

## **STANDARD OPERATING PROCEDURE**

### **Pathway for older children with traumatic injuries who require emergency care in Sheffield Teaching Hospitals NHS Foundation Trust**

#### **PURPOSE**

This standard operating procedure (SOP) describes the referral pathway and in-patient management for older children (aged  $\geq 12$  years) with traumatic injuries who require emergent treatment in Sheffield Teaching Hospitals NHS Foundation Trust (STHFT).

#### **SCOPE**

This SOP applies to referrers from Sheffield Children's Hospital (SCH) and clinicians in trauma-related specialities in STHFT.

From a legal perspective a child is defined, by the Children's Act 1989 and 2004 respectively, as anyone who has not reached their 18th birthday. The fact that a child who has reached 16 years of age is living independently, is in further education, is a member of the armed forces, is in hospital or is in custody in the secure estate for children and young people does not change their status or entitlement to services or protection under the Children Act 1989 (HM Government, 2010).

This policy only applies for children aged 12-15 years. Any child aged  $\geq 16$  years will be managed as an adult within STHFT as per existing policies.

#### **BACKGROUND**

Injury is the most frequent cause of death in children aged  $> 1$  year in the UK. Major trauma networks were established across the UK with the aim of ensuring patients were admitted to the "*right place, at the right time for the right care*".

The South Yorkshire Trauma Network consists of two major trauma centres (STHFT for adults, SCH for children) and four trauma units. From a paediatric perspective there are a further two additional trauma units.

The South Yorkshire Operational Delivery Network does not have provision for paediatric cardiac surgery, interventional radiology or vascular surgery for the management of emergency traumatic injuries. These services are provided by Leeds Major Trauma Centre. Children presenting to a trauma unit who may require these services (e.g. stab wounds to the chest, major haemorrhage from limb injuries or pelvic fractures) should be triaged direct to Leeds if their clinical condition allows. Within Sheffield, children with relevant traumatic injuries will present to SCH (or to STHFT if they appear to look  $\geq 16$  years of age). It is recognised that selected older children, who are an adult weight, can be managed in STHFT, thereby removing the need for a prolonged land transfer to Leeds by ambulance which may help reduce morbidity and mortality in patients with time-critical injuries.

## INCLUSION CRITERIA

- Children with traumatic injuries who are aged  $\geq 12$  years and weigh  $\geq 45$  kg
- No significant comorbid medical conditions
- Isolated traumatic injury requiring emergent, time-critical cardiac surgery, peripheral vascular surgery (distal to antecubital fossa by plastic surgery, proximal to antecubital fossa by vascular surgery) or interventional radiology

Unless haemodynamically unstable and requiring immediate transfer to operating theatre, children should have appropriate assessment and CT imaging at SCH. **Children should not be transferred to STHFT in order to facilitate CT scanning.**

It is essential that children younger or smaller than this are not transferred as STHFT does not have the relevant surgical equipment to allow clinical intervention to take place. Transfer of children outside these criteria may significantly delay time-critical clinical intervention(s).

Children not meeting these criteria will require transfer to Leeds Major Trauma Centre as per network policy.

## REFERRAL PATHWAY

**All children should be admitted to the Emergency Department of SCH in the first instance, as per existing Paediatric Major Trauma Network Guidelines.**

**No child should be admitted to STHFT from a regional trauma unit or direct by ambulance transfer.**

The referral pathway is summarised in Appendix 1 and is as follows.

- **All discussions should be consultant to consultant only.**
- The SCH ED consultant should discuss the case with relevant STHFT speciality consultant via switchboard. The switchboard console numbers (for emergency use only) are 0114 2266617 or 0114 2266621 (internally x 66617 or x 66621).
- If the STHFT speciality consultant agrees for consideration for transfer, then the SCH ED consultant should then discuss the case with STHFT ED consultant via the red phone (0114 273 7981).
- If the STHFT ED consultant agrees that transfer is appropriate, then the transfer can proceed. If the STHFT ED consultant is not satisfied that transfer is appropriate, then transfer to Leeds Major Trauma Centre should be arranged by SCH (in line with the existing network policy). The STHFT ED consultant's decision in all cases is FINAL.
- The transfer should be booked by a PRIORITY 1 ambulance (0300 300 0276). Do not use the EMBRACE transfer service. Transfers should be conducted in line with SCH Major Trauma guidelines.
- Urgent transfer of any PACS imaging should be arranged by SCH ED team.
- Ensure that contact details for next-of-kin/parents are documented. Parents should be instructed not to follow the ambulance but to attend the reception desk at STHFT ED where they will be updated as soon as is practically possible.

