Summary of the 2018-19 Influenza Season:
• 2,522 people were hospitalized with laboratory-confirmed influenza
• 2 pediatric influenza-related deaths were confirmed
• 126 influenza-associated deaths were reported
• 60 outbreaks of influenza in long-term care facilities were reported
• 381 outbreaks of ILI in schools were reported

Minnesota Influenza Surveillance: http://www.health.state.mn.us/diseases/flu/stats/
Neighboring states’ influenza information:
Iowa http://www.idph.state.ia.us/IdphArchive/Archive.aspx?channel=FluReports
Wisconsin http://www.dhs.wisconsin.gov/communicable/influenza/surveillance.htm
North Dakota http://www.ndflu.com/default.aspx
South Dakota http://doh.sd.gov/diseases/infectious/flu/
Hospitalized Influenza Surveillance

Hospitalized influenza cases are based on disease reports of laboratory-positive influenza (via DFA, IFA, viral culture, EIA, rapid test, paired serological tests or RT-PCR) and specimens from hospitalized patients with acute respiratory illness submitted to MDH-PHL by hospitals and laboratories. Due to the need to confirm reports and reporting delays, consider current week data preliminary.

Hospitalized Influenza Cases by Type
Minnesota (FluSurv-NET*)

Hospitalized Influenza Cases by Season, Minnesota (FluSurv-NET*)

<table>
<thead>
<tr>
<th>Season</th>
<th>Total hospitalizations (historic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-2014</td>
<td>1,578</td>
</tr>
<tr>
<td>2014-2015</td>
<td>4,081</td>
</tr>
<tr>
<td>2015-2016</td>
<td>1,538</td>
</tr>
<tr>
<td>2016-2017</td>
<td>3,695</td>
</tr>
<tr>
<td>2017-2018</td>
<td>6,446</td>
</tr>
<tr>
<td><strong>2018-2019</strong></td>
<td><strong>2,522</strong></td>
</tr>
</tbody>
</table>

*Influenza Surveillance Network*

Minnesota Department of Health Weekly Influenza & Respiratory Activity Report: Summary of the 2018-19 Influenza Season
Hospitalized Influenza Surveillance (continued)

Number of Influenza Hospitalizations and Incidence by Region, Minnesota
September 30, 2018 – May 18, 2019

<table>
<thead>
<tr>
<th>Region</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>309 (12%)</td>
</tr>
<tr>
<td>Metro</td>
<td>1,354 (54%)</td>
</tr>
<tr>
<td>Northeast</td>
<td>207 (8%)</td>
</tr>
<tr>
<td>Northwest</td>
<td>55 (2%)</td>
</tr>
<tr>
<td>South Central</td>
<td>171 (7%)</td>
</tr>
<tr>
<td>Southeast</td>
<td>234 (9%)</td>
</tr>
<tr>
<td>Southwest</td>
<td>92 (4%)</td>
</tr>
<tr>
<td>West Central</td>
<td>100 (4%)</td>
</tr>
</tbody>
</table>

Median age (years) at time of admission

62.0
Influenza-Associated Death Surveillance

Influenza deaths are collected via reports from Minnesota’s death certificate database, hospitals, and long-term care facilities. Decedents with influenza listed as a cause of or contributor to death, have recent laboratory confirmation of influenza, or are part of an ongoing influenza outbreak at a long-term care facility are reported to influenza surveillance. **Due to the need to confirm reports and reporting delays, consider current week data preliminary.**

Deaths Associated with Influenza by Season, Minnesota

<table>
<thead>
<tr>
<th>Season</th>
<th>Total deaths (historic)</th>
<th>Total pediatric (&lt;18 years) deaths (historic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-2014</td>
<td>83</td>
<td>2</td>
</tr>
<tr>
<td>2014-2015</td>
<td>368</td>
<td>10</td>
</tr>
<tr>
<td>2015-2016</td>
<td>76</td>
<td>3</td>
</tr>
<tr>
<td>2016-2017</td>
<td>273</td>
<td>2</td>
</tr>
<tr>
<td>2017-2018</td>
<td>440</td>
<td>6</td>
</tr>
<tr>
<td><strong>2018-2019</strong></td>
<td><strong>126</strong></td>
<td><strong>2</strong></td>
</tr>
</tbody>
</table>

