Mild Traumatic Brain Injury (TBI) Care Guideline

CHOC Children's

Patients presenting following any mechanism of injury that impacts the brain will be considered candidates for this care guideline if they meet **one** of the following criteria:

Inclusion Criteria:

- LOC less than 30 minutes and a GCS of 13-15 after the period of LOC;
- Any neurological deficits;
- Any loss of memory of event immediately before or after the injury; or
- Any altered mental state at time of accident (dazed, dizziness, disoriented, or confused)

Exclusion Criteria:

- Neurodegenerative or congenital insult to the brain;
- Moderate TBI (GCS 9-12) or Severe TBI (GCS 3-8)

Criteria for Admission

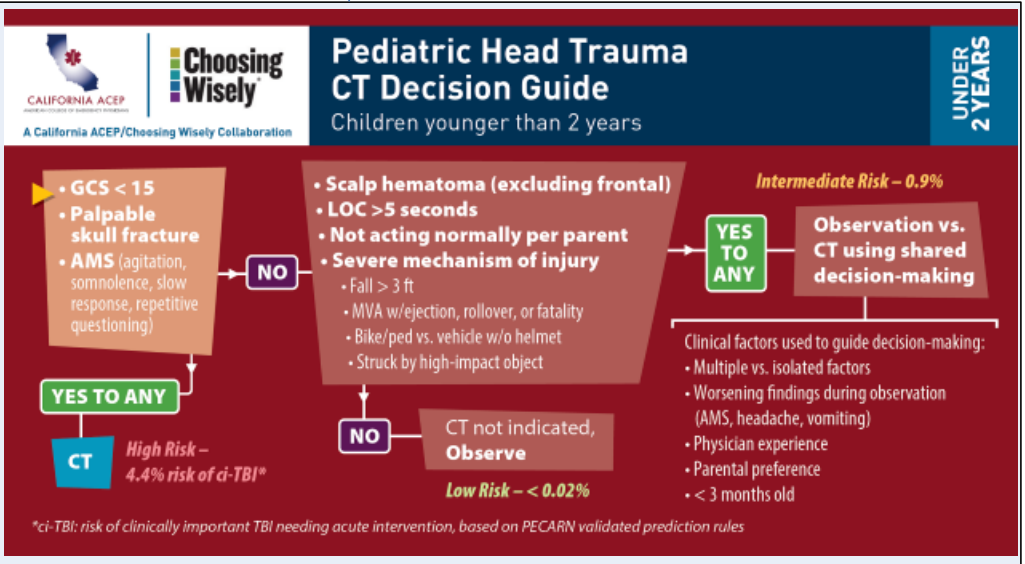
- New, clinically significant abnormalities on imaging
- Patients who have not yet returned to GCS 15 after imaging, regardless of results
- Patients who meet criteria for CT scan but cannot be done within the appropriate period (CT not available, or patient not cooperative)
- Continuing worrying signs (persistent vomiting, severe headache, persistent decline in neuro exam) of concern to the clinician
- Other sources of concern to the clinician (drug or alcohol intoxication, additional injuries, shock, meningismus, CSF leak, NAT, or concern for psychosocial welfare)

