Purpose of this Message:
This message serves to inform the healthcare community about MDH surveillance and laboratory testing strategies for the 2013-2014 influenza season.

Action items:
- Please continue to submit appropriate specimens on hospitalized patients. Submission of positive influenza specimens for out-patients will begin October 1, 2013.
- Please participate in our yearly influenza laboratory testing survey. The survey should take less than 5 minutes. Thank you to our partners who have already completed the survey. The survey can be found by clicking on the following link: [https://survey.vovici.com/se.ashx?s=56206EE3242BF9EC](https://survey.vovici.com/se.ashx?s=56206EE3242BF9EC)
- If you are interested in contributing to this data by providing weekly influenza, RSV, and other respiratory viruses data from your laboratory, please click on this link to provide your contact information if you have not already done so: [https://survey.vovici.com/se.ashx?s=56206EE3242BF9E9](https://survey.vovici.com/se.ashx?s=56206EE3242BF9E9)

In April 2013, influenza surveillance was revised to include year round reporting of hospitalized influenza cases and submission of specimens from hospitalized patients with ILI* or suspicion of influenza to MDH-PHL for influenza PCR testing. Although surveillance has been ongoing, we are sending this notification as a reminder that as we approach the ‘official’ CDC start to the 2013-2014 influenza season (October, 1, 2013) we expect to see increases in influenza activity as we see every year around this time. If you are not currently doing so, please begin utilizing the procedures below upon receipt of this notification.

Included in this Update:
1. Specimen Submission to MDH–PHL
2. Testing Performed at MDH–PHL
3. Forms Required for Specimen Submission
4. Rapid Influenza Test Information
5. Influenza Reporting Requirements (Hospitalized Cases, Deaths, Critical Illness, Other)
6. How to Report Cases of Influenza
7. Weekly Influenza Activity Webpage

1. 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.

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, regardless of influenza testing (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 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
- **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 isolate

*ILI is defined as fever (measured or subjective) and cough or Shortness of breath or difficulty breathing 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 per patient.

DO NOT perform a procedure such as bronchoscopy solely for the purpose of collecting a specimen for testing by MDH-PHL.

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 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](http://www.health.state.mn.us/divs/phl/clin/labflu.html#transport)

2. **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.

- Real-time PCR for type A and type B influenza is performed on all specimens that meet the testing criteria (see Specimen Submission to MDH-PHL, #1, above).
- Specimens positive for type A influenza are typed for seasonal hemagglutinin types H1 and H3, 2009 H1N1, and swine-variants H3N2 and H1N2.
- 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 or that test positive by real-time PCR may also be cultured to either perform influenza serotyping or to identify 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.

3. **Forms Required for Specimen Submission**

All specimens submitted based on criteria outlined in Specimen Submission to MDH-PHL, #1, above, 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 #1, 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 can be found at:
(2) Infectious Disease Testing and Submission Form, for use when submitting specimens for non-hospitalized influenza testing (Project #493)

Please use this form for submitting specimens from non-hospitalized patients and all other circumstances outlined in the Specimen Submission to MDH-PHL, section #1, 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. 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. This 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 or SARI 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

4. 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 swine-origin 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

5. Influenza Reporting Requirements

MDH is requesting reporting of:

- **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 admission date;
- **Any influenza-related death** (hospitalized or non-hospitalized) or **critical illness** (critical illness is defined as admission to the intensive care unit [ICU]);
- **Unusual case incidence** (clusters and suspect novel strains). This includes recently recognized swine influenza strains H3N2v and H1N2v.

Please remember that timely reporting of laboratory-confirmed influenza is essential. In hospitals where active surveillance is ongoing, MDH Epidemiology will be faxing active surveillance reports monthly to confirm reported cases for the previous month. For additional information regarding reporting requirements please refer to: http://www.health.state.mn.us/divs/idepc/dtopics/reportable/influenza.html

6. How to Report Cases of Influenza

*Case reporting by mail, FAX, and secure e-mail*

**Hospitalized** influenza cases can be reported by yellow Disease Report Card or laboratory/epidemiology line list to MDH. Please send via **mail, FAX or secure e-mail** (craig.morin@state.mn.us).

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)

**Exception to case reporting: Specimens submitted to MDH-PHL**

A “case” does NOT need to be reported to MDH Epidemiology if:

- On-site influenza testing is not performed AND you submit a specimen to MDH-PHL from a patient hospitalized with ILI* or clinical suspicion of influenza (see Specimen Submission to MDH-PHL, #1, above)
OR

- On-site influenza testing is negative, AND you submit a specimen to MDH-PHL from a patient hospitalized
  with ILI* or clinical suspicion of influenza (see Specimen Submission to MDH-PHL, #1, above)

In these instances, MDH Epidemiology will receive notification of RT-PCR results (positive or negative) directly
from MDH-PHL.

Report influenza-related deaths and unusual case incidence (clusters and/or suspected new novel strains) by
contacting MDH Epidemiology immediately at (651) 201-5414.

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 from October – May.

If you are interested in contributing to this data by providing weekly influenza, RSV, and other respiratory viruses data
from your laboratory, please click on this link to provide your contact information if you have not already done so:
https://survey.vovici.com/se.ashx?s=56206EE3242BF9E9

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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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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need to know the information to perform their duties. It is for official use only. Do not distribute beyond the intended
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