Maritime Child Health
IWK Health

The Pediatric Pulse

Keep your finger on the pulse of what's happening in pediatric medicine

November 2025

Bronchiolitis

Bronchiolitis is a viral lower respiratory tract infection, characterized by obstruction of the small airways due to cell inflammation, edema and necrosis in the small airways. It is the most common reason for admission to hospital in the first year of life. It is usually caused by Respiratory Syncytial Virus (RSV) and typically occurs in the late fall and winter months. Bronchiolitis is a self-limiting disease with the cornerstone of management being supportive care.

DIAGNOSIS:

- **Clinical diagnosis** based on the patient's history and physical exam.
- Typically presents as a first episode of wheezing in children <12 months of age in the fall/winter months.
- Wide range of symptoms & severity from mild URTI to impending respiratory failure.
- Course begins with a 2-3 day viral prodrome of fever, cough & rhinorrhea progressing to tachypnea, wheeze, crackles and varying degree of respiratory distress (indrawing, grunting, nasal flaring, abdominal breathing).
- Routine lab tests/CXRs are typically **NOT** indicated.

CLINICAL SEVERITY ASSESSMENT:

- **Mild:** little to no respiratory distress and have a normal mental status and activity level. May have transient self-resolving oxygen desaturations.
- **Moderate:** Tachypneic with moderate respiratory distress (ie. mild to moderate retractions without grunting or head bobbing), no apnea, and normal level of alertness. May have hypoxemia (SpO_2 <90 percent) on room air.
- **Severe:** Tachypnea, considerable respiratory distress (ie, retractions, grunting, nasal flaring, head bobbing), and hypoxemia. Other findings that indicate severe illness include agitation, apnea, and/or poor responsiveness.

ADMISSION TO HOSPITAL:

- Signs of severe respiratory distress
- Dehydration/history of poor intake, requiring hydration support
- Supplemental oxygen required to keep 02 sats above 90%
- Cyanosis/history of apnea
- Family unable to cope

Populations at a **higher risk for serious disease** include infants who were born prematurely (< 35 weeks gestation), infants under 3 months of age, those with an underlying cardiopulmonary disease, and those who are immunodeficient.

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TREATMENT:

- For pediatric patients who require admission, supportive care with hydration or feeding support as required, minimal handling, nasal suctioning, and supplemental oxygen therapy forms the mainstay of treatment.
- Most infants/children do well; symptoms tend to peak around day 5 of illness.

OXYGEN:

- Supplemental oxygen is only necessary if saturations are persistently <90%. Patients should be on continuous Sp02 monitoring if receiving supplemental oxygen.
- **Low-flow oxygen** via nasal cannula or simple face mask.

Flow Rates: Newborn max 1L/min
Infant (<5kg) max 2L/min
Peds (<20kg) max 4L/min
Peds/Teens (>20kg) max 6L/min

Simple face mask: 6-10L/min
to prevent re-breathing of C02

- **High flow nasal cannula** heated & humidified oxygen can improve work of breathing and oxygenation in moderate/severe respiratory distress. Can deliver a higher Fi02 than low flow therapy. Start at 2L/kg/min MAX rate 50L/min.
- Infants/children with signs of respiratory failure (respiratory acidosis, altered mental status, and/or apnea) or persistent severe respiratory distress may need advanced support with either **non-invasive ventilation** (CPAP/BIPAP) or **invasive ventilation** (endotracheal intubation).

HYDRATION:

- Use smaller, more frequent oral feeds, as tolerated.
- Gentle suctioning of the nares may be considered prior to feeds.
- Nasogastric (NG) or intravenous (IV) rehydration may be necessary.
- NG and IV routes are equally effective with no difference in length of hospital stay. NG insertion may require fewer attempts if patient is dehydrated.

Salbutamol, corticosteroids, antibiotics, antivirals, hypertonic saline, cool mist/aerosol therapies **NOT RECOMMENDED** due to lack of evidence of efficacy.

DISCHARGE: 02 sats >90% on room air, adequate oral hydration, improved work of breathing.

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Scan the QR Codes below to see the Canadian Pediatric Society's Position Statement on Bronchiolitis, as well as TREKK's Bronchiolitis resources for healthcare providers.

Bronchiolitis Position Statement

Bronchiolitis Resources HCP

Comfort Corner

Access to effective pain management is a fundamental human right but children continue to experience preventable, unmanaged, and untreated pain. In 2023, Solutions for Kids in Pain (SKIP) and the Health Standards Organization developed the world's first standard for pediatric pain establishing guidelines for the delivery of pain management from birth to 19 years. It does not prescribe a particular approach or intervention to pain management, but aims to improve care by following the foundational principles of the Lancet Child & Adolescent Health Commission.

Maritime Child Health has partnered with SKIP to implement this standard across the region to make pain matter, understood, visible and better for all Maritime children. Contact our team to learn more!

Download for free here

References

TREKK (2023). *Bottomline Recommendations:* https://trekk.ca/resources/bottom-line-recommendations-bronchiolitis

CPS (2021). *Bronchiolitis: Recommendations for diagnosis, monitoring and management of children one to 24 months of age*. https://cps.ca/en/documents/position/bronchiolitis

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