OBJECTIVES

• Describe the pharmacology of Atrovent
• Identify the indications for use of Atrovent in the Adult Population
• Identify the indications for use of Atrovent in the Pediatric Population
• Demonstrate proficiency at administering the medication
• Demonstrate accuracy when administering the medication.
Ipratropium Bromide - Atrovent

• Type - Bronchodilator
  – Inhibits the interaction of acetylcholine at receptor sites on bronchial muscle.
  – Effect is primarily local and site specific
  – Minimal systemic absorption
  – Low potential for systemic toxicity
Ipratropium Bromide - Atrovent

- **Action**
  - Increase in pulmonary function → 15 minutes
  - Peak → 1-2 hours
  - Duration of action → 3-4 hours
  - Half-life → 2 hours
  - Does not cross blood-brain barrier
  - Unknown if excreted in breast milk
Ipratropium Bromide - Atrovent

• Indications – Adults
  – Episodes of severe bronchospasm
    • COPD
    • Acute Asthma
    • Bronchospasm
    • Inhalation Injuries

• Indications – Peds
  – Episodes of severe bronchospasm
    • Acute Asthma
    • Bronchospasm
    • Inhalation Injuries
Ipratropium Bromide - Atrovent

• Use
  – Not indicated as initial treatment
  – Nebulized Albuterol (β-agonist) preferable
  – When combined with Albuterol
    • Produces greater bronchodilation than Albuterol alone.
Ipratropium Bromide - Atrovent

• Contraindications
  – Hypersensitivity to Atropine
  – Hypersensitivity to Soybean products
  – Hypersensitivity to Peanuts
Ipratropium Bromide - Atrovent

- Side Effects
  - Palpitations, dizziness
  - Nervousness, anxiety, headache
  - Dry mouth, blurred vision
  - Nausea, vomiting, GI upset
Ipratropium Bromide - Atrovent

- Precautions
  - History of glaucoma
  - Pregnant
  - Breastfeeding
Ipratropium Bromide - Atrovent

• Dosage & Administration
  – Nebulized with normal saline
    • Adult – 0.5mg in 2.5ml saline Unit Dose Vial
    • Peds
      – 1 Day to 12 Months - 0.25mg in 2.5ml unit dose vial
      – 1 year to 14 years – 0.5mg in 2.5 ml unit dose vial
ICEMA Protocols
Adult Respiratory Emergencies

- Protocol Reference #5001

Chronic Obstructive Pulmonary Disease
  - Chronic symptoms of pulmonary disease
  - ALS Interventions
    - Nebulized Albuterol 2.5mg with Atrovent 0.5mg
    - May repeat times two (2)
    - CPAP if available
    - Base hospital may order additional medications
Adult Respiratory Emergencies

Acute Asthma/Bronchospasm

- History of prior attacks
  - Wheezing
  - Diminished breath sounds
  - Cough
- History of toxic inhalation
- Suspected allergic reaction
Adult Respiratory Emergencies

Acute Asthma/Bronchospasm continued

– ALS Interventions

• Nebulized Albuterol 2.5mg with Atrovent 0.5 mg
• May repeat times two (2)
• CPAP if available
• Epinephrine 0.3mg SC
• Allergic reaction → Benadryl 25mg IV or 50mg IM
• Anaphylactic shock → Epinephrine 0.1mg IV
• Base hospital may order additional medications
Adult Respiratory Emergencies

- Acute Pulmonary Edema/CHF
  - Not indicated
Adult Trauma

• Protocol Reference #8001
  Burns associated with Inhalation Injuries
  – ALS Interventions
  • Nebulized Albuterol 2.5 with Atrovent 0.5 mg
  • May repeat times two (2)
  • Base hospital may order additional medications
Peds Respiratory Emergencies

• Protocol Reference #7008
  – History
    • Asthma
    • Toxic Inhalation
    • Difficult Breathing
  – Associated with
    • Wheezing
    • Diminished breath sounds
    • Cough
Peds Respiratory Emergencies

- **ALS Interventions**
  - Nebulized Albuterol 2.5mg with Atrovent may repeat times two (2)
    - 1 day to 12 months – Atrovent 0.25 mg
    - 1 year to 14 years – Atrovent 0.5 mg
  - If no response consider Epinephrine 0.01mg/kg SQ not to exceed adult dosage of 0.3mg
  - Base Hospital may order additional medications
Peds Allergic Reaction

- Protocol Reference #7011
  - ALS Interventions
    - Nebulized Albuterol 2.5mg with Atrovent may repeat times two (2)
      - 1 day to 12 months – Atrovent 0.25 mg
      - 1 year to 14 years – Atrovent 0.5 mg
    - If no response consider Epinephrine 0.01mg/kg SQ not to exceed adult dosage of 0.3mg
    - Base hospital may order additional medications
Peds Trauma

• Protocol Reference #8003

Burns associated with Inhalation Injuries
– ALS Interventions
  • Nebulized Albuterol 2.5mg with Atrovent may repeat times two (2)
    – 1 day to 12 months – Atrovent 0.25 mg
    – 1 year to 14 years – Atrovent 0.5 mg

• Base hospital may order additional medications