Influenza Surveillance Report for the Week Ending November 19, 2016

MI’s Influenza Activity Level:
Sporadic

Updates of Interest: FluLava® Quadrivalent is now licensed for use in all persons 6 months of age and older. The dosage for this vaccine product is 0.5 mL for all persons 6 months of age and older. For more information, see FluBytes on page 4.

Sentinel Provider Surveillance
The proportion of visits due to influenza-like illness (ILI) decreased to 1.4% overall, which is below the regional baseline of 1.9%. A total of 167 patient visits due to ILI were reported out of 12,170 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (33 total):
- C (11)
- N (2)
- SE (15)
- SW (5)

National Surveillance: In the United States, 1.6% of outpatient visits were due to influenza-like illness, which is below 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.
**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 **1 pediatric and 2 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 7 facilities (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>0</td>
</tr>
<tr>
<td>5-17 years</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>18-49 years</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>50-64 years</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>65 years &amp; older</td>
<td>0</td>
<td>6 (2N, 4SE)</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>6 (2N, 4SE)</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, no influenza-associated pediatric deaths have been reported thus far for the 2016-17 flu season.

**Laboratory Surveillance**

MDHHS Bureau of Laboratories reported 5 new positive influenza results, all of which were influenza A/H3 (1N, 3C, 1SE). A total of 27 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>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
<td>N</td>
<td>SE</td>
<td>SW</td>
</tr>
<tr>
<td>2009 A/H1N1pdm</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Influenza A/H3</td>
<td>1</td>
<td>1</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Influenza B</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>A / subtypeable</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>LAIV recovery</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

In addition, 12 sentinel clinical labs (3SE, 2SW, 6C, 1N) reported influenza testing results. Three labs (SE, C) reported sporadic influenza A activity. Four labs (SE, SW, C, N) reported sporadic influenza B activity. Five labs (C, SE, SW) reported low or gradually increasing Parainfluenza activity. Five labs (C, SE, SW) reported low or slightly increasing RSV activity. Four labs (SE, SW, C) reported sporadic or low Adenovirus activity. Three labs (SE, C) reported sporadic hMPV activity. Testing volumes appear generally steady at low to moderate levels.
Congregate Setting Outbreaks of Viral Respiratory Illness
There were two respiratory facility outbreaks (1SE, 1SW) reported to MDHHS during this time period. Both were in long-term care facilities. One outbreak was associated with lab-confirmed parainfluenza infection, while the other remains of unknown etiology. 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>1</td>
<td>1</td>
<td>2</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>Correctional Facility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>1</td>
<td>2</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 were similar, while individual reports had decreased. 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 complaints were similar, while respiratory complaints had increased. Levels of constitutional complaints were similar to those recorded during the same time period last year, while respiratory complaints were higher.
- 4 constitutional alerts (2C, 2SE)
- 6 respiratory alerts (5C, 1SW)
- Last MIFF report: 4 constitutional alerts (1N, 1C, 2SW), 7 respiratory alerts (2N, 3C, 1SE, 1SW)

Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists
Week ending November 19, 2016 - Week 46

[Map showing influenza activity estimates by state and territory]
FDA EXTENDS INDICATION FOR GSK’S FLULAVAL QUADRIVALENT INFLUENZA VACCINE IN INFANTS

The U.S. Food and Drug Administration (FDA) approved extending the age indication for use of FluLaval® Quadrivalent (ID Biomedical Corporation of Quebec, a subsidiary of GlaxoSmithKline) to include children aged 6 through 35 months. FluLaval® Quadrivalent is now licensed for use in all persons 6 months of age and older.

The dosage for using FluLaval® Quadrivalent is 0.5 mL for all persons 6 months of age and older. To reduce flu vaccine administration errors, here is a short algorithm to follow:

- Is the person 3 years of age or older? If yes, the correct flu vaccine dosage is 0.5 mL regardless of flu vaccine product.
- Is the person 6 through 35 months of age? If yes, there are currently 2 flu vaccine products licensed, and the dose depends on the product used.
  - If using Fluzone®, the correct dosage for a child 6-35 months is 0.25 mL.
  - If using FluLaval®, the correct dosage for a child 6-35 months is 0.5 mL.

MDHHS has updated the following flu vaccine educational handouts (linked below and attached):

- Seasonal Influenza Vaccines 2016-17 (presentation chart)
- Who Needs Two Doses of 2016-17 Seasonal Influenza Vaccine?
- A Quick Look at Inactivated Influenza Vaccines

The FluLaval Quadrivalent package insert and FDA approval letter are also available online on FDA’s website.

If you have questions about these changes, please do not hesitate to contact the MDHHS Division of Immunization at 517-335-8159 and ask to speak to one of our Nurse Educators.

VOICES FOR VACCINES CONFERENCE CALL ABOUT THE MOVIE VAXXED

Voices for Vaccines is hosting a conference call on Friday, December 9th at 12:00pm ET to talk about the movie Vaxxed. Matt Carey, science and neurodiversity blogger, will host the call and discuss the controversy surrounding the movie, and what you need to know. The call is free and open to the public, but you must register in advance.

INFLUENZA-RELATED JOURNAL ARTICLES

- Identification of a novel small-molecule compound targeting the influenza A virus polymerase PB1 – PB2 interface
- The potential of Avian H1N1 Influenza A viruses to replicate and cause disease in mammalian models
- Association between influenza infection and vaccination during pregnancy and risk of autism spectrum disorder
  - Maternal influenza vaccination during pregnancy was not associated with increased autism risk in a cohort of 196,929 children
- 2-Dose influenza in kids: We must do better
- Gaming app aims to stop the spread of flu

OTHER INFLUENZA-RELATED NEWS

- Parents are insisting on doctors who insist on vaccinations
- Flu, pneumonia top list of infectious disease in US
  - Letter in JAMA reported that influenza and pneumonia account for nearly 40% of all infectious disease deaths

AVIAN INFLUENZA INTERNATIONAL NEWS

- China reports fatal H5N6 infection
- Prepare for bird flu as never before
- South Korea issues temporary nationwide standstill order to contain bird flu
- 190,000 ducks culled after bird flu found on Dutch farm
- CDC notes variant H1N2 flu case in Iowa

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

MDHHS Contributors
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