

## Children and Infants with Sore Throats - Acute Management

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**Summary** Basic clinical practice guidelines for the treatment of infants and children with sore throats.

**Replaces Doc. No.** Children and Infants with Sore Throat - Acute Management [PD2005\_390]

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**Applies to** Area Health Services/Chief Executive Governed Statutory Health Corporation, Board Governed Statutory Health Corporations, Affiliated Health Organisations - Non Declared, Public Health System Support Division, Community Health Centres, Divisions of General Practice, Government Medical Officers, NSW Ambulance Service, NSW Dept of Health, Private Hospitals and Day Procedure Centres, Public Health Units, Public Hospitals

**Audience** Emergency Departments, Children's Wards

**Distributed to** Public Health System, Community Health Centres, Divisions of General Practice, Government Medical Officers, Health Professional Associations and Related Organisations, NSW Ambulance Service, NSW Department of Health, Public Health Units, Public Hospitals, Private Hospitals and Day Procedure Centres, Tertiary Education Institutes

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### Director-General

This Policy Directive may be varied, withdrawn or replaced at any time. Compliance with this directive is **mandatory** for NSW Health and is a condition of subsidy for public health organisations.

## ACUTE MANAGEMENT OF INFANTS AND CHILDREN WITH SORE THROAT

This policy directive rescinds and replaces PD2005\_390 'Acute Management of Infants and Children with Sore Throats'.

### INTRODUCTION

The Department has revised PD2005\_390 'Acute Management of Infants and Children with Sore Throats' subsequent to changes made by appropriate clinical experts advice.

The attached clinical practice guideline should apply to all facilities where paediatric patients are managed and were prepared for the NSW Health Department by an expert clinical reference group under the auspice of the Statewide Paediatric Steering Committee. Area Health Services are required to have local guidelines in place in all hospitals and facilities likely to be required to assess or manage children with sore throat. In developing local guidelines other relevant Departmental documents should be considered eg. *NSW Health Department Guidelines for the Hospitalisation of Children Revised July 1998* (State Health Publication SWS 980088).

It should be noted that this document reflects what is currently regarded as a safe and appropriate approach to care. However, as in any clinical situation there may be factors, which cannot be covered by a single set of guidelines. This document should be used as a guide, rather than as a complete authoritative statement of procedures to be followed in respect of each individual presentation. It does not replace the need for the application of clinical judgment to each individual presentation.

Robyn Kruk  
**Director-General**

# Acute management of infants and children with sore throats

*Clinical Practice Guidelines*



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A revision of this document is due in March 2007.

March 2006

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# Introduction

These Guidelines are aimed at achieving the best possible paediatric care in all parts of the State. The document should not be seen as a stringent set of rules to be applied without the clinical input and discretion of the managing professionals. Each patient should be individually evaluated and a decision made as to appropriate management in order to achieve the best clinical outcome.

The formal definition of clinical practice guidelines comes from the National Health and Medical Research Council:

*'systematically developed statements to **assist** practitioner and patient decisions about appropriate health care for specific clinical circumstances.'* (National Health and Medical Research Council A Guide to the Development, implementation and evaluation of Clinical Practice Guidelines, Endorsed 16 November 1998, available from [www.nhmrc.gov.au/publications/synopses/cp65syn.htm](http://www.nhmrc.gov.au/publications/synopses/cp65syn.htm))

It should be noted that this document reflects what is currently regarded as a safe and appropriate approach to care. However, as in any clinical situation there may be factors which cannot be covered by a single set of guidelines, this document should be used as a guide, rather than as a complete authoritative statement of procedures to be followed in respect of each individual presentation. It does not replace the need for the application of clinical judgment to each individual presentation.

This document represents basic clinical practice guidelines for the acute management of a sore throat. Further information may be required in practice; suitable widely available resources are provided on page 9.

Each Area Health Service is responsible for ensuring that local protocols based on these guidelines are developed. Area Health Services are also responsible for ensuring that all staff treating paediatric patients are educated in the use of the locally developed paediatric guidelines and protocols.

In the interests of patient care it is critical that contemporaneous, accurate and complete documentation is maintained during the course of patient management from arrival to discharge.

**Parental anxiety should not be discounted: it is often of significance even if the child does not appear especially unwell.**

# Overview

Sore throat is usually due to a simple bacterial or viral infection.

