

INDICATIONS:

For **consideration** (for patients <8) in **moderate to severe** respiratory distress secondary to:

- CHF/Acute Pulmonary Edema
- asthma/reactive airway disease,
- near drowning,
- COPD,
- acute pulmonary edema (cardiogenic and non cardiogenic),
- pneumonia who present with *any* of the following:
 - Pulse oximetry < 88% not improving with standard therapy
 - ETCO₂ > 50mmHg
 - Accessory muscle use / retractions
 - Respiratory rate > 25
 - Wheezes, rales, rhonchi
 - Signs of respiratory fatigue or failure

POTENTIAL ADVERSE EFFECTS:

- Hypotension
- Risk of pneumothorax
- Gastric Distention, and vomiting
- Risk of corneal drying

CONTRAINDICATIONS:▪ **Physiologic**

- Unconscious, Unresponsive, or inability to protect airway.
- Inability to sit up
- Respiratory arrest or agonal respirations (Consider Intubation)
- Persistent nausea/vomiting
- Hypotension- Systolic Blood Pressure less than 90 mmHg
- Inability to obtain a good mask seal

▪ **Pathologic**

- Suspected Pneumothorax
- Shock associated with cardiac insufficiency
- Penetrating chest trauma
- Facial anomalies /trauma/burns
- Closed Head Injury
- Has active upper GI bleeding or history of recent gastric surgery (2 WEEKS)
- Vomiting

PRECAUTIONS:

- History of Pulmonary Fibrosis
- Claustrophobia
- Has failed at past attempts at noninvasive ventilation
- Complains of nausea or vomiting
- Has excessive secretions
- Has a facial deformity that prevents the use of CPAP

1. Assess the patient, treat ABC problems, obtain baseline vitals and establish a transport plan based on general impression. Obtain medical history.
2. Administer High flow oxygen, do risk vs benefit assessment. Evaluate for need for intubation instead of CPAP.
3. **Assess for inclusion and exclusion criteria. Medical Control Required if BP less than 90 systolic.**
4. Initiate other therapies as indicated.
5. Describe procedure to patient and obtain consent, if possible. Use coaching to calm the patient during application.

The Idaho EMS Bureau has taken extreme caution to ensure all information is accurate and in accordance with professional standards in effect at the time of publication. This guideline is for reference and may be modified at the discretion of the EMS Agency Medical Director. It is recommended that care be based on the patient's clinical presentation and on agency-specific authorized policies and protocols.

ADULT

6. Assemble CPAP device, assure there is enough oxygen to power the device.
7. Administer CPAP:
 - Initial setting at 0-2 cmH₂O, **MAX: 5 10 cmH₂O (5 cmH₂O for COPD/Asthma/non-CH causes)**
 - Coaching will be required to reduce anxiety.
 - If coaching is unsuccessful, then consider low dose sedation. (Contact medical control or local protocol)
8. Consider placing Gastric Tube
9. Critical Reassessments
 - V/S and reassessments every 5 minutes or sooner as needed.
 - Evaluate for complications every 5 minutes.
10. Discontinuing CPAP. CPAP therapy needs to be continuous and **should not** be removed unless the patient:
 - cannot tolerate the mask, success of tolerance to the treatment increased with proper coaching by EMS crew
 - requires suctioning or airway intervention,
 - experiences continued or worsening respiratory failure,
 - Develops severe hypotension
 - A pneumothorax is suspected.
 - Intermittent positive pressure ventilation and/or intubation should be *considered* if patient is removed from CPAP therapy.
8. Record time of administration, dose, complications (if any), and patient response.
10. Transport or arrange for appropriate prompt transport and perform ongoing assessment en route. Assist ventilations, intubate, or begin CPR, or initiate other treatment protocols as needed.
11. Notify receiving hospital of need for CPAP at bedside.
12. Complete required documentation.

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