



# Main Embrace

# Standard Operating

# Procedure

Reference:	1441v4
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Embrace approved:	November 2021
CAEC approved:	December 2020
Review due:	December 2023

## Purpose

This Main Standard Operating Procedure (SOP) provides a framework within which Embrace, Yorkshire & Humber Infant & Children's Transport Service (Embrace) operates.

## Intended Audience

All individuals working for Embrace and clinicians working within the Network.

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## 1. PRINCIPLES

1.1. This Main Standard Operating Procedure (SOP) provides a framework within which Embrace Yorkshire & Humber Infant & Children's Transport Service (Embrace) operates.

1.2. Embrace is part of Sheffield Children's NHS Foundation Trust (SC(NHS)FT).

1.3. It is expected that all individuals working for Embrace are aware of and work within the Clinical Governance structure of SC(NHS)FT.

1.4. The service meets the standards set by the UK Paediatric Intensive Care Society<sup>i</sup> and the National Institute for Health and Clinical Excellence<sup>ii</sup> for the provision of specialist transport services.

### 1.5. Mission statement

Embrace aims to provide the highest quality paediatric and neonatal care for infants, children and their families from the first point of contact to arrival at the destination unit.

It is the mission of Embrace to provide:

- A single point of telephone contact for referring clinicians.
- Access to immediate specialist clinical advice.
- Triage to an appropriate level of transport provision and dispatch of transport teams within a clinically appropriate time window.
- Identification of a suitable cot or bed so that the most appropriate care is provided in the most appropriate location for any infant or child requiring specialist care in the Yorkshire & Humber region.
- Logistical support for high risk obstetric transfers by locating a suitable maternal bed and neonatal cot.

To achieve this Embrace will:

- Maintain appropriate communication between all parties to ensure the efficient and effective continuity of patient care.

- Ensure every transfer is carried out in a way that maximises patient safety, comfort and dignity and minimises patient pain, discomfort, or distress and that of parents/guardians.

## 2. SCOPE OF CARE

2.1. Embrace serves approximately 1.25 million children within Yorkshire & Humber (Y&H) Operational Delivery Network, providing 24 hour support for 21 hospital sites. This includes the transfer of:

- 2.1.1. All newborn infants whose mothers were booked for delivery in Y&H.
  - 2.1.1.1. Acute transfer for critical care.
  - 2.1.1.2. Other transfers for specialist opinion, investigation or treatment in regional or supra-regional centres.
  - 2.1.1.3. Repatriation to their home units within Y&H.
- 2.1.2. Children less than 16 years of age presenting in Y&H.
  - 2.1.2.1. Acute transfer for critical care.
  - 2.1.2.2. Planned critical care transfer for specialist opinion, investigation or treatment in regional or supra-regional centres.
  - 2.1.2.3. Repatriation of these children from critical care to their home units within Y&H.
- 2.1.3. Neonates and children, from a critical care unit in Y&H, for palliative care at a regional hospice or home.
- 2.1.4. At the discretion of the receiving Trust's unit, children and young adults over the age of 16 years, presenting in Y&H, who due to their specialist needs require critical care in a tertiary paediatric setting and are under formal transitional care arrangements.
- 2.1.5. In exceptional circumstances, as part of a planned response to critical care surge, children and young adults over the age of 16 years who require critical care.

### 2.2. Exclusions

Embrace will not be responsible for the transfer of the following patient groups:

- 2.2.1. Children and young adults over the age of 16 except in the circumstances described in 2.1.4. and 2.1.5.
- 2.2.2. Primary pre-hospital transfers.
- 2.2.3. Patient transport service for patients not categorized as neonates (i.e. to meet inpatient or outpatient planned appointments).

- 2.2.4. Inter-hospital transfers of paediatric patients that do not require critical care.
- 2.2.5. Patients that have been exposed to hazardous materials (see Embrace Health & Safety guideline<sup>iii</sup>).
- 2.2.6. Trauma patients requiring immediate transfer to a paediatric major trauma centre on a 'call and send' basis.
- 2.2.7. Time critical paediatric neurosurgical transfers requiring emergency surgery.
- 2.2.8. Other time critical transfers for immediate lifesaving treatment, e.g. atrial septostomy, where it is deemed that the referring hospital will be able to transfer more quickly and that this non-specialist transfer will result in significant clinical benefit.
- 2.2.9. Patients who weigh over 140kg will not routinely be transported using standard Embrace equipment.

### 3. REFERRAL

- 3.1. Acceptance criteria for transfer. To activate a transfer the referring hospital will be required to make an initial telephone request to the Embrace Call Centre 0114 268 8180 or, for non-acute transfers or repatriations, complete an online referral form ([www.sheffieldchildrens.nhs.uk/embrace](http://www.sheffieldchildrens.nhs.uk/embrace)) or email a Planned Transfer Booking Form (**appendix 1**). Any patient requiring transfer on the day of referral should be telephoned through to the Call Centre.
- 3.2. Referrals will be accepted from:
  - 3.2.1. Obstetric services for maternal bed and co-located neonatal cot availability (if required). These in utero transfers will be undertaken by the local ambulance service and are outside of the scope of care for Embrace.
  - 3.2.2. Neonatal services for all transfers.
  - 3.2.3. Referring Trusts for all paediatric critical care transfers.
  - 3.2.4. Paediatric Intensive Care Units (PICU) in Sheffield and Leeds for repatriations and transfer.
- 3.3. Acute referrals for neonatal or paediatric critical care will be dealt with by the following procedure:
  - 3.3.1. Embrace Call Handler records contact details of referring clinician and patient demographics on 'Embrace Call Coordination' (**appendix 1**).
  - 3.3.2. Call conference with on call Embrace Consultant.

- 3.3.3. 'Embrace Acute Call Medical Control Form' (**appendix 1**) will be used to record all clinical information communicated by the referring clinician.
- 3.3.4. Immediate clinical advice provided by Embrace Consultant as required
- 3.3.5. Regional Paediatric Intensive Care (PIC) or Neonatal Intensive Care (NIC) Consultant call conferenced (irrespective of critical care cot or bed availability).
- 3.3.6. Clinical details summarised by Embrace Consultant.
- 3.3.7. Further questions and clarifications on clinical status of patient as required.
- 3.3.8. Additional clinical specialists can be added to the call conference as required.
- 3.3.9. Plan agreed for clinical stabilisation and transfer of patient (if required).
- 3.3.10. Activation of Embrace transport team can occur at any point in the process under the direction of the Embrace Consultant.
- 3.3.11. Location of appropriate and available critical care cot or bed to be identified.
- 3.3.12. Clinical flow charts (**appendix 2**) will be used to assist in ensuring patients are referred and transferred to a hospital providing the appropriate level of care

#### 4. TRIAGE AND MEDICAL CONTROL

- 4.1. The decision to activate an Embrace Transport Team is based upon the clinical information provided by the referring unit either by email or online form (for planned transfers) or through a direct telephone referral. Embrace uses the underlying principle of the ACCEPT model (**appendix 3**).
  - 4.1.1. This decision takes into account the workload for Embrace, the 'Embrace Transfer Category Priority List' (**appendix 4**), the 'Tasking of Teams' guidance (**appendix 5**) the competencies of the individual team members and a formal risk assessment process (**appendix 6**).
- 4.2. All decisions will be clearly documented as part of the Embrace clinical records. Conference calls will be digitally recorded and stored<sup>iv</sup>.
- 4.3. The Embrace Consultant will decide upon the composition of the team based upon the clinical information available and his/her knowledge of the competencies of Embrace staff on duty.

4.3.1. Teams will be made up of any combination of the following (see section 9.2. for further details):-

- 4.3.1.1. Embrace Consultant
- 4.3.1.2. Embrace Doctor (Specialist Trainee or Clinical Fellow)
- 4.3.1.3. Embrace Advanced Nurse Practitioner
- 4.3.1.4. Embrace Transport Nurse
- 4.3.1.5. Embrace Driver (employed by Yorkshire Ambulance Service NHS Trust (YAS))

4.4. Where clinically indicated transfers will be Consultant led and delivered (**appendix 7**).

4.5. Teams are either 'nurse-delivered' or 'medic-delivered'.

4.5.1. A 'medic-delivered' team is led by an Embrace Consultant, Embrace Doctor or Embrace Advanced Nurse Practitioners (ANP).

4.5.2. The ANP is not a substitute doctor but an advanced nursing role working alongside medical and nursing staff.

4.5.3. The objectives of the ANP role are:-

- 4.5.3.1. To work within the boundaries of the ANP role acknowledging areas of limitation
- 4.5.3.2. To work within local and national guidelines and within the code of the NMC
- 4.5.3.3. Follow the SC(NHS)FT CP001 Policy for Non-medical Prescribing<sup>v</sup> and where medication and/or blood products are not covered by this policy they will refer to medication clinical management plans.

4.5.4. In exceptional circumstances other medical practitioners (e.g. Consultant Paediatric Anaesthetists) from tertiary centres may attend patients in referring hospitals. Where possible Embrace will facilitate the safe transfer of these individuals when the Embrace Consultant on duty believes it is in the best interest of the patient. This may also include travelling with the patient to the receiving hospital.

4.5.5. The decision to activate a 'Nurse delivered transfer' will be made by the Consultant on duty for Embrace following initial referral and assessment of the clinical condition of the patient. There is a separate guideline CG1593 Embrace Guideline for Nurse Delivered Transfers<sup>vi</sup>.

- 4.6. When an Embrace Consultant is not available to provide triage and medical control (for example due to giving direct clinical care to a critically ill patient) the following set of criteria applies before a transport is accepted.
- 4.6.1. The regional NIC/PIC Consultant must participate in the call conference (irrespective of cot or bed availability).
- 4.6.2. The non-Consultant doctor/ANP should decide for him/herself whether he/she has sufficient competence and experience to undertake the transport based upon the clinical information provided. If the non-Consultant doctor/ANP considers him/herself not to have the appropriate level of experience and competence, this must be clearly stated to the regional NIC/PIC Consultant.
- 4.6.3. The regional NIC/PIC Consultant must agree to support the non-Consultant doctor/ANP during the transfer by phone. This responsibility will be transferred to the accepting unit Consultant as soon as a cot/bed is located and confirmed.
- 4.6.4. Arrangements for the transport must be confirmed with the on-call Embrace Consultant at the earliest opportunity.
- 4.7. In certain circumstances additional clinical personal may need to be added to the Embrace Transport Team to ensure patient safety. This maybe an off-duty Embrace Consultant or a Consultant from the referring or receiving hospital with specific skills. In these circumstances the request for assistance would normally come from the on-call Embrace Consultant and transport to the required location would be coordinated by Embrace.
- 4.8. When an Embrace Transport Team is not available – for example due to clinical demand – then patients will be prioritised according to the 'Embrace Transfer Category Priority List' (**appendix 4**).
- 4.8.1. Patients referred from hospitals within the Y&H region will be prioritised. If the patient referral is from an out of region hospital, they will be asked to refer to the appropriate local service.
- 4.8.2. The length of wait until a team becomes available will be assessed.
- 4.8.3. Discussion will take place between the on-call Embrace Consultant and/or Nurse Coordinator, and a Consultant at the referring hospital and receiving hospital and a clinical decision will be made either to:
- wait
  - ask the referring hospital to transfer

- ask another transport service to transfer (in which case an Outsourcing Disclosure Form will be provided to the referring team (**appendix 8**))

4.9. The Embrace team will aim to be at the referring unit within 3 hours of the decision to transfer the child (Decision Response Time). Referrals that do not meet this key performance metric are monitored and reported both internally and externally.

