The Shrewsbury and Telford Hospital NHS
NHS Trust

Transfer of Children

Version3

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Care Group	:	Women and Children's Centre
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Version No	Implementation Date	History	Ratified/Consultation	Full Review Date
1	29.09.14	New Guidance	Paediatric Governance	
2	24.07.16	Minor updates	Paediatric Governance	16.07.18
3	23.08.19	Full review	Lead Clinician & Paediatric Guideline Lead	23.08.19

1. Introduction

1.1. The configuration of SaTH Children's Services means that transfer of children between the two main hospital sites will at times be required.

1.2. Maintaining the well-being of the child being transferred is the main priority, but consideration must be given to ongoing service provision of both the transferring hospital and partner organisations such as the West Midlands Ambulance Service.

1.3. There are several possible scenarios where a child may need transfer:

- Major trauma
- PICU Transfer, including time-critical transfers
- Paediatric High Dependency transfer
- Ward Level transfer for stable conditions
- Transfer of a stable child to hospice or home

2. Abbreviations

KIDS	Kids Intensive Care & Decision Support
BCH	Birmingham Children's Hospital
PIC(U)	Paediatric Intensive Care (Unit)
PCC	Paediatric Critical Care

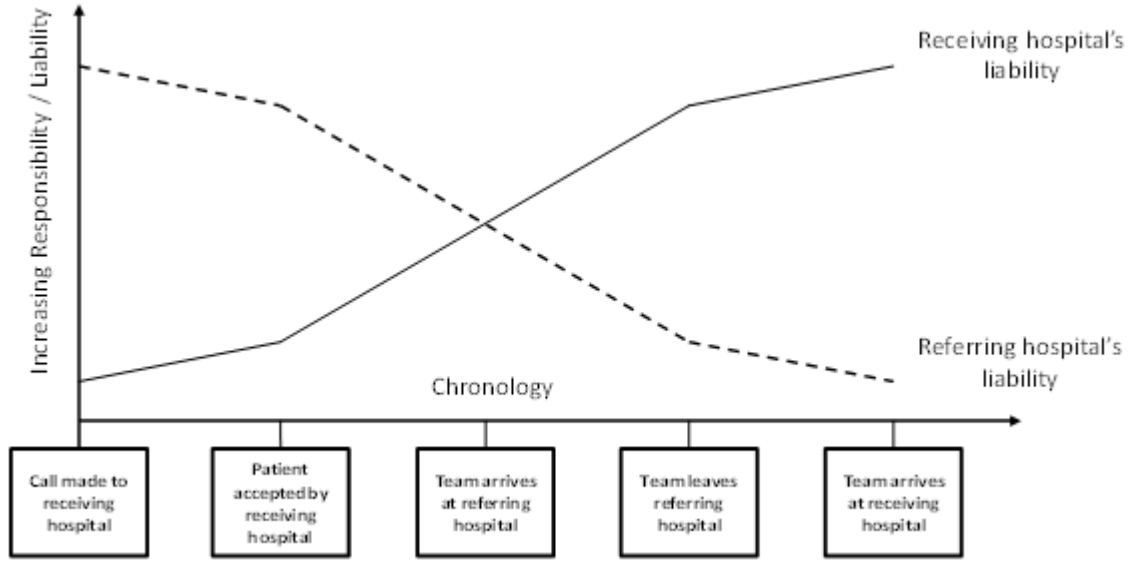
3. Patient Groups

3.1. Inclusions: this guideline applies to children age up to 16 years

3.2. Exclusions: new-born babies (age up to 6 hours) transferred from the Neonatal Unit, ED or Midwife-Led Units; and patients age 16 years+

4. Clinical Responsibility

4.1. Transition of Responsibility: The lead attending and referring clinician has primary clinical responsibility for a patient until the patient has been received at the accepting hospital. There is though a gradual transition of responsibility as depicted below:



4.2. Referring Site Clinician Responsibility: For transfers of children the referring clinician should:

- take all reasonable steps to ensure a safe transfer, using the "Transfer of Child Pathway" (Appendix 1) and "Transfer Risk Assessment" (Appendix 2) Tools to help determine transfer staff, equipment and mode
- discuss cases with the KIDS service for children identified as
  - high-risk, or
  - moderate risk but with potential for deterioration en-route
  - any child with potential need for anaesthetic intervention
- liaise with the clinical team at the receiving SaTH site prior to transfer, to agree the transfer and ongoing management upon arrival of the child
- Note: authority to make referrals and liaise with the accepting hospital team may be delegated to junior/other members of a team, subject to the clinical condition and stability of the patient. This particularly applies in the inter-site transfer of emergency patients from A&E.