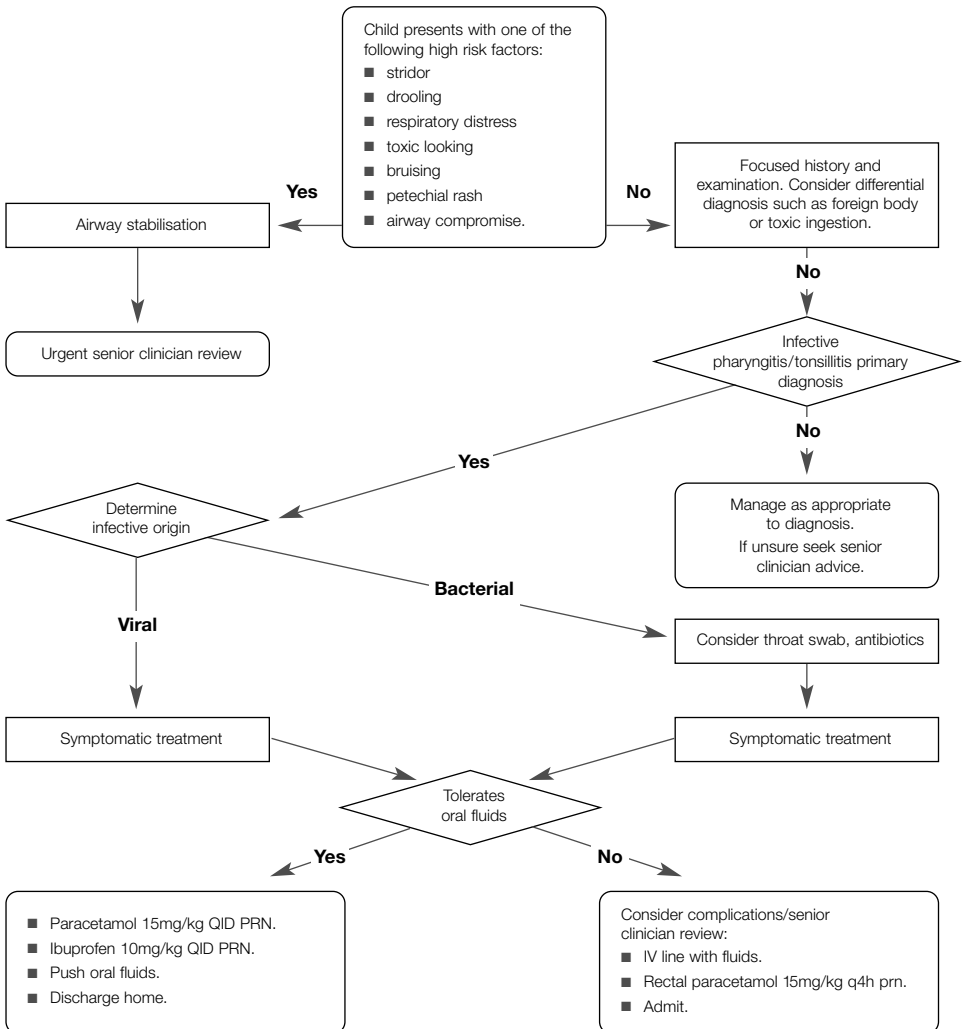
In children under two years of age the cause is usually a viral infection. Symptomatic treatment is the most common treatment.

However, a number of more serious conditions need to be considered:

- epiglottitis
- peritonsillar abscess
- diphtheria
- leukaemia
- severe tonsillar hypertrophy with EB virus infection
- retropharyngeal abscess
- foreign body
- toxic ingestion.

# Assessment and management

## Sore throat – paediatric management flowchart



The taking of a thorough history together with a visual examination is likely to indicate whether a sore throat has a viral or bacterial origin, and will indicate the treatment required.

Features which may suggest the child or infant is suffering from a more serious condition include:

- stridor or respiratory distress
- muffled voice
- drooling
- torticollis
- asymmetric pharyngeal swelling
- grey–white pharyngo–tonsillar membrane
- bruising or petechial rash
- toxic appearance
- dehydration
- lymphadenopathy > 2cms.

If the above features are present, ensure airway stability and discuss the case with a more senior colleague.

## Viral pharyngitis

Viral pathogens include adenovirus, rhinovirus, enterovirus, CMV, coxsackie virus, EBV and herpes simplex virus.

Vesiculation and ulceration suggest herpes virus and coxsackie virus. Conjunctivitis is associated with adenovirus. Viral cultures are rarely helpful.

## Stomatitis

Causes:

- trauma
- aphthous ulcers
- monilial
- herpes simplex
- coxsackie virus
- bacterial agents.

If fluid intake is restricted, admission for IV hydration is often necessary after other avenues for oral hydration have been exhausted.

## Bacterial pharyngitis

Individual elements of the history or physical examination are not useful predictors of the likelihood of Group A streptococcal infection (GAS).

The presence of tonsillar or pharyngeal exudate or recent exposure to GAS, suggest the possibility. It is useful to apply Centor et al's (1981) four-item clinical prediction rule:

1. Fever
2. Tender anterior cervical lymph nodes
3. Tonsillar or pharyngeal exudate
4. Absence of cough.

Presence of three or four items is enough to support an empirical diagnosis of GAS bacterial pharyngitis, while the presence of two items would justify consideration of a throat swab or rapid antigen testing (ASOT) if this test is available. If only one item is present or all items are absent, a diagnosis of GAS bacterial pharyngitis can be excluded.

