



MI Flu Focus

Influenza Surveillance Updates

Bureaus of Epidemiology and Laboratories



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Influenza Surveillance Report for the Week Ending March 4, 2017

MI's Influenza Activity Level:
Widespread

Updates of Interest: The United States Department of Agriculture (USDA) confirmed highly pathogenic avian influenza (HPAI) H7 in poultry on a farm in Tennessee. For more information, see Flu Bytes on page 4.

Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) decreased to 3.6% overall, which is above the regional baseline of 1.9%. A total of 370 patient visits due to ILI were reported out of 10,341 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region

(33 total):

- C (12)
- N (2)
- SE (14)
- SW (5)

National Surveillance: In the United States, 3.6% of outpatient visits were due to influenza-like illness, which is above the national baseline of 2.2%.

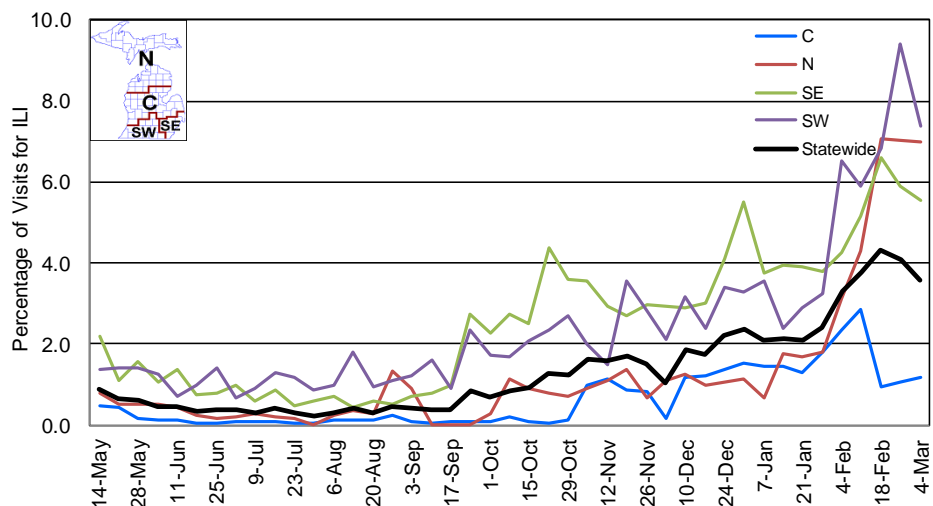
Become a Sentinel Provider!

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.

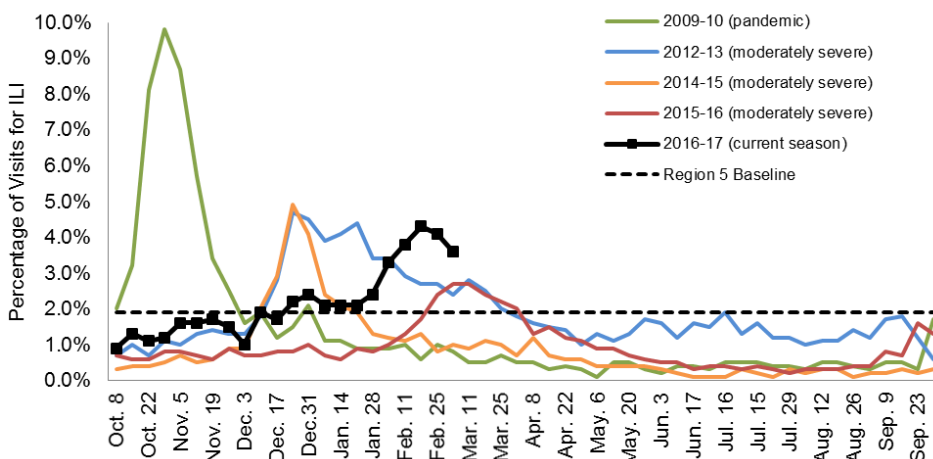
Additional information is in the weekly FluView reports available at:

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 **42 pediatric and 309 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 13 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	3 (N)	22 (10N, 5SE, 7SW)
5-17 years	4 (3N, 1SW)	26 (13N, 1C, 5SE, 7SW)
18-49 years	11 (3N, 8SE)	74 (17N, 47SE, 10SW)
50-64 years	13 (5N, 6SE, 2SW)	112 (21N, 73SE, 18SW)
65 years & older	58 (17N, 32SE, 9SE)	398 (66N, 2C, 282SE, 48SW)
Total	89 (31N, 46SE, 12SW)	632 (127N, 3C, 412SE, 90SW)

