Weekly Influenza & Respiratory Illness Activity Report

Week Ending Dec. 10, 2022 | WEEK 49

A summary of influenza surveillance indicators prepared by the Division of Infectious Disease Epidemiology Prevention & Control. All data are preliminary and may change as more information is received.

### Minnesota Influenza Key Statistics

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of molecular laboratory tests positive</td>
<td>26.8%</td>
</tr>
<tr>
<td>Hospitalizations</td>
<td>2,306</td>
</tr>
<tr>
<td>Most common strain</td>
<td>Influenza A/H3</td>
</tr>
<tr>
<td>School outbreaks</td>
<td>899</td>
</tr>
<tr>
<td>Long-term care outbreaks</td>
<td>39</td>
</tr>
<tr>
<td>Pediatric influenza-associated deaths</td>
<td>0</td>
</tr>
</tbody>
</table>

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- Influenza-Associated Death Surveillance ............................................................ 4
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**Minnesota Influenza Surveillance** ([www.health.state.mn.us/diseases/flu/stats/](http://www.health.state.mn.us/diseases/flu/stats/))


**Neighboring states’ influenza information:**
- Iowa: [Iowa Flu Reports](idph.iowa.gov/influenza/reports)
- Wisconsin: [Influenza (Flu)](www.dhs.wisconsin.gov/communicable/influenza/)
- North Dakota: [Reported Seasonal Influenza Activity in North Dakota](www.ndflu.com/default.aspx)
- South Dakota: [South Dakota Influenza Information](doh.sd.gov/diseases/infectious/flu/)

Due to the COVID-19 pandemic, CDC and MDH will not be posting the weekly geographic spread indicators (no activity, sporadic, local, regional, widespread) this season as they rely on influenza-like illness data (ILI). Because these data are based on symptoms, the cause of ILI cannot reliably be attributed to influenza while COVID-19 is widely circulating.
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*)

<table>
<thead>
<tr>
<th>MMWR Week</th>
<th>B (no genotype)</th>
<th>B (Yamagata)</th>
<th>B (Victoria)</th>
<th>A (not subtyped)</th>
<th>A H3</th>
<th>A (H1N1) pdm09</th>
<th>A (H3N2v)</th>
<th>A (H1N2v)</th>
<th>A &amp; B</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>41</td>
<td>20</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
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</tr>
<tr>
<td>42</td>
<td>100</td>
<td>60</td>
<td>10</td>
<td>0</td>
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</tr>
<tr>
<td>43</td>
<td>200</td>
<td>100</td>
<td>20</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>44</td>
<td>500</td>
<td>200</td>
<td>30</td>
<td>0</td>
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</tr>
<tr>
<td>45</td>
<td>30</td>
<td>10</td>
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<td>0</td>
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</tr>
<tr>
<td>46</td>
<td>10</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>47</td>
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<td>0</td>
<td>0</td>
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<td>0</td>
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<tr>
<td>48</td>
<td>50</td>
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<td>0</td>
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<td>0</td>
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<td>20</td>
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<td>0</td>
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<td>0</td>
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</tr>
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<td>5</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>52</td>
<td>20</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Season</th>
<th>Total hospitalizations (historic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017-2018</td>
<td>6,446</td>
</tr>
<tr>
<td>2018-2019</td>
<td>2,543</td>
</tr>
<tr>
<td>2019-2020</td>
<td>4,022</td>
</tr>
<tr>
<td>2020-2021</td>
<td>35</td>
</tr>
<tr>
<td>2021-2022</td>
<td>901</td>
</tr>
<tr>
<td>2022-2023 (to date)</td>
<td>2,306 (to date)</td>
</tr>
</tbody>
</table>

*FluSurv-NET = Influenza Surveillance Network*

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Hospitalizations this week | Hospitalizations last week | Total hospitalizations (to date)
---|---|---
382 | 563 | 2,306

