



# MI Flu Focus

## Influenza Surveillance Updates

### Bureaus of Epidemiology and Laboratories



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### Influenza Surveillance Report for the Week Ending March 19, 2016

**MI's Influenza**  
**Activity Level:**  
 Widespread

**Updates of Interest:**  
 Signs suggest that flu activity in the U.S. is starting to [decline](#).

#### Michigan Disease Surveillance System

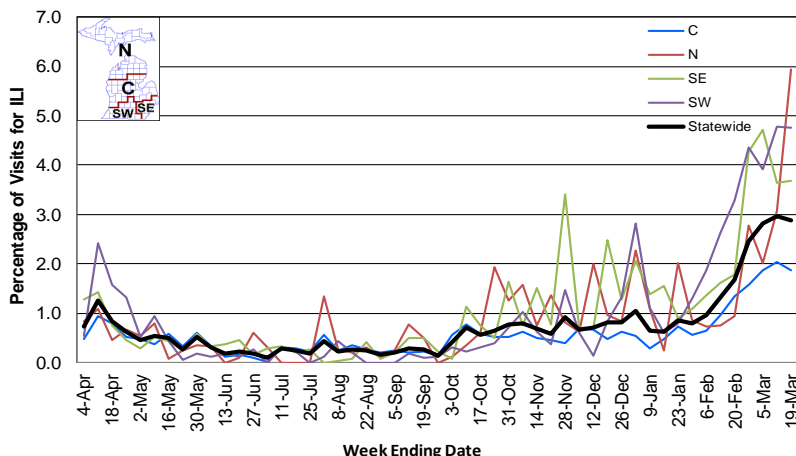
MDSS influenza data indicated that compared to levels from the previous week, both aggregate and individual reports had decreased. Aggregate reports were lower than levels seen during the same time period last year, while individual reports were higher.

#### Emergency Department Surveillance

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

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

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



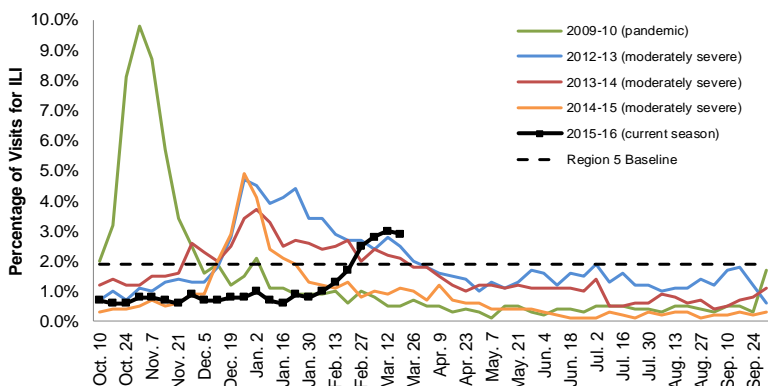
#### Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) decreased to 2.9% overall; this is above the regional baseline (1.9%). A total of 403 patient visits due to ILI were reported out of 13,962 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (35 total):

- C (15)
- N (3)
- SE (10)
- SW (7)

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



#### 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 Stefanie Cole ([ColeS4@michigan.gov](mailto:ColeS4@michigan.gov)) for more information.

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### 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 beginning on Oct. 1, 2015, for Clinton, Eaton, Genesee, and Ingham counties. Since Oct. 1, there have been 25 pediatric (13.1 per 100,000 population) and 119 adult (17.3 per 100,000 population) hospitalizations reported within the catchment area. Note: Some hospitalizations are ruled out after they are reported so the cumulative totals may change from week to week.

The MDHHS Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide, and 13 hospitals (C, N, SE, & SW) reported. Results for the 2015-16 flu season are listed in the table below. Additional hospitals are welcome to join; please contact Seth Eckel at [eckels1@michigan.gov](mailto:eckels1@michigan.gov).

Age Group	New Flu Hospitalizations Reported	Total 2015-16 Flu Hospitalizations Reported to Date
0-4 years	4 (N)	28 (13N, 7SE, 8SW)
5-17 years	5 (3N, 2SW)	21 (10N, 7SE, 4SW)
18-49 years	12 (4N, 6SE, 2SW)	124 (19N, 1C, 77SE, 27SW)
50-64 years	30 (4N, 21SE, 5SW)	171 (20N, 3C, 114SE, 34SW)
65 years & older	28 (5N, 1C, 17SE, 5SW)	187 (18N, 5C, 135SE, 29SW)
<b>Total</b>	<b>79 (20N, 1C, 44SE, 14SW)</b>	<b>531 (80N, 9C, 340SE, 102SW)</b>

