Weekly Influenza & Respiratory Illness Activity Report

A summary of influenza surveillance indicators prepared by the Division of Infectious Disease Epidemiology Prevention & Control

Summary of the 2014-15 Influenza Season

All data are preliminary and may change as more reports are received

Summary of the 2014-15 Season

- 4,153 people were hospitalized with laboratory-confirmed influenza
- 10 pediatric influenza-related deaths were confirmed
- 192 outbreaks of influenza in long-term care were reported
- 706 outbreaks of ILI in schools were reported

Minnesota Influenza Surveillance Website: http://www.health.state.mn.us/diseases/flu/stats/

Google Flu Trends: http://www.google.org/flutrends/us/#US

Neighboring states’ influenza information:

Iowa: http://www.idph.state.ia.us/IdphArchive/Archive.aspx?channel=FluReports
South Dakota: http://doh.sd.gov/diseases/infectious/flu/
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.

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**Hospitalized Influenza Cases by Type**

*Minnesota (FluSurv-NET*)

- B (no genotype)
- B (Yamagata)
- B (Victoria)
- A (not subtyped)
- A H3
- A H1 (unspecified)
- A (H1N1)pdm09
- A (H1N2v)
- A (H3N2v)
- A&B
- Unknown

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

<table>
<thead>
<tr>
<th>Season</th>
<th>Total Hospitalizations (historic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-2010</td>
<td>2,060</td>
</tr>
<tr>
<td>2010-2011</td>
<td>965</td>
</tr>
<tr>
<td>2011-2012</td>
<td>556</td>
</tr>
<tr>
<td>2012-2013</td>
<td>3,068</td>
</tr>
<tr>
<td>2013-2014</td>
<td>1,540</td>
</tr>
<tr>
<td><strong>2014-2015</strong></td>
<td><strong>4,138</strong></td>
</tr>
</tbody>
</table>

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*Influenza Surveillance Network*
### Number of Influenza Hospitalizations and Incidence by Region, Minnesota
**Sept 28, 2014 – May 23, 2015**

<table>
<thead>
<tr>
<th>Region</th>
<th>Total (to date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>68.6</td>
</tr>
<tr>
<td>Metro</td>
<td>73.9</td>
</tr>
<tr>
<td>Northeast</td>
<td>124.1</td>
</tr>
<tr>
<td>Northwest</td>
<td>51.0</td>
</tr>
<tr>
<td>South Central</td>
<td>107.8</td>
</tr>
<tr>
<td>Southeast</td>
<td>91.6</td>
</tr>
<tr>
<td>Southwest</td>
<td>78.3</td>
</tr>
<tr>
<td>West Central</td>
<td>44.9</td>
</tr>
</tbody>
</table>

### Number of Influenza Hospitalizations and Incidence by Age, Minnesota
**Sept 28, 2014 – May 23, 2015**

<table>
<thead>
<tr>
<th>Age Group (years)</th>
<th>Incidence (cases) per 100,000 Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>53.4</td>
</tr>
<tr>
<td>5-24</td>
<td>20.1</td>
</tr>
<tr>
<td>25-49</td>
<td>17.9</td>
</tr>
<tr>
<td>50-64</td>
<td>52.1</td>
</tr>
<tr>
<td>65+</td>
<td>410.6</td>
</tr>
</tbody>
</table>

**Median age (years) at time of admission**
76.0
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

- 2010-11
- 2011-12
- 2012-13
- 2013-14
- 2014-15

<table>
<thead>
<tr>
<th>MMWR Week</th>
<th>Number of influenza-like illness outbreaks</th>
</tr>
</thead>
<tbody>
<tr>
<td>36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>705</td>
</tr>
</tbody>
</table>

Minnesota Department of Health Weekly Influenza & Respiratory Activity | Summary 2014-15
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.
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)**

The graph shows the percentage of persons presenting to outpatient clinics with influenza-like illness (ILI) from 2010-11 to 2014-15. The peak percentage of outpatients with ILI was recorded in 2013-14 at 7.85%.
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 RT-PCR, by Week**

- **B**
- **A (not subtyped)**
- **A H3**
- **A (H1N1) pdm09**
- **2011-12 % + by PCR**
- **2012-13 % + by PCR**
- **2013-14 % + by PCR**
- **2014-15 % + by PCR**

**Peak % RT-PCR positive**

29.65%
Laboratory Surveillance – Rapid Test

**MLS Laboratories – Influenza Testing**

Specimens Positive by Influenza Rapid Test, by Week

- B+ (2014-15 Season)
- A+ (2014-15 Season)
- A/B+ (2014-15 Season)
- 2009-10 % +
- 2010-11 % +
- 2011-12 % +
- 2012-13 % +
- 2013-14 % +
- 2014-15% +

**Peak % rapid positive**

35.28%

**MLS Laboratories – RSV Testing**

Specimens Positive by RSV Rapid Test, by Week

- Number +
- 2009-10 % +
- 2010-11 % +
- 2011-12 % +
- 2012-13 % +
- 2013-14 % +
- 2014-15 % +

**Peak % rapid positive**

31.72%
Pathogens Detected, Minnesota IISP
2014-2015

- Influenza B
- Influenza A Unspecified
- Rhinovirus
- Coronavirus NL63
- Coronavirus HKU1
- Parainfluenza-3
- Parainfluenza-4
- Influenza A H3
- RSV
- Enterovirus
- Coronavirus OC43
- Coronavirus 229E
- Parainfluenza-1
- Parainfluenza-2

MMWR Week
Number Positive by RT-PCR

MN Influenza Incidence Project (IISP) - Outpatients

Indicates current week-data may be delayed by 2 or more weeks
Severe Acute Respiratory Illness Surveillance (SARI) - Inpatients

Positive Respiratory Pathogens by PCR, by MMWR Week

- Influenza B
- Influenza A (H1N1) pdm09
- RSV
- Rhinovirus
- Coronavirus NL63
- Coronavirus OC43
- Coronavirus 229E
- Coronavirus HKU1
- Parainfluenza-1
- Parainfluenza-2
- Parainfluenza-3
- Parainfluenza-4
- Legionella
- Mycoplasma pneumoniae
- Enterovirus
- Influenza A H3
- Influenza A Unspecified
- Human Metapneumovirus
- Adenovirus
- Coronavirus OC43
- Coronavirus HKU1
- Parainfluenza-2
- Parainfluenza-4
- Chlamydophila pneumoniae
- Bordetella pertussis

*Indicates current week-data may be delayed by 2 or more weeks