Children's Acute Transport Service

Clinical Guidelines

Transport considerations when transfer undertaken by local team

Document Control Information

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<thead>
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<td>Document Owner Position</td>
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<tr>
<td>Document Version</td>
<td>Version 5</td>
</tr>
<tr>
<td>Replaces Version</td>
<td>January 2018</td>
</tr>
<tr>
<td>First Introduced</td>
<td>2009</td>
</tr>
<tr>
<td>Active Date</td>
<td>January 2020</td>
</tr>
<tr>
<td>Review Schedule</td>
<td>2 Yearly</td>
</tr>
<tr>
<td>Next Review</td>
<td>January 2022</td>
</tr>
<tr>
<td>CATS Document Number</td>
<td></td>
</tr>
<tr>
<td>Applicable to</td>
<td>All CATS employees</td>
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Assessment

The CATS consultant and the responsible DGH consultant must perform an individual risk assessment to determine if the transfer is time-critical (i.e. the benefits of a rapid transfer by the local team outweigh the risks of non-specialist transfer) or not.

**CATS will not normally transfer neurosurgical emergencies, any time critical surgical abdomen or neonatal patients. Penetrating trauma should be referred to the local major trauma centre.**

Staff most familiar with inter-hospital transfer and capable of managing the airway should perform the transfer. This will usually be a member of the anaesthetic team from the referring hospital. Consider referring to STOPP tool for support with decision making (see appendix).

Initial stabilisation

Initial stabilisation must be undertaken at the local DGH prior to transfer.

Pre transport considerations;

1. Airway is secure, ETT well positioned on CXR
2. Breathing: ventilation is adequate as confirmed by blood gas and ETCO2 monitoring is in place
3. Circulation: adequate fluid resuscitation has been given and there is sufficient, working IV or IO access
4. Disability: check blood glucose, pupils and/or other focal neurological signs.
5. Family needs to be updated
6. Communication with the receiving PICU via CATS regarding the estimated time of arrival and initial requirements

Transport considerations

Mandatory monitoring during transfer should include: ECG, SpO2, blood pressure (non invasive or invasive) and end tidal CO2. Child should be sedated (morphine and midazolam infusions) and muscle relaxed for the transfer. Emergency fluid and vasoactive drugs should be available.
CHECKLIST FOR TRANSFER OF CHILDREN BY THE LOCAL DGH TEAM

Please Print

Appropriate staff identified

Local ambulance service notified

State ‘Time Critical Emergency Patient Transfer’
Expect ASAP response time

Essential equipment

Ensure ETT well secured/good position/no leak
Airway bag (tape, face mask, T piece, ambubag, ETT, laryngoscopes, scissors)
Drug bag (Fluid boluses, resuscitation drugs, osmotherapy)
Ventilator and sufficient oxygen
Infusion pumps (sedation, muscle relaxant, vasoactive infusions)
Run continuous infusions of sedation and muscle relaxant
Ensure adequate venous +/- arterial access
Prepare and connect inotropes ready to commence if required

Adequate monitoring

ECG
SpO2
Blood pressure (NIBP cuff or arterial)
End tidal CO₂

Physiological targets

SpO₂ >95%
Mean BP = age appropriate target
End tidal CO₂: 4-5 kPa
Sedation and paralysis
## STOPP! Safe Transfer of the Paediatric Patient Tool

For use on ALL transfers of children BETWEEN Hospitals. The referring Hospital is responsible for the completion of this form prior to and during transfer. It is recommended that on arrival at the receiving Hospital, a copy is made, the original returned to the local hospital for audit purposes and filed in the patient notes.

### PATIENT DETAILS
- **First name**
- **Surname**
- **Address**
- **Hospital number**
- **NHS number**
- **Date & Time of referral**

### REFERRING Team Contact Details
- **Consultant**
- **Hospital**
- **Ward/Location**
- **Contact no**

### RECEIVING Team Contact Details
- **Consultant**
- **Hospital**
- **Ward/Location**
- **Contact no**

### SUMMARISED CLINICAL DETAILS
- **Presenting Complaint**
- **Current problem + Reason for Transfer**
- **Organ support required**
- **Past Medical History**
- **Drug History**

### DISCUSSION/ADVICE FROM RETRIEVAL TEAM

### TRANSFER INDICATION:
- [ ] Escalation of treatment
- [ ] Investigations
- [ ] Repatriation
- [ ] Palliation
- [ ] Bed Status

