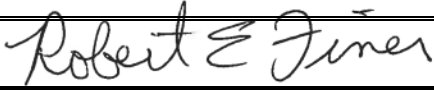
	STAFFORD COUNTY FIRE AND RESCUE DEPARTMENT INTERIM MEDICAL DIRECTIVE	
	NUMBER: 2022-004	DATE: March 8, 2022
	ISSUED BY: Robert E. Fines, MD, FACEP Operational Medical Director <div style="text-align: right; margin-top: 5px;">  </div>	
	SUBJECT: Continuous Pulmonary Airway Pressure (CPAP)	
SUPPLEMENT MEDICAL PROTOCOLS/PROCEDURES: Medical Protocols-Section II, Medical-Respiratory Distress/Asthma/COPD/Coup/Reactive Airway		

PURPOSE:

To provide supplement direction to the Rappahannock Emergency Medical Service (REMS) Medical-Respiratory Distress/Asthma/COPD/Coup/Reactive Airway Patient Care Protocol. This directive outlines the use of Continuous Pulmonary Airway Pressure (CPAP) for Stafford County EMS Clinicians.

DEFINITION:

CPAP is a noninvasive positive pressure ventilation device for patients with Asthma, Chronic Obstructive Pulmonary Disease (COPD) and Congestive Heart Failure (CHF). CPAP has drastically reduced the length of hospitalization stays and those who would have required intubation.

The department is switching to the Pulmodye GO-PAP CPAP Device. The GO-PAP is a disposable CPAP device, uses 10LPM of oxygen and delivers approximately 30% FiO₂, at 5, 7.5 or 10cm of PEEP. Its use is further explained under **GO-PAP INFORMATION** below.



INDICATIONS

- Adult Use Only
- CPAP should be applied for moderate to severe respiratory distress due to Asthma, COPD or CHF.
 - Asthma: Refractory to inhaled beta-agonists (MDI/NEB), shortness of breath with wheezing or decreased air entry, accessory muscle use and/or tripod positioning, cyanosis, mottled skin, nasal flaring, and retractions.
 - CHF: Rales/rhonchi, hypoxia, tachypnea, peripheral edema, jugular venous distention (JVD), ascites, orthopnea and/or frothy sputum.
 - COPD: Smoking history, pursed lip breathing, cyanosis/red face, dyspnea on exertion, chronic barrel chest.
- Moderate to severe respiratory distress.
 - Increased work of breathing: retractions, rate greater than 30, unable to speak in full sentences.
 - Abnormal lung sounds: bilateral rales (at least half-full), diffuse wheezes, diminished breath sounds.
 - Respiratory insufficiency: O₂ saturation less than 94% on 10 lpm, less than 90% on room air.

CONTRAINDICATIONS

- Inability to protect airway: decreased LOC, vomit/secretions, decreased cough/gag, unable to hold head up.
- Inadequate respiratory drive: cardiac/respiratory arrest, respiratory rate less than 10.
- Pneumothorax.
- SBP < 90 mmHg or MAP < 70 mm Hg

- Gastric distension.
- Inability to fit or tolerate mask.
- Respiratory distress related to allergic reaction

GO-PAP INFORMATION

The GO-PAP is supplied by a standard oxygen bared outlet at 10LPM and delivers approximately 90LPM at 30% FiO₂. With a full D size oxygen cylinder, you have approximately 40 minutes of run time with this device. **The GO-PAP does not connect to the 50 psi DISS Fitting on the portable oxygen cylinder.**



Headgear: The Go-PAP uses the same head gear as the O₂-Max CPAP previously used and includes the Omni Clip which allows you to adjust the mask in, out, up and down to fit the patient.

Adjustable PEEP Valve: 5, 7.5, or 10cm H₂O PEEP, is independent of the oxygen flow, do not have to adjust the oxygen to maintain PEEP levels.

Nebulization Inlet: GO-PAP offers an integrated nebulization inlet while maintaining a consistent flow to the patient. You can use the CPAP with or without a nebulizer.

The accompanied nebulizer has a port you can inject medications without detaching the nebulizer from the CPAP. All common nebulizers can be attached to this CPAP.

Neb-Connect: The Neb-Connect is an attachment that connects to the 50 psi DISS Fitting on the portable oxygen cylinder, and allows you to connect the nebulizer tubing to an oxygen source since the CPAP is already connected to the bared oxygen outlet. You simply open the white valve to flow oxygen to the nebulizer.



Neb-Connect™

For more information go to <https://www.pulmodyne.com/product/go-pap> or select QR Code.



PROCEDURE

- Connect and monitor end-tidal CO₂ cannula (sidestream capnography).
- Connect CPAP to bared oxygen source and select 10 LPM oxygen flow.
- Fit patient with CPAP mask, coaching techniques can assist in alleviating fear associated with placing a mask on a patient's face who is in respiratory distress. Allowing patient to hold mask in place prior to engaging headgear straps may assist.
- Start at a PEEP of 5 and titrate to 7.5 or 10.0 cm H₂O if needed, until signs of clinical improvement are observed.
- Evidence of clinical improvement includes:
 - Improved heart rate, respiratory rate, oxygen saturation and capnography.
 - Decreased work of breathing.
 - Patient reports improvement in dyspnea and/or you observe increase in verbal communication.

Closely monitor CPAP administration and immediately discontinue if the patient's status worsens to include:

- Can no longer protect their airway.
- Fails to maintain an adequate respiratory drive.
- Develops hypotension SBP < 90mm Hg.
- Unable to tolerate the CPAP despite reasonable efforts.

If no improvement, switch to BVM respiratory assistance.

Any interruptions in CPAP should be brief. If, for example, nitroglycerin therapy is indicated at least two providers should be present to efficiently coordinate mask removal, medication administration, and mask replacement. Consider applying Nitropaste during CPAP Use.

NOTES:

- CPAP application is a Standing Order for EMT, AEMT, EMT-I and EMT-P clinicians.
- Clinicians should administer CPAP immediately and not wait until the patient has been transferred to the transport unit.
- Critical patients can become dependent on CPAP and clinicians shall not withdraw CPAP without alternative therapies to sustained their condition.
- Notify ED early for appropriate transition to hospital staff.
- GO-PAP CPAP will be added to the oxygen or airway bag as we standardize the EMS Bags.
- GO-PAP CPAP will be added to FacilityDude and the Bound Tree EMS Online Ordering System.