

## **PROTOCOLS FOR RESPIRATORY DISTRESS IN NEWBORN**

**RESPIRATORY DISTRESS:** Presence of tachypnoea (RR>60/min), Retractions, Nasal flaring, Expiratory Grunt, Decreased air entry on auscultation.

### **INDICATIONS OF CPAP**

- 1) Initial stabilization in the delivery room for spontaneously breathing, preterm infants with respiratory distress
- 2) Continued respiratory support to a preterm infant with RDS and good respiratory efforts (to prevent atelectasis)
- 3) Respiratory distress (Silverman Anderson score/ Downe's score $\geq$ 4)
- 4) FiO<sub>2</sub> above 0.30
- 5) In general, infants with RDS who require FiO<sub>2</sub> above 0.35 to 0.40 on CPAP should be intubated, given surfactant replacement therapy, and extubated back to CPAP.
- 6) PostExtubation in very low-birth-weight (VLBW) infants
- 7) HFNC is likely equivalent to CPAP in postextubation stabilization

### **FAILURE OF CPAP**

Worsening respiratory distress, as indicated by SA scoring and/ or hypoxemia (PaO<sub>2</sub>< 50 mmHg)/ hypercarbia (PaCO<sub>2</sub>> 60mmHg) despite CPAP Pressure of 7-8 cm of H<sub>2</sub>O and FiO<sub>2</sub> of 0.5-0.6

### **INDICATIONS FOR MECHANICAL VENTILATION**

- 1) "Increased work of breathing" in an infant on CPAP with signs of moderate-to-severe respiratory distress.
- 2) High CO<sub>2</sub> (>65) and need for high FiO<sub>2</sub> (>50%) while on CPAP.
- 3) Frequent apnea unresponsive to methyl xanthine therapy.

### **INDICATIONS FOR HIGH FREQUENCY OSCILLATORY VENTILATION:**

- 1) HFO may be initiated if conventional ventilation fails to maintain adequate gas exchange at acceptable settings.
- 2) Consider the use of HFV when the MAP required for adequate gas exchange exceeds 10 to 11 cm H<sub>2</sub>O in small infants, and 12 cm H<sub>2</sub>O in larger infants and FiO<sub>2</sub>> 0.7-0.8 or if air leak occurs.

**PROTOCOL FOR SURFACTANT REPLACEMENT THERAPY IN NEWBORNS**

