



**MLS Influenza Laboratory Update #2  
2010-2011 Influenza Season  
September 17, 2010**

**\*\*Please forward** this message to all appropriate personnel within your institution\*\*

For a printable version (pdf) of this update, please click here:

<http://www.health.state.mn.us/divs/phl/mls/alerts.html>

Purpose of this Message:

This message serves to inform the healthcare community about MDH strategies for the 2010-2011 influenza season. MDH is continuing to move away from describing influenza only in terms of the 2009 H1N1 strain in order to encompass all potential circulating influenza strains.

***Included in this Update:***

1. Specimen Submission to MDH-PHL
2. Testing Performed at MDH-PHL
3. Forms Required for Specimen Submission
4. Rapid Testing Information
5. Influenza Reporting Requirements (Hospitalized Cases, Deaths and Critical Illness, Other)
6. How to Report Influenza
7. Other Influenza Surveillance Programs
8. Influenza Teleconference for Laboratorians

**1. Specimen Submission to MDH-PHL**

MDH-PHL is functioning primarily in a surveillance role (not diagnostic role) for influenza testing, with the goal of establishing the strain types circulating in the community and to determine important characteristics about circulating strains (i.e. sub-type, anti-viral resistance, virulence, etc.) to inform the healthcare community. If diagnostic influenza PCR testing is desired on non-hospitalized patients, please submit specimens to your normal reference laboratory.

MDH-PHL is ONLY performing influenza testing in the following circumstances:

- (i) **HOSPITALIZED surveillance** – specimens submitted from persons who are **hospitalized** with ILI\* or clinical suspicion of influenza or **deceased** following ILI or clinical suspicion of influenza, regardless of influenza test results (positive, negative, not done). Note, if your laboratory is performing onsite influenza testing by PCR and/or viral culture (or if you are using a reference laboratory for PCR and/or viral culture), MDH is still requesting that specimens from hospitalized patients with ILI or clinical suspicion of influenza be submitted to MDH-PHL for further characterization. It is important to send a specimen even if a rapid influenza test has produced a negative result or was not performed.
- (ii) **CLUSTER** investigation or other **unusual circumstance** for which MDH has requested a specimen(s) be sent to MDH-PHL.

(iii) **LABORATORY surveillance** - Until this season's influenza strains are well-characterized, laboratories performing rapid testing methods (EIA, IFA, DFA, PCR, etc.) should submit up to two patient specimens that are positive for influenza (both A and B) each week for surveillance purposes. In addition, virology laboratories should continue to submit viral culture isolates that are positive for influenza. After the circulating strain has been established, MDH-PHL will notify all labs with strain information and modify this request for specimen submission.

(iv) **SENTINEL surveillance** – These facilities are pre-determined.

\* ILI is defined as **fever > 100° F and cough or sore throat** in the absence of a known disease other than influenza.

### **Appropriate specimen types**

For patients admitted with ILI WITHOUT evidence of pneumonia or other lower respiratory disease – submit ONE upper respiratory specimen per patient.

- Nasopharyngeal swab is the preferred specimen
- Other acceptable specimens include; nasal swab, nasal wash/aspirate, or combined nasal swab with an oropharyngeal swab, and viral culture

For patients admitted with ILI who ALSO HAVE evidence of pneumonia or other lower respiratory disease submit one upper respiratory specimen AND one lower respiratory specimen (DO NOT perform a procedure such as bronchoscopy solely for the purpose of collecting a specimen for MDH-PHL)

**Upper respiratory specimen** in addition to one or more of the following;

- Bronchial alveolar lavage (BAL)\*
- Tracheal aspirate (if intubated)\*
- Bronchial wash\*

\* Influenza PCR results for BAL, tracheal aspirates and bronchial washes are considered presumptive per CDC testing protocol, therefore viral culture will also be performed to obtain a final result.

### **Specimen Transport**

Place swab in viral transport media (VTM; e.g. M4, M5, Hanks) for transport to MDH. If VTM is not available, then sterile saline or phosphate buffered saline (PBS) is acceptable. If sending left-over saline solution (no chemicals or preservatives) from rapid testing, you must send at least 500 µl. Please ship specimen(s) at refrigerator temperature.