4.3. Referring Site Nursing Responsibilities: For transfers of children the referring site nurse team should

- Discuss transfer arrangements with the receiving hospital nurse team
- Contact ambulance control with relevant information to ensure the appropriate ambulance is sent for transport
- Provide support and information for the child and parents / family in an appropriate and timely manner
- Aid with completion of the "Transfer of Child Pathway" (Appendix 1) and "Transfer Risk Assessment" (Appendix 2) Tools to help determine transfer staff, equipment and mode

5. Transfer Process

5.1. KIDS Team

The KIDS Team should be consulted (Tel. 0300 200 1100) for:

- All Paediatric Intensive Care Unit transfers - whether thought likely or possible
- All High-dependency Transfers, or where there is uncertainty whether the transfer is high-

dependency, to allow safe planning and transfer

- For advice on management of clinical problems, medical and trauma, that the local attending team have clinical uncertainty over

For further details refer to the guidelines "PICU Transfer" and "PICU Time-Critical Transfer".

5.2. Ambulances & Parental Transport

5.2.1. Emergency Ambulance: Emergency ambulances used for inter-hospital transport are taken from the pool of ambulances providing emergency cover for the locality in which they are based. Consideration must be given as to whether it is appropriate for an emergency ambulance to be diverted away from life threatening emergencies to perform the transfer

Restraint: When using emergency ambulances, consideration must also be given to the safety of the child during transfer. An appropriate method of restraint must be used at all times.

- Babies < 9kg – Babypod or Incubator
- Infants and Children 9 - 41kg – 5-point Strapping Device
- Children > 41kg – Standard Ambulance Stretcher

Fixing a car seat to an ambulance stretcher does not comply with Regulation 44 and should not be used in the front cab of an ambulance.

5.2.2. High Dependency Vehicle: Despite the name, these vehicles are usually equipped to a lower level than an emergency ambulance. Staffed by either technicians or advanced healthcare assistants with the aim of providing a more rapid transfer than the patient transport service.

Restraint: as above 5.2.1

5.2.3. Patient Transport Service/Ambulance Taxi: It may be appropriate at times to use these services for the transfer of children to other sites. See Appendix 3.

Restraint: car-seat as per national legislation

5.2.4. Parents Own Vehicle: A comprehensive assessment must be carried out prior to transferring a child in the parents own vehicle. It may be appropriate to do this where there is no risk of deterioration or complications en-route. See Appendix 3.

Restraint: car-seat as per national legislation

5.3. Ambulance Staffing

5.3.1. General Considerations: The remit of the Ambulance Service is to provide a suitable vehicle for inter hospital transfers i.e. not to provide an appropriate trained crew to manage the patient being transferred – responsibility for this lies with the transferring hospital.

This may cause difficulty when a technician manned ambulance attends for a transfer where a paramedic crew was expected. However, for paediatric transfers a paramedic crew is very rarely required:

- If an airway intervention is required or possible, an anaesthetist should be provided or the child transferred by the retrieval service.
- If a medical intervention is required or possible, a medical or advanced clinician escort should be provided.
- If a nursing intervention is required or possible, nurse escort should be provided.

Refer to Appendix 3 for escorting staff assessment.

5.3.2. Ambulance Staff Competencies

- **Paramedics** have either worked as a technician for long periods of time before undertaking work-based training, or; have undertaken a university course. They can undertake advanced

airway management techniques, administer a wide range of drugs via a variety of routes and perform intravenous cannulation

- **Ambulance technicians** have undertaken a period of training and can provide basic and intermediate life support, administer oxygen, nebulisers and a range of IM and oral medication including analgesia
- **Emergency Care Assistants** can perform basic patient assessment and taking of medical observations such as blood pressure, blood sugars, pulse and respiration rates, temperature and acquiring ECGs. They are also trained to assist paramedics in more advanced techniques such as intravenous cannulation and endotracheal intubation.

5.4. Escorting Staff

Any nursing, medical or other clinician escort should be identified as being competent in their ability to manage any reasonably likely complication during the transfer.

