**MI Flu Focus**
Influenza Surveillance Updates
Bureaus of Epidemiology and Laboratories

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**Influenza Surveillance Report for the Week Ending December 9, 2017**

**MI’s Influenza Activity Level:** Local

**Updates of Interest:** One human infection with a novel influenza A virus was reported by Iowa. This person was infected with an influenza A(H3N2) variant [A(H3N2)v] virus and reported direct contact with swine during the week preceding illness onset.

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**Sentinel Provider Surveillance**

The proportion of visits due to influenza-like illness (ILI) increased to 1.9% overall, which is above the regional baseline of 1.8%. A total of 245 patient visits due to ILI were reported out of 12,800 office visits. Please note: These rates may change as additional reports are received.

**Number of Reports by Region** (32 total):
- C (9)
- N (2)
- SE (14)
- SW (7)

**National Surveillance:** In the United States, 2.7% of outpatient visits were due to influenza-like illness, which is above the national baseline of 2.2%.

**Become a Sentinel Provider!** As part of pandemic influenza surveillance, CDC and MDHHS highly encourage year-round participation from all sentinel providers. New practices are encouraged to join the sentinel surveillance program today! Contact Jalyn Ingalls (IngallsJ@michigan.gov) for more information.

Additional information is in the weekly FluView reports available at: www.cdc.gov/flu/weekly.

**Influenza-associated Pediatric Mortality**

No pediatric influenza deaths have been reported to MDHHS during the 2017-2018 flu season. Nationally, eight (8) influenza-associated pediatric deaths have been reported thus far for the 2017-2018 flu season.
**Hospital Surveillance**
The CDC Influenza Hospitalization Surveillance Project provides population-based rates of hospitalization due to severe influenza-related illness through active surveillance and chart review of lab-confirmed cases from Oct. 1, 2017 until Apr. 30, 2018, for Clinton, Eaton, Ingham, Genesee, and Washtenaw counties. Since Oct. 1, there have been 4 pediatric and 28 adult influenza-related hospitalizations reported in the catchment area for the 2017-2018 season. Note: Cumulative totals may change from week to week as cases are reviewed to determine if they meet the case definition.

The MDHHS Influenza Sentinel Hospital Network monitors influenza-related admissions reported voluntarily by hospitals statewide, with 7 facilities (N, C, SE & SW) reporting during this time period. Results for the 2017-18 flu season are listed in the table below. Additional hospitals are encouraged to join; please contact Seth Eckel at eckels1@michigan.gov.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>New Flu Hospitalizations Reported</th>
<th>Total 2017-18 Flu Hospitalizations Reported to Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4 years</td>
<td>1 (N)</td>
<td>1 (N)</td>
</tr>
<tr>
<td>5-17 years</td>
<td>0</td>
<td>1 (N)</td>
</tr>
<tr>
<td>18-49 years</td>
<td>0</td>
<td>2 (SE)</td>
</tr>
<tr>
<td>50-64 years</td>
<td>1 (SE)</td>
<td>8 (4N, 4SE)</td>
</tr>
<tr>
<td>65 years &amp; older</td>
<td>7 (1N, 2SE, 4SW)</td>
<td>20 (6N, 2C, 8SE, 4SW)</td>
</tr>
<tr>
<td>Total</td>
<td>9 (2N, 3SE, 4SW)</td>
<td>32 (12N, 2C, 14SE, 4SW)</td>
</tr>
</tbody>
</table>

**Laboratory Surveillance**
MDHHS Bureau of Laboratories reported 28 new positive influenza results (23 A/H3 & 5 flu B) during this time period. A total of 118 positive influenza results have been reported for the 2017-18 season. Influenza results for the 2017-18 season are in the table below.

