

I) PURPOSE:

- A. The purpose of this policy is to define the indication and procedures required for the use of Continuous Positive Airway Pressure (CPAP) by paramedics.

II) INDICATIONS:

- A. The purpose of CPAP is to improve ventilation and oxygenation in an effort to avoid intubation in patients who present with congestive heart failure (CHF) with acute pulmonary edema or other causes of severe respiratory distress.
- B. CPAP is authorized for use in patients who are 14 years of age and older with any one of the following:
- 1) Awake, alert and able to follow commands.
 - 2) Able to maintain a patent airway.
 - 3) Exhibit two or more of the following:
 - (a) Respiratory rate > 24
 - (b) Pulse Oximetry < 94%
 - (c) Use of accessory muscles during respiration
- C. Conditions in which CPAP may be helpful include suspected:
- 1) Congestive Heart Failure (CHF) with acute pulmonary edema.
 - 2) Acute exacerbation of COPD or asthma.
 - 3) Near drowning/submersion
 - 4) Other causes of severe respiratory distress, excluding trauma

III) CONTRAINDICATIONS:

A) Absolute Contraindications (Do Not Use):

- 1) Respiratory or cardiac arrest
- 2) Agonal/failing respirations
- 3) Inability to maintain airway
- 4) Altered Mental Status - can't cooperate
- 5) Systolic blood pressure <90mmHg
- 6) Signs and symptoms of pneumothorax
- 7) Major facial, head or chest trauma
- 8) Facial abnormalities or inability to obtain a mask seal
- 9) Tracheostomy
- 10) Unconsciousness
- 11) Vomiting

MEDICAL PROCEDURES

CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP)

POLICY# 7900

- B) Relative Contraindications (Use Cautiously):
 - 1) Claustrophobia or unable to tolerate mask
 - IV) EQUIPMENT:
 - A) CPAP pressure generator and circuit set with ability to deliver 5.0 cm to 10 cm of H₂O pressure
 - B) Appropriate sized face mask and straps
 - C) Inline nebulizer if required for bronchodilator administration
 - D) Sufficient oxygen supply
 - V) PROCEDURE:
 - A) Place patient in a seated position.
 - B) Monitor ECG, Vital Signs (BP, HR, RR, SpO₂)
 - C) Monitor vital signs every five (5) minutes; SpO₂ must be used continuously to monitor patients oxygen saturation
 - D) Set up the CPAP system (per manufacturers recommendation) with pressure set at 5-10 cm H₂O (Pulmodyne® O2-RESQ™, Boussignac and WhisperFlow)
 - E) Explain to the patient what you will be doing
 - F) Verify that oxygen is flowing to the mask. Apply mask while reassuring patient – encourage patient to breathe normally (may have a tendency to become anxious or panic – reassure and coach)
 - G) Do not exceed 10 cm of H₂O pressure
 - H) Reevaluate the patient – normally the patient will improve in the first 5 minutes with CPAP as evidenced by:
 - 1) Decreased heart rate
 - 2) Decreased respiratory rate
 - 3) Decreased blood pressure
 - 4) Increased SpO₂
 - I) If the patient does not improve or becomes worse with CPAP, remove the CPAP device and assist ventilations with BVM as needed
 - J) Notify the receiving facility of the type of CPAP device that is being used
-

APPROVAL



Bruce E. Haynes, M.D.
EMS Medical Director