### Laboratory Surveillance

MDHHS Bureau of Laboratories reported 33 new positive influenza results: 22 2009 A/H1N1pdm, 6 influenza A/H3, and 5 influenza B. A total of 302 positive influenza results have been reported for the 2015-16 season. Influenza results for the 2015-16 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	55	19	68	92	234	17* (17 A/California/07/2009-like (H1N1)pdm09**)	2 / 79
Influenza A/H3	12	1	10	15	38	4* (4 A/Switzerland/9715293/2013-like <sup>†</sup> )	0 / 6
Influenza B	4	2	8	11	25	13 (9 B/Yamagata lineage [2 B/Phuket/3073/2013-like <sup>††</sup> ], 4 B/Victoria lineage)	
A / unsubtypeable				5	5		
LAIV recovery				1	1		
RSV			2		2		
Adenovirus	2				2		
Parainfluenza type 1			1		1		

\*Specimens antigenically characterized by CDC; \*\*A/California/07/2009-like (H1N1)pdm09 is the H1N1 component of the 2015-16 Northern Hemisphere flu vaccines; <sup>†</sup>A/Switzerland/9715293/2013-like (H3N2) is the H3N2 component of the 2015-16 Northern Hemisphere flu vaccines; <sup>††</sup>B/Phuket/3073/2013-like virus is the B/Yamagata component of the 2015-16 Northern Hemisphere trivalent and quadrivalent flu vaccines.

In addition, 13 sentinel clinical labs (4SE,2SW,6C,1N) reported influenza results. Twelve labs (SE,SW,C,N) reported influenza A positives with all regions at elevated levels but now showing a prominent downward trend. No sites showed further increases. Eleven labs (SE,SW,C,N) reported low to upper moderate influenza B activity, at overall steady levels or beginning to decline. One site (C) reported no influenza A or B positives. Four labs (SE,SW,C) reported sporadic to low Parainfluenza activity. Twelve labs (SE,SW,C,N) reported low to moderate RSV activity, with an overall gradually decreasing trend. Five labs (SE,SW,C) reported low or mildly elevated Adenovirus activity. Four labs (SE,SW,C) reported low to moderate hMPV activity, with several sites showing small increases. Testing volumes remained high, but many sites began to show moderate or robust decreases.

**Influenza Congregate Settings Outbreaks**

There was 1 new respiratory facility outbreak (no testing done) reported. There have been a total of 26 respiratory facility outbreaks reported to MDHHS for the 2015-16 season. Respiratory facility outbreaks are listed in the table below by facility type and surveillance region.

Facility Type	C	N	SE	SW	Total
K-12 School	1	2		3	6
Long-term Care / Assisted Living Facility	6	1	4	6	17
Healthcare Facility			1		1
Daycare				1	1
Correctional Facility		1			1
<b>Total</b>	<b>7</b>	<b>4</b>	<b>5</b>	<b>10</b>	<b>26</b>

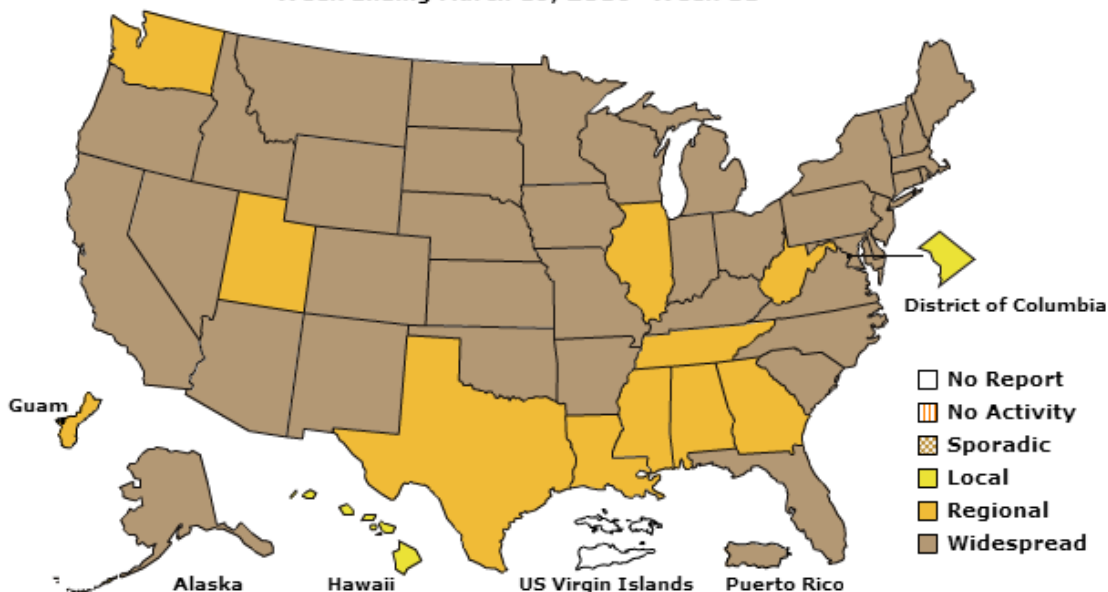
**Influenza-associated Pediatric Mortality**

No new influenza-associated pediatric deaths were reported to MDHHS. One influenza-associated pediatric death (SE) has been reported to MDHHS for the 2015-16 season.

