
Clinical Guidance

Paediatric Critical Care: Pre Transport Stabilisation

Summary

This guideline is for staff to use as a prompt when preparing a child for safe retrieval.

Document Detail	
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<p>This clinical guideline has been produced by the South Thames Retrieval Service (STRS) at Evelina London for nurses, doctors and ambulance staff to refer to in the emergency care of critically ill children.</p> <p>This guideline represents the views of STRS and was produced after careful consideration of available evidence in conjunction with clinical expertise and experience. The guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient.</p>	

Change History		
Date	Change details, since approval	Approved by

Pre transport Stabilisation

Key information for referral call

- Patient demographics, current location of patient (please update if moved)
- Paediatric consultant preference for destination PICU
- Relevant clinical history and thorough examination
- Management to date and response to treatment
- Current physiological parameters (bring PEWS chart to phone) & results

Paediatric consultant must be aware of all referrals

Double check advice, document clearly and inform entire team

Update STRS with significant changes

DO NOT delay urgent interventions awaiting retrieval team arrival

A	AIRWAY <ul style="list-style-type: none"> • Secure oral or nasal ETT (appropriate size and position) • Avoid nasal if suspected basal skull fracture or coagulopathy • DO NOT pre-cut ETT as may result in later being too short • Cervical spine immobilisation for ANY ventilated trauma patient • Gastric tube on free drainage (all ventilated patients) • Obtain CXR post intubation to verify ETT position prior to transfer 	Indications for Intubation <ul style="list-style-type: none"> • Airway protection/patency • Respiratory failure • Cardiovascular support • Neuroprotection • Facilitate procedure/ analgesia 																												
B	BREATHING <ul style="list-style-type: none"> • Ensure adequate ventilation either by anaesthetic circuit or ventilator • Spontaneous ventilation via ETT will result in atelectasis: avoid • Monitor end tidal carbon dioxide (ETCO₂) and saturations continuously • If ventilation difficulty-exclude ETT problems immediately (see right) • Suggested initial ventilator settings: <table border="1" data-bbox="148 943 946 1070"> <thead> <tr> <th></th> <th>PIP</th> <th>PEEP</th> <th>Rate</th> <th>I Time</th> <th>ET CO₂</th> <th>Sats</th> </tr> </thead> <tbody> <tr> <td>Standard</td> <td>16-30*</td> <td>5</td> <td>15-20</td> <td>0.7-1sec</td> <td>4-7kPa</td> <td>>95%</td> </tr> <tr> <td>Asthma</td> <td>To move chest</td> <td>5</td> <td>12-20</td> <td>1sec</td> <td>6-10kPa</td> <td>>90%</td> </tr> <tr> <td>ARDS</td> <td>To move chest</td> <td>5-15</td> <td>15-25</td> <td>1sec</td> <td>6-10kPa</td> <td>>85%</td> </tr> </tbody> </table> <p>* PIP initially to achieve chest rise, titrate to ETCO₂/ PaCO₂, limit to prevent barotrauma. ** Severe hypoxia in ARDS employ recruitment manoeuvres- increase PEEP, suction</p>		PIP	PEEP	Rate	I Time	ET CO ₂	Sats	Standard	16-30*	5	15-20	0.7-1sec	4-7kPa	>95%	Asthma	To move chest	5	12-20	1sec	6-10kPa	>90%	ARDS	To move chest	5-15	15-25	1sec	6-10kPa	>85%	Troubleshoot problems on ventilator- DOPES <ul style="list-style-type: none"> • Displaced ETT-check ETCO₂ and exact length of tube • Obstuction- suction ETT and check passes to end of ETT • Pneumothorax-clinical examination- can be difficult to exclude if chest hyper-expanded due to air trapping • Equipment- check ventilator settings including O₂ • Stomach- Ensure decompressed with nasogastric tube
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C	CIRCULATION: GOOD INTRAVENOUS ACCESS IS A PRIORITY! <ul style="list-style-type: none"> • At least 2 well secured peripheral lines (external jugular vein useful) • Intraosseous needle if delay in obtaining IV access and shocked • Central venous line (CVL) if inotropes or likely to need them • Arterial line if on inotropes (NOT initial priority, AVOID brachial) • If child shocked, ongoing resuscitation whilst awaiting STRS team • Fluid resuscitation: titrate to heart rate, blood pressure, CVP if available • 1st line inotrope: dopamine 5 micrograms/kg/minute (can be started peripherally) • All inotropes can be commenced via IO, CVL, or external jugular line • Liaise with STRS regarding further escalation/ management • SHOCKED NEONATE ?consider Dinoprostone (care with prescription) • Consider cardiogenic shock (gallop, hepatomegaly, cardiomegaly) 	Ventilation for CVS support: DO NOT delay awaiting STRS arrival <ul style="list-style-type: none"> • Grunting - needs respiratory support • Anticipate CVS instability on induction • Commence dopamine and give volume • Avoid propofol if CVS instability • Oncology-related Sepsis: <ul style="list-style-type: none"> - Early aggressive fluid resuscitation - Consider line sepsis as source - If vasodilated consider noradrenaline 																												
D	DISABILITY <ul style="list-style-type: none"> • Ensure adequate sedation if intubated and ventilated • If neuroprotection required- see separate guideline • Trauma patients: ensure C-spine immobilization (current APLS guidance), complete secondary survey and imaging 	Documentation <ul style="list-style-type: none"> • Referral letter, copy of notes, results and drug charts. Safeguarding documentation. • PACS link X-rays/CT to receiving hospital Parents <ul style="list-style-type: none"> • Keep as informed as possible • Not to leave DGH before STRS arrival • One parent & small bag can usually travel in ambulance 																												
E	EXPOSURE <ul style="list-style-type: none"> • Monitor temp, aim for normothermia (36-37°C) unless cooling indicated • Special attention to temperature control required in neonates/ infants 																													
F	FLUIDS <ul style="list-style-type: none"> • Monitor blood glucose: neonates/liver /metabolic disease need glucose • Maintenance fluid not immediate priority (MAX 2mls/kg/hr) 0.9% sodium chloride and 5% glucose (0.9% sodium chloride and 10% glucose if hypoglycaemic) • Consider urinary catheter (monitoring / possible retention) 	Resources- STRS App and website <ul style="list-style-type: none"> • Guidance on age/weight appropriate equipment • Calculate infusions and drugs on emergency drug calculator then print 																												