It is the responsibility of individual clinicians to acknowledge whether the role of escort is within their own level of comfort or competence. Their vulnerability to travel-sickness should also be considered as an escort incapacitated by nausea and vomiting proves to be useless to a child in need of an intervention.

If a child requires an infusion device to run during transfer, the escort must have completed and be up to date with respect to Infusion Device training.

For minimum and desirable training requirements for staff groups refer to Appendix 4.

5.5. Preparation for Transfer

Key principles:

- Stabilisation is essential prior to transfer, even with time-critical conditions. There should be a minimum of two stable PEWS scores a least ½ hour apart prior to departure.
- If unable to demonstrate clinical stability advice must be taken from KIDS.
- Follow Appendices 1, 2 & 3 to determine clinical risk, escort staff and vehicular requirements
- All transfers for high-dependency and PICU support require KIDS discussion
- When there is uncertainty that the child is a high-dependency transfer, KIDS should be involved in deciding transport needs, in addition to local anaesthetic staff
- Parents and carers should be informed of the transfer and rationale for mode and staffing requirements.
- Any escorting staff will need to have return-transport arrangements made

5.6. Emergency & Time-Critical Transfers

Children should be stable prior to transfer, and most transfers across the Trust will not be classed as emergency or subject to significant time-constraints.

However, situations requiring more urgent transfer may include:

Situation	Leave SaTH within
Time-critical condition e.g. intra-cranial expanding haematoma*	½ hour
Suspected torsion of testis	< 2 hours
Perforated Appendix	< 2 hours

*Refer to PICU Time-Critical Transfer Guideline

5.7. Equipment (refer also to Appendix 4)

5.7.1. General Equipment: for escorted transfers the following should be available/taken:

- A copy of all healthcare records & investigations
- Completed Appendix 1 Transfer of Child
- Patient medications, personal belongings and other items
- A correctly completed patient wristband must be securely in place before transfer.
- Mobile telephone with adequate battery life
- Telephone number of receiving hospital
- Telephone number of transferring department
- Warm clothing including Hi-Viz jacket.

5.7.2. Infusion Devices: The battery life of all electrical equipment varies depending on its use and amount of charge. The transfer team/escort must be aware of battery lives for equipment and the implications of losing power en route. If there are doubts, a back-up unit should be obtained from the Equipment Library service.

In general:

- Trust Infusion Pumps (Signature), Syringe Drivers (both P series) and PCA Syringe Drivers (P5000) will last approximately 4 hours on 'middle' infusion rate provided that the device has been charged for at least 16 hours
- Patient Monitors used will also last approximately 4 hours but frequent (i.e. more than every 15 mins cycle time) use of the non-invasive Blood Pressure cuff will deplete the battery life much quicker.
- Alaris Signature Infusion Pumps will sound a 'low battery' alarm 30 minutes before the battery runs out. The escorting nurse must know the 'half-life' of any drug being infused and the implications of the patient not receiving it if the infusion stops.
- Escort staff must have completed Infusion Pump training should these devices be required during transfer.

5.7.3. Nurse Escort, Low-risk Transfers: require a Paediatric basic airway transfer bag & condition-specific medication and equipment

5.7.4. Clinician Escort, Intermediate-risk Transfers: require a Paediatric Critical Illness Bag (Green Bag) and condition-specific medication, fluids and equipment

5.7.5. Anaesthetic Escort, Time-Critical Transfers: require a Paediatric Critical Illness Bag (Green Bag), Transportation trolley, ventilator, monitors incl. capnography – refer to PICU Time-Critical Transfer Guideline

5.8. During Transfer

- Children should receive care of a standard consistent with that provided at the base hospital.
- A set of physiological observations and paediatric early warning score should be documented 15 minutes after departing the base hospital and every 15 minutes afterwards unless their clinical condition dictates otherwise.
- A final set of observations and paediatric early warning score should be recorded at the time of arrival at the receiving hospital.
- A copy of the completed transfer observation sheet should be retained in the case notes of the base hospital.

- Should there be a sudden clinical deterioration but not requiring immediate intervention, the ambulance should divert to the nearest accident and emergency department.
- Should there be a sudden deterioration requiring immediate intervention, the ambulance should be stopped to deliver emergency aid before diverting to the nearest accident and emergency department.

