

	<b>COUNTY OF SACRAMENTO</b> EMERGENCY MEDICAL SERVICES AGENCY	Document #	8064.01
	<b>PROGRAM DOCUMENT:</b>  <b>Management of Moderate to Severe Traumatic Brain Injury (TBI)</b>	Initial Date:	06/13/24
		Last Approval Date:	
		Effective Date:	
		Next Review Date:	06/01/26

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 EMS Medical Director

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 EMS Administrator

**Purpose:**

- A. To ensure timely and effective care for patients with traumatic brain injuries (TBI).

**Authority:**

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

**Protocol:**

- A. Any patient with physical trauma and a mechanism consistent with the potential to have induced a brain injury **AND:**
  - 1. Any injured patient with a loss of consciousness, especially those with GCS < 15 or confusion; OR
  - 2. Multisystem trauma requiring intubation whether the primary need for intubation was from TBI or from other potential injuries, OR
  - 3. Post-traumatic seizures whether they are continuing or not.

**Policy:**

<b>BLS</b>
<ol style="list-style-type: none"> <li>1. CAB's/Routine Care-Supplemental O<sub>2</sub> as necessary to avoid hypoxia – Maintain O<sub>2</sub> saturation as close to 100% as possible.</li> <li>2. Consider spinal motion restriction.</li> <li>3. Elevate the head of the bed to 30 degrees if possible.</li> <li>4. Cover open skull fractures with sterile dry dressings.</li> </ol>
<b>ALS</b>
<ol style="list-style-type: none"> <li>1. Cardiac monitor, ETCO<sub>2</sub>, and pulse oximetry</li> <li>2. <b>Severe TBI: GCS ≤ 8.</b> <ul style="list-style-type: none"> <li>a. Consider endotracheal intubation.</li> <li>b. Avoid hyperventilation – ETCO<sub>2</sub> monitoring with target of 35-45 mm Hg. General targeted ventilation 10 breaths/minute.</li> <li>c. Avoid hypotension – Maintain systolic if BP &gt; 110 mm administer 500 ml fluid bolus. If BP remains &lt; 110 mmHG, administer additional 500 ml not to exceed 1000 ml.               <ul style="list-style-type: none"> <li>• Push dose epinephrine if patients BP is unresponsive to fluid bolus</li> </ul> </li> <li>d. Obtain fingerstick glucose and manage hypoglycemic events per PD# 8002 – Diabetic Emergency (Hypoglycemia/Hyperglycemia).</li> </ul> </li> <li>3. <b>Moderate TBI: GCS 9-13.</b> <ul style="list-style-type: none"> <li>a. If reactive pupils and age ≥ 15 - 2 g TXA by slow IV/IO push over 1 minute.</li> <li>b. Interventions as outlined for severe TBI.</li> </ul> </li> <li>4. Monitor level of consciousness continuously during transport</li> </ol>

**Cross Reference:** PD # 8002 – Diabetic Emergency  
PD# 8020 – Respiratory Distress: Airway Management  
PD# 8065 – Hemorrhage

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