LOWER RESPIRATORY TRACT INFECTIONS
Whooping Cough

Notifiable disease. Suspected and confirmed cases should be notified to UKHSA within 3 days.

Also known as pertussis, is a highly infectious disease caused by *Bordetella pertussis.* It is spread by aerosol droplets released during coughing.
https://www.gov.uk/government/publications/pertussis-guidelines-for-public-health-management

Symptoms:

- Typical symptoms e.g., paroxysmal cough (coughing fits), whooping and post-tussive vomiting may not be present in older children and adults. Pertussis should be considered as a cause of chronic episodic cough in older age groups.
- In young infants, the 'whoop' may be absent and coughing spasms may be followed by periods of apnoea and/or cyanosis.

Treatment:

- Arrange for hospital admission (inform the hospital of the need for appropriate isolation) if:
  - 6 months of age or younger and acutely unwell
  - Has significant breathing difficulties (for example apnoea episodes, severe paroxysms, or cyanosis)
  - Has a significant complication (e.g., seizure or pneumonia)
- If admission is not needed, *prescribe an antibiotic if the onset of cough is within the previous 21 days*. **A macrolide antibiotic is recommended first-line**

Antibiotic Treatment and Prophylaxis		
Medicine	**Dose**	**Duration**
Clarithromycin[1,2]	In neonates, infants, and children: Under 8 kg: 7.5mg/kg twice a day 8 – 11 kg: 62.5mg twice a day 12 – 19 kg: 125mg twice a day 20 – 29 kg: 187.5mg twice a day 30 – 40 kg: 250mg twice a day In children aged ≥12 and adults: 500mg twice a day	7 days
Erythromycin[3] (Preferred in pregnancy)	Adults: 500mg four times a day	7 days
Azithromycin[2]	In neonates, infants, and children: 10mg/kg (maximum 500mg) daily In adults: 500mg daily	3 days
Co-trimoxazole[4] *(Only use if macrolide is contraindicated or not tolerated)*	Infants 6 weeks to 5 months: 120mg twice a day Infants and children 6 months to 5 years: 240mg twice a day Children 6 to 11 years: 480mg twice a day Children ≥12 years and adults: 960mg twice a day	7 days

[1] Prescribe clarithromycin for infants less than 1 month of age
[2] Prescribe azithromycin or clarithromycin for children aged 1 month or older, and non-pregnant adults
[3] From 36 weeks gestation, this is recommended to reduce the risk of transmission to the newborn baby. Prior to this, it is likely to be of clinical benefit for the woman only if administered within the first 21 days of the illness or may be advised if she is likely to come into close contact with a person from a vulnerable group
[4] Contraindicated during pregnancy and is not licensed for use in infants younger than six weeks of age

Prophylaxis:

- **Offer antibiotic prophylaxis (see treatment and prophylaxis table) to close contacts of the 'index case' with suspected or confirmed pertussis (such as those living in the same household, or with overnight stays in the same room in an institutional setting),** when the symptoms in the 'index case' occurred within the previous 21 days, and the close contact is in one of the following priority groups:

  GROUP 1 (infants at increased risk of severe complications from pertussis) includes:
  1) <2 months of age
     a. Born before 32 weeks gestation: unimmunised regardless of maternal vaccine status
     b. Born after 32 weeks gestation: unimmunised whose mothers did not receive maternal pertussis vaccine after 16 weeks and at least 2 weeks before delivery
  2) ≥2 months of age
     a. Unimmunised regardless of maternal vaccine status
     b. Partially immunised (less than three doses of DTaP/IPV/Hib up to 1 year of age) regardless of maternal vaccine status

  GROUP 2 (people at increased risk of transmitting the infection to infants in group 1 and who have not received a pertussis-containing vaccine more than 1 week and less than 5 years ago) includes:
  - Pregnant women at 32 weeks gestation or more
  - Healthcare workers who work with infants and pregnant women
  - People whose work involves regular close or prolonged contact with infants too young to be fully vaccinated
  - People who share a household with an infant too young to be fully vaccinated

Patient advice:

- Advise rest, adequate fluid intake, and the use of paracetamol or ibuprofen for symptomatic relief.
- Likely to cause a protracted non-infectious cough (even with antibiotic treatment) that may last for 3 months or more and has been referred to as 'the one-hundred-day cough'. Children and healthcare workers who have suspected or confirmed whooping cough should stay off nursery, school, or work until 48 hours of appropriate antibiotic treatment has been completed, or 21 days after onset of symptoms if not treated.
- For asymptomatic contacts, exclusion from nursery, school, or work is not required.
- Arrange to have any outstanding vaccinations after recovered from the acute illness.
- Offer immunisation to all people who have been offered antibiotic prophylaxis.
  - Up to 10 years of age: non- or partly immunised should complete the schedule of the childhood immunisation programme.
  - A booster dose of pertussis-containing vaccine is recommended for people aged ≥10 years who have not received a dose of tetanus-diphtheria-inactivated polio vaccine (Td-IPV) in the preceding month and have not received a pertussis booster in the past 5 years.
  - Pregnant women who receive a dose of pertussis-containing vaccine before the 16th gestational week should also be given a further dose after 16 weeks of pregnancy to protect the neonate.

Version Control- **Whooping Cough**			
Version	Author(s)	Date	Changes
V2.0	Shary Walker Interface and Formulary Pharmacist	22/06/22	Link to PHE notification form added, prophylaxis, and patient advice Hospital referral information, Antibiotic treatment table
V2.1	NNICB Interface Team	04/01/24	Clarification that erythromycin is preferred in pregnancy added.