



UK Health  
Security  
Agency

# **Guidance on the management of cases of pertussis in England during the re-emergence of pertussis in 2024**

Update: August 2024

# Contents

Document history .....	3
1. Introduction .....	4
1.1 Principles governing public health action.....	4
1.2 What has changed.....	6
1.3 Who this document is for .....	6
2. Definitions .....	7
2.1 Case definitions .....	7
2.2 Contact definitions .....	8
3. The 14-day follow-up window.....	11
3.1 Case management .....	11
3.2 Management of contacts .....	14
4. Public health surveillance of pertussis .....	16
5. Outbreaks .....	17
5.1 Healthcare settings.....	17
5.2 Nurseries and childcare settings for infants.....	17
5.3 Other nurseries, schools and other educational settings.....	18
Appendix 1. Process for follow-up of pertussis cases in periods of high activity .....	19
Text version of flowchart.....	20
Text message issued after 14 days.....	21
Text message issued up to and including 14 days .....	21
Form (all questions to be mandatory).....	21
Appendix 2. Testing for pertussis in primary care .....	24
Appendix 3. Severe or fatal pertussis disease surveillance form for infants and children .....	24
Appendix 4. Reporting form for pertussis case/s in healthcare workers and of pertussis clusters in healthcare settings.....	24
Appendix 5. Antibiotic treatment and chemoprophylaxis recommendations .....	25
About the UK Health Security Agency .....	26

## Document history

Date	Reason for change	Issue number
February 2024	New document created to highlight priority public health actions during periods of high pertussis activity.	1.0
June 2024	Updated version incorporating: <ul style="list-style-type: none"> <li>• summary statement of principles governing public health action for pertussis</li> <li>• clarifications to definitions</li> <li>• changes to recommendations regarding exclusion for some pertussis cases</li> <li>• changes to recommendations regarding the period of eligibility for antibiotic therapy for pertussis cases</li> <li>• update to recommendations on macrolide prescribing in pregnancy</li> <li>• amendments to the length of the window for active follow-up for cases post-exposure</li> <li>• amendments to recommendations regarding management of outbreaks in educational settings</li> </ul>	2.0
August 2024	Updated version incorporating: <ul style="list-style-type: none"> <li>• reinstated surveillance form for cases and incidents in healthcare settings</li> <li>• new surveillance form for severe cases and deaths from pertussis</li> </ul>	3.0

# 1. Introduction

Pertussis is a highly contagious infectious disease that can spread rapidly from person-to-person through contact with infectious respiratory particles. Pertussis cases are most infectious during the early catarrhal phase but remain infectious for up to 21 days following the onset of coughing.

Intervention measures implemented to help control the spread of SARS-CoV-2 between March 2020 and July 2021 had a significant, additional impact on the transmission of other infectious diseases including pertussis. Consequently, pertussis activity was exceptionally low across England from April 2020 and remained low until summer 2023 when case numbers began to increase. In the last 3 months of 2023 confirmed pertussis case numbers were more than 10-fold higher than they had been during the previous 3 years of suppressed pertussis activity but overall numbers remained lower than pre-pandemic years (see [Health Protection Report volume 18 \(2024\)](#)). Case numbers across all age groups and all regions in England have continued to increase in the first 4 months of 2024 with a total of [4,793 confirmed cases reported in England between January to April 2024](#).

The number of confirmed pertussis cases in infants under 3 months, who are at most risk of severe disease and too young to be fully vaccinated, increased from 2 cases in 2022 to 48 cases in 2023 but remained lower than pre-pandemic years; there were 83 cases in infants under 3 months in 2019. Incidence continues to be highest in infants under 3 months. There have been 8 reported deaths in infants who developed pertussis between January and April 2024.

This document supersedes an earlier iteration of UKHSA's guidance on management of pertussis during periods of high activity. In the context of the continuing increase in pertussis activity at this time, recommendations outlined in this document also supersede those provided in earlier Public Health England (PHE) and UKHSA guidance, including the Guidelines for Management of Pertussis in England, Guidelines for Public Health Management of Pertussis Incidents in Healthcare Settings, and Guidelines for pertussis outbreaks in nurseries and educational settings. This document takes into account evolving evidence on the effectiveness of some public health measures identified in previous pertussis guidance documents issued by PHE and the current epidemiological context.

## 1.1 Principles governing public health action

The recommendations outlined in this document are given in accordance with a set of overarching principles governing public health action for pertussis, as follows:

