Operational Protocol for Referral of Adult Major Trauma Patients (>16 years)

For patients under 16 years please refer to Alder Hey Hospital ED Trauma phone 0151 252 5600

Emergency Referral for Specialist Advice

Adult (>16yrs) patient: Indication for emergency consultation/referral

- Contact Trauma Team Leader (TTL) RSUH: Pager 07623 975903
  If no call back in 5mins… Resus 01782 674447

- Share imaging immediately

Severe of burn & injuries will dictate:
Discussion between BCU, MTC and Whiston Clinicians

Burns [in the presence of other trauma]

Definitive care decision

- e.g. Immediate transfer
  e.g. Specific management without transfer

- Provisional or definitive advice/decision immediately

- Final advice/decision within 30 minutes of initial contact

- If no response within 30 minutes, contact Specialty Consultant or Trauma Resuscitation Anaesthetist via switchboard 24/7

- e.g. Neurosurgeon for specific injury assessment or advice
  e.g. Specialist Radiologist for injury assessment or suitability for interventional radiology
  e.g. Trauma Resuscitation Anaesthetist advice on system control during transfer

See guidance on consultation and referral to RSUH Major Trauma Centre - appendix 2

Patients should not be referred to RSUH with:
1) Paediatric trauma under 16 years old must be referred to Alder Hey. See above.
2) Burns, in the absence of trauma. These must be referred to Whiston Burns Unit 0151 430 1540
3) Spontaneous non-traumatic intracranial bleeds (these must be referred to the Walton Centre); See also GCS flow chart next pg.

NB: CoCH Welsh border patients will follow CoCH MTC referral pathways.
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North Wales Isolated Traumatic Head Injuries
(If any extracranial injuries evident refer to RSUH)

Isolated Head Injury

- GCS <14
  - Refer to: RSUH MTC
    - Contact Trauma Team Leader* (TTL): Pager 07623 975903
      - If no call back in 5mins… Resus 01782 674447

- GCS 14-15
  - Pt intubated & ventilated?
  - Admit patient to local Trauma Unit
    - Patients GCS Deteriorates?
      - Refer to:
        1. RSUH (Neurosurgeons ≥ SpR – 01782 715444)
        2. Walton Centre (Neurosurgical SpR – 0151 5253611)

Appendix 1
Trauma is classified using an Injury Severity Score (ISS) – an anatomical scoring system which retrospectively assigns a measure of severity ranging from zero to 75, with a score of 16 or greater signifying Major Trauma. Mortality increases with Injury Severity Score.

<table>
<thead>
<tr>
<th>Injury</th>
<th>AIS score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Minor</td>
</tr>
<tr>
<td>2</td>
<td>Moderate</td>
</tr>
<tr>
<td>3</td>
<td>Serious</td>
</tr>
<tr>
<td>4</td>
<td>Severe</td>
</tr>
<tr>
<td>5</td>
<td>Critical</td>
</tr>
<tr>
<td>6</td>
<td>Unsurvivable</td>
</tr>
</tbody>
</table>

ISS is defined as the sum of the squares of the single highest Abbreviated Injury Score (AIS) in each of the three most severely injured body regions.

Six regions (head, face, chest, abdomen, extremities including pelvis, external structures)

Of particular note, the use of only the single most severe AIS injury per body region is used.

ISS ranges from 1 to 75; an ISS of 75 is assigned to anyone with an AIS of 6.

An ISS calculator can be found at http://www.trauma.org/archive/scores/isscalc.html

Amended April 2015,
Pager No. added 1st Nov 2012
Hosp name change April 2015
Alder Hey phone number change 2017.
Appendix 2

Guidance on Consultation and Referral to the RSUH Major Trauma Centre

The NHS Clinical Advisory Group Report (2010) recommended that all patients with severe trauma should be transferred to a Major Trauma Centre. However, many Trauma Units are capable of delivering high quality definitive care to a wide range of patients with serious injuries. In the North West Midlands/North Wales Major Trauma Network, it has been agreed that it would be appropriate to keep some patients with severe trauma within a Trauma Unit for definitive care and initial in-hospital rehabilitation. Further guidance on the selection of appropriate patients is included below.