4.10. Following 'first look' assessment of the patient and before departure from the receiving unit, the Embrace Team will discuss the case with the Embrace Consultant. In most circumstances at least one call will also include the Consultant at the accepting unit. This should always be the case in complex patients and/or when there has been a significant change in condition from the initial referral. If other specialists were involved in the initial referral call, and their expertise is relevant to on-going care, then they should also be included in conference calls to discuss management.

## 5. ADVICE CALLS

5.1. Advice calls may form part of the transport process or be independent of any request for transfer.

5.2. Advice will only be given by a member of the Embrace Team when it falls into his/her area of expertise. This area will vary according to the team member's background and experience.

5.3. Advice calls will be directed through the Embrace Call Centre and conferenced through to a suitable clinician. A member of the Embrace Team will normally be party to these conversations.

5.4. Embrace is thereby the facilitator for obtaining advice but not necessarily the provider of that advice.

5.5. Embrace will accept calls for advice and facilitate call conferencing when required but will not be expected to arrange the transfer of patients who fall outside their scope of care (section 2.2).

5.6. Advice may come from four sources (5.7). The clinicians giving this advice are responsible for their advice, accept that it is based upon the information provided to them and are cannot insist that such advice is acted upon.

5.7. The four sources are:

5.7.1. Embrace

5.7.2. A NIC or PIC clinician from the receiving unit

5.7.3. A member of a specialist team from the receiving unit (e.g. neurosurgery or cardiology)

5.7.4. A third party clinician (e.g. Consultant from a tertiary centre) who would otherwise have no responsibility to the patient.

## **6. RESPONSIBILITY ARRANGEMENTS DURING THE TRANSPORT PROCESS**

6.1. Introduction

6.1.1. The transfer of patients by Embrace necessitates that the care of patients is handed over from the referring hospital to the Transport Team and then from the Transport Team to the receiving hospital.

6.1.2. Recognising that there is not a sudden change in responsibility for the patient's care, but that this shifts and is dynamic during stabilisation and preparation for transfer, is central to understanding that a patient's best interests remain paramount throughout the transport process.

6.2. From referral to handover

6.2.1. The patient remains the sole responsibility of the referring hospital team (and consultant) until an adequate handover of the patient to the Embrace Transport Team has been completed. This should be a verbal handover and can only take place once the Embrace Transport Team has arrived at the patient's bedside.

6.2.2. The referring hospital team is responsible for the ongoing care of the patient and should continue to provide the highest available levels of care and support until the Embrace Transport Team has arrived and taken a handover.

6.2.3. While awaiting the arrival of the Embrace Transport Team the referring hospital team may be given advice from Embrace or a third party (such as the receiving unit / other specialist clinician) but is responsible for providing adequate information upon which that advice is obtained and for deciding whether or not to act in accordance with that advice.

### 6.3. From handover by the referring hospital team to departure.

6.3.1. On handover at the referring hospital the Embrace Transport Team will assume joint responsibility for the management of the patient with the referring hospital team Consultant. The Embrace Consultant on duty will assume ultimate responsibility for the patient when the Transport Team departs the referring hospital with the patient.

6.3.2. The referring hospital Consultant(s) and team cannot abdicate responsibility for the patient to the Embrace Transport Team at handover and the Consultant(s), and other responsible staff within the referring hospital, should render to the Embrace Transport Team any assistance necessary to enable the safe preparation of the patient for transfer.

### 6.4. During transfer

6.4.1. During the transfer of a patient from the place of care in the referring hospital until arrival at the place of care in the receiving hospital, Embrace is solely responsible for the patient's care.

6.4.2. The Embrace Consultant on duty is ultimately responsible for the patient during the transfer. This line of responsibility is maintained despite a lack of physical proximity.

6.4.3. During this time the Embrace Transport Team may act upon advice from a third party (e.g. from the receiving unit/other specialist clinician) but is responsible for providing adequate information upon which that advice is obtained and for deciding whether or not to act in accordance with the advice.

### 6.5. Handover in the receiving hospital

6.5.1. The care of the patient remains the Embrace Transport Team's responsibility until an adequate handover of the patient to the receiving team has been completed. Responsibility for the patient passes completely over to the receiving team once the patient has been transferred off the transport trolley and, where required, stabilised on the receiving team's life support equipment.

6.5.2. It is expected that upon arrival at the receiving hospital, the receiving team would, if necessary, render to the Embrace Transport Team any immediate assistance necessary for the care of the patient. This may take place even before the handover process has been completed.

6.5.3. On rare occasions additional clinical care by the Embrace Transport Team may be required (e.g. to facilitate a CT scan on arrival). This should be agreed with the Embrace Consultant at the earliest opportunity. Under these circumstances the primary responsibility for the patient rests with the receiving team. The Embrace Transport Team will act solely as technicians for the safe transfer of the patient using Embrace equipment.

#### 6.6. Nurse delivered transfers

6.6.1. The responsibility and accountability arrangements as detailed above continue to apply when transfers are delivered by Embrace Transport Nurses acting independently. This is both at referring hospitals, during transfer and at receiving hospitals<sup>vii</sup>.

#### 6.7. Transfers delivered by Embrace non-Consultant Doctors/Advanced Nurse Practitioners.

6.7.1. The responsibility and accountability arrangements continue to apply when transfers are delivered by non-Consultant Doctors/ANPs acting independently.

6.7.2. Before accepting responsibility for a patient the non-Consultant Doctor/ANP should independently assess the patient and decide whether or not the transfer of that patient is within his/her experience and competence. Should he/she decide that this is not the case, responsibility remains with the referring team until such time as alternative arrangements can be made e.g. attendance by the Embrace Consultant on duty

#### 6.8. Palliative care

6.8.1. Embrace recognises that at any point during the transport process, starting from initial contact with Embrace, the patient's clinical condition may change and palliative care at the referral centre may be appropriate.

6.8.2. This decision should be made jointly with the:

- Referring Consultant(s)
- Embrace Consultant
- Receiving Consultant.

6.8.3. If this occurs while the Embrace Transport Team are in attendance, responsibility for the patients on going care will then move back to the referring hospital Consultant. Again, Embrace recognises that this is a dynamic process

but the referring hospital will assume ultimate responsibility for re-orientation of care.

6.8.4. On discussion with the responsible Embrace Consultant on duty the Embrace Transport Team may remain at the referring hospital to continue shared care with the referring hospital team.

## 7. MODE OF TRANSPORT

### 7.1. Mode of transport

- 7.1.1. Embrace is a ground (road), rotary wing (helicopter) and fixed wing (plane) transfer service.
- 7.1.2. Ground transport is provided by specialist Embrace road ambulance.
- 7.1.3. Air transport is provided in collaboration with specialist partners by either fixed wing or rotary wing. These operating procedures are covered extensively by the aeromedical guidelines.<sup>viii</sup>

### 7.2. Ambulances (ground)

- 7.2.1. Ambulances are provided by Yorkshire Ambulance Service NHS Trust (YAS) under the terms of a Service Level Agreement that is reviewed annually.
- 7.2.2. These ambulances are specially adapted to the need of the paediatric and neonatal patients, for example
  - interior temperature monitoring
  - medical air supply
  - specialist fitting for Embrace equipment – defibrillator, air/oxygen blender, Tom Thumb etc.
- 7.2.3. Drivers are also provided, managed and trained by YAS. The driving team work under the joint YAS and Embrace EMB1423 Drivers Standard Operating Procedure<sup>ix</sup>.
- 7.2.4. The specialist Embrace road ambulances are configured for single trolley/incubator use.
- 7.2.5. YAS is responsible for the servicing and maintenance of the vehicles
  - In the event of a vehicle being taken out of service for whatever reason YAS provide replacement vehicles.

- 7.2.6. Procedures for safe utilisation of transport vehicles are covered in Embrace EMB1630 Health & Safety in Transport Guideline and specific aeromedical guidelines.

## 8. EQUIPMENT

- 8.1. Embrace uses incubators and trolleys in a single patient configuration.
- 8.2. Incubators for babies up to 5kgs.
- 8.3. Trolleys in conjunction with a BabyPod 2™ for babies and infants between 2-9kgs. A warming device will usually be required. Mature babies between 1.5kg and 2kg who are temperature stable in an open cot can also be transferred in a BabyPod 2™ in special circumstances documented on a case by case basis by the on-call Embrace Consultant.
- 8.4. Trolleys for infants and children between 5 and 140kgs secured with one of the following devices:
- Paraid Ambulance Child Restraint (2.5-45kgs)
  - Child Evac-U Splint mattress (5-15kgs)
  - Adult Evac-U Splint mattress (15-140kgs)
  - Integral trolley harness (45 – 140kgs)
- 8.5. Transport of twins by road can be undertaken using a single stretcher double BabyPod 2™ configuration such that both babies can be monitored and easily accessed and following the principles in CG1593 Embrace Guideline for Nurse Delivered Transfers.
- 8.6. All incubators and trolleys are fitted with intravenous infusion pumps, appropriate ventilators, monitors and suction units.
- 8.7. Additional equipment for specialist treatment, e.g nitric, cooling, etc is available.
- 8.8. Embrace staff should report equipment defects as per SC(NHS)FT CP568 Medical Equipment Management Policy<sup>x</sup>.

- 8.9. Servicing and maintenance of Embrace equipment is carried out by SC(NHS)FT Clinical Engineering personnel or specialist providers identified by the Clinical Engineering department.
- 8.10. Cleaning and decontamination of equipment is by all clinical staff following the SC(NHS)FT CP568 Medical Equipment Management Policy<sup>xi</sup> and section 9 of the CP546 Control of Infection Policy<sup>xii</sup>.
- 8.11. Embrace staff must use SC(NHS)FT approved and supplied equipment and consumables.
- 8.12. In exceptional circumstances, where it is in the best interests of the patient, other equipment may be used after discussion with the Embrace Consultant on duty. A Datix risk management form will be completed in these circumstances.
- 8.13. Aeromedical equipment is covered by separate guidelines and SOP's but is subject to the same cleaning and decontamination procedures, reporting procedures and is approved by the aircraft provider.
- 8.14. Measures are taken to monitor and decrease noise and vibration for the comfort for both the patient and staff.

## 9. EMBRACE TEAM

- 9.1. Embrace's most important resource is the Team that deliver the service. The health, safety and well-being of individuals are paramount<sup>xiii</sup>.
- 9.2. The Embrace Team consists of:-
- Consultants from Paediatrics, Paediatric Intensive Care, Neonatal Intensive Care, Paediatric Emergency Medicine or Paediatric Anaesthesia who are skilled and experienced in managing the medical care of sick neonates and children during the transport process.
  - Non-Consultant Doctors who are senior trainees in their field – these may be from various backgrounds including:
    - Paediatrics
    - Neonates

- Anaesthetics
- Emergency Medicine
- Advanced Nurse Practitioners from neonatal and/or paediatric critical care backgrounds.
- Nurses from neonatal and/or paediatric critical care backgrounds
- Call Handlers and a Call Centre Manager who are the first point of contact for referring clinicians.
- YAS Drivers who drive the specialist ground vehicles.

### 9.3. Wellbeing

- 9.3.1. The well-being of staff is paramount and is documented in the EMB1702 Embrace Health & Wellbeing Guideline and EMB1422 Fatigue Management Guidance. There is SC(NHS)FT CP71 Managing Stress and Enhancing Wellbeing Policy<sup>xiv</sup> and a CP61 Moving and Handling Policy<sup>xv</sup>.

