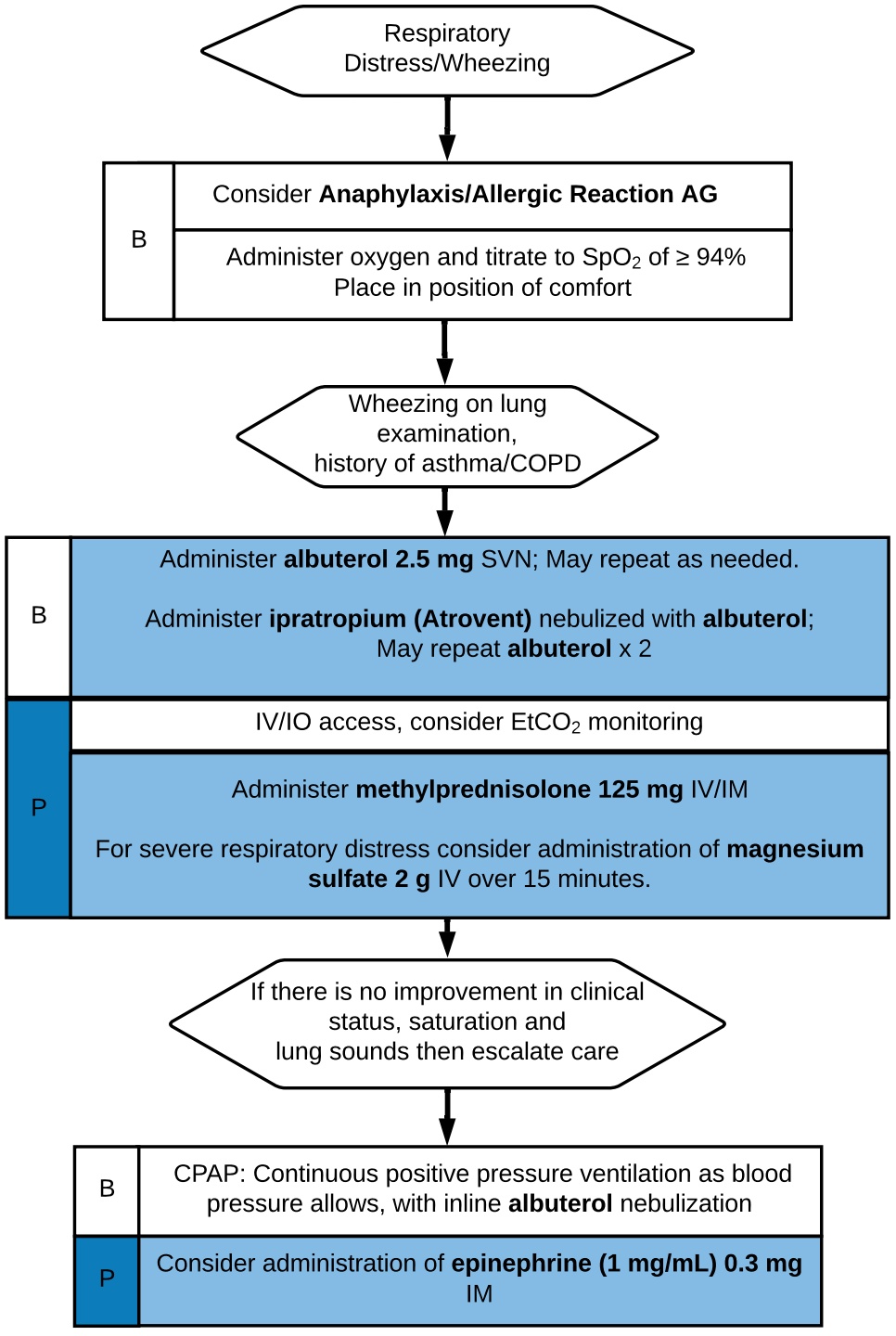
Respiratory-Asthma/COPD Administrative Guideline

History	Signs and Symptom	Differential
• Asthma/COPD/chronic bronchitis/emphysema • Congestive heart failure • Home treatment (oxygen, nebulizer) • Medications (theophylline, steroids, inhalers) • Toxic exposure, smoke inhalation	• Shortness of breath • Decreased ability to speak • Increased work of breathing/accessory muscle use • Wheezing, rhonchi • Fever, cough • Tachycardia	• Asthma • Anaphylaxis • Aspiration • COPD (Emphysema, Bronchitis) • Pneumonia • Pulmonary embolus • Pneumothorax • Cardiac (MI or CHF) • Pericardial tamponade • Hyperventilation • Inhaled toxin (Carbon monoxide, etc.)



Education/Pearls

Asthma and chronic obstructive pulmonary disease (COPD) are common reactive airway diseases in which inflammation of the airways impedes airflow. The mainstay of treatment includes reducing inflammation, providing oxygenation, and assisting in ventilation. For patients reporting or demonstrating respiratory distress:

- Treatment is tailored to the severity of the patient's symptoms.
- Pulse oximetry and waveform capnography should be monitored continuously.
- The patient should be placed in a position of respiratory comfort: generally Fowler's Position or even in a tripod position.

Mild to moderate symptoms: Patients with asthma or COPD may describe breathing difficulty, tightness, or wheezing. Patients with mild symptoms generally have near-normal vital signs, breathe unlabored, and may have detectable wheezing on exam. Patients with moderate disease experience vital sign changes - usually with tachypnea - and examination findings that demonstrate respiratory distress, diffuse wheezes and difficulty exhaling, also known as prolonged expiratory phase. Treatment involves:

- Administration of oxygen
- Administration of aerosols, which dilate the airways
- Administration of a steroid, which reduces airway inflammation

Severe symptoms: Patients with a severe asthma or COPD exacerbation demonstrate critical symptoms, including cyanosis, tripod position, prolonged expiration, and extensive wheezing or - even more concerning - a near-silent chest without audible breath sounds. In addition receiving the treatment for mild to moderate symptoms, these patients require **supportive treatment, ideally before initiating movement of the patient**, including:

- Administration of magnesium, which reduces airway inflammation and relaxes airway musculature
- Fluid resuscitation, as many respiratory patients become dehydrated from work of breathing
- Application of non-invasive positive-pressure ventilation (CPAP)
  - Should be administered for severe respiratory distress if not improving with less invasive support
  - Discontinue CPAP for shock, altered LOC, or vomiting
- Administration of epinephrine if impending respiratory failure is suspected
  - Administer with caution in patients with history of CAD/MI/stents, as epinephrine may precipitate myocardial ischemia in these patient

Consider **Anaphylaxis/Allergic Reaction AG** in patients with asthma-like disease without prior history.