary refill  
• Decreased extremity temperature | • Abrasion  
• Contusion  
• Laceration  
• Sprain  
• Dislocation  
• Fracture  
• Amputation |

#### Universal Patient Care
- Clean amputated part
- Wrap in sterile dressing soaked in Normal Saline
- Place in container / hazard waste bag
- Place container on ice / refrigerator
- Do Not Delay Patient Transport looking for amputated body part

#### Isolated Extremity Injury
- Spinal Immobilization (If indicated)

#### Stabilize Fractures
- Wound Care
- Hemorrhage Control
- Assess Pulse / Motor / Sensation

#### Pulseless Extremity
- Reposition extremity and reassess Pulse / Motor / Sensation

#### Cardiac Monitor / Pulse Oximetry
- Contact Medical Control
- Transport to Appropriate Facility

#### Femur Fracture
- Traction Device

#### Pelvic Fracture
- Sheet splinting or Pelvic Binder Device

#### LEGEND
- EMR
- EMT
- A-EMT
- EMT-P
- MC Order
SPECIAL CONSIDERATIONS:

1. This guideline is for an isolated fracture of the extremity. In providing pain management for extremity fractures care should be taken to ensure that the patient has no other injuries. If pain medication is given to a patient with other type injuries such as head, chest or abdominal injuries it could exacerbate those injuries. For units with delayed transports and treat and release authorization, see Special Operations Pain Control Guideline of approved by Medical Director.

2. Urgently transport any injury with vascular compromise.

3. Severe bleeding from an extremity not rapidly controlled may necessitate the application of a tourniquet.

4. Hip dislocations and knee and elbow fracture / dislocations have a high incidence of vascular compromise.

5. Interventions
   a. Wounds
      i. Apply dry sterile dressing
      ii. Secure extremity to backboard (OR)
      iii. Buddy splint to other lower extremity (OR)
      iv. Apply traction splint device when applicable (do not delay transport to apply device)
   b. Pulseless extremity
      i. Evaluate patient for hypotension
      ii. Reposition extremity and reassess for pulse
TAB 7 GUIDELINE 12
OBSTETRICAL TRAUMA

HISTORY
- Type of Injury
- Mechanism: crush / penetrating / amputation
- Time of injury
- Open vs. closed wound / fracture
- Wound contamination
- Medical History
- Medications

SIGNS / SYMPTOMS
- Pain, swelling
- Deformity
- Altered sensation / motor function
- Diminished pulse / capillary refill
- Decreased extremity temperature

DIFFERENTIAL
- Acute blood loss
- Placenta abrupto
- Uterine rupture
- Intra-abdominal injury
- Diaphragmatic rupture

---

Universal Patient Care

Spinal Immobilization

Obtain and record GCS

GCS < 8

Gag Reflex

NO

Airway Management
Maintain EtCO₂ 35-45

YES

Basic Airway Maneuvers

Maintain Pulse Ox > 92%

Cardiac Monitor / Pulse Oximetry

Vital Signs / Perfusion

Stabilize Fractures
Wound care
Hemorrhage control

Place in left lateral decubitus position

Contact Medical Control

Transport to Appropriate Facility

Consider Air Medical Transport

---

LEGEND
EMR
EMT
A-EMT
EMT-P
MC Order

---

Estimated Gestational Age (EGA)
If EGA > 20 weeks, consider two patients: mother and fetus. Estimation of gestational age may be made based on fundal height by palpating for top of uterus:

If uterus is at umbilicus then EGA > 20 weeks
Estimation by Last Menstrual Period:
Due Date = LMP + 9 months + 7 days
EGA = due date – current date
SPECIAL CONSIDERATIONS:

1. RESUSCITATION OF THE MOTHER IS THE NUMBER 1 PRIORITY

2. Manage shock and hypotension
   a. For the patient that is 6 months pregnant or more, tilt the backboard to the left side by placing towel roll underneath
   b. CAUTION: Shock is not always obvious in the pregnant patient. Because of an increase in circulating blood volume during pregnancy, the pregnant female will show signs of hypovolemia later in their course
**TAB 7 GUIDELINE 13**

**PEDIATRIC TRAUMA**

### HISTORY
- < 16 years of age
- Time and mechanism of injury
- Damage to structure or vehicle
- Other injured or dead
- Speed and details of MVC
- Restraints / Protective equipment
- Ejection
- Loss of consciousness
- Past medical history
- Medications

### SIGNS / SYMPTOMS
- Pain, swelling
- Deformity, lesions, bleeding
- Altered mental status
- Respiratory status
- Hypotension or shock
- Arrest
- Pulse rate / rhythm / quality
- Systolic blood pressure
- External hemorrhage
- Skin color
- Unconscious

