INFLUENZA LIKE ILLNESS (ILI) ACTIVITY

STATE OF WISCONSIN

REGION V OF US (WI, MN, IL, MI, OH, IN)

UNITED STATES

ILI: HIGH LEVELS  ILI: MODERATE LEVELS  ILI: BELOW BASELINE  ILI: INSUFFICIENT DATA

AT-A-GLANCE:

- Weekly Respiratory Report Description
- Predominant Virus of the Week: Rhino-enterovirus

CURRENT ALERTS:

- Influenza-associated hospitalizations at this time of the year are higher than the previous 5 influenza seasons.

INFLUENZA-ASSOCIATED PEDIATRIC DEATHS REPORTED:

<table>
<thead>
<tr>
<th></th>
<th>Week 42 (2017)</th>
<th>October 1, 2017 to present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wisconsin</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Nationwide</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Wisconsin positive influenza results and subtypes by PCR

Cumulative number of positive influenza PCR tests by subtype
September 3, 2017 to present

<table>
<thead>
<tr>
<th>Influenza A:</th>
<th>A (2009 H1N1)</th>
<th>A (H3N2)</th>
<th>A (Unknown)</th>
<th>B (Victoria)</th>
<th>B (Yamagata)</th>
<th>B (Unknown)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total positive (n)</td>
<td>4</td>
<td>47</td>
<td>23</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>80</td>
</tr>
<tr>
<td>% of total positive</td>
<td>5%</td>
<td>59%</td>
<td>29%</td>
<td>0%</td>
<td>3%</td>
<td>5%</td>
<td>100%</td>
</tr>
</tbody>
</table>
## WISCONSIN LABORATORY SURVEILLANCE FOR RESPIRATORY VIRUSES BY PCR

### Trends in respiratory virus activity by PCR

Week ending on October 21, 2017

<table>
<thead>
<tr>
<th>Respiratory virus</th>
<th>Tested</th>
<th>Positive (n)</th>
<th>Positive (%)</th>
<th>Influenza A</th>
<th>Influenza B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>H3N2</td>
<td>2009 H1N1</td>
</tr>
<tr>
<td>Influenza</td>
<td>894</td>
<td>14</td>
<td>1.6%</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Respiratory virus</th>
<th>Tested</th>
<th>Positive (n)</th>
<th>Positive (%)</th>
<th>Parainfluenza 1</th>
<th>Parainfluenza 2</th>
<th>Parainfluenza 3</th>
<th>Parainfluenza 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parainfluenza</td>
<td>471</td>
<td>28</td>
<td>6.0%</td>
<td>15</td>
<td>3</td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Respiratory virus</th>
<th>Tested</th>
<th>Positive (n)</th>
<th>Positive (%)</th>
<th>CoV 229E</th>
<th>CoV OC43</th>
<th>CoV NL63</th>
<th>CoV HKU1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coronavirus (CoV)</td>
<td>245</td>
<td>1</td>
<td>0.4%</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Respiratory virus</th>
<th>Tested</th>
<th>Positive (n)</th>
<th>Positive (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSV</td>
<td>567</td>
<td>1</td>
<td>0.2%</td>
</tr>
<tr>
<td>Human metapneumovirus</td>
<td>485</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Rhino-enterovirus</td>
<td>454</td>
<td>94</td>
<td>20.7%</td>
</tr>
<tr>
<td>Adenovirus</td>
<td>245</td>
<td>1</td>
<td>0.4%</td>
</tr>
</tbody>
</table>
WISCONSIN STATE SUMMARY

ILI activity trend analysis

<table>
<thead>
<tr>
<th>Tested</th>
<th>Influenza rapid antigen tests</th>
<th>RSV rapid antigen tests</th>
<th>Influenza-like illness (ILI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tested</td>
<td>Positive (n)</td>
<td>% Positive</td>
</tr>
<tr>
<td></td>
<td>Influenza A</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>395</td>
<td>7</td>
<td>1</td>
</tr>
</tbody>
</table>

Influenza and RSV trend analysis

Average % ILI:
- Average % ILI
- Baseline
- Threshold
- 3 per. Mov. Avg. (Average % ILI)

% Positive by antigen detection:
- RSV
- Influenza
- 3 per. Mov. Avg. (RSV)
- 3 per. Mov. Avg. (Influenza)
WISCONSIN STATE SUMMARY

ILI activity trend analysis by influenza season, Wisconsin

Influenza-associated hospitalizations, Wisconsin Electronic Disease Surveillance System
September 1, 2017 to present

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>Total reported (n)</th>
<th>Influenza subtype</th>
<th>Admitted to ICU</th>
<th>Required mechanical ventilation</th>
<th>Pregnant</th>
<th>Postpartum (≤6 weeks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1</td>
<td>1</td>
<td>A (2009 H1N1)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1-4</td>
<td>1</td>
<td>A (H3N2)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5-17</td>
<td>0</td>
<td>A (Unknown)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>18-49</td>
<td>4</td>
<td>B</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>50-64</td>
<td>5</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>65+</td>
<td>26</td>
<td></td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td></td>
<td>8</td>
<td>22</td>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>