## IMMEDIATE MANAGEMENT

- On arrival to STHFT, the patient should be met by a hospital trauma team as assessed as per STHFT Major Trauma Management Guidelines.

**There is no need to modify any of the existing adult trauma guidelines for children aged  $\geq 12$  years who weigh  $\geq 45$  kg. These children should be managed as if they are a small adult.**

**This includes anaesthetic management, vascular access, resuscitation and administration of blood products. Please ensure blood bank are aware that products will be administered to a child.**

**In terms of drugs, these should be chosen in line with existing adult guidelines, with weight adjusted as necessary.**

- The hospital trauma team must include all the speciality consultant who took the initial referral.

## DEFINITIVE MANAGEMENT

- Consent processes should be in line with existing guidelines. The procedure and the risks will be fully explained to the patient, in age-appropriate terms as appropriate.
- Consent must be taken by the operating consultant or competent deputy. Under the age of 16 years, consent is usually obtained from a parent or guardian, however, a child under 16 years may be assessed as having capacity to consent. Refer to Department of Health (DH) guidance for consent to treatment
- Clinical management should be conducted as per standard practice.
- The most appropriately skilled available surgeon should be involved. Any operating teams should be consultant surgeon and consultant anaesthetic led, with support provided from paediatric teams from SCH.
- Consultant paediatric surgeons should attend theatre at STHFT on request by the STHFT consultant surgeon(s).
- Consultant paediatric anaesthetists should attend theatre at STHFT on request by the STHFT consultant anaesthetist(s).
- If possible, parents should be allowed to stay with their child for as long as possible. In the event of anaesthesia being induced, parents should be allowed to visit their child in the post-anaesthetic care unit (PACU) or on the intensive care unit.
- In terms of training in paediatric management, all STHFT staff are trained to level 1 safeguarding children and clinical interventions will be performed by STHFT staff who have level 2 safeguarding training.

## POST-PROCEDURAL CARE

- Post-surgical care should ideally take place in an appropriate paediatric facility.
- TEG on-call should be informed of the admission (if not already done earlier in the pathway).
- A post-procedural consultant MDT (in person or via MS Teams) should take place involving all relevant clinicians; as a minimum this should include:
  - Operating STHFT consultant(s)
  - SCH consultant surgeon(s)
  - Consultant STHFT anaesthetist
  - Consultant STHFT ICU
  - Consultant SCH ICU
- At this point, the MDT should determine if the child should remain in STHFT or be transferred back to SCH. As a general principle, once clinically safe to do so and once no further treatment at STHFT is required, children should be transferred back to SCH at the first possible opportunity.
- If transfer is required, contact the Duty Matron to arrange transport through liaison with the Embrace transport service using the Embrace Hotline 0114 305 8200.  
<http://www.sheffieldchildrens.nhs.uk/refer-to-us/embrace/>.
- In the event of a transfer to a paediatric facility being required, appropriate support is to be given to the family during this process. In the event of parental distress, meaning they are unable to drive, hospital staff should support family to make alternative travel arrangements.
- If the child is required to stay at STHFT, either for clinical or logistical reasons, then the child should be admitted to critical care (either general or cardiac ICU as appropriate). Management on a general ward is not appropriate.
- The nominated caring consultant whilst the child is at STHFT will be the STHFT operating surgeon (or vascular surgeon if the event of an interventional radiology procedure) **AND** a consultant surgeon from SCH.
- The relevant policy for managing a child admitted to STHFT should be followed ([LINK – STHFT Policy No 31](#)) and the STHFT Safeguarding Children Team informed.
- There is no need for specific clinical staff to care for the child (e.g. SCH PACU/critical care nurses or doctors).
- Whilst the child is an in-patient at STHFT, daily MDTs should be conducted (either in person, by telephone or on MS Teams) and should involve:
  - Primary STHFT consultant surgeon(s)
  - Caring SCH consultant surgeon(s)
  - Consultant STHFT ICU
  - Consultant SCH ICU
- The MDT will review on a day-by-day basis the optimal time for transfer back to SCH. The MDT will also determine the most appropriate ward environment (either general ward or critical care).

