



MI Flu Focus

Influenza Surveillance Updates Bureaus of Epidemiology and Laboratories, and Division of Immunization/Bureau of Family Health Services



Editor: Jalyn Ingalls, MA

IngallsJ@michigan.gov

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Summer Edition: Influenza Surveillance Report for the Week Ending September 30, 2017

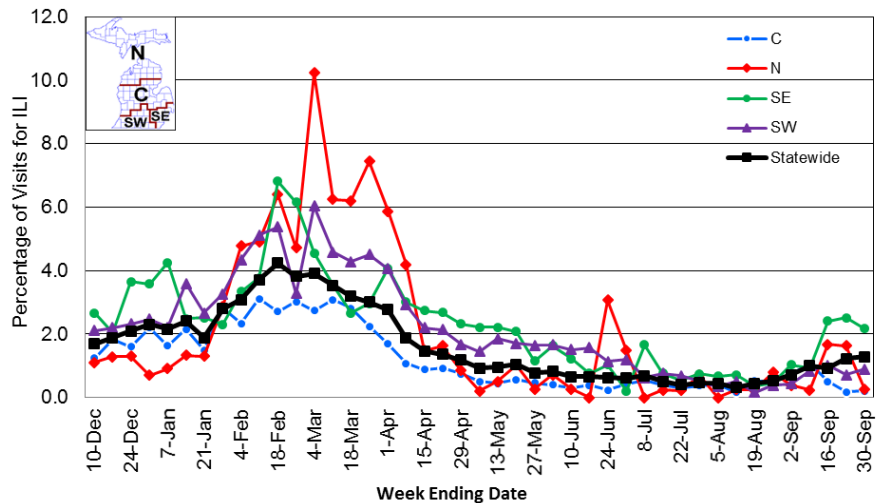
2017 Summer Surveillance System Reports

Updates of Interest: As of September 30, 2017, the Michigan Department of Health and Human Services has identified one human case of variant influenza A/H3N2 (H3N2v) associated with exposure to swine at a local county fair. The fair season is coming to a close, but we will continue to provide updates on reported cases of variant influenza. For information on reporting suspect variant influenza cases, please see page 3.

Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) increased to 1.3% overall, which is below the regional baseline of 1.9%. A total of 98 patient visits due to ILI were reported out of 7,674 office visits. Please note: These rates may change as additional reports are received.

Percentage of Visits for Influenza-like Illness (ILI)
Reported by Sentinel Providers, Statewide and Regions
2016-17 Flu Season



Number of Reports by Region

(25 total):

- C (6)
- N (2)
- SE (11)
- SW (6)

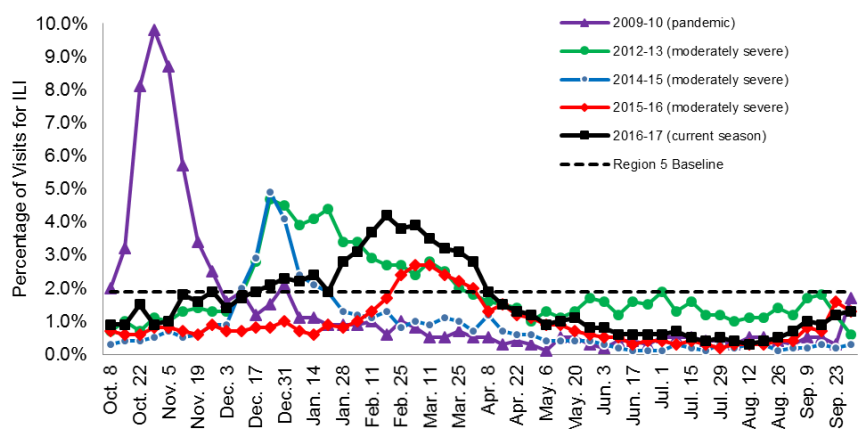
National Surveillance: In the United States, 1.2% of outpatient visits were due to influenza-like illness, which is below the national baseline of 2.2%.

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.

Percentage of Visits for Influenza-like Illness (ILI) Reported by the US
Outpatient Influenza-like Illness Surveillance Network (ILINet):
Michigan, Select Seasons



Laboratory Surveillance

MDHHS Bureau of Laboratories reported 9 new positive influenza results (8 A/H3, 1 A/H1 & 0 flu B) during this time period. A total of 717 positive influenza results have been reported for the 2016-17 season. Influenza results for the 2016-17 season are in the table below.

| Respiratory Virus | # Positive Respiratory Virus Results by Region | | | | Total | # Specimens Antigenically Characterized | # Tested for Antiviral Resistance |
|-------------------|--|----|-----|-----|-------|--|-----------------------------------|
| | C | N | SE | SW | | | # Resistant / Total # Tested |
| 2009 A/H1N1pdm | 2 | 1 | 8 | 5 | 16 | 2 (A/CALIFORNIA/07/2009-LIKE (H1N1)pdm09) | |
| Influenza A/H3 | 129 | 26 | 150 | 191 | 496 | 12 (A/HONG KONG/4801/2014-LIKE) | 0 / 95 |
| Influenza B | 66 | 11 | 52 | 76 | 205 | 8 (B/PHUKET/3073/2013-LIKE) 9 (B/BRISBANE/60/2008-LIKE) | |
| A / unsubtypeable | | | | | | | |

In addition, 9 sentinel clinical labs (2SE, 2SW, 5C, 0N) reported influenza testing results. Two labs (SE, C) reported sporadic influenza A activity. No labs reported influenza B activity. Two labs (SE, C) reported sporadic or low Parainfluenza activity. One lab (C) reported sporadic RSV activity. Three labs (SE, SW, C) reported sporadic Adenovirus activity. No labs reported hMPV activity. Overall testing volumes remain in the low range but levels continue to edge up at several sites.

