



UK Health
Security
Agency

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

Contents

1. Introduction.....	3
2. Priority groups for public health action.....	4
Individuals at increased risk of severe complications ('vulnerable')	4
Individuals at increased risk of transmitting to 'vulnerable' individuals in 'group 1' if they have pertussis.....	4
3. The 21-day window for active follow-up.....	5
4. Public health response to reported cases of pertussis.....	5
4.1 Scenario 1: Single case reported at 21 days or less after onset of cough	5
4.2 Scenario 2: Single case reported more than 21 days post onset of cough, or a serologically or oral fluid confirmed case	6
Appendix 1. Process for follow up of pertussis cases in periods of high activity.....	9
Text version of flowchart	10
>21 day text message.....	11
<21-day pertussis text message	11
Form (all questions to be compulsory).....	11
Appendix 2: Testing for pertussis in primary care.....	13
About the UK Health Security Agency	14

1. Introduction

Pertussis is a highly contagious infectious disease that can spread rapidly from person-to-person through contact with airborne droplets. As such, intervention measures implemented to help control the spread of SARS-CoV-2 between March 2020 and July 2021 additionally had a significant impact on the transmission of other infectious diseases including pertussis. Consequently, pertussis activity has been exceptionally low across England since 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 \(2024\)](#)).

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.

Where disease transmission is widespread, the benefit of chemoprophylaxis of contacts is likely to be of limited value and, in these circumstances, efforts should be focused on improving vaccine coverage.

Vaccination in pregnancy remains key to passively protecting babies before they can be directly protected by the infant vaccine programme. Studies in England found maternal vaccination offers around 90% vaccine effectiveness against confirmed disease and 97% protection against death from pertussis in infants under 3 months of age. 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](#)).

This guidance has been issued to assist UKHSA Health Protection Teams (HPTs) manage the recent increase in workload related to pertussis, alongside ongoing raised activity in other vaccine preventable diseases. The key priority for action during this heightened pertussis activity is to prevent infant hospitalisations and deaths and highlight the importance of timely and complete vaccination in pregnancy, infants and children under 10 years.

2. Priority groups for public health action

This guidance confirms the key priority groups for public health action (see [Pertussis: guidelines for public health management](#)):

Individuals at increased risk of severe complications ('vulnerable')

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

Or

B. Unimmunised infants (born at more than 32 weeks) less than 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 aged between 2 months and to under 1 year of age who are unimmunised or partially immunised (less than 3 doses of DTaP/IPV/Hib/HepB) regardless of maternal vaccine status.

Individuals at increased risk of transmitting to 'vulnerable' individuals in 'group 1' if they have pertussis

A. Pregnant women who have reached 32 weeks gestation but have not yet received a pertussis-containing vaccine in this pregnancy.

B. Healthcare workers working with infants (as defined in a, b or c above) and pregnant women.

C. People whose work involves regular, close or prolonged contact with infants as defined in a, b or c above.

D. People who share a household with an infant as defined in 'vulnerable' infants in a, b or c above.

3. The 21-day window for active follow-up

In household settings the benefit of chemoprophylaxis is limited to within 21 days of onset of coughing in the index case. Cases are no longer infectious after 21 days and therefore antibiotics for case management are not usually recommended beyond this time. Serology and oral fluid samples should be taken from at least 2 weeks after cough onset. Given that completion of testing then adds around another week to the process, such samples are unlikely to have results reported in time for management within the 21-day window.

Therefore, where workload is high and onset date has not been provided to the local unit by the reporter, it is reasonable to assume that serologically and oral fluid confirmed cases are reported too late for immediate public health action. Note that serology or oral fluid testing is only required for suspected cases that have not been otherwise confirmed where there is at least one year since the most recent dose of pertussis vaccine. Please see Appendix 1 for a suggested process for HPT actions.

4. Public health response to reported cases of pertussis

Prompt notification, appropriate testing and case management are important for timely public health actions and to help support general practice, HPTs may wish to share Appendix 2 with local primary care services. For full details of appropriate testing, based on duration of cough at presentation and age, please see Appendix 2 and [Pertussis: guidelines for public health management](#).

4.1 Scenario 1: Single case reported at 21 days or less after onset of cough¹

For clinically suspected or laboratory confirmed cases (culture or PCR) who have been coughing for 21 days or less, post exposure prophylaxis should be offered to all household contacts where a contact in a priority group for public health action (based on the list above, in Section 2) has been identified.

¹ The 21 days of cough may not be clearly defined, particularly if cough onset date is uncertain. In such cases the period of coughing may need to be approximated. A pragmatic approach may be appropriate where the time of reporting is likely to delay the opportunity for action beyond the 21 days.

When there is increased awareness and more activity, there is likely to be a lower threshold for notifying suspected cases of pertussis. In these circumstances, HPTs may wish to prioritise follow up of notified cases who are in the earlier stages of illness as this will yield the greatest public health benefits.

