

Care of the Infant on CPAP

What is CPAP?

- Continuous Positive Airway Pressure, provides a PEEP (Positive End Expiratory Pressure to):
- Increase the FRC by exceeding the closing capacity of the lungs,
- Stabilise and prevent the collapse of alveoli.
- Provide a splint to the chest wall and airway, increasing lung volumes, recruiting alveoli, and preventing further damage or collapse

When to use

- Significant signs of respiratory distress
- Pulmonary oedema
- Non Invasive support prior to intubation
- Post extubation
- Tracheo-malacia or other abnormality of the lower airways.
- Transient Tachypnoea of the Newborn (TTN)

When not to use

- Known pneumothorax
- Facial and nasal abnormalities e.g. bilateral choanal atresia, cleft palate, tracheoesophageal atresia.
- Diaphragmatic hernia.
- Unrepaired gastroschisis.
- Consider -larger babies often do not tolerate application of CPAP devices well, resulting in restlessness and labile oxygen requirement

Equipment

- Check **humidity** chamber is filled to correct level, self feeding bag has sufficient fluid and all probes are securely fitted
- Before use, perform safety checks as outlined by manufacturer (eg, alarms and pressure dump are working)
- Set flow rate to achieve desired PEEP (usually no more than 2l/m above PEEP (cm))

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Hat

- Measure head circumference as per manufacturers guidelines
- Ensure the hat is pulled down over the ears and nape of the neck and is resting on the eyebrows
- Remove hat and headgear daily to assess skin integrity and pressure areas
- Ensure ears are flat, check and clean behind ears daily
- Measure HC and change hat at least weekly

Prongs & Mask

- Use the manufacturers size guide to measure for prongs/mask
- Prongs should completely fill nostrils without stretching or compromising skin integrity of nares or septum
- If using a mask ensure it is not pressing on the end of the nose, occluding the nares (too small) or pressing on the orbits (too big)
- Every hour, gently release the mask or prongs to relieve any skin pressure
- Alternate between prongs and mask 3-6 hourly, even if only tolerated for a short period
- Discard and replace any soiled prongs or masks

Care

- Insert OGT (*not* NGT) and aspirate regularly to relieve abdomen
- Ensure tubing is not pulling or underneath baby
- Provide supportive positioning
- Assess skin integrity and pressure areas
- Monitor for pain and discomfort

Observe and Record

- Flow, FIO₂, PEEP and humidity temp hourly
- Changes in respiratory effort, rate or FIO₂ and escalate
- HR, brady, desats and escalate any changes to NIC or medics
- BP once per shift if stable