



Recommendations for Management of Influenza and Other Community Viral Respiratory Diseases Winter 2009-2010 (October 14, 2009)

Laboratory Recommendations

At this point, the Massachusetts Department of Public Health recommends that diagnostic testing not be performed routinely on patients presenting with influenza-like illness (ILI). Currently, the novel 2009 H1N1 is the only virus causing ILI in Massachusetts. Early management and therapy for high-risk patients will result in better outcomes and decreased transmission in the community.

ILI Symptoms: fever, cough, sore throat, runny or stuffy nose, body aches, headache, chills and fatigue. A significant number of people who were infected with this virus also have reported diarrhea and vomiting.

Confirmatory testing may be available for selected patients admitted with ILI through infectious diseases or infection control recommendations. Direct antigen tests (QFLU) have demonstrated limited sensitivity (40 to 50 percent), but good specificity, for detection of the novel H1N1 influenza A virus and may provide useful data for cohorting. Specific confirmation of the novel H1N1 virus is performed by the Massachusetts State Laboratory (requests require submission of a State Lab requisition form, available through our Laboratory).

- **Specimen Collection:** Collection kits with instructions and materials for influenza direct testing and influenza confirmation can be requested from the laboratory. Kits contain a VTM (pink) vial for confirmation studies, a saline (clear) vial for direct testing, rayon swabs approved for use and specimen collection instructions.
 - **For NP Swab:** Prior to collection, have patient blow nose to eliminate heavy secretions. The collection should be performed with the patient in the supine position, with neck extended. Gently insert a Dacron or Rayon swab along the floor of the nasal passage to an age-appropriate age depth, at least 1 inch for adults (or until resistance is met at the rear of the nasopharynx), then rotate several times. After removal of the swab, transfer into the viral transport media. Collect second NP swab for direct test, if needed. Place direct test swab into sterile saline tube. A video demonstrating how to collect a nasopharyngeal swab is also posted on OurNet (link), and can be viewed at the New England Journal of Medicine website (<http://content.nejm.org/cgi/content/full/NEJMe0903992/DC1>)
 - **For NP Wash:** Prior to collection, have patient blow nose to eliminate heavy secretions. The collection should be performed with the patient in the supine position, with neck extended. Gently insert the lubricated catheter along the floor of the nasal passage to the appropriate age depth marking (or until resistance is met at the rear of the

nasopharynx). Sterile saline (1 to 3 mL) is instilled and quickly aspirated. **After removal of the catheter, slowly transfer aspirated secretions into the viral transport media and direct test vial, taking care not to produce aerosol.**

- Swabs other than dacron or rayon (e.g., cotton, calcium alginate, etc.) cannot be used for direct test specimens.
- Direct testing cannot be performed on specimens inoculated into VTM (pink) or transport media other than the saline included with the collection kit.
- **Respiratory Virus Confirmation (OE mnemonic = RVPPANEL):** Inoculate nasopharyngeal (NP) swab or wash into the pink Viral Transport Media (VTM) and transport as quickly as possible to the lab. You can hold the specimen for a short time, storing at 4°C if transport delay is anticipated.
- **Influenza Direct Testing (OE mnemonic=QFLU):** Place the NP swab for direct influenza detection into the saline (colorless fluid) tube for transport. The swab for direct detection cannot be used for respiratory virus culture.

Test Performance: The sensitivity of the Direct Flu Test depends on the type of specimen submitted, the quality of specimen collection, the phase of infection (early versus late) and other parameters. False negative results with the novel H1N1, when compared to molecular diagnostic procedures, occur in 50 percent or more of infected patients.