

Bronchiolitis

Definition: Viral illness causing airway inflammation and obstruction of lower respiratory tract in children < 2 years.

Symptoms: starts with rhinitis, congestion; progresses to cough, wheeze, rales, increased respiratory effort; may/may not have fever

Inclusion Criteria

- 1 month-24 months

Exclusion Criteria

- Chronic lung disease
- Airway defects
- Baseline O₂
- Congenital heart disease requiring baseline medication
- Pulmonary hypertension
- Neuromuscular disorder
- Immunodeficiency

Red Flag symptoms?

- Toxic appearance
- Tachypnea without wheezing, crackles, or hypoxia
- Drooling, stridor, dysphagia
- Stridor
- Hives, lip/tongue swelling

No

Yes

Consider Alternate Diagnosis

- Toxic appearance → Sepsis, myocarditis
- Tachypnea without wheezing or hypoxia → Acidemia, DKA
- Apnea, paroxysmal coughing spells → pertussis
- Drooling, stridor, dysphagia → foreign body
- Stridor → croup
- Noisy breathing → laryngotracheomalacia
- Hives, lip/tongue swelling → allergic reaction
- Hypoxia, work of breathing, hepatomegaly → congenital heart disease

1-11 months

12-23 months

History of wheezing with viral illness?
History of response to bronchodilators?
Wheezing, prolonged expiratory phase on exam?

Yes

Consider trial of albuterol

No Response

Strong Response

Treat as asthma
Off bronchiolitis pathway

Assess bronchiolitis disease severity:

- Mental status
- Respiratory exam
- Hydration status

Risk factors for severe illness:

- Age 1-3 months
- Premature
-Especially <29 weeks
- Genetic abnormalities
- History of PICU stay for bronchiolitis
- Cigarette smoke exposure

	MILD	MODERATE	SEVERE
Mental Status	Alert, appropriate	Fussy or anxious	Lethargic or inconsolable
RR			
<2 mos.	<60	61-80	>80
2-12 mos.	<50	51-70	>70
1-2 yrs.	<40	41-60	>60
Retractions	No or mild retractions: subcostal or intercostal	2 of the following: subcostal, intercostal, substernal, or nasal flaring	3 of the following: subcostal, intercostal, substernal, suprasternal, supraclavicular, nasal flaring, grunting, head bobbing
Wheezing	None/end expiratory only	Expiratory wheeze only	Inspiratory & expiratory or diminished breath sounds

Note: A patient's bronchiolitis severity (mild, moderate, or severe) = the highest rating in any category
This clinical score was derived from the "Baseline Assessment and Pathway Status Determination" chart by

Mild

Moderate

Severe

Suction

If febrile

Antipyretic

Reassess

- Mental status
- Work of breathing
- Feeding/hydration

Moderate

Severe

- Reassess
- Oseltamivir if influenza

Disposition

Discharge Criteria

- Mild work of breathing
- SpO₂ >90%
- Adequate PO intake Follow up planned (if warranted)

- Oxygen
- IV hydration if dehydrated
- Oseltamivir if influenza

Disposition

Inpatient Criteria

- SpO₂ <90%
- Progressing
- Caregiver uncomfortable
- Suction needs more than can be done at home
- Unable to maintain hydration

- Respiratory support: Oxygen, HHFNC, NIPPV
- NPO, IV hydration
- Oseltamivir if influenza

Pediatric Data* Strongly Recommends Against

- Chest radiographs*
-Unless toxic-appearing, critically ill, or clinical concern for pneumothorax
- Lab studies*
- Viral testing
-With exception of influenza and/or COVID and Ochsner PICU admissions
- Albuterol* Beta-agonists
- Racemic epinephrine*
- Corticosteroids*
- Antibiotics*
-Unless known bacterial infection (e.g., otitis) or toxic appearance

*AAP Bronchiolitis Clinical Practice Guideline strongly recommends against this test or intervention; anticipated benefits clearly exceed harms (or vice versa) and quality of evidence is excellent or unobtainable; based on AAP guidance, clinicians should follow strong recommendations unless there is a clear and compelling rationale for an alternative approach

References

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