Inclusion criteria:

- Children ≥ 5 years of age with concern for concussion/mTBI
- GCS 14 15

Exclusion criteria:

- GCS <14
- Concern for stroke (refer to <u>Stroke: Suspected</u>)
- Concern for C-spine injury
- Child with global developmental delay

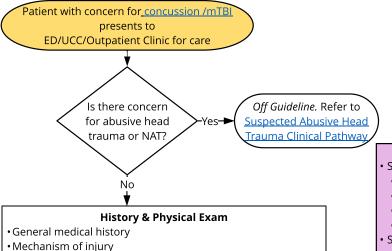
Children meeting any of the above exclusion criteria may require a more extensive evaluation

Physical Exam

Physical exam

· ACE ED version

- Head and neck exam
- Age appropriate neurological exam
- Consider
 <u>Vestibular/Ocular-Motor</u>
 <u>Screening (VOMS)</u>
- Balance assessment



· Consider assessment tools (e.g., Acute Concussion Evaluation,

otherwise known as ACE, is helpful for follow-up)

Is patient

tolerating oral

intake and stable

for discharge?

Yes

Review Discharge Education, Expectations

& Follow-up Plan

Discharge

· ACE Physician/Clinician Office version



OR code for mobile view

Acute CT Head Imaging Indications

- Signs of altered mental status
- Agitation
- Somnolence
- Repetitive questioning
- Slow response to verbal communications
- Signs of basilar skull fracture

Additional Considerations (Observation vs. CT based on clinical findings)

- Combination or ≥ 2 of the following:
 - Loss of consciousness (witnessed or documented)
 - Severe or worsening headache
- Multiple vomiting episodes
- Worsening symptoms or signs
- Severe mechanism of injury
 - Motor vehicle crash with patient ejection, death of another passenger, or rollover
 - · Pedestrian or bicyclist without helmet
 - Helmet struck by a motorized vehicle
 - Falls of more than 1.5 meters (5 feet)

Off Guideline. Treatment

based on abnormal results

- Head struck by a high impact object
- Physician/clinician experience

Use shared decision-making with families regarding a period of observation in the ED vs. home with return precautions

Obtain CT Head imaging

Imaging

Obtain CT Head imaging

Imaging

Imaging

Are the results normal?

Thysician comment experience

Off Guideline. Treatment based on clinical presentation

May consider hospital admission for any of the following, though not limited to:

- Trouble ambulating (significant risk of fall/injury)
- Persistent vomiting
- · Uncontrolled pain

Abbreviations:

mTBI = Mild traumatic brain injury

GCS = Glasgow coma scale

NAT = Non-accidental trauma

Discharge Checklist

It is not uncommon for concussion symptoms to develop within 48 hrs. Please consult PCP if symptoms develop

- Medications
 - Avoid opioids
 - Prescription medications are often not necessary
- Education Materials (includes information on return to school and activities, rest, headache management and screen time)
 - Concussion Guidance
 - Educational Accommodations for Concussion
 - Sleep Tips for Children and Teens

Expectations

- Many patients will have symptom resolution within 3 weeks, however for some it may take a month or longer
- Return to school may occur prior to full resolution of symptoms

• Timeline for follow-up

• Within 2 weeks for reassessment of symptoms

• Follow-up

- Competitive sports/athletes, follow-up with Sports Medicine
- All others should follow-up with PCP initially

Contact: EvidenceBasedPractice @cmh.edu