For additional information please refer to the link below:

<http://www.health.state.mn.us/divs/phl/clin/labflu.html#transport>

## **2. Testing Performed at MDH-PHL**

MDH-PHL is performing real-time PCR for type A and type B influenza on all specimens that meet the testing criteria (see #1 above). Specimens that are positive for type A PCR are typed for seasonal hemagglutinin types H1 and H3 and for 2009 H1N1 [formerly known as novel (swine-like) H1]. Select specimens will be tested for anti-viral resistance and may be further characterized for the presence of potential virulence factors. Specimens from defined surveillance programs are also cultured for influenza serotyping and for the identification of other respiratory viruses. In addition, influenza isolates sent from virology laboratories are serotyped with CDC/WHO antisera for influenza A or influenza B to determine if they match with the current vaccine. Selected specimens and /or isolates are forwarded to the CDC for additional characterization.

### **Results Reporting by Fax:**

MDH-PHL will continue to fax results to those laboratories that are currently set up to receive faxes. If your laboratory did not set up this function during the 2009-2010 influenza season, please contact Paulette Schlichter at [paulette.schlichter@state.mn.us](mailto:paulette.schlichter@state.mn.us)

### 3. Forms Required for Specimen Submission

All specimens submitted based on criteria outlined in #1 above, require the submission of **ONLY ONE** form. **NOTE:** This is a change from the 2009-2010 influenza season, as the *Clinical Screening Form* is no longer being used. We are requesting that you choose from one of two versions of the *Clinical Testing and Submission Form* depending on whether the specimen is being submitted from a hospitalized or non-hospitalized patient

#### (i) Hospitalized Patients Only Influenza Testing - Clinical Testing and Submission Form (Project #1492)

Use this form for all specimens submitted from persons hospitalized with ILI based on criteria outlined in #1 above (Hospitalized surveillance). In order to allow for prompt testing of submitted specimens the information in lower right-hand corner regarding the hospitalization of the patient (including name of hospital, date of admission, and in-house test results) must be filled out completely. This form can be found at: [www.health.state.mn.us/divs/phl/clin/forms.html](http://www.health.state.mn.us/divs/phl/clin/forms.html)

#### (ii) Non-Hospitalized Influenza Testing - Clinical Testing and Submission Form (Project #493)

This is the general MDH laboratory form that is used for all other specimens submitted to MDH-PHL. Use this form for submitting specimens for influenza testing from non-hospitalized patients. This would include submission by clinical laboratories of positive influenza specimens that are being sent to MDH-PHL for surveillance serotyping or for any specimen specifically requested by MDH staff related to cluster investigation or other unusual circumstance. Please include any influenza testing results, methods used (DFA, rapid EIA, PCR, etc.) and name of test kit(s) in the comment section at the bottom of the form. The Clinical Testing and Submission Form can be found at: [www.health.state.mn.us/divs/phl/clin/forms.html](http://www.health.state.mn.us/divs/phl/clin/forms.html)

**Note:** if your facility is enrolled in the defined Influenza Sentinel Provider Surveillance Network, please follow current established guidelines for the laboratory submission form and project number that is specific to that project. <http://www.health.state.mn.us/divs/idepc/diseases/flu/hcp/sentinel/site.html>

### 4. Rapid Influenza Test Information

As in past years, MDH's guidance for the use of rapid influenza testing is to interpret results with caution. Disease prevalence is an important indicator of the predictive value of the rapid influenza tests. When disease prevalence is low (currently) there is a higher potential for false positive results, therefore all positive rapid influenza test results should be confirmed by viral culture, at least until a higher disease prevalence is established. Information on rapid influenza testing can be found at: <http://www.health.state.mn.us/divs/idepc/diseases/flu/hcp/rapid.html>

### 5. Influenza Reporting Requirements

MDH is requesting reporting of:

- (1) Any Minnesota resident **HOSPITALIZED** with laboratory-confirmed influenza (via DFA, IFA, viral culture, EIA, rapid test, paired serological tests, or RT-PCR) if the first positive influenza test specimen collection date is not more than 14 days before the patient's admission date;
- (2) Any influenza-related **DEATH** (hospitalized or non-hospitalized) or **CRITICAL ILLNESS** (critical illness is defined as admission to the intensive care unit [ICU]);
- (3) **UNUSUAL CASE** incidence (clusters and suspect new novel strains). 2009 H1N1 is no longer considered a novel strain.

