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<th><strong>Paediatric Transfer Contingency Plan</strong></th>
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Paediatric Transfer Contingency Plan

November 2012
(updated Oct 2016)
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**PAEDIATRIC TRANSFER CONTINGENCY PLAN**

1.0 Aim

1.1 The purpose of these guidelines is to standardise practice, minimise risk and provide guidance to ensure the safe stabilisation and transfer of critically ill children (up to 14th birthday) from clinical sites in the Southern Health and Social Care Trust when a suitable retrieval team is unavailable or the transfer is time critical. These guidelines do not apply to neonatal transfers from the neonatal unit to other hospitals.

2.0 Background

2.1 Children and infants within the Southern Trust sites occasionally become critically ill and require the services and care of a paediatric tertiary care centre, locally this is the Royal Belfast Hospital for Sick Children (RBHSC).

2.2 For simplicity, the critically ill child or critically injured child can be defined as children requiring, or potentially requiring, high dependency or intensive care. Ideally the critically ill child should be moved between hospitals by a highly specialised paediatric transfer team (i.e. NISTAR formerly CONNECCT for transfers to RBHSC).

2.3 In some circumstances the medical condition of the child may be time critical requiring immediate transfer by the local team.

2.4 In the exceptional circumstance of a cross border or international transfer it may be necessary to enlist the services of a private transfer company. These services are subject to a regional contract which at time of writing is currently held by Woodgate.

2.5 Critically ill children are at increased risk of morbidity and mortality when being transferred. The decision to move or transfer any child must be made by the consultant responsible for the child’s care with full liaison with the appropriate staff at the child’s intended destination and the child’s family. Each transfer should be clinically indicated with clear clinical advantages for the child and carefully balanced against the potential risks of the transfer itself.

2.6 Issues and concerns particularly arise with the transfer of smaller children (<5 years), and in particular the infant or neonate (i.e. children less than 4 weeks old).
3.0 When to transfer

3.1 Before any transfer the sick child must be properly assessed, resuscitated and stabilised by the appropriate medical staff.

3.2 Transfer by the local team is required when:

- NISTAR (or other retrieval service) is unavailable
- Clinical decision is such that immediate transfer is required e.g.
  - Neurosurgical emergencies
  - Burns
  - Intra-abdominal emergencies
  - Trauma

3.3 *Paediatric intensive care admission is mandatory for patients likely to require advanced respiratory support (i.e. acute or medium term mechanical ventilation) but children should also be referred to a PICU:

- If it is highly likely that they will need an intensive care dependent procedure
- Who have symptoms or evidence of shock, respiratory distress or respiratory depression
- Who have the potential to develop airway compromise
- Who have an unexplained deteriorating level of consciousness
- Who have required resuscitation or who are requiring some form of continuing resuscitation
- Who have received a significant injury
- After prolonged surgery or any surgical procedure that is medium or high risk or of a specialist nature, even if this surgery is elective
- Who have potential or actual severe metabolic derangement, fluid or electrolyte imbalance*  
  - Who have an acute organ (or organ-system) failure
  - Who have established chronic disease (or organ-system failure) and who experience a severe acute clinical deterioration or secondary failure in another organ-system
  - Who require one to one nursing because of the severity of an acute or acute on chronic illness

*Depending on the clinical picture, these children may be appropriately managed on the renal unit


**recent update Quality Standards for the Care of Critically Ill Children (5th Edition Dec 2015)

4.0 Roles and responsibilities

(When transfer by the local team is required)

4.1 The Director of CYP and Director of Acute Services share equal governance responsibility for the safe transfer of sick children.

4.2 Critically ill children requiring stabilisation and transfer by the local team requires the involvement of both paediatricians and anaesthetists, and may also include the ED consultant and consultant surgeon depending on the clinical presentation.

4.3 This will be operative both in and out of hours and covers both CAH and DHH as a single agreed approach in the Trust.

- This will apply to transfers from DHH and CAH to another hospital outside the Southern Trust
- The decision on which medical staff will travel with the sick child requires a risk managed approach
- The team involved in the transfer of sick children should be competent in the management of sick children
- The consultant in paediatrics/or ED must discuss the clinical position with the consultant anaesthetist on call and both consultants are to assume that they will be responsible for the decision making to assure the safe transfer of the ill child/young person. They are also responsible in ensuring that the team has the collective relevant skills and competencies for that transfer.

4.4 If in discussion the consultants agree that the clinical risk is such that a different combination of trained competent staff are suitable to manage this transfer then this should be implemented. The transfer team agreed may include consultants from both/either speciality, or a senior trainee/Speciality Doctor in paediatrics and/or in anaesthesia and an appropriately trained nurse. At no time will a trainee doctor be the only medical member of a transfer team unless the consultants involved deem the doctor to be competent.

5.0 Staffing

5.1 On each hospital site there should be 24 hour cover by

- A consultant paediatrician who is able to attend within 30 minutes and does not have responsibilities to other hospital sites
- A consultant anaesthetist who is able to attend within 30 minutes and does not have responsibilities to other hospital sites
- Clinical staff with competences in resuscitation, stabilisation and intubation of children
6.0 Team composition and competencies

6.1 Medical staff (and nursing staff) involved should be suitably senior with the appropriate competencies, training and experience for paediatric transfers with minimum paediatric resuscitation and updating as per the Paediatric Intensive Care Society. (Appendix 6)

6.2 The team accompanying the child should have the collective necessary skills to maintain stability and treat any changes in the child's condition during its transportation.

6.3 The team involved in the transfer need to be trained and competent in:

- Care of the acutely ill patient including
  - Airway management
  - Resuscitation
  - Inotropic support
  - Use and management of invasive lines

6.4 The transferring team must be familiar with the equipment they are expected to use.

- Portable ventilator (if appropriate): see 8.2
- Vital signs monitor
- Syringe pumps
- Infusion devices
- Suction equipment
- Appropriate filters for ventilation (see appendix 10)

6.5 The team should be familiar with the contents of Emergency Bag and paperwork required for transfer

6.6 **Six generic skills are expected of all personnel involved with the care of the critically sick child:**

- to recognise the critically sick or injured child;
- to initiate appropriate immediate treatment;
- to work as part of a team;
- to maintain and enhance skills;
- to be aware of issues around safeguarding children; and
- to communicate effectively with children and carers.

**Department of Health. The acutely or critically sick or injured child in the district general hospital – a team response. 2006. www.dh.gov.uk

6.7 Paediatrics

- Senior paediatrician with adequate paediatric resuscitation skills
- This should be a minimum of grade ST3 or above who is deemed competent by the paediatric consultant in charge
- Trainees involved in the transfer are required to be APLS (or EPLS) /NLS trained with current certification
6.8 Anaesthetics

- The anaesthetist must be APLS (or EPLS) trained and have current certification
- If the consultant anaesthetist involved deems the trainee to be adequately experienced and competent, the trainee may transfer the patient if they agree and are happy to do so, otherwise the transfer should be made by the consultant anaesthetist
- Senior trainee should have adequate previous paediatric exposure (previous paediatric anaesthetic modules in training) which is normally at ST5 or higher

**For anaesthetists:**
- Opportunities should be provided for anaesthetists in DGHs to maintain their paediatric skills, through short attachments to larger centres and participation in elective surgery lists within the trust
- There should be participation in in-service training of other staff and in scenario practices
- Forward planning of resuscitation and stabilisation teams, and clear networking arrangements, will reduce the chances of an anaesthetist being left in sole charge of a critically sick child
- Where an anaesthetist is required to act beyond his or her practised competencies through unexpected circumstances – such as a very sick child inappropriately presenting to a hospital without paediatric expertise
  - It is his or her duty to make the care of the patient his or her first concern, and it is the employing trust’s duty to provide support to the anaesthetist.
- In some DGHs, intensivists with significant experience of paediatric intensive care may be comfortable with all aspects of resuscitation and stabilisation of the critically sick child. These intensivists could be a valuable resource in assisting paediatricians, emergency department practitioners and anaesthetists.

