Testing for pertussis in primary care

Suspect pertussis in patients with a **cough illness lasting 14 days or more** without an apparent cause **plus one** of the following: (a) paroxysms of coughing, (b) inspiratory ‘whoop’, (c) post-tussive vomiting.

**All cases should be notified to your local HPT** (insert phone number or email address). When notifying, it is helpful to let the HPT know if the case has had contact with pregnant individuals or children aged under one year, including through occupational exposure (for example, healthcare or nursery settings).

Recommended tests for pertussis testing vary according to the length of time since cough onset:

* less than 2 weeks from cough onset: PCR and/or culture
* between 2 and 3 weeks from cough onset: PCR and/orculture **and/or either** oral fluid kit (if aged 2 to less than 17 years) **or** serology
* more than 3 weeks from cough onset: **either** oral fluid kit (if aged 2 to less than 17 years) **or** serology

Further information is available in the [Pertussis guidelines for public health management](https://www.gov.uk/government/publications/pertussis-guidelines-for-public-health-management) on the testing for and management of pertussis, or please call your local HPT for further advice (insert relevant contact details).

**Requesting an oral fluid kit – free service**

For cases aged 2 years to less than 17 years, notify the case to your local HPT and they will post an oral fluid kit (OFK) directly to the case.

Note that if the case has been immunised against pertussis in the previous year, a positive result cannot be interpreted.

**Managing cases**

**If 2 weeks or less from cough onset**, treat with appropriate antibiotics once PCR and culture tests have been taken. However, if the case is a healthcare worker providing close personal care to infants or pregnant women, or a nursery worker providing close personal care to infants, consider prescribing antibiotics up to 3 weeks from cough onset. Exclude the case from school/work until they have completed 2 days of the antibiotic course. Work with the local HPT to identify and manage vulnerable close contacts. There is no need to prescribe a second course of antibiotics even if symptoms are not resolving.

**If more than 2 weeks from cough onset**, antibiotics are not required even if the case still has symptoms. The case should not be excluded from school/work **unless** they are healthcare worker providing close personal care to infants or pregnant women, or a nursery worker providing close personal care to infants (exclude these cases until 21 days from onset of cough).

**Sending a pertussis serology test**

For cases not aged 2 years to less than 17 years, a charged-for serology test using serum can be arranged via your local laboratory, either undertaken by them or then sent on to the Respiratory and Vaccine Preventable Bacteria Reference Unit (RVPBRU). [Form R3](https://www.gov.uk/government/publications/vaccine-preventable-bacteria-section-request-form) can be used.

Note that if the case has been immunised against pertussis in the previous year, a positive result cannot be interpreted.

**Sending a pertussis culture**

A nasopharyngeal swab or pernasal swab may be taken for culture. The swab should be placed in a culture medium (ideally charcoal) and submitted to your local microbiology lab. **Please clearly label as ‘for pertussis culture’.**

**Sending a pertussis PCR test**

Insert local info:

Please submit samples to your local laboratory as per normal protocol. Samples may then be tested locally or referred for pertussis PCR testing by your local Public Health Laboratory (PHL). Please label clearly ‘for **Bordetella pertussis PCR testing’**

In general, PCR testing can be performed on the following specimens:

* Pernasal/nasopharyngeal swab (PNS/NPS)

Ideally a dry swab, although swabs in viral transport medium or charcoal agar medium may be acceptable (confirm with your local laboratory). Swabs have either a flexible wire shaft or a flexible plastic shaft (e.g. Copan swab) and a rayon / Dacron / nylon bud. Push the swab along the floor of the nasal cavity, as far towards the posterior wall of the nasopharynx as possible.

 

(See the following link for further guidance:

<https://www.youtube.com/watch?v=zqX56LGItgQ>)

* Nasopharyngeal aspirate

Provide at least 400 microlitres in a sterile container. (See the following link for further guidance: <https://www.youtube.com/watch?v=wktn17tjPaE>)

* Throat swab

Acceptable alternative if PNS/NPS not available in primary care (confirm with your local laboratory). Collected using a virology swab or dry swab in a sterile container.