NORTH EAST NORTH CUMBRIA REGIONAL PATHWAY – BRONCHIOLITIS IN INFANTS

Oxygen Therapy

- Ideally oxygen delivered should be humidified
  - Face mask oxygen via venturi device to titrate
  - Low flow oxygen via nasal cannulae
  - Headbox
- 1:6 nursing ratio is acceptable

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Humidified
High
Flow
Nasal
Cannula
Oxygen
Therapy

- Age specific nasal cannulae(RCPCH guidance – Appendix2)
- <10Kg 2L/kg/min >10kg (20 + 0.5L/kg/min)
- FiO_2 titrated to SpO_2 92-98%
- Orogastric tube in situ
- 1:4 nursing ratio is acceptable
- Assess for response with clinical review at 15-30min
  - Expect ↓RR and WOB
- If SpO_2 <92% and FiO_2>0.4 persistently
  - Consider escalation of respiratory support
  - **High risk group - <3months old / ex-Prem / Congenital Heart Disease – early NECTAR referral**

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Consider if available

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Continuous
Positive
Airway
Pressure

- Usual CPAP via nasal mask or nasal prong interface
- Bi-level support maybe used in a Level 2 or 3 PCC unit
- 6-8cm H_2O pressure
- 1:2 nursing ratio recommended
- Regular medical bedside reviews
- Sedation to facilitate tolerance of CPAP only in a Level 2 Critical Care unit with appropriate level of monitoring
- If SpO_2 <92% and FiO_2>0.4 persistently
  - Consider escalation of respiratory support
  - **High risk group - <3months old / ex-Prem / Congenital Heart Disease – early NECTAR referral**

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General Management

- Observations
  - PEWS chart – consider ECG monitoring
  - Record RR, recessions, grunting, apnoeas
- Airway & Breathing
  - Gentle secretion clearance as indicated and if safe
  - Consider chest physiotherapy
  - Consider prone positioning (with appropriate level monitoring)
- Feeding and hydration
  - Small frequent oral feeds/NG feeds (medium risk)
  - Nil enteral/ ⅔ restricted IV fluids (high risk)
- CoVID
  - Isolate (esp CEV group) in cubicles – prioritise result
  - Senior decision maker for HHFNC/CPAP commencement
  - Follow local PPE policy

Call NECTAR early
01912826699

nectar
NORTH EAST CHILDREN'S TRANSPORT AND RETRIEVAL

Invasive Ventilation

INTUBATION & VENTILATION

Call NECTAR for advice

Clinical decision usually
- Critically ill infant
- Impending exhaustion
- Hypoxia despite oxygen therapy
- Frequent apnoeas

Escalation of respiratory support due to progression of illness

Inadequate response to previous clinical interventions

PREPARE TO INTUBATE/VENTILATE

- ☐ Consultant level input recommended
- ☐ Assemble local stabilisation team
  - Paediatrician
  - Anaesthetics/Critical Care
  - Experienced paediatric nurses
- ☐ Move safely to resuscitation area
- ☐ Use anaesthetic T-piece to maintain adequate gas exchange during preparation

SUGGEST
- ☐ NECTAR intubation checklist
- ☐ Ketamine + Atracurium/Rocuronium or gas induction of anaesthesia
  - Oral ETT
  - Micro cuff is preferable
  - Don't cut ETT short
- ☐ Pressure controlled ventilation
  - Aim PIP<30 PEEP 4-6 RR25-35 I:E 1:2 aim TV 5-8ml/kg
- ☐ Address CVS instability
- ☐ Sedate with Morphine & Midazolam +/-muscle relaxant
- ☐ Gastric tube on free drainage

Special Groups

Ex-Premature infants on home O_2 for Chronic Lung Disease
- High O_2 requirement
- Chronic CO_2 retention with metabolic compensation

Infants with neuro-muscular disease
- Risk of masked respiratory failure

Infants with Congenital Heart Disease
- Look for **E**mergency **H**ealth **C**are **P**lan
- Early discussion with NECTAR and Cardiology team with call conferencing
- **Cyanotic Heart disease** - expect and tolerate lower SpO_2 as appropriate for underlying condition

CoVID-19
- **Consider awaiting CoVID swab result prior to commencing HHFNC O2**
- **Follow local PPE guidance for suspected/confirmed CoVID patients**
- **Do not delay non-invasive or invasive respiratory support if clinically indicated**
- **Discuss with NECTAR early for decision support**