### RISK ASSESSMENT RESULTS:
PERFORM RISK ASSESSMENT ON PAGE 2 THEN TICK & SIGN RESULTS CATEGORY IN TABLE BELOW. IF Paediatric Consultant not aware: STOP AND INFORM NOW

#### Transfer Category
- [ ] Transfer no longer required
- [ ] Ward level (level 0)
- [ ] Basic critical care (HDU, level 1)
- [ ] Intermediate critical care (level 2)
- [ ] Advanced critical care (level 3)
- [ ] AND/OR Time critical

#### Recommended Transfer Team

#### Referring Hospital Personnel:
- [ ] Parents
- [ ] Nurse/ODP
- [ ] Anaesthetist/Paediatrician

#### Ambulance Crew Requested:
- [ ] Patient Transport Service
- [ ] LAS/East of England Ambulance – standard crew
- [ ] LAS/East of England Ambulance – paramedic crew

#### PICU Trained:
- [ ] CATS
- [ ] Other retrieval team

### ASSESSMENT COMPLETED BY:
- **Nurse:** [Name, Role, Signature]
- **Doctor:** [Name, Role, Signature]
<table>
<thead>
<tr>
<th>Category</th>
<th>Assessment</th>
<th>Trigger</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Is there any risk of Airway compromise? (e.g. stridor, foreign body, burns)</td>
<td>YES/NO</td>
</tr>
<tr>
<td>B</td>
<td>RR = Is the RR outside the normal age-adjusted range?</td>
<td>YES/NO</td>
</tr>
<tr>
<td></td>
<td>Any evidence of respiratory distress/increased work of breathing/longevity</td>
<td>YES/NO</td>
</tr>
<tr>
<td></td>
<td>Apnea/s/exhaustion</td>
<td>YES/NO</td>
</tr>
<tr>
<td></td>
<td>Sats = &gt; 2L/min O2 to maintain sats &gt; 94%. Presence of Empyema, Use of High</td>
<td>YES/NO</td>
</tr>
<tr>
<td></td>
<td>Flow Oxygen/CPAP/BIPAP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intubated and Ventilated?</td>
<td>YES/NO</td>
</tr>
<tr>
<td>C</td>
<td>BP = Is the systolic BP or HR outside the normal age-adjusted range?</td>
<td>YES/NO</td>
</tr>
<tr>
<td></td>
<td>Are there signs of poor peripheral perfusion, e.g. CRT &gt; 2 secs?</td>
<td>YES/NO</td>
</tr>
<tr>
<td></td>
<td>HR = ABG: Lactate &gt; 2 or BE &gt; -2</td>
<td>YES/NO</td>
</tr>
<tr>
<td></td>
<td>Fluid boluses: &gt; 40mls/kg within 6 hours</td>
<td>YES/NO</td>
</tr>
<tr>
<td>D</td>
<td>GCS low &lt;8/fluctuating or AVPU (P or U)</td>
<td>YES/NO</td>
</tr>
<tr>
<td></td>
<td>Risk of progressive intracranial event or signs of raised ICP?</td>
<td>YES/NO</td>
</tr>
<tr>
<td></td>
<td>Newly-diagnosed Inborn Error of Metabolism</td>
<td>YES/NO</td>
</tr>
</tbody>
</table>

**ARE ANY OF A B C D TRIGGERS YES?**

1. Ensure paediatric consultant is aware and has agreed the transfer
2. Complete transfer risk assessment below
3. If indicated contact CATS (Tel: 0800 0850003) for advice before proceeding