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

Laboratory Surveillance

MDHHS Bureau of Laboratories reported 42 new positive influenza results (36 A/H3, 1 A/H1 and 5 flu B) during this time period. A total of 418 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	1		3	1 (A/CALIFORNIA/07/2009-LIKE (H1N1)pdm09)	
Influenza A/H3	81	26	101	122	330	5 (A/HONG KONG/4801/2014-LIKE)	0 / 95
Influenza B	25	3	34	23	85	4 (B/PHUKET/3073/2013-LIKE) 6 (B/BRISBANE/60/2008-LIKE)	
A / unsubtypeable							
LAIV recovery							

In addition, 11 sentinel clinical labs (2SE, 2SW, 6C, 1N) reported influenza testing results. All eleven labs reported influenza A activity at elevated levels but with most sites showing a continued plateau or slight new decreases. Ten labs (SE, SW, C) reported influenza B activity with nearly all sites showing stable levels or a slightly decreasing trend. Several sites in the SW and C regions continue to show predominant influenza B activity or roughly co-dominant influenza A and B activity. Four labs (SE, SW, C) reported low or slightly increased Parainfluenza activity. All eleven labs (SE, SW, C, N) reported low to moderate RSV activity with levels staying steady or dropping slightly. Four labs (SE, SW, C) reported low or sporadic Adenovirus activity. Six labs (SE, SW, C, N) reported low to moderate hMPV activity, with several sites showing further increases. Testing volumes remain high or very high but have generally stabilized or started to show modest declines.

Congregate Setting Outbreaks of Viral Respiratory Illness

There were 10 new respiratory facility outbreaks (6C, 3SE, 1SW) reported to MDHHS during this time period, 7 of which were confirmed influenza. 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	3		1	5
Long-term Care / Assisted Living Facility	20		17	21	58
Healthcare Facility	1		1	1	3
Daycare			1	2	3
Homeless Shelter			1		1
Total	22	3	20	25	70