### 9.4. Training and education

- 9.4.1. All staff are expected to adhere to the HR538 Mandatory Training Policy<sup>xvi</sup>, and HR45 Corporate and Local Induction Policy for Permanent and Temporary Staff<sup>xvii</sup> to ensure that all Embrace staff have key information and basic understanding of Embrace operations.

- 9.4.2. New staff will be expected to complete a competency document in line with the Paediatric Intensive Care Society and Neonatal Transport Group standards.

- 9.4.3. All new staff undergo on site orientation and equipment training.

#### 9.4.4. Nursing Staff

- 
- Initially nursing staff are accompanied on transfers with the Education team and then a period of preceptorship on transfers with established nursing staff.
- Progress is recorded and monitored by the Nurse Educators within the education database and individual transfer log.

#### 9.4.5. ANPs

- New ANPs are expected to follow an extended nursing induction programme. This includes accompanied transfers with Embrace Consultants and the established ANP team.

- All ANPs will have a named Embrace Consultant supervisor and will have minimum 6 monthly documented meetings with their named supervisor.
- All ANPs will undertake periods of time, to be agreed with their medical supervisor and Embrace Lead Nurse, on tertiary level units for the purpose of updating skills and knowledge.
- All ANPs will have a joint annual appraisal between themselves, the Embrace Consultant supervisor and the Embrace Lead Nurse.
- Embrace Consultants meet on a regular basis to discuss educational supervision, competency and ability to lead transfers.

#### 9.4.6. Doctors

- All doctors undergo a structured induction programme.
- 
- They have training to enhance skills in advanced procedures. This is in conjunction with ongoing education to maintain core transport skills; for example airway management.
- Supervision-
  - ❖ All doctors are initially accompanied on transfers by a Consultant until they are deemed competent.
  - ❖ All doctors are assigned an Embrace Consultant Clinical Supervisor for their post.
  - ❖ Clinical supervision includes Personal Development Plan target setting, health and wellbeing support and feedback on progress.
  - ❖ A minimum of 3 meetings are required during 6 months and are recorded.
  - ❖ Embrace Consultants meet on a regular basis to discuss supervision, competency and ability to lead transfers.

#### 9.4.7. New Embrace Consultants

- All new Consultants undergo a structured induction programme tailored to include Embrace Consultant responsibilities.
- They have training to enhance skills in advanced transport procedures.
- All new Consultants are initially accompanied on transfers by an established Consultant until it is agreed they are competent.

#### 9.4.8. Ongoing professional development

- All staff are required to undergo training on all equipment, resources and modes of transfer and keep up to date with relevant policy changes.

- Training will be recorded on the Education data base and reviewed on an annual basis.
- There is a programme for on-going training including annual update days.
- All permanent clinical staff are expected to complete and maintain appropriate nationally recognised life support programmes.
- Embrace Consultants will undertake periods of time within a tertiary level centre for the purpose of updating individual skills and knowledge. This will be agreed at their annual appraisal.

## 10. DOCUMENTATION

### 10.1. Patient identification.

10.1.1. All calls concerning individual patients will have basic demographic details recorded by Embrace Call Centre staff and a unique 8 digit identification number (Embrace number) allocated.

10.1.2. The NHS number should be recorded at the time of the call if available or sought and recorded retrospectively.

10.1.3. Patient identification (surname, given name, Embrace number and NHS number (where available)) will be recorded on each page of the referral and transport forms.

10.2. All calls will be documented on the appropriate Embrace referral forms. These will form part of the clinical records for the patient and will be signed and dated by the individual completing them.

10.3. All drugs should be prescribed and administered in accordance with the SC(NHS)FT CP85 Medicines Management Policy<sup>xviii</sup>.

10.4. All untoward incidents and adverse events will be recorded in the patient's transfer notes. In addition a Datix risk management form will be completed and forwarded to the Risk Management Department. All Datix forms are reviewed internally within 24 hours and monthly at the Safety Review Meeting (**appendix 9**).

10.5. Copies of the Embrace Transfer Record (**appendix 1**) will be left at the receiving unit to form part of their clinical notes. The original will be returned to Embrace to

complete the records for that episode. All notes should be stored in accordance with the SC(NHS)FT CP38 Clinical Records Policy<sup>xix</sup>.

10.6. Any emails sent with clinical information must be secure and the information governance policy must be followed.

10.7. The PANDO app can be used to securely transmit clinical images, including X-rays and CFM traces, and copies of the clinical transport record.

## **11. PATIENT IDENTIFICATION**

11.1. All patients being transferred will have 2 ID bands in place.

11.2. It is the Embrace Nurse's responsibility to identify the patient prior to the delivery of care and transfer by cross referencing bands with medical and nursing notes.

11.3. Patients must wear agreed ID band in line with SC(NHS)FT CP75 Patient Identification Policy that includes their name, date of birth, NHS number and gender. If NHS number not available the local hospital number should be used.

11.4. Due to skin integrity or sensitivity, ID bands may not be appropriate; a risk assessment will be undertaken in these cases and patient identification attached to clothes and/or incubator/pod.

11.5. Once at receiving hospital the accepting nurse and Embrace Nurse must check patient ID band with medical and nursing notes.

## **12. PARENTS**

12.1. Parents will be kept fully informed of all aspects of their infant / child's care. These discussions will be recorded in the Embrace Transfer Record.

12.2. Discussions with parents will include:

12.2.1. The nature of the condition affecting their child.

12.2.2. The reason for transfer.

12.2.3. An explanation of the process of transfer and the potential risks.

12.3. No formal written consent for transfer will be taken. A patient information leaflet will be provided.

- 12.4. No consent will be taken for a third party procedure (e.g. laparotomy).
- 12.5. Where possible and appropriate, one parent may be invited to travel with their child- this decision is at the discretion of the transport team. Guidelines for parents accompanying their child are in place.
- 12.6. The Embrace Team cannot be responsible for the health of the parent accompanying their child. Travel with Embrace should only be offered if the parent is medically fit to travel. Should a parent become unwell whilst travelling, immediate assistance will be offered but will only be equivalent to that provided by an ordinary member of the public.
- 12.7. Mothers who have recently given birth, and wish to travel with their child, must have been discharged from in-patient obstetric care and be more than 24 hours post normal vaginal delivery or more than 72 hours post Caesarean section delivery.
- 12.8. Parents accompanying a rotary or fixed wing transfer will have a fitness to fly assessment completed.
- 12.9. A sample of maternal blood should be obtained for all babies and infants under 4 months of age for whom there is a reasonable expectation of an early transfusion of blood products being required. This is not required if the mother is travelling with the Embrace Team to the receiving hospital.

**Appendix 1: Clinical documentation****Planned Transfer Booking Form**

Send this form to Embrace by e-mail to **embrace.transport@nhs.net** at least one day before transfer. A team member will call back to confirm arrangements. Need to

Referral Date:	Referral Unit:
Patient Location:	Phone Number:
Patient Name:	Date of Birth:
Age:	Weight:
Postcode:	NHS No:
Sex:	
Gestation at Birth (weeks):	Corrected Gestation (weeks):
Requires Transfer To:	Reason for Transfer:
Specific Procedure/Appointment:	
Additional Notes:	
<b>Print Name:</b>	
<b>Signature:</b>	
<b>Designation:</b>	



<b>EMBRACE NUMBER</b>	2	0	2	1						<b>PATIENT NAME</b>								
<b>NHS NUMBER</b>										<b>DATE</b>	D	D	M	M	2	0	2	1

To be completed by Embrace Consultant

<b>DECISION DATE/TIME</b>	<b>CASE REVIEW TRIGGER CODE (1-22)</b>												
D	D	M	M	2	0	2	1	H	H	M	M	<input type="checkbox"/> Entered on case review database	<input type="checkbox"/> No case review trigger

Air transfer requested?

Flight provider: \_\_\_\_\_ Time of call: : :

Outcome:  Available  Not available Reason for unavailability: \_\_\_\_\_

Flight provider: \_\_\_\_\_ Time of call: : :

Outcome:  Available  Not available Reason for unavailability: \_\_\_\_\_

**PROVISIONAL DIAGNOSIS**

During transfer:  Ventilated  BIPAP  CPAP  High flow  Self ventilating (low flow)  Self ventilating (in air)  N/A  
 Ventilated neonates on arrival: Blood gas  Yes  No  pCO2 <4  pCO2 >7 kPa and pH < 7.2

TRANSFER OUTCOME	TRANSPORT CATEGORY	ADDITIONAL INFO
<input type="checkbox"/> <b>Transferred</b> Transferred to: _____ Destination type: <input type="checkbox"/> PICU <input type="checkbox"/> Theatre <input type="checkbox"/> Neonatal Unit <input type="checkbox"/> Other transport service <input type="checkbox"/> Adult ICU <input type="checkbox"/> Normal residence <input type="checkbox"/> Paed HDU <input type="checkbox"/> Hospice <input type="checkbox"/> Ward <input type="checkbox"/> X-ray <input type="checkbox"/> Out-patients <input type="checkbox"/> Obstetric unit <input type="checkbox"/> Emergency Dept	<input type="checkbox"/> Neonatal <input type="checkbox"/> Paediatric <input type="checkbox"/> In-Utero <input type="checkbox"/> Adult <input type="checkbox"/> Intensive care <input type="checkbox"/> High dependency care <input type="checkbox"/> Low dependence/special care/transitional care <hr/> <input type="checkbox"/> <b>COVID-19</b> <hr/> <input type="checkbox"/> Not time critical <b>Time critical:</b> <input type="checkbox"/> By referring unit <input type="checkbox"/> Embrace team – national criteria <input type="checkbox"/> Embrace team – local criteria	<input type="checkbox"/> Nitric <input type="checkbox"/> N/A <input type="checkbox"/> Prostin <input type="checkbox"/> N/A <input type="checkbox"/> Inotropes <input type="checkbox"/> N/A <hr/> <b>PRIMARY CLINICAL REASON FOR TRANSFER (tick one only)</b> <input type="checkbox"/> Burns <input type="checkbox"/> Cardiac <input type="checkbox"/> Cooling <input type="checkbox"/> ECMO <input type="checkbox"/> ENT/Airway <input type="checkbox"/> Haem / Onc <input type="checkbox"/> Liver <input type="checkbox"/> Metabolic <input type="checkbox"/> Neurology <input type="checkbox"/> Neurosurgery <input type="checkbox"/> Other <input type="checkbox"/> Palliative care <input type="checkbox"/> Poisoning <input type="checkbox"/> Post treatment return <input type="checkbox"/> Prematurity <input type="checkbox"/> Renal <input type="checkbox"/> Respiratory <input type="checkbox"/> Sepsis <input type="checkbox"/> Surgery <input type="checkbox"/> Surgery- Day case <input type="checkbox"/> Trauma
Referral reason: <input type="checkbox"/> Capacity/Resources <input type="checkbox"/> Uplift in care <input type="checkbox"/> Repat <input type="checkbox"/> Outpatients apt or procedure		
<input type="checkbox"/> <b>No transfer</b> <input type="checkbox"/> Advice/courtesy call <input type="checkbox"/> Team deployed <input type="checkbox"/> Not transported – condition improved <input type="checkbox"/> Not transported – condition deteriorated <input type="checkbox"/> Not transported – Other: Specify..... <input type="checkbox"/> Patient died before team arrived <input type="checkbox"/> Patient died while team present <input type="checkbox"/> Patient died during transit <input type="checkbox"/> Out of region request for bed only	<input type="checkbox"/> <b>Refusal</b> <input type="checkbox"/> Time critical transfer <input type="checkbox"/> Out of region <input type="checkbox"/> Team not available <input type="checkbox"/> Out of scope of care <input type="checkbox"/> Ward transfer <input type="checkbox"/> Adult patient <input type="checkbox"/> Mobile ECMO <input type="checkbox"/> Transport not requested <input type="checkbox"/> Other: <b>Refusal outcome: (Tick all that apply)</b> <input type="checkbox"/> Transferred by referring hospital team <input type="checkbox"/> Transferred by accepting hospital team <input type="checkbox"/> Embrace ambulance used <input type="checkbox"/> Stayed at referring hospital <input type="checkbox"/> Passed onto other transport service: Specify.....	