Some patients with serious injuries that fall within the territory of on-site specialists at the Trauma Units in Bangor, Glan Clwyd and Wrexham may be managed without transferring out to the Major Trauma Centre in Stoke-on-Trent.

Any of these patients may be referred to RSUH for advice or transfer at any time if there are any concerns about their management. Responsibility for ongoing care will be willingly offered by RSUH. There is an ‘open door’ policy for accepting patients from the Network with severe trauma at RSUH.

It is important to make provision for rehabilitation for major trauma patients who remain in a BCU Trauma Unit. This should be underpinned by completing and regularly updating a rehabilitation prescription. This may be done in liaison with the Trauma Rehabilitation Consultants in Stoke-on-Trent.

Patients with suspected serious injuries that fall in the territory of specialists not available in the BCU Trauma Units, but available in the Major Trauma Centre, should always be referred. This applies especially to serious injuries to the head, spine and pelvis and to major burns. This is further clarified for adult patients:

- All serious head injuries may be referred to RSUH. If the GCS is over 13 at the time of referral and the patient has an isolated head injury, the patient may be referred to the Walton Centre as an alternative.

- All serious spinal injuries may be referred to RSUH. If the patient has no cardio-respiratory instability, has a GCS of 15, and has an isolated spinal injury, the patient may be referred to the Spinal Unit in Oswestry as an alternative.

- All patients with spinal CORD injury should be discussed with Oswestry within 4 hours of identifying this injury, even if the patient has been referred to RSUH for definitive acute care.

- All serious chest injuries may be referred to RSUH. If the patients have rib fractures, haemopneumothoraces or pulmonary contusions that are within the capability of the Trauma Unit Intensive Care team, they may be managed within the Trauma Unit as an alternative (or local choice). If there is evidence of an injury that may need surgical intervention, the patient should be transferred. This includes ongoing intra-thoracic bleeding, the persistence of an air leak, pneumothorax or pulmonary collapse, or evidence of injury to the heart, great vessels or oesophagus.

- Patients with serious injuries to the kidney/urinary tract or liver should generally be referred to RSUH. BCU Urologists may choose to manage some serious urinary tract injuries as an alternative (or local choice). Some complex liver injuries may be best managed in a dedicated Liver Unit.

- Patients with complex intra-abdominal injuries requiring damage control surgery should generally be referred. Where there is a need to consider managing as an ‘open abdomen’, the patient may be best transferred to the Major Trauma Centre.

- Patients with open fractures that need plastic surgery to achieve optimal skin and soft tissue cover should be referred in a timely fashion to achieve the British Association Standards in Trauma (BOAST).
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- Patients with complex pelvic injuries should be referred to RSUH. Those with haemodynamic instability may need immediate intervention at the TU. They may also need emergency transfer for specialist intervention. Patients with complex fractures who are haemodynamically stable may be transferred as an emergency. As an alternative, they may be transferred as a non-emergency for pelvic/acetabular reconstruction. Initial management at the TU may include temporary stabilisation with an external fixator. Transfer of such patients should be within two days of referral to comply with national recommendations. These ‘non-emergency’ patients may be referred to the Consultant Orthopaedic Surgeon of the week (COW) or via the RSUH Trauma Team Leader (as for emergency referrals) who will then liaise with the Consultant Pelvic Surgeon on call. Courtesy ‘specialty-to-specialty’ handovers are expected for any other injuries after the patient has been accepted.

- Patients with major burns should be referred to Burns Unit at Whiston Hospital. RSUH should be consulted about patients with significant burns in the presence of other serious injuries. A discussion between BCU, RSUH and Whiston may be needed.

- All children with major trauma should be referred to Alder Hey Children’s Hospital.