



MI Flu Focus

Influenza Surveillance Updates

Bureaus of Epidemiology and Laboratories



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Influenza Surveillance Report for the Week Ending February 18, 2017

MI's Influenza Activity Level:
Widespread

Updates of Interest: Influenza-like activity in Michigan is continuing to rise. Please note that only 3 sentinel providers reported data for the North region, which could be contributing to the spike in ILI activity in that region (see graph below).

Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) increased to 4.2% overall, which is above the regional baseline of 1.9%. A total of 521 patient visits due to ILI were reported out of 12,425 office visits. One sentinel provider in the North region reported a very high ILI which is contributing to the spike in ILI activity reported, and only 3 sentinels reported for the North region which also could be contributing to the spike in ILI represented below. Please note: These rates may change as additional reports are received.

Number of Reports by Region

(36 total):

- C (13)
- N (3)
- SE (14)
- SW (6)

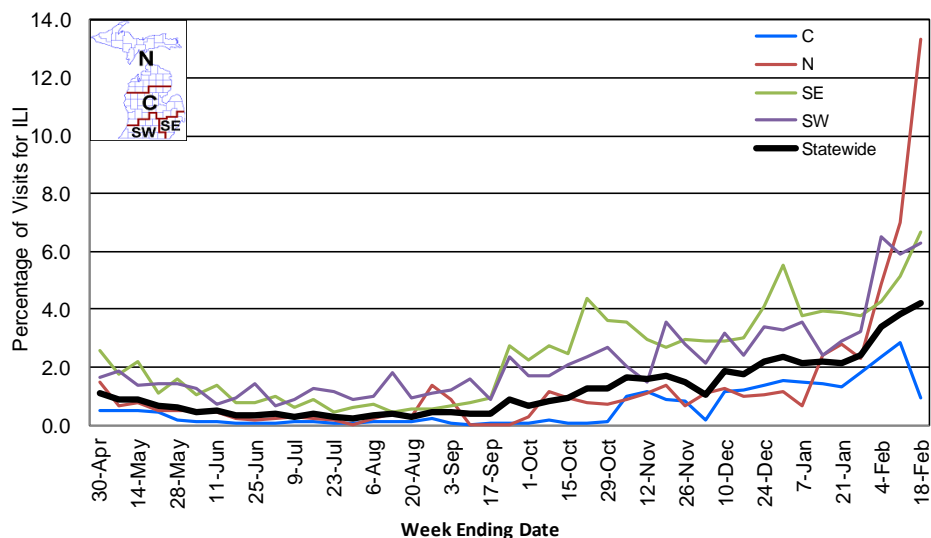
National Surveillance: In the United States, 4.8% of outpatient visits were due to influenza-like illness, which is above the national baseline of 2.2%.

Become a Sentinel Provider!

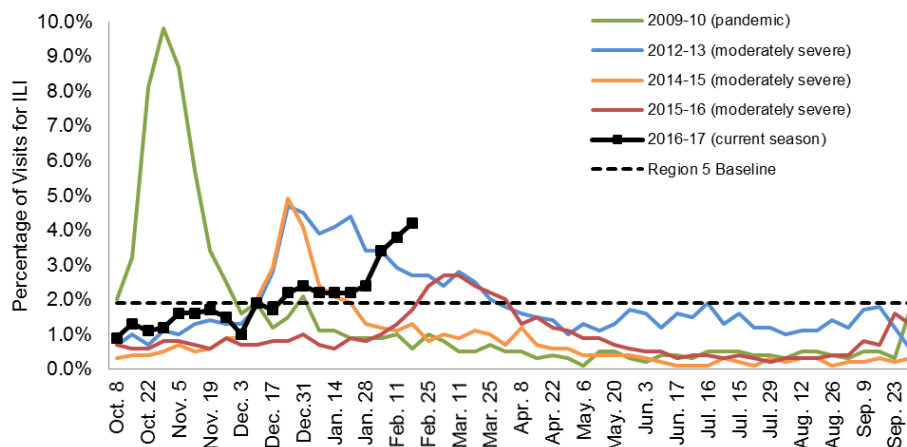
As part of pandemic influenza surveillance, CDC and MDHHS highly encourage year-round participation from all sentinel providers. New practices are encouraged to join the sentinel surveillance program today! Contact Jalyn Ingalls (IngallsJ@michigan.gov) for more information.

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

Percentage of Visits for Influenza-like Illness (ILI) Reported by Sentinel Providers, Statewide and Regions 2015-16 - 2016-17 Flu Seasons



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



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 **25 pediatric and 177 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 10 facilities (N, C, 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.

Age Group	New Flu Hospitalizations Reported	Total 2016-17 Flu Hospitalizations Reported to Date
0-4 years	4 (3SE, 1SW)	13 (2N, 5SE, 6SW)
5-17 years	3 (1N, 1SE, 1SW)	14 (3N, 1C, 5SE, 5SW)
18-49 years	15 (5N, 7SE, 3SW)	45 (8N, 28SE, 9SW)
50-64 years	25 (3N, 17SE, 5SW)	68 (10N, 47SE, 11SW)
65 years & older	62 (8N, 49SE, 5SW)	247 (37N, 2C, 180SE, 28SW)
Total	109 (17N, 77SE, 15SW)	387 (60N, 3C, 265SE, 59SW)

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, 34 influenza-associated pediatric deaths have been reported thus far for the 2016-17 flu season.

