



**REGION 11
CHICAGO EMS SYSTEM
PROCEDURE**

Title: Continuous Positive Airway Pressure (CPAP)

Section: Airway Management

Approved: EMS Medical Directors Consortium

Effective: March 6, 2025

CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP) - ALS

INDICATIONS

- Spontaneously breathing patients with moderate to severe respiratory distress from acute pulmonary edema, congestive heart failure (CHF), chronic obstructed pulmonary disease (COPD), or asthma

CONTRAINDICATIONS

- Respiratory failure
- Unconscious
- Cardiogenic shock
- Pneumothorax
- Significant vomiting
- Facial trauma that prevents a good seal

EQUIPMENT

- Flow Safe II EZ CPAP Adult mask
- Oxygen tank and regulator able to generate 25 liters per minute (LPM) flow rate

PROCEDURE:

1. Apply personal protective equipment: gloves.
2. Remove CPAP mask from packaging.
3. Connect tubing to adapter on oxygen regulator.
4. Turn on oxygen and dial flowmeter to desired setting: begin with 8-9 liters per minute equaling CPAP of 5.0.
5. Adjust oxygen flow as indicated on yellow sticker attached to oxygen tubing. ***(Manometer will not register until placed on patient.)***
6. Position patient in upright position
7. Explain procedure to patient (e.g. *"I am going to put this mask on your face to help you breath. Try to relax and breathe normally"*).
8. Place mask on patient's face obtaining a proper seal without leaks.
9. Adjust each of the four velcro straps to maintain seal.
10. Adjust spring action forehead pads to adjust mask on bridge of nose
11. Secure mask to face with head strap.
12. Titrate CPAP by increasing the flow meter to 13-14 LPM equaling CPAP of 10.0 (see table below).



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13. Reassess patient for mask seal and ability to cooperate and tolerate mask.
14. If patient is unable to tolerate, decrease flow rate to 10-12 LPM and reassess.
15. Reassess patient with goal of: decreased heart rate, decreased respiratory rate and effort, and improved oxygen saturation.

TABLE: CONNECT TO FLOW SOURCE ONLY

CPAP Pressure (cm H ₂ O)	Flow (LPM) Nebulizer Off	Flow (LPM) Nebulizer On
5.0	8 - 9	15 - 16
7.5	10 - 12	19 - 20
10.0	13 - 14	24 - 25
13.0 (Max)	FLUSH	28 - 30

CAUTION: CPAP pressure will decrease when nebulizer is activated and increase when nebulizer is deactivated. Verify CPAP pressure with manometer and adjust flow meter.

16. To use nebulizer, add medication to bowl.
17. Turn nebulizer switch on to the green indicator. (see picture)
18. Increase oxygen flow to maintain desired pressure per table.



19. Use quick release clips to discontinue CPAP device in the case of patient deterioration and use the Airway Management Protocol.