≥ 18 month old patient presents with asthma symptoms (wheezing, cough, SOB, increased WOB)

CrS Score and Assessment
Oxygen as needed to maintain SpO2>90%

CrS 0-2
- Albuterol via intermittent nebulizer
- Repeat CrS 15 min post treatment

CrS 3-5
- Albuterol via intermittent nebulizer (may give q20min up to 3 treatments)
- Add Ipratropium Bromide: May repeat x1
- Give steroids X1 dose
- Consider continuous HR and SpO2 monitoring
- Repeat CrS 15-30 min post treatment

CrS 6-8
- Albuterol via intermittent nebulizer give 3 treatments back to back
- Add Ipratropium Bromide: Repeat x1
- Give steroids x1 dose
- Continuous HR and SpO2 monitoring
- Repeat CrS 30 min post treatment
- Make NPO

CrS >9
- Albuterol via intermittent nebulizer:
  - Give 3 treatments back to back
  - May continue q15-20 min as needed until patient is transported
- Add 0.5mg Ipratropium Bromide: Repeat x1 (Max Total dose 1mg)
- Start IV
- Give steroids
- Consider IVF bolus
- Continuous HR and SpO2 monitoring
- Repeat CrS 30 min post treatment
- Make NPO
- Transfer to hospital

Clincially improved?

Yes
- Repeat treatment per CrS score maximum 3 treatments, then consider transfer to ED

No
- CrS ≤3?
  - Yes
    - Discharge Home
  - No
    - Repeat CrS 30 min post treatment

Meets Discharge Criteria?

Yes
- Discharge Home

No
- Repeat treatment per CrS score maximum 3 treatments, then consider transfer to ED

CrS Score and Assessment

DEFINITIONS
CrS: Clinical Respiratory Score

Discharge Home

Transfer to Emergency Department

Purple shaded area represents CAREGIVER INITIATED PROTOCOL FOR ASTHMA #6-03

Literature shows CRX is not routinely indicated in the care of acute asthma exacerbation

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# Guideline for Asthma Management: Urgent Care

**Inclusion:** ≥ 18 months Old Presents with Asthma Symptoms, Otherwise Healthy, Patient in Acute Asthma Exacerbation

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## Medication Dosing

### Respiratory Medications
- Albuterol via intermittent nebulizer:
  - <15 kg use 2.5mg
  - ≥15 kg use 5mg
- Ipratropium Bromide 0.5mg via intermittent nebulizer, may repeat x1 (max dose 1mg)

### Steroid Dosing
- Dexamethasone tablets PO x1 (based on 0.6mg/kg PO) (Max dose 16mg)
  - <12kg: 4mg (1 tablet)
  - 12 to <15kg: 8mg (2 tablets)
  - 15 to <25kg: 12mg (3 tablets)
  - ≥25kg: 16mg (4 tablets)
  - Do not give if patient had a dose in the last 24 hours
  - Consider Steroid taper if the patient has had 2 courses of steroids in the past 60 days
- Dexamethasone 0.6mg/kg IM (Max dose 16 mg) (Give steroids PO unless patient is vomiting)
- Methylprednisolone 2mg/kg IV x1 if CRS ≥9 or patient not tolerating PO (max dose 60mg)

### Additional Medications
- Epinephrine (Concentration 1mg/mL) 0.01mg/kg IM (Max dose 0.5mg)

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## Discharge

### Discharge Criteria
- CRS ≤3
- Breathing easy with good air exchange
- SpO2 >90% on room air consistently
- Family able to manage patient at home
- Able to maintain SpO2 >90%, RR, WOB, through feeding/activity

### Discharge Risk Assessment
**Risk Screen:** (Consider transfer and/or Care Concern Call)
- Hospitalized two or more times in past 6 months, history of ICU/intubation
- >3 ED visits in past 6 months
- 2 or more canisters of albuterol in past 6 months
- Failure of outpatient therapy (already on q4 hour nebs or oral steroids >48 hours)
- Direct exposure to tobacco smoke
- Consider Subspecialty Referral if:
  - Hospitalized 2 or more times in the past year
  - >3 ED/UC visits in the past 12 months
  - 2 or more courses of oral steroids in the past 2 months
  - 2 or more canisters of albuterol in the past 6 months

### Discharge Orders
- **Follow Up with PCP/Subspecialist**
- **Education:**
  - Asthma Basics (Asthma Management Plan)
  - MDI Teaching if applicable
  - DPI Instruction
- **Discharge Medications:**
  - Albuterol MDI with spacer
    - 4 puffs QID times 2 days and q4 hours prn cough/wheezing/symptoms
  - Inhaled steroids
    - Fluticasone propionate (Flovent) 44 mcg/puff - 2 puffs BID x1 canister (no refills) (For patients <12 years old)
    - Budesonide (Pulmicort respules) 0.5mg/2ml inhalation solution - BID via nebulizer
    - Fluticasone furoate (Arnuity Ellipta) 100 mcg/actuation - 1 puff daily (For patients ≥12 years old)
  - Oral Steroid: Dexamethasone PO x1 24 hours after first dose
    - <12kg: 4mg PO
    - 12 to <15kg: 8mg PO
    - 15 to <25kg: 12 mg PO
    - ≥25kg: 16mg PO
    - (Max dose 16mg)
  - Consider steroid taper if the patient has had 2 courses of steroids in the past 60 days

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## Transfer Criteria

### Consider Transfer to Hospital if:
- CRS ≥ 4 after response to 2-3 treatments
- O2 requirement to keep SpO2 > 90%
- Clinical Hypoxia
- Unable to manage patient at home

### Consider Air Transport if:
- Acute Respiratory Failure
- CRS≥9 after 2-3 treatments
- FiO2 ≥50%
- tPEWS =7 or score of 3 in any of categories Airway, Circulation, or Disability
- Use CHOA Air Transport or call 911 as appropriate