State Summary: Flu activity is decreasing

- Sixty lab-confirmed influenza deaths have been reported for the 2015-2016 season to date, including one pediatric death.
- During week 15, 466 specimens were tested by the World Health Organization/National Respiratory and Enteric Virus Surveillance System (WHO/NREVSS) collaborating laboratories in Washington, with 52 specimens positive for influenza. Twenty eight specimens were positive for influenza B, 14 were positive for influenza A (H1N1), 5 were positive for influenza A (subtyping not performed), and 5 were positive for influenza A (H3N2).
- During week 15, the proportion of outpatient visits for influenza-like illness (ILI) was 0.8 percent, below the baseline of 1.1 percent.
- Influenza is characterized as local in Washington.

Laboratory Data

World Health Organization (WHO) & National Respiratory and Enteric Virus Surveillance System (NREVSS)

Seven laboratories in Washington participate in the WHO/NREVSS surveillance network, along with other laboratories nationwide that test WA residents for influenza. WHO/NREVSS laboratory data for WA residents are shown in the following table and figure. For the 2015-2016 season, CDC is reporting influenza B lineages

<table>
<thead>
<tr>
<th>Week</th>
<th>No. Labs Reporting</th>
<th>A (H1)</th>
<th>A (2009 H1N1)</th>
<th>A (H3N2)</th>
<th>A (Unable to subtype)</th>
<th>A (Subtyping not performed)</th>
<th>B</th>
<th>BYam</th>
<th>BVic</th>
<th>Total # Tested</th>
<th>% Flu Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>9</td>
<td>0</td>
<td>59</td>
<td>10</td>
<td>0</td>
<td>31</td>
<td>63</td>
<td>1</td>
<td>3</td>
<td>609</td>
<td>27.4</td>
</tr>
<tr>
<td>13</td>
<td>8</td>
<td>0</td>
<td>37</td>
<td>7</td>
<td>0</td>
<td>26</td>
<td>46</td>
<td>3</td>
<td>2</td>
<td>567</td>
<td>21.3</td>
</tr>
<tr>
<td>14</td>
<td>8</td>
<td>0</td>
<td>14</td>
<td>13</td>
<td>0</td>
<td>16</td>
<td>43</td>
<td>0</td>
<td>0</td>
<td>512</td>
<td>16.8</td>
</tr>
<tr>
<td>15</td>
<td>6</td>
<td>0</td>
<td>14</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>28</td>
<td>0</td>
<td>0</td>
<td>466</td>
<td>11.2</td>
</tr>
</tbody>
</table>

Figure 1: WHO/NREVSS Laboratory Data, Washington, 2015–2016
**Antigenic Characterization**

Antigenic characterization has been conducted by CDC on a subset of influenza specimens collected in Washington during the 2015-2016 season.

Fourteen influenza A (H3N2) specimens were characterized as A/Switzerland/9715293/2013-like, the influenza A (H3N2) component of the 2015-2016 vaccine.

Sixteen influenza A (2009 H1N1) specimen was characterized as A/California/07/2009-like, the influenza A (H1N1) component of the 2015-2016 vaccine.

Twenty two influenza B specimens was characterized as B/Phuket/3073/2013-like, the B Yamagata lineage component of the 2015-2016 trivalent and quadrivalent vaccines.

Six influenza B specimens were characterized as B/Brisbane/60/2008-like, the B Victoria lineage component of the 2015-2016 quadrivalent influenza vaccine.

**Antiviral Resistance Testing**

One influenza A (H1N1) isolate collected in Washington during the 2015-2016 season was determined to be oseltamivir resistant at CDC. Nationally, less than one percent of influenza viruses tested have resistance to antivirals.

**Novel, Avian and Unsubtypable Influenza Viruses**

During the 2014-2015 season, highly pathogenic avian influenza (HPAI) was identified in bird populations in Washington state and elsewhere in the United States. No human cases have been identified. On January 15, 2016, HPAI was reported in a commercial turkey flock in Indiana, the first HPAI positive reported in the United States since summer 2015. See USDA avian flu tracking page.

**Public Health Reporting of Aggregate Influenza Data (PHRAID)**

Select commercial laboratories in Washington report the number of influenza tests performed and the number positive for influenza A and B each week through PHRAID. For week 15, 422 flu tests were reported in PHRAID from four commercial laboratories, with 41 tests positive for influenza A and 38 positive for influenza B (Figure 2). No data are available from eastern Washington facilities.

