Queensland Paediatric Emergency Care

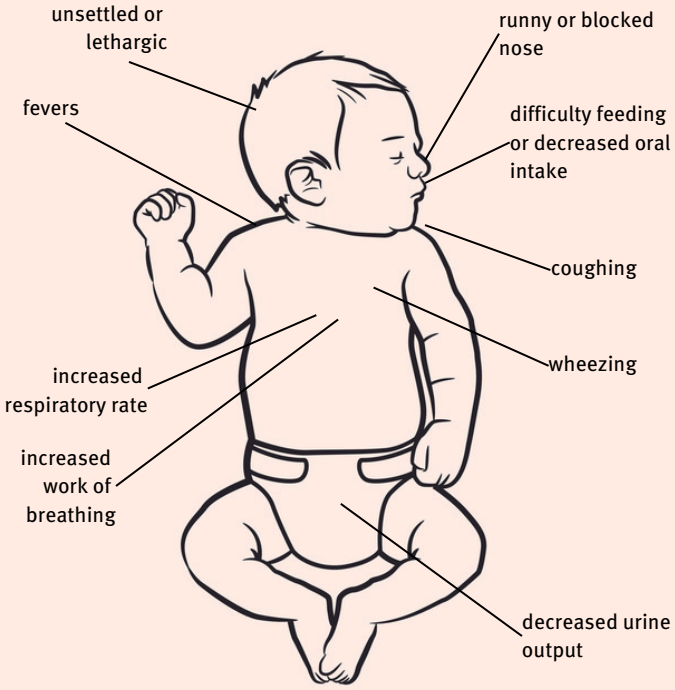
Skill Sheets

Bronchiolitis - Common Emergency Presentations

Bronchiolitis is a lower respiratory tract infection that can be caused by several different viruses including Respiratory Syncytial Virus, Adenovirus and Parainfluenza virus. Bronchilolitis occurs between 0-12 months of age.

The viruses cause the bronchiolar mucosa to swell and the lumen to fill with mucus and exudate. This results in bronchial obstruction which contributes to the presentation of increased respiratory effort and wheezing. In the early months of an infant's life they are obligatory nasal breathers. Bronchiolitis can cause their nasal passages to be partially blocked. This obstruction may lead to increased respiratory effort and difficulty feeding, resulting in varying degrees of dehydration. Bronchiolitis can last for 7-10 days with peak severity occurring day 2 or 3.

Signs and Symptoms



NB: This list is not exhaustive. All symptoms may not be present.

Risk factors for severe disease

- gestational age less than 37 weeks
- chronological age at presentation less than 10 weeks
- chronic lung disease
- congenital heart disease
- chronic neurological conditions
- Indigenous
- failure to thrive
- Trisomy 21
- post-natal exposure to cigarette smoke
- breast fed for less than 2 months

Assessment of severity of acute bronchiolitis

	Mild:	Moderate:	Severe:
Behaviour	Normal	Some/intermittent irritability	Increasing irritability and/or lethargy, fatigue
Respiratory rate	Normal to mild tachypnoea	Moderate respiratory distress	Marked increase or decrease
Use of accessory muscles	Nil to mild chest wall contraction	Moderate chest wall retractions Tracheal tug Nasal flaring	Marked chest wall retractions Marked tracheal tug Marked nasal flaring
Room air oxygen saturations (FiO_2 21%)	SpO_2 greater than 92%	SpO_2 between 90% and 92%	SpO_2 less than 90% May not be corrected by oxygen therapy
Apnoeic episodes	None	May have a brief apnoea	May have increasingly frequent or prolonged apnoea
Feeding	Normal	May have difficulty with feeding or reduced feeding volumes or time	Reluctant or unable to feed

Treatment

The management of bronchiolitis focuses on supportive cares to ensure adequate oxygenation and supporting hydration. Although an obstructive respiratory illness, bronchodilators are not recommended in treating infants with bronchiolitis. For information on treatment and medication dosages in the treatment of bronchiolitis refer to the 'Management' section of the Queensland Paediatric Emergency Care Guideline: Bronchiolitis - Emergency management in children.

Tips for caring for children with bronchiolitis

- Ensure regular vital signs and respiratory observations are carried out and documented. For guidance on the observation frequency for your patient, discuss with senior nursing staff and the treating medical officer. See the Queensland Health Paediatric Early Warning and Response System Tools page for the CEWT tool appropriate for use in your workplace.
- Keep a strict fluid balance chart to ensure an accurate depiction of the infant's hydration status. This includes weighing nappies, timing breast feeds and recording vomits/possets.
- Where possible, nursing cares should be grouped together to reduce distress to the infant and promote maximal rest.
- Review with treating doctor the need for nasopharyngeal suctioning. This may clear the nostrils and assist feeding in infants with moderate distress. Frequent suctions are not recommended due to the risk of nasal trauma.
- The administration of prefeed nasal saline may be helpful in improving feeds by loosening secretions. This may help reduce the need for suctioning.
- If there has been a significant decrease in feeding or transition to nasogastric feeds, ensure support is provided to breast-feeding mothers in the form of lactation advice and that equipment is provided to pump. You can learn more about supporting the breast-feeding mother here: Children's Health Queensland Video: Supporting the breast-feeding mother.
- Infants who are discharged from emergency on day 1 or 2 of illness may get worse before they get better. Ensure parents understand this and provide discharge education to families on when to seek medical attention: Queensland Paediatric Emergency Fact Sheet: Bronchiolitis

For further information:

Guideline:
Queensland Paediatric Emergency Care Guideline: Bronchiolitis - Emergency management in children

Videos:
Bronchiolitis
Respiratory Assessment

Skill Sheets:
Respiratory Assessment
Hydration Assessment
Vital Signs Assessment in Paediatrics

Parent Fact Sheet (available in English, Arabic, Swahili, Chinese (simplified), Vietnamese, Somali (written and audio)

References:

Children's Health Queensland. (2022, September 15). Bronchiolitis– Emergency management in children. Queensland Paediatric Emergency Care Clinical Guideline. Accessed 20 March 2023 from https://www.childrens.health.qld.gov.au/for-health-professionals/queensland-paediatric-emergency-care-qpec/queensland-paediatric-clinical-guidelines/bronchiolitis

Faan, P. R. P. M. H. J., & C(Inc), R. D. (2018). Childhood Oxygenation Problems. In Wong's Nursing Care of Infants and Children (11th ed., pp. 902–903). Mosby.

Queensland Health State-wide ED Nurse Educator Committee, Lucas, L., Opie, A., Ruff, C., Booker, C., Armit, L, QEDSAP, HIU. (Eds.) (2021). In Queensland Health: Transition Support Program - Emergency. Module 2 - Paediatric Care in the Emergency Department (5th ed.). State of Queensland (Queensland Health).

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Skill Sheet Disclaimer