- In the event of the child not being a Sheffield resident, the children must return to SCH in the first instance, prior to repatriation to their local hospital.
- Psychological support for the child can be accessed via SCH where a Paediatric Clinical Psychologist can be accessed during the week in addition to a Consultant Child and Adolescent Psychiatrist with an interest in Paediatric Mental Health Liaison for the Major Trauma Centre. Support for parents can be accessed through the STHFT MTC trauma psychology services.

## WHEN A CHILD DIES

- The serious injury or death of a child is usually a traumatic event for those involved, including the staff who have looked after the child. After the event, a meeting inviting all staff involved in the care of the child must be held.
- This process should be managed in accordance with network and SCH guidelines ([Link-Sheffield SSCB Child Death Procedures](#)) and a Child Death review will also take place (led by SCH). The coroner will need to be informed.
- The relevant forms are available in Appendix 5 of the Guidance for the Care of Children and Young People within Sheffield Teaching Hospitals NHS Foundation Trust [LINK – STHFT Policy No 31](#)
- Staff support is available in a number of ways:
  1. Individual support from the clinical supervisor / educational supervisor / line manager
  2. Referral to the local Occupational Health Service, or local Psychology Service if available
  3. Referral to the General Practitioner
  4. Referral to professional bodies and unions
  5. [workplace.wellbeing@shsc.nhs.uk](mailto:workplace.wellbeing@shsc.nhs.uk) is available to all NHS workers in Sheffield and they can offer a bespoke package of support
- Sources of support for families:
  1. Sudden – supporting people after sudden death. An initiative by Brake, the road safety charity: <http://www.suddendeath.org/>
  2. Support for UK residents who have been bereaved or seriously injured in a crash: <http://www.brake.org.uk/>
  3. Support for families after the death of a child, including siblings: <https://childbereavementuk.org/>
  4. Cruse bereavement care – support for bereaved families: <https://www.cruse.org.uk/>
  5. Leeds suicide bereavement service: <http://leedssbs.org.uk/>
  6. Wakefield bereavement support for children: <http://www.starwakefield.org.uk/>
  7. Leeds bereavement forum – charity based in Leeds who will signpost individuals to the most appropriate bereavement service either locally or nationally: <http://lbforum.org.uk/>
  9. Financial support with funeral costs: <http://www.childfuneralcharity.org.uk/> or <https://www.familyfund.org.uk/>

## RELATED EXTERNAL DOCUMENTS

[Yorkshire and Humber Paediatric Major Trauma Guidelines](#)  
[Operational Policy for Sheffield Children's Hospital Major Trauma Centre](#)  
[Child Death Procedure](#)

## RELEVANT ALIGNED TRUST DOCUMENTATION

- Guidance for the Care of Children and Young People within Sheffield Teaching Hospitals NHS Foundation Trust [LINK – STHFT Policy No 31](#)
- Resuscitation Policy [LINK - STHFT Policy No 81 Resuscitation Policy](#)
- Safeguarding Children Policy [LINK - STHFT Policy No. 172 Safeguarding Children Policy](#)
- Risk Management Policy [LINK - STHFT Policy No. 52 Risk Management Policy](#)
- Medicines Code Policy [LINK - STHFT Policy No. 89 Medicines Code](#)
- Consent to Examination and Treatment Policy [LINK - STHFT Policy No. 100 Consent to Examination and Treatment](#)
- E-Safety Safeguarding Children and Vulnerable Adults Policy [LINK - STHFT Policy No 61 E Safety Safeguarding Children and Vulnerable Adults](#)

## LAST REVIEW

New SOP September 22

## NEXT REVIEW

September 2024