![Figure 2. Aggregate Influenza Testing Results, Western Washington, 2015–2016](image-url)
Outpatient Influenza-like Illness Surveillance Network (ILINet) Data
ILI is defined as fever (temp ≥ 100ºF/37.8ºC) plus cough and/or sore throat. During week 15, 29 sentinel providers in Washington reported data through the U.S. Outpatient Influenza-like Illness Surveillance Network Surveillance Network (ILINet). Of 4,284 visits reported, 36 (0.8%) were due to ILI, below the baseline of 1.1%.

**Figure 3. Percentage of ILI Visits Reported by Sentinel Providers, Washington, 2014–2016**

![Percentage of ILI Visits Reported by Sentinel Providers, Washington, 2014–2016](image)

**Table 2: Number of ILI Visits Reported by Sentinel Providers by Age Group, Washington**

<table>
<thead>
<tr>
<th>CDC Week</th>
<th># Sentinel Providers/ Clinics</th>
<th>Age 0–4</th>
<th>5–24</th>
<th>25–49</th>
<th>50–64</th>
<th>Over 64</th>
<th>Total ILI</th>
<th>Total Patients</th>
<th>% ILI</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 (2016)</td>
<td>36</td>
<td>9</td>
<td>26</td>
<td>24</td>
<td>11</td>
<td>1</td>
<td>71</td>
<td>3,926</td>
<td>1.8</td>
</tr>
<tr>
<td>13 (2016)</td>
<td>34</td>
<td>3</td>
<td>34</td>
<td>18</td>
<td>11</td>
<td>0</td>
<td>66</td>
<td>4,238</td>
<td>1.3</td>
</tr>
<tr>
<td>14 (2016)</td>
<td>34</td>
<td>5</td>
<td>27</td>
<td>14</td>
<td>7</td>
<td>3</td>
<td>56</td>
<td>4,812</td>
<td>1.2</td>
</tr>
<tr>
<td>15 (2016)</td>
<td>29</td>
<td>5</td>
<td>17</td>
<td>8</td>
<td>5</td>
<td>1</td>
<td>36</td>
<td>4,284</td>
<td>0.8</td>
</tr>
</tbody>
</table>

**Other Causes of Respiratory Infections**
The University of Washington Clinical Virology Laboratory publishes aggregate test results for influenza as well as other respiratory viruses.

During week 15, the following non-influenza respiratory viruses were identified by the University of Washington Clinical Virology Laboratory (highest count listed first): rhinovirus, human metapneumovirus, coronavirus, respiratory syncytial virus (RSV), adenovirus, parainfluenza.

University of Washington Clinical Virology Laboratory: [http://depts.washington.edu/rspvirus/respiratory.htm](http://depts.washington.edu/rspvirus/respiratory.htm)

Note that pertussis is also circulating in Washington state.
WA DOH Pertussis Update: [http://www.doh.wa.gov/Portals/1/Documents/Pubs/348-254-PertussisUpdate.pdf](http://www.doh.wa.gov/Portals/1/Documents/Pubs/348-254-PertussisUpdate.pdf)
Influenza Hospitalization Data—Spokane County Only

Reported Laboratory-confirmed Influenza Hospitalizations (Spokane County Only)
Spokane Regional Health District requires hospitals and providers to report laboratory-confirmed influenza-associated hospitalizations. Two hundred eight lab-confirmed influenza hospitalizations have been reported to date for the 2015-2016 influenza season: 97 influenza A, 110 influenza B and one influenza A and B co-infection.

Influenza Hospitalization Data—Snohomish County Only

Reported Laboratory-confirmed Influenza Hospitalizations (Snohomish County Only)
Snohomish Health District requires hospitals in Snohomish County to report laboratory-confirmed influenza-associated hospitalizations to the health district. See figure below, courtesy of Snohomish Health District.
ESSENCE Syndromic Surveillance Data

Figure 5 shows the proportion of visits at a sample of emergency departments in western Washington for a chief complaint of influenza-like illness, or discharge diagnosis of influenza, by CDC week. For this purpose, ILI is defined as “influenza” OR fever with cough or fever with sore throat. Syndromic Surveillance ILI data are not available for eastern Washington facilities. For week 15, 96 of 10,943 emergency department visits (0.9%) were for a chief complaint of ILI or discharge diagnosis of influenza.