Reported cumulative influenza-associated hospitalizations by influenza season, Wisconsin
### NORTHEASTERN REGION

#### ILI activity trend analysis

![Graph showing ILI activity trend analysis]

#### Influenza and RSV trend analysis

![Graph showing Influenza and RSV trend analysis]

<table>
<thead>
<tr>
<th>Tested</th>
<th>Influenza A</th>
<th>Influenza B</th>
<th>Total</th>
<th>% Positive</th>
<th>Tested</th>
<th>Positive (n)</th>
<th>% Positive</th>
<th>ILI %</th>
<th>Baseline</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>2.0%</td>
<td>34</td>
<td>4</td>
<td>11.8%</td>
<td>0.4%</td>
<td>2.6%</td>
<td>4.0%</td>
</tr>
</tbody>
</table>

### Influenza rapid antigen tests

<table>
<thead>
<tr>
<th>Tested</th>
<th>Influenza A</th>
<th>Influenza B</th>
<th>Total</th>
<th>% Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

### RSV rapid antigen tests

<table>
<thead>
<tr>
<th>Tested</th>
<th>RSV</th>
<th>% Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>4</td>
<td>11.8%</td>
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### Influenza-like illness (ILI)

<table>
<thead>
<tr>
<th>Tested</th>
<th>Influenza A</th>
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<th>% Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

---

**Influenza A**

- Tested: 150
- Positive: 2
- % Positive: 2.0%

**Influenza B**

- Tested: 34
- Positive: 4
- % Positive: 11.8%

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**ILI %**

- Baseline: 0.4%
- Threshold: 2.6%
- Average % ILI: 4.0%

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**ILI activity trend analysis**

- **Average % ILI**
- **Baseline**
- **Threshold**
- **3 per. Mov. Avg. (Average % ILI)**

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**Influenza and RSV trend analysis**

- **RSV**
- **Influenza**
- **3 per. Mov. Avg. (RSV)**
- **3 per. Mov. Avg. (Influenza)**

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Page 7
**ILI activity trend analysis**

- **Influenza rapid antigen tests**
  - Tested: 137
  - Positive (n): 4
  - % Positive: 2.9%

- **RSV rapid antigen tests**
  - Tested: 24
  - Positive (n): 0
  - % Positive: 0.0%

- **Influenza-like illness (ILI)**
  - ILI %: 0.1%
  - Baseline: 1.9%
  - Threshold: 3.2%

**Influenza and RSV trend analysis**

- **Average % ILI**
- **Baseline**
- **Threshold**
- **3 per. Mov. Avg. (Average % ILI)**

- **RSV**
- **Influenza**
- **3 per. Mov. Avg. (RSV)**
- **3 per. Mov. Avg. (Influenza)**

Week ending:
- 9/2
- 9/23
- 10/14
- 11/4
- 11/25
- 12/16
- 1/6
- 1/27
- 2/17
- 3/10
- 3/31
- 4/21
- 5/12
- 6/2
### ILI activity trend analysis

#### Influenza and RSV trend analysis
SOUTHERN REGION

**ILI activity trend analysis**

- **Average % ILI**: Daily ILI activity levels.
- **Baseline**: Historical ILI activity levels.
- **Threshold**: Upper threshold for ILI activity.
- **3 per. Mov. Avg. (Average % ILI)**: Three-point moving average of ILI activity.

**Influenza and RSV trend analysis**

- **RSV**: Weekly RSV activity.
- **Influenza**: Weekly Influenza activity.
- **3 per. Mov. Avg (RSV)**: Three-point moving average of RSV activity.
- **3 per. Mov. Avg (Influenza)**: Three-point moving average of Influenza activity.

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<td>% Positive</td>
</tr>
<tr>
<td>Influenza A</td>
<td>Influenza B</td>
<td>Total</td>
</tr>
<tr>
<td>15</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
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Influenza vaccine composition 2017-2018:

The **trivalent** vaccines for use in the 2017-2018 influenza season contain the following:

- A/Michigan/45/2015 (H1N1)pdm09-like virus
- A/Hong Kong/4801/2014 (H3N2)-like virus
- B/Brisbane/60/2008-like virus (B/Victoria lineage)

It is recommended that **quadrivalent** vaccines containing two influenza B viruses contain the above three viruses and:

- B/Phuket/3073/2013-like virus (B/Yamagata lineage)
SEASONAL INFLUENZA VACCINATION

Percentage of Wisconsin residents who received one or more doses of influenza vaccine, by age group and influenza season

[Bar chart showing the percentage of residents vaccinated by age group and influenza season from 2014-2015 to 2017-2018.]

Percentage of Wisconsin residents who received one or more doses of influenza vaccine, by race and ethnicity and region, 2017-2018 influenza season

[Bar chart showing the percentage of residents vaccinated by race, ethnicity, and region.]

- American Indian
- Asian
- Black
- White
- Hispanic
- Non-Hispanic

- Wisconsin
- Northeastern
- Southeastern
- Southern
- Western
- Northern