Michigan Disease Surveillance System

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

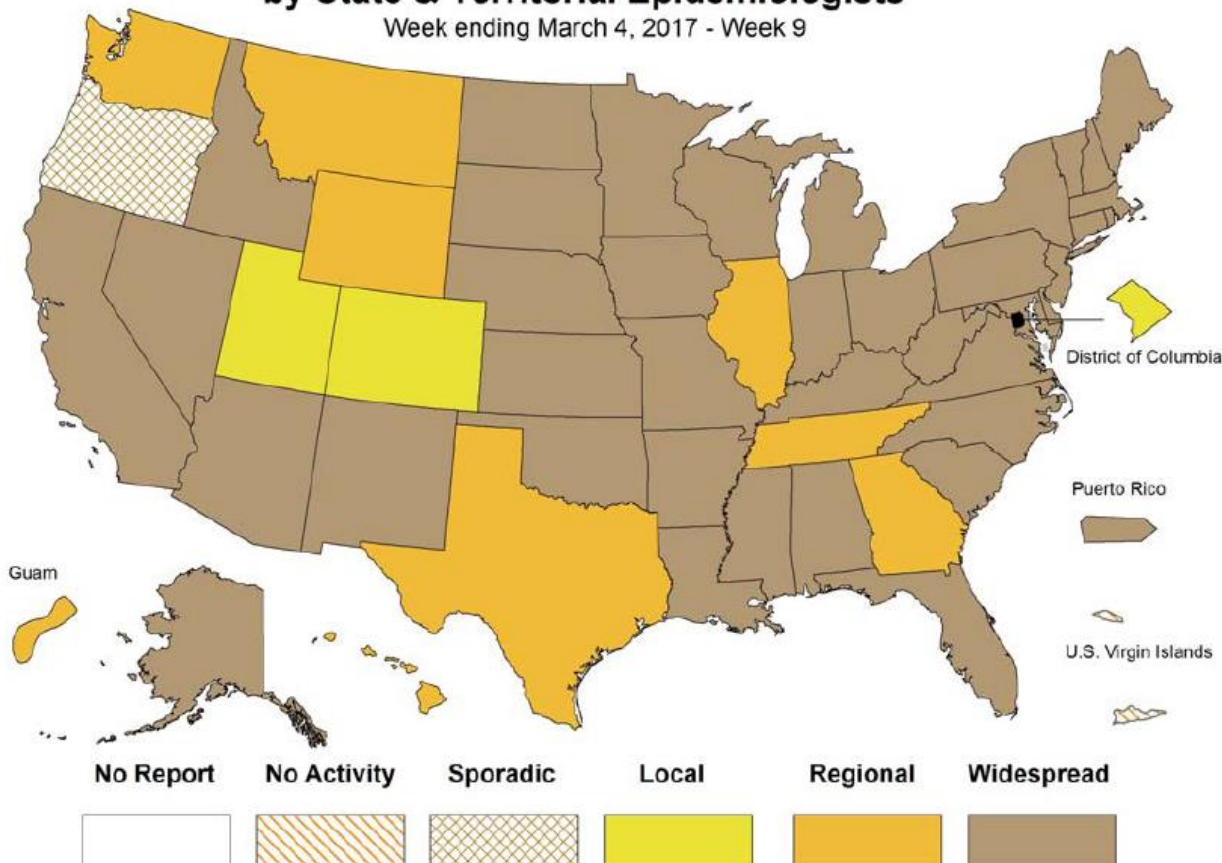
Emergency Department Surveillance

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

- 3 constitutional alerts (1N, 1C, 1SW)
- 3 respiratory alerts (C)
- Last MIFF report: 3 constitutional alerts (1N, 1C, 1SW), 5 respiratory alerts (3N, 4C, 1SW)

Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*

Week ending March 4, 2017 - Week 9



FluBytes



TAKE 3 ACTIONS TO FIGHT THE FLU CAMPAIGN – NOW IN SPANISH

The CDC has created “Take 3 Actions to Fight the Flu” campaign posters in Spanish. These are available online and can be used to promote flu vaccination among Spanish-speaking patients!



AVIAN INFLUENZA OUTBREAK IN TENNESSEE

On March 5, the United States Department of Agriculture (USDA) confirmed [highly pathogenic avian influenza](#) (HPAI) H7 in poultry on a farm in Tennessee. It has been determined that this is not the same as the China H7N9 virus that has impacted poultry and infected humans in Asia. CDC has announced that they consider the human risk of contracting North American H7N9 influenza virus to be low. CDC is also working with the USDA and the Tennessee Department of Health to monitor the health of the poultry workers who may have been exposed.

RECOMMENDED COMPOSITION FOR THE 2017-2018 SEASONAL INFLUENZA VACCINE

The World Health Organization (WHO) has announced the [recommended composition](#) of influenza virus vaccines for use in the 2017-2018 northern hemisphere influenza season. It is recommended that trivalent vaccines for use in the 2017-2018 northern hemisphere influenza season contain the following:

- A/Michigan/45/2015 (H1N1)pdm09-like virus
- A/Hong Kong/4801/2014 (H3N2)-like virus
- B/Brisbane/60/2008-like virus

It is recommended that quadrivalent vaccines containing two influenza B viruses contain the above three viruses as well as an additional B virus: B/Phuket/3073/2013-like virus. The FDA has voted to back this [recommendation](#).

Archived editions of FluBytes are available [here](#) and MI FluFocus archives are [here](#).

INFLUENZA-RELATED JOURNAL ARTICLES

- [Population effect of influenza vaccination under co-circulation of non-vaccine variants and the case for a bivalent A/H3N2 vaccine component](#)
- [A readability comparison of anti- versus pro-influenza vaccination online messages in Japan](#)
- [Assessing the potential pandemic risk of recent avian influenza viruses](#)
- [H1N1 influenza viruses varying widely in hemagglutinin stability transmit efficiently from swine to swine and to ferrets](#)

OTHER INFLUENZA-RELATED NEWS

- [USDA issues update on highly pathogenic avian influenza in Tennessee](#)
- [Low pathogenic avian influenza \(poultry\), USA](#)
- [Tennessee reports bird flu on second farm](#)
- [How CDC is using advanced molecular detection technology to better fight flu](#)
- [Flu claims 17 lives in North Carolina in one week](#)
- [Pharmacists can make a difference during influenza pandemics](#)
- [Avian influenza global spread raises concern for next human pandemic and poultry production](#)
- [Dampened immunity during pregnancy promotes evolution of more virulent flu](#)

AVIAN INFLUENZA INTERNATIONAL NEWS

- [Greek H5N6 virus appears distinct from Asian strain](#)
- [CHP closely monitors two human cases of avian influenza A\(H7N9\) in Mainland](#)
- [Increase in human infections with avian influenza A\(H7N9\) virus during the fifth epidemic – China, October 2016 – February 2017 \(MMWR\)](#)
- [Malaysia reports first H5N1 outbreak in nearly 10 years](#)
- [China reports 26 H7N9 cases in one week](#)
- [Hong Kong investigates imported H7N9 avian influenza, monitoring additional cases on Mainland](#)

FLU WEBSITES

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

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

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