Bronchiolitis
Just Do Nothing

Except: Clinical Care, Advise, Re-examine

John Mackenzie Emergency Care Institute
Context

Big problem, < 12 mth, most common condition

Big numbers, 48,782  2014-2017

44% admitted
Considerable Variation in Treatment

- radiation exposure with chest x-rays
- nasopharyngeal suctioning to obtain a sample for viral testing
- treatment with bronchodilators that cause side-effects but not clinical improvement
- treatment with oxygen for mild or transient reduction of oxygen saturation, leading to increased length of stay and disruption to breastfeeding and family routines
- increased length of hospital admission and disruption to breastfeeding and family routines
Leading Better Value Health Care Programs

ACI
Sees 3 places to engage

• LHDs
• Doctors/Nurses
• Patients/Carers

Program Logic, Roadmap, Stakeholder, Engagement etc etc etc etc etc
Why do we do more than we should?

Expectations
Cognitive bias – omission regret, impact bias, ambiguity bias, remember negative cases
Fear of being sued
Gaps in knowledge
Erroneous beliefs
Lack of understanding what patients and families want
Greed
Patients demand it
How can we do less?

Care as happens, not as imagined
Audit and feedback
Peer comparisons
Shared decision-making
System changes eg model of care
The Key Changes

- Thresholds/targets for adequate oxygenation (magic number is 92%)
- Parameters for use of continuous oximetry (severe)
- Inclusion of High Flow Nasal Cannulae (HFNC) in management (it works)
- Viral identification is not recommended
- Bronchodilators are not recommended
What is Bronchiolitis? (and differentials)

Cough
Tachypnoea
Chest wall retractions
Widespread crackles or wheeze.

Pneumonia
Congestive heart failure
Pertussis
Pneumothorax
Bronchial foreign body
RISK FACTORS FOR MORE SERIOUS ILLNESS

- Gestational age <37 weeks
- Chronological age at presentation <10 weeks of age
- Postnatal exposure to cigarette smoke
- Breast fed for less than 2 months
- Failure to thrive
- Chronic lung disease
- Congenital heart disease
- Chronic neurological conditions
- Immunodeficiency
- Indigenous ethnicity - Aboriginal, Torres Straight Islanders, Pacific and Maori infants.
<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behaviour</td>
<td>Normal</td>
<td>Some/intermittent irritability</td>
<td>Increasing irritability and/or lethargy/fatigue</td>
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<tr>
<td>Respiratory Rate</td>
<td>Normal – mildly increased</td>
<td>Increased respiratory rate</td>
<td>Marked increase or decrease in respiratory rate</td>
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<tr>
<td></td>
<td>respiratory rate</td>
<td></td>
<td></td>
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<tr>
<td>Use of accessory muscles</td>
<td>Nil to mild chest wall</td>
<td>Moderate chest wall retractions</td>
<td>Marked chest wall retractions</td>
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<tr>
<td></td>
<td>retraction</td>
<td>Tracheal tug</td>
<td>Marked tracheal tug</td>
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<tr>
<td></td>
<td></td>
<td>Nasal flaring</td>
<td>Marked nasal flaring</td>
</tr>
<tr>
<td>Oxygen Saturation</td>
<td>O₂ saturations &gt;92% (in room</td>
<td>O₂ saturations 90 - 92% (in room air)</td>
<td>O₂ saturations &lt; 90% (in room air)</td>
</tr>
<tr>
<td>Oxygen Requirement</td>
<td>air)</td>
<td></td>
<td>Hypoxemia, may not be corrected by O₂</td>
</tr>
<tr>
<td>Apnoeic Episodes</td>
<td>None</td>
<td>May have brief self-limiting apnoea</td>
<td>Increasingly frequent or prolonged apnoea</td>
</tr>
<tr>
<td>Feeding</td>
<td>Normal or slightly decreased</td>
<td>Difficulty feeding but able to take &gt; 50% of</td>
<td>Significant difficulty feeding with intake &lt; 50%</td>
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<tr>
<td></td>
<td></td>
<td>normal feeds</td>
<td>of normal feeds</td>
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<tr>
<td>Likelihood of Admission</td>
<td>Management should be discussed with a paediatrician</td>
<td>Of observation</td>
<td>Appropriate children’s facility/PICU</td>
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<td>Referral is determined by:</td>
<td>- Senior review</td>
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<td></td>
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<td>- Local CERS response</td>
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<tr>
<td>Observations</td>
<td>Assessment in ED prior to discharge (minimum two sets of observations on SPOC)</td>
<td>Hourly Referring to SPOC</td>
<td>Continuous cardiorespiratory and oximetry monitoring and assessment</td>
</tr>
<tr>
<td>Vital signs (respiratory rate, heart rate, O₂ saturations, temperature)</td>
<td>Small frequent feeds</td>
<td>Not feeding adequately (&lt; 50% over 12 hours), Administer NG or IV hydration</td>
<td></td>
</tr>
<tr>
<td>Hydration/Nutrition</td>
<td>Nil requirement</td>
<td>Administer O₂ to maintain saturations ≥ 92%</td>
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</tr>
<tr>
<td>Oxygen</td>
<td></td>
<td>If a trial of NPO₂ is ineffective consider HFNC after paediatrician review</td>
<td>Consider HFNC or CPAP after paediatrician review</td>
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<tr>
<td>Respiratory Support</td>
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<tr>
<td>Disposition/Escalation</td>
<td>Consider further medical review if early in the illness and any risk factors are present or if child develops increasing severity after discharge</td>
<td>Decision to admit should be supported by clinical assessment, social and geographical factors and phase of illness</td>
<td>Requires admission or transfer, escalate as per local CERS if:</td>
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<td></td>
<td></td>
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<td>- Severity does not improve</td>
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<td></td>
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<td>- Persistent desaturations</td>
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<td></td>
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<td>- Significant or recurrent apnoeas with desaturation</td>
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</tbody>
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If no improvement consult NETS 1300 36 2500
Medications (none)

- Beta 2 agonists – do not administer beta 2 agonists (including to those with a personal or family history of atopy).
- Corticosteroids – do not administer systemic or local glucocorticoids (nebulised, oral, intramuscular (IM) or IV)
- Adrenaline – do not administer adrenaline (nebulised, IM or IV) except in periarrest situation.
- Hypertonic saline – do not administer nebulised hypertonic saline.
- Antibiotics – including Azithromycin are not indicated in bronchiolitis.
- Antivirals – are not indicated
- No nasal suction, no physio, maybe NS drops with feeding
Not really doing nothing

Oxygen only if persistent < 92%
Use HFNP O2 for moderate to severe if normal NP O2 doesn’t work

But still don’t do investigation is you think its bronchiolitis
No meds
Don’t bother the baby
End SLIDO Time

Get out your phones