Bronchiolitis

No Respiratory Distress

- Good PO
  - RR<40
  - Sat<94%
  - Well appearing

- Poor PO
  - RR>40
  - Sat<94%

Suction - Afrin

- Good PO, RR<40, Sat>94%
  - No Δ

Albuterol 25% respond

- Good PO, RR<40, Sat>94%
  - No Δ

Racemic Epi +/- 3% NS 40% respond

- Poor Oxygenation/Ventilation and unlikely to respond to vaponephrine

Improved

- 3/2/1 Rule

- PICU or IMU

- 2/1 Rule

- 3% NS Neb

Respiratory Distress

- Poor Ventilation/Oxygenation
  - Start Racemic Epi, and IV Fluids
  - Plan Ventilatory Support

- Poor Oxygenation/Ventilation or Repeat Vaponephrine, than start IV fluids

Worse or No Δ

- High Flow

- BiPap +/- Ketamine

- Heliox or Nitric Oxide 20ppm

- Intubation

D/C

- Good PO, RR<40, Sat>94%

3/2/1 Rule

- Improved and intubation avoided

2/1 Rule

- Improved

- PICU or IMU

- 3% NS Neb

- High Flow

- BiPap +/- Ketamine
Vaponephrine (Racemic Epinephrine)  
- 0.5ml per neb

Albuterol Nebs and Dosing
- Albuterol 0.6mg/ml over 1hr = 10mg
- Albuterol 0.9mg/ml over 1hr = 15mg
- Albuterol 1.3mg/ml over 1hr = 20mg
- Albuterol 90 mcg/puff – 2-4 puffs
- Xopenex 44mcg/puff – 4-6 puffs

Steroid Dosing
- Methylprednisolone 2mg/kg, max 60mg/dose
- Prednisolone 2mg/kg, max 60mg/dose

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- Albuterol 1.3mg/ml over 1hr = 20mg
- Albuterol 90 mcg/puff – 2-4 puffs
- Xopenex 44mcg/puff – 4-6 puffs

Action Plan
- Xopenex 4-6 puffs q 4 hrs for 2d, then 2-4 puffs q 4 hrs day.
- Acute worsening then trial of 6 puffs, wait one hour and take 6 more puffs, if no improvement then go to ER

- Albuterol 4 puffs q 4 hrs for 2d, then 2 puffs q 4 hrs day.
- Acute worsening then trial of 6 puffs, wait one hour and take 6 more puffs, if no improvement then go to ER

Persistent Respiratory Rate >60
- NPO – risk of aspiration
- IV and hydrate

Clinical Respiratory Score (CRS)

<table>
<thead>
<tr>
<th>Assess</th>
<th>Score 0</th>
<th>Score 1</th>
<th>Score 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory Rate</td>
<td>&lt;2 mos &lt;50</td>
<td>&lt;2 mos 50-60</td>
<td>&lt;2 mos &gt; 60</td>
</tr>
<tr>
<td></td>
<td>2-12 mos &lt;40</td>
<td>2-12 mos 40-50</td>
<td>2-12 mos &gt; 50</td>
</tr>
<tr>
<td></td>
<td>1-5 yrs &lt; 30</td>
<td>&gt; 1-5 yrs 30-40</td>
<td>&gt; 15 yrs &gt; 40</td>
</tr>
<tr>
<td></td>
<td>&gt;5yrs&lt;20</td>
<td>&gt;5yrs20-30</td>
<td>&gt;5yrs&gt;30</td>
</tr>
<tr>
<td>Auscultation</td>
<td>Good air movement, scattered expiratory wheezing, loose rales/crackles.</td>
<td>Depressed air movement, inspiratory and expiratory wheezes or rales/crackles.</td>
<td>Diminished or absent breath sounds, severe wheezing, or rales/crackles, or marked prolonged expiration.</td>
</tr>
<tr>
<td>Use of Accessory Muscles</td>
<td>Mild to no use of accessory muscles. Mild to no retractions, nasal flaring on inspiration.</td>
<td>Moderate intercostal retractions, mild to moderate use of accessory muscles, nasal flaring.</td>
<td>Severe intercostal and substernal retractions, nasal flaring.</td>
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<tr>
<td>Mental Status</td>
<td>Normal to mildly irritable</td>
<td>Irritable, agitated, restless.</td>
<td>Lethargic</td>
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<tr>
<td>Room Air SpO2</td>
<td>&gt; 95%</td>
<td>90-95%</td>
<td>&lt;90%</td>
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<tr>
<td>Color</td>
<td>Normal</td>
<td>Pale to normal</td>
<td>Cyanotic, dusky</td>
</tr>
</tbody>
</table>

2/1 Spacing Rule
- 2 hours = floor
- 1 hour = PCU (step down)
- Continuous Albuterol or Vapo = PICU

3/2/1 Spacing Rule
- 3 hours = home
- 2 hours = floor
- 1 hour = PCU (step down)
- Continuous Albuterol or Vapo = PICU
Increased CO

Pul Edema and Consolidation

Atelectasis

Upper Airway Dilation
  - allows oxygenation
  - facilitates pulmonary toilet for edema and consolidation
  - increases PEEP and decreases atelectasis