Acute Exacerbation

**Asthma Triage/ Diagnosis**

**Severe Exacerbation**
(PEFR < 50% predicted/personal best if unable to perform peak flow)
- albuterol 2.5-5 mg with 0.25-0.50 mg ipratropium bromide HHN X 3 doses in first hour (Q 20 min)
- O2 to keep sat > 95%
- Systemic steroids (If patient will tolerate, 2 mg/kg given orally up to max of 60 mg)*

**Mild to Moderate Exacerbation**
(PEFR > 50% predicted or personal best if known)
- Nebulized Albuterol 2.5-5.0 mg with 0.25-0.50 mg ipratropium bromide (Atrovent) X 1 dose followed by Albuterol 2.5-5.0 mg nebulized X 2 doses in first hour (Q20 min)**
- Oxygen to keep sat > 95%
- Systemic steroids (If patient will tolerate, 2 mg/kg given orally up to max of 60 mg)*

**Repeat assessment (auscultation, use of accessory muscles, heart rate, Resp. Rate, PEFR, SaO2)**

**Impending or actual respiratory arrest**
(physician directed care)
- mask pressure support or intubation and mechanical ventilation
- nebulized albuterol and ipratropium bromide
- intravenous systemic steroids

**Admit to PICU**

**Good Response**
- PEFR ≥ 70% predicted/personal best
- Response sustained 30 minutes after last treatment, no distress, no symptoms
- Sat > 92% on room air

**Discharge Home**
- Send home with prescription for oral prednisone and inhaled albuterol (nebulized or MDI)
- Continue treatment with inhaled albuterol every 3-4 hours for length of oral steroid course
- Oral steroids at 1-2 mg/kg for 5-7 days
- Patient education
  - review medication use
  - review or initiate action plan

**Incomplete response**
- PEFR > 50 but < 70% predicted/personal best
- Mild to moderate symptoms

**Admit to Hospital**
- Inhaled albuterol 2.5 mg nebulized Q 3-4 hours
- Systemic steroids
- Oxygen to keep sat > 95%
- Consider CXR
- Monitor PEFR, SaO2, pulse, chest auscultation
- Education while in hospital

**Poor Response**
- PEFR < 50% predicted/personal best
- Severe symptoms, drowsiness, confusion

**Admit to Hospital or PICU**
- Inhaled albuterol continuously or every 1-2 hours
- Consider Addition of ipratropium bromide if in PICU
- Intravenous steroids
- Oxygen to keep sat > 95%
- Monitor SaO2 and consider ABG
- Consider intubation and mechanical ventilation if showing signs of fatigue or drowsiness
- If admit is delayed, continue treatment per physician orders
- Education of patient and/or family while in hospital

*Oral efficacy is equivalent to intravenous, if patient can tolerate oral route
**2.5 mg Albuterol = 1 unit dose
0.25 mg Atrovent = 1 unit dose