5.9. Completion of Transfer

5.9.1. On arrival at Destination Ward there should be:

- Completion of the Appendix 1 Transfer of Child Form including time of arrival & problems encountered
- Handover of relevant information
- Nursing observations and PEWS score recorded
- Documentation in clinical notes of relevant patient events & interventions during transfer

5.9.2. On completion of transfer:

- A DATIX completed for any adverse events related to transfer, including:
  - equipment shortage or failure
  - unexpected patient deterioration
  - transport delay
  - staff escort problems
- Equipment is returned to place of origin and cleaned before storing it away
- Disposable equipment and items removed from the Transfer bags must be replaced prior to storage of these bags for future use
- Electrical equipment should be placed on charge on returning it to its area of origin
- Faults with equipment are to be reported to the nurse in charge of the area and equipment must be removed from service and the process for sending it to the Medical Equipment Servicing Department (MESD) is followed
- Medicines stored away in the appropriate cupboard and disposable equipment disposed of following the Trust waste disposal policy

6. Training

On induction staff will receive instruction on how to access paediatric guidelines.

7. Audit

Monitoring of adherence to this guideline will be through the Trust's DATIX system. Non-compliance or significant problems encountered whilst following this guideline should be highlighted in this way.

8. References

- Tameside and Glossop NHS trust - Neonatal and Paediatric Transfer Policy
- Greater Manchester Children and Young People Network – Transfer of Children from Short Stay Assessment Units.
- Yorkshire Ambulance Service – Policy for the Inter-hospital Transfer of Children Shrewsbury and Telford Hospital NHS Trust – Transfer Policy
- The Shrewsbury and Telford Hospital NHS trust – PICU Transfer Guideline

- Department of Health (2006) - The acutely or critically sick or injured child in the district general hospital - a team response

9. Appendices

9.1. Appendix 1: Transfer of Children Pathway

9.2. Appendix 2: Transfer Risk Assessment Tool

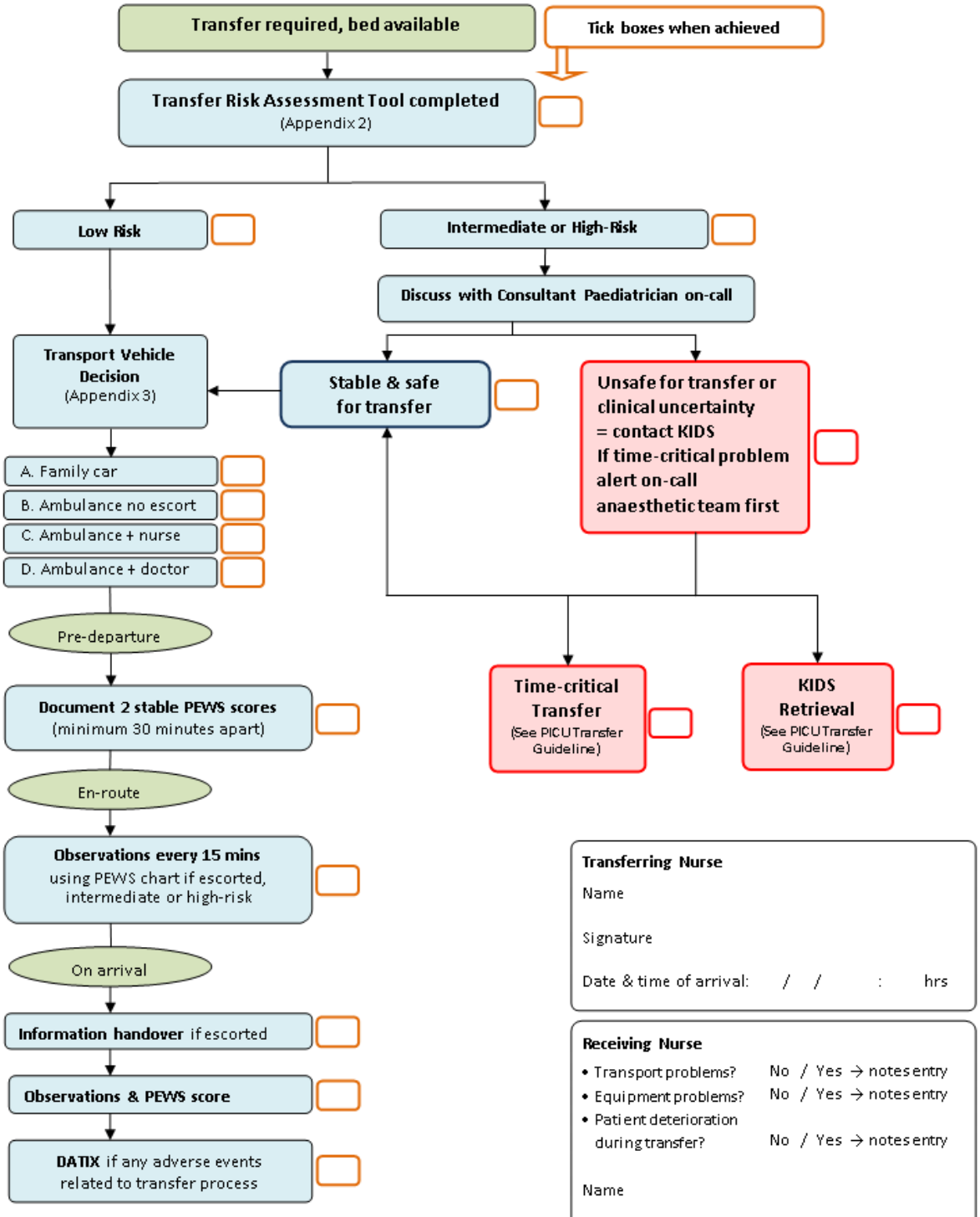
9.3. Appendix 3: Transport Vehicle and Escort Requirements

