Sierra – Sacramento Valley EMS Agency Treatment Protocol	T-3 (LALS)
Suspected Moderate/Severe Traumatic Brain Injury (TBI)	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2021
Approval: John Poland – Executive Director	Next Review: 01/2024

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:
  - <65 years of age with a GCS ≤13, or ≥65years of age with a GCS <15 (or decrease from baseline)
  - Post-traumatic seizures
  - 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: 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, reposition airway &/or initiate BVM ventilations with appropriate airway adjunct if necessary (use of a pressure-controlled BVM &/or ventilation rate timer is recommended if available)
- Maintain normothermia
- Consider the concurrent need for appropriate immobilization/spinal motion restriction

LALS

- Continuous cardiac & $EtCO_2$ monitoring **(AEMT II)**
- IV NS TKO: For SBP <90 (or SBP <100 in pts ≥65 years of age), bolus 1000 mL N/S, then titrate additional fluids to maintain SBP ≥90 (or SBP ≥100 in pts ≥65 years of age)
- Check blood glucose

Blood glucose ≤60 mg/dl?

YES →

Dextrose 10%
- 10 - 25 gm (100 - 250 mL) IV

OR

Glucagon
- 1 mg (1 unit) IM

NO ↓

For persistent hypoxia &/or inadequate ventilatory effort:
- Consider advanced airway
- Avoid hyperventilation - target $EtCO_2$: 40 mmHg **(AEMT II)**
  - Ventilate at a rate of 10 breaths/min

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