



MI Flu Focus

Influenza Surveillance Updates

Bureaus of Epidemiology and Laboratories



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Influenza Surveillance Report for the Week Ending November 12, 2016

MI's Influenza Activity Level:
Sporadic

Updates of Interest:

Many countries, including the United States, are seeing an increase in avian influenza cases. To read about specific outbreaks, see *FluBytes* on page 4.

Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) decreased to 1.9% overall, which is at the regional baseline of 1.9%. A total of 152 patient visits due to ILI were reported out of 7,821 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (26 total):

- C (6)
- N (2)
- SE (13)
- 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%.

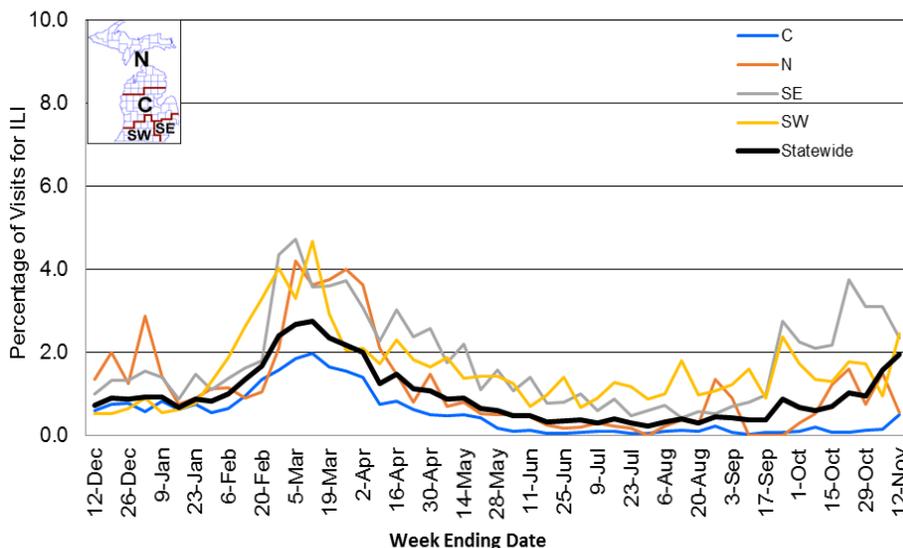
Become a Sentinel Provider!

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!

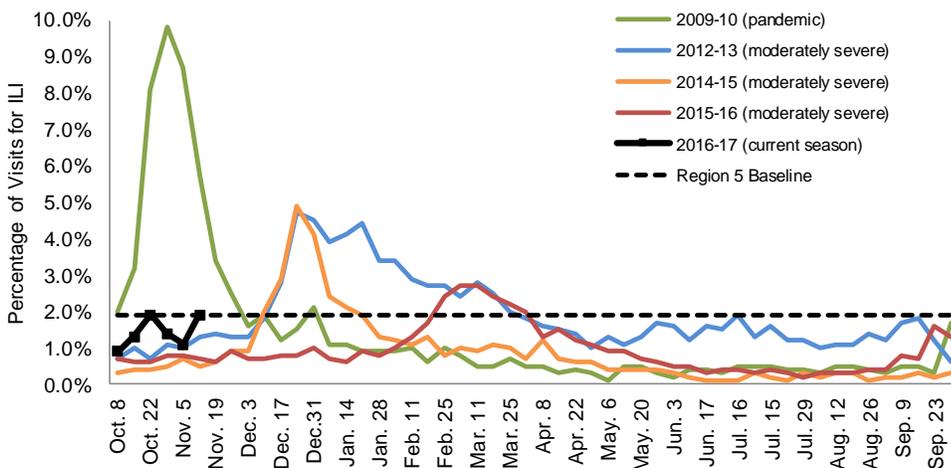
Contact Jalyn Ingalls (IngallsJ@michigan.gov) for more information.

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

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. There were **no** new influenza-related hospitalizations reported in the catchment area, with a total of one (adult) reported 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 9 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.

