Beta-agonist therapy as per DEM Initial Bronchodilator Treatment Guidelines

Administer supplemental oxygen to maintain SpO₂ >92%
Continuous pulse oximetry during bronchodilator continuous nebulization

Does patient need an oral/IM/IV steroids?  
Yes ☑  No ☐

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prednisone PO</td>
<td>mg</td>
<td>60 mg</td>
</tr>
<tr>
<td>Prednisolone liquid PO</td>
<td>mg</td>
<td>60 mg</td>
</tr>
<tr>
<td>SOLU-MEDROL (methylprednisolone) IV</td>
<td>mg</td>
<td>125 mg</td>
</tr>
<tr>
<td>Decadron (dexamethasone) PO for those with prednisone intolerance; may give IV form</td>
<td>mg</td>
<td></td>
</tr>
<tr>
<td>Prednisone PO in formula/juice; 0.6 mg/kg; maximum 10 mg</td>
<td>mg</td>
<td></td>
</tr>
<tr>
<td>Decadron (dexamethasone) IM</td>
<td>mg</td>
<td>10 mg</td>
</tr>
</tbody>
</table>

ED-Asthma  Draft Version 0.3 2/12/08
Triage nurse/charge nurse to notify DEM therapist via pager 1488 that an asthma patient is in the department of emergency medicine. RN or Respiratory Therapist to initiate bronchodilator therapy

Initial assessment
PEF or PI score
History, physical examination (auscultation, use of accessory muscles, heart rate, respiratory rate,) oxygen saturation, clinical symptoms.

Mild
PEF>80 and patient is symptomatic or has history of high risk for acute exacerbation
Or PI score ≤ 8

PEF < 80% or
PI score ≥ 8

- 2.5mg albuterol < 30 kg
5mg albuterol >30 kg

Moderate-Severe

PEF < 80% or
PI score ≥ 8
- Inhaled high dose beta-2 agonist and anticholinergic by nebulizer every 20 minutes or continuously for 1 hour.
  Adult - 5mg albuterol Q 20 minutes for 3 doses or 15 mg/hr continuous.
  >30 kg (10mg/hr < 30 kg)

Atrovent - 1mg added to 1st dose of beta-2 agonist or continuous

- Oxygen to achieve saturation ≥ 92%
- Continuous pulse oximetry
- Oral or IV corticosteroids as ordered by a physician.
- Consider HELIOX as driving gas source for bronchodilators

Repeat assessment PEF and/or PI score
Physical examination (auscultation, use of accessory muscles, heart rate, respiratory rate,) oxygen saturation, clinical symptoms

Discharge home
RCP
- Patient education
- Review medicine use
- Review/initiate asthma action plan

Physician recommendation
- Recommend close medical follow-up
- Continue treatment with inhaled beta2-agonist
- Continue course of oral systemic steroids

Good/complete response to therapy
Good response
PEF > 80%
Response sustained after last treatment
No distress
Physical exam normal

Incomplete Response

Moderate exacerbation
PEF<50% predicted but < 80%
Physical exam moderate symptoms
- Initial short acting beta,-agonist every 60 minutes
- Continue treatment q1-3 hours, provided there is improvement. Consider continuous 8 hour dosing.
- abg

Admit to hospital ward (recommended)
- Inhaled beta2-agonist + inhaled anticholinergic
- Systemic oral or IV corticosteroid
- Oxygen
- Monitor PEF, O2 saturation, pulse
- Consider HELIOX as driving gas source for bronchodilators if not already on

Severe exacerbation
PEF<50% predicted
Physical exam sever symptoms at rest
History-high risk patient
- Consider noninvasive ventilation
- Consider HELIOX as driving gas source for bronchodilators
- Inhaled short acting beta,-agonist hourly or continuously with inhaled anticholinergic
- abg

Admit to hospital intensive care (recommended)
- Inhaled beta,-agonist hourly or continuously + inhaled anticholinergic
- IV corticosteroid
- Oxygen
- Consider invasive or noninvasive ventilation
- Consider HELIOX as driving gas source for bronchodilators if not already on