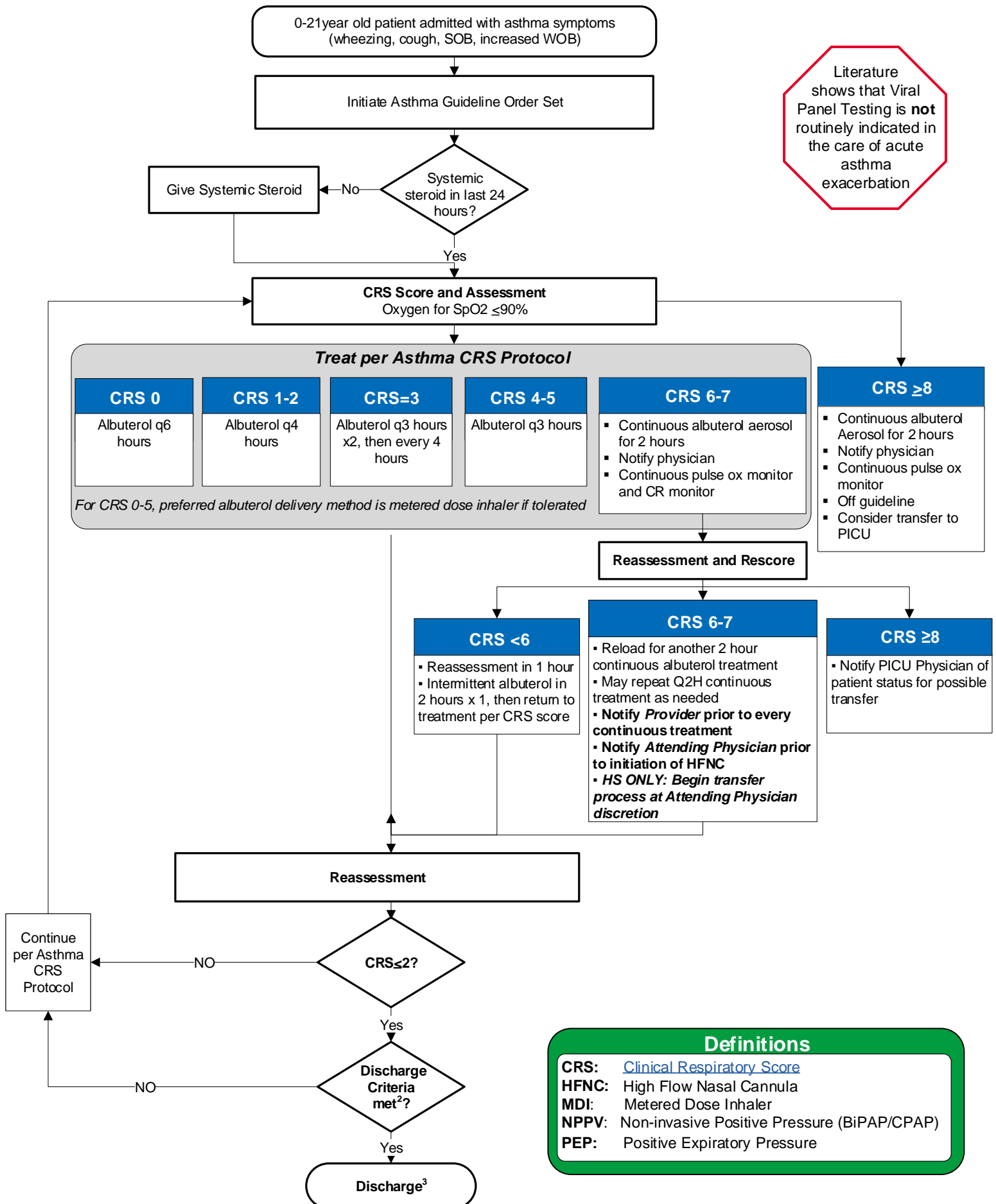


Asthma Management: Inpatient Clinical Practice Guideline

Final 6/9/20



Inclusion: 0-21 year old Presents with Asthma Symptoms, Otherwise Healthy, Non-ICU Patient in Acute Asthma Exacerbation



Definitions

CRS: [Clinical Respiratory Score](#)
HFNC: High Flow Nasal Cannula
MDI: Metered Dose Inhaler
NPPV: Non-invasive Positive Pressure (BiPAP/CPAP)
PEP: Positive Expiratory Pressure

DEVELOPED THROUGH THE EFFORTS OF CHILDREN'S HEALTHCARE OF ATLANTA AND PHYSICIANS ON CHILDREN'S MEDICAL STAFF IN THE INTEREST OF ADVANCING PEDIATRIC HEALTHCARE. THIS IS A GENERAL GUIDELINE AND DOES NOT REPRESENT A PROFESSIONAL CARE STANDARD GOVERNING PROVIDERS' OBLIGATION TO PATIENTS. ULTIMATELY THE PATIENT'S PHYSICIAN MUST DETERMINE THE MOST APPROPRIATE CARE. © 2020 Children's Healthcare of Atlanta, Inc.



