NHS Children's Acute Transport Service

Clinical Guidelines

Management of critically ill child at the local DGH

Document Control Information

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Purpose

- It is important that in the event that there is a delay in PCC transport team availability due to workload that the DGH have a contingency plan in place to temporarily care for a child with guidance from the CATS consultant
- In order to utilise the resources available to you there should be a designated area to take the child to such as theatre recovery, SCBU and/or AICU
- Adequate and ongoing dialogue between the CATS consultant and the consultants involved in the child's care is the key to delivering quality care and preventing errors from occurring

Assessment

- Ensure plan agreed and instigated in conjunction with the CATS consultant
- **Do not delay urgent treatment or interventions whilst awaiting the PCC transport team**
- If clinical condition warrants immediate transfer (e.g. emergency neurosurgery required) refer to CATS clinical guidelines and 'Transport considerations when transfer is undertaken by local DGH team'

Initial management priorities

Preparation is the key to minimising clinical instability

AIRWAY **DO NOT use pre-cut tubes** • If cuffed tubes available consider using them (may not need to inflate cuff) • Secure airway ensuring good position with no significant leak • Add **PEEP** as soon as possible to ventilation circuit • Add appropriate HME to circuit • Gastric tube on free drainage (all ventilated children)	• Discuss induction agent with CATS consultant • Anticipate CVS instability with induction (If septic/cardiac) • Prepare fluid bolus and possible peripheral adrenaline infusion • Chest X ray post intubation (ideal position at base of T2) with copy requested for transport team

BREATHING Ensure adequate ventilation: • Is the chest wall moving? • Is air entry equal? • Have you good saturation readings? • Transport ventilator if available otherwise utilise other ventilation resources from SCBU/AICU • **Always monitor end tidal carbon dioxide ($ETCO_2$)** • Consider appropriate blood gas targets dependent on clinical condition	**Possible Ventilation problems:** • Exclude ETT related problems urgently if ventilation difficult • Inadequate sedation/paralysis • Large leak around ETT in child requiring high ventilator pressures **(need to upsize tube)** • **Unintended endobronchial intubation** • Consider physiotherapy and suction • Tension pneumothorax **(must be drained)** • Discuss ventilation strategies with CATS consultant

CIRCULATION • **Two** good intravenous access points are a priority • Continuous cuff BP readings whilst awaiting arterial line placement • In a life threatening situation consider peripheral or IO inotrope infusion until central line access can be established • Arterial line attempted but can run on peripheral blood gases • In neonatal shock consider cardiac anomaly (femoral pulses/ 4 limb BP) • Discuss circulatory support measures with CATS consultant (e.g. appropriate inotrope)	**Unable to get BP reading from cuff check:** • Cuff size (2/3 upper arm width) • Femoral and peripheral pulses • $ETCO_2$ tracing (poor cardiac output) • Anticipate CVS instability at induction • Early aggressive fluid resuscitation + inotropes may be required • Avoid propofol if CVS instability • **Give more fluid and titrate inotropes constantly reassessing until either arterial line placed or successful BP cuff readings recorded at frequent intervals**

DISABILITY • Commence adequate sedation & paralysis (see CATS prescription sheet for drug infusion doses) • Monitor Blood Glucose • Consider urinary catheter (monitoring of output/avoid retention) • Pupils • Temperature control - aim for normothermia unless cooling indicated • Maintenance fluids commenced	• Discuss specific concerns re sedation with CATS consultant • Consider specific antibiotic cover • Consider further tests such as CT scan, blood film, Cr USS, ammonia • Copy all notes for team • Transfer x-rays/scans to receiving unit e.g. ask radiology to IEP via blue light transfer

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.

Ongoing management/contingency plan

- Appropriate staff identified to support care whilst awaiting next available CATS team
- Care area identified to assist with resource management within the DGH e.g. child moved to NICU/AICU/theatre recovery
- Ongoing dialogue continues between DGH team and CATS consultant in relation to the clinical management
- Plan agreed and updated according to clinical condition

Detailed clinical guidelines are available on the CATS website: **http://www.cats.nhs.uk**