**Figure 5: Syndromic Surveillance, Percentage of Hospital Visits for a Chief Complaint of ILI, or Discharge Diagnosis of Influenza, by CDC Week, Western Washington, 2013-2016**

### Influenza-like illness outbreaks in long term care facilities

Long term care facilities are required to report all suspected and confirmed outbreaks to their local health jurisdiction per Washington Administrative Code (WAC) 246-101-305. Long-term care facilities are required to report the following:

- A sudden increase in acute febrile respiratory illness over the normal background rate (e.g., 2 or more cases of acute respiratory illness occurring within 72 hours of each other) OR
- Any resident who tests positive for influenza


Local health jurisdictions in turn report long-term care facility influenza-like illness outbreaks to the Washington State Department of Health.

Since July 2015, 34 ILI outbreaks in long-term care facilities have been reported to the Washington State Department of Health.
Reported Laboratory-Confirmed Influenza-Associated Deaths
Sixty laboratory-confirmed influenza deaths have been reported since week 30 of 2015, including one pediatric death. Thirty nine deaths were attributable to influenza A, twenty to influenza B and one to co-infection of influenza A and B.

Table 3: Number and rate of reported laboratory-confirmed influenza-associated deaths by age group, Washington, 2015-2016 season to date

<table>
<thead>
<tr>
<th>Age Group (in years)</th>
<th>Number of Deaths</th>
<th>Death Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5–24</td>
<td>1</td>
<td>0.06</td>
</tr>
<tr>
<td>25–49</td>
<td>12</td>
<td>0.52</td>
</tr>
<tr>
<td>50–64</td>
<td>18</td>
<td>1.29</td>
</tr>
<tr>
<td>65+</td>
<td>29</td>
<td>3.10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>0.87</strong></td>
</tr>
</tbody>
</table>

Reported Laboratory-Confirmed Influenza-Associated Deaths, Past Seasons
For reference, lab-confirmed influenza death totals reported to the Department of Health for past seasons are presented below in Table 4. Note that for the purposes of tables 3 and 4, each influenza season runs from week 30 of one year to week 29 of the next (roughly July to July).

Past season summaries are available: http://www.doh.wa.gov/DataandStatisticalReports/DiseasesandChronicConditions/CommunicableDiseaseSurveillanceData/InfluenzaSurveillanceData

Note that influenza deaths are likely under-reported. The reasons for this under-reporting vary. Influenza may not be listed as a cause of death, influenza testing may not have occurred in a timely fashion to identify the virus, or may not have been performed at all, and lab-confirmed influenza deaths may not have been appropriately reported to public health.

CDC has published information about estimating seasonal influenza-associated deaths: http://www.cdc.gov/flu/about/disease/us_flu-related_deaths.htm?mobile=nocontent

Table 4: Number and rate of reported laboratory-confirmed influenza-associated deaths by age group, past season totals

<table>
<thead>
<tr>
<th>Season</th>
<th>Number of Deaths, All Ages</th>
<th>Death Rate (per 100,000 population), All Ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-2016, season to date</td>
<td>60</td>
<td>0.87</td>
</tr>
<tr>
<td>2014-2015, total</td>
<td>157</td>
<td>2.28</td>
</tr>
<tr>
<td>2012-2013, total</td>
<td>54</td>
<td>0.80</td>
</tr>
<tr>
<td>2011-2012, total</td>
<td>18</td>
<td>0.27</td>
</tr>
<tr>
<td>2010-2011, total</td>
<td>36</td>
<td>0.53</td>
</tr>
</tbody>
</table>

Additional Resources

International Influenza Data: http://www.who.int/topics/influenza/en/


Washington Local Health Department Influenza Surveillance Reports:
Clark County: https://www.clark.wa.gov/public-health/flu
King County: http://www.kingcounty.gov/healthservices/health/communicable/diseases/Influenza.aspx
Kitsap County: http://www.kitsappublichealth.org/Respiratory.pdf
Pierce County: http://www.tpchd.org/providers-partners/influenza-medical-providers
Whatcom County: http://www.co.whatcom.wa.us/967/Influenza
Yakima County: http://www.yakimacounty.us/365/RSV-Flu-Stats