**Department of Health. The acutely or critically sick or injured child in the district general hospital – a team response. 2006. www.dh.gov.uk

6.9 Nursing staff

The accompanying nurse should normally be

- a senior nurse with experience and / or training in
  - care of the critically ill child or
  - emergency transfer or
  - airway management.

6.10 Recommended resuscitation training and updating for all staff (Appendix 6)
7.0 Stabilisation and Transfer

7.1 The regional transport team (NISTAR) is always preferable when appropriate and possible.

7.2 Stabilisation requires a team of competent individuals comprising (as a minimum) a paediatrician or paediatric A&E consultant, an anaesthetist and an appropriate nurse working in concert with A&E staff or ward staff: the nurse–patient ratio should be at least 1:1.

7.3 If the clinical presentation is surgical in nature, a surgeon must be involved as part of the stabilising team which includes assessment and appropriate intervention.

7.4 The team should be led by a clinician of appropriate seniority, who has the competencies and knowledge to manage and oversee the treatment of a critically sick child. Within the Southern Trust this requires consultant presence of at least both paediatricians and anaesthetists.

7.5 Once decision is made that a critically ill child requires stabilisation and transfer to a paediatric intensive care unit, the relevant PICU must be contacted by the paediatric team for discussion and agreement for the transfer. (Telephone proforma (NISTAR) Appendix 7)

7.6 Advice regarding both stabilisation and transfer should be sought early from the receiving PICU and other relevant specialities e.g. Neurosurgery.

7.7 Transfer: Ideally no child should be transferred with any cardio-vascular or airway instability, however in exceptional circumstances this may be necessary. In these cases advice should be sought from the paediatric ICU consultant.

- For transfer the airway must be appropriately secured with an ET tube and position confirmed with a chest X-Ray
- Oral intubation is more than adequate if secured appropriately and safely.
- There should be two working cannula, which may include central venous access (femoral access is adequate). If there is difficulty in obtaining adequate vascular access, intraosseous access should be considered at an early stage. An arterial line, if clinically indicated, may be considered for ease of sampling and monitoring blood pressure, however multiple attempts should be abandoned if it will delay the transfer process.
- Ensure the child is kept warm.
- Ensure appropriate equipment and monitoring, particularly adequate batteries and replacements, and ensure there is enough oxygen for the duration of the journey.
- Call ambulance as a matter of urgency (999 call) when the patient has been stabilised and is ready for transfer.
- Contact PICU just before leaving base hospital (028 90633466)

7.8 If the child becomes unstable in being moved onto the transport equipment, do not move until stability has been regained, i.e. check gases, blood sugar, ventilation, tube position etc prior to moving.

- Be aware of how to use ventilator equipment with appropriate circuits and filters to effectively ventilate a child or neonate
- If neonatal or paediatric ventilator equipment is not readily available, you should be able to use standard ventilator equipment and adjust for the size of the patient to take account of the additional dead space
• Be able to monitor the effectiveness of ventilation through clinical observation of chest lifts, end tidal CO2 monitoring and blood gas analysis, and be able to recognise and manage hypercapnia if required (see appendix 10)

7.9 A mobile phone is available (*CAH) and should be taken for transfer to ensure team is easily contacted.

7.10 Appropriate clothing i.e. coat should be worn on transfer in case transfer team is unable to return to base with the transferring ambulance.

7.11 Petty cash should be brought on transfer for above reason.

8.0 Equipment
8.1 The following monitoring / equipment will need to be in available and used for transfer:

• Portable ventilator
  ▪ + alternative power supply and replacement fully charged batteries
• ECG, Oxygen saturations, Blood pressure
• Capnography in all ventilated patients (mandatory)
• Fluid infusions (to be administered via a syringe pump rather than an infusion pump as these are more safely secured in the ambulance)
• Working suction
• Any drugs which may be required or prescribed during transfer should be checked and labelled prior to leaving the referring unit
• Adequate oxygen reserve (Appendix 8)
• Paediatric emergency transfer bag must be taken with the patient
  ▪ (available from Th1 in CAH and theatres DHH)

• *To assist in the safe set-up and stabilisation prior to transfer the theatre/ICU technician should be called in to assist in the equipment set-up
  *(this is currently, at time of writing, only available on the Craigavon site)

8.2 Ventilators

• Portable ventilators may not provide identical support to theatre ventilators in use despite apparently similar settings; a trial period should always be allowed before moving the patient
• Paediatric patients require ventilators capable of consistently delivering low tidal volumes at increased ventilatory frequencies
• The susceptibility of infants to barotrauma and the use of uncuffed tracheal tubes favour pressure-controlled ventilation
- The Drager Oxylog 3000 should be used for paediatric patients with a weight ≥ 5kg
  - See Appendix 9 for issues with insufficient ventilation with very low tidal volumes
  - Be aware potential issues with filters and dead space (appendix 10)
  - Available in A&E resuscitation and Intensive Care (CAH), theatres (DHH)

- The neonatal ventilator (babyPAC) should be considered for patients < 5kg
  - Paediatricians are more familiar with this ventilator and consequently may best take the lead in ensuring appropriate settings prior to transfer
  - Available on the transport incubator in NICU and in A&E resuscitation (CAH), SCBU (DHH)
  - See Appendix 11 for guide for using babyPAC ventilator

8.3 Consideration should be given to how the equipment is positioned within the ambulance ensuring equipment is adequately secured.

8.4 All transfer equipment should be monitored and tested regularly to ensure it is charged and ready for use and this process documented.

8.5 All equipment should be tested for functionality before use – portable equipment should not be used for lengthy periods on battery power before departure.

9.0 Drugs

9.1 Anaesthetic drugs are decided upon by the anaesthetist transferring the child.
  - These should include
    - Appropriate inotropes if required
    - Muscle relaxants
    - Induction agents
    - Sedative drugs

9.2 Drugs required for each transfer will depend on the clinical condition of the child.

9.3 Drugs that should be considered prior to departure with any critically ill child include the following
  - Adrenaline 1in 10 000
  - Atropine 1mg in 5mls
  - Diazepam rectal tubes 5mg
  - Lorazepam 4mg in 1ml
  - Glucose 10%
  - Naloxone 400mcg in 1ml
  - Sodium Bicarbonate 8.4 %( 1mmol in 1ml)
9.4 Mannitol or hypertonic saline may need to be considered in neurosurgical emergencies.

9.5 Further anticonvulsants may be required if Lorazepam has already been administered.

9.6 Ensure that there are enough infusion fluids for the duration of the journey.

10.0 Recommended Pre transfer check

- See Appendix 12 for comprehensive pre-departure checklist (NISTAR)

Plus

- Check contents of resuscitation bag
- Drug doses calculated using calculator
- Ensure full oxygen tank- swap if in any doubt or if child has been ventilated for a prolonged period on transport ventilator
- Ensure have adequate alternative power reserve for ventilators, monitors and syringe drivers
- Ensure ETT secured appropriately
- Ensure ventilation adequate
- Ensure transfer team has a mobile phone and the correct contact numbers* to facilitate communication en route (*Appendix 1)
- Ensure transfer team has money

Inform PICU when the transfer team is leaving and expected arrival at PICU.

