

# PERTUSSIS – EMERGENCY DEPARTMENT MANAGEMENT

## PRACTICE GUIDELINE <sup>®</sup>

### DOCUMENT SUMMARY/KEY POINTS

- This guideline details:
  - the clinical presentation and the diagnosis of pertussis (whooping cough) infection
  - the management and treatment of pertussis
  - recommendations for diagnostic testing to confirm pertussis infection
  - treatment of household contacts

### CHANGE SUMMARY

- SCH initiated the reviewed to update treatment.
- Now a joint Emergency Department Guideline for use at SCH and CHW.

### READ ACKNOWLEDGEMENT

- All ED clinical staff: nurses and medical officers need to understand and acknowledge this document.

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

<b>Approved by:</b>	SCHN Policy, Procedure and Guideline Committee	
<b>Date Effective:</b>	31 May 2016	<b>Review Period:</b> 3 Years
<b>Team Leader:</b>	Department Head – ED	<b>Area/Dept:</b> Emergency

## Pertussis (Whooping Cough)

### Clinical

Pertussis is a respiratory infection caused by the bacterium *Bordetella pertussis* (or *Bordetella parapertussis*). It is characterised by:

- paroxysms of coughing;
- inspiratory whoop;
- post-tussive vomiting **and/or**
- persistent cough over 2 weeks.

These features may be more subtle in young infants. Infants younger than 6 months are at the highest risk of morbidity and mortality from pertussis. They may require hospitalisation for supportive care of complications such as apnoea, hypoxia and feeding difficulties. The illness has 3 phases:

1. **Catarrhal** with rhinorrhoea, low grade temperature and mild cough lasting 1-2 weeks,
2. **Paroxysmal** with worsening cough lasting 4 weeks and
3. **Convalescent** with gradual lessening of cough for another month. Cough may recur with upper respiratory tract infections for up to a year.

Complications include pneumonia, seizures and encephalopathy related to hypoxia.

### Transmission:

Infection is spread by respiratory droplets or direct contact. Incubation is usually 7-10 days but can be up to 21 days. Susceptible household contacts are highly likely to develop pertussis.

### Infectious Period:

Children with pertussis are infectious from the early catarrhal stage to 3 weeks after the cough starts or after 5 days of appropriate antibiotics. They should be excluded from school or preschool until the infectious period is over. Asymptomatic contacts do not need to be excluded.

### Immunisation

Acellular vaccine (x 3 doses) is 85% effective in preventing pertussis although immunity wanes after a few years.

## Diagnosis

**Clinical:** The diagnosis should be suspected based on the clinical history.

- **Investigations:**

- A nasopharyngeal aspirate/swab for PCR is the investigation of choice. It is usually negative after 21 days of cough onset, or after 5-7 days after effective antibiotic therapy has been commenced.
- IgA serology should not be routinely performed.
- White Cell Count – the presence of a lymphocytosis is not useful.  
([See: Laboratory diagnosis of pertussis](#))

## Management

Treat children on the basis of clinical suspicion; do not wait for microbiological confirmation of disease.

- **Admit** all infants under 6 months with suspected pertussis and children with cyanosis or apnoea. Organise frequent observations and monitoring with pulse oximetry. Intensive care may be needed for children with episodes of cyanosis or apnoea.
- **Antibiotics** – antibiotic treatment in the catarrhal and early paroxysmal stages may ameliorate the disease. Treatment in established cases also helps minimise spread.

### Recommendations:

- Azithromycin  
infants and child < 6 months: 10 mg/kg orally daily for 5 days  
child older than 6 months: 10 mg/kg (up to 500 mg) orally, for the first dose, then 5mg/kg (up to 250 mg) orally, daily for a further 4 days  
adults: 500 mg orally, for the first dose, then 250 mg orally, daily for a further 4 days  
**OR**
- Trimethoprim+sulfamethoxazole (*dose based on trimethoprim component*)  
child 1 month and older: 4mg/kg (up to 160mg) orally, 12-hourly for 7 days  
**OR**
- Clarithromycin  
child: 7.5 mg/kg (up to 500 mg) orally, bd for 7 days adult: 500mg orally, bd for 7 day

**Please note: Prescribing azithromycin for pertussis is outside of the PBS.**

*The approach that should therefore be taken is as follows:*

- Log request for azithromycin into online approval system (Guidance MS for SCH; online ID approval site for CHW)
- During office hours, family to take prescription to SCH/CHW pharmacy
- Outside office hours, dispense from ED

Erythromycin is no longer recommended due to low tolerability and reduced compliance.  
There is no clinical evidence to recommend the use of roxithromycin.

- ◆ **Household Contacts** - Treatment with antibiotics is recommended for selected household or institutional contacts of patients with pertussis.
  - All household members if the household includes an infant less than 12 months of age.
  - A child 12-24 months who has received less than 3 doses of pertussis vaccine.
  - A woman in the last month of pregnancy.
  - Household members who have close dealings with children under 5 years of age or with pregnant women.
  - Where the case attended childcare with children or staff who are not fully immunised.

Drug doses and duration are the same as for cases (see above). See NSW Public Health Guidelines: ([www.health.nsw.gov.au/infect/pdf/pertussis.pdf](http://www.health.nsw.gov.au/infect/pdf/pertussis.pdf) - Local Holding)

NB: If household contacts require treatment, siblings that are present in the ED should be treated by ED staff; parents and siblings not present in the ED should be treated by their GP.

## Public Health

The Public Health Unit should be informed about **all suspected and confirmed cases** of pertussis (Extension 28233) or Public Health Officer on-call (via switchboard).

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