9.4. Appendix 4: Equipment for Transfers

Transfer of Children Pathway (Appendix 1)

Name

Unit no.



Transferring Nurse

Name

Signature

Date & time of arrival: / / : hrs

Receiving Nurse

- Transport problems? No / Yes → notes entry
- Equipment problems? No / Yes → notes entry
- Patient deterioration during transfer? No / Yes → notes entry

Name

Signature

Date & time of arrival: / / : hrs

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Appendix 2: Transfer Risk Assessment Tool

Patient Details

Name

Unit number

DOB

A	Does the child have an airway problem or potential for a problem during transfer?	**e.g. 1** had treatment for croup or allergic reaction **e.g. 2** stridor or difficulty talking, or abnormal cry	Problem identified? YES NO (please circle)
B	Does the child have difficulty breathing or potential for problems during transfer?	**e.g. 1** recession or tachypnoea **e.g. 2** requiring oxygen	Problem identified? YES NO (please circle)
C	Does the child have a circulation problem or potential for a problem during transfer?	**e.g. 1** tachycardia & isn't warm & well-perfused **e.g. 2** required IV resuscitation	Problem identified? YES NO (please circle)
D	Does the child have a reduced conscious level or potential for a neurological problem during transfer?	**e.g. 1** recent seizure **e.g. 2** any reduction in GCS or not A on AVPU scale	Problem identified? YES NO (please circle)
E	Could transfer cause a problem with temperature regulation or pain control?	**e.g. 1** painful injury or fractures **e.g. 2** babies requiring temperature support	Problem identified? YES NO (please circle)

ASSIGN RISK (tick box)

LOW RISK
= No ABCDE problems

INTERMEDIATE RISK
= 1 or more ABCDE problems

HIGH RISK
= 1 or more ABCDE problems

Low risk

Escort requirements (see also Appendix 3)

No clinician or nurse escort required **unless**

- Safeguarding concerns
- Detailed handover required
- Parental support for journey needed
- Treatment required en-route not deliverable by ambulance crew e.g. O2 > 30%, continuous drug infusions
- Underlying medical condition liable to unpredictable deterioration
- Requires close nursing care & continuous observation
- PEWS score 4+
- Parental disagreement on lack of escort

Intermediate / High Risk

Escort requirements (see Appendix 3)

- This will depend upon the clinical problem.
- The on-call Consultant paediatrician must be informed, and a joint decision reached on transport mode, staff escort and equipment requirements

Discussion with KIDS Service

- All unstable and high-risk patients must be discussed with KIDS Team.
- Intermediate-risk patients who are at risk of clinical deterioration en-route are also best discussed
- If any clinical doubt about transfer mode, contact KIDS

Completed by

Name

Signature

Date / / Time :