### DIFFERENTIAL
- Chest Injury
  - Tension pneumothorax
  - Flail Chest
  - Pericardial Tamponade
  - Open chest wound
  - Hemothorax
- Intra-abdominal bleeding
- Pelvis / Femur fracture
- Spine fracture / Cord injury
- Head injury (see Head Trauma)
- Extremity fracture / dislocation
- HEENT (Airway obstruction)
- Hypothermia

---

**LEGEND**
- EMR
- EMT
- A-EMT
- EMT-P
- MC Order

---

**Universal Patient Care**

**Spinal Immobilization**

**Obtain and record GCS**

- **GCS < 8**
  - **Gag Reflex**
  - **NO**
  - **Airway Management**
    - Maintain EtCO\(_2\) 35-45
    - Suspected Herniation maintain EtCO\(_2\) 30 - 35
  - **YES**
  - **Basic Airway Maneuvers**
  - **Maintain Pulse Ox > 92%**
  - **Cardiac Monitor / Pulse Oximetry**
  - **Vital Signs / Perfusion**

- **GCS > 8**
  - **Basic Airway Maneuvers**
  - **Maintain Pulse Ox > 92%**
  - **Cardiac Monitor / Pulse Oximetry**
  - **Vital Signs / Perfusion**

**Abnormal**

**Normal**

**Rapid Transport**

**Focused History and Physical Exam**

**Transport**

**Continued Hypotension**

- Control of external hemorrhage
- Splinting of long bone fracture
- Splinting of pelvic fracture
- Wound care

**Contact ALS Intercept**

**Body Specific Trauma Guideline**

- **Contact Medical Control**
  - Transport to Appropriate Facility
  - Consider Air Medical Transport
### TAB 7 GUIDELINE 14
### SPINAL TRAUMA

<table>
<thead>
<tr>
<th>HISTORY</th>
<th>SIGNS / SYMPTOMS</th>
<th>DIFFERENTIAL</th>
</tr>
</thead>
</table>
| • Type of Injury  
• Mechanism: crush / penetrating / amputation  
• Time of injury  
• Open vs. closed wound / fracture  
• Wound contamination  
• Medical History  
• Medications | • Pain, swelling  
• Deformity  
• Altered sensation / motor function  
• Diminished pulse / capillary refill  
• Decreased extremity temperature | • Dislocation  
• Fracture  
• Spinal shock  
• Spinal cord injury |

#### Universal Patient Care

- **Isolated Spinal Injury**
  - **Spinal Immobilization**
    - **Stabilize Fractures**  
    - **Wound Care**  
    - **Hemorrhage Control**
  - **Cardiac Monitor / Pulse Oximetry**
  - **Contact Medical Control**
    - **Transport to Appropriate Facility**
    - **Consider Air Medical Transport**

#### Multi-System or Pediatric Trauma Guideline

**NO**

#### LEGEND

- **EMR**
- **EMT**
- **A-EMT**
- **EMT-P**
- **MC Order**

#### HISTORY

- **Type of Injury**
- **Mechanism:** crush / penetrating / amputation
- **Time of injury**
- **Open vs. closed wound / fracture**
- **Wound contamination**
- **Medical History**
- **Medications**

#### SIGNS / SYMPTOMS

- **Pain, swelling**
- **Deformity**
- **Altered sensation / motor function**
- **Diminished pulse / capillary refill**
- **Decreased extremity temperature**

#### DIFFERENTIAL

- **Dislocation**
- **Fracture**
- **Spinal shock**
- **Spinal cord injury**
TAB 7 GUIDELINE 15
POLICE CUSTODY
(RIOT CONTROL AGENTS / CONDUCTED ENERGY DEVICE)

**HISTORY**
- Age of victim
- Type of Injury
- Time of injury
- Medical History
- Medications – illegal drug usage
- Reason for use of conducted energy weapon
- Last Tetanus Shot

**SIGNS / SYMPTOMS**
- Agitation / Altered Mental Status
- Barb placement
- Face / Neck
- Breast / Axilla
- Groin
- Spine column
- External signs of trauma
- Palpitations
- Shortness of breath / Wheezing

**DIFFERENTIAL**
- Agitated Delirium Secondary to Psychiatric Illness
- Agitated Delirium Secondary to Substance Abuse
- Cardiac Dysrhythmia
- Closed Head Injury
- Multi system trauma
- Asthma Exacerbation

**LEGEND**
- EMR
- EMT
- EMT-P
- A-EMT
- MC Order

[Flowchart Diagram]