Page 3 of Call Coordination form not required

PRINT NAME ..... SIGNATURE .....

<b>EMBRACE NUMBER</b>	2	0	2	1					<b>PATIENT NAME</b>								
<b>NHS NUMBER</b>									<b>DATE</b>	D	D	M	M	2	0	2	1

**To be completed by Embrace Consultant**

PICU referral outcome	Refusal unit	Final outcome	Accepting unit
<input type="checkbox"/> Refused – no staffed cot/bed available		<input type="checkbox"/> Accepted to PICU	
<input type="checkbox"/> Refused – no transport team available		<input type="checkbox"/> Accepted to other ICU	
<input type="checkbox"/> Refused – no staffed bed or team available		<input type="checkbox"/> Accepted to other unit	
<input type="checkbox"/> Refused – time critical			
<input type="checkbox"/> Refused – out of scope of care			

PICANET Referral ID 

--	--	--	--	--	--

PICANET Transport ID 

--	--	--	--	--	--

**PICANET – Complete for all patients for transfer to a paediatric care area by a full team**

Planned  Unplanned

**Invasive ventilation via advanced airway at time of referral call:**  
 Yes  
 No – not indicated  
 No – advised to intubate  
 Unknown

**PIM3 AUDIT DATA AT FIRST LOOK**  
 Elective admission (could be postponed for more than 6 hours without adverse effects)

**Main reason for admission:**  
 Asthma  Bronchiolitis  Croup  Obstructive sleep apnoea  DKA  Seizure disorder  
 Recovery from surgery →  Bypass cardiac proc  Non-bypass cardiac proc  Elective liver trans  Other procedure  Other (none of the above)

**COVID-19:**  
 Suspected or probable COVID without PIM-TS  
 Suspected or probable COVID with PIM-TS  
 Confirmed COVID with PIM-TS  
 Confirmed COVID without PIM-TS

**Is evidence available to assess past medical history?**  Yes  No  
 Cardiac arrest before first look →  Cardiac arrest out of hospital  
 Cardiomyopathy or myocarditis  HLHS  Acute NEC  SCID  
 Leukaemia / lymphoma after 1<sup>st</sup> induction  Liver failure  Spontaneous cerebral haemorrhage  
 Neurodegenerative disorder  HIV infection  BMT

Systolic BP:    SpO2:   % FiO2 at time SpO2 measured:

Pupil reaction:  Both fixed and dilated  Other reaction  Unknown

Mechanical ventilation in first hour:  Yes  No  Unknown

CPAP via prongs, mask or advanced airway in first hour:  Yes  No

Clinically relevant blood gas available at first look:  Yes  No

Base excess: +/-    mmol/l (art/cap/ven - please specify) Lactate:    mmol/l (art/cap/ven - please specify)

Arterial PaO<sub>2</sub>    kPa or   mmHg  
 At the time of arterial PaO<sub>2</sub>: FiO<sub>2</sub>    Advanced airway  Yes  No Headbox  Yes  No

PRINT NAME ..... SIGNATURE .....



<b>EMBRACE Number</b>	2	0	2	1						<b>PATIENT NAME</b>								
<b>NHS Number</b>										<b>Date</b>	D	D	M	M	2	0	2	1

**STATUS AT REFERRAL**

**AIRWAY & C-SPINE**

<input type="checkbox"/> Clear <input type="checkbox"/> Compromised <input type="checkbox"/> Intubated <input type="checkbox"/> Being intubated <input type="checkbox"/> Tracheostomy <input type="checkbox"/> LMA <input type="checkbox"/> Gastric tube <input type="checkbox"/> CXR to confirm ETT position	Details
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------

**BREATHING**

<input type="checkbox"/> Spontaneous <input type="checkbox"/> Ventilated  Mode.....	PIP		Rate / Freq	
	PEEP		Insp. time	
	FiO2		MAP	
	Sats		Nitric ppm	
	Details			
High flow		l/min		

**BLOOD GASES**

**CIRCULATION**

Time	Art/Ven/Cap	Art/Ven/Cap	Art/Ven/Cap	Observations	Fluid Bolus ( ml/Kg)
Sample				HR	Crystalloid
pH				Systolic BP	Colloid
pCO2				Diastolic BP	Blood
pO2				Mean BP	FFP/Cryo
BE				Cap refill	Maintenance ml/kg/day
HCO3				Inotrope	<b>Access</b> <input type="checkbox"/> Peripheral ..... <input type="checkbox"/> Long Line <input type="checkbox"/> Central <input type="checkbox"/> Arterial <input type="checkbox"/> Intra-osseus <input type="checkbox"/> UAC <input type="checkbox"/> UVC
Glucose				Dose	
Lactate				.....	
Na				.....	
K				.....	
Ca				.....	
Cl				.....	
Hb				<input type="checkbox"/> Prostin	
Met Hb				Dose	
				Start time:	

**NEUROLOGY**

**INFECTION**

GCS		E	V	M	Pupil size	R	L	Temp	CORE	PERIPH
	A	V	P	U	Pupil reaction	R	L	Antibiotics		
<input type="checkbox"/> Sedated ..... <input type="checkbox"/> Muscle relaxed .....					<input type="checkbox"/> 3% Sodium chloride  <input type="checkbox"/> Mannitol			Culture results		
								Status, e.g., Covid status, MRSA positive		

**Other details**

PRINT NAME .....

SIGNATURE .....

<b>EMBRACE Number</b>	2	0	2	1						<b>PATIENT NAME</b>									
<b>NHS Number</b>											<b>Date</b>	D	D	M	M	2	0	2	1

**BLOOD RESULTS**

<b>Date and time</b>				
Haemoglobin				
White cell count				
Neutrophil				
Lymphocytes				
Platelets				
INR / PT				
APTT				
Fibrinogen				
Sodium				
Potassium				
Urea				
Creatinine				
Calcium				
Magnesium				
Total bilirubin				
Conjugated				
Unconjugated				
ALT				
Alkaline phosphatase				
Albumin				
Ammonia				
CRP				

**IMAGING**

	Plain X-rays	CT/USS/MRI
<b>Date and time</b>		
Head		
Chest		
Spine		
Abdomen		
Pelvis and limbs		
Other		

**Advice provided by:** .....

**Decision date and time:** .....

**Mobilisation Category:**  <1 hour mobilisation  > 1 hour mobilisation  Not Applicable

- IV access X2
- Gastric tube
- CXR
- C-spine protection
- Copy of notes
- Patient transfer letter/Badger
- PACS
- Maternal blood
- Parents informed
- Jessops Wing surgical**
- JW checklist
- Blood products at SCH
- Cooling Transfers**
- Rectal temp monitoring
- Passive cooling protocol
- No ice packs
- CFAM
- MRI Transfers**
- Consent

PRINT NAME .....

SIGNATURE .....





**Appendix 2: Clinical flow charts****Transfer Thresholds for In-Utero and Post-Natal Babies****Known major abnormality, any gestational age**

- Leeds General Infirmary
- Sheffield, Jessop Wing

**Level 3 'Tertiary' centres (Neonatal Intensive Care Units)**

- Leeds General Infirmary
- Bradford Royal Infirmary
- Hull Royal Infirmary
- Sheffield, Jessop Wing

**In-Utero transfers:**

- Less than 27 weeks - singletons
- Less than 28 weeks - twins
- Estimated birth weight less than 800g (any gestation)

**Post-Natal Babies**

- Less than 27 weeks - singletons
- Less than 28 weeks - multiples
- Birth weight less than 800g (any gestation)
- Any baby needing more than 48hrs of ventilation to be discussed
- Any baby requiring complex intensive care with symptoms of multi organ failure

**Level 2 (Local Neonatal Unit)**

- Calderdale
- Pinderfields
- York
- Barnsley
- Scunthorpe
- Grimsby
- Doncaster
- Chesterfield
- Rotherham

**In-Utero transfers:**

- 27 weeks and over - singletons
- 28 weeks and over - multiples
- Estimated birth weight must be more than 800g

**Post Natal Babies**

- 27 weeks and over corrected gestational age - singletons
- 28 weeks and over corrected gestational age - multiples
- Current weight must be more than 800g

