

ADULT CLOSED HEAD INJURY SAFE HARBOR

Definition: A safe harbor is a special type of clinical practice guideline that, under existing federal law, may serve as the legal standard of care, not just evidence of the standard of care.

Closed Head Injury Safe Harbor: If a patient with an isolated closed head injury satisfies all safe harbor inclusion criteria and does not meet any exclusion criteria, no imaging is required, and the patient may be discharged with specific instructions. If a patient is excluded from the safe harbor, then imaging decisions are per customary practice.

The following safe harbor criteria are based upon published prediction tools for adult closed head injury,¹⁻¹⁶ including guidelines or recommendations from the *Centers for Disease Control and Prevention*,¹⁵ *American College of Emergency Physicians*,^{4,15} the *American College of Radiology Head Injury Institute*,¹⁴ the *American Congress of Rehabilitation Medicine*¹³, and UpToDate,¹⁶ as well as the Choosing Wisely¹⁷ initiative of the *American Board of Internal Medicine Foundation*.

A. Inclusion Criteria

If a patient satisfies each of the following criteria, then that patient is included within the Adult Closed Head Injury Safe Harbor. If any criterion is not satisfied, the patient is excluded from the Adult Closed Head Injury Safe Harbor.

1. The patient presents to the emergency department with a suspected isolated and closed (non-penetrating) head injury within 24 hours of the traumatic event.
2. The patient is at least 18 and under 60 years old, and the patient is able to provide a reliable history.
3. The patient has been observed for at least 2 hours (starting at the time of triage) without worsening change in the emergency department.
4. In the judgment of the treating provider, the patient is capable of follow-up within 72 hours if symptoms worsen or warning signs develop as detailed in the patient discharge instructions.

B. Exclusion Criteria

If the patient satisfies any of the following criteria, then that patient is *excluded* from the Adult Closed Head Injury Safe Harbor. Meeting a single criterion from either the history criteria or the examination criteria is sufficient to exclude the patient from the safe harbor.

1. *History*: The patient is excluded from the safe harbor if the patient's history includes any of the following:
 - a. The patient has lost consciousness for more than one minute.
 - i. A loss of consciousness for less than one minute by itself does not exclude the patient from the safe harbor.
 - b. The patient has any amnesia except of the event causing the head injury.
 - i. Amnesia of the event causing the head injury by itself does not exclude the patient from the safe harbor.
 - c. The patient has experienced worsening headache since the event causing the head injury.
 - d. The patient has vomited since the event causing the head injury.
 - e. The patient uses any anticoagulation medications.
 - f. A dangerous mechanism caused the head injury.
 - i. Dangerous mechanism of head injury is defined as the following:
 1. ejection from a motor vehicle,
 2. pedestrian struck by a motor vehicle,
 3. a fall from a height of more than 3 feet, or
 4. a fall down more than 5 steps.
 - g. Seizure prior to presentation.
2. *Examination*: The patient is excluded from the Adult Closed Head Injury Safe Harbor if the care provider's examination of the patient reveals any of the following:
 - a. The patient has a Glasgow Coma Score less than 15.
 - b. The patient is intoxicated with drugs or alcohol.
 - c. The patient experiences a posttraumatic seizure in the emergency department.
 - d. The examination reveals signs of skull fracture, including basilar skull fracture.
 - e. Exam finding of any focal neurologic deficit.

Discharge Instructions for those patients satisfying the Adult Closed Head Injury Safe Harbor criteria

If a patient satisfies all of the Adult Closed Head Injury Safe Harbor inclusion criteria and does not meet any of the Adult Closed Head Injury Safe Harbor exclusion criteria, the care provider should discuss discharge instructions with the patient and give the patient a discharge instruction sheet to take home and share with family members and/or caregivers (please see below for sample discharge instruction links). The patient acknowledges being instructed on the need for follow-up and agrees to follow up if, within 72 hours, symptoms worsen or warning signs develop. The care provider should be sure to:

- 1) Alert the patient to look for post-concussive warning signs (including physical, cognitive, emotional, and sleep symptoms) since onset of symptoms may not occur until days after

- the initial injury. These symptoms are described in the discharge instructions.
- 2) Instruct the patient on what to expect, what to watch for, and when it is important to return immediately to the emergency department. These symptoms or warning signs are described in the discharge instructions.
 - 3) Emphasize that getting plenty of rest and sleep is very important after a concussion, as it helps the brain to heal. The patient should gradually return to the patient's usual routine only after the patient starts to feel better.
 - 4) Note that the patient may visit CDC's website¹⁵ for mild traumatic brain injury guideline for adults: https://www.cdc.gov/traumaticbraininjury/mtbi_guideline.html. Sample discharge instructions from this same website are available at: https://www.cdc.gov/traumaticbraininjury/pdf/TBI_Patient_Instructions-a.pdf ("What to expect after a concussion") and https://www.cdc.gov/traumaticbraininjury/pdf/TBI_Wallet_Card-a.pdf ("What to expect after a concussion wallet card").

Patient's acknowledgment of receipt of discharge instructions, including the patient's acknowledgment of being instructed on the need for follow-up and agreement to follow up, should be secured.

References

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