- The key priorities for pertussis are to (i) prevent infant hospitalisations and deaths and (ii) highlight the importance of timely and complete vaccination in pregnancy, infants and children under 10 years.
- The risk of severe outcomes from pertussis is greatest among infants less than 2 months of age who have not yet received their primary pertussis dose, and especially in those whose mothers were not vaccinated within the recommended window in pregnancy (16 to 32 weeks' gestation).
- The decision to treat pertussis with antibiotics and the choice of treatment is a clinical decision. The benefits of treatment for suspected pertussis are greatest where initiated as soon as possible after illness onset. Testing for pertussis (and in particular oral fluid testing) is important for surveillance but should not delay management.
- Given increased awareness and more activity at this time, there is likely to be a lower threshold for notifying suspected cases of pertussis<sup>1</sup>. In these circumstances, UKHSA health protection teams (HPTs) should prioritise follow up of suspected, epidemiologically linked and confirmed cases (per the definitions set out in section 2.1 below) who are in the early stages of illness as this will yield the greatest public health benefit.
- Interventions for contacts of pertussis are of limited effectiveness, in general. Evidence of benefits from chemoprophylaxis is limited to close, prolonged, household-type contact. Evidence of effectiveness outside these settings is limited. In all settings, chemoprophylaxis is more effective the earlier it is administered post-exposure, and certainly within 14 days from that exposure.
- Given that disease transmission is widespread across all age groups and regions at this time, the benefit of chemoprophylaxis for contacts is likely to be limited. Where cases and outbreaks occur in settings where it is unlikely that those exposed will be members of a priority group (for example, school settings) investigation and active intervention are not routinely recommended.
- Public health actions should be proportionate to the additional level of risk in any given scenario, relative to background risk, and should be based on risk assessment as appropriate. Recommendations regarding contact tracing in special settings (healthcare, education) should take into account the likely limited public health benefit achieved if broad contact definitions were to be applied.

Vaccination in pregnancy remains key to passively protecting babies before they can be directly protected by the infant vaccine programme. Analysis of data from England indicates that maternal vaccination offers very high levels of protection against disease, hospitalisation and death from pertussis in infants under 3 months of age.

---

<sup>1</sup> Note that recommendations regarding public health actions set out in this guidance apply to all notified cases of pertussis (suspected, confirmed or epidemiologically linked). This is equivalent to all cases logged as 'possible', 'probable' or 'confirmed' on the UKHSA case management system.

In addition, it is hugely important that babies are vaccinated on time at 8, 12 and 16 weeks of age wherever possible and that those who miss vaccination are caught up at the earliest opportunity. Of concern is the continuing decline in uptake of the maternal pertussis vaccine (see [Pertussis immunisation in pregnancy: vaccine coverage \(England\)](#)) and coverage of the primary infant schedule in recent years (see [Vaccine uptake guidance and the latest coverage data](#)).

## 1.2 What has changed

The main changes to previously published recommendations outlined in this document are in the following areas:

- a summary of principles governing public health action to support health protection teams (HPTs) in prioritising cases and situations for follow-up
- clarifications to definitions of key terms and for contacts in high priority groups for public health action
- revision to the recommended period of exclusion for pertussis, which has been reduced from 21 to 14 days for some (but not all) cases
- recommendations regarding the timeframe for considering antibiotic therapy for pertussis, now reduced from 21 to 14 days for some (but not all) cases
- update to recommendations on macrolide prescribing in pregnancy
- amendment to the period for active follow-up for contacts of a case, which has been reduced from 21 days to 14 days from onset of coughing
- amendments to recommended actions in the event of cases or outbreaks in some community settings (for example schools) in light of high levels of community transmission at this time
- introduction of a new public health surveillance form for severe cases and deaths from pertussis among children under 5 years of age, and re-introduction of a surveillance form cases and clusters in healthcare settings

## 1.3 Who this document is for

This guidance has been issued primarily to assist UKHSA HPTs manage the recent increase in workload related to pertussis, alongside ongoing raised activity in other vaccine preventable diseases.

## 2. Definitions

### 2.1 Case definitions

This guidance reaffirms case definitions for pertussis as below. Guidance on testing approaches for pertussis is given in [Appendix 2](#).

#### **Suspected case of pertussis:**

Any person in whom a clinician suspects pertussis infection. This may include individuals presenting with a new onset cough without a clear alternative cause and one or more of the following features:

- paroxysms of coughing
- post-tussive vomiting
- inspiratory whoop
- cough of duration 14 days or more

(in the absence of laboratory confirmation or epidemiological link to a laboratory confirmed case).

#### **Confirmed case of pertussis:**

Any person with signs and symptoms consistent with pertussis and:

- *B. pertussis* is isolated from a respiratory sample (NPA/NPS/PNS)

Or:

- anti-pertussis toxin IgG titre >70 IU/ml (serum) or >70 aU (OF) is detected in a specimen (in the absence of vaccination in the past year)

Or:

- *B. pertussis* PCR positive in a respiratory clinical specimen

#### **Epidemiologically linked case of pertussis:**

Any person with signs and symptoms consistent with pertussis and:

- was in close contact with a laboratory confirmed case of pertussis in the 21 days before onset of their cough

(in the absence of laboratory confirmation).

## 2.2 Contact definitions

This section outlines definitions of close contacts for pertussis cases (suspected, confirmed or epidemiologically linked).

### 2.2.1 Households, healthcare and community settings

The objective of contact tracing in households, healthcare and community settings is to reduce risk of exposure to vulnerable individuals meeting priority group definitions (see section 2.2.3), by reducing transmission of the organism in the whole contact group. Prolonged and close contact with a case during their infectious period is typically required for significant risk of pertussis transmission to arise.

Close contact in most settings is defined by prolonged (for example, overnight) contact with a case. Family members or people living in the same household as a pertussis case are considered close contacts. Patients staying overnight in an inpatient setting with a pertussis case (for example, a hospital bay) would also be close contacts by this definition, as would people in institutional settings staying overnight in the same room as a case during their infectious period. An exception to the contact definition in community settings given above concerns nursery workers and others working in childcare settings providing close personal care to infants meeting the priority Group 1 definitions set out in section 2.2.3 below, where a significant exposure would be defined as for healthcare workers (see section 2.2.2 below).