11.0 Communication

11.1 A decision to transfer should be made by consultants after full assessment and discussion between the referring and receiving hospitals.

11.2 It is essential that all information relating to the patient’s condition and rationale for transfer, is clearly recorded, using an agreed standardised format for written communication.

11.3 Written records should include biographical and introductory information, clinical observations, airway, fluid balance, blood results, drugs used, x-rays, medical history including respiratory function, names of referring and accepting consultants and nursing care records.

11.4 The ambulance service should not be contacted until both the transferring and receiving teams are satisfied that the patient is ready for transfer. Before transfer, the receiving unit must confirm that it is ready to receive the patient.

11.5 The receiving unit should be informed of the estimated time of arrival.

11.6 It is good practice that relatives be made aware of the transfer decision as soon as is practicable, where appropriate. If time permits, a member of the transfer team could meet with the family to explain their role in the transfer.
11.7 Accompanying documentation must include the patient’s history, indications for transfer and a record of the patient’s vital signs and status throughout the transfer period.

12.0 Parents

12.1 Parents should be told that they will be unable to accompany their child in the ambulance due to restricted spaces.

12.2 Parents should be told not to lead or follow the ambulance especially if a blue light journey is essential.

12.3 Parents need to be informed about the contact details and whereabouts of the clinical area that their child is going to.

12.4 Parents need to be kept informed of decisions being made regarding their child’s transfer. A member of the team should be assigned to keep parents updated.

12.5 Appendix 14 & 15 for parent information leaflet.

13.0 Ambulance

13.1 Contact ambulance control as soon as decision made to transfer and discuss expected time of departure.

13.2 The speed of travel should normally be dictated by patient condition and should generally be maintained at normal or below normal speed to ensure patient and staff safety except in exceptional circumstances.

13.3 Patient and staff safety must be paramount once the decision is made to transfer a child.

13.4 The child must be appropriately secured for the duration of the journey harnessed or seat belted onto the trolley. Car seats should not be used in ambulances to transfer critically ill children and should never be attached to the trolley or equivalent for transfer.

13.5 All staff must wear a seatbelt for the duration of the journey.

13.6 The use of blue lights should be discussed by the team and only used if absolutely necessary as the use of them can increase the risk to the entire team and patient.

* Retrieval & Transfer Safety Protocol (Paediatric Intensive Care Society) Appendix 16
14.0 Documentation (appendix 13)

14.1 Written and clear evidence of communication with parents must be documented to cover illness, severity, reason for transfer and where child is being transferred to.
- This should be honest and include risks, operative interventions, uncertainty – including non-survival and no false hope

14.2 The original notes* should be sent with the patient and all results (including x-rays on disc if being transferred to a unit outside of Northern Ireland) etc. should be obtained prior to transfer if time allows.

*SHSC Policy on the transfer of patients and their records to another hospital or in-patient facility

14.3 Details of all drugs, including loading doses, administered to the child both prior to and during transfer must be clearly documented and forms part of the formal handover to the receiving team. A full record of drugs administered must also be brought back to the base hospital.

14.4 On completion of transfer and on return to base, it must be documented what (even if nothing) occurred during the transfer.
- Should there be any untoward event then a clinical incident form should be completed appropriately

14.5 During the course of the journey recordings of all readings must be taken every 5 minutes from departure until arrival.

15.0 Governance

15.1 The service should have appropriate arrangements for clinical review of morbidity, mortality, transfers and critical incidents.
- The Southern Trust presently participates in a monthly tele link involving hospitals from other trusts including RBHSC
- This forum focuses on recent transfers from each hospital

15.2 The service should be submitting data to, and participating in, appropriate clinical audit programme.

15.3 There is an individual obligation on all professionals to keep skills and competencies up to date and practised.

15.4 There is a team obligation to practise in order to maintain competency.

15.5 There is an organisational obligation to ensure that the environment and equipment meet the standards required for the effective delivery of resuscitation and stabilisation.

15.6 The respective responsibilities of professionals to deliver the best possible care, and that of their NHS trust to support them, should be part of clinical governance arrangements. In particular, a doctor faced with a very sick or injured child has a professional duty to do his or her best for the patient, and his or her employers have a duty to support him or her – whatever the outcome.

15.7 Data collection, audit and inspection form an essential part of the process of service review and improvement (appendix 13)
16.0 Escalation when all PICU beds occupied (appendix 5)

16.1 The Southern Trust has no provision for Level 2 or level 3 care for the critically ill “paediatric” child. The regional paediatric critical care escalation policy does allow for a DGH to admit critically ill children but only when **ALL** alternative solutions including transfer to other units both in the United Kingdom and the Republic of Ireland have been exhausted. RBHSC, as the only unit in NI, has a key role in guiding where such children are cared for. The option of activating emergency capacity planning in RBHSC should be considered before a child is cared for in a DGH as per the Regional Escalation Plan for Paediatric Intensive Care (June 2015, CCaNNI) *see flow chart appendix*

16.2 In the unlikely event that a critically ill child has to be cared for in the Southern Trust, it has been agreed that the most appropriate area for managing a critically ill child needing level 2 and 3 care will be in Craigavon Area Hospital theatres as the appropriate ventilators, space and equipment required can be accessed there. It is recognised that this may be suboptimal, however in this extreme circumstance, all relevant teams will strive to care for the child as best they can, with full support from PICU personnel from RBHSC.

16.3 A multidisciplinary approach will be required with support from the local paediatric (which may involve neonatologists), anaesthetic and intensive care departments, with further potential input from relevant surgical specialities. Support from the paediatric department should also include paediatric nursing support.

16.4 CAH would rely on RBHSC to offer advice on management and to facilitate transfer to a more appropriate unit as soon as feasible. This would include children in need of regional services and in that situation there will be close collaboration with RBHSC to decide which child can be best cared for in CAH. This may include transfer of a child for non-clinical reasons.
Appendix 1:

Useful numbers

List of taxi companies *(examples only)*

**Belfast**
- Value cabs 028 90809080
- Fonacab 028 90333333
- City Cab 028 90233333

**Newry**
- Taxiline 028 30260888
- Sunshine Taxis 028 30839999

**Craigavon**
- A1 Cabs 028 38349349
- A2B Taxis 028 38351088

Useful clinical numbers

**PICU:** 028 90633466 Tie-line 7222 (3466) or (2449)

**NISTAR contact numbers:**

- Paediatric 028 90 (632499/632449/633466)
- Neonatal: 07825 147266

Private transfer services

**Woodgate air transfer** 028 94 422478

**Aero medics:** 028 94 422478
Appendix 2:

Paediatric transfer flowchart

![Paediatric Transfer Flowchart](image)
Appendix 3:

Neonatal transfer flowchart
Appendix 4:
*From NISTAR

**PICU Bed Finding when RBHSC is full**

For children requiring PICU when RBHSC is full the following telephone numbers will help in identifying available beds in G.B. and ROI.

**UK**

0800 085 0003 – direct line for CATS (Children’s Acute Transport Service based in London). They will know bed and ECMO availability throughout UK during busier seasonal periods.

**Scotland**

0141 201 6923 – direct line for transport on PICU in Royal Hospital for Sick Children Glasgow. They will know bed and ECMO availability in Glasgow & Edinburgh.