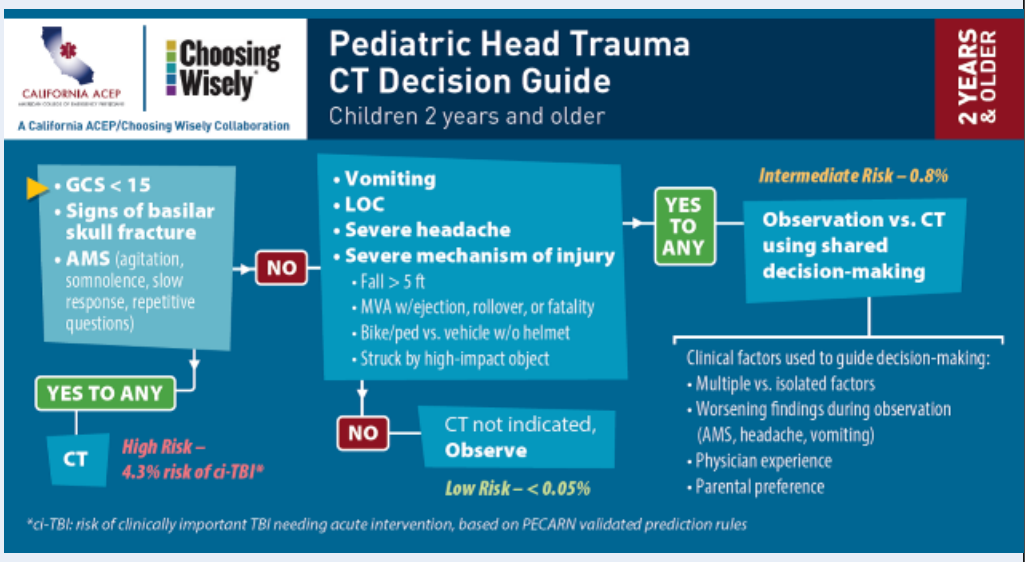
Initial Evaluation

- **Assessment:** Neurological exam including: GCS, LOC, motor strength, motor tone, cranial nerve exam, comprehensive systems assessment, and vital signs. Note any seizure activity. Monitor for unidentified injuries.
- **Diagnostics:** Labs at the discretion of the provider, CT of the brain (if indicated according to initial CT decision guides below)

If mechanism of injury meets definition of a trauma, initiate appropriate tier trauma response (Tier 1, Tier 2, or Consult)

Initial CT Decision Guide





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Repeat CT per the discretion of neurosurgery

Reassess the appropriateness of Care Guidelines as condition changes and 24 hrs after admission. This guideline is a tool to aid clinical decision making. It is not a standard of care. The physician should deviate from the guideline when clinical judgment so indicates.

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Interventions

- Neurology and/or Neurosurgery consult at the discretion of the attending physician
- Neuro assessment upon admission and then Q4 hours and PRN for the first 24 hours. Report any pupillary changes, changes in LOC, worsening of GCS, or worsening neurological symptoms to provider immediately
- Assess for pre-existing physical, cognitive, emotional, and sleep pattern symptoms to identify baseline assessment for concussion symptoms.
- Medications: IVF with normal saline, acetaminophen for headache (avoid NSAID), medications for n/v
- Assess patient's fall risk and provide assistance with mobility to ensure safety.
- Cognitive rest x 24 hours (minimum), but typically not more than 48 hours.
- Obtain speech consult for cognitive evaluation and recommendations for treatment

Cognitive Rest

1. Dim lights in room.
2. Promote rest and periods of uninterrupted sleep. Ensure that the room remains quiet and calm.
3. No TV, cell phone, computer, iPad, or other electronic devices-including video games.
4. Avoid activities that cause mental exertion (reading, homework).
5. Limit visitors and length of visit based on the patient's condition.
6. Only one person should speak at a time, use short sentences and normal tone. Keep topics simple.
7. Assess social dynamics of visitors and refer to social services, as needed.
8. Avoid caffeine, concentrated sugar/sweets, junk food, or alcoholic beverages.

Discharge Criteria

- Ensure cognitive evaluation/concussion screen by speech therapy has been completed prior to discharge
- Tolerating regular diet
- Ambulating without difficulty
- Pain controlled with oral pain medications

Patient Education

- Provide family with concussion brochure and/or Head Injury handout which includes common post-concussive symptoms and direction on when to call the doctor immediately (available on Clinical Education page under Patient-Family Handouts)
- PMD or Concussion Clinic follow-up
- Educate caregiver to limit use of oral pain medication to no more than 3 times per week to avoid medication overuse headache

Reassess the appropriateness of Care Guidelines as condition changes and 24 hrs after admission. This guideline is a tool to aid clinical decision making. It is not a standard of care. The physician should deviate from the guideline when clinical judgment so indicates.

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