## Testing

### Throat swabs

- Throat swabs are generally not recommended, but if performed, the swab should be vigorously swabbed around the tonsils and pharynx with care to avoid contact with the uvula or soft palate.

### Rapid antigen testing (ASOT)

- This test is not known to alter use of antibiotics or general patient management.

## Assessment and management

### Antibiotics

The only justification for testing would be to decide whether or not to use antibiotics.

Antibiotics generally confer limited symptomatic benefit over pure symptomatic management (one day less symptoms), and minimal, if any benefit in preventing suppurative and non-suppurative complications of GAS infection except possibly in high risk populations such as indigenous groups, especially Aboriginal people.

### Uvulitis

Generally a streptococcal infection, but may also be caused by Hib, staphylococcus and pneumococcus.

### Symptomatic treatment

- Paracetamol 15mg/kg/dose given six-hourly (review after 24 hours).  
Ibuprofen 5–10mg/kg/dose given six-hourly (review after 24 hours).
- Encourage oral fluid intake.
- Topical anaesthetic (xylocaine viscous) is generally not recommended.

### Further complications to consider

#### Peritonsillar abscess

Suggested by an increasingly sore throat with dysphagia and spasm of the face muscles. The tonsils and uvula are displaced to the opposite side. Surgical drainage may be necessary.

#### Obstructive apnoea

May be past history of sleep problems and snoring made worse by respiratory infection. The obstruction is evident by stertorous (snoring) and laboured breathing and apnoea, usually worse when child is asleep.

#### Admission

Hospital admission is indicated for children with airway obstruction, inability to tolerate oral fluids, presence of dehydration or toxicity suggestive of systemic sepsis

#### Follow-up advice

Parents should be advised that if their children's symptoms of sore throat persist for longer than 48 hours, or other symptoms develop to complicate the illness of sore throat, then they should return with their child for further assessment and review.

# Parent information sheet – sore throat

Please see the following internet sites for parent information sheets:

- The Children's Hospital at Westmead  
[www.chw.edu.au](http://www.chw.edu.au)
- The Sydney Children's Hospital  
[www.sch.edu.au](http://www.sch.edu.au)
- Kaleidoscope Hunter Children's Health Network [www.kaleidoscope.org.au](http://www.kaleidoscope.org.au)

# Evidence base for acute management of sore throat

## Bacterial pharyngitis

Individual elements of the history or physical examination are not useful predictors of the likelihood of Group A streptococcal infection (GAS).

Only the presence of tonsillar or pharyngeal exudate or recent exposure to GAS, had likelihood ratios as high as about two to three, and only absence of tender anterior cervical lymphadenopathy, or tonsillar enlargement or exudate had negative likelihood ratios as low as about 0.6 to 0.8. (Ebell et al 2000)

Centor et al's (1981) proposed the four-item clinical prediction rule:

- fever
- tender anterior cervical lymph nodes
- tonsillar or pharyngeal exudate
- absence of cough.

This rule has been validated in repeat studies as a useful predictor (sensitivity 83 per cent and specificity 94 per cent in all comers, but 93 per cent sensitivity in children).

Presence of three or four items is enough to support an empirical diagnosis of GAS bacterial pharyngitis.

Presence of two items would justify consideration of a throat swab or rapid antigen testing (ASOT) if this test is available.

Presence of one item only or absence of any items is enough to empirically exclude GAS bacterial pharyngitis. (Bisno A L. et al 2002) (Bisno A L. 2001) (Cooper R J, Hoffman J R. et al 2001.)

## Throat swabs

Throat swabs are technique dependent, do not differentiate between acute infection and carrier-state and are not generally recommended.

If performed, the swab should be vigorously swabbed around the tonsils and pharynx with care to avoid contact with the uvula or soft palate. (Schwartz B. et al 1998)

## Rapid antigen testing (ASOT)

Using a throat swab as a gold standard, ASOT is 64 per cent to 90 per cent sensitive and 90 per cent specific. This test did not alter use of antibiotics or general patient management. (Schwartz B et al 1998) (Hedges J R. et al 1991).

## The use of antibiotics

The only justification for ASOT testing would be to decide whether or not to use antibiotics. The balance of evidence in The Cochrane Review and in a review by Del Mar in Australia was that antibiotics confer limited symptomatic benefit over pure symptomatic management (one day less symptoms), and minimal, if any benefit in preventing suppurative and non-suppurative complications of GAS infection except possibly in high risk populations such as indigenous groups, especially Aboriginal people. (Del Mar C 1992; Graham A 1999; Thomas M 2000.)

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