**Dublin**

Our Lady’s Hospital for Sick Children, Crumlin: 00353 14096650

Children’s University Hospital, Temple St: 00353 18784256

**Air Transfers**

Woodgate 02894 422478
Appendix 5:

Flow Chart of Escalation Actions for RBHSC / DGH's / HSCB

Phase 1
- PICU transfers to UK.
- All other hospitals outside of region.
- Postoperative neonates return to RUMS or Home Trusts if not PICU.
- A daily conference call is instigated through CcAnNI.
- RBHSC surge status communicated to all other hospitals in a state of readiness to move to Phase 2.

Phase 1 RBHSC level 3
- RBHSC on EBD status
- Only 1 Emergency theatre remains open.
- Theatre staff work in PICU/recovery area.

Phase 2 (phase 1 action plus):
- Daily contact between RBHSC and all other hospitals detailing Acuity status and Bed capacity.
- Notification of status to HSCB levels and Bed capacity.
- RBHSC surge status communicated to all other hospitals in a state of readiness to move to Phase 3.
- All children from RBHSC wards (if fit) return to home trusts.
- PICU age threshold reviewed; each child assessed individually or clinical appropriateness.
- NICU side rooms used if the service is not in escalation.
- Children from RBHSC requiring acute care but not PICU move to other Trusts.

Phase 2 RBHSC 12 = N ≤ 16
- Elective activity ceases in DGH as agreed with HSCB/PHA.

Phase 3 (phase 1+2 actions plus):
- RBHSC surge status communicated and all other hospitals and DGHs required to accept transfers and to open additional paediatric ventilated beds.
- Other hospitals open to 100% pre-agreed capacity.
- Paediatric Standing Committee of CcAnNI will become a paediatric network to address regional issues.
Appendix 6:

**Paediatric Resuscitation Training and Updating**


<table>
<thead>
<tr>
<th>STAFF GROUP</th>
<th>Appropriate Minimum Training</th>
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<tbody>
<tr>
<td><strong>MEDICAL STAFF</strong></td>
<td></td>
</tr>
<tr>
<td>Consultant who may be on call for acute paediatrics, ED, ICU/Apaesthesia or PICU</td>
<td>Advanced Life Support</td>
</tr>
<tr>
<td>ST3-8 in acute paediatrics, ED, ICU/Apaesthesia or PICU</td>
<td>Advanced Life Support</td>
</tr>
<tr>
<td>ST1-2 in acute paediatrics, ED or ICU/Apaesthesia</td>
<td>One day Paediatric Life Support</td>
</tr>
<tr>
<td>Medical staff (all grades) caring for children in settings other than acute paediatrics and ED</td>
<td>One day Paediatric Life Support</td>
</tr>
<tr>
<td><strong>NURSING STAFF</strong></td>
<td></td>
</tr>
<tr>
<td>Retrieval team</td>
<td>Advanced Life Support</td>
</tr>
<tr>
<td>Nominated Lead Nurse for an area such as HDU/ICU</td>
<td>Advanced Life Support</td>
</tr>
<tr>
<td>Senior Nurses on PICU/Theatres &amp; Recovery</td>
<td>Advanced Life Support</td>
</tr>
<tr>
<td>Nurses in Paediatrics, ED, ICU or PICU/Theatres &amp; Recovery</td>
<td>One-day Paediatric Life Support</td>
</tr>
<tr>
<td>Health care assistants</td>
<td>Basic Life Support</td>
</tr>
</tbody>
</table>

**NOTES:**

1. **Updates:** Basic Life Support should be updated yearly. Advanced Resuscitation skills should be refreshed every three/four years. Please also refer to the recommendations of any providing agencies.

2. The expected level of Advanced Life Support training can be met by courses such as APLS or EPLS. However, more may be expected from already highly qualified practitioners, so training should be tailored to the individual and identified by formal yearly Appraisal. For example, Simulation Training & Clinical Attachments may be required.

3. Paediatric Life Support training (Basic or One-day, according to the individual’s role) should be undertaken within the first 20 days of working with acutely ill children. This training should be transferable between posts (and Hospitals). Advanced Life Support should be of at least 8 hours duration in total and include both lectures in recognition of ill children and practical skills training in defibrillation, basic airway management and intravenous access. Assessment of competence should be undertaken and evidence of competence should be documented.

(Accepting that these are standards set by the Paediatric Intensive Care Society all parties must strive to meet the above recommendations, however in particular in paediatrics, despite PILS being offered to all trainees who have not completed a formal course previously it may be difficult to achieve the above standard in the time frame recommended)
Appendix 7:

Southern Health and Social Care Trust

NISTAR
Paediatric / Neonatal Transport Request Telephone Proforma

Please complete before contacting PICU or NISTAR:
Paediatric: 02890632499 / 02890633466
Neonatal: 07825147266 (08.00-20.00) or 02890632499 / 02890633466 (20.00-08.00)

Patients Name: ___________________________ D.O.B. _____/_____/_____
Referring Hospital: ______________________ Referring Consultant: ________________
Patients Weight: ____________ kg Destination Centre: PICU / NICU / Other _______________
Summary of problem and diagnosis (incl. obstetric details + PMHx):

<table>
<thead>
<tr>
<th>Airway:</th>
<th>Patent / stridor / airway adjunct / intubated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breathing:</td>
<td>Wheeze / recession / cyanosis</td>
</tr>
<tr>
<td>RR:</td>
<td>SpO₂ on _________FiO₂ ________ Spont / CPAP / IPPV</td>
</tr>
<tr>
<td>Ventilatory settings:</td>
<td>________________</td>
</tr>
<tr>
<td>Circulation:</td>
<td>IV lines: CVC: Y / N Art Line? Y / N</td>
</tr>
<tr>
<td>HR:</td>
<td>CRT: _______ BP: _______ MAP: ____________</td>
</tr>
<tr>
<td>Disability:</td>
<td>BM: _______ mmol/L GCS: _______ Temperature: ______°C</td>
</tr>
<tr>
<td>Drugs:</td>
<td>Antibiotics: ____________________________</td>
</tr>
<tr>
<td>Inotropes:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Other:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Fluids / Infusions:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Any other important information:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Advice given by NISTAR (Advice given by: ____________________________):</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
</tbody>
</table>

Signature ____________________________ Date: _______ Time: _______
Appendix 8:

Oxygen

During critical care transportation, oxygen is commonly supplied from gas cylinders

- Ambulances carry a pair of code F (1360 litre) or HX (2300 litre) cylinders in the cabin and two small D (340 litre) or CD cylinders (460 litre)
- Modern CD and HX cylinders have similar dimensions to their counterparts but are filled to 23 000 kPa rather than 13 700 kPa
  - They include integral four bar pressure regulators and Schraeder outlets

How much oxygen will I need?

- Modern ventilators consume gas for purposes other than supplying the patient’s minute ventilation
- If gas consumption is not displayed by the ventilator, a crude estimate can be made
- Provision for patient deterioration should be made when predicting Fio2
- The oxygen requirement for transfer includes an additional 50% in case of unforeseen delays
- Gas consumption = (minute ventilation + bias flow) × [(Fio2 − 0.2)/0.8] + cycling requirement

Transport requirement = Gas consumption × estimated duration × 1.5

From APLS 5th edition:

Calculate the amount of oxygen required for the journey using the following:

Number of cylinders = \( \frac{2 \times \text{duration of journey} \times \text{flow [l/min]}}{\text{cylinder capacity [litres]}} \)

For example, if oxygen is provided at 10 l/min for a journey intended to take 120 minutes, this would need four size E cylinders, each containing 600 l. This allows for at least twice as much oxygen as the estimated journey time requires. Always take more than one cylinder in case of failure.
## Medical Device Alert

### Action

Ref. MDA/2010/092  Issued: 30 November 2010 at 13:30

### Device

**All Oxylog 3000 emergency/transport ventilators.**

Manufactured by Draeger.

