



# MI Flu Focus

## Influenza Surveillance Updates

### Bureaus of Epidemiology and Laboratories



Editor: Stefanie Cole, RN, MPH ColeS4@michigan.gov February 17, 2016 Vol. 13; No. 5

### Influenza Surveillance Report for the Week Ending February 6, 2016

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

**Updates of Interest:**

- A [study](#) published in MMWR showed areas with higher poverty levels had lower flu vaccination rates and higher flu hospitalization rates.

#### Michigan Disease Surveillance System

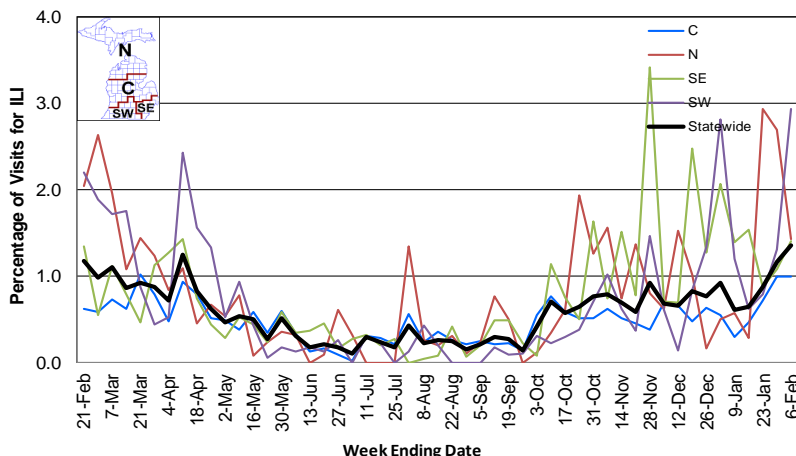
MDSS influenza data indicated that compared to levels from the previous week, aggregate reports had decreased while individual reports had increased. Aggregate reports were lower than levels seen during the same time period last year, while individual reports were higher.

#### Emergency Department Surveillance

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

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

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



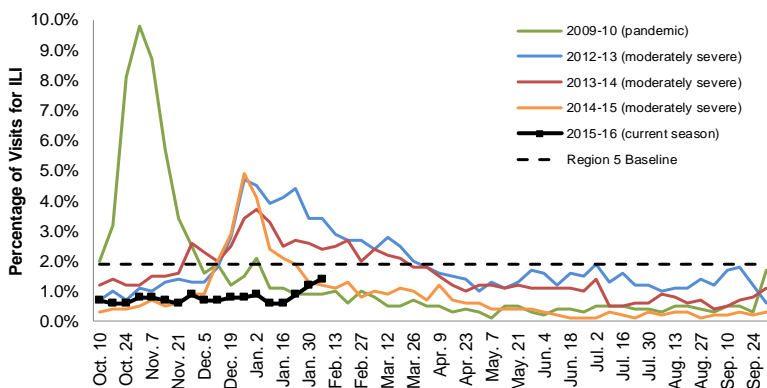
#### Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) increased to 1.4% overall; this is below the regional baseline (1.9%). A total of 190 patient visits due to ILI were reported out of 13,996 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (38 total):

- C (16)
- N (3)
- SE (11)
- SW (8)

**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 3 pediatric (1.6 per 100,000 population) and 15 adult (2.2 per 100,000 population) hospitalizations reported within the catchment area.

The MDHHS Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide, and 15 hospitals (N, C, 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	0	3 (SE)
5-17 years	0	0
18-49 years	2 (SE)	21 (1N, 1C, 19SE)
50-64 years	7 (SE)	14 (SE)
65 years & older	3 (SE)	21 (20SE, 1SW)
<b>Total</b>	<b>12 (SE)</b>	<b>59 (1N, 1C, 56SE, 1SW)</b>

### Laboratory Surveillance

MDHHS Bureau of Laboratories reported 10 new positive influenza results: 9 2009 A/H1N1pdm and 1 influenza B. A total of 107 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	10	3	52	15	80	10* (10 A/California/07/2009-like (H1N1)pdm09**)	1 / 43
Influenza A/H3	5		8	6	19	2* (2 A/Switzerland/9715293/2013-like†)	0 / 6
Influenza B	1	1	4		6	2 (2 B/Yamagata lineage [2 B/Phuket/3073/2013-like††])	
A / unsubtypeable				2	2		
RSV			2		2		

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

In addition, 14 sentinel clinical labs (5SE,2SW,6C,1N) reported influenza results. Twelve labs (SE,SW,C,N) reported influenza A activity with further increases in the SE region and increases beginning in the C region. Six labs (SE,SW,N) reported sporadic or lightly increasing influenza B activity. Four labs (SE,SW) reported low Parainfluenza activity. Thirteen labs (SE,SW,C,N) reported low to moderate RSV activity at steady or increasing levels, with sites in the SE showing the strongest upward trends. Six labs (SE,SW,C) reported low or slightly elevated Adenovirus activity. Two labs (SE,SW,C) reported low or increasing hMPV activity. Most testing volumes remained in the moderate to upper-moderate range with some sites at high levels.

