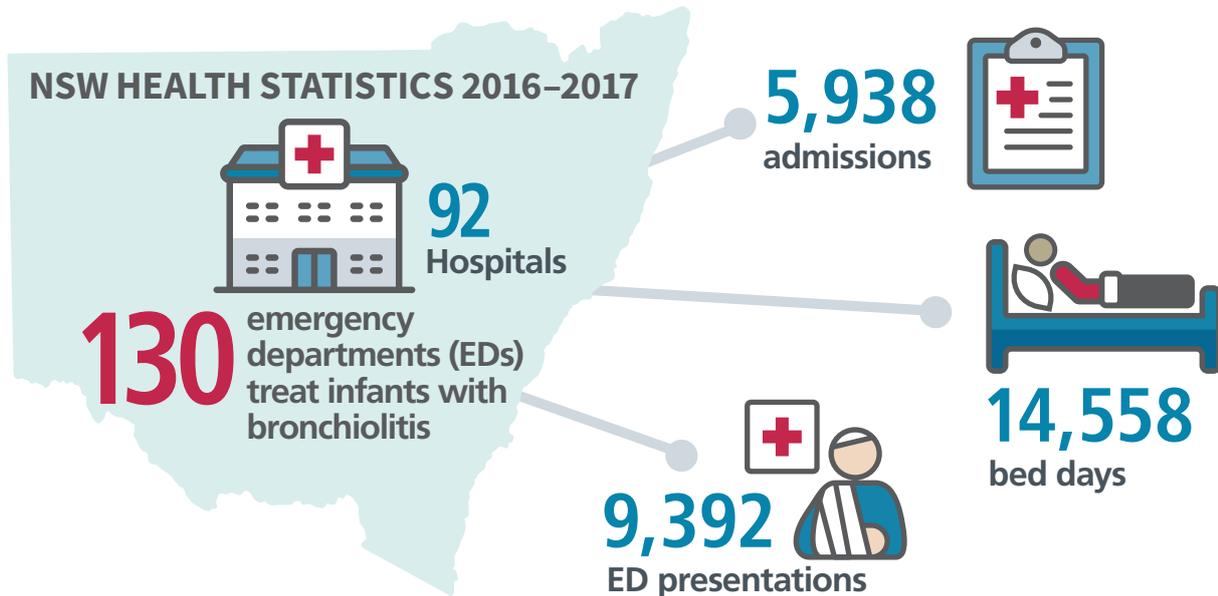


# Acute bronchiolitis: quality improvement priority brief

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. The infection causes the small tubes in the lungs (bronchioles) to become narrowed by inflammation and mucous, leading to difficulty breathing and poor feeding. A small proportion of infants require treatment to help their breathing and feeding. Four key areas of care have been identified as a priority for local and statewide improvement. This initiative is in its explorative phase and information will be updated as the project progresses.



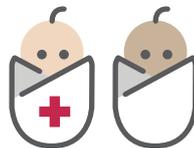
1



## 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.

2



## ACUTE MANAGEMENT

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

- bronchodilators
- steroids
- antibiotics.

3



## 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.

4



## WORKING WITH FAMILIES

In 2018 seven hospitals will be focusing on reviewing the care they provide to babies with bronchiolitis. Families will be followed up about their hospital experience, to ensure services are meeting their needs. Improvements should be made where needed.

The Leading Better Value Care (LBVC) Bronchiolitis initiative will investigate current practice and focus on aligning investigations and treatment practices with the *NSW Health Acute Management of Bronchiolitis Clinical Practice Guideline (GL2018\_001)*.

Local sites will use data and work with families to guide solution development. The impact of change will be measured by the economic analysis and the experience of families. As this initiative is in its explorative phase, information will be updated as the project progresses.

## 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. This includes:

- 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.

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 will focus on investigating and improving current service practices for bronchiolitis.

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.

## Evidence

- 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/>