### Problem

Insufficient ventilation of paediatric patients when using small tidal volumes (50-100 ml)

This problem can result in gas being re-breathed and a potential dangerous rise in CO2.

### Action

- Ensure that all users are aware of the manufacturer’s [Field Safety Notice](http://www.mhra.gov.uk/Publications/SDocs/emergency/MedicalDeviceAlert/MDA/2010/092) (FSN).

- Users should always consider the dead space of ventilator breathing circuits when using small tidal volumes.

- Be aware that Draeger breathing circuits for use with the Oxylog 3000 (disposable and reusable) have a dead space of 35 ml and 35 ml respectively.

- If the dead space is not suitable for the intended purpose then consider using an alternative device.

### Action by

All staff using these ventilators for paediatric patients.

### CAS deadlines

- Action underway: 14 December 2010
- Action complete: 29 December 2010

### Contact

**Manufacturer**

Doug Sims

Draeger Medical UK Limited

Tel: 01442 213 542

Fax: 01442 240 327

Email: doug.sims@draeger.com

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**Link to full Medical Device Alert**


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**Notes:**

Medicines and Healthcare products Regulatory Agency
Appendix 10:

SAFETY AND QUALITY
REMINDER OF BEST PRACTICE GUIDANCE

<table>
<thead>
<tr>
<th>Subject</th>
<th>Use of ventilator filters in the resuscitation of neonates</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSCB reference number</td>
<td>SQR/SAI/2016/021 (AS &amp; MCH)</td>
</tr>
<tr>
<td>Programme of care</td>
<td>Acute Services &amp; Maternity and Child Health</td>
</tr>
</tbody>
</table>

SUMMARY OF EVENT

A neonate was admitted from home to a District General Hospital (DGH) with seizure episodes. The baby required resuscitation, but the anaesthetic and paediatric staff in the DGH experienced difficulties in achieving effective ventilation due to additional excess dead space caused by the use of a standard filter on the ventilator circuit rather than a paediatric filter.

Subsequently, the baby was transferred to the paediatric intensive care unit (PICU) in RBHSC by the Northern Ireland Specialist Transfer and Retrieval service (NISTaR). Sadly the baby passed away a short time later from overwhelming sepsis as a result of meningitis. After discussion and consideration of the clinical picture, the difficulties with resuscitation were not considered to have contributed to the cause of death.

Investigation of this event highlighted the following areas for improvement:

1. Neonatal and paediatric ventilator circuits, including filters should have been available to the staff performing the resuscitation;
2. Earlier contact with the regional centre (PICU) may have helped communication;
3. Management of hypercapnia, use of ventilator filters, proactive management of dead space, and monitoring the effectiveness of ventilation, require regular skills training. Of note, Advanced Paediatric Life Support (APLS) and Neonatal Life Support (NLS) courses include training in maintaining an airway until ventilation can be commenced. However, they do not routinely cover ventilator management.
# REQUIREMENTS UNDER CURRENT GUIDANCE

We are not aware of guidance which specifically relates to the use of neonatal or paediatric ventilator filters. However, local clinical advice is that if a neonatal/paediatric circuit and filter is not available, a standard ventilator circuit and filter may be used to effectively ventilate a neonate or child. This requires compensating for the excess dead space by increasing the respiratory rate or tidal volume. Ongoing monitoring of the patient is essential to assess the effectiveness of ventilation.

<table>
<thead>
<tr>
<th>NEONATAL</th>
<th>PAEDIATRIC</th>
<th>PAEDIATRIC / ADULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tidal Volume 25mls – 75mls</td>
<td>Tidal Volume 50 – 250mls</td>
<td>Tidal volume 150 – 1000mls</td>
</tr>
</tbody>
</table>

Ventilator filters may be used to:

- Act as Heat Moisture Exchange (HME) to prevent patient heat loss and stop inspired gases becoming too dry;
- Protect the anaesthetic machine from contamination.

For Directors with responsibility for paediatric and anaesthetic services:

- You must ensure that neonatal and paediatric ventilator circuits and filters are available in all settings where there may be a need to resuscitate and provide ventilator support to a neonate or child. You should include availability of such equipment in routine equipment checks and have a system to re-order such equipment as necessary.
- You should ensure that all staff who may be involved in the resuscitation of neonates attend a Neonatal Life Support (NLS) course at least once every 4 years.
- You should ensure that paediatricians, paediatric nurses and any other relevant staff are aware of how to contact local anaesthetic staff for support in the case of neonatal resuscitation, and PICU as soon as possible for advice and support.
For anaesthetists, paediatricians, or neonatologists who may be involved in the resuscitation of a baby or child who requires ventilation:

- You should ensure that contact is made as early as possible with PICU for advice and support;

- You should be aware of how to use ventilator equipment with appropriate circuits and filters to effectively ventilate a child or neonate;

- If neonatal or paediatric ventilator equipment is not readily available, you should be able to use standard ventilator equipment and adjust for the size of the patient to take account of the additional dead space;

- You should be able to monitor the effectiveness of ventilation through clinical observation of chest lifts, end tidal CO2 monitoring and blood gas analysis, and be able to recognise and manage hypercapnia if required;

- You should attend a Neonatal Life Support (NLS) course at least once every 4 years.
Appendix 11:

babyPAC 100

Controls and Features

1. Function Selector Switch – Switches ventilator ON to selected mode
   - **CPAP** – Delivers a constant flow of 10 L/min. CPAP set PEEP/CPAP control and is displayed on the pressure manometer.
   - **CMV + PEEP** – Rate is determined using TINS and TEXP and Inspiratory pressure (PIP), and expiratory pressure (CPAP/PEEP) are set. Flow of 10LPM is delivered during the inspiratory phase only. PEEP is maintained via the expiratory valve. Spontaneous breathing will result in a loss of PEEP. This mode economizes the compressed gas.
   - **CMV + ACTIVE PEEP** – The operation is the same as CMV + PEEP however the flow remains 10LPM throughout the entire breathing cycle. PEEP is therefore maintained for during spontaneous breathing.
   - **IMV + CPAP** – Same as CMV + ACTIVE PEEP except the TEXP scale is increased by a factor of 10 therefore allowing for a lower set rate.

2. PEEP/CPAP Control – Set by dial and achieved PEEP/CPAP displayed on pressure gauge

3. Inspiratory Pressure – Adjusted to achieve the end inspiratory pressure, ranging from 12 to 70 cmH2O. (The patient pressure manometer should always be used as a final reference of the pressure being achieved).

4. Inspiratory and Expiratory Times – Rate is determined using TINS and TEXP dials. The dials range from 0.25 to 2.0 seconds for inspiration and 0.25 to 4.0 seconds for expiration TEXP is multiplied by a factor of 10 when in IMV + CPAP.

5. Oxygen Concentration – The oxygen concentration can be varied using oxygen and/or air, depending on availability of the gases. This safety feature allows the babyPAC to continue to operate after the failure of one of the supply gases during two-gas operation.

NOTE: If during two gas use, one gas fails, the oxygen concentration will automatically change:
• Oxygen and Air is available - yellow scale becomes operative and the oxygen concentration ranges from 21 to 70%.
• Oxygen only - white scale becomes operative and the concentration ranges from (approx.) 45 to 100%.
• Air only - oxygen concentration will be 21% regardless of the oxygen control setting (in this case, the control should be left at 21% in order to achieve maximum gas economy).

