



### What is Pertussis?

- Highly infectious disease that damages respiratory epithelium.
- Produces respiratory obstruction and paroxysmal coughing resulting in gasping for breath.
- Coughing spasms are often followed by vomiting.
- The cough can last for months.
- Infants less than 6 months and adults often do not have the characteristic whoop.
- It is caused by a bacteria – *Bordetella pertussis*

### How is Pertussis spread?

- By respiratory droplets
- Parents and family are the main sources of infections for babies.

### When is Pertussis infectious?

- The incubation period is about 14 days (6-20 days)
- It is highly infectious in the early catarrhal (runny nose) stage **before** the onset of the cough.
- Communicability decreases and becomes negligible in about three weeks.
- Appropriate antibiotics decreases the period of infectivity to five days or less.

### Who is affected by Pertussis?

- Children less than 6 months are most susceptible as maternal antibodies do not protect newborns against infection
- All 3 childhood vaccinations are required to provide optimal protection – any child who has received less than 3 doses of a pertussis containing vaccine should be considered at risk of pertussis.
- Everybody is susceptible to pertussis. Immunity, either by vaccination or exposure to the disease, begins to wane after 6-10 years.
- Vaccine efficacy is 70–80%, so people immunised against pertussis can still contract the disease, but they are likely to have a less severe illness.
- 70–100% of susceptible household contacts and 50-80% of susceptible school contacts are likely to be infected when exposed to pertussis.

### How is Pertussis diagnosed?

- Pertussis is a notifiable disease and is therefore required to be reported to DHS.
- Laboratory confirmation -can be problematic but a NPA or Nasal Swab should be obtained where possible.
- Serology -is highly reliable in the presence of appropriate symptoms.
- Clinical diagnosis -
  - acute illness lasting more than 14 days without another apparent cause
  - a classical paroxysmal cough with whooping and post-tussive vomiting
  - apnoea may be the only manifestation in infants
  - the patient is a contact of a known case.

### How is Pertussis prevented?

- Immunisations are strongly recommended to the following groups
  - Adults **before planning** pregnancy or for both parents **as soon as possible** after birth
  - Adults working with or caring for very young babies, **especially health-care workers**
  - Any adult wishing to protect themselves against whooping cough
- Antibiotics have little effect on the clinical course of disease but can reduce the risk of transmission if commenced within 21 days of cough onset.
- A patient who has been coughing for more than 21 days is no longer infectious and antibiotic treatment and school exclusion are not needed.
- All patients admitted to the hospital with pertussis should be isolated.
- All pertussis cases should be considered infectious until 5 days after commencing antibiotics.

### Boostrix Vaccine dTpa; diphtheria-tetanus-acellular pertussis

- Contains lower concentrations of diphtheria and pertussis antigens than infant and childhood DTPa vaccines.

- Acellular vaccines are significantly less likely to cause adverse reactions

### Did you know?

- Australia experiences an epidemic of whooping cough about every **three to four** years.
- Approx **one** in every **200** children under 6 months of age infected with pertussis die.

### Resources

The ID table: [http://www.wch.org.au/infection\\_control/infectious/index.cfm?doc\\_id=1102#P](http://www.wch.org.au/infection_control/infectious/index.cfm?doc_id=1102#P)

The Blue Book: <http://www.health.vic.gov.au/ideas/bluebook/pertussis>

DHS Alert: [http://www.health.vic.gov.au/chiefofficer/downloads/pertussis\\_alert\\_mar09.pdf](http://www.health.vic.gov.au/chiefofficer/downloads/pertussis_alert_mar09.pdf)