



# MI Flu Focus

## Influenza Surveillance Updates

### Bureaus of Epidemiology and Laboratories



Editor: Stefanie Cole, RN, MPH   ColeS4@michigan.gov   February 24, 2016   Vol. 13; No. 6

### Influenza Surveillance Report for the Week Ending February 13, 2016

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

**Updates of Interest:**

A *U of M study* shows parents rate flu vaccines less important, effective, and safe compared to other childhood vaccines. WHO [recommends](#) vaccine strains for 2016-17.

#### Michigan Disease Surveillance System

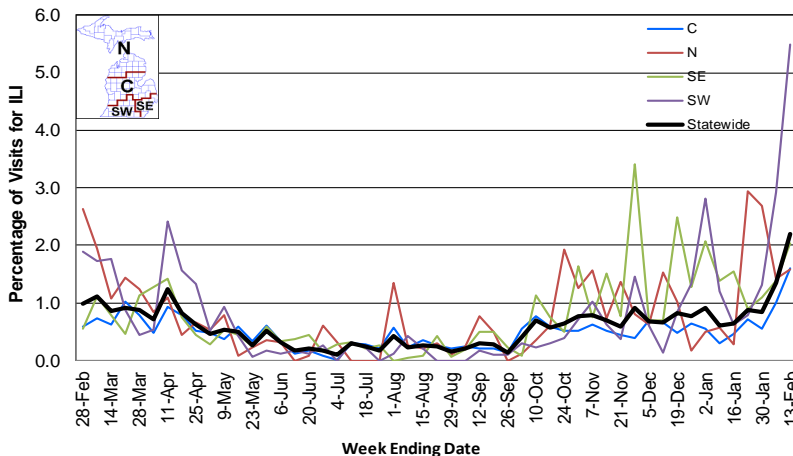
MDSS influenza data indicated that compared to levels from the previous week, both aggregate and individual reports had increased. Aggregate reports were lower than levels seen during the same time period last year, while individual reports were higher.

#### 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 complaints were similar to those recorded during the same time period last year, while respiratory complaints had decreased.

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

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



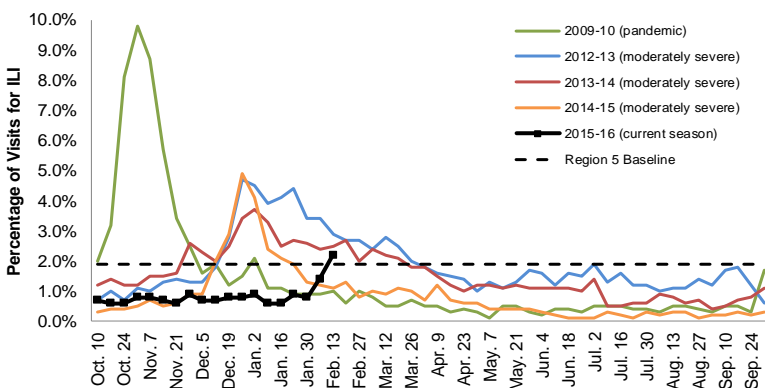
#### Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) increased to 2.2% overall; this is above the regional baseline (1.9%). A total of 232 patient visits due to ILI were reported out of 10,546 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (31 total):

- C (13)
- N (3)
- SE (10)
- SW (5)

**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 22 adult (3.2 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	2 (1SE, 1SW)	5 (4SE, 1SW)
5-17 years	1 (SE)	1 (SE)
18-49 years	11 (9SE, 2SW)	32 (1N, 1C, 28SE, 2SW)
50-64 years	18 (2N, 10SE, 6SW)	32 (2N, 24SE, 6SW)
65 years & older	15 (9SE, 6SW)	36 (29SE, 7SW)
<b>Total</b>	<b>47 (2N, 30SE, 15SW)</b>	<b>106 (3N, 1C, 86SE, 16SW)</b>