In most community settings, it is assumed that contact between a case and their contacts is continuous. Time since exposure would therefore be defined as the time since the onset of coughing in the index case, where the day of onset is set as day 0.

Other types of contact in the community or in healthcare settings (for example, at work or at school, or in a hospital or GP surgery waiting room) would generally not be considered to constitute a close contact group where intervention would be effective.

### 2.2.2 Healthcare workers

Special considerations apply to healthcare workers (HCWs) who provide close personal care to infants or pregnant women because of the nature of their interactions with vulnerable individuals meeting priority group definitions (see section 2.2.3). For exposed Group 2 HCWs (see definition in section 2.2.3 below), the objective of contact tracing is to minimise the risk of further onward transmission to vulnerable individuals.

For HCWs in this category, a significant exposure is defined as either:

1. Contact with a pertussis case within their own household.

Or:



2A. Unprotected, direct, face-to-face contact in their place of work (a healthcare setting) for greater than a cumulative period of one hour with a pertussis case who is within 14 days of the onset of their cough.

Or:

2B. Direct contact with respiratory secretions from a pertussis case within 14 days of onset of their cough (for example, when performing aerosol-generated procedures or examination of the nose and throat in a healthcare setting without [appropriate personal protective equipment](#) (PPE); or exposure to infectious respiratory particles from case with active coughing at less than 2 metre distance).

Prolonged contact at close proximity of the kind described in 2A above is more likely to occur in inpatient settings than in outpatient settings, primary or ambulatory care, but risk assessment may be required where vulnerable (unimmunised or partially immunised) infants are concerned. For HCWs in their place of work, close contact is likely to occur through either a single exposure, or on an intermittent basis. Time since exposure is therefore defined as the time that has elapsed since the most recent exposure to the index case, where the day of the most recent exposure is defined as day 0.

### 2.2.3 High priority groups for public health action

This updated guidance confirms the key priority groups for public health action as follows:

#### Group 1: Individuals at increased risk of severe complications ('vulnerable')

A. Unimmunised infants (born at less than 32 weeks) under 2 months of age regardless of maternal vaccine status.

Or:

B. Unimmunised infants (born from 32 weeks) under 2 months of age whose mothers did not receive maternal pertussis vaccine after 16 weeks and at least 2 weeks before delivery.

Or:

C. Infants from 2 months to less than 5 months of age, regardless of maternal vaccination status or gestational age at delivery.

Or:

D. Infants from 5 months to less than 1 year of age who have received less than 3 doses of a pertussis-containing vaccine (for example, DTaP/IPV/Hib/HepB), regardless of maternal vaccination status or gestational age at delivery.

Group 2: Individuals at increased risk of transmitting to 'vulnerable' individuals in 'group 1' if they have pertussis, who have not received a pertussis-containing vaccine more than one week and less than 5 years ago

- A. Pregnant women who have reached 32 weeks' gestation.
- B. HCWs who provide close personal care to infants (as defined in Group 1 above) and pregnant women.
- C. People whose work involves regular, close and prolonged contact with infants as defined in Group 1 above (for example, nursery workers in baby rooms).
- D. People who share a household with an infant as defined in 'vulnerable' infants in Group 1 above.

## 3. The 14-day follow-up window

Pertussis cases are considered infectious from onset of coughing until 48 hours after commencement of appropriate antibiotic treatment, or 21 days from onset of their cough if not receiving treatment.

Pertussis testing for the majority of cases, especially amongst adolescents and adults where serological methods are primarily used for confirmation, is unlikely to deliver results in a way that will influence timely case management. Where workload is high and onset date has not been provided to the local unit, it is reasonable to assume that serologically and oral fluid confirmed cases are reported too late for immediate public health action. See [Appendix 1](#) for a suggested process for HPT actions.

In household settings the benefit of chemoprophylaxis declines over time following the onset of coughing in the index case. Current evidence suggests that gains from chemoprophylaxis beyond 14 days post-exposure to the index case are limited. Therefore, during periods of heightened transmission, chemoprophylaxis for contacts beyond 14 days from the point of exposure is not recommended.

A flowchart outlining the general approach to follow-up for pertussis cases is given in [Appendix 1](#). Further details of case and contact management are given below.

### 3.1 Case management

#### 3.1.1 Risk assessment

Actions outlined in this section focus on cases up to and including 14 days from the onset of coughing. There is no requirement for HPTs to routinely phone the GP or index case for cases reported after 14 days from cough onset. Where cases are reported to the UKHSA HPT more than 14 days and up to or including 21 days from cough onset, no action is required beyond relevant exclusion advice for the case as outlined in [public-facing guidance](#) that is issued as part of the process outlined in [Appendix 1](#). Cases reported to the UKHSA HPT more than 21 days following cough onset require no public health action, since the period of exclusion for cases will have elapsed.

#### 3.1.2 Antibiotic therapy

The decision to offer antibiotics for pertussis cases, and the choice of treatment, is a clinical one. The benefit of antibiotics on the clinical course of the illness is limited to the early catarrhal phase and certainly within 14 days from onset of cough. Beyond the first 14 days, the main benefit of antibiotic therapy is to reduce transmission to close contacts. Given the current level of pertussis activity in the population and the extent of asymptomatic infection, the use of antibiotics in cases beyond 14 days to prevent ongoing transmission is unlikely to have a significant impact at a population level.

