



# Portage County EMS Patient Care Guidelines



## Asthma/ COPD

(Includes Reactive Airway Disease, Bronchospasm, Emphysema and Chronic Bronchitis)

**Note:**

- All hypoxic patients should be given enough oxygen therapy to reverse their hypoxia (SpO<sub>2</sub> < 94%), even if they have COPD, but all COPD patients must be closely monitored for signs of respiratory depression due to oxygen therapy. Look for: somnolence, lethargy, decreased rate or depth of breaths. If these appear, back off on the rate of flow and prepare to assist ventilations.
- Remember: *“All that wheezes is not asthma!”* Always consider the possibility of congestive heart failure in older adults with wheezing.
- The absence of wheezing may be indicative of extreme airflow obstruction.

<b>Priorities</b>	<b>Assessment Findings / History</b>
Chief Complaint	“Difficulty breathing”, “Shortness of breath”
LOPQRST	Determine location, onset, duration and progression, triggering events, response to treatment at home, and subjective severity
AS/PN	Chest pain (angina or pleuritic), fever/chills, cough/productive of what, recent changes in sputum color
AMPL	Exposure to a known allergen. History of asthma, emphysema, chronic bronchitis, COPD or previous bronchospasm. Current or past medications for these problems (e.g., albuterol, Atrovent, Advair, Prednisone, antibiotics). Compliance with these medications recently.
Initial Exam	Check ABC’s and correct immediately life threatening problems
Detailed Focused Exam	<b>Vital Signs:</b> BP, HR, RR, Temp, SpO <sub>2</sub> , ETCO <sub>2</sub> <b>General Appearance:</b> Tripod positioning, purse-lipped breathing? Severity of distress[1]? <b>Skin:</b> Cool, moist and pale? Warm, dry and flushed? Urticaria? Cyanosis? <b>Respiratory Effort:</b> Using accessory muscles, signs of fatigue; two-word sentences? <b>Lung Sounds:</b> Wheezes, rales, rhonchi or stridor? Decreased lung sounds? Prolonged expiratory phase? Absence of wheezing? <b>Heart Sounds:</b> Rate, regularity? <b>Lower Extremities:</b> Pitting edema? <b>Neuro:</b> ALOC, lethargy, somnolence?
Data	SpO <sub>2</sub> in all patients (continuous or re-checks every 5 minutes) Cardiac monitoring, 12-lead EKG; Capnography Blood glucose if DKA is suspected or ALOC is present

**EMERGENCY MEDICAL RESPONDER**

- Routine Medical Care
- Allow/assist the patient to assume a position of comfort (usually upright).
- Administer oxygen 2 – 4 LPM per nasal cannula if SpO<sub>2</sub> < 94%. Increase flow and consider non-rebreather mask to keep SpO<sub>2</sub> > 94%
- Assist with patient-prescribed albuterol metered dose inhaler

- Nebulizer therapy:
  - **Albuterol** unit dose (2.5 mg in 3 ml) administer per hand held nebulizer or mask; May repeat X 2 additional doses
  - May use premixed albuterol unit dose and administer per hand held nebulizer or mask
- Assisted ventilation: Consider assisting breathing with gentle synchronous ventilations with bag-valve mask (BVM); Support ventilation with BVM if apnea or hypoventilation occurs.
- Airway adjuncts
  - If there is loss of consciousness and loss of gag reflex, insert an oropharyngeal or nasopharyngeal airway
  - Consider a non-visualized airway in unconscious patients without a gag reflex

*Give a status report to the ambulance crew by radio ASAP.*

### EMERGENCY MEDICAL TECHNICIAN

- Assist with patient-prescribed medications
  - **Albuterol, ipratropium or Combivent®** MDI 2 Puffs
- Nebulizer therapy:
  - **Ipratropium** unit dose (0.5 mg in 2.5 ml) administer per hand held nebulizer or mask
  - May mix albuterol and ipratropium in same nebulizer or give them separately.
  - May use premixed albuterol/ ipratropium unit dose and administer per hand held nebulizer or mask
  - Do not repeat ipratropium alone or in combination without an order from Medical Control.
- Consider CPAP (See CPAP Procedure) for a patient that:
  - Is awake and able to follow commands
  - Is over 12 years old and is able to fit the CPAP mask
  - Has the ability to maintain an open airway
  - Exhibits two or more of the following:
    - Respiratory rate greater than 25 breaths per minute
    - SPO2 of less than 94% at any time
    - Use of accessory muscles during respirations

*Contact medical control for the following:*

- More doses of albuterol or ipratropium

*Give a status report to the ambulance crew ASAP*

### ADVANCED EMERGENCY MEDICAL TECHNICIAN

- IV normal saline @ KVO; If signs of dehydration or hypovolemia are present, administer 500 ml bolus, and then decrease to KVO.

*Contact medical control for the following:*

Additional fluid resuscitation appears to be needed

### INTERMEDIATE

- For severe asthma, consider **epinephrine 1:1,000** 0.3 – 0.5 mg (ml) IM[2],[3]
- Airway adjuncts:
  - If there is altered level of consciousness and loss of gag reflex, insert an oropharyngeal or nasopharyngeal airway or consider endotracheal intubation
  - In respiratory arrest or cardiopulmonary arrest, insert an endotracheal tube

*Contact medical control for the following:*

- Repeat IM epinephrine if the signs of severe distress continue after 20 minutes.

### PARAMEDIC

- For severe asthma or COPD, give **methylprednisolone** 125 mg IV[4]
- Consider RSI/RSA[5]

*Contact medical control for the following:*

- Additional doses of albuterol or ipratropium.
- Magnesium sulfate 2 gm IV piggyback (2 gm in 100 mL NS run over 20 minutes) for severe asthma[4]

### FOOTNOTES:

[1] Severity of Respiratory Distress:

- Mild = RR<20 + minimal additional breathing effort + speaking in complete sentences + minimal subjective distress, No ALOC
- Moderate = RR 20 to 25 + moderate additional breathing effort + difficult to complete a sentence + moderate subjective distress + No ALOC
- Severe = RR> 25 + marked additional breathing effort + 2 or 3 word sentences + marked subjective distress + possible ALOC

[2] IM or IV epinephrine is only indicated for most severe attacks deemed life-threatening and not responding to inhaled bronchodilators. Use extreme caution when administering. Cardiac monitoring is mandatory.

[3] Epinephrine 1:1,000 should NEVER be given IV or IO.

[4] IV/IO methylprednisolone is not compatible when administered concurrently with magnesium sulfate. Either initiate a second IV line or ensure the existing IV line is flushed completely.

[5] RSI/RSA requires 2 paramedics at the patient's side

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