Please remember that timely reporting of laboratory-confirmed influenza is essential. In hospitals where active surveillance is ongoing, MDH will be contacting Infection Preventionists bi-weekly as a reminder to report cases.

## **6. How to Report Influenza**

MDH encourages reporting of laboratory-positive hospitalized influenza cases through the Minnesota Immunization Information Connection (MIIC). If you are interested in using MIIC to report hospitalized influenza cases, please e-mail Karen White at [karen.white@state.mn.us](mailto:karen.white@state.mn.us) with the subject line “Reporting influenza using MIIC”. Please provide your name, phone number, email address, and facility name and address. If you are not current using or plan to use MIIC or other electronic reporting method, please send yellow Disease Report Cards or Laboratory/Epidemiology line lists to MDH via: U.S. mail, secure e-mail ([craig.morin@state.mn.us](mailto:craig.morin@state.mn.us)) or FAX. Mailed or faxed reports should be sent to:

Attn: Craig Morin

Minnesota Department of Health, Acute Disease Investigation and Control Section

625 Robert St. N., PO Box 64975

St. Paul, MN 55164-0975

651-201-5414 (phone) 651-201-5743 (FAX)

### **What information needs to be reported?**

- (1) Patient’s name, address, date of birth, medical record number
- (2) Admitting hospital name and date of admission
- (3) Name of laboratory (submitter # if available), influenza test type (e.g. rapid test, PCR, culture), test result (A, B or unknown), and date of specimen collection
- (4) Outcome (died or survived)

\* To report unusual case incidence (clusters and/or suspected new novel strains) please contact MDH Epidemiology immediately at (651) 201-5414.

**Note:** If you submit a specimen on a patient hospitalized with ILI to MDH-PHL (see Section #1 above) and RT-PCR is positive for influenza at MDH-PHL you do NOT need to report the case to MDH via MIIC, yellow card, U.S. mail, etc.

### **Why is reporting critical?**

Case reporting and active surveillance with specimen submission will assist in establishing the severity of illness, strain types circulating in the community and specific characteristics about circulating strains (i.e. sub-type, anti-viral resistance, virulence, etc.). This information is used keep the healthcare community continually updated about the influenza season.

## **7. Other Influenza Surveillance Programs**

Please join our MLS Laboratory Influenza/RSV Weekly Surveillance Program. Laboratory participants provide weekly, aggregate data about influenza and RSV testing results from their laboratories on a weekly basis via a web-based form. If interested, please contact Paula Vagnone at [paula.snippes@state.mn.us](mailto:paula.snippes@state.mn.us)

All of the data gathered from the various MDH influenza surveillance programs – school and long-term care facility outbreaks, doctor office visits, and laboratory data about circulating respiratory viruses and much more – all can be found on the MDH Weekly Influenza Activity website:

<http://www.health.state.mn.us/divs/idepc/diseases/flu/stats/index.html>

## **8. Influenza Teleconference for Laboratorians**

MDH-PHL is planning a teleconference in early to mid-October in preparation for the influenza season. You will receive a message with more details in the coming weeks.

### **Thank you and Questions**

Thank you for your assistance in the many MDH Influenza Surveillance programs. If you have any questions about influenza reporting please contact MDH Epidemiology at 651-201-5414. If you have

questions about specimen submission or laboratory testing, please contact Dave Boxrud, Molecular Biology and Virology Laboratory Supervisor at 651-201-5257

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This is an update from the Minnesota Department of Health – Public Health Laboratory (MDH-PHL) and the Minnesota Laboratory System (MLS). This message is being sent to MLS laboratory contacts serving Minnesota residents. You are not required to reply to this message.

**\*\*Please forward this to all appropriate personnel within your institution and Health System\*\***

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