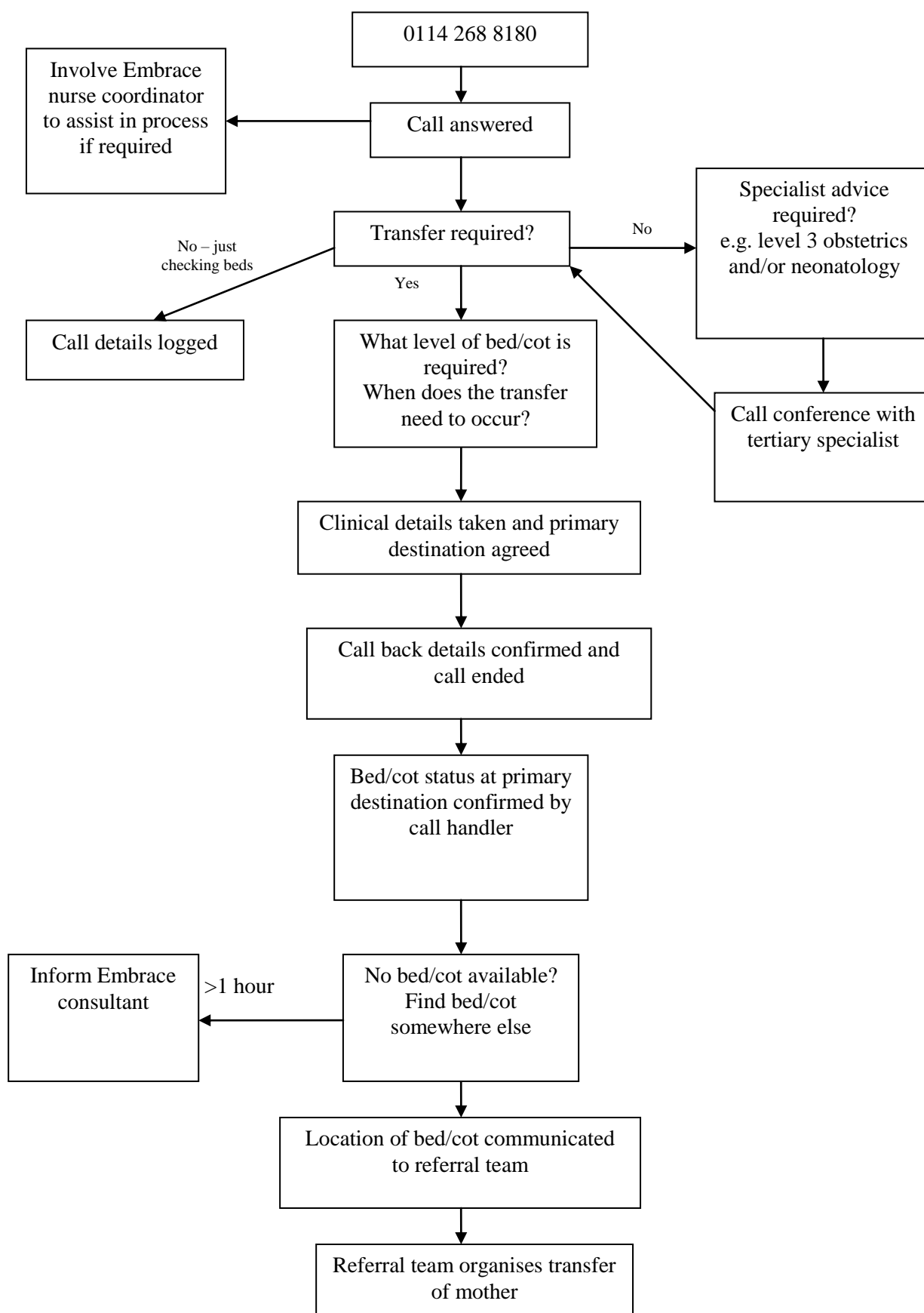
**Level 1 (Special Care Unit)**

- Harrogate
- Airedale
- Scarborough
- Bassetlaw
- St James, Leeds

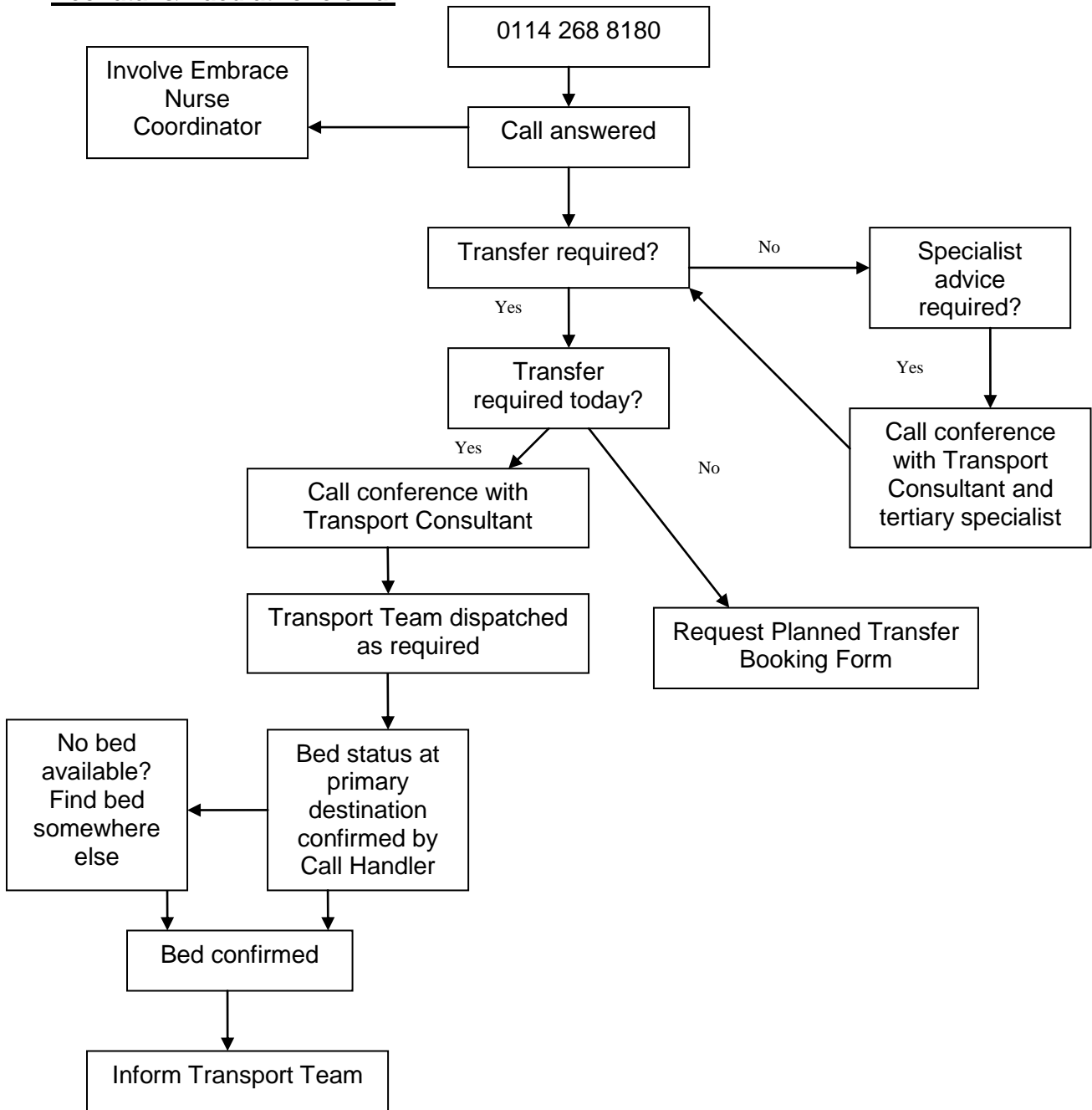
**Post Natal Babies**

- 32 weeks and over corrected gestational age - singletons
- 34 weeks and over corrected gestational age - multiples
- Current weight must be more than 1000g

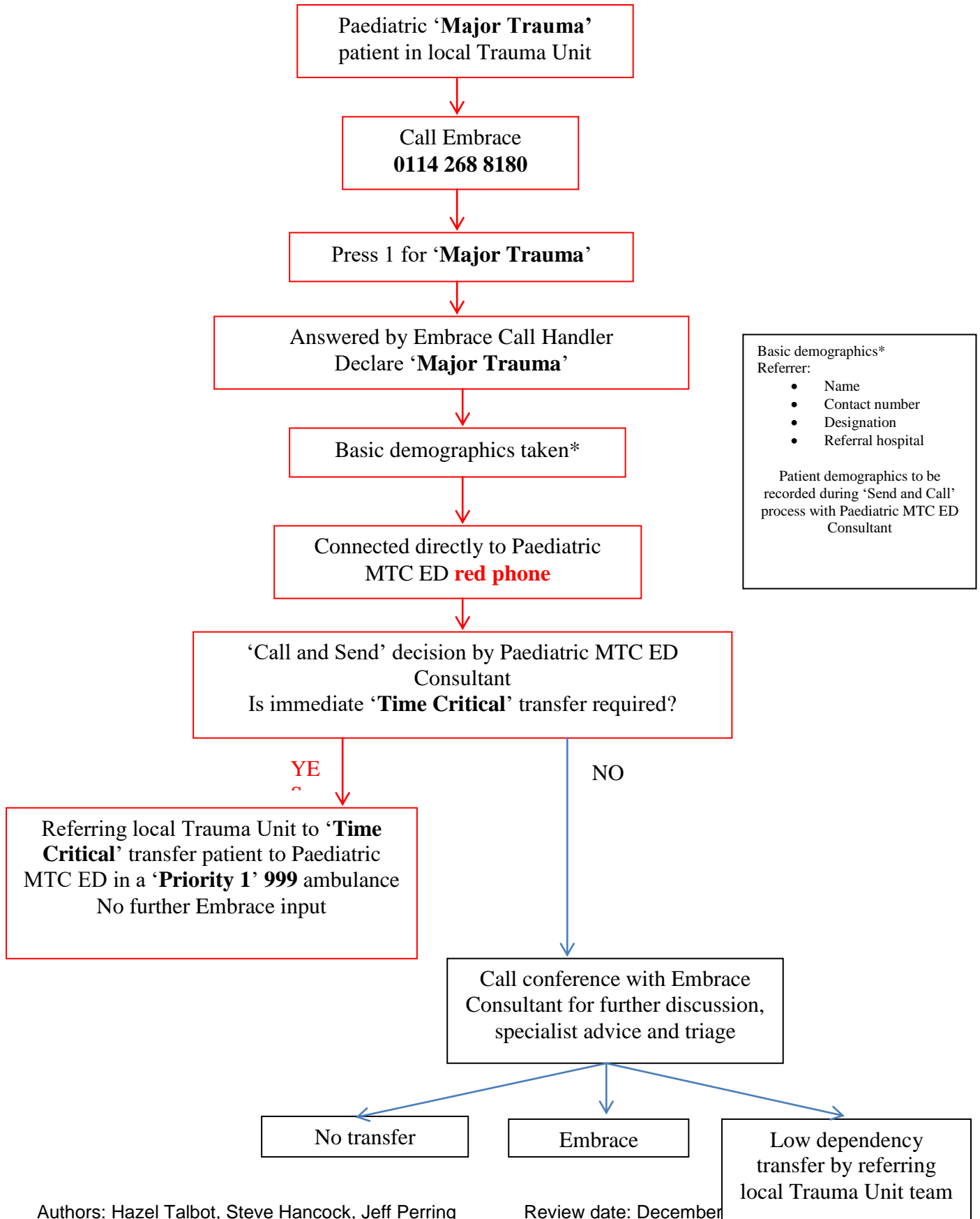
**No in-utero transfers to a level 1 centre (Special Care Unit).**

