St John's Hospital Head Injury Protocol (16 and over) & Resources

Head injuries are common, accounting for around 10% of all ED attendances. Most head injuries are mild and can be safely discharged from the ED, however some head injuries do require local observation and/or specialist input and care. This guideline should be followed during assessment and management of adult head injuries. It includes:

- NHS Lothian CT Head Imaging guidance
- ED Discharge guidance
- Local Admission and Observation guidance
- SETN Regional Head Injury Pathway

EMERGENCY DEPARTMENT MANAGEMENT

IMAGING GUIDANCE

NHS Lothian "Isolated Head Injury (16yr+) Imaging"
Intranet EMIBANK link

MANAGEMENT AND DEPOSITION OF PATIENTS

Regional Head Injury Pathway
https://rightdecisions.scot.nhs.uk/media/vd5dsmjz/regional-head-injury-final-v-4.pdf

DISCHARGE FROM THE ED

All patients must meet all of the following criteria:

- Normal CT or CT not indicated
- GCS 15
- Some at home to supervise or suitable supervision arranged (or risk of late complication deemed negligible)
- No other indication of admission:
    - Drug and/or alcohol intoxication
    - Additional injuries necessitating admission
    - Shock
    - Meningism
    - CSF leak

Discharge advice:

- All patients should have verbal and written discharge advice.
- Wound management follow-up advice

Drug and alcohol liaison:

- Offer onward referral or provide WLDAS contact information as deemed appropriate.

Follow up:

- Patients discharged from ED with persisting problems following a head injury should initially refer to the "Head Injury Symptoms" website (https://headinjurysymptoms.org)
- Ongoing concern can be referred by the GP for a neurology opinion.

LOCAL ADMISSION OF ISOLATED HEAD INJURIES

Patients not meeting criteria for admission to RIE but do require an extended period of observation should be admitted to locally to Ward 18. They will remain under the care of the Emergency Medicine team and should be reviewed daily.

Documentation for those being admitted to SJH Ward 18 MUST *include*:

Management

- History – Date, time and mechanism of injury. Drug and alcohol use.
- Examination – clear documentation of GCS (including pre-hospital), other injuries sustained
- Imaging – CT results (if indicated)
- Wound management (if required)
- HEPMA completion (including regular medications and PRN analgesia, antiemetics)

Observation

- Period of observation required (e.g., 6, 12, 24, 48 hours)
- Observations frequency (unless otherwise specified by Neurosurgery):
    - If <GCS 15 at any time:
        - Every 30 minutes
    - If GCS 15 on presentation in ED
        - Every 30 minutes for 2 hours
        - Hourly for 4 hours
        - Then every 2 hours

Escalation and Further Imaging

- Basic ward care such as bloods and cannulas should be performed by ward staff or HAN.
- The senior ED doctor (consultant or registrar) should be called in the event of patient deterioration as follows:
    - New agitation or abnormal behaviour
    - Sustained (30 minutes) drop of 1 point in GCS (especially if motor)
    - Any drop of 3 points in E or V score
    - Any drop of 2 points in M score
    - New severe or increasing headache
    - New persisting vomiting
    - New neurological symptoms or signs e.g., pupil inequality, asymmetry of facial or limb movement
    - NEWS of >= 4
    - Any clinical concern
- Immediate repeat imaging should be performed if the escalation criteria are confirmed on assessment.
- Further imaging >24 hours
    - Patients who remain GCS <15 after 24 hours observation should be considered for a repeat CT or MRI even if the first CT was normal.

Discharge Documentation

A discharge plan must be clearly documented in the patient notes by the reviewing ED team.

The following discharge criteria must be met prior to discharge:

- As per “Discharge from ED” advice
- Observation period complete
- All significant symptoms have resolved
- Capable of leaving the ward safely
- Have suitable supervision arrangements

Ward 18 Head Injury Pathway

Please complete this proforma prior to transfer and keep in patients notes.
Please note that any patients following this pathway will be under ED care.

Date and time of admission to ED		Addressograph Label Name: Address: CHI:
Date and time of injury		

Prior to transfer to Ward 18:

GCS:		**Time documented:**			NEWS	
Eyes:	Verbal:	Best motor:			RR	
Pupils:					HR	
Right:	+/-	Left:	+/-		Spo2	
Limb Movement					Temp	
RUL		LUL			BP	
RLL		LLL				

	Findings		**Actions Required**	
CT Head/Cervical Spine			Neurosurgical Discussion Y/N Name: Registrar_____ Consultant on call _____ Comments and outcome:	
Wounds			Sutures – Size: Number: Date of removal: Staples – Number: Date of removal:	
Other Injuries				
Period of observation required (circle): 6 hours 12 hours 24 hours 48 hours				
HEPMA Complete (Circle)	Regular Medications	Antiemetics	Analgesia	CIWA
Estimated discharge (if appropriate)	**Date** **Time**	**Signed**	**Name** **Grade**	**Contact number**

Appendices (For Ward 18 use)

Appendix 1 – Neuro Observations of Admitted Patients (unless otherwise specified by Neurosurgery):

Observations

The minimum observations are:

- GCS
- Pupil size and reactivity
- Limb movements
- Respiratory rate
- Heart rate
- Blood pressure
- Temperature
- SpO2

Frequency of observations if GCS<15 at any time

- Every 30 minutes

Frequency of observations if GCS 15 on presentation in ED

- Every 30 minutes for 2 hours
- Then hourly for 4 hours
- Then every 2 hours

Appendix 2: Escalation procedure (ideally agreed between two members of nursing staff)

Escalation criteria

Call the supervising Dr if there is any of the following:

- New agitation or abnormal behaviour
- Sustained (30 minutes) drop of 1 point in GCS (especially if motor)
- Any drop of 3 points in E or V score
- Any drop of 2 points in M score
- New severe or increasing headache
- New persisting vomiting
- New neurological symptoms or signs e.g., pupil inequality, asymmetry of facial or limb movement

Repeat CT

The Dr should arrange an immediate CT scan if the escalation criteria are confirmed on assessment.

Further head imaging after 24 hours

Patients who remain GCS <15 after 24 hours observation should be considered for a repeat CT or MRI even if the first CT was normal.

Appendix 3: Discharge Criteria (tick)

Period of observation complete	
Resolution of all significant symptoms and capable of leaving the ward safely	
Suitable supervision arranged and documented on Trak	
All investigations completed and actioned	
Discharge advice and follow-up information provided and documented on Trak including:	
- All patients should have verbal and written discharge advice.	
- Wound management follow-up advice	
- TTC referral	
- Drug and liaison input (if appropriate)	
Transport home	