Therefore:

- antibiotic therapy can be considered for clinical indications within 14 days of onset of cough
- however, where the case has a household or other close contact who falls into priority Group 1 for public health action or is a pregnant woman, antibiotic therapy is recommended for all cases commencing within 21 days of onset of cough

The second bullet above would apply, for example, to cases who are healthcare workers providing close personal care to infants or pregnant women, or nursery workers providing close personal care to infants in a baby room that includes children under 3 months of age.

Details of recommended antibiotic treatment and chemoprophylaxis is given in [Appendix 5](#). For pregnant women, clinicians may wish to consult online guidance from the [UK Teratology Information Service](#), where a decision needs to be made on antibiotic choice in the event that first-line therapy (erythromycin) cannot be used.

### 3.1.3 Exclusion

The risk of onward transmission from an untreated case declines over time and certainly beyond 14 days from cough onset. Given the current level of pertussis activity in the population and the likely extent of asymptomatic infection, exclusion beyond 14 days to prevent ongoing transmission is unlikely to have a significant impact at a population level in the majority of cases. The only exceptions would be situations where there are known vulnerable close contacts identified.

Therefore, in the current epidemiological context, recommendations for exclusion of cases have been revised as follows:

#### Children

Children with suspected, epidemiologically linked, or confirmed pertussis should be excluded from schools or nurseries for 48 hours following commencement of recommended antibiotic therapy, or for 14 days following the onset of coughing if they are not being treated.

#### Staff working in nurseries and other childcare settings providing close personal care to infants

Cases (suspected, epidemiologically linked or confirmed) among staff working in nursery or other childcare settings providing close personal care to children in priority Group 1 (for example, in nursery baby rooms) should be excluded for 48 hours following commencement of recommended antibiotic therapy, or for 21 days following the onset of cough if untreated.

#### Staff in other nursery and childcare settings, schools and other educational settings

Cases (suspected, epidemiologically linked or confirmed) among staff in other nursery and childcare settings, in schools and in other educational settings should be excluded for 48 hours

following commencement of recommended antibiotic therapy, or for 14 days following the onset of cough if untreated.

#### Healthcare workers

If the case (suspected, epidemiologically linked or confirmed) is a healthcare worker providing close personal care to infants in priority Group 1, or to pregnant women, they should be excluded from work as soon as a diagnosis of pertussis is suspected, until 48 hours following commencement of recommended antibiotic therapy, or for 21 days following the onset of cough if untreated. The HCW should in addition inform their occupational health department and infection prevention control team as soon as possible – and should do so even if beyond 21 days from the onset of coughing as vulnerable contacts may still be within their incubation period.

#### Hospitalised patient

If the case (suspected, epidemiologically linked or confirmed) is a hospitalised patient, they should be placed in respiratory isolation until 48 hours of treatment is completed or for 21 days from onset if untreated.

### 3.1.4 Immunisation

It is important that unvaccinated and partially immunised cases up to 10 years of age complete their course of primary immunisation and booster vaccine once they have recovered from their acute illness, following the UKHSA guidance document '[Vaccination of individuals with uncertain or incomplete immunisation status](#)'.

Currently, routine immunisation against pertussis is not recommended for those aged ten years and over, except for pregnant women (see below).

Pregnant women who have been diagnosed with pertussis (at any stage of pregnancy) and have not been vaccinated after 16 weeks of pregnancy, should be offered a dose of pertussis containing vaccine in line with national recommendations. Pregnant women diagnosed with pertussis before 16 weeks' gestation should wait until they reach 16 weeks of pregnancy (and ideally following the detailed ultrasound scan, which usually takes place at around 20 weeks) to have the vaccine.

[Guidance on prospective occupational vaccination of healthcare workers for pertussis](#) is available. HCWs who have recovered from a primary infection should be offered a booster dose of pertussis-containing vaccine if they have not received a dose of in the preceding 5 years, and no Td-IPV in the preceding month.

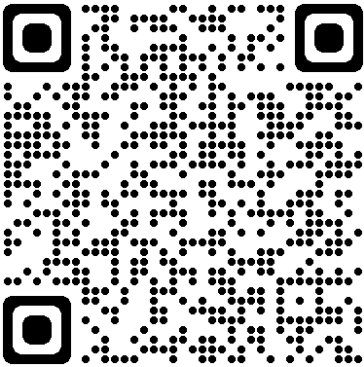
### 3.1.5 Communication

It is advised that UKHSA HPTs send a link to all patients with a suspected, epidemiologically linked or confirmed diagnosis to access the UKHSA information page using the URL below:

<https://www.gov.uk/government/publications/whooping-cough-diagnosis-information>

Or share the QR code below so that those with a smart phone can access the information. See [Appendix 1](#) for example text to accompany the link.

