UT kids
UT MEDICINE SAN ANTONIO

Children's Health
University Health System

RESPIRATORY ASSESSMENT AND MANAGEMENT PROTOCOL (RAMP)

Patients ≥ 1 year of age with asthma/wheezing excluding bronchiolitis, cystic fibrosis, trach pts, neuromuscular diseases & cardiac pts

Alert: Consider Fast Tracking Life Threatening Asthma Clinic Patients
Brief history & physical exam w/CRS
Monitor oxygen saturation and administer oxygen to maintain SpO_2 ≥ 92% in asthma/wheezing patients

CRS ≥ 8

No:

CRS ≤ 3
Albuterol MDI w/ valved holding chamber X 1 dose:<20 kg: 4 puffs; ≥ 20 kg: 6 puffs.
Consider steroids

CRS 4-6
Albuterol MDI w/ valved holding chamber:< 20kg: 6 puffs; ≥ 20kg: 8 puffs Q 20 min PRN up to 3X.
If no response after 1 dose ADD Ipratropium MDI/neb (may give up to 3 doses ipratropium).
Start Steroids (If AFTER trial of Alb MDI there is difficulty in adminstering, may consider Neb)

CRS 7
Albuterol MDI w/valved holding chamber :< 20kg: 8 puffs;≥ 20kg: 8 puffs Q 20 min PRN up to 3X.
If no response after 1 dose ADD Iptratropium MDI/neb (may give up to 3 doses Ipratropium).
Start steroids.(If AFTER trial of Alb MDI there is difficulty in administering, may replace with Neb)
If no improvement after 3rd treatment, notify physician immediately, place on continuous albuterol, give 3rd dose of Ipratropium
In ED: monitor 1hr post treatment if clinically improving for potential d/c

Yes:

CRS ≧ 8-12 ; Unable to talk, Severe

<u>Distress: Impending or Actual Respiratory Arrest</u>

Admit to PICU
Start Continous Albuterol and notify physician of assesment
Provide supplemental 02
Add Ipratropium immediately (may give up to three doses)
Start steroids
Consider IV magnesium sulfate
ABG, CBG, or VBG
Mechanical ventilation as needed
Continue to reassess. When improving, refer to RAMP.
Follow RAMP algorithm to discharge when CRS ≤ 3;
stable vital signs on room air.

Repeat CRS Assessment after initial therapies

CRS ≦ 3
V/S stable and on room air
Step down to discharge*

CRS 4-6
Admit to Hospital if from ED
If requiring more than Q 2 h X 12 h admit to Intermediate Care & re-evaluate diagnosis
Obtain order to increase strength of albuterol: < 20kg: 6 puffs;≥ 20kg: 8 puffs Q 2-3 h
Add Ipratropium if not already given three doses, Continue Steroids
If AFTER trial of Alb MDI there is difficulty in adminstering, may temporarily replace with Neb

<u>CRS 7 Despite initial therapy</u>
Admit to Intermediate Care Unit (IMC) based on patient care requirements
Add Ipratropium if not already given 3 doses
Change steroid to IV
Begin continuous Albuterol (may stay on continous albuterol for up to 24hrs in IMC

CRS ≥ 8

Repeat Assessment after Continued Therapies

CRS ≦ 3
V/S stable and on room air
Step down to discharge*

CRS 4-6
If in Intermediate Care, transfer to Floor Status
Continue weaning until CRS < 3

CRS 7
<u>No improvement or worsening</u>
Begin IV Magnesium Sulfate
Continue continuous Albuterol
Consider Pulmonary consult

CRS ≥ 8

Repeat Assessment after Continued Therapies

CRS ≦ 3
V/S stable and on room air
Step down to discharge*

CRS 4-6
If in Intermediate Care transfer to Floor Status
Continue weaning until CRS < 3

CRS remains 7
<u>No improvement or worsening</u>
Continue continuous Albuterol
Continue IV corticosteriods
Oxygen to keep SpO_2 ≥ 92%

CRS ≥ 8

***Discharge Home**

- Continue Albuterol MDI treatment as per Asthma Action Plan
- Complete course of oral systemic corticosteroid
- Initiate or continue long-term control meds (escalate if necessary)
- Patient education
- Review medications including drug delivery technique
- Review written Asthma Action Plan
- Recommend close medical follow-up including discharge visit recommendations with appropriate phone numbers
- Perform med reconciliation

<u>Key Points</u>
1.RT may increase frequency /dosage with physician notification.
2.Weaning can only occur during the current treatment interval

<u>Albuterol Weaning Regimen & Discharge Criteria</u>
Albuterol will be administered via MDI unless otherwise ordered by a clinician for CRS 3-6 and improving, V/S stable, and weaning from O2.

<u>Previous TX Dose</u> (Wean dose first): **Wean To:**
Albuterol MDI < 20kg: 6 puffs → 4 puffs → taper interval
≥ 20kg: 8 puffs → 6 puffs → 4 puffs → taper interval
Albuterol Neb < 20 kg: 2.5mg → MDI 4 puffs → taper interval
≥ 20 kg 5mg → MDI 6 puffs → 4 puffs → taper interval

<u>Interval</u> (wean after weaning dose): **Wean To:**
Continuous Albuterol → Q2h
*RT to notify MD RN when receiving Q2h
Q2h → Q 3h
Complete asthma action plan and prepare for discharge
Q3h → Q4h (patients to not be spaced out further than q4h)

Discharge Criteria: Room air, SABA Q 4 h X 2 & CRS < 3

Ipratropium: 1-12yo: 0.25-0.5 mg neb
>12 yo: 0.5 mg neb

Albuterol neb dosing:
4 puffs =2.5 mg neb
8 puffs = 5 mg neb

RT Driven Protocol for medication titration
This protocol is not meant to be a substitute for clinical judgment.
Medication treatment recommendations are based on: NAEPP EPR3: Guidelines for the diagnosis & management of asthma. NHLBI. Aug, 2007 and Asthma Care Quick Reference, Sept. 2012

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