Age Group	New Flu Hospitalizations Reported	Total 2016-17 Flu Hospitalizations Reported to Date
0-4 years	0	0
5-17 years	0	0
18-49 years	0	0
50-64 years	0	0
65 years & older	1 (SE)	6 (2N, 4SE)
Total	1 (SE)	6 (2N, 4SE)

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 4 new positive influenza results, three influenza A/H3 (3SE) and one influenza B (SW). A total of 22 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							
Influenza A/H3	4	0	13	3	20		0 / 8
Influenza B			1	1	2		
A / unsubtypeable							
LAIV recovery							

In addition, 9 sentinel clinical labs (2SE, 1SW, 5C, 1N) reported influenza testing results. Two labs (C) reported sporadic influenza A activity. One lab (C) reported sporadic influenza B activity. Four labs (C, SE, SW, N) reported low or slightly elevated Parainfluenza activity. Five labs (C, SE, SW) reported sporadic or slightly increasing RSV activity. Two labs (SE, C) reported sporadic or slightly increasing Adenovirus activity. Three labs (SE, SW, C) reported low hMPV activity. Testing volumes continue to slowly trend upwards with some sites nearing moderate levels.

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					
Long-term Care / Assisted Living Facility				1	1
Healthcare Facility					
Daycare					
Correctional Facility					
Total				1	1

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.