QR code



This information page highlights the potential risk of spread to others, safety-netting and the importance of vaccination. It sets out:

- the priority groups for public health actions especially those at high risk of severe infection, that is unimmunised or partially immunised infants
- where a member of the household is a healthcare worker, working with infants or pregnant women, it requests that they inform their occupational health department and seek early medical advice if they develop symptoms
- general advice about ensuring children (up to 10 years) and pregnant women are fully immunised according to national recommendations

## 3.2 Management of contacts

### 3.2.1 Chemoprophylaxis

#### Households, healthcare and relevant community settings

In households, healthcare and relevant community settings (see above), antibiotic prophylaxis should be offered to all close contacts where:

- (i) the onset of coughing in the index case was within the preceding 14 days

And:

- (ii) there is a close contact in one of the high priority groups outlined in section 2.2 (for example, a vulnerable infant in Group 1 as set out in section 2.2.3 above, admitted to the same hospital bay)

The benefits of chemoprophylaxis for close contacts are greatest the sooner it is administered following exposure.

### Healthcare worker

Chemoprophylaxis should be offered to contacts of a HCW case in the following groups where a significant exposure occurred within 14 days from onset of coughing in the index case:

- (i) vulnerable infants in Group 1 as set out in section 2.2.3 above
- (ii) pregnant women who have reached 32 weeks gestation but have not received a booster dose of pertussis-containing vaccine more than one week and less than 5 years ago
- (iii) healthcare worker contacts who provide close personal care to infants in Group 1 or pregnant women, and who have not received a booster dose of pertussis-containing vaccine more than 1 week and less than 5 years ago

Details of recommended antibiotic treatment and chemoprophylaxis is given in [Appendix 5](#). For pregnant women, HPTs or clinicians may wish to consult online guidance from the [UK Teratology Information Service](#), where a decision needs to be made on antibiotic choice in the event that first-line therapy (erythromycin) cannot be used.

## 3.2.2 Immunisation

Recommendations regarding immunisation of contacts who have been offered chemoprophylaxis are as follows:

- (i) unimmunised and partially immunised contacts up to the age of 10 years should complete the schedule with the appropriate vaccine, in accordance with [guidance on vaccination of individuals with uncertain or incomplete vaccination status](#)
- (ii) any pregnant contacts who have reached or passed the 20th week of their pregnancy but have not yet received a pertussis-containing vaccine during their current pregnancy should be vaccinated
- (iii) any woman whose infant is under 8 weeks of age, and who did not receive a pertussis-containing vaccine in that pregnancy, between gestational weeks 16 and 32
- (iv) for contacts who are healthcare workers and provide close, personal care to infants in Group 1 or pregnant women, a booster dose of pertussis-containing vaccine is recommended if they have not received a dose in the preceding 5 years, and no Td-IPV in the preceding month

## 3.2.3 Exclusion

Exclusion for contacts is **not** required.

## 4. Public health surveillance of pertussis

Pertussis remains a notifiable disease under the Health Protection Legislation (England) Guidance 2010. Suspected cases should be notified to the local HPT. This should be done by telephone as soon as is practicable and in writing within 3 days. Since October 2010, all diagnostic laboratories have been required to report confirmed cases of *B. pertussis* infection to their local HPT. Written notification must be provided within 7 days of the agent being identified, or if the case is considered to be urgent, the HPT should be notified by phone promptly.

HPTs are strongly encouraged to report all severe cases and pertussis-related deaths to the Immunisation and Vaccine Preventable Diseases (IVPD) division at UKHSA in a timely manner, via [pertussis@ukhsa.gov.uk](mailto:pertussis@ukhsa.gov.uk) using the [relevant surveillance form](#) (see [Appendix 3](#)). This form replaces the UKHSA enhanced pertussis surveillance form for these fatal and severely unwell cases, collecting similar information via HPTs rather than directly from general practices as this can be challenging where cases have died.

In addition, HPTs are requested to notify IVPD of any suspected or confirmed cases in healthcare workers and clusters in healthcare settings by submitting the [relevant reporting form](#) (see [Appendix 4](#)) to [pertussis@ukhsa.gov.uk](mailto:pertussis@ukhsa.gov.uk).



## 5. Outbreaks

### 5.1 Healthcare settings

Where 2 or more suspected, confirmed or epidemiologically linked cases of pertussis occur in a healthcare setting, an outbreak control team (OCT) should be convened. This is likely to include:

- director of infection prevention and control
- hospital microbiologist (if different)
- infection control nurse
- consultants from relevant clinical specialties
- occupational health physician or nurse
- HPT representative
- screening and Immunisation team representative
- communications

Attempts should be made to confirm diagnosis following discussion with the Respiratory and Vaccine Preventable Bacteria Reference Unit (RVPBRU), UKHSA Colindale (020 8327 7887).

NHS providers should seek advice from their local Infection prevention and control (IPC) team.

In addition, expert advice on outbreak investigation and response is available from the Immunisation and Vaccine Preventable Diseases (IVPD) division, UKHSA Colindale: [immunisation.lead@ukhsa.gov.uk](mailto:immunisation.lead@ukhsa.gov.uk)

### 5.2 Nurseries and childcare settings for infants

Advice in this section focuses on those nurseries and childcare settings providing care for infants in priority group 1 for public health action.

#### 5.2.1 Outbreak definition in a nursery or childcare setting for infants

An outbreak in a nursery, or childcare setting for infants, is defined as 2 or more confirmed or at least one confirmed and one clinically suspected case of pertussis within 42 days where transmission is likely to have occurred in the nursery setting.