### Influenza Congregate Settings Outbreaks

There was 1 new respiratory facility outbreak (no lab testing done) reported. There have been a total of 7 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		1	2
Long-term Care / Assisted Living Facility	3			1	4
Healthcare Facility			1		1
<b>Total</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>7</b>

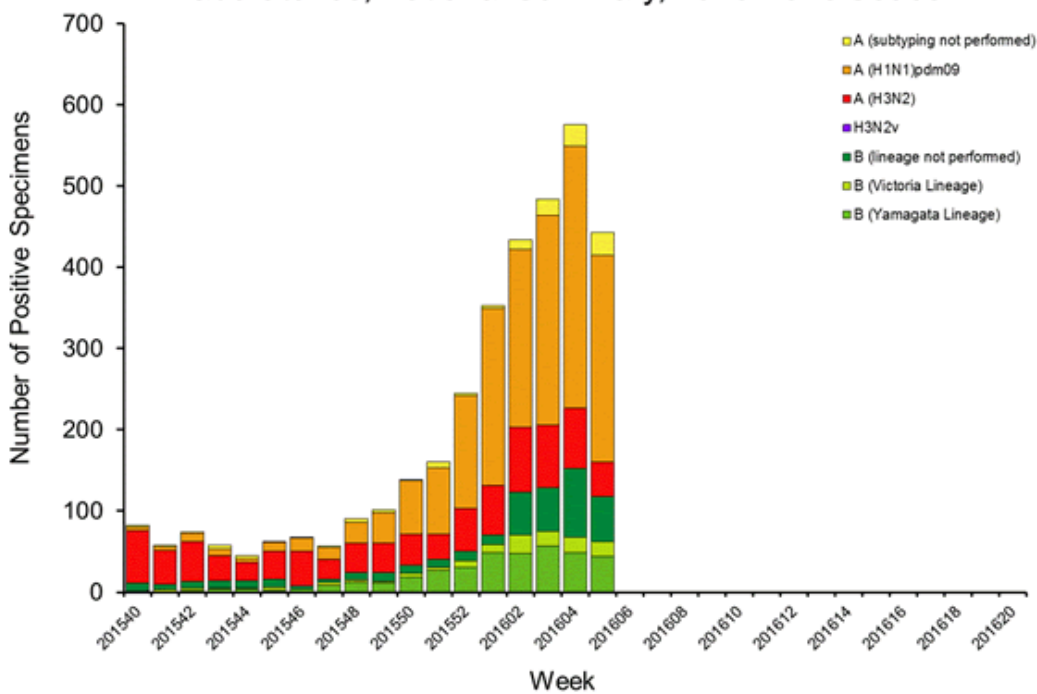
### Influenza-associated Pediatric Mortality

One influenza-associated pediatric death in a school-aged child from the SE region associated with 2009 influenza A/H1N1 has been reported to MDHHS. This is Michigan's first confirmed flu-associated pediatric death for the 2015-16 season.

**National:** In the United States, flu activity increased slightly with 2.4% of outpatient visits due to influenza-like illness, which was above the national baseline of 2.1%. Seven of 10 regions reported ILI at or above region-specific baselines. Two new influenza-associated pediatric deaths were reported, for a total of 11 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/).

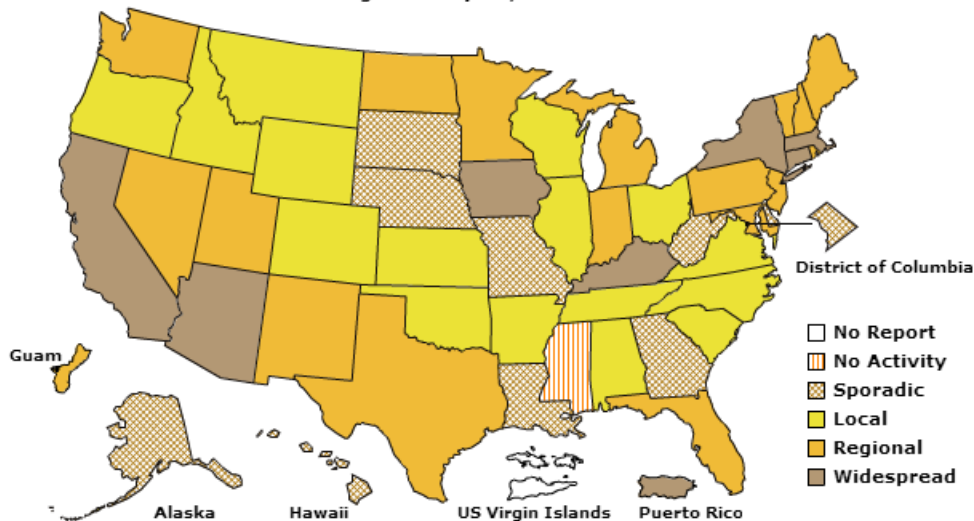
**International:** Globally, increasing flu activity continued to be reported in the temperate zones of the Northern Hemisphere with influenza A(H1N1)pdm09 as the most detected virus. A few countries in Europe reported an increase in activity predominantly due to influenza B virus. More information is 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/).