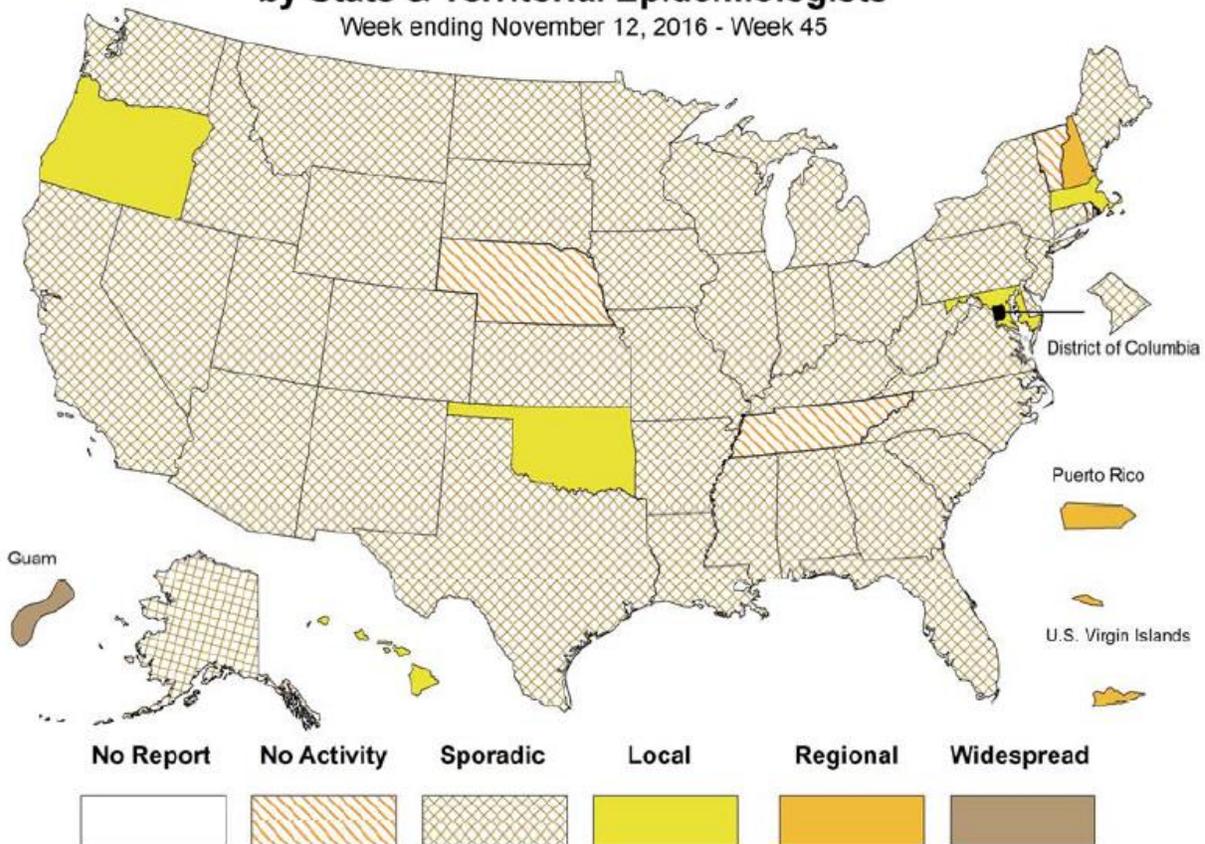
Emergency Department Surveillance

Compared to levels from the week prior, emergency department visits from constitutional 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 (1N, 1C, 2SW)
- 7 respiratory alerts (2N, 3C, 1SE, 1SW)
- Last MIFF report: 3 constitutional alerts (2C, 1SW), 8 respiratory alerts (2N, 5C, 1SE)

Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*

Week ending November 12, 2016 - Week 45





FLUMIST UPDATE FROM MEDIMMUNE

Following the ACIP recommendation that LAIV not be used during the 2016-17 flu season, Medimmune researchers have been investigating what was behind the decreased FluMist effectiveness in the 2015-16 season. In a [letter](#) submitted to *Eurosurveillance*, Medimmune researchers say that based on evidence, the reduced replicative fitness of the A/California and A/Bolivia LAIV strains is most likely the cause. They are continuing to research all potential hypotheses, and are working to ensure that the vaccine effectiveness of LAIV is improved for future seasons.

NATIONAL INFLUENZA VACCINATION WEEK

National Influenza Vaccination Week is December 4th through 10th, which is only two weeks away! Don't forget that the CDC has many materials on their [website](#) that you can use to promote NIVW and flu vaccination for your patients!



MANY COUNTRIES SEEING A SPIKE IN AVIAN INFLUENZA

More avian influenza outbreaks have been reported as birds are migrating south. The US, Switzerland, and Denmark, have seen spikes in H5N8 avian influenza, and other countries are seeing increases in H5N1 and H5N6 influenza among their poultry.

China recently notified the World Health Organization of two human cases of A(H7N9), an avian influenza virus. Only 800 laboratory confirmed human cases of A (H7N9) have been confirmed since 2013.

For more information on avian influenza outbreaks, see articles linked under the Avian Influenza International News Section to the right.

INFLUENZA-RELATED JOURNAL ARTICLES

- [Identification of a novel small-molecule compound targeting the influenza A virus polymerase PB1 – PB2 interface](#)
- [Development of a freeze-dried, heat-stable influenza subunit vaccine formulation](#)
 - Developed two lead dry formulations of H1N1 influenza subunit vaccines
 - Freeze-dried vaccines were shown to be safe and remained immunogenic
- [Novel approach for identification of influenza virus host range and zoonotic transmissible sequences by determination of host-related associative positions in viral genome segment](#)
- [Pneumococcal conjugated vaccine reduces the high mortality for community-acquired pneumonia in the elderly: An Italian regional experience](#)

OTHER INFLUENZA-RELATED NEWS

- [Parents are insisting on doctors who insist on vaccinations](#)
- [Influenza vaccine uptake higher in children with asthma](#)
- [Room to improve flu vaccine coverage among health care personnel](#)
- [Influenza vaccination keeps dialysis patients out of the hospital](#)

AVIAN INFLUENZA INTERNATIONAL NEWS

- [Expect more bird flu cases in Europe and in the U.S., OIE says](#)
- [Human infection with avian influenza A\(H7N9\) virus – China](#)
- [H5N8 expands in Europe; other strains strike elsewhere](#)
- [Hungary: Highly pathogenic avian influenza outbreak in Hungary](#)

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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