



Pediatric Asthma Respiratory Distress



History

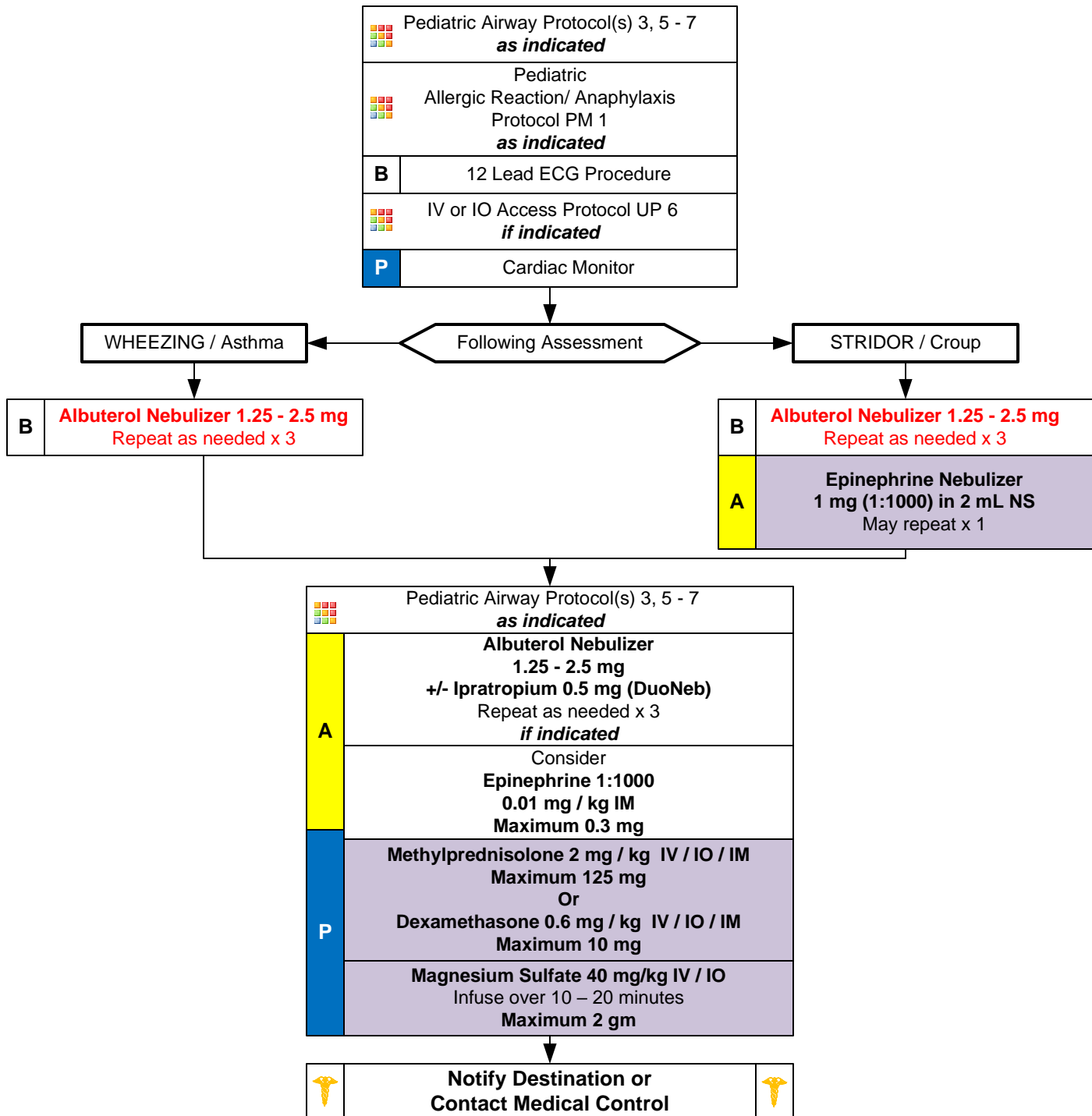
- Time of onset
- Possibility of foreign body
- Past Medical History
- Medications
- Fever / Illness
- Sick Contacts
- History of trauma
- History / possibility of choking
- Ingestion / OD
- Congenital heart disease

Signs and Symptoms

- Wheezing / Stridor / Crackles / Rales
- Nasal Flaring / Retractions / Grunting
- Increased Heart Rate
- AMS
- Anxiety
- Attentiveness / Distractability
- Cyanosis
- Poor feeding
- JVD / Frothy Sputum
- Hypotension

