► Continuous Positive Airway Pressure (CPAP)

The purpose of CPAP is to improve ventilation and oxygenation and avoid intubation in patients with congestive heart failure (CHF) with acute pulmonary edema or other causes of severe respiratory distress.

» Indications

Patients 14 years and older in severe respiratory distress who are:

- Awake and able to follow commands
- Able to maintain a patent airway
- Exhibit two or more of the following:
  - Respiratory rate > 25
  - Pulse oximetry < 94%
  - Use of accessory muscles during respiration

Conditions in which CPAP may be helpful include suspected:

- CHF with pulmonary edema
- Acute exacerbation of COPD or asthma
- Pneumonia
- Near drowning

» Absolute Contraindications: (Do NOT Use)

- Respiratory or cardiac arrest or agonal respirations
- Tracheostomy
- Signs and symptoms of pneumothorax
- Major facial, head or chest trauma
- Vomiting

» Procedure

1. Place patient in a seated position
2. Monitor ECG, Vital signs (BP, HR, RR, SPO2)
3. Set up the CPAP system (per manufacturers recommendation) with pressure set at 7.5 cm H_2O
4. Explain to the patient what you will be doing
5. Apply mask while reassuring patient – encourage patient to breathe normally (may have a tendency to hyperventilate)
6. Reevaluate the patient every 5 minutes – normally the patient will improve in the first 5 minutes with CPAP as evidenced by:
   - Decreased heart rate
   - Decreased respiratory rate
   - Decreased blood pressure
   - Increased SPO2

BVM ventilation or endotracheal intubation may be considered, when indicated, if the patient fails to show improvement.