VENTILATION: HIGH-FLOW NASAL CANNULAE (HFNC) ● 1/1

DEFINITION
Delivery of humidified, heated and blended oxygen/air at flow rates between 1–8 L/min via nasal cannulae

INDICATIONS
- Treating or preventing apnoea of prematurity
- Respiratory support for babies with:
  - respiratory distress syndrome – first line or post-extubation
  - chronic lung disease
  - meconium aspiration
  - pulmonary oedema
  - pulmonary hypoplasia
  - pneumonia
- Babies slow to wean off nasal CPAP
- Babies with nasal trauma from nasal CPAP

SETTING AND FLOW RATE
- Set operating temperature at 36–38°C
- Start at flow rate of 4–6 L/min (flow rates <6 L/min in babies <2 kg)
- Use ≤8 L/min in babies ≥2 kg
- **Ensure that air can exit freely around the prongs**

MONITORING
Continuously
- Heart rate (including ECG)
- Respiratory rate
- SpO_2
- **NOTE**: Monitor blood gases if on supplemental oxygen or on clinically indicated

WEANING FLOW RATES
(This weaning mainly applies to babies born <34 weeks' gestation, as some babies born ≥34 weeks may come off high flow without need for weaning)

FiO_2 >0.3	May not be possible to wean flow rate
FiO_2 <0.25 in baby ≥1.0 kg	Attempt to reduce by 1.0 L/min 24-hrly
FiO_2 <0.25 in baby <1.0 kg	Attempt to reduce by 1.0 L/min 48-hrly
FiO_2 0.25–0.3	Attempt to reduce by 1.0 L/min 48-hrly
Requiring <4.0 L/min	• If baby in air, attempt to stop (baby in air does not require nasal prong oxygen) • If baby in oxygen, put in 0.2 L/min of nasal prong oxygen initially
• Clinical instability • Increased work of breathing • Significant increase in FiO_2	Escalate treatment Consider pneumothorax (rare)

CONTRAINDICATIONS
- Upper airway abnormalities
- Ventilatory failure
- Severe cardiovascular instability
- Frequent apnoeas (despite caffeine in preterms)