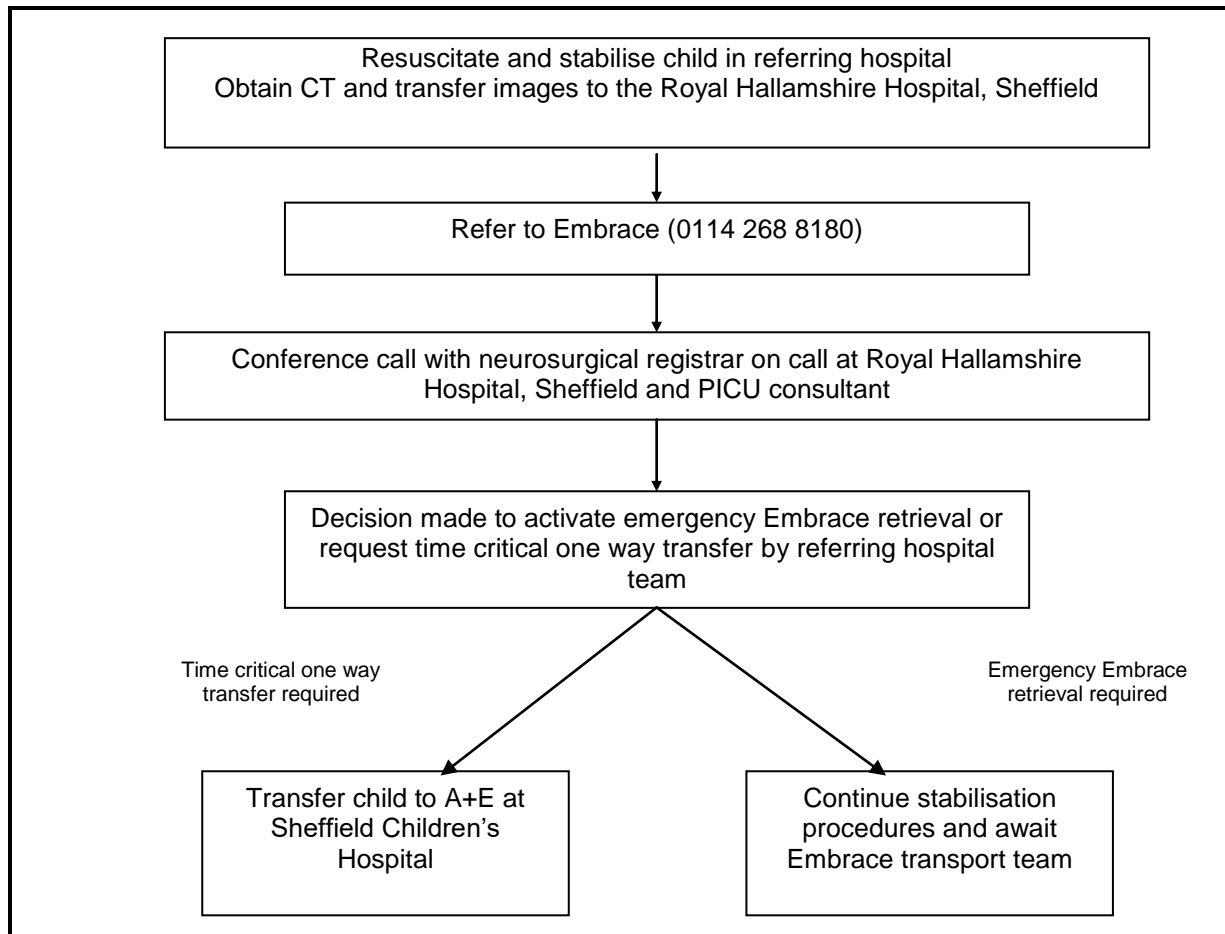
**In-Utero transfers**

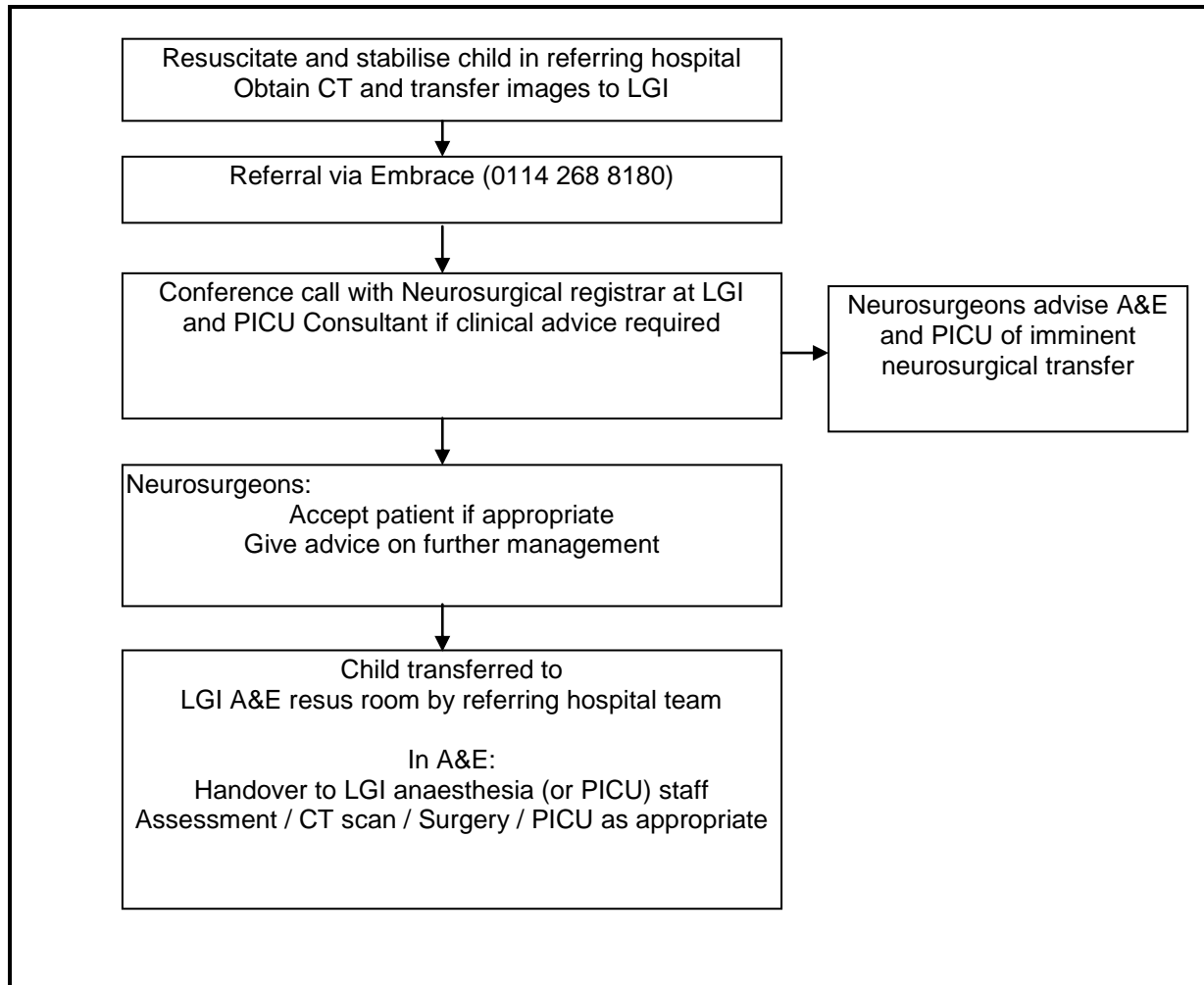
**Neonatal & Paediatric referral**



**Embrace 'Major Trauma' algorithm**

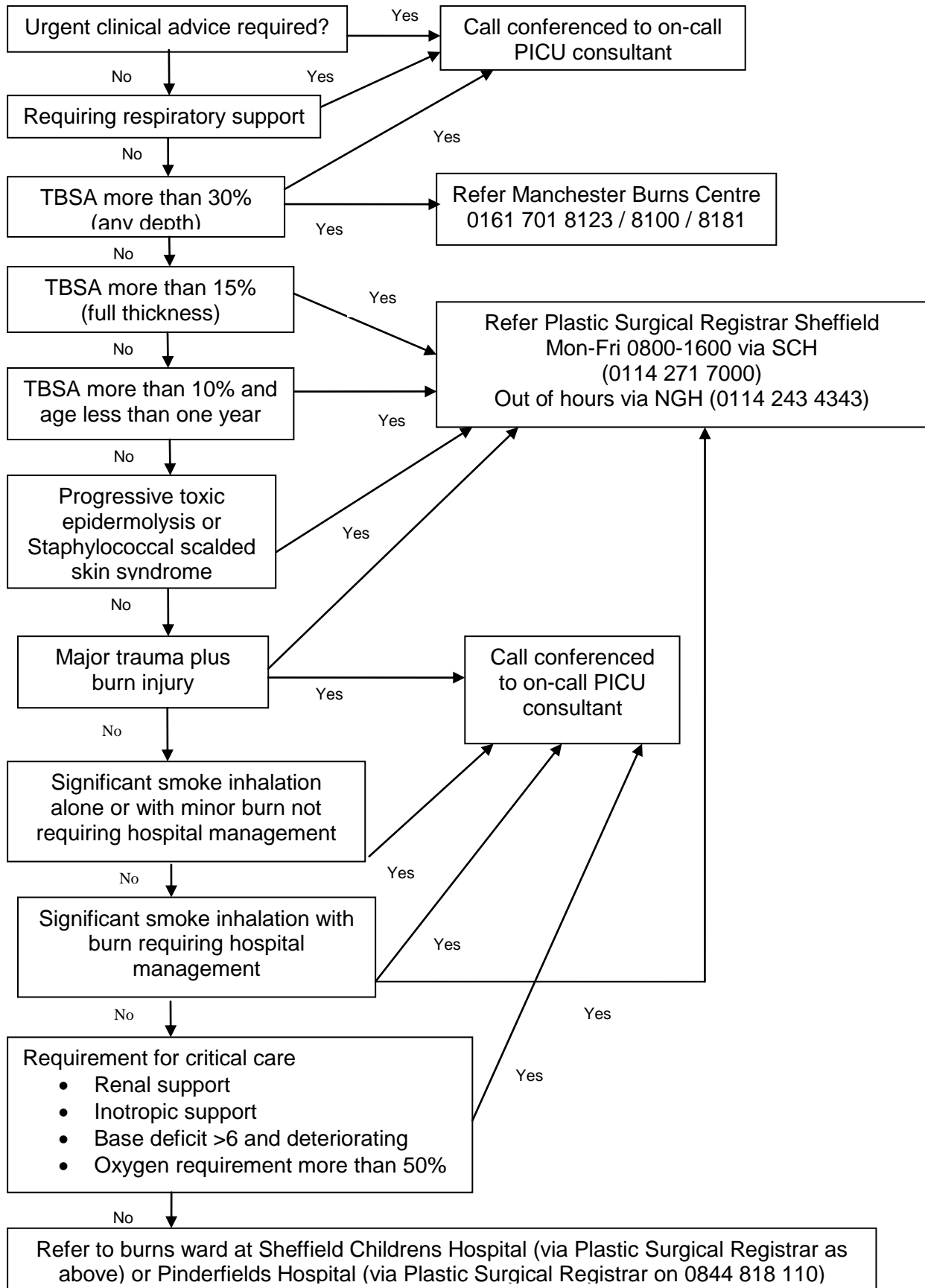


**Neurosurgical emergencies – Sheffield area**

**Neurosurgical emergencies – Leeds area****Notes:**

- The transfer of all head injuries and other neurosurgical emergencies into Leeds remains the responsibility of the referring hospital.