6. Patient Pressure Manometer – Displays the patient pressure during the respiratory cycle.

7. Supply Gas Failure Alarm – Visual alarms provide a warning if either of the supply gases are below the pressure required to operate the ventilator. Low Gas Pressure displays red. Adequate Gas Pressure, white is displayed for oxygen and black and white for air.

8. Single Gas Operations – A green visual indicator illuminates 3 times every 30 secs when operating on a single gas supply.

If one gas fails during use, an audible alarm sounds which can be silenced for 60 secs by depressing the silence button. A second depression of this button after this 60 sec period is interpreted as an acknowledgement by the operator that single gas operation is intended and the audible alarm will cease.

If the ventilator is switched on with one gas supply, this is taken as being deliberate and no audible alarm will sound for gas failure (however in both cases the visual alarm will continue).

9. Silencing and Muting of Electronic Audible Alarms – An orange visual indicator illuminates every 3 seconds when an audible alarm has been silenced. All audible alarms (except for single supply gas failure alarm) are automatically suspended for the first 60 seconds, after switching on the ventilator. Any audible alarm can be silenced for a 60 sec period by depressing the silence button, unless a new alarm condition occurs, where the alarm will sound.

Please Note: If the alarm condition remains after this 60 sec period, a second depression of this button is interpreted as an acknowledgement by the operator that this is intended and the audible alarm will cease, however the visual alarm will remain until the condition is rectified.

10. Cycle Indicator – A green visual indicator flashes when the patient’s inflation pressure rises through 10 cmH2O (set pressure).

11. Low Pressure (Disconnect) Alarm – An audible and visual alarm will operate to warn of a possible disconnect or that the ventilator is not cycling correctly (if the ventilator does not rise through the pre-set level of 10 cmH2O at least once every 8 second period).

12. High Pressure Alarm – An audible and visual alarm will operate to warn of a possible danger to the patient if the inflation pressure remains positive and above the pre-set level of 10 cmH2O for a period exceeding 8 seconds.

NOTE: If the PEEP is set above 10 cmH2O, a cycle will not be detected, therefore a high pressure alarm will be activated and can be muted as described under 9.

13. Variable Relief Valve – This is an independent high pressure relief device. An audible alarm provides a signal that the set pressure has been achieved and that gas loss is occurring through this valve.
An additional audible and visual alarm will be activated under this condition. These will reset automatically after 10 seconds when the condition is no longer present.

14. Low Battery Alarm – A yellow visual indicator is used to show that the internal battery used to power the alarms is low. Initially, the yellow indicator will flash every 30 secs for several hours as an early warning of a low battery. This will increase to twice every second, and an audible alarm, when the final few minutes of the battery life remains.

NOTE: The battery is only used to operate the alarms and does not affect the operation of the ventilator.

Set-Up

- Connect supply hose(s) to gas supply(ies).
- Check that the visual alarm(s) for supply gas failure has changed from red to white (oxygen)/black and white (air).
- Ensure there is a bacterial filter on the expired limb of the babyPAC.
  - It is placed there to reduce the amount of dead space in the circuit rather than having it at the Y piece.
- Set the function selection to CMV + PEEP and check that the alarm indicators flash in sequence and that the alarm sounds to indicate correct function.
- Set the ventilator mode to suit the patient.
- Briefly occlude the patient ‘y’ piece with your thumb. Check that the pressure readings on the manometer are appropriate for the patient; if not, use the appropriate dials to change the pressures.
- Check the rate of the respiratory cycle and adjust using the appropriate dials.
- Adjust the oxygen level (depending on which scale is relevant) to the required percentage.
- Connect patient to ventilator and check the patient pressure manometer to ensure correct ventilation.
- Check that the green cycle indicator light flashes during each inflation as the pressure rises.
- Temporarily reduce the high pressure alarm setting to just below the set inspiratory pressure and check that the alarm sounds and the high pressure indicator shows red, then reset to the required level.
- Temporarily disconnect the ventilator circuit at the connection closest to the patient and verify that the green cycle light fails to illuminate during the inspiratory phase, immediately reconnect circuit to patient.

*Full instruction manual can be found on website below:
## PRE DEPARTURE CHECKLIST – FOR PAEDIATRIC TRANSPORTS

<table>
<thead>
<tr>
<th>Name:</th>
<th>Weight:</th>
<th>Reason for transport:</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIRWAY/BREATHING</td>
<td>AIRWAY SECURE/ ETT FIXED</td>
<td></td>
</tr>
<tr>
<td></td>
<td>END TIDAL CO₂ MONITORING</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HANDVENT/VIRAL FILTER</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SELF-INFLATING BAG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ANAESTHETIC BAGGING SET</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STETHOSCOPE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AIRWAY BAG – LARYNGOSCOPES/ET TUBES /INTRODUCERS/ GUARDS/ FACEMASKS/ SUCTION CATHETERS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OXYGEN/ AIR AVAILABLE IN SUFFICIENT QUANTITY – CALCULATION DONE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CXR CHECKED RE POSITION OF TUBE</td>
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</tr>
<tr>
<td></td>
<td>ABG POST PLACEMENT ON TRANSPORT VENTILATOR</td>
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</tr>
<tr>
<td>CIRCULATION</td>
<td>APPROPRIATE BP /CIRCULATION MONITORING</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SUFFICIENT, WORKING IV ACCESS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RELEVANT FLUIDS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>INOTROPES IF REQUIRED</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DEPIBRILLATOR</td>
<td></td>
</tr>
<tr>
<td>DRUGS</td>
<td>SEDATION/PARALYSIS/ANAESTHESIA – APPROPRIATE DOSES/INFUSIONS DRAWN UP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EMERGENCY DRUGS</td>
<td></td>
</tr>
<tr>
<td>EQUIPMENT</td>
<td>TRANSPORT BAG</td>
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</tr>
<tr>
<td></td>
<td>VENTILATOR – OXYLOG/BABYPAC AND TUBING</td>
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</tr>
<tr>
<td></td>
<td>PORTABLE SUCTION</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MONITOR + EXTERNAL BATTERIES</td>
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</tr>
<tr>
<td></td>
<td>SYRINGE PUMPS</td>
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</tr>
<tr>
<td></td>
<td>TRANSWARMER + TEMPADOTS</td>
<td></td>
</tr>
<tr>
<td>OTHER</td>
<td>NGT FREE DRAINAGE</td>
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</tr>
<tr>
<td></td>
<td>CHEST DRAINS ON HEIMLICH VALVE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MOBILE PHONE AND RELEVANT CONTACT NUMBERS</td>
<td></td>
</tr>
<tr>
<td>PAPERWORK</td>
<td>MEDICAL NOTES</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DRUG KARDEX</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FLUID CHART</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RELEVANT XRAYS IF REQUIRED</td>
<td></td>
</tr>
</tbody>
</table>

Signed/Grade: ________________  Date: ____________
Appendix 13:

PAEDIATRIC TRANSFER DOCUMENTATION CHECKLIST

Paediatric / Neonatal Transfers

1. **PAEDIATRIC EMERGENCY ANAESTHETIC RECORD***
   TO BE COMPLETED BY ANAESTHETIST

2. **NISTAR TELEPHONE PROFORMA***
   *(OPTIONAL - AN AIDE FOR MAKING REFERRALS)*

3. **EMERGENCY AND PLANNED TRANSFERS’ FORM***
   FILL OUT AND FORWARD TO ADDRESS ON BOTTOM OF PAGE

4. **PRE-TRANSFER CHECKLIST***
   *(WHEN CHILD TRANSFERRED BY CAH TEAM)*
   COMPLETE BEFORE LEAVING CAH TO ENSURE ALL EQUIPMENT PRESENT
   AND WORKING AND ALL DOCUMENTATION PRESENT