**National:** In the United States, flu activity decreased slightly with 3.2% of outpatient visits due to influenza-like illness, which was above the national baseline of 2.1%. All 10 regions reported ILI at or above region-specific baselines. Two new influenza-associated pediatric deaths were reported, for a total of 30 pediatric deaths for the 2015-16 flu season. Additional information is in the weekly FluView reports available at: [www.cdc.gov/flu/weekly/](http://www.cdc.gov/flu/weekly/).

**International:** Globally, high levels of flu activity continued to be reported. In some countries in northern Europe, flu B virus detections increased. In North America, flu activity continued to increase. In northern temperate Asia, flu activity was ongoing with increasing levels of flu B virus. More information is available at: [www.who.int/influenza/surveillance\\_monitoring/updates/latest\\_update\\_GIP\\_surveillance/en/](http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/).

**A Weekly Influenza Surveillance Report Prepared by the Influenza Division  
Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists\*  
Week Ending March 19, 2016- Week 11**





## U.S. SEASONAL INFLUENZA NEWS

- [Signs suggest US flu activity is starting to recede](#)
- [Influenza still widespread in Iowa](#)
- [5 flu-related deaths in North Carolina last week; highest weekly total for 2015-16 season](#)
- [San Diego teen dies from influenza](#)
- [Winter's almost over, but the flu is on the upswing across Alaska](#)
- [Dallas County baby dies from flu](#)

## INFLUENZA-RELATED JOURNAL ARTICLES

- *Clinical Infectious Diseases*: [Multistate outbreak of respiratory infections among unaccompanied children, June-July 2014](#)
  - Outbreak due to multiple pathogens, including *Streptococcus pneumoniae* serotype 5 and flu viruses
- [Global role and burden of influenza in pediatric respiratory hospitalizations, 1982-2012: a systematic analysis](#)
- [Phylogenetics of avian influenza clade 2.2.1 H5N1 viruses in Egypt](#)
  - Continuous evolution of HPAI H5N1 viruses in Egypt observed in all poultry farming and production systems in almost all regions of the country
  - Wide circulation of 2.2.1.2 clade carrying triple mutations associated with increased binding affinity to human receptors
- [Revealing the true incidence of pandemic A\(H1N1\)pdm09 influenza in Finland during the first two seasons - an analysis based on a dynamic transmission model](#)
- [Identification and characterization of influenza variants resistant to a viral endonuclease inhibitor](#)
- [Human mesenchymal stromal cells reduce influenza A H5N1-associated acute lung injury in vitro and in vivo](#)
- [Estimating the burden of influenza-associated hospitalizations and deaths in Central America](#)
- [Susceptibility of swine to H5 and H7 low pathogenic avian influenza viruses](#)

## FLU WEBSITES

[www.michigan.gov/flu](http://www.michigan.gov/flu)

[www.cdc.gov/flu](http://www.cdc.gov/flu)

[www.flu.gov](http://www.flu.gov)

<http://vaccine.healthmap.org/>

## NAT'L INFANT IMMUNIZATION WEEK

[National Infant Immunization Week](#) (NIIW) is April 16-23, 2016. NIIW is an annual observance to highlight the importance of protecting infants from vaccine-preventable diseases.

Are you looking for ideas on how you can educate others on and promote childhood immunizations in your community? Check out the [NIIW Activity Register](#). It provides an overview of educational and promotional events and campaigns that partners and immunization programs will be hosting throughout this year's NIIW. If you are hosting an NIIW activity, [share it here](#) with others!

## AVIAN INFLUENZA INTERNATIONAL NEWS

- [South Korea finds ducks infected with H5N8 bird flu](#)
- [China reports H7N9 avian influenza case in Anhui province](#)
- [Nigeria hit by 22 more H5N1 outbreaks](#)
- [WHO notes China's recent H7N9 clusters, details H5N6 case](#)
- [China reports another human H7N9 case; Nigeria sees additional widespread H5N1 poultry outbreaks](#)

## OTHER INFLUENZA-RELATED NEWS

- [Canine influenza spreads to southeast Wisconsin](#)
- [Maryland Department of Agriculture revises 2016 fair season requirements for poultry](#)
- [University of Georgia, Sanofi Pasteur researchers design new H1N1 influenza vaccine](#)
- [Body's immune response to influenza leads scientists towards lifelong flu vaccine](#)
- [Taiwan records 42 flu-related deaths in one-week period](#)

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 Stefanie Cole at [ColeS4@michigan.gov](mailto:ColeS4@michigan.gov).

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