Sierra – Sacramento Valley EMS Agency Treatment Protocol	T-3P (LALS)
Pediatric Suspected Moderate/Severe Traumatic Brain Injury (TBI)	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 04/2027

Prehospital Identification of Moderate/Severe TBI

- Any pt with a mechanism of injury consistent with a potential for a brain injury, and one or more of the following:
  - GCS <13 (in infants: any decreased responsiveness, deterioration of mental status, irritation or agitation)
  - Post-trauma seizures, whether continuing or not
  - Multi-system trauma requiring advanced airway placement

For any patient with a suspected moderate/severe TBI, avoid/treat the three TBI "H-Bombs":
1) **H**yperventilation, 2) **H**ypoxia, 3) **H**ypotension

BLS

- Assess V/S, including continuous SpO_2 monitoring and pupil exam: Reassess V/S every 3-5 min if possible
- High-flow O_2 (regardless of SpO_2 reading)
- If continued hypoxia (SpO_2 <94%) or inadequate ventilatory effort, proceed through the following in a stepwise manner:
  - Reposition airway
  - Initiate positive pressure ventilation with appropriate airway adjunct if necessary (use of a pressure-controlled BVM &/or ventilation rate timer is recommended if available)
- Avoid hyperventilation
  - Infant (0-24mo) ventilation rate: 25 breaths/min
  - Pediatric (2-14yo) ventilation rate: 20 breaths/min
- Maintain normothermia
- Consider the concurrent need for appropriate immobilization/spinal motion restriction

LALS

- Continuous cardiac & $EtCO_2$ monitoring **(AEMT II)**
- IV/IO NS TKO: For hypotension, bolus 20 mL/kg, repeat bolus until hypotension resolves
- Check blood glucose

Blood glucose ≤60 mg/dl?

YES →

Dextrose 10%
- 5 ml/kg (0.5 gm/kg) IV/IO
- Max: 100 mL (10 gm)

OR

Glucagon
- <24 kg: 0.5 mg IM
- ≥24 kg: 1 mg IM

NO ↓

For persistent hypoxia &/or inadequate ventilatory effort:
- Supraglottic airway
- Target EtCO2: 35-39 mmHg

- Transport to appropriate destination & notify receiving facility of a "Trauma Alert" as soon as possible (if applicable)
- Monitor & reassess