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MMWR Week: 40 41 42 43 44 45 46 47 48 49 50 51 52 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Number of hospitalizations: 0 1 10 30 60 90 120 150 180 210 240 270 300 330 360 390 420 450 480 510 540 570 600 630 660 700 730 760 800 830 860 900 930 960 1000
MMWR Week: 40 41 42 43 44 45 46 47 48 49 50 51 52 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Number of hospitalizations: 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000
Minnesota Department of Health Weekly Influenza & Respiratory Activity Report for Week Ending Dec. 10, 2022 | WEEK 49
### Number of Influenza Hospitalizations and Incidence by Region, Minnesota

<table>
<thead>
<tr>
<th>Region</th>
<th>Hospitalizations this week</th>
<th>Total (to date)</th>
<th>% Hospitalizations this week</th>
<th>% Total (to date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>70</td>
<td>301</td>
<td>18%</td>
<td>13%</td>
</tr>
<tr>
<td>Metro</td>
<td>203</td>
<td>1567</td>
<td>53%</td>
<td>68%</td>
</tr>
<tr>
<td>Northeast</td>
<td>30</td>
<td>98</td>
<td>8%</td>
<td>4%</td>
</tr>
<tr>
<td>Northwest</td>
<td>4</td>
<td>24</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>South Central</td>
<td>24</td>
<td>72</td>
<td>6%</td>
<td>3%</td>
</tr>
<tr>
<td>Southeast</td>
<td>32</td>
<td>154</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>Southwest</td>
<td>11</td>
<td>33</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>West Central</td>
<td>8</td>
<td>57</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

### Median age (years) at time of admission

62
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

Deaths Associated with Influenza by Age Group and Season, Minnesota

Season | Total deaths (historic) | Total pediatric (<18 years) deaths (historic)
-------|-------------------------|-------------------------
2017-2018 | 440 | 6
2018-2019 | 126 | 1
2019-2020 | 197 | 3
2020-2021 | 7 | 0
2021-2022 | 54 | 2
2022-2023 (to date) | 46 | 0

Season | Median age (years) at time of death
-------|-------------------------
2017-2018 | 85
2018-2019 | 75
2019-2020 | 73
2020-2021 | 76
2021-2022 | 76.5
2022-2023 (to date) | 81

*FluSurv-NET = Influenza Surveillance Network*
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

#### New school outbreaks

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>40-52</td>
<td>117</td>
<td>76</td>
<td>899</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Minneapolis Department of Health Weekly Influenza & Respiratory Activity Report for Week Ending Dec. 10, 2022 | WEEK 49
Long-Term Care (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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>40-41</td>
<td>13</td>
<td>12</td>
<td>39</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### New LTC outbreaks this week

- **2022-2023**: 13
- **2021-2022**: 12
- **2020-2021**: 0
- **2019-2020**: 0
- **2018-2019**: 0

### Total this season (to date)

- **2022-2023**: 39
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.

**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.

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

* Indicates current week-data may be delayed by 1 or more weeks
‡ MN Baseline valid for 2020-21 season only, do not compare it with previous seasons. The baseline is calculated by averaging the ILI percent for non-influenza weeks over the previous four seasons and adding two standard deviations. Non-influenza weeks account for less than 2% of the season’s total flu-positive specimens tested at Public Health Labs in HHS Region 5. Weeks where ILI % is above baseline reflect weeks with excess health care visits due to ILI.

**% of outpatients with ILI this week** | **% of outpatients with ILI last week**
--- | ---
4.64% | 5.07%
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

<table>
<thead>
<tr>
<th>Region</th>
<th>% molecular influenza tests + this week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>34.9%</td>
</tr>
<tr>
<td>Metro</td>
<td>19.5%</td>
</tr>
<tr>
<td>Northeast</td>
<td>36.9%</td>
</tr>
<tr>
<td>Northwest</td>
<td>25.4%</td>
</tr>
<tr>
<td>South Central</td>
<td>35.0%</td>
</tr>
<tr>
<td>Southeast</td>
<td>26.3%</td>
</tr>
<tr>
<td>Southwest</td>
<td>41.7%</td>
</tr>
<tr>
<td>West Central</td>
<td>29.6%</td>
</tr>
<tr>
<td>Statewide (overall)</td>
<td>26.8%</td>
</tr>
</tbody>
</table>
### MLS Laboratories – Influenza Testing
Specimens Positive by Influenza Rapid Antigen Test, by Week