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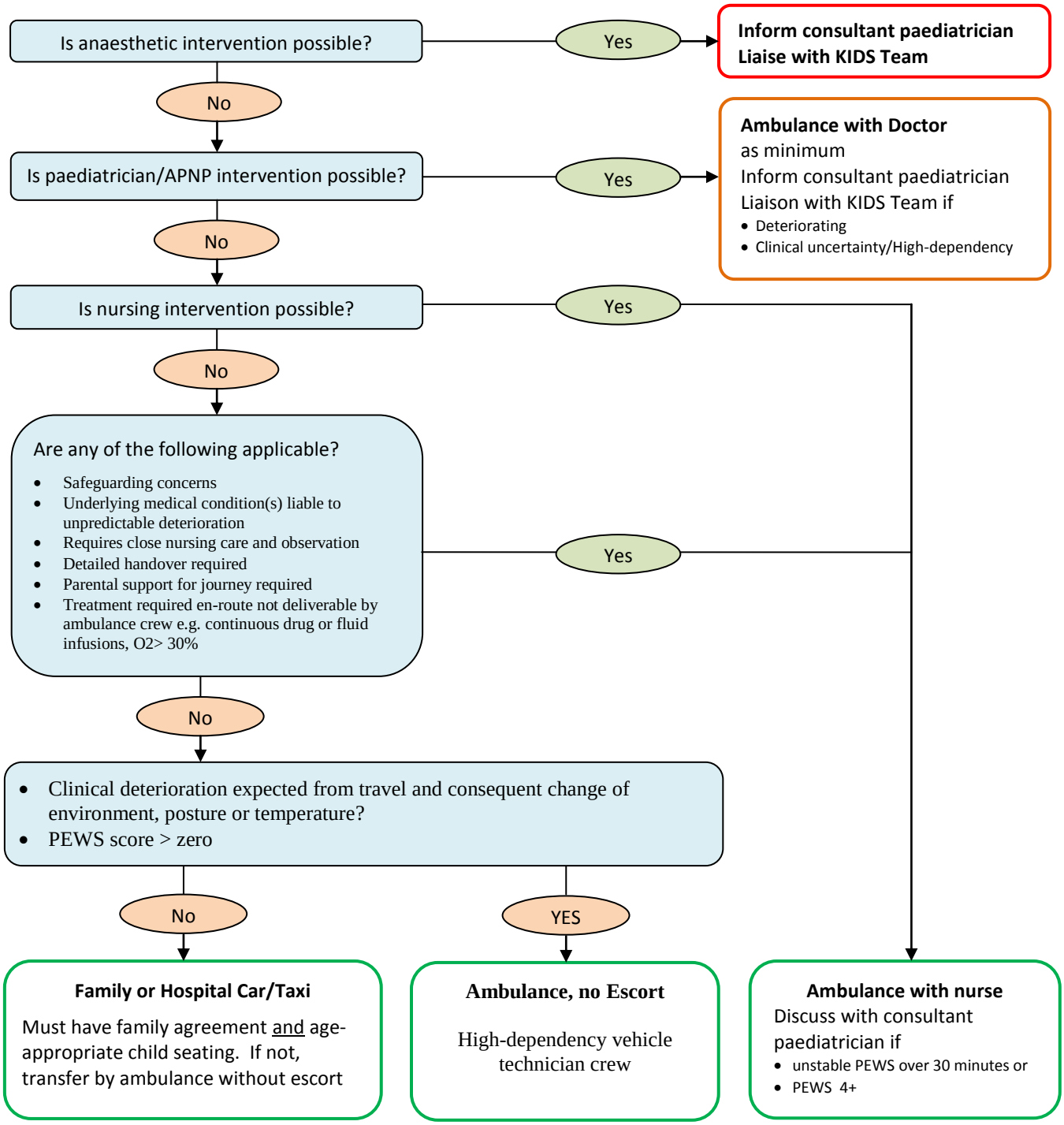
Appendix 3 Transport Vehicle and Escort Requirements

1. Summary Algorithm



2. Family Car Transfers

Transfer of a child by the family car may be acceptable if all the following criteria are met:

1. The family wish to use their own transport
2. The child is Low-risk using the "Transfer Risk Assessment Tool"
3. The child has a PEWS score of zero on two occasions at least 30 minutes apart
4. The car has an age-appropriate car-seat
5. None of the following conditions exist
   - Safeguarding concerns
   - Underlying medical condition(s) liable to unpredictable deterioration
   - Clinical deterioration possible due to change of environment, posture or temperature
   - Requires close nursing care and observation
   - Treatment required en-route
   - Detailed handover required
   - Parental support for journey required

3. Ambulance Transfer

Whilst emergency procedures can be undertaken by ambulance crews, it is important to filter those children at potential risk of deterioration en-route who might require nursing or medical interventions.