<table>
<thead>
<tr>
<th>Respiratory Virus</th>
<th># Positive Respiratory Virus Results by Region</th>
<th>Total</th>
<th># Specimens Antigenically Characterized</th>
<th># Tested for Antiviral Resistance</th>
<th># Resistant / Total # Tested</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
<td>N</td>
<td>SE</td>
<td>SW</td>
<td></td>
</tr>
<tr>
<td>2009 A/H1N1pdm</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Influenza A/H3</td>
<td>38</td>
<td>8</td>
<td>43</td>
<td>8</td>
<td>97</td>
</tr>
<tr>
<td>Influenza B</td>
<td>3</td>
<td>4</td>
<td>10</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>A / unsubtypeable</td>
<td>3</td>
<td>4</td>
<td>10</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>LAIV recovery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In addition, 10 sentinel clinical labs (2SE, 2SW, 6C, 0N) reported influenza testing results. All ten (10) labs (SE, SW, C) reported influenza A activity, ranging from sporadic to modestly elevated or increasing. Four (4) labs (SE, C) reported sporadic or low influenza B activity. Three labs (SE, SW, C) reported slightly increased Parainfluenza activity. Nine (9) labs (SE, SW, C) reported low or further increasing RSV activity, with the strongest upward trend seen in the SE region. Three (3) labs (SE, SW, C) reported sporadic or low Adenovirus activity. Two (2) labs (SE, C) reported sporadic hMPV activity. Testing volumes continue to rise upwards with most sites at moderate levels.

**Congregate Setting Outbreaks of Viral Respiratory Illness**
There were 5 new respiratory outbreaks (2N, 3C) reported to MDHHS during this time period, all of which had laboratory-confirmed influenza. Respiratory facility outbreaks for the 2017-2018 season are listed in the table below.

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>C</th>
<th>N</th>
<th>SE</th>
<th>SW</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-12 School</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Long-term Care / Assisted Living Facility</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Healthcare Facility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daycare</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Homeless Shelter</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>10</td>
<td>3</td>
<td>1</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>
WEBINAR: PRESENTING FLU FACTS AND OVERCOMING VACCINE HESITANCY

On January 10, 2018 the National Influenza Vaccination Disparities Partnership will host a webinar, "Talking to Patients about Flu: Sharing Facts and Addressing Misconceptions and Hesitancy." The webinar will address current flu vaccine recommendations and ways to talk to family and patients about flu vaccine. Presenter Dr. Mark Sawyer will give an update on the current flu season and recommendations from the Advisory Committee on Immunization Practices (ACIP).

The webinar is scheduled for January 10, 2018 from 2:00-3:00 pm (ET). Advanced registration is required.

EARLY SEASON FLU VACCINATION COVERAGE ESTIMATES: 2017-2018 FLU SEASON

Last week was National Influenza Vaccination Week (NIVW). In observance of NIVW, CDC released early season flu vaccination coverage estimates for the U.S. for the 2017-2018 flu season, which are summarized below:

- Estimated 38.6% of people aged 6 months and older reported being vaccinated as of November 2017.
  - Early season coverage for children 6 months – 17 years was 38.8%.
  - Early season coverage for adults aged 18 years and older was 38.5%.
- Early season estimates show that 67.6% of healthcare personnel have received their flu vaccine.
- Early season estimates show that 35.6% of pregnant women have received their flu vaccine.
  - Survey methodology changed for pregnant women, which changed the characteristics of the survey sample. Comparisons of vaccination coverage from November 2017 to previous years cannot be made.
- Final 2017-2018 flu season vaccination coverage estimates will be available in September 2018.

More details about the early season 2017-2018 flu season vaccination coverage estimates are available online, including detailed coverage estimates for the general population, healthcare personnel, and pregnant women.

INFLUENZA-RELATED JOURNAL ARTICLES

- A systematic review of safety and immunogenicity of influenza vaccination strategies in solid organ transplant recipients
- School-located influenza vaccinations for adolescents: A randomized controlled trial
- Estimates of global seasonal influenza-associated respiratory mortality: A modelling study
- Influenza immunization policies: Which could be the main reasons for differences among countries?

OTHER INFLUENZA-RELATED NEWS

- Flu vaccine benefits go beyond effectiveness of one strain
- The flu shot is not just about you
- A 20-year-old Arizona woman died from the flu one day after being diagnosed
- Seasonal flu death estimate increases worldwide
- Iowa reports influenza A(H3N2) variant case, reports contact with swine
- How child care providers can stop the spread of the flu this winter
- Health department says the flu is running rampant in New York
- Challenges in reducing influenza-associated mortality
- Flu season 2017: Influenza is now widespread in 12 states including New York and California
- New research highlights strengths and weaknesses of the flu shot
- How does the flu actually kill people?

AVIAN INFLUENZA INTERNATIONAL NEWS

- Genetic tests reveal more about new H5N6 reassortant

FLU WEBSITES

- www.michigan.gov/flu
- www.cdc.gov/flu
- www.flu.gov
- http://vaccine.healthmap.org/

For questions or to be added to the distribution list, please contact Jalyn Ingalls at ingallsj@michigan.gov

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