MedStar Family Choice

Management of Bronchiolitis in Pediatrics
Clinical Practice Guideline
MedStar Health

"These guidelines are provided to assist physicians and other clinicians in making decisions regarding the care of their patients. They are not a substitute for individual judgment brought to each clinical situation by the patient's primary care provider in collaboration with the patient. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication but should be used with the clear understanding that continued research may result in new knowledge and recommendations."

MedStar Pediatrics and MedStar Family Choice accept and endorse the clinical guidelines set forth by the American Academy of Pediatrics: The Diagnosis, Management, and Prevention of Bronchiolitis, 2014.

The complete online version of this article/guideline is available at:
http://pediatrics.aappublications.org/content/134/5/e1474.full.pdf
The guideline below is a summary of the above article/guideline written in 2014 by the AAP.

Background

Bronchiolitis is a clinical syndrome to which infants and children under age 2 are most susceptible. Bronchiolitis is characterized by acute inflammation, edema, and necrosis of epithelial cells lining small airways, and increased mucus production. Signs and symptoms typically begin with rhinitis and cough, which may progress to tachypnea, wheezing, rales, use of accessory muscles, and/or nasal flaring.

Clinical Guidelines on Bronchiolitis for prevention, management, and treatment are based on best available evidence and are intended for typical cases of bronchiolitis age 1 month through 23 months. Therefore, these guidelines are not intended to address every case of bronchiolitis. Benefit versus risk must first be considered in all patients. Recommendations are based on strong evidence, moderate evidence, and weak evidence (legend found at end of guideline).

Excluded from the 2014 guideline recommendations are several co-morbid conditions such as:

- Immunodeficiency diseases such as HIV infection, recipients of solid organs or hematopoietic stem cell transplants
- Underlying respiratory illnesses such as recurrent wheezing, chronic neonatal lung disease (bronchopulmonary dysplasia), neuromuscular disease, cystic fibrosis, and hemodynamically significant congenital heart disease

Also, please note that this AAP guideline was written before Nirsevimab (Beyfortus) was universally recommended (see below).

Recommendations for Diagnosis (Ralston, et al):

- Clinicians should diagnose bronchiolitis and severity level on the basis of history and physical exam (strong evidence)

- Risk factors for severe disease are based on age less than 12 weeks old, prematurity, underlying cardiopulmonary disease, or immunocompromise. (moderate evidence)
- Radiographic or laboratory studies should NOT be routinely obtained. (moderate evidence)

Management **(based on supportive, symptomatic care – including frequent nasal saline and nasal suctioning as needed)**

- Do not administer albuterol to infants and children (strong)
- Do not administer epinephrine to infants and children (strong)
- Do not administer systemic corticosteroids to infants in any setting (strong)
- Do not administer antibacterial medications to infants and children unless concomitant bacterial infection is present or strongly suspected (strong)
- Do not administer nebulized hypertonic saline in **outpatient setting** to infants (moderate)
- May choose to **NOT** use continuous pulse oximetry for infants and children (weak)
- May choose to **NOT** administer supplemental oxygen if oxyhemoglobin saturation >90% in infants and children (weak)
- Deep nasal suctioning is **NOT** recommended as this can increase lower airway viral load and duration of infection
- AAP guideline recommends against testing for RSV, unless it will change medical management.
- Consider COVID and Influenza testing as appropriate.

Possible Indicators for ED transfer:

Respiratory Distress	Increased work of breathing.
Tachypnea	Infants with RR greater than 60. Children with RR greater than 40.
Hypoxia	Pulse Ox less than 92% awake. Pulse Ox less than 90% asleep.
Dehydration risk	Poor oral intake and/or decreased urination.
Clinical appearance	Ill appearing, lethargy, somnolence, or irritable.