**Burns referrals (TBSA = Total Body Surface Area of burn)**



**Vascular and Cardio-Thoracic Emergencies – Non-Trauma**

**Do not attempt to refer directly to vascular surgery, vascular interventional radiology, cardio-thoracic surgery or other specialists at Leeds General Infirmary**

**Neonatal patients**

Follow the normal Embrace process and call conference with the Leeds General Infirmary NICU consultant on-call

'Time Critical' transfer by Embrace to Leeds General Infirmary NICU

Onward referral to specialists within LGI will be made by the NICU team in Leeds

**Paediatric patients**

Follow the normal Embrace process and call conference with the Leeds General Infirmary PICU consultant on-call

'Time Critical' transfer by Embrace or referring hospital team to Leeds General Infirmary PICU

Onward referral to specialists within LGI will be made by the PICU team in Leeds

**Vascular and Cardio-Thoracic Emergencies – Trauma Patients**

**Do not attempt to refer directly to vascular surgery, vascular interventional radiology, cardio-thoracic surgery or other specialists at Leeds General Infirmary**

**Trauma patients in a 'Trauma Unit' referring hospital in Leeds MTC Network**

Follow the 'Embrace Major Trauma Algorithm' and connect to the Red Phone at Leeds General Infirmary (LGI) Emergency Department

Decision making to be led by LGI Emergency Department Consultant

'Time Critical' transfer by referring hospital team to LGI Emergency Department

**Trauma patients in a 'Trauma Unit' referring hospital in Sheffield MTC Network**

Follow the 'Embrace Major Trauma Algorithm' and connect to the Red Phone at Sheffield Children's Hospital (SCH) Emergency Department

Decision making to be led by SCH Emergency Department Consultant

If possible Vascular or Cardio-Thoracic emergency identified, by SCH Emergency Department

Consultant, then call conference to Red Phone at Leeds General Infirmary (LGI) Emergency Department

Decision making to be led by LGI Emergency Department Consultant

'Time Critical' transfer by referring hospital team to LGI Emergency Department

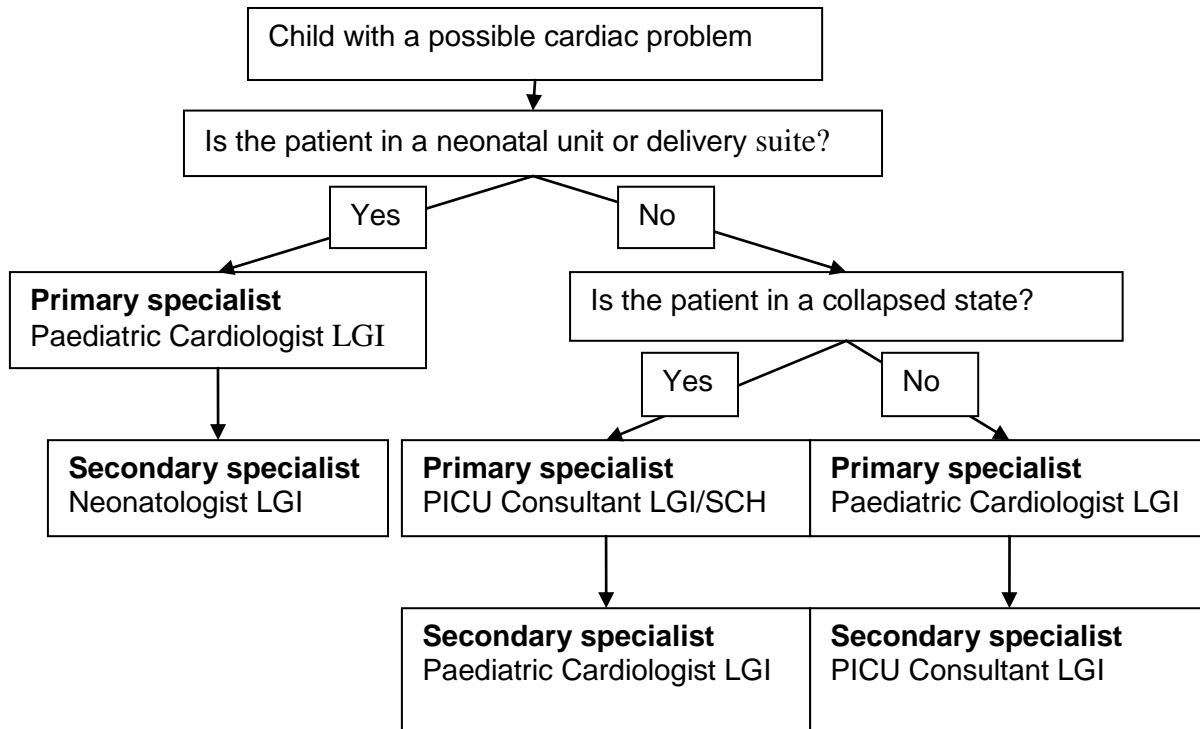
**Trauma patients in Sheffield Children's Hospital (SCH) Emergency Department**

Connect to the Red Phone at Leeds General Infirmary (LGI) Emergency Department

Decision making to be led by LGI Emergency Department Consultant

'Time Critical' transfer by SCH team to LGI Emergency Department

**Cardiac emergency**

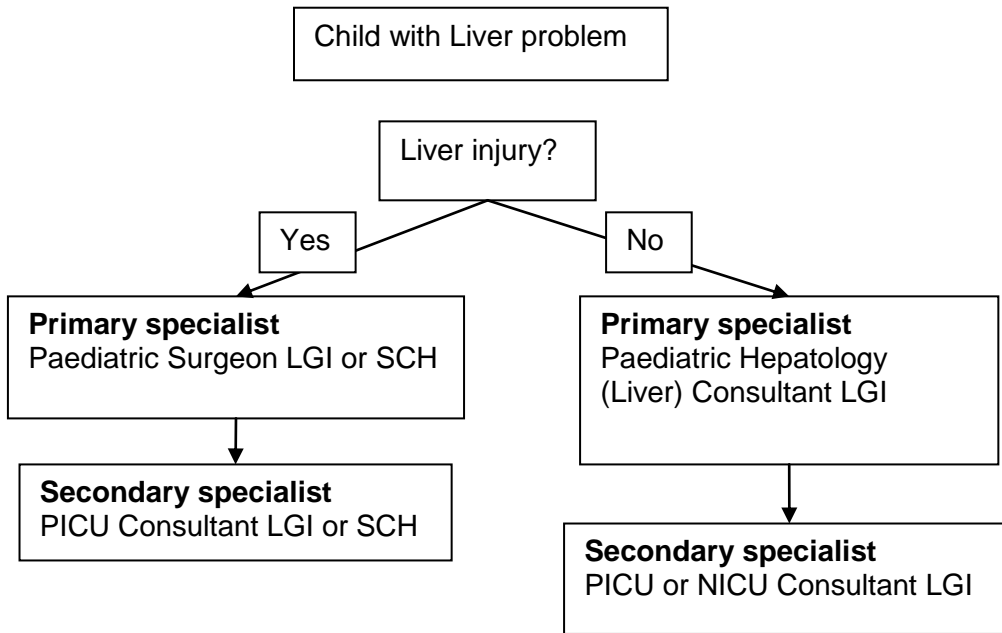


**Cardiac centres**

Leeds (General Infirmary)  
Leicester (Glenfield)  
Liverpool (Alder Hey)  
Birmingham  
Newcastle (Freeman)  
Glasgow

London Evelina  
London Brompton  
London GOSH  
Bristol  
Southampton

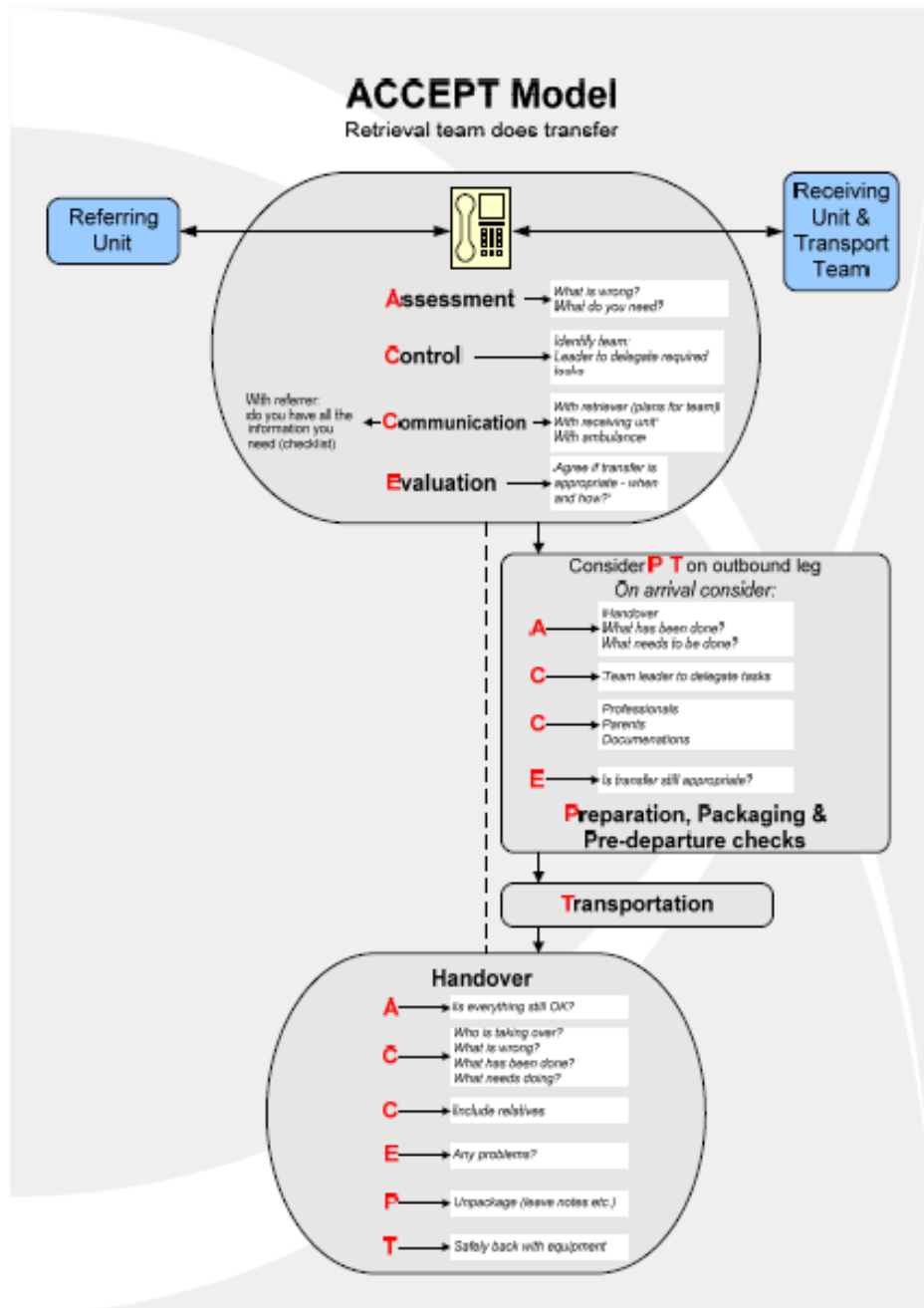
**Hepatology (Liver) emergencies**



**Heptology (Liver) Units**

Leeds General Infirmary  
Birmingham Children's Hospital  
London Kings

**Appendix 3: ACCEPT model**



**Appendix 4: Embrace Transfer Category Priority List****Category A****Time critical by referring hospital**

Signs of critical raised intra-cranial pressure e.g. fixed dilated pupil  
Rapidly expanding space occupying lesion e.g. extra-dural haemorrhage  
Blocked VP shunt

**Time critical by Embrace**

Life-threatening respiratory or cardiovascular failure not responding to appropriate local management  
Primary pulmonary hypertension of the newborn (PPHN) requiring nitric oxide  
Potential ECMO candidate  
Meningococcal sepsis  
Suspected duct-dependent cardiac anomaly not responding to alprostadil (prostin)  
Hypoxic ischaemic encephalopathy requiring therapeutic hypothermia ('cooling')  
Hyperammonaemia  
Gastroschisis  
Ventilated trachea-oesophageal fistula/atresia  
Intestinal perforation  
Suspected malrotation/volvulus (including neonates with bilious vomiting)  
Neonate or child requiring emergency (life, limb or gut saving) surgery or invasive procedure\*  
\*consider time critical one way transfer by referring hospital team

**Category B**

Intubated ventilated neonate any gestation in level 1 unit  
Child requiring acute admission to PICU  
Intubated ventilated neonate less than 28 weeks gestation in level 2 unit

**Category C**

Child requiring HDU level care (medical, surgical, cardiac, burns etc.)  
Neonate on CPAP in level 1 unit  
Neonate requiring urgent planned surgery, invasive procedure or investigation  
Emergency transfer between PICU's for specialist care or capacity  
Emergency transfer between NICU's for specialist care or capacity  
Repatriation to free up capacity in level 3 neonatal unit

**Category D**

Repatriation to free up capacity in PICU  
Transfer of neonate for outpatient appointment or non-urgent investigation  
Transfer between PICU's for ongoing care e.g. nearer home, second opinion etc.

