Quick facts are below. See full report on pages 1-10 for details.

**Flu activity in Washington is currently**
- Increasing and Elevated

**Number of reported lab-confirmed deaths**
- 2019-2020 season to date
- 11 deaths
  - 2 children
  - 9 adults

**Most common type this week**
- B

**Take Me To:**
- Strains page 1
- Trends page 2
- Other viruses page 8
- Deaths page 9

**How do you stop the spread of flu?**
Get vaccinated! After getting vaccinated, also:

1. Wash your hands often
2. Cover your cough
3. Stay home when you’re sick

**More information:**
Learn about flu and flu activity in Washington:
- [www.knockoutflu.org](http://www.knockoutflu.org)
- National flu report from the CDC
- Washington flu resources for providers
- Read detailed Washington weekly flu report following this page.

Washington State Influenza Update

Week 51: December 15, 2019-December 21, 2019
Washington State Department of Health, Communicable Disease Epidemiology

Please note all data are preliminary and may change as data are updated

State Summary: Flu activity is increasing and elevated

- Eleven lab-confirmed influenza deaths have been reported for the 2019-2020 season to date.
- Eight influenza-like illness outbreaks in long term care facilities have been reported for the 2019-2020 season to date.
- During week 51, 7.1 percent of visits among Influenza-like illness Network participants were for influenza-like illness, above the baseline of 1.5 percent.
- During week 51, 28.7 percent of specimens tested by WHO/NREVSS collaborating laboratories in Washington were positive for influenza.
- Influenza A and Influenza B were reported during week 51.

Influenza Laboratory Surveillance Data

Laboratory Data: World Health Organization (WHO) & National Respiratory and Enteric Virus Surveillance System (NREVSS) Data Reported to CDC

CDC has generated separate graphs of data reported to CDC by public health laboratories (Figure 1) and commercial laboratories (Figure 2). Table 1 combines the data from the public health and commercial laboratories.

Table 1: WA Influenza Specimens Reported to CDC, Public Health Laboratories and Commercial Laboratories

<table>
<thead>
<tr>
<th>Week</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>B Vic</th>
<th>Total Tested</th>
<th>% Flu Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>14</td>
<td>98</td>
<td>0</td>
<td>14</td>
<td>1,297</td>
<td>10.2</td>
</tr>
<tr>
<td>49</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>25</td>
<td>198</td>
<td>0</td>
<td>11</td>
<td>1,687</td>
<td>14.2</td>
</tr>
<tr>
<td>50</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>43</td>
<td>312</td>
<td>0</td>
<td>5</td>
<td>1,760</td>
<td>20.6</td>
</tr>
<tr>
<td>51</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>49</td>
<td>444</td>
<td>0</td>
<td>0</td>
<td>1,724</td>
<td>28.7</td>
</tr>
</tbody>
</table>

Figure 1: Influenza Positive Tests Reported to CDC, WA Public Health Laboratories
Figure 2: Influenza Positive Tests Reported to CDC, WA Commercial Laboratories
Outpatient Influenza-like Illness Surveillance

Influenza-like Illness Surveillance by Region

Figure 3 shows the percent of Emergency Department visits for a chief complaint of ILI or a discharge diagnosis of Influenza for each geographic region in Washington state. Regions: West-Northwest: Clallam, Grays Harbor, Jefferson, Kitsap, Lewis, Mason, Pacific, Thurston Southwest: Clark, Cowlitz, Skamania, Wahkiakum Puget Sound: King, Pierce North: Island, San Juan, Skagit, Snohomish, Whatcom Central: Benton, Chelan, Douglas, Franklin, Grant, Kittitas, Klickitat, Okanogan, Walla Walla, Yakima East: Adams, Asotin, Columbia, Ferry, Garfield, Lincoln, Pend Oreille, Spokane, Stevens, Whitman

Figure 3: Percent of Emergency Department Visits for ILI by Region, Washington

![Graph showing percent of Emergency Department visits for ILI by region, Washington](image-url)
Outpatient Influenza-like Illness Surveillance Network (ILINet) Data

ILI is defined as fever (temp 100 °F/37.8 °C or higher) plus cough and/or sore throat. During week 51, 43 sentinel providers in Washington reported data through the U.S. Outpatient Influenza-like Illness Surveillance Network Surveillance Network (ILINet). Of 21476 visits reported, 1515 (7.1%) were due to ILI, above the baseline of 1.5%.

