

Base Hospital Contact: Required for respiratory failure, severe respiratory distress unresponsive or not amenable to CPAP.

1. Use appropriate PPE ❶
2. Assess airway and initiate basic and/or advanced airway maneuvers [prn \(MCG 1302\)](#) ❷ ❸
3. Maintain patient in position of comfort ❹
4. Administer **Oxygen** [prn \(MCG 1302\)](#)
High flow Oxygen 15 L/min for all patients with impending respiratory failure, suspected pneumothorax, inhalation injury, or carbon monoxide exposure
5. If patient with stridor or concern for airway obstruction, treat per [TP 1234, Airway Obstruction](#)
6. If pulmonary edema/CHF exacerbation suspected, treat per [TP 1214, Pulmonary Edema/CHF](#)
7. If anaphylaxis suspected, treat in conjunction with [TP 1219, Allergy](#)
8. Initiate CPAP for alert patients with moderate or severe respiratory distress and SBP \geq 90mmHg ❺
Hold CPAP for patients with suspected pneumothorax, upper airway edema/obstruction, or other contraindications [\(MCG 1315\)](#)
9. Capnography is encouraged for patients with moderate or severe respiratory distress [\(MCG1305\)](#) ❻
10. Initiate cardiac monitoring [prn \(MCG 1308\)](#)
Perform 12-lead ECG if cardiac ischemia suspected and treat in conjunction with [TP 1211, Cardiac Chest Pain](#)
11. Consider the following etiologies of respiratory distress without pulmonary edema:
Bronchospasm (asthma or COPD) – document Provider Impression as *Respiratory Distress / Bronchospasm*
Pneumonia – document Provider Impression as *Respiratory Distress / Other*
Pulmonary embolism – document Provider Impression as *Respiratory Distress / Other*
Spontaneous pneumothorax – document Provider Impression as *Respiratory Distress / Other*
12. For bronchospasm, COPD or asthma exacerbation:
Albuterol 5mg (6mL) via neb or 4 puffs via MDI ❼ ❽
May repeat x2 [prn](#) wheezing
May be administered in-line with CPAP for patients with moderate or severe respiratory distress
Document Provider Impression as *Respiratory Distress / Bronchospasm*

For deteriorating respiratory status despite albuterol:
Epinephrine (1mg/mL) administer 0.5mg (0.5mL) IM
Consider early in asthma exacerbation with poor perfusion or severe respiratory distress ❾
Unlikely to benefit patients with COPD exacerbation

13. Establish vascular access prn (*MCG 1375*)
14. For poor perfusion:
Normal Saline 1L IV rapid infusion
Reassess after each 250mL increment for evidence of volume overload (pulmonary edema); stop infusion if pulmonary edema develops

For persistent poor perfusion, treat in conjunction with *TP 1207, Shock/Hypotension*
15. If sepsis suspected, treat in conjunction with *TP 1204, Fever/Sepsis*
16. If overdose is suspected, treat in conjunction with *TP 1241, Overdose/Poisoning/Ingestion*
17. If inhalation injury suspected, treat in conjunction with *TP 1236, Inhalation Injury*
18. Perform needle thoracostomy for suspected tension pneumothorax (*MCG 1335*)

SPECIAL CONSIDERATIONS

- ① Consider wearing surgical mask when caring for patients with respiratory distress of unclear etiology, which may be infectious.
- ② Initiate BMV to assess patient response. Effective BMV may improve the patient's respiratory status enough to restore adequate spontaneous respirations. Place advanced airway placement if BMV is ineffective or consider placement once assessment for rapidly reversible causes is complete. Paramedics should use judgment based on patient characteristics, circumstances, and skill level when selecting the advanced airway modality.
- ③ If positive pressure ventilation is performed at any time, document Provider Impression as *Respiratory Arrest / Respiratory Failure*
- ④ Fowler's or Semi-Fowler's positioning is likely to be most comfortable for awake patients with respiratory distress.
- ⑤ Early use of CPAP has been shown to decrease ICU length of stay and risk of intubation for patients with severe respiratory distress. It should be strongly considered for patients in moderate-to-severe respiratory distress, based on assessment of work of breathing, regardless of SpO₂.

CPAP is appropriate for undifferentiated respiratory distress. It is the treatment of choice for patients with COPD exacerbation and may be used in conjunction with albuterol or if patient does not improve after initial albuterol.

Contraindications to CPAP include: ALOC with inability to follow commands or hold head up independently, active vomiting, facial trauma, or inability to protect airway.

- ⑥ Persistently high or increasing end-tidal CO₂ (EtCO₂) readings above normal with low respiratory rate indicate respiratory failure (bradypneic hypoventilation); low EtCO₂ readings with a low respiratory rate also may represent respiratory failure due to low tidal volumes (hypopneic hypoventilation); consider the need for assisted ventilations in these cases. In a patient with respiratory distress of unclear etiology, a "shark-fin" capnography waveform indicates likely Bronchospasm/COPD exacerbation. Gradually elevating EtCO₂ waveforms ("stacking") in a patient with BMV indicates excessive ventilation by the provider, resulting in inadequate exhalation; in this case, decrease ventilation rate significantly to avoid progression to cardiopulmonary arrest.
- ⑦ Wheezing may also be caused by pulmonary edema; reassess breath sounds frequently for patients without history of asthma or with other concerns for volume overload (edema, etc.), because as air entry improves with treatment, rales may be more easily heard. If pulmonary edema/CHF exacerbation suspected, treat per [TP 1214, Pulmonary Edema/CHF](#).
- ⑧ Administration of albuterol via a metered-dose inhaler (MDI) with spacer is considered equivalent to nebulized albuterol; a spacer is typically required for this route to be effective in novice users. MDIs are single use and should be left with the hospital staff upon handoff of the patient.
- ⑨ Epinephrine may be administered prior to albuterol as initial drug therapy in patients with Respiratory Failure due to bronchospasm.