If 2 or more confirmed and epidemiologically linked cases of pertussis occur within 42 days of each other in a nursery or childcare setting for infants, an incident management team (IMT) or outbreak control team (OCT) may be considered, and where appropriate a risk assessment

performed by the IMT/OCT to determine whether further public health action should be undertaken.

### 5.2.2 Chemoprophylaxis in a nursery or childcare setting for infants

In a nursery or childcare setting providing care to infants, it may be appropriate to consider more widespread chemoprophylaxis (for staff and children) than suggested in section 3.2, depending on the severity of illness among those affected, the number of cases and the number of potential contacts, in addition to the age and vaccination status of those exposed – with reference to the priority groups outlined in section 2.2.3.

In settings with a large proportion of incompletely vaccinated infants, the OCT may consider arranging chemoprophylaxis if a clearly defined group can be identified and it is practical and feasible. See [Appendix 5](#) for recommended antibiotic regimens for chemoprophylaxis or treatment.

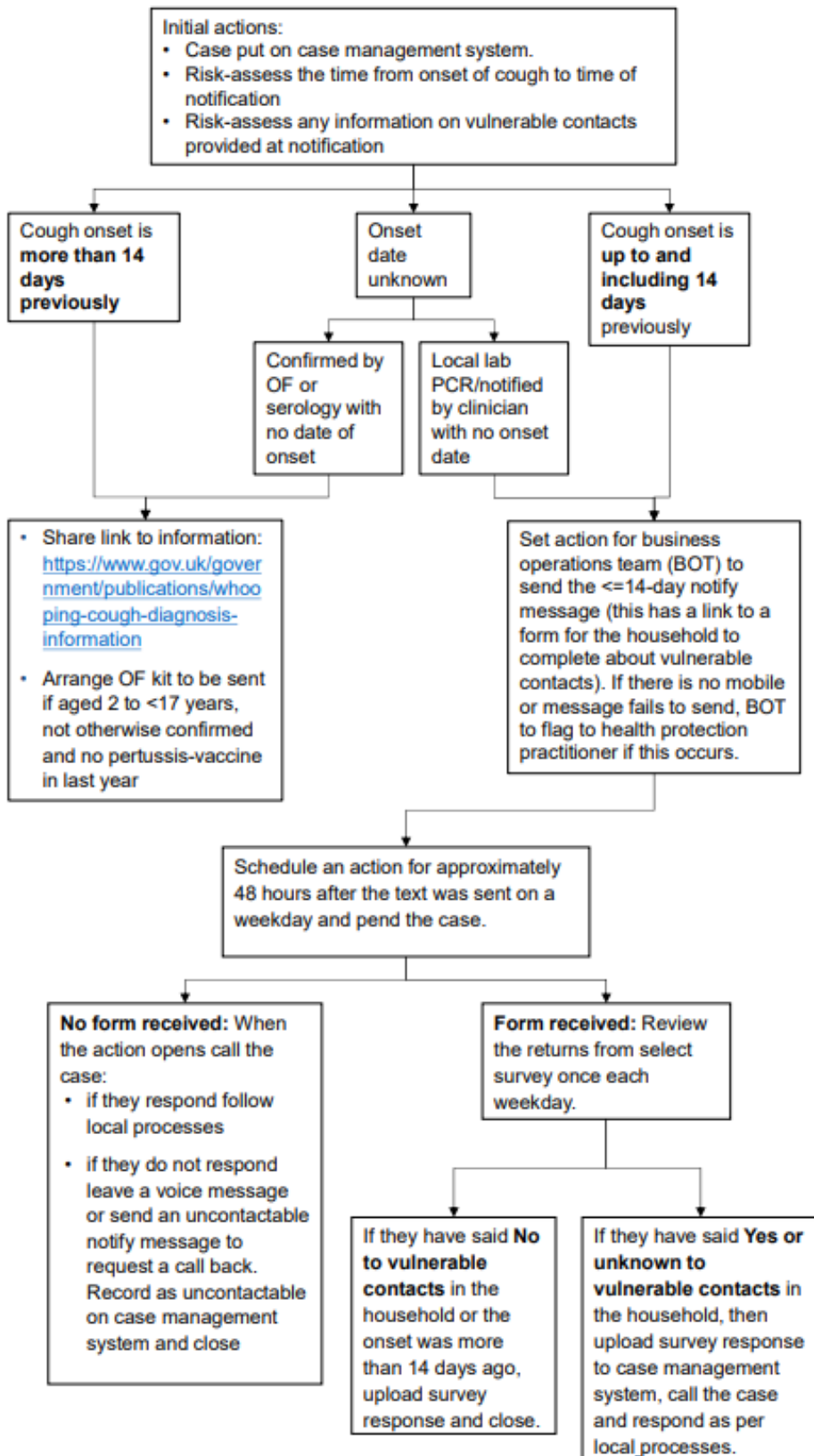
### 5.2.3 Vaccination in a nursery or childcare setting for infants

The OCT should advise that all nursery or childcare setting attendees (and their siblings) and staff check that they are up to date with their pertussis vaccinations and if not, arrange an appointment with their GP promptly to catch up on missing doses. Given the age group, widespread booster vaccinations are unlikely to be required in this setting. Pregnant staff should be advised to follow routine advice in relation to pertussis vaccination in pregnancy (advised from 16 weeks of pregnancy) and to discuss any specific concerns with their midwife.