In Figure 4, the baseline is for Region 10 (Alaska, Idaho, Oregon, and Washington). For the 2019-2020 season, the baseline is calculated differently than in previous seasons. See http://www.cdc.gov/flu/weekly/overview.htm

Figure 4: Percentage of ILI Visits Reported by Sentinel Providers, Washington, 2019

<table>
<thead>
<tr>
<th>Week</th>
<th>Sentinel Providers</th>
<th>Age 0-4</th>
<th>Age 5-24</th>
<th>Age 25-49</th>
<th>Age 50-64</th>
<th>Over 64</th>
<th>Total ILI</th>
<th>Total Patients</th>
<th>Percent ILI</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>45</td>
<td>129</td>
<td>169</td>
<td>70</td>
<td>28</td>
<td>29</td>
<td>425</td>
<td>11,889</td>
<td>3.6</td>
</tr>
<tr>
<td>49</td>
<td>45</td>
<td>257</td>
<td>383</td>
<td>223</td>
<td>62</td>
<td>52</td>
<td>977</td>
<td>21,349</td>
<td>4.6</td>
</tr>
<tr>
<td>50</td>
<td>44</td>
<td>339</td>
<td>559</td>
<td>277</td>
<td>79</td>
<td>59</td>
<td>1,313</td>
<td>21,906</td>
<td>6.0</td>
</tr>
<tr>
<td>51</td>
<td>43</td>
<td>363</td>
<td>697</td>
<td>340</td>
<td>64</td>
<td>51</td>
<td>1,515</td>
<td>21,476</td>
<td>7.1</td>
</tr>
</tbody>
</table>
Influenza Hospitalization Data

Reported Laboratory-Confirmed Influenza Hospitalizations (Spokane County Only)
Spokane Regional Health District requires hospitals to report laboratory-confirmed influenza-associated hospitalizations. 40 lab-confirmed influenza hospitalizations have been reported since October 2018 (12 influenza A and 28 influenza B). See figure below, courtesy of Spokane Regional Health District.

Figure 5: Spokane Lab-Confirmed Influenza Hospitalizations by Month of Admission

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.

Figure 6: Snohomish County Influenza Hospitalizations by Season 2013-CDC Week 51
Influenza-like Illness Syndromic Surveillance Data

ESSENCE Syndromic Surveillance Data

Figure 7 shows the proportion of visits at a subset of emergency departments across 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.


Figure 7: Syndromic Surveillance, Percentage of Hospital Visits for a Chief Complaint of ILI, or Discharge Diagnosis of Influenza, by CDC Week, Washington, 2016-2019

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

Recommendations for prevention and control of influenza outbreaks in long-term care facilities are available at: http://www.doh.wa.gov/Portals/1/Documents/5100/fluoutbrk-LTCF.pdf

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

Since Week 40 of 2019, 8 influenza-like illness outbreaks in long-term care facilities have been reported to the Washington State Department of Health.
Seasonal Baselines and Epidemic Thresholds


Figure 8 shows the percentage of specimens tested for influenza at WHO/NREVSS labs that are positive for influenza by week. For week 51, the percentage of specimens positive for influenza is above both the seasonal baseline and the epidemic threshold.

Figure 9 shows the percentage of visits that are for influenza like illness among ILINet providers. For week 51, the percentage of visits for ILI is above both the seasonal baseline and the epidemic threshold.

