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

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**Influenza Surveillance Report for the Week Ending January 28, 2017**

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

**Updates of Interest:** 40 states are now reporting widespread influenza activity. For more information on flu activity in the U.S., please read the CDC’s Situation Update: Summary of Weekly FluView Report for the week ending January 28, 2017.

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**Sentinel Provider Surveillance**

The proportion of visits due to influenza-like illness (ILI) increased to 3.1% overall, which is above the regional baseline of 1.9%. A total of 219 patient visits due to ILI were reported out of 7,147 office visits. Please note: These rates may change as additional reports are received.

**Number of Reports by Region**

(26 total):
- C (6)
- N (1)
- SE (15)
- SW (4)

**National Surveillance:** In the United States, 3.9% 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 (InglallsJ@michigan.gov) for more information.

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

The CDC Influenza Hospitalization Surveillance Project provides population-based rates of hospitalization due to severe influenza illness through active surveillance and chart review of lab-confirmed cases from Oct. 1, 2016 until Apr. 30, 2017, for Clinton, Eaton, Genesee, and Ingham counties. Since Oct. 1, there have been 7 pediatric and 72 adult influenza-related hospitalizations reported in the catchment area for the 2016-2017 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 8 facilities (C, N, SE, SW) reporting during this time period. Results for the 2016-17 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 2016-17 Flu Hospitalizations Reported to Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4 years</td>
<td>0</td>
<td>6 (1N, 2SE, 3SW)</td>
</tr>
<tr>
<td>5-17 years</td>
<td>4 (1N, 1C, 1SE, 1SW)</td>
<td>8 (1N, 1C, 3SE, 3SW)</td>
</tr>
<tr>
<td>18-49 years</td>
<td>5 (3SE, 2SW)</td>
<td>20 (1N, 13SE, 6SW)</td>
</tr>
<tr>
<td>50-64 years</td>
<td>6 (4SE, 2SW)</td>
<td>26 (6N, 18SE, 2SW)</td>
</tr>
<tr>
<td>65 years &amp; older</td>
<td>24 (9N, 12SE, 3SW)</td>
<td>94 (20N, 63SE, 11SW)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>39 (10N, 1C, 20SE, 8SW)</strong></td>
<td><strong>154 (29N, 1C, 99SE, 25SW)</strong></td>
</tr>
</tbody>
</table>

**Influenza-associated Pediatric Mortality**

No new influenza-associated pediatric deaths were reported to MDHHS. In Michigan, there have been no influenza-associated pediatric deaths reported for the 2016-17 season. Nationally, 15 influenza-associated pediatric deaths have been reported thus far for the 2016-17 flu season.

**Laboratory Surveillance**

MDHHS Bureau of Laboratories reported 19 new positive influenza results (14 A/H3 and 5 flu B) during this time period. A total of 214 positive influenza results have been reported for the 2016-17 season. Influenza results for the 2016-17 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>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3 (A/HONG KONG/4801/2014-LIKE)</td>
</tr>
<tr>
<td>Influenza A/H3</td>
<td>41</td>
<td>8</td>
<td>85</td>
<td>39</td>
<td>173</td>
</tr>
<tr>
<td>Influenza B</td>
<td>2</td>
<td>23</td>
<td>14</td>
<td>39</td>
<td>3</td>
</tr>
<tr>
<td>A / subtypeable</td>
<td>2</td>
<td>23</td>
<td>14</td>
<td>39</td>
<td>3</td>
</tr>
<tr>
<td>LAIV recovery</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

In addition, 11 sentinel clinical labs (2SE, 2SW, 6C, 1N) reported influenza testing results. All eleven labs reported influenza A activity ranging from sporadic to progressively increasing, with the most notable upticks occurring in the SE and SW regions. Seven labs (SE, SW, C) reported sporadic or modestly increasing influenza B activity. Four labs (C, SE, SW) reported low or slightly increased Parainfluenza activity. Ten labs (SE, SW, C) reported RSV activity with most sites showing a steady or upward trend. Three labs (SE, SW, C) reported sporadic or low Adenovirus activity. Three labs (SE, SW, C) reported low or slightly elevated hMPV activity. Testing volumes are steady or continue to gradually increase, with the majority of sites staying near the moderate range.
Congregate Setting Outbreaks of Viral Respiratory Illness

There were two new respiratory facility outbreaks (1SE, 1SW) reported to MDHHS during this time period, both of which were confirmed influenza A. Respiratory facility outbreaks for the 2016-2017 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></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term Care / Assisted Living Facility</td>
<td>3</td>
<td>10</td>
<td>13</td>
<td></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></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homeless Shelter</td>
<td>1</td>
<td>10</td>
<td>1</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4</td>
<td>10</td>
<td>14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Michigan Disease Surveillance System

MDSS influenza data indicated that compared to levels from the previous week, aggregate reports had decreased, while individual reports had increased. Aggregate reports were lower than levels seen during the same time period last year, while individual reports were higher.