Differential

- Asthma / Reactive Airway Disease
- Aspiration
- Foreign body
- Upper or lower airway infection
- Congenital heart disease
- OD / Toxic ingestion / CHF
- Anaphylaxis
- Trauma





Pediatric Asthma Respiratory Distress



Respiratory Distress/ Respiratory Failure

- Respiratory distress is abnormal breathing in terms of rate and/ or effort.
- Assess for respiratory distress by looking for changes in lung sounds and changes in skin color and mental status.
- Respiratory failure is a state of inadequate oxygenation and/ or ventilation.
- The first priority in managing an ill child is assessment of airway and breathing.
- Respiratory conditions are a major cause of cardiac arrest in infants and children.
- Early detection and management of respiratory distress and/ or failure means a better chance of favorable outcome in the ill child.
- Respiratory distress/ tachypnea with normal lung sounds and normal oxygenation may signal hypoglycemia in the young child/ infant. Consider CHF in young child/ infant with wheezing with reported poor feeding, difficulty feeding, or sweating during feeding.

Signs of Respiratory Distress:

Tachypnea	Increased effort (nasal flaring, retractions)
Tachycardia	Poor respiratory effort (hypoventilation, bradypnea)
Pale, cool skin	Abnormal lung sounds (stridor, wheezing, grunting)
Mental status changes	

Signs of Respiratory Failure:

Early signs:

Marked Tachypnea
Increased effort
Tachycardia
Poor / absent air movement

Late Signs:

Bradypnea
Decreased or no effort
Bradycardia
Cyanosis
Stupor or coma

Refer to Adult COPD/ Asthma Protocol AR 4 Purple Section, Page 2

Methylprednisolone or Dexamethasone:

- Administer to patients who require two (2) or more breathing treatments only.

Pearls

- **Recommended Exam: Mental Status, HEENT, Skin, Neck, Heart, Lungs, Abdomen, Extremities, Neuro**
- **Items in Red Text are key performance measures used to evaluate protocol compliance and care.**
- **This protocol includes all patients with respiratory distress, Asthma, Reactive Airway Disease, croup, or bronchospasm.**
- **Patients may also have wheezing and respiratory distress with viral upper respiratory tract infections and pneumonia.**
- Pulse oximetry should be monitored continuously and consider End-tidal CO₂ monitoring if available.
- **Combination nebulizers containing albuterol and ipratropium (DuoNeb):**
Patients may require more than 3 nebulizer treatments, treatments should continue until improvement.
Following 3 combination nebulizers (DuoNeb), it is preferable to continue albuterol solely with subsequent treatments as there is no proven benefit to continual use of ipratropium.
- **Epinephrine:**
If allergic reaction or anaphylaxis is suspected, give immediately and repeat until improvement.
If allergic reaction is not suspected, administer with no improvement and/ or impending respiratory failure.
- Consider Magnesium Sulfate with impending respiratory failure and/ or no improvement.
- Consider IV access when Pulse oximetry remains $\leq 92\%$ after first beta-agonist nebulizer treatment.
- Do not force a child into a position, allow them to assume position of comfort, typically the tripod position.
- Bronchiolitis is a viral infection typically affecting infants which results in wheezing which may not respond to beta-agonists. Consider Epinephrine nebulizer if patient < 18 months and not responding to initial beta-agonist treatment.
- Croup typically affects children < 2 years of age. It is viral, possible fever, gradual onset, no drooling is noted.
- Epiglottitis typically affects children > 2 years of age. It is bacterial, with fever, rapid onset, possible stridor, patient wants to sit up to keep airway open, drooling is common. Airway manipulation may worsen the condition.
- In patients using levalbuterol (Xopenex) you may use Albuterol for the first treatment then use the patient's supply for repeat nebulizers or agency's supply.
- A silent chest in respiratory distress is a pre-respiratory arrest sign.
- **EMR/ EMT:**
The use of Epinephrine IM is limited to the treatment of anaphylaxis and may be given only by autoinjector, unless manual draw-up is approved by the Agency Medical Director and the NC office of EMS.
Administration of diphenhydramine is limited to the oral route only.
- EMT administration of beta-agonist is limited to only patients currently prescribed the medication, unless approved by the Agency Medical Director and the NC office of EMS.
- Agency Medical Director may require contact of medical control prior to EMT/ EMR administering any medication(s).