*PLEASE PHOTOCOPY **ALL** NOTES RELEVANT TO TRANSFER
AND ABOVE DOCUMENTATION AND KEEP IN THE THEATRE
DEPARTMENT (PHOTOCOPIES KEPT DOWN IN T+O
RECEPTION- SEE CLAIRE). ALL ORIGINAL NOTES GO ON
TRANSFER TO RECEIVING HOSPITAL.
Appendix 14:

Parent information leaflet

Dear Parent,

We are providing you with this information because we need to transfer your child to another hospital. One of the paediatric clinic staff will have already explained the reason for the transfer to you, but as this can sometimes come as a bit of a shock it’s hard to take everything in and you will always think of extra questions after the doctor has left. This information leaflet should provide you with some practical information about the transfer, but if you have any questions or concerns please ask any of the staff looking after you or your child.

<table>
<thead>
<tr>
<th>Reason for transfer</th>
<th>Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ward/Department</th>
<th>Phone number for ward</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consultant</th>
<th>Driving Directions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Daisy Hill Hopsital site</td>
</tr>
<tr>
<td></td>
<td>Craigavon Area Hospital Site:</td>
</tr>
<tr>
<td></td>
<td>1. Turn left onto Hospital Road. Continue forward onto Monaghan Row, at Monaghan Street Roundabout take the 1st exit onto Camlough Road - A25 Signposted Bessbrook, Camlough</td>
</tr>
<tr>
<td></td>
<td>2. At roundabout take the 3rd exit, then merge onto the A1 Signposted Belfast</td>
</tr>
<tr>
<td></td>
<td>3. At Hillsborough Roundabout take the 1st exit onto Hillsborough - A1 Signposted Belfast</td>
</tr>
<tr>
<td></td>
<td>4. At roundabout take the 2nd exit onto Hillsborough Road - A1 Signposted Lisburn</td>
</tr>
<tr>
<td></td>
<td>5. At Sprucefield Roundabout take the 2nd exit, then merge onto the M1 Signposted The North, Belfast</td>
</tr>
<tr>
<td></td>
<td>6. Travel along M1 and at the end of the M1, prior to going onto the westlink, take the left slip road exit for to Royal</td>
</tr>
<tr>
<td></td>
<td>7. Turn right into royal site</td>
</tr>
<tr>
<td></td>
<td>Distance: 37.3 miles</td>
</tr>
<tr>
<td></td>
<td>Average journey time: 1 hr 3 min</td>
</tr>
</tbody>
</table>

|           | Craigavon Area Hospital Site: |
|           | 1. Exit the hospital and at the first roundabout (hospital roundabout) take the second exit onto Kernan Road (signposted M1, Armagh A3). |
|           | 2. Turn right at the end of the road onto Seagoe Road - B2. |
|           | 3. At the roundabout take the first exit, and then join the M12 motorway (signposted Belfast). |
|           | 4. At junction 1 roundabout take the second exit, the join the M1 motorway (signposted Belfast). |
|           | 5. Travel along M1 for approx 24 miles and at the end of the M1, prior to going onto the westlink, take the left slip road exit for the Royal |
|           | 6. Turn right into royal site |

|           | Distance to travel – 27 miles |
|           | Average journey time – 32 minutes |
In the Royal Hospital Site

a) If you are going to the Royal Belfast Hospital for Sick Children turn left at the 1st mini roundabout and the hospital is straight ahead with parking just round the corner on right on your left hand side.

b) If you are going to the Royal Maternity Hospital go straight on at the mini 1st roundabout and park in the main visitor’s car park on your left hand side. Go up the stairs if you have parked on the ground floor. The maternity hospital is directly across the road from the car parking attendant’s office.

**Car parking**

At time of writing the current charges for car parking at the Royal Hospital are:

<table>
<thead>
<tr>
<th>Duration</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4 hours</td>
<td>1.20</td>
</tr>
<tr>
<td>4-6 hours</td>
<td>2.00</td>
</tr>
<tr>
<td>6-24 hours</td>
<td>4.10</td>
</tr>
</tbody>
</table>

Please note these prices may be subject to change. Free parking available for relatives of critical care/ high dependency children.
Transfer

Most children that are transferred via ambulance, escorted by medical/nursing team members equipped to care for the needs of your child. This means that you will travel separately. It is appreciated that this is a stressful time but you must not attempt to follow the ambulance. The ambulance may use blue lights and sirens to avoid heavy traffic congestion. If you try to follow the ambulance you may cause or be involved in a serious accident. If you do not drive or have no means of transport please contact ward staff prior to departure as they can support you in planning travel arrangements.

Facilities

The ideal person to stay overnight with a child is his/her parent or guardian. Only one parent should stay with the child. Where there are exceptional family circumstances, the nursing staff will make a decision (at their own discretion) about who can stay. When allocating sleeping facilities, priority is given to parents of very ill children and mothers who are breastfeeding or pregnant. In most wards you will be offered a camp bed or a comfortable chair for staying overnight. There are shower/bathroom facilities for parents in most wards. There is a café in the Children’s hospital which opens: Daily 8.30am – 2.30pm and 3.00pm – 6.45pm. The hospital shop is located in the Mall and sells newspapers, sweets and soft drinks. Its opening hours are as follows: Monday-Friday 8am-8pm; Saturday and Sunday 10am-6pm. Vending machines are also available in the hospital for drinks and snacks.

Travel expenses

A Hospital Travel Costs Scheme is available to help people who are entitled to reclaim travel costs to and from hospital for NHS treatment. You may be eligible to reclaim travel expenses if you receive Benefits or Credits or are on a Low Income. Ask staff for details.

Authors Dr M. Hogan Date October 2008 revised November 2012 by Laura McNally
Appendix 15:

INFORMATION LEAFLET FOR PARENTS/ CARERS WHO’S CHILD REQUIRES TRANSFER OUT OF NORTHERN IRELAND

Dear Parent/ Carer,

We are providing you with this information because we need to transfer your child to another hospital outside of Northern Ireland. One of the paediatric staff will have already explained the reason for the transfer to you, but as this can sometimes come as a bit of a shock it’s hard to take everything in and you will always think of extra questions after the doctor has left. This information leaflet should provide you with some practical information about the transfer, but if you have any questions or concerns please ask any of the staff looking after your child.

<table>
<thead>
<tr>
<th>Reason for transfer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td></td>
</tr>
<tr>
<td>Phone number for ward</td>
<td></td>
</tr>
<tr>
<td>Ward/Department</td>
<td></td>
</tr>
<tr>
<td>Consultant</td>
<td></td>
</tr>
</tbody>
</table>

**Transfers to Dublin**

Most children that are transferred via ambulance, escorted by medical/ nursing team members equipped to care for the needs of your child. This means that you will travel separately. It is appreciated that this is a stressful time but you must not attempt to follow the ambulance. The ambulance may use blue lights and sirens to avoid heavy traffic congestion. If you try to follow the ambulance you may cause or be involved in a serious accident. If you do not drive or have no means of transport please contact ward staff prior to departure as they can support you in planning travel arrangements.

