EFFECTIVE MAY 2020

Guideline for INSURE method for Surfactant Delivery
(INtubation SURfactant rapid Extubation)

- Early rescue strategy following nCPAP failure may help avoid potential for respiratory insufficiency and need for subsequent mechanical ventilation.
- Potential extubation within 5-10 minutes (dependent on patient tolerance and at discretion of clinician)
- Rapid extubation after surfactant administration may not always be possible and care should be individualized

Indications

- >=32 weeks and >= 1500g
- Mild-moderate RDS
- Ideally received full course of antenatal corticosteroids
- Early intervention (requiring FiO2 <30% and 7 CPAP)

Method

- Options for analgesia:
  - Fentanyl 1-2 mcg/kg x1 (lowest dose recommended with repeat dosing if needed). This is the preferred option due to its rapid onset and shorter duration of action.
  - MSO4 0.05-0.1 mg/kg x1 (lowest dose recommended). If you choose this option please be aware that it may take longer for the infant to experience sufficient analgesia.

    Option for sedation: Among infants >33 weeks, the addition of Midazolam 0.1 mg/kg x1 may be considered.

- Intubate with appropriate size ETT and secure to proper depth (estimated at 6+weight in kg)

  - Confirm placement with auscultation of equal bilateral breath sounds and +EtCO2 color change.

- Trim ETT with sterile scissors and replace with inline suction adapter and catheter. Confirm depth of catheter for suctioning and administration of surfactant.

- Continue to provide manual PPV as needed
    - PPV may by delivered via ambu bag or Neopuff, T-Piece Resuscitator.
- Suction via ETT as needed before administration of surfactant.
- Swap out suction catheter for MAC and advance to set depth. Keeping patient supine and flat, administer surfactant in 1 aliquot over 1 minute carefully providing manual PPV throughout.
    - Patient may require increased PIP, rate, and fio2 during this procedure.
    - Vital signs, chest rise, compliance, and resistance must be monitored closely for adverse effects.
- Withdraw catheter and continue PPV
- When patient has recovered from administration (vital signs stable, fio2 weaned), CPAP equipment may be placed back on patient and CPAP resumed. Have CPAP on patient and running prior to extubation to maintain FRC.
- Monitor for improvement in FiO2 and WOB