Communicable Disease Epidemiology Influenza Update

2012 CDC Week 29 (7/15/12–7/21/12)
This report includes all data collected during the 2011–2012 season.

Summary:

- Influenza activity was very low throughout most of Washington during week 29.
- The proportion of emergency room visits for influenza-like illness (ILI) was very low in both western and eastern Washington.
- During week 29, 1 (0.8%) of 129 specimens tested by the World Health Organization (WHO) Collaborating Laboratories in Washington was positive for influenza B.

Laboratory Data

World Health Organization (WHO) Collaborating Laboratories
Five laboratories in Washington participate in the WHO surveillance network. These laboratories include the Washington State Public Health Laboratories, the Seattle & King County Public Health Laboratory, the Spokane Regional Health District Laboratory, the University of Washington Virology Laboratory, and Seattle Children's Hospital Laboratory. WHO laboratory data from Washington are shown in the following table and figure.

<table>
<thead>
<tr>
<th>Week Ending</th>
<th>No. Labs Reporting</th>
<th>A (H1)</th>
<th>A (2009 H1N1)</th>
<th>A (Unable to subtype)</th>
<th>A (Subtyping not performed)</th>
<th>B</th>
<th>Total Influenza</th>
<th>Total # Tested</th>
<th>% Influenza Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/30/12</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>156</td>
<td>1.9</td>
</tr>
<tr>
<td>7/7/12</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>115</td>
<td>1.7</td>
</tr>
<tr>
<td>7/14/12</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>121</td>
<td>0</td>
</tr>
<tr>
<td>7/21/12</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>129</td>
<td>0.8</td>
</tr>
<tr>
<td>Cumulative since 6/24/12</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>6</td>
<td>521</td>
<td>1.2</td>
</tr>
</tbody>
</table>

WHO Laboratory Data, Washington, 2011–2012
Antigenic Characterization
During the 2011–12 influenza season, antigenic characterization was performed on 120 influenza viruses from Washington State.

**Influenza A (H3N2) (n=32)**
Sixteen (50%) influenza A (H3N2) viruses were characterized as A/Perth/16/2009-like, the influenza A (H3N2) component of the 2011–12 vaccine. Sixteen (50%) viruses showed reduced titers with antiserum produced against A/Perth/16/2009.

**Influenza A (2009 H1N1) (n=8)**
All 8 influenza A (2009 H1N1) viruses were characterized as A/California/07/2009-like, the influenza A (H1N1) component of the 2011–12 vaccine.

**Influenza B (n=80)**
62 (77.5%) influenza B viruses tested belong to the B/Victoria lineage of viruses and 18 (22.5%) belong to the B/Yamagata lineage of viruses. Of 34 influenza B/Victoria lineage viruses characterized, 33 (97%) were characterized as B/Brisbane/60/2008-like, the influenza B component of the 2011–12 vaccine.

Antiviral Resistance Testing
The Washington State Public Health Laboratories perform antiviral resistance testing on selected influenza A (2009 H1N1) specimens for surveillance purposes. PHL uses CDC protocols to identify a single known mutation in the neuraminidase of the influenza A (2009 H1N1) virus that confers oseltamivir resistance (H275Y). During July 24, 2011 through July 21, 2012, one oseltamivir-resistant influenza A (2009 H1N1) virus was detected in Washington state.

Novel Influenza Viruses
No novel influenza viruses were detected in Washington state during the 2011–2012 season.

Public Health Reporting of Aggregate Influenza Data (PHRAID)
Select laboratories in Washington report the total number of influenza tests performed and the total number positive for influenza A and B each week through PHRAID. During CDC Week 29 (7/15–7/21), 10 western Washington facilities reported 1 (1.3%) positive influenza B specimens out of 78 influenza tests conducted. In eastern Washington, 5 facilities reported 1 (5.0%) positive influenza B specimen out of 20 influenza tests conducted.
Influenza-like Illness Data

**Syndromic Surveillance Data**

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics) WA: The following graphs show the proportion of emergency department visits, by CDC week, for a syndrome of influenza-like illness (ILI). A syndrome of ILI is derived from the chief complaint and is defined as “influenza” OR fever with cough or sore throat.

Western Washington: During week 29, 68 (0.34%) of 20,101 visits to emergency rooms in Western Washington were for influenza-like illness.

Eastern Washington: During week 29, 35 (0.6%) of 5843 visits to emergency departments in Eastern Washington were for influenza-like illness. No data are available prior to 2009.

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**Percentage of ER Visits for ILI by CDC Week, Western Washington, 2007–2012**

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**Percentage of ER Visits for ILI by CDC Week, Eastern Washington, 2009–2012**
Mortality Data

Pneumonia and Influenza (P&I) Mortality
DOH analyzes death records to determine the weekly proportion of deaths due to pneumonia and influenza (P&I). The below graph indicates the weekly proportion of deaths due to P&I during 2005 – present. **Data points for the most recent 8–12 weeks do not represent all deaths in the state since there is a delay in submitting death records to DOH.**

During week 28, 17 (6.2%) of 275 deaths reported to DOH were due to P&I.

Reported Laboratory-confirmed Influenza Deaths
Since July 24, 2011, the Washington State Department of Health (DOH) has received 18 reports of laboratory-confirmed influenza deaths. Six deaths were due to influenza B viruses and 11 deaths were due to influenza A virus. One was due to influenza of unknown type. Of these fatal cases, 16 (89%) had one or more risk factors known to increase complications from influenza.

Number and Rate of Reported Fatal Laboratory-Confirmed Influenza Cases by Age Group, Washington, July 24, 2011 – July 21, 2012

<table>
<thead>
<tr>
<th>Age Group (years)</th>
<th>No. Deaths</th>
<th>Death Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–4</td>
<td>0</td>
<td>NA</td>
</tr>
<tr>
<td>5–24</td>
<td>3</td>
<td>0.17</td>
</tr>
<tr>
<td>25–49</td>
<td>4</td>
<td>0.17</td>
</tr>
<tr>
<td>50–64</td>
<td>3</td>
<td>0.22</td>
</tr>
<tr>
<td>65+</td>
<td>8</td>
<td>0.94</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>0.27</td>
</tr>
</tbody>
</table>
Laboratory-confirmed Influenza Hospitalizations
Spokane Regional Health District requires that their hospitals and providers report patients hospitalized with laboratory-confirmed influenza. During July 24, 2011 through July 21, 2012, 93 adults and 23 children hospitalized with laboratory-confirmed influenza were reported among Spokane County residents. Cumulative hospitalization rates by age group and hospitalized cases by week of hospital admission are shown on the below graphs.

Laboratory-Confirmed Cumulative Hospitalization Rates by Age Group (per 100,000), Spokane County, Washington 2011–2012

Additional Resources:

International Influenza Data:

National Influenza Data
National influenza surveillance data are available at: [http://www.cdc.gov/flu/weekly/](http://www.cdc.gov/flu/weekly/)
Distribute: [http://isdsdistribute.org/](http://isdsdistribute.org/)

Local Influenza Surveillance Reports:
King County: [http://www.kingcounty.gov/healthservices/health/communicable/immunization/fluactivity.aspx](http://www.kingcounty.gov/healthservices/health/communicable/immunization/fluactivity.aspx)
Yakima County: [http://yakimahealthdistrict.org/w/home/community-health/rsv-flu-stats/](http://yakimahealthdistrict.org/w/home/community-health/rsv-flu-stats/)