

Laboratory Testing Protocol for Persons with Influenza-Like Illness or Acute Respiratory Illness

April 26, 2009

This Protocol is for use by regional and local health departments.

Specimen Collection for Influenza Specimens

Respiratory Specimen Collection

1. Perform influenza testing on **all** patients with **influenza like illness (ILI)**: fever $>100^{\circ}$ F **and** cough and/or sore throat)
2. Perform influenza testing on all patients with **acute respiratory illness (ARI)**: recent onset of *at least two* of the following symptoms: rhinorrhea (runny nose) or nasal congestion, sore throat, cough (with or without fever or chills) **and** meet one of the following criteria:
 - a history of recent travel to Mexico (within 7 days) or
 - contact with a person who has been diagnosed with Influenza A.

Perform rapid flu testing, if available, for immediate decisions regarding communicability. However, rapid flu testing is not sufficiently sensitive to rule out influenza. Regardless of results of rapid flu testing, collect and submit specimen for viral culture.

Submit all specimens to the Department of State Health Services or the appropriate public health department laboratory even if viral culture specimens are routinely submitted to another laboratory. Collection and submission instructions are listed below.

If rapid testing is not available, submit a culture specimen using the instructions below.

Serum Specimen Collection

Serum specimen collection will be used primarily for epidemiological investigations related to influenza virus transmission. Local and regional health departments can coordinate with providers to ensure collection of serum specimens as appropriate.

Collect whole blood on **all patients with influenza like illness (ILI)**. Collect 5cc for cases less than 3 years of age, collect 10cc for cases 3 to 11 years of age, and collect 20cc for cases 12 years of age or older. Serum specimen should be collected as close to onset of illness as possible and a second specimen collected at least 14 days after onset.

Collect whole blood from **close contacts** to a laboratory-confirmed case. Collect 5cc for contacts less than 3 years of age, collect 10cc for contacts 3 to 11 years of age, and collect 20cc for contacts 12 years of age or older. Serum specimen should be collected as close as possible to onset of illness of the laboratory-confirmed case and a second specimen should be collected at least 14 days after collection.

Handling Guidelines for Influenza Specimens

Respiratory Specimen Guidelines

Acceptable specimens for influenza testing include a nasopharyngeal or throat swab, nasal wash, or nasal aspirates. Preferred specimen is a combination throat/nasal pharyngeal swab or oral pharyngeal swab or nasal wash. Other routine respiratory specimens, such as a bronchial wash, or sputum will be acceptable.

Samples should be collected within the first 4 days of illness. **Swabs used for specimen collection should have a Dacron tip and an aluminum or plastic shaft. Swabs with calcium alginate or cotton tips and wooden shafts are not recommended, as these have substances that can interfere with PCR procedure.** Specimens should be put into an approved biohazard bag and placed at 4°C immediately after collection.

Procedure	Influenza Types Detected	Acceptable Specimens	Transport
RT-PCR	A and B	Nasopharyngeal swab, throat swab, nasal wash, bronchial wash, nasal aspirate, sputum	Cold on Ice Packs –or– Frozen on Dry Ice. Submit same day as collection

Transport cold on ice packs or freeze at - 70° C and ship on dry ice. Although specimens are acceptable for culture within 4 days of collection, due to the current situation, please submit specimens the same day as collected.

When influenza A is detected by rapid testing methods, please send an aliquot (1-2 ml) of the original suspension (not exposed to test kit reagents) in viral transport media or equal; or if an additional original specimen swab in viral transport media is available, that is preferable.

Serum Specimen Guidelines

Collected blood should be stored at 4°C immediately. This can be done by placing the sample on ice, in a 4°C refrigerator, or in a cooler with cold packs.

Blood may be stored at 4°C for up to 18 hours. Sometime between 1 hour and 18 hours after collection, the blood collection tube must be centrifuged to separate the clotted blood from the serum and the serum removed to a clean tube. The clotted blood may be discarded. The serum must be aliquoted into labeled tubes. After aliquoting, the serum samples must be immediately stored at -20°C or colder.

Laboratory Forms

Go to DSHS Laboratory at http://www.dshs.state.tx.us/lab/MRS_forms.shtm to:

- Order forms for Laboratory mailing containers and supplies
- Test Request Form Samples and G-2A Form
- Obtaining Test Request Forms by email

For additional assistance with specimen submission call:

Telephone: (512) 458-7318

Toll Free: (888) 963-7111 ext. 7318