General Orders/ Education

- Measure Height
- Vital Signs every 4 hours and PRN
- Initiate Asthma Education
 - Asthma Class
 - Asthma Basics
 - MDI with Spacer
- Encourage Hydration; Consider IVF if CRS >6
- Consider contact droplet isolation if febrile or upper respiratory symptoms

RESPIRATORY

- Oxygen via NC/mask (if mask, warm & humidify) to keep O₂ sats ≥ 90%
- Attempt to wean O₂ if sats > 90%
- Continuous pulse oximetry and CR monitor when on continuous aerosol
- Frequent reassessment per care team member while on continuous treatment
- Intermittent pulse ox check before each treatment until O₂ sat > 90% for ≥ 4 hours, then discontinue pulse oximetry.
- **DO NOT USE CONTINUOUS PULSE OXIMETER IF PATIENT IS RECEIVING INTERMITTENT TREATMENTS**
- **Notify the physician when the patient is on room air and treatments are every 4 hours**

Medication

Medication	Dose	Max Dose	Comment
RESPIRATORY			
Albuterol MDI 90mcg/puff	<15 kg: 4 puffs with spacer per CRS score ≥ 15 kg: 8 puffs with spacer per CRS score	8 puffs	Consider decreasing dose as able; Concern for VQ mismatch with higher dosing
Albuterol Intermittent Treatment	<15 kg: 2.5 mg via nebulizer per CRS score ≥15 kg: 5 mg via nebulizer per CRS score	5mg	
Albuterol Continuous Treatment	<15 kg: 7.5 mg/hr via nebulizer per CRS score ≥15 kg: 15 mg/hr via nebulizer per CRS score	15mg	
Ipratropium Bromide	0.25-0.5mg per nebulizer TID	0.5mg	If persistent cough present; maximum effect seen in first 24 hrs
<i>Inhaled Corticosteroids</i>			
Continue home medication if previously prescribed			
STEROIDS			
Prednisone/ Prednisolone PO	2mg/kg PO daily <u>OR</u> 1mg/kg PO BID for 5 days	80mg/day (40mg/dose)	
Dexamethasone PO	PO (tablets) q24 hours x 2 doses <12kg: 4 mg 12 to <15kg: 8 mg 15 to <25kg: 12 mg ≥25kg: 16mg	16mg/dose	Dosing based on 0.6mg/kg/dose
Methylprednisolone	1mg/kg/dose IV q12 hours	40mg/dose	If not tolerating PO or vomiting
Dexamethasone IM	0.6mg/kg IM q24 hours x 2 doses	16mg/dose	If no IV access
Adjunct Therapy			
Albuterol Intermittent with PEP	<15 kg: 2.5mg of albuterol and 5 cm H ₂ O 15-18 kg: 5mg of albuterol and 8 cm H ₂ O 18-25 kg: 5mg of albuterol and 10 cm H ₂ O >25 kg: 5mg of albuterol and 12 cm H ₂ O		Consider if diminished breath sounds, chronic hypoxemia, persistent crackles, or atelectasis
Magnesium Sulfate	50mg/kg IV over 20 min	2 grams/dose	If more than 2 doses, check Mg level; if signs and symptoms of dehydration give IVF prior to administration
High Flow Nasal Cannula (HFNC)			See campus specific HFNC guidelines (SB , ECH/HS) and notify attending Physician
Non-invasive positive pressure (NPPV)			

PICU Criteria

Consider PICU transfer if any of below:

- Acute Respiratory Failure
- CRS ≥8
- FiO₂ ≥50%
- PCO₂ >55
- Initiation of NPPV/HFNC (refer to HFNC guidelines)

²Discharge Criteria

- CRS ≤2
- Room Air for ≥ 4 hours
- Treatments Q4 hours or less often
- Asthma Education Complete
- Parents able to follow-up with PCP within 2-3 days or access emergency care if needed

³Discharge Instructions

- Asthma action plan
- Asthma basics
- MDI with spacer education
- Follow-up with PCP in 2-3 days
- Consider daily controller medication
- Administer influenza vaccine, unless contraindicated, refused, or already given