Prevention

- Disinfecting hands before and after contact with patients, after contact with inanimate objects in direct vicinity of patients, and after removing gloves is mandatory for all (strong)
- Alcohol-based rubs should be used for hand decontamination when caring for children with bronchiolitis. Soap and water should be used when alcohol-based hand rubs are not available (strong)
- Counsel caregivers about exposing infant or child to environmental tobacco smoke and smoking cessation when assessing for bronchiolitis (strong)
- Inquire about exposure of infant or child to tobacco smoke when assessing for bronchiolitis (moderate)
- Encourage exclusive breastfeeding for $\geq$ 6 months to decrease morbidity of respiratory infections (moderate)

- Educate personnel and family members on evidence-based diagnosis, treatment, and prevention in bronchiolitis (moderate)
- Prophylaxis against RSV with **Nirsevimab (Beyfortus)**[6]
    - Administer nirsevimab to all infants under 8 months and to children aged 8–19 months at increased risk for severe RSV shortly before the RSV season begins (or within 1 week of birth for those born during the RSV season).
    - Typically administer nirsevimab from October through March in most of the continental U.S.
    - Administration can occur during birth hospitalization or in an outpatient setting.
    - Optimal timing is just before the RSV season, but it can be given anytime during the season to eligible infants and children who have not yet received a dose.
    - Only one dose of nirsevimab is recommended per RSV season.
    - Nirsevimab is generally not needed for infants under 8 months if the pregnant parent received the RSVpreF vaccine 14 or more days before giving birth.
    - If it is unknown whether pregnant parent received RSVpreF vaccine, give nirsevimab to the infant.
- ***Prophylaxis against RSV with Palivizumab (Synagis): if nirsevimab is not available or not feasible to administer, high-risk infants who are recommended to receive palivizumab in the first or second year of life should receive palivizumab, as previously recommended.per AAP Dosing Recommendations[5]:***

    - Administer palivizumab to premature infants with gestational age less than 29 weeks, 0 days (strong)
    - Administer palivizumab during the first year of life in infants with hemodynamically significant heart disease or chronic lung disease of prematurity.
    - During the second year of life consider palivizumab for children with chronic lung disease of prematurity that continue to require support with supplemental oxygen, chronic corticosteroid therapy or diuretic therapy within 6 months of the onset of the second RSV season.
    - Administer a maximum 5 monthly doses (15 mg/kg/dose) of palivizumab during RSV season to infants who qualify for palivizumab in the first year of life (moderate)

Legend

Strong recommendations are defined as particular action is favored because anticipated benefits clearly exceed harm (or vice versa) and quality of evidence is excellent or unobtainable.
Moderate recommendations are defined as a particular action is favored because anticipated benefits clearly exceed harm (or vice versa) and quality of evidence is good but not excellent, or unobtainable.
Weak recommendations are based on balance of benefits and harms and defined as when aggregate database shows evidence of both benefit and harm that appear similar in magnitudes for any available courses of actions.

References

1. Ralston et al. Clinical Practice Guideline: The Diagnosis, Management, and Prevention of Bronchiolitis. *Pediatrics* November 2014; 134 (5): e1474–e1502.

2. DeNicola LK. Bronchiolitis. Medscape. Available at: http://emedicine.medscape.com/article/961963 - overview . Updated March 25, 2018.

3. Updated Guidance for Palivizumab Prophylaxis among Infants and Young Children at Increased Risk of Hospitalization for RSV Infection: https://pediatrics.aappublications.org/content/134/2/415.full

4. Quinonez RA, Ralston SL. Bronchiolitis: the rationale behind the new AAP guideline. *Medscape Pediatrics.* Available at: http://www.medscape.com/viewarticle/834677. Published November 13, 2014. Accessed May 10, 2023.

5. Committee on Infectious Diseases and Bronchiolitis Guidelines Committee, Updated Guidance for Palivizumab Prophylaxis Among Infants and Young Children at Increased Risk of Hospitalization for Respiratory Syncytial Virus Infection. Pediatrics August 2014; 134 (2): 415–420.

6. Jones JM, Fleming-Dutra KE, Prill MM, et al. Use of Nirsevimab for the Prevention of Respiratory Syncytial Virus Disease Among Infants and Young Children: Recommendations of the Advisory Committee on Immunization Practices — United States, 2023. MMWR Morb Mortal Wkly Rep 2023;72:920–925. DOI: http://dx.doi.org/10.15585/mmwr.mm7234a4

7. AAP Nirsevimab Administration Visual Guide. Accessed 05/06/2025.

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