



**Respiratory - Airway
BRONCHOSPASM
Practice Guideline**

Patient Care Goals:

1. Alleviate respiratory distress due to bronchospasm
2. Promptly identify and intervene for patients who require escalation of therapy
3. Deliver appropriate therapy by differentiating other causes of respiratory distress

Patient Presentation:
Inclusion Criteria
Respiratory distress with wheezing, decreased air entry, or no air entry presumed to be due to bronchospasm from asthma, obstructive lung disease, or reactive airway disease

RELATIVE Exclusion Criteria
Respiratory distress due to a presumed underlying cause that includes one of the following:

1. Anaphylaxis (may be used as adjunctive therapy)
2. Bronchiolitis (wheezing < 2 years of age)
3. Croup
4. Epiglottitis
5. Foreign body aspiration
6. Submersion/drowning (may be used as adjunctive therapy)
7. Congestive heart failure (may be used as adjunctive therapy)

Patient Management
Albuterol

- Pt weight 30 Kg or **GREATER**
5.0 mg / Ipratropium 1.0 mg nebulized
- Pt weight **LESS** than 30 Kg
2.5 mg / Ipratropium 0.5 mg nebulized
- May repeat to total of three doses

Magnesium

- Pt weight 40 Kg or **GREATER**
2g in 100mL IV/IO over 10 min
- Pt weight **LESS** than 40 Kg
50 mg/kg IV infusion over 10 minutes (in conjunction w/IVF bolus below)

Dexamethasone

- 0.5 mg/kg IV/IO (slow push), IM/IN/PO
Max dose of 16 mg

Epinephrine 1mg/ml (1:1000)

- Pt weight 30 Kg or **GREATER**
0.3 mg IM
- Pt weight **LESS** than 30 Kg
0.15 mg IM

Normal Saline bolus
20 ml/kg IV/IO, repeat x 1 if no improvement

CPAP - Coaching is **key** for patients in severe distress
Titrate PEEP for patients without exclusions

COPD patients with acute exacerbation and altered mental status may have elevated CO2 (hypercapnia). Providers should consider more aggressive treatment, monitor for airway loss, and inform ED staff about clinical status.

Capnography – presence of obstructive waveform may help confirm bronchospasm

Patient Safety Considerations
Wheezing may be absent in severe bronchospasm
Positive Pressure Ventilation increases risk of pneumothorax
Nebulized medication increases risk of infection to provider
Routine IV often unnecessary
Routine use of lights and sirens is not recommended during transport unless severe or refractory to EMS interventions

Quality Improvement:
Key Documentation Elements

1. Severity of bronchospasm
2. Capnography for potential respiratory decompensation
3. Response to treatments, medical decision making for care escalation
4. Ventilation assistance and advanced airway

