Endotracheal Suctioning - NICU - Paediatric Summary Clinical Guideline

Reference no.: NIC RC 16/ Oct 17/v003

Equipment needed

- Wall suction and /or portable suction unit if available
- Suction tubing
- A selection of suction catheters in various sizes
- A selection of gloves in various sizes
- Bag and mask or Neopuff device
- Oxygen supply
- Tape measure
- Stethoscope

Indication

N.B. - Suctioning should be performed on an individual basis using clinical judgement and only when necessary (Day et al 2002).

Individual assessment of the infant should include:

- Physiological changes including saturation levels, heart rate, respiratory rate, blood pressure and colour changes.
- Changes in auscultation (breath sounds)
- Blood gas results, changes upon x-ray, changes in ventilation requirements, increased oxygen requirements.
- Changes in the infants behaviour including breathing pattern and agitation
- Previous history of suctioning and secretions including colour, consistency and amount. (ARRC 2010)

Guideline

- Only staff who have received adequate and appropriate training with regards to endotracheal suctioning and feel competent to do so should carry out the task (DOH 2004b, NMC 2008).

- Documentation should include

  - Evidence of assessment prior to suction.
  - Evidence that the assessment was acted upon and documented.
  - Infant response to suction and the secretions obtained.
  - E/T tube size and length documented and clearly visible.

- This is a clean procedure. Wash your hands prior to commencing and *preferably wear gloves*.

- The increasing of oxygen prior to the procedure should be based on the infant's response to care, handling and previous suctioning.

- *Aspiration of the stomach should NOT be carried out routinely* – consideration should be made as to when the last feed was given and what amount was given before making the decision to aspirate.

- The size of the catheter to be used can be selected by doubling the size of the E/T tube, for example:

    - Size 2.5 tube = FG5 catheter
    - Size 3.0 tube = FG6 catheter etc.

- You should use the smallest catheter possible that will allow effective suctioning.

- The catheter length should be measured so that the tip reaches no further than the end of the ET tube (Youngmee and Taesook 2003)

- The negative pressure should be between 60 – 75 mmHg (8-10kpa)

- Each catheter insertion should last no longer than 15 seconds.

- The baby should be allowed to recover between insertions.

- Where possible the procedure should be inline with positive developmental care and be carried out using 2 nurses – one to hold and comfort the infant (Ward-Larson C et al 2004)

- Under normal conditions, the first suctioning should take place only when necessary, no sooner that 3-4 hours following intubation and *should be avoided if Curosurf has been administered previously.*

- Sterile normal saline ***should not*** be routinely instilled during endotracheal suctioning – evidence based literature suggests that this is not effective (Gardner et al 2009). However, if on clinical grounds it is deemed necessary because thick tenacious secretions are thought to be causing obstruction, the amount of normal saline to use is 0.1 to 0.2ml/kg.

- Following E/T suctioning, oral pharyngeal suctioning should be carried out gently as required.

- Suction tubing should be changed every 24hrs ***if it has been*** used and the change documented on the observation chart.