4.2 Scenario 2: Single case reported more than 21 days post onset of cough, or a serologically or oral fluid confirmed case

There are often delays in the reporting of cases to UKHSA HPTs, (beyond the 21-day window to prevent secondary transmission), the focus in these circumstances should be (1) to prevent tertiary spread to vulnerable groups and (2) to seek early recognition of clusters in institutional settings.

When the UKHSA HPT receives report of either:

A. A case confirmed by serology or oral fluid testing (see explanation in Section III)

Or

B. A clinically diagnosed notified case that has been coughing for more than 21 days¹

In most circumstances, for cases reported to the UKHSA HPT more than 21 days from cough onset, no public health action is required. However, where the risk of ongoing spread is high – for example, case in a boarding school or where there is a significant risk of ongoing spread to vulnerable groups, for example, healthcare worker contact working with young infants or pregnant women, public health interventions may be required (please see relevant guidance [Pertussis: guidelines for public health management in a healthcare setting](#) and [Pertussis outbreaks in nurseries and educational settings](#)).

For cases reported more than 21 days from cough onset, the following actions are therefore recommended.

4.2.1 Risk assessment

There is no requirement to routinely phone the GP or index case for cases reported after 21 days of cough onset. However, it is important to establish if there is a healthcare worker in

the household who works with infants or pregnant women. It is also important to ascertain whether there is evidence of ongoing transmission in a nursery setting, a primary (day) school, a secondary (day) school or a boarding school setting. Information on these settings may be collected through follow-up of cases reported within 21 days or through requesting this detail when warning and informing cases with cough onset more than 21 days earlier (Appendix 1). The oral fluid request form targeting children aged 2 to 16 years inclusive also now requests nursery or school details from parents and young people.

4.2.2 Communication

It is advised that UKHSA HPTs send a link to all patients with a suspected 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.



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

4.2.3 Post exposure prophylaxis

Recommendations for post-exposure prophylaxis

Chemoprophylaxis is not recommended where a report has been made after 21 days from cough onset.

Healthcare worker contacts (who work with infants or pregnant women) may wish to discuss the option of pertussis booster vaccination with their occupational health department to protect against future potential exposures.

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

Case put on HPZone
Risk-assess the time from onset of symptoms to time of notification

If the onset is **more** than 21 days or confirmed by 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 <17 years, not otherwise confirmed and no pertussis-vaccine in last year

If onset is **less** than 21 days set action for business operations team (BOT) to send the <=21-day notify message (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 ~48hrs after the text was sent on a weekday and pend the case.

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 HPZone and close

Form received: review the returns from select survey once each weekday.

If they have said **No to vulnerable contacts** in the household or the onset was >21 days ago, upload survey response and close.

If they have said **Yes or unknown to vulnerable contacts** in the household, then upload survey response to HPZone, call the case and respond as per local processes.

Text version of flowchart

- 1 Add details of the case or suspected case onto HP Zone. Risk-assess the time from onset of symptoms to time of notification. If onset is more than 21 days go to point 2 or if less than 21 days go to point 3.
- 2 If the onset date is more than 21 days or the case has been confirmed by oral fluid (OF) or serology:
 - 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 less than 21 days set action for business operations team (BOT) to send the <=21-day notify message (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 no 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 HPZone 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 21 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 HPZone, call the case and respond as per local processes.

>21 day text message

Dear ((first name/parent of name)). We have been informed that ((you/your child)) has been diagnosed with 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)) to provide details if you / your child work in or attend a nursery or school by emailing us at [insert contact email address]. You can also use this email to contact us if you have any other questions.

<21-day pertussis text message

UKHSA xxx Health Protection: Dear ((first name/parent of name)). We have been informed that ((you/your child)) has been diagnosed with 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)) 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 will call you back the next working day to speak with you. If you have concerns, you can contact us at [insert email address]

Form (all questions to be compulsory)

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

We have been informed that you/your child has been diagnosed with 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 will call you back the next working day to speak with you.

More information on pertussis is available at the following link:

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

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/your child's cough start within the last 3 weeks: Y/N/U

If N – survey ends, if Y/U questions below to pop up

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: Y/N/U
- a woman over 32 weeks pregnant: Y/N/U
- a person in regular contact with babies or women over 32 weeks pregnant such as a health care worker or nursery staff: Y/N/U
- did the person with pertussis go to nursery/ school as a student or work in a nursery / school in the first 3 weeks that they were coughing? Y/N/U
- [if Y they have been in a nursery/ school setting] What is the name of the school or nursery (this is so that we can monitor the number of cases at the nursery/ school)

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 3 weeks, we will call you in 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.

Appendix 2: Testing for pertussis in primary care

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

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.

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