Congregate Setting Outbreaks of Viral Respiratory Illness

There were no new respiratory facility outbreaks reported to MDHHS during this time period. Respiratory facility outbreaks for the 2016-2017 season are listed in the table below.

| Facility Type | C | N | SE | SW | Total |
|---|-----------|----------|-----------|-----------|------------|
| K-12 School / University | 3 | 5 | 1 | 3 | 12 |
| Long-term Care / Assisted Living Facility | 32 | 1 | 29 | 43 | 105 |
| Healthcare Facility | 3 | | 4 | 1 | 8 |
| Daycare | | | 1 | 2 | 3 |
| Homeless Shelter / Correctional Facility | | | 2 | | 2 |
| Total | 38 | 6 | 37 | 49 | 130 |

2016-2017 Flu Season Surveillance Systems Summary Report

Hospital Surveillance

The Influenza Hospitalization Surveillance Project (IHSP) surveillance has concluded for the 2016-2017 flu season. During this season, 635 flu-related hospitalizations were reported for the catchment area (Eaton, Clinton, Ingham and Genesee). This is the highest single season total since IHSP surveillance was initiated after the influenza pandemic of 2009.

The MDHHS Influenza Sentinel Hospital Network monitors influenza-related admissions reported voluntarily by hospitals statewide. Surveillance peaked for the 2016-2017 season during the week ending February 25, with 156 flu-related hospitalizations reported by 12 facilities across the state. Additional hospitals are encouraged to join for the 2017-2018 season; please contact Seth Eckel at eckels1@michigan.gov.

Influenza-associated Pediatric Mortality

No new pediatric deaths were reported to MDHHS for the week ending September 30, 2017. A total of 5 influenza-associated pediatric deaths in Michigan have been reported thus far for the 2016-17 season. Four of the children tested positive for Influenza B, and one tested positive for Influenza A/H3. Nationally, 107 influenza-associated pediatric deaths have been reported thus far for the 2016-17 flu season.

Michigan Disease Surveillance System

MDSS influenza data is comprised of both aggregate and individual reports. For the 2016-2017 season, aggregate counts peaked during Week 9 with 7,339 reports. Individual reports peaked during Week 9 with 2,790 cases having been reported to the MDSS.

Emergency Department Surveillance

In monitoring chief complaint data for the 2016-2017 flu season, constitutional complaints peaked during Week 8 with 14 county level and 1 statewide alert being issued. Respiratory complaints peaked during Week 6, with 7 county level alerts having been issued.

Novel Influenza A Viruses

Due to cases of human H3N2v and other variant influenza viruses recently being reported, MDHHS has added a section to MIFF to share the most recent updates regarding H3N2v activity in the United States. As of week ending September 30, there has been one H3N2v case reported to MDHHS for 2017.

Variant (Swine) Influenza Guidance for Healthcare & Public Health Providers

Michigan's fair season is coming to a close, but we will continue to provide information about reported cases of variant influenza. MDHHS recommends that providers with a suspect patients for variant influenza follow these guidelines:

1. Clinicians treating patients with an influenza-like illness (fever $\geq 100^{\circ}\text{F}$ plus a cough and or/a sore throat) should ask about recent exposure to swine or attendance at fairs.
2. Collection of upper respiratory specimens for any influenza-like illness is strongly advised.
3. Respiratory specimens should be collected as soon as possible after illness onset and submitted to MDHHS.
4. For more information on how to collect and submit specimens to the MDHHS Bureau of Laboratories, including the required test requisition form, refer to:

http://www.michigan.gov/mdhhs/0,5885,7-339-71551_2945_5103-213906--,00.html.

5. Early initiation of antiviral treatment (oseltamivir) is most effective in treating variant influenza infection.
6. Infection control should follow standard contact and droplet precautions for ill persons.
7. For more details, see [Variant \(Swine\) Influenza Guidance for Healthcare and Public Health Providers](#) (MDHHS Guidance).

To report suspect cases and arrange testing, contact your local health department immediately or contact MDHHS at 517-335-8165 or after hours at 517-335-9030.



