



Pertussis (Whooping Cough) FAQ

The University of Iowa Hygienic Laboratory

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If a patient has a cough, do they have pertussis?

Iowa is experiencing a statewide outbreak of whooping cough, but there are more reasons to cough than an infection with *Bordetella pertussis*. **Most coughs are due to VIRAL infections.** Less than 8% of specimens submitted to University of Iowa Hygienic Laboratory (UHL) for pertussis testing are positive by PCR (Aug 2004 through Feb 2005: 710 positive of 9,538 tests).

Who should be tested for pertussis?

- Persons who are not a contact of a case, but have symptoms compatible with pertussis (prolonged cough (>14 days) with any of the following: paroxysms of coughing, posttussive vomiting, inspiratory whoop, apnea).
 - Test? YES
 - Treat? Health Care Provider determination
- In an OUTBREAK situation, persons with a prolonged cough (>7 days), particularly adults that have NOT had contact with a case defined by Public Health.
 - Test? YES, but consider alternate diagnoses
 - Treat? Physician determination

Who should NOT be tested for pertussis?

- People who are asymptomatic.
 - **Test? NO**
 - Treat? YES-Only if close contact with a confirmed case.
- Do not test people who have had symptoms of pertussis and have been coughing for more than 30 days.
 - **Test? NO**
 - **Treat? NO**

Is there any harm in testing patients for pertussis that do not meet criteria for testing?

YES! No test is perfect. Patients who do not meet epidemiologic and symptomatic criteria for pertussis have a greater chance of returning a FALSE POSITIVE result. This is due to the positive predictive value (PPV) of a test and is a function of disease prevalence.

A positive PCR result DOES NOT mean that a patient is infectious or that they have clinically relevant disease. Laboratory tests should be used in conjunction with clinical symptoms for diagnosis and can be used to confirm but not rule out pertussis.

When is a person with pertussis infectious?

A symptomatic (coughing) person is infectious for:

21 days after cough onset or;

until they have completed 5 days of appropriate antibiotics.

- Patients can remain highly symptomatic for weeks to months, and can remain PCR positive following treatment but are not infectious after 21 days of cough or 5 days of appropriate antibiotic treatment.
- Asymptomatic contacts to a case of pertussis are NOT infectious.

What is a “Close Contact” and should they be tested?

A “Close Contact” is defined by CDC and IDPH criteria (www.idph.state.ia.us/adper/pertussis.asp) Persons with significant exposure will receive a letter or phone call from a Public Health agency or school in conjunction with Public Health. Persons without CDC/IDPH defined exposure are not a close contact and are not at risk. Only consider testing close contacts that are coughing, others should not be tested.

What is the best specimen?

- The best specimen for *B. pertussis* is a Dacron or rayon posterior nasopharyngeal swab or nasal wash/aspirate for **detection by PCR**. These can be found in the UHL Pertussis Collection Kit.
- A specimen obtained BEFORE initiating antibiotic treatment.
 - The value of PCR testing after initiation of antibiotic treatment is not known and not well studied.
 - PCR results cannot be used to measure how contagious a patient is or monitor response to antibiotic treatment because this test detects both living and dead bacteria.

How do I get a test performed in Iowa?

The University Hygienic Laboratory (UHL) offers PCR molecular testing and bacterial culture for diagnosis of pertussis.

- The PCR test is fast, but detects living and dead bacteria. It cannot be used as a test of cure.
- The culture is 100% specific but much less sensitive than PCR

How do I order pertussis testing from UHL?

A test request form can be obtained at:

http://www.uhl.uiowa.edu/kitsquotesforms/respiratory_slip_noclient.pdf

- Check the test request for “*Bordetella pertussis*” under the “Bacteria by PCR” column (DO NOT request “Virus Isolation and/or Detection” as this test requires a different specimen and will not be performed on a dry swab).
- Kits and instructions are available by calling UHL at 319-335-4500.
- Testing is performed M-F.
- Results are available two to three days after arrival at UHL.
- **Specimens can be shipped by US mail, ambient temperature, at any time.** UHL collects mail 7 days a week and will store specimens at 4°Celsius until processed. If you are using a carrier such as FedEx or a private courier, specimens MUST arrive during UHL hours of business (M-F 8am-5pm, Sat. 9am-noon).

What information is required for UHL testing?

Federal regulations (CLIA '88) require the following information:

- Use the UHL respiratory disease test request form:
 - Two patient identifiers: patient name and date of birth.
 - Patient gender.
 - The desired test MARKED on the test request form.
 - The type of specimen submitted.
 - The date the specimen was collected.
- Patient identifiers on BOTH request form AND specimen tube(s) – they must match
- Writing must be legible.
- Make sure to include your complete facility information so that results can be reported.
- Public Health guidelines recommend that patient symptoms, epidemiology, vaccination, and antibiotic treatment also be provided. This information will help avoid delays in testing and reporting.

FAILURE TO PROVIDE THIS INFORMATION MAY LEAD TO DELAYED TEST RESULTS OR SPECIMEN REJECTION.