Purpose of this Message:
This message serves to inform the healthcare community about MDH surveillance and laboratory testing strategies for the 2012-2013 influenza season. For a pdf version of this document, please go to: http://www.health.state.mn.us/divs/phl/mls/alerts.html

Action Items:
No immediate action is required.

Please forward this message to all appropriate personnel within your institution.

Surveillance for the 2012-2013 influenza season does not officially begin until October 1, 2012, however we request that you begin utilizing the procedures below upon receipt of this notification.

Included in this Update:
1. New This Year
2. Specimen Submission to MDH–PHL
3. Testing Performed at MDH–PHL
4. Forms Required for Specimen Submission
5. Rapid Influenza Test Information
6. Influenza Reporting
7. Weekly Influenza Activity Webpage
8. MDH Contact Information

1. New This Year – MDH continues to ask for specimens from patients with ILI* and swine contact throughout the entire influenza season
MDH would like to receive a specimen on outpatients with ILI who meet any of the following criteria:

- Recent (7 days or less) contact with swine
- Recent contact with someone with ILI who had recent exposure to swine

Providers should refer to the following link if they have questions regarding appropriate specimen types and specimen submission. Providers are no longer required to contact MDH by telephone for specimen submission approval. http://www.health.state.mn.us/divs/idepc/diseases/flu/h3n2v/hcp.html

2. Specimen Submission to MDH-PHL
The 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. subtype, antiviral resistance, virulence, etc.). If diagnostic testing is desired on non-hospitalized patients, please submit specimens to your normal reference laboratory. More detailed influenza information below can also be found at: http://www.health.state.mn.us/divs/phl/cfin/labflu.html

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

- 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. 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 still requests that positive specimens be submitted to MDH-PHL for further characterization. It is important to send a specimen on any hospitalized patient with ILI*
or clinical suspicion of influenza; even if rapid influenza testing is negative or if rapid influenza testing was not performed.

- **Cluster investigation or other unusual circumstance** for which MDH Epidemiology has requested a specimen(s) be sent to MDH-PHL. This includes patients with ILI that have had swine contact (See #1 above).
- **Sentinel surveillance** – These facilities are pre-determined
- **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 (either A or B) each week for surveillance purposes. In addition, virology laboratories should continue to submit all viral culture isolates that are positive for influenza

**Appropriate specimen types**

For patients admitted with ILI* or clinical suspicion of influenza **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, throat swab, or combined nasal swab with an oropharyngeal swab, and viral culture

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

For patients admitted with ILI* or clinical suspicion of influenza 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 testing by MDH-PHL) per patient.

Submit an **upper respiratory specimen** in addition to one or more of the following;
- Bronchial alveolar lavage (BAL)
- Tracheal aspirate (if intubated)
- Bronchial wash

**Specimen Transport**

Place swab in viral transport media (VTM; e.g. M4, M5, Hanks) for transport to MDH-PHL. 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 influenza testing, you must send at least 0.5 ml. Please ship specimen(s) at refrigerator temperature. For additional information please refer to this link: [http://www.health.state.mn.us/divs/phl/clin/labflu.html#transport](http://www.health.state.mn.us/divs/phl/clin/labflu.html#transport)

3. **Testing Performed at MDH–PHL**

The MDH-PHL has established an algorithm for influenza testing that serves to provide important surveillance data in a timely manner as well as conserve valuable testing resources. MDH-PHL is performing real-time PCR for type A and type B influenza on all specimens that meet the testing criteria. Specimens that are positive for type A are typed for seasonal hemagglutinin types H1 and H3, 2009 H1N1, and swine-variants (including H3N2v and H1N2v). Select specimens may be tested for antiviral 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 the current vaccine. Selected specimens and/or isolates are forwarded to the CDC for additional characterization.

**Results Reporting by Fax:**

MDH-PHL will fax all influenza results. No influenza results will be sent via mail. If you need to update your fax number, please contact Paulette Schlichter at paulette.schlichter@state.mn.us

4. **Forms Required for Specimen Submission**

All specimens submitted based on criteria outlined in Specimen Submission to MDH-PHL, require the submission of only one form.

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

Use this form for specimens submitted from persons hospitalized with ILI or clinical suspicion of influenza based on criteria outlined in the Specimen Submission to MDH-PHL, section #2, above (Hospitalized Surveillance). In
order to allow for prompt testing of submitted specimens, it is imperative that the form is filled out completely, especially information regarding hospitalization (hospital of admission, date of admission, in-house influenza test results, influenza test type) found in the lower right hand corner of the form. This form has been updated so please discard the submission form used last season. The new submission form Hospitalized Patients Only - Influenza Testing - Clinical Testing and Submission Form (Project #1492) can be found at:

http://www.health.state.mn.us/divs/phl/clin/print_mdh_hosp.pdf  (Print and complete manually)
http://www.health.state.mn.us/divs/phl/clin/fillable_mdh_hosp.pdf  (Complete on your computer, then print)

(2) Non-Hospitalized Influenza Testing Clinical Testing and Submission Form (Project #493)
Please use this form for submitting specimens from non-hospitalized patients and all other circumstances outlined in in the Specimen Submission to MDH-PHL, section #2, above. This would include submissions by clinical laboratories for positive influenza specimens that are being sent to MDH-PHL for further characterization or for any specimen specifically requested by MDH staff related to a cluster investigation or other unusual circumstance (including possible swine influenza cases). 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. **If there is known swine contact with the patient, please indicate that also.** The Non-hospitalized Clinical Testing and Submission Form can be found at:

http://www.health.state.mn.us/divs/phl/clin/forms.html

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

5. Rapid Influenza Test Information
As in past years, guidance for the use of rapid influenza testing is to interpret results with caution. For decisions on treatment, providers are encouraged to use clinical judgment and to avoid basing decisions solely on rapid test results. Also, commercially available rapid influenza diagnostic tests (RIDTs) may not detect H3N2v and H1N2v virus in respiratory specimens. In general, RIDTs are not reliable during times of low influenza prevalence and are not recommended until influenza prevalence increases. More detailed information regarding the use and interpretation of rapid influenza testing can be found at:

http://www.health.state.mn.us/divs/idepc/diseases/flu/hcp/rapid.html

6. Influenza Reporting
For information regarding reporting requirements and the different mechanisms for reporting a case of influenza, please refer to: http://www.health.state.mn.us/divs/idepc/dtopics/reportable/influenza.html

7. Weekly Influenza Activity Webpage
Results of the data gathered from various MDH influenza surveillance programs can be found on the MDH Weekly Influenza Activity webpage: http://www.health.state.mn.us/divs/idepc/diseases/flu/stats/index.html
Data from these programs are collected and displayed weekly during the influenza season. Please let us know if you are interested in contributing to this data by providing weekly influenza and RSV data from your laboratory. Click on this link to provide contact information if you have not already done so:

https://survey.vovici.com/se.ashx?s=56206EE3731AE898

8. MDH Contact Information
Specimen Submission and Laboratory Testing: Sara Vetter, Virology Laboratory Supervisor at 651-201-5255 or Dave Boxrud, Molecular Epidemiology Supervisor at 651-201-5257.
Influenza Case Reporting: MDH Epidemiology at 651-201-5414.

Thank you for your partnership and continued support of influenza surveillance efforts in Minnesota.

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