## 5.3 Other nurseries, schools and other educational settings

As noted in section 1.1, where outbreaks occur in settings where it is unlikely that those exposed will be members of a priority group (for example, school settings) investigation and active intervention are not routinely recommended.

# Appendix 1. Process for follow-up of pertussis cases in periods of high activity



## **Text version of the flowchart showing the process for follow-up of pertussis cases in periods of high activity**

1.  
Add details of the case or suspected case onto the case management system. Risk-assess the time from onset of cough to time of notification. Risk-assess any information on vulnerable contacts provided at notification.  
If onset is more than 14 days previously, or the test result being reported is an oral fluid or serology with no recorded date of onset, go to point 2.  
If up to and including 14 days previously, or the notification was received from a clinician and no onset date is reported, or the test result being reported is a PCR from a local lab go to point 3.
2.  
If the date of cough onset is more than 14 days previously or the case has been confirmed by oral fluid (OF) or serology with no date of onset:
  - share link to information – <https://www.gov.uk/government/publications/whooping-cough-diagnosis-information>
  - arrange OF kit to be sent if aged 2 to less than 17 years, not otherwise confirmed and no pertussis-vaccine in the last year
3.  
If onset is up to and including 14 days previously, or the notification was received from a clinician with no onset date reported, or the test result being reported is a PCR from a local lab, set action for business operations team (BOT) to send the notify message for those up to and including 14 days (this has a link to a form for the household to complete about vulnerable contacts).  
If there is no mobile or message fails to send, BOT to flag to health protection practitioner if this occurs.  
Schedule an action for approximately 48 hours after the text was sent on a weekday and pend the case.  
If no form is received go to point 4 or if form is received go to point 5.
4. No form received:
  - when the action opens call the case
  - if they respond follow local processes
  - if they do not respond leave a voice message or send an uncontactable notify message to request a call back. Record as uncontactable on the case management system and close
5. Form received:  
  
Review the returns from select survey once each weekday:

- A. If they have said No to vulnerable contacts in the household **or** the onset was more than 14 days ago, upload survey response and close.
- B. If they have said Yes or unknown to vulnerable contacts in the household then upload survey response to the case management system, call the case and respond as per local processes.

## Text message issued after 14 days

Dear ((first name/parent of name)). We have been informed that ((you or your child)) may have whooping cough (pertussis). Please read the following information leaflet:

<https://www.gov.uk/government/publications/whooping-cough-diagnosis-information>.

Please contact us and quote reference number ((HPZ/CIMS)) to provide details if you or your child work in or attend a nursery or childcare setting for infants by emailing us at [insert contact email address].

You can also use this email to contact us if you have any other questions.

## Text message issued up to and including 14 days

UKHSA xxx Health Protection: Dear ((first name/parent of name)).

We have been informed that ((you or your child)) may have whooping cough (pertussis).

Please read the following information leaflet:

<https://www.gov.uk/government/publications/whooping-cough-diagnosis-information> and complete the following short form **\*\*link\*\*** using reference number ((HPZ/CIMS)) to let us know if you have any vulnerable contacts as we may recommend antibiotics for those in the household.

If you do not reply on the form in the next 48 hours, we may call you back to speak with you.

If you have concerns, you can contact us at [insert email address]

## Form (all questions to be mandatory)

(Introduction text) Form to identify contacts of whooping cough (pertussis)

We have been informed that you or your child may have had whooping cough (pertussis).

Completing this form will help us to understand if you/your child have any vulnerable contacts and we may recommend antibiotics for those in the household to prevent the spread of the

infection. If you do not respond to the survey in the next 48 hours we may call you back to speak with you.

More information on pertussis is available at the following link:

<https://www.gov.uk/government/publications/whooping-cough-diagnosis-information>

Module 1:

What is your reference number (from the text message you received):

To confirm your identity, please confirm the date of birth for the person with pertussis (to be date format):

Did your or your child's cough start within the last 2 weeks: Yes, No, Unknown,

If No, survey ends. If Yes or Unknown, questions below to pop up.

Module 2:

Do you or your child have any close contacts (such as someone in the household) who is:

- a baby or infant who has not yet had 3 doses of pertussis vaccine (you may know this as the '6 in 1 vaccine', hexavalent vaccine or DTaP/IPV/Hib/HepB) –it is offered at 8, 12 and 16 weeks of age: Yes, No or Unknown
- a woman over 32 weeks pregnant: Yes, No or Unknown
- a person in regular contact with babies or women over 32 weeks pregnant such as a health care worker or nursery staff: Yes, No or Unknown

Did the person with pertussis go to nursery or a childcare setting for infants or work in a nursery or childcare setting for infants in the first 3 weeks that they were coughing? Yes, No or Unknown

[If Yes, they have been in a nursery or childcare setting for infants] What is the name of the nursery or childcare settings (this is so that we can monitor the number of cases at the nursery or childcare setting)

End of survey message:

Thank you for your reply, if you or your child might have vulnerable contacts and your or your child's cough started in the last 2 weeks, we will call you during working hours to discuss this further. If you have identified vulnerable contacts and do not receive a call in the next 48 hours (excluding weekends), then please email us at [email address].

