North Thames Paediatric Network
Connecting paediatric services

East of England Paediatric Critical Care Operational Delivery Network

Appendix 7

Observations , Cares, Feeding and Sedation recommendations

All children requiring CPAP should be nursed in a critical care bed with access to full cardiovascular monitoring and close nursing observation.

<table>
<tr><th colspan="2">Continuous</th></tr>
<tr><td colspan="2">

- ECG
- Saturation
- Naso-gastric/ Oro-gastric tube on free drainage (unless stable enough for feeds -see below)

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<tr><th colspan="2">Hourly</th></tr>
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Clinical Observations:

- Respiratory rate
- Work of breathing
- Heart rate
- Oxygen saturations
- Capillary refill time
- AVPU
- CEW/PEWS score
- Strict fluid balance
- Parental or nursing concern
- Pain / comfort score
- Visual inspection of interface – adequate seal, free from secretions, skin integrity

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Equipment checks:

- PEEP
- Flow L/min
- FiO2%
- Humidifier temp check
- Humidifier water check
- Check CPAP tubing for water tracking up towards patient

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<tr><th colspan="2">4 hourly</th></tr>
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- Blood pressure
- Temperature (unless pyrexial or hypo-thermic then as clinically indicated)

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- Cluster cares
- Aspiration of NG/OG – to reduce risk of tummy distension due to air and to check absorption if feeding

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<tr><th colspan="2">4 – 6 hourly / patient specific</th></tr>
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- Sats probe position change (2 hourly for neonates)
- Change patient position
- Nose & mouth care
- Check nappy (change as required)
- Consider cuddles with parent if clinically stable

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- Prong checks, right position & not squashing the nose (clean and not blocked). Any evidence of skin break down complete risk assessment and initiate management, consider alternative interface if available.
- Eye checks (visible & not exposed to airflow).

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Blood Gases

Perform blood gas analysis - One hour post initiation of CPAP. Thereafter as the patient's condition dictates.

NOTE: Blood gases should not replace visual observation of the patient or undermine clinical judgement. Capillary blood gas can be considered in patients show signs of severe worsening respiratory distress, supplemental FIO2 of >60% or suspected impending respiratory failure (NICE 2019)

Feeding the infant on CPAP

Consider the use of a soother (dummy) to promote a closed circuit and improve PEEP, gain consent from family. For any child, in agreement with senior clinician and family, 'dummy dips' with milk may help settle. Support breast-feeding mums with expressing and milk storage facilities on site.

Stable / improving	Unstable / increasing acuity
NBM for 4-6 hours post stabilisation on CPAP Then if: RR consistently <60 Fi02 < 40% No red flags Consider starting continuous feeds see below	Patient should not be considered for feeds, NGT/OGT should remain on free drainage. Monitor blood glucose
Starting feeds:	
Ensure - Senior clinician in agreement Ensure family aware of plan	Maintain strict fluid balance Fluid allowance agreed
Watch for:	
Respiratory deterioration associated with feeding Abdominal splinting Abdominal distention Tolerance of feeds	

Sedation of the infant on acute CPAP

Some children may struggle to settle on CPAP, consider all of the following strategies to assist. The use of a validated comfort / pain assessment tool may assist in indicating when/when not to consider sedation.

The irritable / unsettled / agitated child may be displaying symptoms of hypoxia / hypercapnia. Ensure this child is assessed appropriately and both hypoxia and hypercapnia have been addressed as causative.

Non-medical interventions	Pharmacological sedation
• Swaddling • Non-nutritive suck • 'dummy dips' • Containment holding / cuddles • Pain score and analgesia if indicated • Consider if child is hungry and meets criteria for enteral feeding • Involve play team as appropriate to support with distraction • Check all pressure areas (all hard surfaces eg ECG leads, interfaces, cannulas etc.)	As **a last resort** a dose of chloral hydrate may be considered. On **every occasion** there **MUST** be discussion and agreement with the **paediatric consultant**, including out of hours Refer to the BNFc for dosage and indications; however, the lowest dose should always be given due to the ongoing risks of respiratory depression. The child should be fully monitored and closely observed for any adverse effects.