

The Washington State Public Health Laboratories (PHL) primarily perform 2009 H1N1 influenza virus testing for surveillance purposes. Results are used to monitor 2009 H1N1 activity in the state and guide influenza treatment recommendations.

Criteria for submitting specimens to PHL

If testing for 2009 H1N1 virus has not been performed, laboratories should submit clinical specimens or viral isolates to PHL from:

- 1) Deceased or critically ill patients (i.e., ICU admission) suspected to have influenza*.
- 2) Hospitalized patients who have tested positive for influenza.

*Laboratories are encouraged to send influenza virus isolates from deceased or critically ill patients to PHL, regardless of whether or not 2009 H1N1 testing has been performed. Laboratories do not need to submit specimens from patients who test positive for influenza B.

In addition, healthcare providers have the option to submit specimens for 2009 H1N1 testing from non-hospitalized pregnant women who have tested positive for influenza.

If a patient does not meet the above criteria for testing at PHL, 2009 H1N1 testing can be done at a commercial laboratory if a healthcare provider feels testing is necessary for patient care. To assist with deciding when testing at PHL is appropriate, please see the algorithm available at:

<http://www.doh.wa.gov/ehsphl/Epidemiology/CD/swineflu/sflu-testalg.pdf>

Specimen collection and storage

The following specimen types are acceptable for 2009 H1N1 PCR testing at PHL:

- Nasopharyngeal swab
- Throat swab
- Nasal aspirates
- Nasopharyngeal / Throat swab
- Viral isolate

For bronchoalveolar lavage or deep tracheal suction specimens, see below.

Healthcare providers should:

- Collect specimens using appropriate infection control procedures.
- Collect nasopharyngeal and throat swabs using Dacron or rayon swabs with plastic or wire shafts. Specimens collected with cotton or calcium alginate swabs with wooden shafts will not be tested.
- Immediately after collection, place the swab or aspirate material into a sterile vial with 2 ml of viral transport media; for swab specimens, break or cut off the end of the swab shaft.
- **Close the vial tightly** to avoid leakage during transport. Specimens that leak in transit will not be tested at PHL.
- Do not let a swab come into contact with reagents used for other tests. If a swab contacts reagents for other tests, a new swab must be submitted.
- Label the vial with the patient's name, specimen source, and date obtained; place immediately in a refrigerator (4 °C) until ready for transport. **DO NOT FREEZE.**

QUESTIONS? Most questions should be directed to your local health jurisdiction.

Communicable Diseases Epidemiology may be reached at (206)418-5500

WAPHL, Virology Laboratory may be reached at (206)418-5458

Specimen shipping

Please Note: Specimens must be received at the Public Health Laboratories (PHL) within 72 hours of collection. Specimens which arrive more than 72 hours after collection will not be tested. PHL is open to receive influenza specimens Monday through Friday 8 am–5 pm.

- Complete an Influenza Testing Specimen Submission Form, available at: <http://www.doh.wa.gov/ehsphi/Epidemiology/CD/swineflu/VirH1N1form.pdf>. **Specimens will not be processed until ALL of the following information is known:**
 - Patient name and county of residence
 - Specimen type and date of collection
 - Submitter contact information
 - Reason for testing at PHL (i.e., which criteria are met by the patient)
- Make sure the name and date on the vial match the name and date on the specimen submission form.
- Place the completed Influenza Testing Specimen Submission Form into the OUTER pouch of the plastic biohazard envelope. Do not place any paperwork in the inner pouch along with the vial.
- Pack and label clinical specimens as Biological Substances, UN 3373. Pack and ship according to United States Department of Transportation and United States Postal Service regulations.
- Transport clinical specimens cold (NOT frozen) on ice packs to:
 - Washington State Public Health Laboratories
 - Attn: PHL Virology Laboratory
 - 1610 NE 150th Street
 - Shoreline, WA 98155
- Freeze viral isolates to -70 °C and ship on dry ice. Please contact the PHL Virology Laboratory for further instructions on shipping viral isolates: (206) 418-5458.

Critically ill patients and bronchoalveolar lavage (BAL) specimens

Submission of BAL and deep tracheal suction specimens as a supplemental specimen from critically ill patients may improve the yield of virus recovery. Since these specimens are not an “approved” specimen type for the rt-PCR test used by PHL, they will be placed in viral culture and PCR will be performed when growth has occurred. Test results will be delayed.

PHL testing procedures

PCR test: PHL performs an RT-PCR test developed by the CDC. As of September 11, 2009, PHL is only performing the test for 2009 H1N1 subtype. As the other seasonal influenza subtypes (H1, H3, and B) return to common circulation, PHL will add those tests into the influenza subtyping panel.

Test results turnaround time: Projected turnaround time for results from the influenza subtyping PCR test will be within 3 to 5 business days from receipt of the specimen at the PHL. If a specimen requires additional work, such as viral culture or testing at the CDC, then final results will be delayed.

Reporting of test results: Test results are sent by postal mail to the submitting facility. Test results are also sent by fax and/or electronic reporting system to the local health jurisdiction in which the patient resides.

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