<table>
<thead>
<tr>
<th>TRANSFER CATEGORY</th>
<th>ANY TRIGGERS</th>
<th>STAFF REQUIRED</th>
<th>DISCUSS WITH CATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 0 (ward level) Children not requiring continuous monitoring</td>
<td>NO</td>
<td>Parent/carer + Nurse Ambulance: Standard crew/transport</td>
<td>NO</td>
</tr>
<tr>
<td>Level 1 (Basic critical care) Children needing continuous monitoring or IV therapy Or any PCC Level 1 Care</td>
<td>NO</td>
<td>Competent Nurse or Doctor OR Appropriately trained ambulance crew</td>
<td>NO</td>
</tr>
<tr>
<td>Level 2 (Intermediate critical care) Level 1 + single system support requirements (e.g. CPAP, NIV)</td>
<td>YES</td>
<td>Nurse/ ODP AND Senior Doctor (paeds resus-trained) AND Appropriately trained ambulance crew OR CATS Transfer (if agreed jointly)</td>
<td>Discuss with your Consultant</td>
</tr>
<tr>
<td>Level 3 (Advanced critical care) Intubated and Ventilated</td>
<td>YES</td>
<td>CATS Transfer - UNLESS time critical (SEE BELOW)</td>
<td>YES</td>
</tr>
<tr>
<td>Time Critical (level 1-3) e.g. ACUTE NEUROSURGICAL EMERGENCY, LIFE/IMM. THREATENING PROBLEM, ACUTE ABDOMEN REQUIRING SURGERY, TESTICULAR TORSION</td>
<td>YES</td>
<td>Local Team: Nurse/ODP + Senior Doctor (airway + paeds resus-trained) AND Appropriately trained ambulance crew “This is a paediatric time critical transfer”</td>
<td>YES</td>
</tr>
</tbody>
</table>
# TRANSFER DOCUMENTATION CHECKLIST: (please detail/tick as necessary)

## Personnel:
- Doctor 1 (name, speciality & grade)
- Doctor 2 (name, speciality & grade)
- Nurse/ODP (name, speciality & grade)
- Parent/guardian details (if accompanying)

## Communication:
- Bed in destination hospital identified and availability confirmed
- Consultant in destination hospital has agreed transfer
- Parents/Carers informed of transfer and any parental concerns discussed
- Parents/Carers invited to accompany child

## Equipment:
- Appropriate drugs & Grab bag available
- Suction unit available and batteries fully charged
- Sufficient oxygen in portable cylinder available
- Appropriate restraint device available
- Batteries on monitor and/or infusion pumps fully charged
- Infusion devices rationalised and secured

## Drugs/Fluids:
- Analgesia
- Intubation drugs
- Emergency drugs
- IV Fluids
- Blood

## Transport:
- Time ambulance service called:
- Ambulance reference no:
- Ambulance arrival time at referring hospital:
- Transfer staff have a mobile phone available
- Money/cards available for emergencies
- Return travel arrangements confirmed & Team have contact details e.g.: taxi/ward numbers

## Patient Specific Instructions for transfer (tailor to needs): (please tick)
- Temperature monitoring
- Nil by Mouth/consider NG tube for surgical patients
- Blood glucose monitoring
- Maintenance IV fluids
- Well-secured IV access (x 2 if required)
- ID bracelet x2

## Other:

## Paperwork for transfer (photocopy the following): (please tick)
- Referral letter
- Copy of Current medical, nursing notes and investigations (recent clinic letter for long-term patients)
- Copy of Current drugs chart, PEWs chart and fluid charts
- Upload/transfer radiology onto relevant IT system
- 3 Copies STOPP Tool (for patient notes in referring and receiving hospitals and audit)
- TRANSFER DATIX Completed as per specific Trust policy
## Transfer Observations Record

(Prior to departure, during transfer: circle) continuous/15m/30m, and on arrival

<table>
<thead>
<tr>
<th>Temperature (°C)</th>
<th>39</th>
<th>38</th>
<th>37</th>
<th>36</th>
<th>35</th>
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</thead>
<tbody>
<tr>
<td>Heart Rate &amp; Blood Pressure</td>
<td>240</td>
<td>230</td>
<td>220</td>
<td>210</td>
<td>200</td>
</tr>
<tr>
<td>Respiration Rate</td>
<td>60</td>
<td>50</td>
<td>40</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>O₂ Sats</td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Neurological Assessment</td>
<td>AVPU</td>
<td>Pupil R</td>
<td>Pupil L</td>
<td></td>
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<tr>
<td>BM / glu</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Vent. Settings</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Pre departure</th>
<th>Transfer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td></td>
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</tbody>
</table>

**Pain assessment:**

- Time departed base:
- Time handed over:

**Details of any treatments given:**

**Details of incidents (Please also complete Trust report):**

[Children’s Acute Transport Service provides paediatric intensive care retrieval for Great Ormond Street, The Royal Brompton and St Mary’s NHS Trusts. Funded and accountable to the North Thames Paediatric Intensive Care Commissioning Group through Great Ormond Street NHS Trust.]