Treatment Protocol: Respiratory Distress **Ref. No. 1237-P**

Base Hospital Contact: Required for respiratory failure, severe respiratory distress or hypoxia and for patients < 1 year old with moderate respiratory distress

1. Use appropriate PPE ❶
2. Assess airway and initiate basic and/or advanced airway maneuvers prn *(MCG 1302; 1309)* ❷❸❹
3. Maintain patient in position of comfort❺
4. Administer **Oxygen** prn *(MCG 1302)* ❷
   High flow Oxygen 15 L/min for all patients with impending respiratory failure, suspected pneumothorax, inhalation injury, or carbon monoxide exposure
   Use **Oxygen** with caution in patients with known congenital heart disease
5. If patient with stridor, obstruction or tracheostomy concerns, treat per *TP 1234-P, Airway Obstruction*
6. If anaphylaxis suspected, treat in conjunction with *TP 1219-P, Allergy*
7. Initiate cardiac monitoring prn *(MCG 1308)*
   For suspected dysrhythmia, perform 12-lead ECG and **CONTACT BASE**
   For patients with dysrhythmias, treat per *TP 1212-P, Cardiac Dysrhythmia - Bradycardia* or *TP 1213-P, Cardiac Dysrhythmia - Tachycardia* ❻
8. For bronchospasm, wheezing or asthma exacerbation:
   < 4 years of age: **Albuterol 2.5mg (3mL) via neb or 2 puffs via MDI** per *MCG 1309* ❼
   ≥ 4 years of age: **Albuterol 5mg (6mL) via neb or 4 puffs via MDI** per *MCG 1309* ❼❽
   May repeat x2 prn wheezing
   Document Provider Impression – *Respiratory Distress / Bronchospasm*
9. For deteriorating respiratory status despite albuterol:
   Epinephrine (1mg/mL) 0.01mg/kg IM, dose per *MCG 1309*
   Consider giving initially if wheezing with poor perfusion or severe respiratory distress ❾
   CONTACT BASE concurrent with **Epinephrine**
10. Establish vascular access prn *(MCG 1375)*
11. Initiate CPAP for alert patients with moderate or severe respiratory distress with length greater than the length-based resuscitation tape (e.g., Broselow Tape™)
    Hold CPAP for patients with hypotension, suspected pneumothorax, upper airway edema/obstruction, or other contraindications *(MCG 1315)* ❿
12. For poor perfusion *(MCG 1355)*:
    Normal Saline 20mL/kg IV rapid infusion per *MCG 1309*

For patients with persistent poor perfusion, treat in conjunction with *TP 1207-P, Shock/Hypotension*

13. Consider etiology ⓫
    For bronchospasm, wheezing, bronchiolitis, or asthma exacerbation document Provider Impression – *Respiratory Distress / Bronchospasm*
    For other and unknown causes of respiratory distress document Provider Impression – *Respiratory Distress / Other*

14. If sepsis suspected, treat in conjunction with *TP 1204-P, Fever/Sepsis*

15. If accidental or intentional overdose or toxic exposure is suspected, treat in conjunction with *TP 1241-P, Overdose/Poisoning/Ingestion*

16. If inhalation injury suspected, treat in conjunction with *TP 1236-P, Inhalation Injury*

17. Perform needle thoracostomy for suspected tension pneumothorax *(MCG 1335)*

SPECIAL CONSIDERATIONS

❶ Consider wearing surgical mask when caring for patients with respiratory distress of unclear etiology, which may be infectious.

❷ Patients with cyanotic congenital heart disease may be expected to have a measured SpO2 of 75-85%. Parents/caretakers may also know the patient's "normal" SpO2 range. It is important to ask caretakers and consider this possibility, as administration of Oxygen in these patients will worsen respiratory status.

❸ Bag-mask ventilation (BMV) with a viral filter is the preferred method of airway management for pediatric patients. 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 as authorized per *MCG 1302*; supraglottic airway (sizing per *MCG 1309*) is preferred unless contraindicated. Paramedics should use judgment based on patient characteristics, circumstances, and skill level when selecting the advanced airway modality for pediatric patients in whom multiple modalities are authorized.

❹ If positive pressure ventilation is performed at any time, document Provider Impression as *Respiratory Arrest / Respiratory Failure.*

❺ Fowler's or Semi-Fowler's positioning is likely to be most comfortable for awake patients with respiratory distress. Avoid agitating children with suspected partial foreign body obstruction and/or impending airway failure. Allow parents/caretakers to handle/facilitate patient if safe to do so.

❻ In pediatric patients with respiratory distress, bradycardia is likely to represent a pre-terminal event, ensure that oxygenation and ventilation is adequate; bradycardic dysrhythmia is persistent despite adequate oxygenation and ventilation before moving to *TP 1212-P, Cardiac Dysrhythmia – Bradycardia.* Respiratory rates vary by age and normal ranges can be found in *MCG 1309*.

❼ Consider blow-by to avoid agitation in pediatric patients if a mask cannot be tolerated (e.g., infants and toddlers).

❽ 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.

❾ Epinephrine may be administered prior to albuterol as initial drug therapy in patients with Respiratory Failure due to bronchospasm.

❿ While CPAP may be used in pediatric patients, current ALS equipment does not support use of CPAP in pediatric patients who are not longer than the length-based resuscitation tape (e.g., Broselow Tape™).

⓫ Etiologies of respiratory distress in pediatrics are varied; etiologies may include the following:
- Bronchospasm due to asthma, bronchiolitis, reactive airway disease or viral illness – document Provider Impression as *Respiratory Distress / Bronchospasm*

- Pneumonia or Upper Respiratory Illness – document Provider Impression as *Respiratory Distress / Other*
- Croup or Bacterial Tracheitis – document Provider Impression as *Airway Obstruction*
- Spontaneous pneumothorax – document Provider Impression as *Respiratory Distress / Other*
- Acute Chest Syndrome in patients with Sickle Cell Disease – document Provider Impression as *Chest Pain – Not Cardiac.* For patients with history of Sickle Cell Disease presenting with chest pain, respiratory distress, and hypoxia, treat in conjunction with *TP 1202-P, General Medical.*