Continuous Positive Airway Pressure (CPAP) Administration

For use of this protocol, patients must meet one or more of the indications. Contraindicated patients and those that do not meet the inclusion criteria will be treated according to existing protocols without the application of CPAP.

Indications:
Severe respiratory distress not responding to initial treatment with any of the following:

1. CHF/Pulmonary edema/near drowning
2. Hypoxia, i.e., SpO2 less than 92% on supplemental oxygen.
3. Acute exacerbation of asthma/COPD.

Contraindications:

1. Respiratory/cardiac arrest.
2. Blood Pressure
    a. Adult (≥10 years of age) less than 90mmHg systolic
        i. NOTE: 70 + (2x10 years of age) = 90 mmHg
    b. Pediatrics (<10 years of age) less than (70 mmHg + [2x age in years]).
        i. Small adult CPAP mask does not properly fit the patient and/or pediatric size CPAP mask is not available.
3. Inability to maintain patent airway.
4. Major trauma, pneumothorax, penetrating or blunt chest trauma and blast injury.
5. Vomiting or active GI bleeding with emesis.
6. Unstable facial fractures.

Procedure

1. EXPLAIN THE PROCEDURE TO THE PATIENT.
2. Apply appropriately sized and properly sealing CPAP mask per manufacturer's recommendations.
3. Place the patient on continuous pulse oximetry.
4. Secure the mask with provided straps and tighten to obtain a good seal, check for air leaks.
5. Continue to coach the patient to keep the mask in place, readjust as needed.
6. Begin with 5 cmH20 with titration as necessary and as tolerated.
7. Advise medical control of CPAP use during radio report.
8. If respiratory status deteriorates, remove the device and assist ventilations with a BVM/supplemental oxygen; place an appropriate airway control device.
9. Obtain/monitor vital signs.
10. Administer medications, per appropriate protocol, as indicated**.**
    a. The CPAP mask can be briefly removed for oral or SL medication (e.g., nitroglycerin) administration.
11. Contact medical control and consider sedation to reduce anxiety per **Patient Procedural Sedation- Procedure Protocol.**

Discontinuing CPAP Therapy

1. CPAP therapy needs to be continuous and should not be stopped without Medical Control contact unless:
    a. Patient cannot tolerate the mask.
    b. Patient has marked deterioration including respiratory arrest.
    c. Patient has decreasing LOC.
    d. Pat has or is at risk for vomiting.
    e. It is determined to be clinically detrimental.
2. Assist ventilations as necessary and contact Medical Control regarding the discontinuation of CPAP therapy.

Special Notes:

1. For patients with a decreased level of consciousness, continuously closely monitor patient while on CPAP.
2. Upon arrival at receiving facility, do not remove CPAP until hospital therapy is ready to be placed on the patient.
3. Watch the patient for gastric distention.
4. CPAP may be used on DNR patients not in arrest.
5. Due to changes in cardiac preload and afterload during CPAP therapy, a complete set of VS must be obtained every 10 minutes (5 minutes in short transport situations).