

## Quick Reference Guide for Moderate/Severe TBI Management

These recommendations are relevant to pre-hospital, referring hospital, ED and ICU

Guideline: Moderate to Severe TBI Guideline (Trauma Policy # 8.10a) found on Power DMS

### Interventions to be considered:

<p><b><u>Basics</u></b></p> <ul style="list-style-type: none"> <li>• <b>HOB elevated</b> 30°, neck midline</li> <li>• Maintain <b>C-spine precautions</b> (collar) until cleared</li> <li>• Upload or Obtain <b>outside images</b> as soon as possible – <i>See Workflow Document</i></li> <li>• Maintain <b>normothermia</b> (36.0 to 37.5°) – Use <u>warming measures if needed!</u></li> <li>• Maintain goal PaCO<sub>2</sub> 35-45</li> <li>• Refer to Epidural Observation Protocol for minimum duration of stay for confirmed EDH</li> </ul>	<p><b><u>Hemodynamics &amp; Monitoring</u></b></p> <ul style="list-style-type: none"> <li>• <b>IV fluid</b> – Normal Saline at maintenance rate. Bolus if tachycardic or hypotensive</li> <li>• Consider MTP or goal directed colloid resus as needed; <b>Crani Blood Pack</b>, TXA if going to OR</li> <li>• <b>Standard labs</b>: T&amp;S, Gas, CBC, CMP, TEG, Coags <ul style="list-style-type: none"> <li>○ Na checks q6h for sTBI</li> <li>○ Na goal &gt;140</li> <li>○ Glucose checks every 4 hours sTBI; avoid hypoglycemia</li> </ul> </li> </ul>
<p><b><u>Avoid Secondary Injury</u></b></p> <ul style="list-style-type: none"> <li>• <b>Hypertonic Saline (3%)</b> 5ml/kg bolus if signs of <b>elevated ICP</b></li> <li>• <b>Seizure ppx- Keppra 40mg/kg bolus</b> <ul style="list-style-type: none"> <li>○ Keppra maintenance is 40mg/kg/day divided bid x 7 days</li> </ul> </li> <li>• No NSAIDs for 48 hours post injury (if no imaging), and/or cleared by neurosurgery (if +ICH)</li> <li>• <b>Ancef for all open skull fractures</b>; add broad coverage if dirty or contaminated (<i>See Abx PPX CPG</i>) <ul style="list-style-type: none"> <li>○ If Injury occurred in barn or fecal contamination, add Penicillin to above regimen</li> <li>○ Do not continue prophylactic course for longer than 48 hours</li> </ul> </li> </ul>	

### Tiered Therapies:

<p><b><u>Tier I</u></b></p> <ul style="list-style-type: none"> <li>• HOB 30 degrees</li> <li>• CSF drainage; intraventricular drain</li> <li>• Analgesia and sedation</li> </ul>	<p><b><u>Tier II</u></b></p> <ul style="list-style-type: none"> <li>• Mild hyper-ventilation <ul style="list-style-type: none"> <li>○ CO<sub>2</sub> 30-35</li> </ul> </li> <li>• Intermittent hypertonic saline – osmotherapy</li> </ul>	<p><b><u>Tier III</u></b></p> <ul style="list-style-type: none"> <li>• Paralysis</li> <li>• Barbiturate coma</li> <li>• Decompressive craniectomy</li> </ul>
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