The seasonal baseline is calculated using data from the previous five years, and the epidemic threshold is 1.645 standard deviations above the seasonal baseline. This method is similar to that used by CDC when calculating pneumonia and influenza mortality, as described in [http://www.cdc.gov/flu/weekly/overview.htm](http://www.cdc.gov/flu/weekly/overview.htm).

The intention of these models is to provide a data driven approach to determining when influenza has reached an epidemic level. Under these models, influenza is considered to be epidemic when the percentage of specimens positive for influenza is at or above the epidemic threshold, and the percentage of visits for ILI is also at or above the epidemic threshold.

Taken together, these figures show that influenza activity is above both the seasonal baseline and the epidemic threshold for week 51. Feedback on the use of these models is welcomed.

**Figure 8: Percentage of Specimens Positive for Influenza, WHO/NREVSS labs**

![Figure 8: Percentage of Specimens Positive for Influenza, WHO/NREVSS labs](chart1.png)

**Figure 9: Percentage of Visits for ILI, Sentinel Providers**

![Figure 9: Percentage of Visits for ILI, Sentinel Providers](chart2.png)
Other Causes of Respiratory Infections

During the 2019-2020 season, the following non-influenza respiratory viruses were reported to the National Respiratory and Enteric Surveillance System (NREVSS).

For more information about NREVSS, see https://www.cdc.gov/surveillance/nrevss/index.html.

Figure 10: Respiratory and Enteric Viruses, Washington, 2019-2020 Season to Date

![Graph showing the number of positive specimens for various viruses over CDC weeks 40 to 51.]

Table 3: Respiratory and Enteric Viruses, 2019-2020 Season to Date

<table>
<thead>
<tr>
<th>Week</th>
<th>Reporters</th>
<th>Respiratory Syncytial Virus</th>
<th>Human Parainfluenza Virus</th>
<th>Adenovirus</th>
<th>Coronavirus</th>
<th>Rotavirus</th>
<th>Enteric Adenovirus</th>
<th>Human Metapneumovirus</th>
<th>Rhinovirus</th>
<th>Enterovirus</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>17</td>
<td>103</td>
<td>34</td>
<td>8</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>65</td>
<td>0</td>
</tr>
<tr>
<td>49</td>
<td>17</td>
<td>147</td>
<td>28</td>
<td>12</td>
<td>8</td>
<td>1</td>
<td>0</td>
<td>24</td>
<td>94</td>
<td>0</td>
</tr>
<tr>
<td>50</td>
<td>16</td>
<td>205</td>
<td>28</td>
<td>9</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>21</td>
<td>69</td>
<td>0</td>
</tr>
<tr>
<td>51</td>
<td>10</td>
<td>230</td>
<td>31</td>
<td>17</td>
<td>17</td>
<td>0</td>
<td>0</td>
<td>35</td>
<td>110</td>
<td>1</td>
</tr>
</tbody>
</table>
# Laboratory Confirmed Influenza-Associated Deaths

## Reported Laboratory-Confirmed Influenza Associated Deaths

*Note that these counts reflect only deaths officially reported to the Washington State Department of Health.  
Note that each influenza season is reported as week 40 through week 39 of the following year.*

Eleven laboratory-confirmed influenza deaths have been reported since week 40 of 2019, 4 influenza A, 7 influenza B, and 0 type unknown. Most deaths have occurred in people with underlying health conditions, or in people with no pre-existing conditions but who were elderly. Two deaths have occurred in children.

### Table 4: Count and rate of reported laboratory-confirmed influenza-associated deaths by age group, Washington, 2019-2020 season to date

<table>
<thead>
<tr>
<th>Age Group (in years)</th>
<th>Count of Deaths</th>
<th>Death Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>1</td>
<td>0.22</td>
</tr>
<tr>
<td>5-17</td>
<td>1</td>
<td>0.08</td>
</tr>
<tr>
<td>18-29</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>30-49</td>
<td>1</td>
<td>0.05</td>
</tr>
<tr>
<td>50-64</td>
<td>5</td>
<td>0.35</td>
</tr>
<tr>
<td>65+</td>
<td>3</td>
<td>0.26</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>0.15</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 5. Note that for the purposes of tables 4 and 5, each influenza season runs from week 40 of one year to week 39 of the next (roughly October to October).