If anyone else in the household has or develops similar symptoms, please ensure they seek medical advice as a course of antibiotics may be required. If you have any concerns or

questions about the survey, you can contact us at [insert email address] and we will respond in working hours.

Whooping cough (pertussis) can be particularly severe for young babies and we recommend all pregnant women take up the offer of vaccination when offered, further details are available at:

<https://www.nhs.uk/pregnancy/keeping-well/whooping-cough-vaccination/>

## **Appendix 2. Testing for pertussis in primary care**

A [summary of pertussis testing for primary care](#) is available to download.

## **Appendix 3. Severe or fatal pertussis disease surveillance form for infants and children**

The [severe or fatal pertussis disease surveillance form for infants and children](#) is available to download.

## **Appendix 4. Reporting form for pertussis cases in healthcare workers and of pertussis clusters in healthcare settings**

The [reporting form for pertussis cases in healthcare workers and pertussis clusters in healthcare settings](#) is available to download.



## Appendix 5. Antibiotic treatment and chemoprophylaxis recommendations<sup>2</sup>

Age group	Clarithromycin [note 1]	Azithromycin [note 1]	Erythromycin	Co-trimoxazole [note 1] <sup>3</sup>
<b>Neonates<sup>4</sup> (&lt;1 month)</b>	Preferred in neonates 7.5 mg/kg twice a day for 7 days	10 mg/kg once a day for 3 days	10 to 15 mg/kg every 6 hours for 7 days	Not licensed for infants below 6 weeks
<b>Infants (1 month to 12 months) and children (12 months and older)</b>	<b>1 month to 11 years:</b> <b>Under 8kgs</b> 7.5 mg/kg twice a day for 7 days <b>8 to 11kg</b> 62.5mg twice a day for 7 days <b>12 to 19kg</b> 125mg twice a day for 7 days <b>20 to 29kg</b> 187.5mg twice a day for 7 days <b>30 to 40kg</b> 250mg twice a day for 7 days <b>12 to 17 years:</b> 500mg twice a day for 7 days	<b>1 to 6 months:</b> 10 mg/kg once a day for 3 days <b>&gt;6 months:</b> 10 mg/kg (max 500mg) once a day for 3 days	<b>1 to 23 months:</b> 125mg every 6 hours for 7 days [note 2] <b>2 to 7 years:</b> 250mg every 6 hours for 7 days [note 2] <b>8 to 17 years:</b> 250 to 500mg every 6 hours for 7 days [note 2]	<b>6 weeks to 5 months:</b> 120mg twice a day for 7 days <b>6 months to 5 years:</b> 240mg twice a day for 7 days <b>6 to 11 years:</b> 480mg twice a day for 7 days <b>12 to 17 years:</b> 960mg twice a day for 7 days
<b>Adults</b>	500mg twice a day for 7 days	500mg once a day for 3 days	500mg every 6 hours for 7 days [note 2]	960mg twice a day for 7 days
<b>Pregnant women<sup>5</sup></b>	Third line – dosing as for adults above	Second line – dosing as for adults above	Preferred antibiotic – dosing as for adults above	<b>Should not be used in pregnancy, particularly in the first trimester, unless no other antibiotic option available</b>

Note 1: Please note that the doses for treatment and prophylaxis are the same

Note 2: Doses can be doubled in severe infections

<sup>2</sup> For all antibiotic prescribing recommendations given above, please consult the [BNF](#) or the [BNF for children](#) for cautions, interactions and side-effects prior to prescribing.

<sup>3</sup> Consider if macrolides contra-indicated or not tolerated.

<sup>4</sup> Please note that macrolides should be used with caution in neonates. An association between erythromycin and azithromycin use and hypertrophic pyloric stenosis in infants has been reported, but it is judged that the risk of severe outcomes from pertussis in this age group outweigh the risk of developing this complication.

<sup>5</sup> For pregnant contacts, a risk assessment would need to be done to look at the risk and benefits of antibiotic therapy/prophylaxis. The aim of treating/prophylaxing women in pregnancy is to prevent transmission to the newborn infant and should be considered in those who have not received a pertussis containing vaccine more than one week and less than 5 years prior. Where possible, pregnant women should begin treatment at least 3 days prior to delivery. Macrolide preferences outlined above are based on experience of use in pregnancy – for more information about [macrolide prescribing in pregnancy](#) refer to the UK Teratology Information Service website.

# About the UK Health Security Agency

UKHSA is responsible for protecting every member of every community from the impact of infectious diseases, chemical, biological, radiological and nuclear incidents and other health threats. We provide intellectual, scientific and operational leadership at national and local level, as well as on the global stage, to make the nation’s health secure.

UKHSA is an executive agency, sponsored by the Department of Health and Social Care.

## Acknowledgements

With grateful thanks to the South East, South West, North East and London health protection teams for their contributions.

© Crown copyright 2024

Prepared by: Immunisation and Vaccine-Preventable Diseases Division.

For queries relating to this document, please contact: [immunisation@ukhsa.gov.uk](mailto:immunisation@ukhsa.gov.uk)

Published: August 2024

Publishing reference: GOV-17122



You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v3.0. To view this licence, visit [OGL](https://www.ogilicence.gov.uk). Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.



UKHSA supports the Sustainable Development Goals