Emergency Department Surveillance

Compared to levels from the week prior, emergency department visits from constitutional and respiratory complaints had both increased. Levels of constitutional and respiratory complaints were both higher than those recorded during the same time period last year.

- 18 constitutional alerts (4N, 7C, 1SE, 4SW, 2 statewide)
- 8 respiratory alerts (3N, 3C, 1SE, 1SW)
- Last MIFF report: 5 constitutional alerts (2C, 1SE, 2SW), 7 respiratory alerts (1N, 3C, 1SE, 2SW)
GEARING UP FOR NATIONAL INFANT IMMUNIZATION WEEK - VICNETWORK WEBINAR

National Infant Immunization Week (NIIW) is the annual observance that highlights the importance of protecting infants from vaccine-preventable diseases and celebrates the achievements of immunization programs and partners in promoting healthy communities, which will take place April 22-29, 2017. The “Gearing Up for National Infant Immunization Week” webinar is scheduled for Tuesday, February 28th from 2:00-3:00pm ET. Participants will learn about NIIW planning tools, digital communication share materials and resources available for a variety of audiences. The webinar is free, but you must register.

HPV UPDATE WEBINAR: “PREVENT CANCER THROUGH HPV VACCINATION: UPDATE FOR HEALTH CARE PERSONNEL”

Registration is now open for the HPV Update webinar entitled, "Prevent Cancer through HPV Vaccination: Update for Health Care Personnel", hosted by the MSU College of Human Medicine Continuing Medical Education, Michigan Department of Health and Human Services, and the Physician Peer Education Project on Immunization. The goals of the webinar are to define the importance of HPV vaccination for cancer prevention and the rationale for vaccinating at ages 11 or 12, list the indications for HPV vaccine including the new 2-dose recommendations, and provide useful and compelling information about HPV vaccine to aid parents in making the decision to vaccinate. There will be two offerings of this webinar at 7 a.m. and 12 p.m. on Thursday, February 23, 2017. Registration is required for all attendees.

CDC 2017 CHILDHOOD IMMUNIZATION CHAMPION AWARD

The Centers for Disease Control and Prevention (CDC) Childhood Immunization Champion Award is an annual award to recognize individuals who make a significant contribution toward improving public health through their work in childhood immunizations. All nominations need to be submitted to MDHHS Division of Immunizations, Attention: Stephanie Sanchez (SanchezS@michigan.gov) no later than February 17, 2017.

INFLUENZA-RELATED JOURNAL ARTICLES

- Influenza epidemic surveillance and prediction based on electronic health record data from an out-of-hours general practitioner cooperative: Model development and validation on 2003-2015 data
- The annual burden of seasonal influenza in the US Veterans Affairs population
- Influenza in the Asia-Pacific region: Findings and recommendations from the Global Influenza Initiative
- Early and real-time detection of seasonal influenza onset
- Vaccination has minimal impact on the intrahost diversity of H3N2 influenza viruses

OTHER INFLUENZA-RELATED NEWS

- 7 pediatric flu deaths, 1,300+ flu hospitalizations reported in one week
- Influenza market (H1N1 vaccines and others) by product (influenza vaccines and influenza drugs): Global industry perspective, comprehensive analysis and forecast 2014-2020
- Time and education are key in improving flu vaccine uptake in older patients
- Sudden drop in air temperature appears to "kickstart" flu season, study finds
- Exposure to patients with influenza persists despite hospital surveillance
- Flu season nearing its peak, CDC says
- Professor develops breath monitor to detect flu virus
- Trump’s vaccine views are at odds with those of most Americans, study says

AVIAN INFLUENZA INTERNATIONAL NEWS

- Poland reports first H5N5 outbreak
- Taiwan reports human H7N9 avian influenza case, dozens of additional cases reported in China

FLU WEBSITES

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

Archived editions of FluBytes are available here and MI FluFocus archives are here.

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

MDHHS Contributors
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