

Advice on pertussis (whooping cough) for clinicians

Pertussis is highly infectious. Spread by respiratory droplets, 70–100% of household contacts and 50–80% of susceptible school-aged contacts are usually infected. Infants <12 months of age are at highest risk of complications and death. The incubation period is 6–20 days but usually less than 14 days. A patient is infectious just prior to and, if untreated, for up to 21 days after cough onset. The cough may persist for months.

Diagnosis

Pertussis can be diagnosed on a clinical basis if the patient has an acute cough illness lasting ≥ 14 days without other apparent cause and any one of: paroxysms; whoop; or post tussive vomiting. Apnoea may be the only manifestation in infants. Laboratory confirmation can be problematic but should be sought. Nasopharyngeal swabs or aspirate are the best specimens to obtain within 21 days of cough onset but are likely to be falsely negative after that or if effective antimicrobial therapy has commenced against *Bordetella pertussis*. Serology using *B. pertussis* specific IgA may be falsely negative but a positive result is highly reliable in the presence of appropriate symptoms.

Immunisation

If the patient has already been infected then vaccination will not prevent illness, however, complete vaccination remains the most important preventive measure for pertussis control. Please check the immunisation status of all children aged ≤ 7 years and catch up any missed doses (the recommended schedule for pertussis vaccination is at 2, 4, and 6 months, and 4 years of age).

An adult Pertussis booster vaccine (Adacel[®] or Boostrix[®]) is currently recommended on a single occasion only for the following groups who have previously completed a course of diphtheria-tetanus-pertussis (DTP) vaccine:

- Adolescents in Year 10 or age equivalent.
- Adults before planning pregnancy or as soon as possible after birth for both parents.
- Adults working with or caring for young children, especially health-care workers and child-care workers in contact with infants.
- Any adult wishing to receive a dose of an adult pertussis booster vaccine provided they have completed a course of DTP vaccination.

It is important to note that adult Pertussis booster vaccine is only provided free to adolescents in Year 10 of secondary school (or age equivalent). Whilst such a booster is strongly recommended for the other groups outlined above, it is not provided free.

Treatment of Cases

Antibiotics will usually have little effect on the clinical course of disease but can reduce the risk of transmission if commenced within 21 days of cough onset. The current recommended treatment is a course of azithromycin, clarithromycin, or erythromycin (only azithromycin should be used in a child < 1 month of age). Roxithromycin is currently **not** recommended. A person

who has been coughing for more than 21 days is no longer infectious; therefore antibiotic treatment and school exclusion are **not** needed.

Treatment of Contacts

Antibiotics should **not** be given more than 14 days after first contact with the infectious case (doses and duration as for cases). In special circumstances, such as a high-risk exposure for an **infant** contact, antibiotics may be given within 21 days of first contact with an infectious case.

Antibiotics rarely prevent secondary transmission and should be limited to close contacts (people living in either the same household or institutional setting) in the following categories:

- All household members when the household includes any child ≤ 24 months of age who has received fewer than 3 effective doses of pertussis vaccine
- Any women in the last month of pregnancy, regardless of vaccination status
- All other children and adults in the same care group if the case, regardless of his/her vaccination status, attended childcare for >1 hour while infectious and that care group includes 1 or more children <12 months of age who have received fewer than 3 effective doses of pertussis vaccine. If the group does not contain any children <12 months who have received fewer than 3 effective doses of pertussis vaccine, then only those children in the group who have received less than 3 effective doses of vaccine, and staff who have not received a pertussis vaccine in the previous 10 years, should receive antibiotics.
- Healthcare staff, regardless of vaccination status, working in a maternity or newborn nursery.
- Where a case worked in a maternity ward or newborn nursery for more than an hour while infectious, then all babies in that ward should receive antibiotics.

Exclusion of Cases and Contacts

Under the Health (Infectious Disease) Regulations 2001, pertussis **cases** must be excluded from school and children's services centres for 5 days after commencing antibiotic treatment. Unimmunised household **contacts** <7 years of age and unimmunised close contacts who work in, or attend, a child care centre must be excluded from school and children's services centres for 14 days from the last exposure to infection or until they have taken 5 days of a course of antibiotics. A child who has received <3 doses of a pertussis containing vaccine should be considered unimmunised.

Please notify all cases (either suspected or laboratory confirmed) to the Department's Communicable Disease Prevention and Control Unit:

Tel. 1300 65 11 60

Fax. 1300 65 11 70