

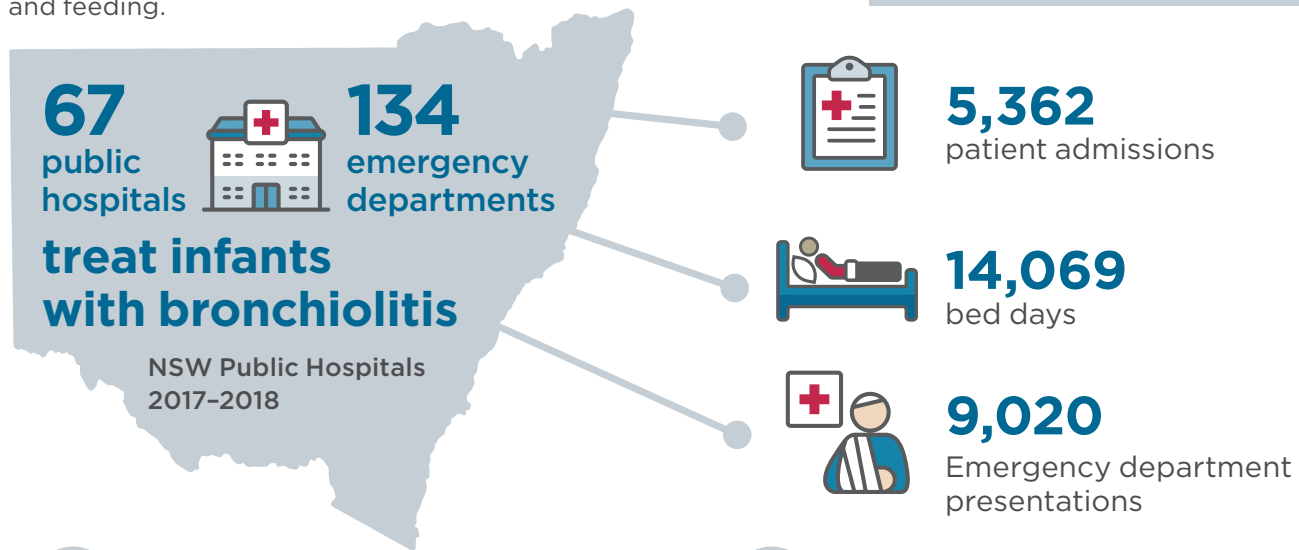
# Acute bronchiolitis

## Clinical priorities

Acute bronchiolitis is a common viral chest infection that mainly affects infants under the age of one. It is most common in the autumn and winter. It causes small tubes in the lungs (bronchioles) to become narrowed by inflammation and mucus, leading to difficulty breathing and poor feeding. A small proportion of infants require treatment to help their breathing and feeding.

### Aims of the initiative

- Reduce unwarranted clinical variation
- Reduce unnecessary investigations and ineffective treatments.



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### DIAGNOSTICS

Diagnosis is based on clinical features and physical examination. Symptoms include cough, tachypnoea, chest wall retraction and wheezing. Most children with bronchiolitis do not need viral tests, blood tests or chest X-rays.

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### ACUTE MANAGEMENT

Treatment is mainly supportive, ensuring the child is hydrated and gets enough oxygen. Treatments that have no benefit include: bronchodilators; steroids; and antibiotics.

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### OPTIMISING HEALTH

Clinicians should identify babies who are at higher risk of severe illness. For babies who are able to go home, the healthcare team provides families with clear information about safe home management and when to seek further medical advice.



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### WORKING WITH FAMILIES

In 2018 seven hospitals were focused on reviewing the care they provided to babies with bronchiolitis. Families were followed up about their hospital experience, to ensure services are meeting their needs.

In 2018, the Leading Better Value Care (LBVC) bronchiolitis initiative investigated current practice and focused on aligning investigations and treatment practices with the *NSW Health Acute Management of Bronchiolitis Clinical Practice Guideline* (GL2018\_001).

Seven local sites used data and worked with families to guide solution development. In 2019, every local health district (LHD) has the opportunity to join the initiative. The impact of change will be measured by the economic analysis and the experience of families.



### Diagnosis

Viral bronchiolitis is a clinical diagnosis based on typical history and examination. A baby with bronchiolitis initially has signs of a cold, then develops a cough, wheezing and difficulty breathing and feeding. This progresses over the next few days, but in most cases gradually improves over a week.

Most infants do not need investigations. Viral tests and blood tests have no role in management. Chest x-rays are useful in severe cases or to assess another diagnosis, but are not routinely indicated.



### Acute management

Treatment is mainly supportive, ensuring the baby has adequate oxygen and fluids. Oxygen therapy should be administered when oxygen saturations are persistently less than 92%. In more severe cases, there are other types of treatment to support breathing. Additional fluids may be given by a tube or a drip.

There are several treatments that are recognised to have no benefit, and are not recommended in the clinical practice guideline. These include:

- bronchodilators
- steroids
- adrenaline
- hypertonic saline
- antibiotics
- antivirals
- chest physiotherapy.

Sites will explore the option of an acute review clinic to provide an alternative to admission and facilitate discharge home.



### Optimising health

Some babies, such as those who had a low birth weight or who are premature, have an increased risk of severe bronchiolitis. These high-risk infants should be monitored for unexpected deterioration.

Clinical teams provide families with clear information to facilitate safe home management, including information about:

- what to expect
- how to care for the baby
- when to seek medical advice
- when to come for a planned review.



### Working with families

As part of Leading Better Value Care, in 2018 seven hospitals focused on investigating and improving current service practices for bronchiolitis.

In 2019, families will be asked about their hospital experience to review if services are meeting their needs and to help guide improvements at the local level, and at hospitals across NSW.

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## Evidence

- Data source: Secure Analytics for Population Health Research and Intelligence (SAPHARI), Centre for Epidemiology and Evidence, NSW Ministry of Health. Extracted by Clinical Monitoring, Economics and Evaluation, ACI.
- NSW Ministry of Health: Infants and Children – Acute Management of Bronchiolitis Clinical Practice Guideline (GL 2018\_001) [https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/GL2018\\_001.pdf](https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/GL2018_001.pdf)
- NSW Bronchiolitis Factsheet: Developed by the John Hunter Children's Hospital, Sydney Children's Hospital and Children's Hospital at Westmead. <https://www.schn.health.nsw.gov.au/files/factsheets/bronchiolitis-en.pdf>
- Paediatric Research in Emergency Departments International Collaborative (PREDICT), 2016 Australasian Bronchiolitis Guideline (Complete Version and Bedside Clinical Guideline). <http://www.predict.org.au/publications/2016-pubs/>