Deaths Associated with Influenza by Age Group and Season, Minnesota

<table>
<thead>
<tr>
<th>Season</th>
<th>Median age (years) at time of death</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-2014</td>
<td>63</td>
</tr>
<tr>
<td>2014-2015</td>
<td>85</td>
</tr>
<tr>
<td>2015-2016</td>
<td>68</td>
</tr>
<tr>
<td>2016-2017</td>
<td>86</td>
</tr>
<tr>
<td>2017-2018</td>
<td>85</td>
</tr>
<tr>
<td><strong>2018-2019</strong></td>
<td><strong>74</strong></td>
</tr>
</tbody>
</table>
School Outbreaks

K-12 schools report an outbreak of influenza-like illness (ILI) when the number of students absent with ILI reaches 5% of total enrollment or three or more students with ILI are absent from the same elementary classroom.

Influenza-like Illness (ILI) in Schools by Season

- Total this season: 381
Long-Term Care (LTC) Outbreaks

LTC facilities report to MDH when they suspect an outbreak of influenza in their facility. Laboratory-confirmed outbreaks are reported here.

Confirmed Influenza Outbreaks in LTC by Season

- Total this season: 60

Graph showing the number of confirmed outbreaks by MMWR week from 2013-14 to 2018-19.
MDH collaborates with healthcare providers who report the total number of patients seen and the total number of those patients presenting to outpatient clinics with influenza-like illness.

### Percentage of Persons Presenting to Outpatient Clinics with Influenza-Like Illness (ILI)

- **Sentinel Provider Surveillance (Outpatients)**

  MDH collaborates with healthcare providers who report the total number of patients seen and the total number of those patients presenting to outpatient clinics with influenza-like illness.
Laboratory Surveillance

The MN Lab System (MLS) Laboratory Influenza Surveillance Program is made up of more than 310 clinic- and hospital-based laboratories, voluntarily submitting testing data weekly. These laboratories perform rapid testing for influenza and Respiratory Syncytial Virus (RSV). Significantly fewer labs perform PCR testing for influenza and three also perform PCR testing for other respiratory viruses. MDH-PHL provides further characterization of submitted influenza isolates to determine the hemagglutinin serotype to indicate vaccine coverage. Tracking the laboratory results assists healthcare providers with patient diagnosis of influenza-like illness and provides an indicator of the progression of the influenza season as well as prevalence of disease in the community.

Specimens Positive for Influenza by Molecular Testing*, by Week

- **B**
- A (not subtyped)
- A H3
- A (H1N1) pdm09
- A (H1N1) pdm09

* Beginning in 2016-17, laboratories report results for rapid molecular influenza tests in addition to RT-PCR results

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*Minnesota Department of Health Weekly Influenza & Respiratory Activity Report: Summary of the 2018-19 Influenza Season*
Minnesota Department of Health Weekly Influenza & Respiratory Activity Report: Summary of the 2018-19 Influenza Season

Laboratory Surveillance (continued)

MLS Laboratories – Influenza Testing

Specimens Positive by Influenza Rapid Antigen Test, by Week

- B+ (2018-19 Season)
- A+ (2018-19 Season)
- A/B+ (2018-19 Season)
- 2014-15 % +
- 2015-16 % +
- 2016-17 % +
- 2017-18 % +
- 2018-19 % +

Specimens Positive by RSV Rapid Antigen Test, by Week

- Number +
- 2014-15 % +
- 2015-16 % +
- 2016-17 % +
- 2017-18 % +
- 2018-19 % +

MMWR Week

Number of Positive Influenza Specimens

Percentage of Rapid Antigen Influenza Tests Positive

Number of Positive RSV Tests

MMWR Week
Influenza activity in the United States remains low.

- **Viral Surveillance:** Influenza A viruses have predominated in the United States since the beginning of July. The percentage of respiratory specimens testing positive for influenza in clinical laboratories was low.
  - **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
  - **Antiviral Resistance:** All viruses tested since late May show susceptibility to the antiviral drugs oseltamivir, zanamivir, and peramivir.
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) remained low at 1.4%, which is below the national baseline of 2.2%. All regions reported ILI below their region-specific baseline level.
  - **ILI State Activity Indicator Map:** New York City, the District of Columbia, and 49 states experienced minimal ILI activity, and Puerto Rico and one state had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in Guam and two states was reported as local activity; the District of Columbia, the U.S. Virgin Islands and 40 states reported sporadic activity; eight states reported no activity; and Puerto Rico did not report.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** One influenza-associated pediatric death that occurred during the 2018-2019 season was reported to CDC.