Past season summaries are available:  

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 5: Count of Reported Laboratory-Confirmed Influenza-Associated Deaths, Past Seasons to Week 51 and Total

<table>
<thead>
<tr>
<th>Season</th>
<th>Count of Deaths as of Week 51 of Season</th>
<th>Count of Deaths Reported for the Entire Season (week 40 to week 39)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-2020, to date</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>2018-2019</td>
<td>4</td>
<td>245</td>
</tr>
<tr>
<td>2017-2018</td>
<td>9</td>
<td>296</td>
</tr>
<tr>
<td>2016-2017</td>
<td>6</td>
<td>278</td>
</tr>
<tr>
<td>2015-2016</td>
<td>3</td>
<td>67</td>
</tr>
<tr>
<td>2014-2015</td>
<td>1</td>
<td>156</td>
</tr>
<tr>
<td>2013-2014</td>
<td>1</td>
<td>80</td>
</tr>
<tr>
<td>2012-2013</td>
<td>1</td>
<td>54</td>
</tr>
<tr>
<td>2011-2012</td>
<td>0</td>
<td>20</td>
</tr>
</tbody>
</table>
Table 6: Count of Deaths Reported to WA DOH by County of Residence

Table 6 shows the count of laboratory-confirmed influenza deaths reported to the Washington State Department of Health by county of residence. Deaths are from week 40 of 2019 through the present. Note that due to reporting lag, counts may be different at the county level. Only deaths reported by the county as “investigation complete” are included in the official Washington State Department of Health counts.

Note that due to reporting lag, counts may be different at the county level.

<table>
<thead>
<tr>
<th>County</th>
<th>Count of Deaths Reported to WA DOH from week 40 of 2019 to present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Franklin</td>
<td>1</td>
</tr>
<tr>
<td>Grant</td>
<td>1</td>
</tr>
<tr>
<td>King</td>
<td>2</td>
</tr>
<tr>
<td>Kitsap</td>
<td>1</td>
</tr>
<tr>
<td>Kittitas</td>
<td>1</td>
</tr>
<tr>
<td>Pierce</td>
<td>3</td>
</tr>
<tr>
<td>Thurston</td>
<td>1</td>
</tr>
<tr>
<td>Yakima</td>
<td>1</td>
</tr>
</tbody>
</table>

**Additional Resources**

International Influenza Data: [http://www.who.int/topics/influenza/en/](http://www.who.int/topics/influenza/en/)


Washington Local Health Department Influenza Surveillance Reports:

Clark County: [https://www.clark.wa.gov/public-health/flu](https://www.clark.wa.gov/public-health/flu)

King County: [http://www.kingcounty.gov/healthservices/health/communicable/diseases/Influenza.aspx](http://www.kingcounty.gov/healthservices/health/communicable/diseases/Influenza.aspx)

Kitsap County: [http://www.kitsappublichealth.org/Respiratory.pdf](http://www.kitsappublichealth.org/Respiratory.pdf)

Pierce County: [https://www.tpchd.org/healthy-people/provider-resources/disease-information-for-providers/influenza/influenza-reports](https://www.tpchd.org/healthy-people/provider-resources/disease-information-for-providers/influenza/influenza-reports)

Whatcom County: [http://www.co.whatcom.wa.us/967/Influenza](http://www.co.whatcom.wa.us/967/Influenza)

Yakima County: [http://www.yakimacounty.us/365/RSV-Flu-Stats](http://www.yakimacounty.us/365/RSV-Flu-Stats)