Adult Head injury (≥16yrs) presents to RIE ED within 7 days of injury

CT Head indicated?

No → Risk of clinically important injury is low.

Yes → CT head abnormal

Yes → CT Head Normal → Are there ***CONCERNING SIGNS**?

No → Risk of clinically important injury is low.

Risk of clinically important injury is low. → Are any of the following present?

- GCS<15 (altered baseline in dementia)
- persistent vomiting
- severe headache
- Drug or alcohol intoxication
- Meningism

No → Is there a medical reason for admission?

No → Home

Yes → AMU

Yes → **ED observation ward****

- Patients should only be discharged when GCS 15/back to baseline with resolution of symptoms and signs and with safe social circumstances
- Patients who require admission > 12 hours in ED Obs should be admitted to Neurosurgery (only if abnormal CT AND ongoing neurobs required) or AMU where there are no further head injury concerns

Refer ****CONCERNING OBSERVATIONS** to ED Senior

Patiients with significant co-existing conditions where the patient may die within 12 months using SPICT tool or underlying terminal or life limiting illness e.g. metastatic malignancy, end stage organ failure, severe frailty (CFS 7-9) should be d/w Neurosurgeon re most appropriate management and destination (which may include admission to AMU)

ARE ANY OF THE FOLLOWING PRESENT?

- GCS<13
- Focal Neurology/abnormal pupils
- Extradural haemorrhage EDH ≥ 8mm
- Acute Subdural haemorrhage (SDH_≥ 8mm
- Intraparenchymal haemorrhage/contusion (IPH) ≥ 8mm
- Diffuse SAH (IVH or circle of Willis/Sylvian fissure or blood in basal cisterns)
- Penetrating injury
- Depressed skull fracture

Yes → Requires critical care?

Yes → Refer to Neurosurgery & Critical care

No → Injuries confined to head/face/neck?

No → Major Trauma ward under Neurosurgery

Yes → DCN*

No → Is there a SDH or IPH 5-8mm or any EDH?

Yes → is the CFS score ≥ 4

No → Requires critical care?

Yes → Refer to Neurosurgery for management plan (may include admission to AMU)

No → If there are ***CONCERNING SIGNS** OR If the patient is on clopidogrel or anticoagluants refer to neurosurgery for management plan and admission destination (which may include AMU)

The following injuries <u>in isolation</u> do not require routine neurosurgical referral and can be admitted to ED observation ward for <u>*a minimum of 6 hours.*</u>

- Simple linear closed undisplaced fracture
- SDH ≤4mm
- Single intraparenchymal contusion/haemorrhage ≤4mm
- Trace SAH (peripheral)

These patients require review by ED Senior prior to discharge/transfer from ED obs

Discuss all other injuries or concerns with Neurosurgery

***CONCERNING SIGNS - discuss with neurosurgery**

- GCS ≤8
- CSF Leak
- Definite or suspected penetrating injury
- Seizure without full recovery
- Unexplained confusion persisting >4 hrs
- Deterioration in GCS
- Progressive focal neurology

****CONCERNING OBSERVATIONS**

- Development of agitation or abnormal behaviour
- A sustained drop (>30mins) of 1 point in GCS
- Any drop of ≥ 3 points in eye opening or verbal
- Any drop of ≥2 points in motor score
- Development of severe or increasing headache
- Persisting vomiting
- New or evolving neurological symptoms

Brennan, Kerslake, McKean, Simpson, Barugh Dec 2025 Review Dec 2028