

Are any of the following present?

- Glasgow Coma Scale <15
- Suspected open or depressed skull fracture (scalp lacerations or hematomas, or bony step-off of the skull)
- Any sign of basilar skull fracture (hemotympanum, periorbital bruising, retroauricular bruising, otorrhea, rhinorrhea)
- Two or more episodes of vomiting
- New neurologic deficit (ie. cranial nerve, motor, sensory, coordination, gait, cognition)
- Presence of bleeding diathesis or use of an anticoagulant medication
- Seizure
- Age 60 years or older
- Retrograde amnesia of a 30-minute or longer period of time before the traumatic episode
- Potentially high impact head injury (ie. pedestrian struck by motor vehicle, occupant ejected from motor vehicle, fall from 3 feet or more, fall down 5 stairs or more)
- Intoxication, headache, or abnormal behaviour (such as excessive agitation, inconsolability, uncooperativeness, odd affect, violent behaviour) are less well validated criteria

Yes

No

Head CT without contrast

Does the head CT show any of the following?

- Mass effect (basal cistern compression or midline shift), sulcal effacement or herniation
- Substantial epidural or subdural hematoma (>1 cm in width, or causing mass effect)
- Substantial cerebral contusion (>1 cm in diameter, or more than one site)
- Extensive subarachnoid hemorrhage, posterior fossa, intraventricular or bilateral hemorrhage
- Depressed or diastatic skull fracture
- Pneumocephalus
- Cerebral edema

Yes

No

Neurosurgical
evaluation

Are any of the following present?

- Glasgow Coma Scale <15
- Bleeding diathesis or anticoagulation
- Seizure
- No responsible caregiver at home

Yes

No

Inpatient observation

Outpatient observation