

Laboratory Testing Protocol for the Surveillance of 2009-H1N1 Influenza A Virus (Novel H1N1)

Effective August 31st 2009

**** Guidelines subject to change depending on the situation and state/federal updates***

This document is being updated for clinicians within the seventeen-county region serviced by the Houston Department of Health and Human Services (HDHHS) Laboratory Response Network (LRN) Reference Laboratory in accordance with local practices and state and CDC guidelines.*

Novel H1N1 testing conducted at the HDHHS laboratory is for surveillance purposes. The primary goals for 2009-H1N1 Influenza A virus (novel H1N1) testing are to:

- detect the distribution and spread of the virus
- detect new variants of the virus
- assist in outbreak investigations

Diagnostic testing should be performed by commercial laboratory services.

Specimen Submission Guidelines

Specimens submitted to the HDHHS LRN laboratory **must** be from one of the following categories:

- **Hospitalized patients**: Hospitalized for **at least** 48 hours with influenza symptoms (fever greater than 37.8 ° C (100 ° F) **and** cough and /or sore throat) plus **one or both** of the following conditions:
 - severe illness such as lower respiratory tract infections or pneumonia
 - unusual presentation in children, adults > 64 years of age, and immuno-compromised individuals
- **Ante-mortem specimens**: Patients who have died with influenza like-illness and have no other known cause of death (note: specimens must be collected before death)
- **Pregnant patients** with influenza-like illness
- Individuals with influenza-like illness who are a part of a **critical public health investigation and/or outbreak** as identified by the local health departments
- Providers who are part of **established influenza surveillance programs**. Only enrolled providers will be allowed to submit specimens that do not meet one of the other criteria above.

Qualifying criteria must be indicated on the requisition form.

Specimens that do not meet one of these criteria will not be tested by the HDHHS LRN laboratory. Submitters should send these specimens to a reference laboratory for testing.

HDHHS may allow exceptions to this list depending on the specific epidemiological and clinical characteristics of the situation, with prior approval from HDHHS

Link to the specimen submission form: <http://www.houstontx.gov/health/H1N1form.pdf>.

Specimen Collection Guidelines

Samples should be collected as soon as possible after the onset of illness.

Specimens must be clearly labeled and accompanied by Novel H1N1 Influenza Requisition Form.

Acceptable specimens for novel influenza A/H1 (swine-like) virus testing include:

- nasopharyngeal swabs
- throat swabs
- nasal swabs
- dual nasal/throat swabs
- nasal aspirates
- isolates from viral culture

Swabs used for specimen collection should have a Dacron, polyester, foam, or rayon tip and an aluminum or plastic shaft.

Swabs with calcium alginate or cotton tips and wooden shafts are *not* acceptable.

Swab specimen collection vials should contain 1-3ml of viral transport medium (e.g. containing, protein stabilizer, antibiotics to discourage bacterial and fungal growth, and buffer solution).

Specimen Storage and Transport

Specimens should be placed at 4°C immediately after collection and should be transported on ice packs to the HDHHS laboratory within 72 hours of collection.

Specimens that are more than 72 hours old should be frozen and transported to the HDHHS laboratory on dry ice.

Respiratory specimens suspect for novel influenza A/H1 virus should be packaged and transported according to guidelines for packaging and transporting dangerous goods.

Specimen Rejection Criteria

- Swabs with calcium alginate or cotton tips and wooden shafts
- Specimens not transported on ice
- Frozen specimens not transported on dry ice
- Swabs not transported in viral transport media
- Specimens submitted in expired viral transport media
- Refrigerated specimens more than 72 hours old
- Specimens accompanied by incorrect, improperly completed or incomplete requisition forms
- Specimen source, collection date and time not specified on requisition form
- Inappropriate specimens not listed above (Bronchoalveolar lavages, endotracheal aspirates, sputum and nasal washes cannot be accepted at this time)

References

Laboratory Response Network (LRN) Protocol, Centers for Disease Control and Prevention, February 2006.

Laboratory testing protocol for the surveillance of Novel H1N1 influenza and seasonal influenza. <http://www.dshs.state.tx.us/swineflu/Lab-Test-Protocol.shtm>, August 6th 2009.

Interim Guidance on Specimen Collection, Processing, and Testing for Patients with Suspected Novel Influenza A (H1N1) Virus, Centers for Disease Control and Prevention, May 13, 2009.