**Influenza Positive Tests Reported to CDC by U.S. Public Health Laboratories, National Summary, 2015-2016 Season**



**A Weekly Influenza Surveillance Report Prepared by the Influenza Division  
Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists\***

Week Ending February 06, 2016- Week 5



# FluBytes



## MMWR: POVERTY & FLU HOSPITALIZATIONS

A [study recently published](#) in *Morbidity and Mortality Weekly Report* indicates that higher poverty rates are associated with higher rates of flu hospitalizations. Using 2010-11 and 2011-12 flu season data, the authors found the age-adjusted incidence of flu-related hospitalizations in communities where 20% or more of households were below the federal poverty line was 21.5 per 100,000 person-years, compared to 10.9 per 100,000 person-years in areas with fewer than 5% of households below the poverty line. Flu vaccination rates were also lower in areas with higher poverty.

## U.S. SEASONAL INFLUENZA NEWS

- [Flu now widespread in Arizona; over 3,700 cases reported](#)
- [Flu numbers pick up in ND, but mild season still possible](#)
- [NY confirms flu cases in 44 counties, all NYC burroughs](#)

## AVIAN INFLUENZA INTERNATIONAL NEWS

- [More avian flu outbreaks detected in 4 countries](#)
  - Bangladesh H5N1, France H5N2, Nigeria H5N1, Vietnam H5N6
- [WHO update covers 28 recent H7N9 cases in China; France reports another H5N9 outbreak, Nigeria detects more H5N1](#)
- [NEJM: Probable hospital cluster of H7N9 influenza infection](#)
- [Poor biosecurity linked to further bird flu spread in Nigeria](#)
- [Over 3,000 chickens on Pingtung farm culled due to avian flu](#)
- WHO: [Human infection with avian influenza A\(H7N9\) virus – China](#)
- Public Health England: [Risk assessment of avian influenza A\(H5N6\)](#)

## 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/>

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

## INFLUENZA-RELATED JOURNAL ARTICLES

- *Eurosurveillance*: [Early influenza vaccine effectiveness results 2015-16: I-MOVE multicenter case-control study](#)
  - Case-control study in 10 sites: France, Germany, Hungary, Ireland, Italy, Poland, Portugal, Spain, Sweden, the Netherlands
  - Interim adjusted VE against any flu, all ages was 46.3%
  - Adjusted VE against 2009 H1N1 among all ages was 44.2%
  - Due to late start to flu season, sample sizes were low resulting in low precision
- [Long-term shedding of influenza virus, parainfluenza virus, respiratory syncytial virus and nosocomial epidemiology in patients with hematological disorders](#)
  - Long-term viral shedding for more than 30 days most pronounced in patients with RSV, range of viral shedding 35-334 days (median 80 days)
- [Seasonal influenza vaccination delivery through community pharmacists in England: evaluation of the London pilot](#)
- [Systems biology of immunity to MF59-adjuvanted versus nonadjuvanted trivalent seasonal influenza vaccines in early childhood](#)
- [Airborne influenza A is detected in the personal breathing zone of swine veterinarians](#)
- [A computationally designed hemagglutinin stem-binding protein provides in vivo protection from influenza independent of a host immune response](#)

## OTHER INFLUENZA-RELATED NEWS

- CDC: [146.2 million doses of flu vaccine distributed in U.S.](#)
- [Sainte-Justine, Montreal Children's hospitals swamped by flu cases](#)
- [WHO publishes update on influenza in Ukraine](#)
- [First Tasmanian pharmacists ready to vaccinate](#)
- [Mexico welcomes first recombinant influenza vaccine](#)

## OTHER IMMUNIZATION NEWS

- The February 24 ACIP meeting [draft agenda](#) has been posted
- WHO meets Feb. 22-25 to determine strains for 2016-17 Northern Hemisphere flu vaccines
- This year, [National Infant Immunization Week](#) is April 16-23, [let CDC know](#) your NIIW activities

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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