**Universal Patient Care**
- Spinal Immobilization (If indicated)
- Airway Management

**Behavioral | Excited Delirium Guidelines**
- YES

**Medical / Multi-System or Pediatric Trauma Guidelines**
- NO

**Riot Control Agents**
- YES

**Remove contaminated clothing, Irrigate face / eyes**

**Dyspnea / Wheezing**
- YES

**Asthma / COPD History**
- NO

**Respiratory Distress Guidelines**
- Observed 20 Minutes for Dyspnea or Wheezing?
- YES
- NO

**Contact Medical Control**
- Criteria for Treat / Release

**NO**

**YES**

**Transport to Appropriate Facility**

**Conducted Energy Device**
- YES

**Cardiac History / Complaint of Chest Pain / Dyspnea / Palpitations**
- NO

**Wound Care Hemorrhage Control**
- Barb Removal

**Cardiac Monitor / Pulse Oximetry**
- Perform procedure if able to transmit, do not delay care to obtain EKG

**NO**

**YES**

**Release to Police Officer**

NWO EMS (SVIAS) BLS – Tab 7 – Trauma Guidelines – Updated 2017_12_01 Page 20
SPECIAL CONSIDERATIONS:

1. All patients in police custody retain the right to participate in decision making regarding their medical care (as long as they have decisional capacity) and may request medical care of EMS. Consider utilizing the behavioral | excited delirium or psychiatric patient guideline as indicated

2. A key symptom to the potential onset of sudden death from excited delirium is “instant tranquility.” The patient who was initially very violent and combative suddenly becomes calm and docile. This is a serious and ominous sign; patient should be constantly monitored and transported for further evaluation
   a. Do not position or transport any restrained patient in such a way that could impact the patient’s respiratory or circulatory status

3. If extremity / chemical / law enforcement restraints are applied, follow Restraint Guideline
   a. All patients who receive either physical or chemical restraint must be continuously observed by ALS personnel on scene or immediately upon their arrival

4. Riot Control Agents (Mace, Pepper Spray, etc.)
   a. Cause intense irritation of the eyes, mucous membranes, and respiratory tract. Treatment is supportive and most patients recover in 10 – 20 minutes of exposure to fresh air
   b. Treatment
      i. Irrigate the patient’s eyes with Normal Saline if you suspect the agent remains in the eyes
      ii. Use of dawn dish soap (1 part) and water (3 parts) spray or soak for 15 seconds will help break down the oils in the riot control agents
      iii. Baby shampoo with water break down the oils in the riot control agents
   c. If an asthmatic patient is exposed to pepper spray and released to law enforcement, all parties should be advised to immediately contact EMS if wheezing / difficulty breathing occurs.

5. Conducted Energy Device
   a. Patient does not have to be in police custody or under arrest to utilize this guideline
   b. Treat and release by EMS personnel
      i. After a (15) fifteen-minute observation period in the field (starting from arrival at patient’s side) all of the follow criteria must be met:
         1. Patient is 18 years of age or older
         2. GCS of 15, Patient must have decisional capacity, has not taken any form of stimulant medication and understands risk and benefits of cardiac arrest
3. Vital signs with heart rate < 100, SBP > 90 and < 180 or DBP < 100
4. No tetanic muscle contractions
5. No previous history of cardiac problems
6. No dart has penetrated the eye, face, neck, breasts (females), axilla, groin, spine column
7. Patient has no other acute medical or psychiatric conditions
   a. Traumatic injury sustained in TASER induced fall or police encounter
   b. Hypoglycemia
   c. Acute psychiatric disturbance or agitated delirium
8. All darts which have been deployed are accounted for
9. Patient is not requesting transport to the hospital
ii. Police are to be informed that it is the responsibility of law enforcement to ensure that the patient receives a Tetanus booster within 72 hours if the patient has not had one in the past 10 years. This advice must be documented in the PCR

c. Removal of Taser probe barb:
   i. Barbs are similar to barbed style fish hooks, and are extremely sharp. Use caution when handling to avoid contaminated needle stick exposure
   ii. Cartridge must be removed from conducted energy weapon by Police prior to touching
   iii. Grasp the probe portion of the barb assembly firmly (with gloved hand, forceps or pliers) holding skin taut between two fingers. At a 90° angle to the skin, quickly remove the probe barb from the patient’s skin and bandage wounds accordingly
   iv. Probe barbs should be inspected to ensure assembly is complete. Usually the entire barb is approximately ¼” in length
   v. Once removed, conducted energy weapon barbs should be considered a contaminated sharp and handled accordingly. Ideally the barbs should be given to police for proper disposal
   1. The conducted energy weapon cartridge usually contains a slot / hole to insert the deployed barbs for safe storage, or the barbs should be disposed of in an appropriate sharps container