<table>
<thead>
<tr>
<th>Hospital/ contact details</th>
<th>Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Children's University Hospital, Temple Street, Dublin 1, Ireland Tel: 00353 18784256</td>
<td>Canteen available. A limited number of parents’ rooms are available. Please ask ward staff to arrange a room if required. There is a normal deposit/fee. A parent’s accommodation Officer is available Mon - Fri. 08.30 - 16.00pm. Free on - street car parking facilities in the vicinity of the hospital are very limited as Pay and Display parking is in operation on most streets.</td>
</tr>
<tr>
<td>Our Lady's Children's Hospital, Crumlin, Dublin 12 Ireland Telephone : 00353 14096650</td>
<td>Hospital Canteen, shop and coffee bar. The Parents Accommodation Unit consists of single and double rooms, bathrooms/showers, sitting rooms and kitchens, where light snacks may be made. €18.00 Single room / €30.00 Double room / €30.00 Family Room, Mattresses for use in wards - no charge, Female/Male Toiletry Packs - €6.00, Sleeping Bag - €10.00. Fold-up mattresses are available for one parent to stay on some wards. Car parking on the hospital site is very limited and is charged.</td>
</tr>
</tbody>
</table>
Transfers to Scotland/England

Most children that are transferred via air are escorted by medical/nursing team members equipped to care for the needs of your child. This means that you will travel separately. If your child requires air transfer the hospital will assist you in arranging flights for you. **You must have appropriate identification documentation to travel by air.** The following list of facilities is not exhaustive please ask ward staff for information if transferring to a hospital not outlined below.

<table>
<thead>
<tr>
<th>Hospital/ contact details</th>
<th>Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Hospital for Sick Children, Edinburgh 9 Sciennes Road Edinburgh EH9 1LF Telephone: 0131 536 1000</td>
<td>Accommodation is near to the unit and you are welcome to stay. Family Support will meet with you as soon as possible to help with any problems you may have. Closest airport is Edinburgh and it is approx. £25 from airport to children’s hospital. Public transport is a cheaper solution.</td>
</tr>
<tr>
<td>Royal Hospital for Sick Children, Glasgow Dalnair Street Glasgow G3 8SJ Tel: 0141 201 0000</td>
<td>The hospital has a Ronald MacDonald house; this is where most of the families stay. However the rooms are limited and sometimes it is full. If this happens usually parents are permitted to stay in a spare cubicle on one of the wards for temporary stays until something is available in Ronald MacDonald house. We also have a list of local B&amp;B and hotels. The hospital has a canteen open throughout the day and vending services at night, there is a tea bar and shop at the main entrance open 9-4 on weekdays. There are also a few restaurants situated very close (5min walk) from the hospital. It is 8 miles from Glasgow airport to the children’s hospital.</td>
</tr>
<tr>
<td>Birmingham Children’s Hospital Steelhouse Lane, Birmingham B4 6NH 0121 333 8506 More information at: <a href="http://www.bch.org.uk">www.bch.org.uk</a></td>
<td>Hospital restaurant, café and coffee bar. If your child is going to be in hospital for more than three days - or there are special circumstances - you may be able to stay in the parents' accommodation, which is on the second floor of the hospital, or at Ronald McDonald House nearby. Parents’ accommodation is free-of-charge. Closest airport is Birmingham international approx. 6 miles away.</td>
</tr>
<tr>
<td>Sheffield Children’s Hospital, Western Bank, Sheffield, South Yorkshire S10 2TH Tel: 0114 271 7000 More information at: <a href="http://www.sheffieldchildrens.nhs.uk">www.sheffieldchildrens.nhs.uk</a></td>
<td>In Sheffield Children’s Hospital, the Parkside Restaurant is open for breakfast, lunch and tea. There is also a small café situated in the main entrance open 8am till 7pm. Shop available for essentials. Fold away beds available at ward level. The hospital also has a facility with 10 rooms for parents, run by The Sick Children’s Trust. This includes a kitchen, lounge and laundry facilities away from the wards. The ward staff can make enquiries for you on admission. The nearest airport to Sheffield Children’s Hospital is Yorkshire and Humberside, Robin Hood Airport Doncaster Sheffield is 44.07 miles from Sheffield Children’s Hospital, Leeds Bradford and Manchester airports also used.</td>
</tr>
<tr>
<td>Great Ormond Street London, WC1N 3JH Tel: 020 7405 9200 More information at: <a href="http://www.gosh.org">www.gosh.org</a></td>
<td>Some parents stay on the ward with their children, but some wards do not have the space to offer this. Arrangements will be made for somewhere for you to stay elsewhere in the hospital or in the surrounding area. Restaurant and shop available. Launderette facilities for families are available in the hospital. Washing and showering facilities are provided in the Parents’ Unit in the Cardiac Wing link corridor. Taxi fare from Heathrow approx. £60.00 it takes approx. 60 minutes to drive from any of the 5 London airports. Public transport provides cheaper option. If you cannot find what you are looking for, please ring the Patient Advice and Liaison Service (Pals) Office on 020 7829 7862 or the Transport Office on 020 7829 8618.</td>
</tr>
</tbody>
</table>
Expenses and Reimbursement:

Any reasonable expenses associated with travel or accommodation will be considered for reimbursement by the Patient Travel Office, Health and Social Care Board (HSCB) on the presentation of a completed travel claim form with valid receipts.

If you have any queries in respect to what a ‘reasonable expense’ is please contact the Patient Travel Office, HSCB on 028 90553711 for advice.
Appendix 16:

RETRIEVAL & TRANSFER SAFETY PROTOCOL

Breakdown
In the event of an ambulance breakdown team members should remain in the ambulance unless unsafe to do so.
Ensure ambulance staff have contacted base to inform them of the breakdown and any ensuing problems likely to arise from it.
Ambulance staff should be asked to contact the police to divert or stop the traffic.
High visibility jackets should be worn if the team member is required to leave the ambulance for any reason.

Equipment safety
All retrieval and ambulance equipment should be stowed and securely restrained during the transport.
All retrieval equipment should be serviced yearly by medical physics and battery integrity confirmed.

Speed
Lights and sirens should be used with discretion and mainly to expedite the way through busy traffic.
The speed limit and traffic lights should be observed unless requested by the team and agreed by all members travelling in the ambulance.
It may occasionally be appropriate to use lights and sirens on both outbound and return journeys.
In exceptional circumstances it may be felt appropriate to exceed the speed limit but the reason must be stated and agreed upon by all team members.

Patient Safety
The vacuum mattress must be securely strapped to the trolley.
The patient must be securely strapped onto the ‘vacumattress’ or harness if the mattress is not being used.
CO₂ monitoring and waveform must be displayed on all intubated patients.
It must be ascertained prior to departure that the oxygen supply is sufficient for the needs of the journey.

Parent Safety
Parents must be told not to follow the ambulance on the return journey.
A contact number for parents must be taken prior to departure from the referring hospital.
Parents must be provided with the PICU telephone number. The PICU will then be able to contact the retrieval team on their behalf.

Personal Safety
Full three point seat belts must be worn at all times.
If any patient interventions are required the ambulance should be requested to stop.
Appropriate footwear should be worn on retrieval.
High visibility jackets should be carried and worn at night and if for any reason the team member has to leave the ambulance.
A spare 150cm line with a three-way tap should be flushed through and left accessible throughout the ambulance journey. This will enable team members to bolus drugs/fluids without removing their seatbelts.
If staff have been out for a long period of time they must consider whether they are in a fit condition to drive home. A taxi may be provided for team members if it is felt to be appropriate.