

	<b>COUNTY OF SACRAMENTO</b> EMERGENCY MEDICAL SERVICES AGENCY	<b>Document #</b>	<b>9017.23</b>
	<b>PROGRAM DOCUMENT:</b>  <b>Pediatric Trauma</b>	<b>Initial Date:</b>	<b>11/21/95</b>
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 EMS Medical Director

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 EMS Administrator

**Purpose:**

- A. To **establish** the treatment standard for pediatric patients (age ≤ 14 yrs.) who have received traumatic injuries.
- B. To serve as the treatment standard for pediatric orthopedic injuries, eye injuries and head trauma.

**Authority:**

- A. California Health and Safety Code, Division 2.5
- B. California Code of Regulations, Title 22, Division 9

**Protocol:**

- A. Trauma: Time on scene for critical trauma should not exceed ten (10) minutes under normal circumstances. Conditions requiring more than ten (10) minute scene times must be documented.
- B. Avoiding hypothermia is imperative to the management of the critical pediatric patient. Passive warming measures including warm ambient/environmental temperature, use of blanket, covering head may be used to maintain normal body temperature >37°C or 98.6°F.

<b>BLS</b>
1. Airway, Breathing, Circulation (ABC's) / Routine Trauma Care - Time on scene should not exceed ten (10) minutes under normal circumstances. Conditions requiring extended scene times shall be documented.
2. Supplemental O <sub>2</sub> as necessary to maintain SpO <sub>2</sub> ≥ 94%. Use the lowest concentration and flow rate of O <sub>2</sub> as possible.
3. Be prepared to support ventilation with appropriate airway adjuncts when indicated.
4. Spinal Motion Restriction (SMR) if indicated.
5. Amputations: <ul style="list-style-type: none"> <li>a. Dress stump with dry sterile dressing. Place amputated part in sterile, dry container or bag and close. Place first container in second container or bag and tie it closed. Place in melting ice. Amputated part should not directly contact ice or water.</li> </ul>
6. Evisceration of Abdomen: <ul style="list-style-type: none"> <li>a. Cover with large saline soaked dressing. Do not replace abdominal contents.</li> </ul>
7. Hemorrhage Control: <ul style="list-style-type: none"> <li>a. The first method of control is direct pressure. If unable to control see Hemorrhage in Trauma Policy #8065</li> </ul>
8. Impaled Object: <ul style="list-style-type: none"> <li>a. Only to be removed when its presence interferes with Cardiopulmonary Resuscitation</li> </ul>

(CPR) or impaled object interferes with the airway.

9. Open Chest Wounds:

- a. Cover with a vented chest seal or occlusive dressing and tape on three sides loosely. If signs of tension pneumothorax develop (distended neck veins, cyanosis, tracheal shift, absent breath sounds on one side, falling blood pressure (BP), dyspnea), remove the dressing, allow air to escape and reapply dressing.

10. Orthopedic Trauma:

- b. Supplemental O<sub>2</sub> as necessary to maintain SpO<sub>2</sub> ≥ 94%. Use the lowest concentration and flow rate of O<sub>2</sub> as possible.
- c. Airway adjuncts as needed.
- d. Spinal Motion Restriction (SMR) when indicated.
- e. Splinting:
  - If angulated and NO pulse, then attempt to gently straighten, unless pain or resistance is met, and splint.
  - If angulated, stable and GOOD pulse, splint in position unless transport would be compromised.
  - If severely angulated, may gently straighten. Check pulse before and after positioning.
  - Open fractures should be treated with moist sterile dressings and not reduced. The exception would be a traction splint to an open femur fracture. In this case, it is essential to notify hospital staff (as well as written documentation) of the presence of an open fracture.

**NOTE:** For patients presenting in severe pain from amputations and/or suspected extremity fracture(s) including hip injuries or dislocations, consider administration of opiate pain medication per PEDIATRIC Pain Management policy, PD# 9018.

11. Chemical:

- a. Irrigate with water or normal saline on all chemical injuries. Irrigate profusely until the patient reaches the hospital.
- b. Remove contact lenses if present.
- c. Trauma:
  - Cover both eyes loosely with protective dressing and avoid pressure to globe.
- d. Spinal motion restriction when indicated.
- e. Position patient, sitting upright if comfortable.

**NOTE:** Impaled objects should be stabilized, not removed. Embedded foreign bodies in eye - cover both eyes.

12. Head Trauma:

- a. If in shock, treat according to Shock protocol, PD# 9013. Supplemental O<sub>2</sub> 100% by Non-Rebreather.
- b. Airway adjuncts as needed.
- c. Spinal motion restriction immobilization - Transport well immobilized with backboard on side if airway problems occur.
- d. Scalp hemorrhage can be life-threatening, dress with a pressure dressing and check for:
  - Alertness
  - Verbal response
  - Pain response
  - Unresponsiveness

13. Prepare for immediate transport.

## ALS

1. Advanced airway adjuncts as needed. Airway management per Pediatric Airway Management PD# 8837.
2. Cardiac monitoring and SpO<sub>2</sub>
3. Transport as soon as possible.
4. Establish vascular access.
5. If unable to establish IV and patient is in extremis, then establish IO.
6. If hypotensive, administer 20 ml/Kg bolus of NS and reassess after each bolus. Titrate to a minimal Systolic Blood Pressure (SBP) for patient's age.
7. IF patient has:
  - a. Unilateral decreased breath sounds with a history of chest trauma AND:
    - Severe respiratory distress and/or
    - Hypotension per pediatric **blood pressure** parameters or loss of radial pulse due to shock
  - OR
  - b. Traumatic arrest with evidence of chest trauma or suspicion that a tension pneumothorax is contributing to the arrest  
THEN
    - Decompression of a tension pneumothorax should be immediately accomplished with insertion of a 3.25" 14 gauge chest decompression needle in the 2<sup>nd</sup> intercostal space, midclavicular line.

### NOTE:

1. If anatomical variation precludes access to the midclavicular line approach, decompression can be attempted by placing a needle on the affected side at the 3rd or 4th intercostal space, anterior axillary line.
2. Subsequently, if all the criteria are met for tension pneumothorax on the opposite side, needle decompression should be performed on that side.
3. Decompression of suspected pneumothorax in traumatic arrest should be performed bilaterally.
4. Orthopedic Trauma:
  - Patients presenting in severe pain from amputation and/or suspected extremity fracture(s), including hip or shoulder injuries or dislocations, consider administration of opiate pain medication per Pain Management Policy, PD# 9018.

CROSS REFERENCE: PD# 5050 - Destination  
PD# 5052 - Trauma Destination  
PD# 5053 - Trauma Triage Criteria  
PD# 8020 - Respiratory Distress, General  
PD# 8044 - Spinal Motion Restriction (SMR)  
PD# 9018 - Pediatric Pain Management  
PD# 8065 - Hemorrhage in Trauma  
PD# 8837 - Pediatric Airway Management  
PD# 9016 - Pediatric Parameters