Current Variant Influenza Activity in the United States

There were 9 human infections with novel influenza A infection reported to CDC during week 39, 8 in Maryland and 1 in Michigan. To date, a total of 61 variant virus infections have been reported in the United States during 2017. This most recent human infection was publicly reported in the September 30 [FluView report](#) (Week 39: September 24- September 30, 2017).

| States reporting H3N2v Cases | Cases in 2015 | Cases in 2016 | Cases in 2017 |
|------------------------------|---------------|---------------|---------------|
| Delaware | | | 1 |
| Maryland | | | 36 |
| Michigan | 1 | 12 | 1 |
| Minnesota | 1 | | |
| New Jersey | 1 | | |
| North Dakota | | | 1 |
| Ohio | | 6 | 15 |
| Pennsylvania | | | 1 |
| Texas | | | 1 |
| Total | 3 | 18 | 56 |

Table 1. Case Counts of Detected Human Infections with H3N2v
<https://www.cdc.gov/flu/swineflu/h3n2v-case-count.htm>

CDC Recommendations

CDC has long-standing [guidance](#) for people attending agricultural fairs or other settings where swine might be present, including a recommendation that people who are at high risk of serious flu complications avoid pigs and swine barns. For more information about H3N2v, visit: <https://www.cdc.gov/flu/swineflu/h3n2v-basics.htm>.

Similarly, a [Morbidity and Mortality Week Report](#) was issued in October 2016 detailing the outbreak of influenza A(H3N2) variant virus infections among persons in Michigan and Ohio.

2016-17 SEASON INFLUENZA VACCINATION COVERAGE ESTIMATES – CDC

The CDC has [released](#) the 2016-17 season influenza vaccination coverage estimates. Nationally, 46.8% of persons aged 6 months and older were vaccinated with 1+ dose of flu vaccine. Here are a couple of highlights from Michigan's data:

- Overall coverage in Michigan increased 2% to 44.2%
- Children aged 6 months through 12 years of age decreased in coverage
- Michigan saw an increase in coverage among adults aged 18 through 49 years of age with high-risk conditions, a 6.5% increase from the 2015-16 season

National [flu vaccination coverage](#) among healthcare personnel and pregnant women are also available. Please note, only national data is available for these special populations.

CDC CLINICIAN OUTREACH AND COMMUNICATION ACTIVITY WEBINAR

The Centers for Disease Control and Prevention will be hosting a Clinician Outreach and Communication Activity (COCA) call addressing, "The Role of Healthcare Professionals in Protecting Older Adults Against Influenza." The webinar is scheduled for Thursday, October 12, from 2:00-3:00pm (ET). The webinar will discuss immunosenescence, the importance of recommending and providing flu vaccine to older adults, and educational materials that can be used to support healthcare professionals in discussing flu prevention. [Instructions](#) for accessing the webinar are available online.

SOUTHERN HEMISPHERE FLU VACCINE COMPOSITION

The World Health Organization has announced the [recommended composition](#) of influenza virus vaccines for use in the 2018 southern hemisphere influenza season. There is a new H3N2 strain, and a switch from the Victoria B lineage virus back to a Yamagata B lineage virus for trivalent vaccines. It is recommended that trivalent vaccines contain the following:

- A/Michigan/45/2015 (H1N1)pdm09-like virus
- A/Singapore/INFIMH-16-0019/2016 (H3N2)-like virus (NEW)
- B/Phuket/3073/2013-like virus

Quadrivalent vaccines will also include a B/Brisbane/30/2008-like virus.

INFLUENZA-RELATED JOURNAL ARTICLES

- [Estimated rates of influenza-associated outpatient visits during 2001-2010 in six US integrated health care delivery organizations](#)
- [Social determinants of influenza hospitalization in the United States](#)
- [Effectiveness of influenza vaccines in preventing severe influenza illness among adults: A systematic review and meta-analysis of test-negative design case-control studies](#)
- [2015 pandemic influenza readiness assessment among US public health emergency preparedness awardees](#)
- [Emergency preparedness in the workplace: The flulapalooza model for mass vaccination](#)
- [Exploring provider and parental perceptions to influenza vaccination in the inpatient setting](#)
- [Impact of the US maternal tetanus, diphtheria, and acellular pertussis vaccination program on preventing pertussis in infant <2 months of age: A case-control evaluation](#)

OTHER INFLUENZA-RELATED NEWS

- [FDA approves pediatric indication for IV peramivir](#)
- [Medicago announces phase 3 study of VLP quadrivalent influenza vaccine](#)
- [WHO swaps out H3N2, B strains in Southern Hemisphere flu vaccine](#)
- [How the 1918 flu pandemic revolutionized public health](#)
- [Flu vaccination rates among healthcare workers have plateaued](#)
- [The pregnancy vaccine scare that never should have been](#)

AVIAN INFLUENZA INTERNATIONAL NEWS

- [Clusters of human infections with avian influenza A \(H7N9\) virus in China, March 2013 to June 2015](#)
- [Increase in human infections with novel asian lineage avian influenza A\(H7N9\) viruses during the fifth epidemic – China, October 1, 2016 – August 7, 2017](#)

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

Bureau of Epidemiology – S. Bidol, MPH, S. Eckel, MPH

Bureau of Family Health Services, Division of Immunization – J. Ingalls, MA

Bureau of Labs – B. Robeson, MT, V. Vavricka, MS