

| <b>Publication:</b>                      |                                                                                                                                                                                                                                                                                                             |
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| Document name:                           | <b>Severe Traumatic Brain Injury Principles</b>                                                                                                                                                                                                                                                             |
| Document purpose:                        | This document contains overarching principles of practice and governance to all acute receiving hospitals in the Midlands Trauma Networks.                                                                                                                                                                  |
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| Action required:                         | Dissemination to MTC, TU, LEH personnel for action.                                                                                                                                                                                                                                                         |
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**Purpose.** To provide overarching principles of practice and governance to all acute receiving hospitals in the Midlands Trauma Networks.

**Scope of document.** Limited to providing guidance for the management for patients with suspect significant head injuries, to ensure correct initial management and appropriate onward referral if necessary

**Introduction.** Head injury is the commonest cause of death and disability in people aged 1–40 years in the UK. Each year, 1.4 million people attend emergency departments in England and Wales with a recent head injury, and about 200,000 a year are admitted to hospital with head injury. Of these, one-fifth have features suggesting skull fracture or have evidence of brain damage. Most patients recover without specific or specialist intervention, but others experience long-term disability or even die from the effects of complications that could potentially be minimised or avoided with early detection and appropriate treatment.

## Principles

- Patients who have sustained a head injury will be transported to a hospital in line with the pre-hospital triage tool.
- Patients will be considered for imaging in line with current NICE guidance
- Guidelines on the transfer of patients with clinically significant head injuries should be drawn to help guide whether a patient can be directly referred to the MTC TTL, or to the neurosurgeons initially

**Inclusion criteria for TTL to TTL transfer**

- Aged 16 and over to UHNM, UHCW, QEHB. Under 16 to BCH or Alder Hey for patients North of UHNM or North Wales.

*And any of the following:*

- GCS less than or equal to 8
- Deteriorating GCS (drop of 2 points or more on GCS)
- Focal neurological signs
- Penetrating head injury

**Exclusion criteria for TTL to TTL transfer**

Patients with any of the following **MUST** be discussed with the receiving Neurosurgical service prior to transfer:

- Patients with bilateral fixed dilated pupils
- Terminal illness or major co-morbidity (e.g. advanced dementia)
- Known limitations of care in place

**Recommendations**

- In line with recent coroner recommendations and the national critical care networks medical leads group, critical care beds availability should not be a prerequisite for transfer if the patient requires time critical neurosurgical intervention.
- If the MTC TTL needs to discuss a patient that meets the inclusion criteria above, with the neurosurgeons prior to transfer they should understand the local process/facilities available in order to conference call them in to expediate a quick decision.
- All patients with evidence of HI and a GCS <12 OR CT evidence of intracranial haemorrhage should receive TXA within 3 hours and preferably within 1 hour as per CRASH-3 recommendations.

**References**

NICE CG176

Regulation 28 Coroners report, January 2017

National Critical Care Networks Regulation 28, Memorandum of Understanding, May 2018

CRASH-3 recommendations