**Category E**

Transfer of child for specialist ward level care (not commissioned, done at Transport Consultants discretion)

**Appendix 5: Tasking of teams****Tasking of teams**

There is a need to have rules for tasking teams throughout a 24 hour shift which balance patient safety, fatigue management and professional development of staff. These rules will be used with discretion by the consultant and nurse coordinator to ensure the needs of the service are met.

The Embrace rosters currently support two night teams between October and March and one night team for the rest of the year.

**Tasking for two night teams****LD1**1<sup>st</sup> on call 0730 – 14002<sup>nd</sup> on call 1400 – 1900**LD1 (coordinator)**Available to form an emergency team with 1<sup>st</sup> or 2<sup>nd</sup> on call consultant as required**LD2 nurse**

Nurse delivered planned transfer shift

Available to form an emergency team with 1<sup>st</sup> or 2<sup>nd</sup> on call consultant as required**LD2 full team**2<sup>nd</sup> on call 1000 – 14001<sup>st</sup> on call 1400 – 19302<sup>nd</sup> on call 1930 – 21003<sup>rd</sup> on call 2100 – 2200**N1**1<sup>st</sup> on call 1930 – 02002<sup>nd</sup> on call 0200 – 0700**N2**2<sup>nd</sup> on call 2100 – 02001<sup>st</sup> on call 0200 – 07303<sup>rd</sup> on call 0730 - 0900

Main Embrace Standard Operating Procedure

LD1		0730 – 1400						1400 - 1900																	
LD1 coord		Available to form an emergency team																							
LD2 nurse		Planned transfers																							
LD2 full team		1000 – 1400						1400 - 1930						930 - 2100											
N1		0200 - 0700																		1930 – 0200					
N2		0200 - 0730				0730-0900																2100 – 0200			
Time 24 hr		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Tasking for one night team

LD1

1<sup>st</sup> on call 0730 – 1400

2<sup>nd</sup> on call 1400 – 1900

LD1 (coordinator)

Available to form an emergency team with 1<sup>st</sup> or 2<sup>nd</sup> on call consultant as required

LD2

Nurse delivered planned transfer shift

Available to form an emergency team with 1<sup>st</sup> or 2<sup>nd</sup> on call consultant as required

LD3

2<sup>nd</sup> on call 1130 – 1400

1<sup>st</sup> on call 1400 – 1930

2<sup>nd</sup> on call 1930 – 0000

N1

1<sup>st</sup> on call 1930 – 0700

LD1		0730 – 1400						1400 - 1900																	
LD1 coord		Available to form an emergency team																							
LD2		Planned transfers																							
LD3		1130 – 1400						1400 - 1930						1930 - 0000											
N1		1930 - 0700																				1930 – 0700			
Time 24 hr		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Author: Stephen Hancock  
 Date implemented: Sept 2013, Review: Sept 2014  
 Information only, Embrace Guideline Group approved

**Appendix 6: Transport risk assessment forms**

**Ground Transport Risk Assessment Form**

TEAM		YES=1
	<p><b>Driver</b> less than 3 months experience at Embrace                      4<sup>th</sup> or more consecutive shift                      3<sup>rd</sup> of more consecutive trip or over 10 hrs time out on this shift                      Not full time with Embrace, i.e. 999 crew                      Self-assessed concern over health or well-being                      Team member had tragic or unexpected event earlier on shift</p> <p><b>Nurse</b> less than 3 months experience at Embrace                      4<sup>th</sup> or more consecutive shift                      3<sup>rd</sup> or more consecutive trip or over 10 hrs time out on this shift                      Self-assessed concern over health or well-being                      Team member had tragic or unexpected event earlier on shift</p> <p><b>Medic/ANP</b> less than 2 months experience at Embrace                      4<sup>th</sup> or more consecutive shift                      3<sup>rd</sup> or more consecutive trip or over 10 hrs time out on this shift                      Self-assessed concern over health or well-being                      Team member had tragic or unexpected event earlier on shift</p>	
<b>CONDITIONS</b>		
	Visibility poor Snowy/icy weather High winds	
<b>LOGISTICAL</b>		
	Non-Embrace ambulance Anticipated need for lights and sirens Navigation to unfamiliar location Transport declined by another service due to weather or patient condition	

**TOTAL**

**IF RISK SCORE 4 OR MORE, INFORM CONSULTANT/BASE**

Total 4 or more: reduce risk (e.g. exchange/add team member/driver; change vehicle; alter route, delay trip).

**If 4 or more, what action was taken:**

--	--



**Appendix 7: Consultant delivered transport guidance****Aims:**

- To provide guidance to Embrace consultants and nurse coordinators when making triage decisions
- Identify those conditions when an Embrace consultant would be expected to attend all or part of the transfer
- Provide possible solutions when Embrace consultant attendance is not possible because of other clinical priorities

**Background:**

- It is possible to predict when a consultant is likely to be required on a transport with a reasonable degree of accuracy. This is based on an understanding of the risks associated with resuscitation, stabilisation and transport in certain patient conditions. Decisions need to be made in the knowledge of the Embrace team members available, resources at the referring hospital and the other transfers that are waiting or on-going. The list is not exhaustive and at all times clinical and logistical decisions will need to be made by the on-call Embrace consultant and documented appropriately.

**Clinical conditions:****Consultant Delivered Transport List**

- Critical unstable airway
- Severe asthmatics
- ECMO transfers
- Severe respiratory failure
- Hypoplastic Left Heart Syndrome
- Less than 26/40 in a (level 1) SCBU
- Severe pulmonary hypertension
- Ventilated diaphragmatic hernia in SCBU or LNU
- Ventilated tracheoesophageal fistula
- Critical raised ICP
- Meningococcal and other severe sepsis syndromes
- Multiple trauma
- Out of hospital arrest
- Severe DKA
- Shock with multi-organ failure

**Strategies:**

- Consultant may only need to be present for the stabilisation if this provides a level of stability that can predictably be coped with by the transporting Embrace team
- Utilisation of Yorkshire Air Ambulance or Embrace 5 Rapid Response Vehicle can provide extra flexibility
- In the event of an Embrace consultant not being available try to mitigate the risk:
  - Ensure that the most experienced clinicians at the referring unit are in attendance
  - Consider adding extra staff from Embrace e.g. doctor, ANP, nurse
  - Discuss the possibility of base unit ICU consultant attending
  - Consider referring to another transport service

**Appendix 8:****Outsourcing Disclosure Form****Patient name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Embrace, Yorkshire & Humber Infant & Children's Transport Service has undertaken an external benchmarking process with the Commission on Accreditation of Medical Transport Systems (CAMTS).

We wish to disclose that:

- a) \*Embrace was unable to provide the transfer for the patient named above and has re-referred to another provider who is not accredited by CAMTS Global. The name of the non-CAMTS Global accredited provider is \_\_\_\_\_.
- b) \*Embrace is providing the clinical team for the transfer of the patient named above but is utilising a non-CAMTS Global accredited vehicle provider. The name of the non-CAMTS Global accredited provider is \_\_\_\_\_.

\*delete as appropriate

This decision has been made by the Embrace Consultant on-call taking into account all factors and focusing on providing the best possible care to your patient in the current circumstances.

Please contact Embrace on 0114 268 8180 if you wish to discuss this further.

\_\_\_\_\_  
Signature\_\_\_\_\_  
Date\_\_\_\_\_  
Name\_\_\_\_\_  
Designation

**Appendix 9:****Embrace Incident Reporting Framework**

If an incident arises at a referring or receiving unit with involvement from Embrace the following procedure should be followed:

1. The local unit should complete their Trust Risk Form describing the incident, highlighting action at the time of the incident and including a section for response from Embrace
2. This form should be electronically sent to the Lead Nurse: [jo.whiston@nhs.net](mailto:jo.whiston@nhs.net)
3. The form will be reviewed by the Lead Nurse and a Consultant who will respond to you with an action plan
4. The incident will also be reported to the Risk Management Department at Sheffield Children's Hospital

**Any incidents that require urgent action should be discussed as soon as possible with the Lead Consultants for Embrace**

**Tel: 0114 3053005**

Or

[stephen.hancock@nhs.net](mailto:stephen.hancock@nhs.net) (paediatric cases)

[cath.harrison@nhs.net](mailto:cath.harrison@nhs.net) (neonatal cases)

Embrace independently review all transfers with incident reporting being carried out as required

**Any serious incidents should be reported following your Trust's usual policy**



## REFERENCES

- 
- <sup>i</sup> Paediatric Intensive Care Society (2015) Standards for the Care of Critically Ill Children 5th Edition
- <sup>ii</sup> National Institute for Health and Clinical Excellence (2010) Specialist Neonatal Care Quality Standard [QS4]
- <sup>iii</sup> Embrace Yorkshire & Humber Infant & Childrens Transport Service (2019) Embrace Health & Safety in transport Guideline (EMB1630v3)
- <sup>iv</sup> Sheffield Childrens NHS Foundation Trust (2017) Information Governance Policy Section 3.2 and 3.5.2.6 (CP204)
- <sup>v</sup> Sheffield Childrens NHS Foundation Trust (2017) Trust Policy for Non-medical Prescribers (CP001)
- <sup>vi</sup> Sheffield Childrens NHS Foundation Trust (2020) Embrace Guideline for Nurse delivered transport (CG 1593)
- <sup>vii</sup> Sheffield Childrens NHS Foundation Trust (2020) Embrace Guideline for Nurse delivered transport (CG 1593)
- <sup>viii</sup> Embrace Yorkshire & Humber Infant & Childrens Transport Service (2019) Aeromedical Guidelines (EMB1601), Fixed Wing Guideline (EMB1602), SAR Guideline (EMB1603), TCAA Guideline (EMB1604), YAA Guideline (EMB1605)
- <sup>ix</sup> Embrace Yorkshire & Humber Infant & Childrens Transport Service (2019) Embrace Drivers Standard Operating Procedure (EMB1423)
- <sup>x</sup> Sheffield Childrens NHS Foundation Trust (2019) Medical Equipment Management Policy (CP568)
- <sup>xi</sup> Sheffield Childrens NHS Foundation Trust (2019) Medical Equipment Management Policy (CP568)
- <sup>xii</sup> Sheffield Childrens NHS Foundation Trust (2019) Control of Infection Policy (CP546)
- <sup>xiii</sup> Embrace Yorkshire & Humber Infant & Childrens Transport Service (2019) Embrace Fatigue Management Guidance (EMB1422)
- <sup>xiv</sup> Sheffield Childrens NHS Foundation Trust (2019) Managing Stress and Enhancing Wellbeing Policy (CP71)
- <sup>xv</sup> Sheffield Childrens NHS Foundation Trust (2019) Moving and Handling policy (CP61)
- <sup>xvi</sup> Sheffield Childrens NHS Foundation Trust (2019) Statutory and Mandatory Training Policy (HR538)
- <sup>xvii</sup> Sheffield Childrens NHS Foundation Trust (2019) Corporate and Local Induction Policy for Permanent and Temporary Staff (HR45)
- <sup>xviii</sup> Sheffield Childrens NHS Foundation Trust (2019) Medicines Management Policy (CP85)
- <sup>xix</sup> Sheffield Childrens NHS Foundation Trust (2018) Clinical Records Management Policy (CP38)