The competencies of ambulance crew in managing acute paediatric emergencies are variable according to vehicle type.
High-dependency Vehicles are usually equipped to a lower level than an emergency ambulance, and are staffed by either technicians or advanced healthcare assistants.
Paramedic-staffed ambulances are equipped to a higher level, and crew have greater training in acute paediatric emergencies (see section 6.3), though variability will still exist. They should not however be considered a substitute for a nurse or doctor for the elective transfer of children.

In practice if a nurse or doctor is escorting a child then a paramedic crew is not required.

3.1 Ambulance Transfer without Escort

A 999 ambulance with technician crew or high-dependency vehicle is the likely transport available for A child may be considered for ambulance transfer () without escort if

A Low-risk on Transfer Risk Assessment Tool
B A stable PEWS score on two occasions at least 30 minutes apart
C A maximum PEWS score of 3
D None of the following conditions exist
   - Safeguarding concerns
   - Detailed handover required

- Requires close nursing care and observation
- Likely to require administration of medication en-route
- Requires continuous intravenous infusion of fluids or medication
- Requires more than 30% oxygen
- Underlying medical condition liable to unpredictable deterioration
- Parental support required for the journey

3.2 Ambulance with Escort

The escort required will depend upon the nature of any likely intervention required for the journey. Paramedics are able to undertake advanced airway management, administer a wide range of drugs and perform IV cannulation.

4. Transfer Escort Requirements

The following principles should be applied when deciding escort(s) requirements

Intervention	Examples (not exclusive indications)	Escort
Nurse intervention possible	IV infusion device care Bronchiolitis in 30-40% oxygen, no apnoeas Improving asthma requiring no more than hourly inhalers Parental support during journey	Nurse
Medical intervention possible	Bronchiolitis in > 40% O2 or with apnoeas Asthma requiring intravenous infusion and hourly inhalers Seizure requiring treatment	Paediatrician / Advanced Clinician
May require airway intervention	Intubation possible Clinical instability Time-critical problem	Anaesthetist or KIDS Retrieval Service

Where no nursing, medical or anaesthetic intervention is possible, the child may be transferred by ambulance without escort or by family car if Low-Risk on “Transfer Risk Assessment Tool” and no “Exceptions”.

5. Escort Training

	Minimum	Desirable
Nursing Staff	1. PILS or PLS in past 12 months 2. Infusion device training	1. APLS or EPALS in past 4 years
Advanced Paediatric Nurse Practitioners	1. APLS or EPALS in past 4 years	1. Transportation scenario in past 12 mths 2. Regional/National Transportation Course
Associate Specialists in Paediatrics	1. APLS or EPALS in past 4 years	1. Transportation scenario in past 12 mths 2. Regional/National Transportation Course
Consultant Paediatricians	1. APLS or EPALS in past 4 years	1. Transportation scenario in past 12 mths 2. Regional/National Transportation Course
Anaesthetists	1. APLS or EPALS/Equivalent experience in past 4 years 2. Transportation training at ST4+ 3. Minimum 6 months paediatric anaesthesia experience or equivalent	1. Transportation scenario in past 12 mths

Appendix 4 Equipment for Transfers

Nurse Escort Low-risk Transfers	**General** Mobile phone Warm clothing **Airway & breahing** Paediatric basic airway transfer bag **Other** Condition-specific medication and equipment
Clinician Escort Intermediate-risk Transfers	**General** Mobile phone Warm clothing **Airway, Breathing and Circulation** Paediatric Critical Illness Bag (Green Bag) **Other** Condition-specific medication and equipment
Anaesthetist Escort Time-critical Transfers*	**General** Mobile phone Warm clothing **Airway, Breathing and Circulation** Paediatric Critical Illness Bag (Green Bag) Tranportation trolley Ventilator, monitors incl. capnography **Other** Condition-specific medication, fluids and equipment ***Refer to PICU Time-Critical Transfer Guideline for more detailed information**