<table>
<thead>
<tr>
<th>Region</th>
<th>% rapid antigen influenza tests + this week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>25.3%</td>
</tr>
<tr>
<td>Metro</td>
<td>17.2%</td>
</tr>
<tr>
<td>Northeast</td>
<td></td>
</tr>
<tr>
<td>Northwest</td>
<td></td>
</tr>
<tr>
<td>South Central</td>
<td></td>
</tr>
<tr>
<td>Southeast</td>
<td>33.9%</td>
</tr>
<tr>
<td>Southwest</td>
<td>38.3%</td>
</tr>
<tr>
<td>West Central</td>
<td></td>
</tr>
<tr>
<td>Statewide (overall)</td>
<td>31.3%</td>
</tr>
</tbody>
</table>

### MLS Laboratories – RSV Testing
Specimens Positive by RSV Rapid Antigen Test, by Week

<table>
<thead>
<tr>
<th>Region</th>
<th>% rapid antigen RSV tests + this week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>50.0%</td>
</tr>
<tr>
<td>Metro</td>
<td>11.8%</td>
</tr>
<tr>
<td>Northeast</td>
<td></td>
</tr>
<tr>
<td>Northwest</td>
<td>4.5%</td>
</tr>
<tr>
<td>South Central</td>
<td></td>
</tr>
<tr>
<td>Southeast</td>
<td>37.0%</td>
</tr>
<tr>
<td>Southwest</td>
<td>42.9%</td>
</tr>
<tr>
<td>West Central</td>
<td></td>
</tr>
<tr>
<td>Statewide (overall)</td>
<td>26.8%</td>
</tr>
</tbody>
</table>
Some participants in the MN Lab System (MLS) Laboratory Influenza Surveillance Program also report testing data from respiratory virus panel PCR testing. Tracking these laboratory results assists monitoring for non-influenza/non-COVID viruses that may be circulating and causing influenza-like illness.

**Other Molecular Testing Results by Virus from MLS Survey**
Surveillance for respiratory syncytial virus (RSV) began in September 2016. Hospitalized inpatients of all ages who reside in the 7-county Twin Cities metropolitan area (Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington) with laboratory-confirmed RSV are reportable. Due to the need to confirm reports and reporting delays, consider current week data preliminary.
Seasonal influenza activity remains high across the country.

- Of influenza A viruses detected and subtyped during week 48, 76% have been influenza A(H3N2) and 24% have been influenza A(H1N1).
- Seven influenza-associated pediatric deaths were reported this week, for a total of 21 pediatric flu deaths reported so far this season.
- CDC estimates that, so far this season, there have been at least 13 million illnesses, 120,000 hospitalizations, and 7,300 deaths from flu.
- The cumulative hospitalization rate in the FluSurv-NET system is higher than the rate observed in week 48 during every previous season since 2010-2011.
- The number of flu hospital admissions reported in the HHS Protect system increased during week 48 compared to week 47.
- The majority of influenza viruses tested are in the same genetic subclade as and antigenically similar to the influenza viruses included in this season’s influenza vaccine.
- All viruses collected and evaluated this season have been susceptible to influenza antivirals.
- An annual flu vaccine is the best way to protect against flu. Vaccination helps prevent infection and can also prevent serious outcomes in people who get vaccinated but still get sick with flu.
- CDC recommends that everyone ages 6 months and older get a flu vaccine annually. Now is a good time to get vaccinated if you haven’t already.
- There are also prescription flu antiviral drugs that can be used to treat flu illness. It’s very important that flu antiviral drugs are started as soon as possible to treat patients who are hospitalized with flu, people who are very sick with flu but who do not need to be hospitalized, and people with flu who are at higher risk of serious flu complications based on their age or health.
- Multiple respiratory viruses are currently co-circulating with influenza. Testing is important to determine appropriate treatment.

Outpatient Illness: ILINet Activity Map

CDC National Influenza Surveillance (http://www.cdc.gov/flu/weekly/)