Akron Children's Hospital

Bronchiolitis Acute Care Floor Guidelines

Each patient must be evaluated for inclusion and exclusion in the pathway.

Inclusion criteria:

Infants/children < 24 months of age requiring admission for bronchiolitis

Exclusion Criteria:

Ventilator or other ICU therapy required

Consider Exclusion/Other treatment if one or more of following present:

Immunodeficiency	Congenital heart disease
Bronchopulmonary dysplasia (BPD)	Pulmonary Hypertension
Premature infant <44 weeks post conceptual age	Other Chronic lung disease
Congenital airway disease	History of apnea

Prior documented wheezing responding to albuterol or asthma diagnosis

Care of the Patient with Bronchiolitis

General Care	· Strict Intake and Output · Vital signs q4 hours · Special Considerations: Children with risk factors for severe disease or complications may require more frequent monitoring · **Respiratory Status Assessment** includes respiratory rate, effort, noting of any retractions, nasal flaring and assessment of lung sounds. Assessment should be done with vital signs, as frequently as any ordered aerosols (including PRN) and at any changes in the patient's status.
Oxygen	· Generally, oximeter readings should be in the range of or below 90% for oxygen use, but limits for oximeter alarms should be ordered by the physician/APP and adjusted to the patient's needs. · Oxygen may be ordered to assist in easing symptoms of respiratory distress. Respiratory assessment including respiratory rate, effort, including notation of any retractions or nasal flaring, and assessment of lung sounds should be done prior to starting any oxygen. The physician/APP should be notified if the use of oxygen for the patient is needed. · If O_2 needed, deliver with nasal cannula with humidified oxygen unless nasal blockage, mouth breathing, parent refusal, or patient intolerance, then use venti-mask for O_2 delivery. · When a patient is on oxygen, weaning of the oxygen should be done once respiratory status is stable and in conjunction with the patient's respiratory assessment. · Children with disease processes that shift the oxyhemoglobin dissociation curve may need O2 level kept higher than 90%.
Feeds/Fluids	· Regular Diet as tolerated. Encourage breast or formula feeding, not clear fluids. Attempt oral feeds unless severe respiratory distress or feeding associated with cough and choking. · IV fluids or NG feeds at maintenance rate (or potentially more if dehydrated) should be considered if **any** of the following prevent oral feedings: Respiratory distress, Apneic episode(s), difficulty tolerating oral feeds because of coughing or disinterest, and/or urine output less than 1mL/kg/hr (over 4-8 hrs). IV fluids are preferred over NG feedings if the patient is in significant respiratory distress. · Once respiratory status has improved, oral feedings should be resumed and

	when tolerating breastmilk/formula feeds, discontinue/SLIV or remove NG tube. · Continuous assessment of the patient's intake and output is ongoing and physician/APP should be notified of any changes in the patient's I&O trend for adjustment with fluids.
Labs	· Based on AAP Guidelines, bronchiolitis should be diagnosed based on history and physical exam and radiographic and laboratory studies should not be routinely done. These are reserved for select circumstances when diagnosis is in question or when it will change management of the patient · **Chest X-ray, Rapid RSV and Respiratory Film array: Not routinely Recommended (except for COVID-19 testing purposes)** · Consider Rapid flu · BMP: Consider if patient moderately dehydrated or on IV fluids. · Blood culture: Not routinely recommended unless concern for bacteremia. · CBC: Not routinely recommended.
Electronic monitoring	Pulse oximetry: · Recommend checks every 4 hours x 3 for baseline measurement and if saturations ≥ 90% discontinue (as per order) or every 4 hours with vitals · Continuous oximetry monitoring is **not** routinely indicated, even with O_2 requirement, but more frequent monitoring than four hour checks is required when weaning oxygen. · If ordered, consider ordering oximeter alarm setting at 88% to prevent frequent alarming. Cardiac Respiratory Monitor: consider in infants ≤ 12 weeks of age and should be considered for patients with other risk factors for severe disease (prematurity, underlying cardiopulmonary disease, etc). ✸If ordered, consider ordering for unattended or sleep times, instead of around the clock to prevent frequent false alarms. ✸
Treatments or Medications	· Nasal suction for congestion ➢Bulb syringe with saline nose drops. ➢Nasopharyngeal catheter suctioning is not recommended because of · May use 3% hypertonic saline aerosol 4mL every 8 hours. · Albuterol not recommended if patient diagnosed with bronchiolitis, per AAP bronchiolitis guidelines · Racemic Epinephrine not recommended per AAP bronchiolitis guidelines · Cool mist humidifier may be used but no evidence suggesting benefit · Also not recommended: ➢Chest physiotherapy ➢Steroid therapy ➢Antibiotics ➢Ipratropium (or "Duonebs" which contain Albuterol and Ipratropium) ➢Cough/cold medications

Parent Education	· Review with parents/guardians Tips to Grow By Pamphlet information for parents to read about "RSV Bronchiolitis" and "Suctioning Baby's nose".
Infection Control	· Patients should remain in their room · Strict hand washing and the use of Purell Hand Sanitizer · Contact/droplet isolation for all bronchiolitis patients regardless of testing results as all bronchiolitis is contagious
Concern for the Patient's status	If the patient is experiencing increasing respiratory distress, an MRT or discussion of case with PICU should be considered. Respiratory distress may include the following symptoms: · Increased or increasing respiratory rate · Increased or increasing oxygen requirements; especially if ≥ 50% · Increased or severe nasal flaring · Increased or severe retractions · Grunting with respirations · Decreased tolerance of oral feedings · Listlessness or restlessness · Pale, diaphoretic, uncomfortable looking child Other concerns such as severe dehydration, severe electrolyte imbalance, or any child not responding to treatment warrant an MRT or discussion of case with PICU.

Discharge Criteria:

Respiratory status at discharge should be:

- RR <60/minute
- No significant increased respiratory effort from baseline
- Clearing of airway can be done by parent using bulb suctioning
- No supplemental O_2 being given
- If albuterol is effective in decreasing respiratory symptoms an HFA with spacer and mask should be ordered and teaching completed prior to discharge **(not generally needed)**.

Nutritional status:

- Tolerating oral feedings appropriate for age and weight, with adequate UOP

Social:

- Home resources are adequate to support ordered home therapies
- Parent (guardian) is proficient with therapies required
- Family has participated in discharge decision

Follow-up:

- Follow-up appointment is established or appropriate instructions for follow-up have been given to caregiver.

Standard discharge Instructions are available in the GEN IP Discharge Orders order set under Disease Specific Instructions

References:

1. Ralston SL,Lieberthal AS,Meissner HC, et al*; American Academy of Pediatrics. Clinical practice guideline: the diagnosis, management, and prevention of bronchiolitis. Pediatrics. 2014;134(5). Available at: www.pediatrics.org/cgi/content/full/134/5/e1474*
2. Nebulized hypertonic saline solution for acute bronchiolitis in infants – Cochrane Database http://www.ncbi.nlm.nih.gov/pubmed/23900970
3. Steam inhalation or humidified oxygen for acute bronchiolitis in children under three years of age – Cochrane Database http://www.ncbi.nlm.nih.gov/pubmed/21249676
4. Choosing Wisely – an initiative of the ABIM Foundation http://www.choosingwisely.org/doctor-patient-lists/society-of-hospital-medicine-pediatric-hospital-medicine/

   http://www.choosingwisely.org/doctor-patient-lists/american-academy-of-pediatrics/

Last Reviewed November 2021 by: Samantha Gunkelman, MD; Kathryn Mansel, MD and the Pediatric Hospital Medicine division

Reviewed by the Order Set Committee November 2021