Laboratory Surveillance

MDHHS Bureau of Laboratories reported 35 new positive influenza results (24 A/H3 and 11 flu B) during this time period. A total of 320 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	1		1		2	1 (A/CALIFORNIA/07/2009-LIKE (H1N1)pdm09)	
Influenza A/H3	60	13	97	83	253	5 (A/HONG KONG/4801/2014-LIKE)	0 / 8
Influenza B	8	2	33	22	65	4 (B/PHUKET/3073/2013-LIKE) 6 (B/BRISBANE/60/2008-LIKE)	
A / unsubtypeable							
LAIV recovery							

In addition, 8 sentinel clinical labs (2SE, 1SW, 5C) reported influenza testing results. All eight labs reported influenza A activity at sustained elevated levels with several sites (SE, SW) reporting further notable increases; however sites in the C region are showing some indications of a plateau. Six labs (SE, SW, C) reported influenza B activity with all sites showing a continued upward trend and several sites (SW, C) further substantial increases. One site (C) again showed notably predominant influenza B activity. Two labs (C, SE) reported low Parainfluenza activity. Seven labs (SE, SW, C) reported RSV activity with most sites showing modestly elevated but steady levels. Three labs (SE, SW, C) reported low Adenovirus activity. Three labs (SE, SW, C) reported low or slightly increased hMPV activity. Testing volumes are showing further increases, with nearly all sites in the high range.

Congregate Setting Outbreaks of Viral Respiratory Illness

There were 14 new respiratory facility outbreaks (1N, 5C, 4SE, 4SW) reported to MDHHS during this time period, five of which were confirmed influenza A. Respiratory facility outbreaks for the 2016-2017 season are listed in the table below.

Facility Type	C	N	SE	SW	Total
K-12 School		1			1
Long-term Care / Assisted Living Facility	7		11	17	35
Healthcare Facility					
Daycare			1	2	3
Homeless Shelter			1		1
Total	7	1	13	19	40

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 and individual reports were both lower than levels seen during the same time period last year.

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.

- 15 constitutional alerts (2N, 7C, 1SE, 4SW, 1 statewide)
- 8 respiratory alerts (3N, 4C, 1SW)
- Last MIFF report: 10 constitutional alerts (1N, 4C, 5SW), 2 respiratory alerts (1N, 1C)

Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*

Week ending February 18, 2017 - Week 7





INTERIM ESTIMATES OF 2016-2017 SEASONAL INFLUENZA VACCINE EFFECTIVENESS

The Centers for Disease Control and Prevention released the interim estimates of 2016-2017 seasonal influenza vaccine effectiveness data last Thursday. They report that the vaccine has been 48% effective against influenza A and B viruses. Effectiveness against the predominant influenza A (H3N2) viruses has been 43% while effectiveness against influenza B viruses has been 73%. The CDC also provided effectiveness data broken down by age group:

- 6 months-8 years: 53%
- 9-17 years: 23%
- 18-49 years: 13%
- 50-64 years: 50%
- 65 years and older: 44%

To read more information about the interim estimates for influenza vaccine effectiveness, please read the [MMWR](#).

UPDATES FROM FEBRUARY 2017 ACIP: NFID WEBINAR

The National Foundation for Infectious Diseases (NFID) is hosting a webinar titled, "Updates from February 2017 ACIP." Dr. William Schaffner, MD, NFID Medical Director and NFID liaison to the Advisory Committee on Immunization Practices (ACIP) will be joined by Dr. Patricia Stinchfield to discuss updates from the 2017 ACIP meeting. The webinar is on Wednesday, March 1, at 12:00pm ET. This webinar is free, but [registration](#) is required.

2017 IMMUNIZATION SCHEDULES AVAILABLE

The 2017 recommended immunization schedules have been released. The schedules are revised and approved annually by the Advisory Committee on Immunization Practices (ACIP) and the Centers for Disease Control and Prevention (CDC). The [childhood and adolescent birth through 18 years immunization schedule](#) and [the adult immunization schedule](#) are available online. Please read through the MMWRs for the [Recommended Immunization Schedule for Children and Adolescents Aged 18 Years or Younger](#) and the [Recommended Immunization Schedule for Adults Aged 19 Years or Older](#). Remember to always review the footnotes. For more information, please see [Immunization Schedules](#) webpage on CDC's website.

INFLUENZA-RELATED JOURNAL ARTICLES

- [Interim estimates of 2016-2017 vaccine effectiveness against influenza A\(H3N2\), Canada, January 2017](#)
 - Overall VE for influenza A (H3N2) was 42%
- [Emergence of a novel subclade of influenza A\(H3N2\) virus in London, December 2016 to January 2017](#)
- [Do maternal antibodies facilitate hemagglutinin imprinting to influenza A viruses encountered early in childhood?](#)
- [Alveolar macrophages prevent lethal influenza pneumonia by inhibiting infection of Type-1 alveolar epithelial cells](#)
- [Deriving effective vaccine allocation strategies for pandemic influenza: Comparison of an agent-based simulation and a compartmental model](#)
- [Comparison of influenza epidemiological and virological characteristics between outpatients and inpatients in Zhejiang Province, China, March 2011-June 2015](#)

OTHER INFLUENZA-RELATED NEWS

- [Bipartisan group of House and Senate Committee Leaders: "Vaccines Save Lives"](#)
- [Spread of illness causes Kalamazoo Public Schools to close Friday](#)
- [Nine new flu deaths in Oklahoma](#)
- [Positive birth outcomes for flu vaccine during pregnancy](#)
- [Dengue and influenza coinfection in mice found to elevate risk of lung damage, death](#)
- [France: Flu epidemic coming to a close](#)

AVIAN INFLUENZA INTERNATIONAL NEWS

- [Four countries report H5N1 as H5N8 detections continue](#)
- [H5N1 hits Vietnam again as 7 European nations report more H5N8](#)
- [China reports two additional H7N9 avian influenza cases in Sichuan Province](#)

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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