INFLUENZA AND ENTEROVIRUS DISEASE (EV-D68)

2014-2015 INFLUENZA UPDATE

We are seeing an increase in influenza activity in the community through reports from our health care partners and surveillance systems. Surveillance in the United States shows that most circulating viruses identified so far this season are Influenza A (H3N2) and influenza B viruses. Very few 2009 H1N1 viruses have been reported.

Most of the viruses analyzed in recent months are like the 2014-2015 vaccine viruses, however there are some influenza A (H3N2) viruses nationally and internationally that are antigenically drifted from the H3N2 virus component used in this season’s vaccine.

- If drifted influenza A (H3N2) viruses circulate broadly in the United States this season, it could translate into reduced vaccine effectiveness against circulating H3N2 viruses.
- Even when drifted viruses are found to be circulating, CDC continues to recommend influenza vaccination:
  - Studies have shown that seasonal influenza vaccination can sometimes induce antibodies and/or T cells capable of cross-reacting with antigenically distinct viruses. While vaccine effectiveness may be reduced, the vaccine can still offer protection.
  - More than one type or subtype of influenza usually circulates during a single season and flu vaccines protect against three or four different influenza viruses, depending on the vaccine given.

Influenza antiviral treatment is an important second line of defense to treat flu illness in the event of infection. Healthcare providers should NOT wait for confirmation of flu to begin antiviral treatment. Antiviral treatment works best when started early. Two FDA-approved influenza antiviral medications are recommended for use in the United States during the 2014-2015 influenza season: oral oseltamivir (Tamiflu®) and inhaled zanamivir (Relenza®). Oseltamivir and zanamivir are chemically related antiviral medications known as neuraminidase inhibitors that have activity against both influenza A and B viruses. For complete information about antiviral recommendations see; www.cdc.gov/flu/professionals/antivirals/index.htm

INFLUENZA NASAL SPRAY VACCINE (LAIV) USE IN CHILDREN

There is some evidence to suggest that the nasal spray vaccine may not protect children against H1N1 viruses during the 2014-2015 season because the same H1N1 vaccine virus from the 2013-2014 vaccine is included in the 2014-2015 vaccine.

- Available CDC analyses showed that there was no measurable effectiveness for LAIV against influenza A (H1N1) among children enrolled in a CDC-sponsored study last influenza season.
There were not enough cases of infection in the CDC study with H3N2 or B viruses to calculate vaccine effectiveness against those viruses in children last season.

Reasons behind the lack of effectiveness against H1N1 infections for LAIV during the 2013-2014 season are not fully understood.

Nasal spray vaccine continues to be a recommended option for vaccination:
  - LAIV is designed to protect against four different influenza viruses: influenza A (H1N1), A (H3N2) and two influenza B viruses;
  - Surveillance shows that there is substantially more circulation of influenza A (H3N2) and B viruses and very little circulating H1N1 so far this season;
  - LAIV has been shown to offer good protection against influenza A (H3N2) and influenza B viruses in the past;
  - LAIV may offer better protection than IIV against antigenically drifted viruses that may circulate this season.

Individuals who have not been vaccinated yet this season should get vaccinated now.

Children should be immunized with whatever vaccine is immediately available and indicated.

Influenza vaccination should not be delayed to obtain a specific vaccine preparation.

Children needing one dose of vaccine this season who got the nasal spray vaccine are considered fully vaccinated and do not need to be revaccinated.

Children needing two doses of vaccine this season who have only gotten one dose can get either the nasal spray vaccine or the flu shot as their second dose, whatever is immediately available.


ENTEROVIRUS DISEASE (EV-D68) and ACUTE FLACCID MYELITIS

Nationally, of the more than 2,500 specimens tested by the CDC lab, about 40% have tested positive for EV-D68. About one third have tested positive for an enterovirus or rhinovirus other than EV-D68. Of the 66 persons with severe respiratory illness for whom specimens were sent to CDC from Washington State for testing, only 10 (15%) were positive for EV-D68. No additional specimens have been submitted from Washington residents with acute respiratory illness since late October.

Acute onset of limb weakness in children, CDC has been working with healthcare professionals and state and local health departments to investigate reports of children across the United States who developed a sudden onset of weakness in one or more arms or legs, MRI scans show an inflammation predominantly of the gray matter—nerve cells—in the spinal cord. This illness is now being referred to as acute flaccid myelitis. From August 2 to November 26, 2014, CDC has verified reports of 90 children in 32 states who developed acute flaccid myelitis that meets CDC’s case definition. Acute flaccid myelitis cases reported this year, are most similar to illnesses caused by viruses including poliovirus, other enteroviruses, adenoviruses, West Nile virus, and herpesviruses.
For additional information see Acute Flaccid Myelitis: Interim Considerations for Clinical Management - available on the CDC website at: www.cdc.gov/ncird/downloads/acute-flaccid-myelitis.pdf

CDC is asking that clinicians continue to look for and immediately report to their state or local health department any patients who meet the following case definition, using a patient summary form available on CDC’s website at; (www.cdc.gov/ncird/investigation/viral/sep2014/hcp.html):

1. Patients ≤21 years of age,
2. Acute onset of focal limb weakness,
3. Occurring on or after August 1, 2014, and
4. An MRI showing a spinal cord lesion largely restricted to gray matter.

Physicians who have patients meeting the case definition can work with their local public health department to facilitate specimen submission via Washington State Public Health Laboratories for testing at CDC. CDC will conduct laboratory testing of stool, respiratory and cerebrospinal fluid specimens for enteroviruses including poliovirus, West Nile virus and other known infectious etiologies.

Washington State has sent 2 specimens for testing to CDC for Washington State children with acute limb weakness, neither tested positive for EV-D68. Coxsackie A virus was found in the stool of one child. A specimens from the other child were negative for any virus.

EBOLA PLANNING ACTIVITIES
Stay tuned for a future CD Update addressing local Ebola planning activities.

Resources:
Centers for Disease Control and Prevention www.cdc.gov
Washington State Department of Health www.doh.wa.gov/ForPublicHealthandHealthcareProviders/NotifiableConditions/ListofNotifiableConditions
Thurston County Public Health and Social Services Department www.co.thurston.wa.us/health

THANK YOU FOR REPORTING SUSPECT AND CONFIRMED CASES!

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<tr>
<th>TO REPORT A NOTIFIABLE CONDITION IN THURSTON COUNTY</th>
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<tbody>
<tr>
<td>Voice mail for reporting Non-immediately reportable conditions (24 hours a day)</td>
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<tr>
<td>Day time immediately reportable conditions</td>
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<tr>
<td>After hours immediately and 24 hour reportable conditions or a public health emergency</td>
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<tr>
<td>No one is available with Thurston County Public Health and condition is immediately notifiable</td>
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