### Laboratory Surveillance

MDHHS Bureau of Laboratories reported 17 new positive influenza results: 12 2009 A/H1N1pdm, 1 influenza B, and 2 influenza A/H3, and 1 co-infection of flu B and A/H1N1. A total of 124 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	14	4	54	21	93	11* (11 A/California/07/2009-like (H1N1)pdm09**)	1 / 43
Influenza A/H3	6		8	7	21	4* (4 A/Switzerland/9715293/2013-like†)	0 / 6
Influenza B	1	2	5		8	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. All 14 labs (SE,SW,C,N) reported influenza A ranging from sporadic activity to gradual increases in parts of the C and SW regions and substantial increases in the SE region. Seven labs (SE,SW,C) reported sporadic to increasing influenza B activity. Three labs (SE) reported sporadic to low Parainfluenza activity. Thirteen labs (SE,SW,C,N) reported low to moderate RSV activity at steady or increasing levels. Four labs (SE,SW,C) reported low to mildly elevated or increasing Adenovirus activity. Four labs (SE,SW,C) reported low or increasing hMPV activity. Nearly all testing volumes showed increases with most sites now in the moderate to high range.

### Influenza Congregate Settings Outbreaks

There was 1 new respiratory facility outbreak (no testing done) reported. There have been a total of 8 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
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>3</b>	<b>8</b>

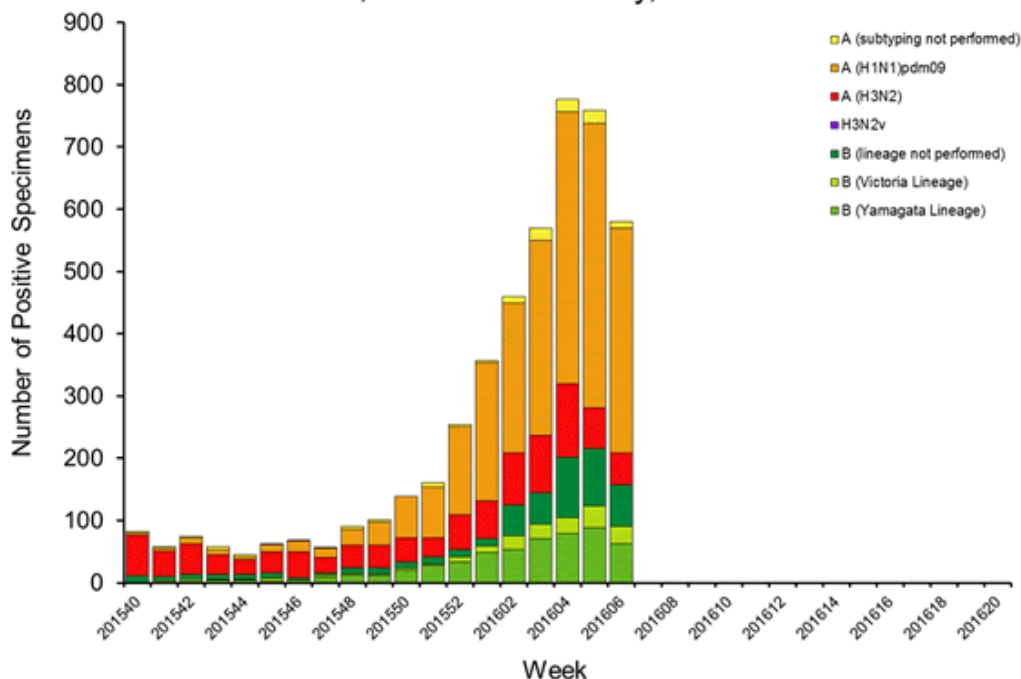
### Influenza-associated Pediatric Mortality

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 increased with 3.1% of outpatient visits due to influenza-like illness, which was above the national baseline of 2.1%. Nine of 10 regions reported ILI at or above region-specific baselines. Two new influenza-associated pediatric deaths were reported, for a total of 13 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/).

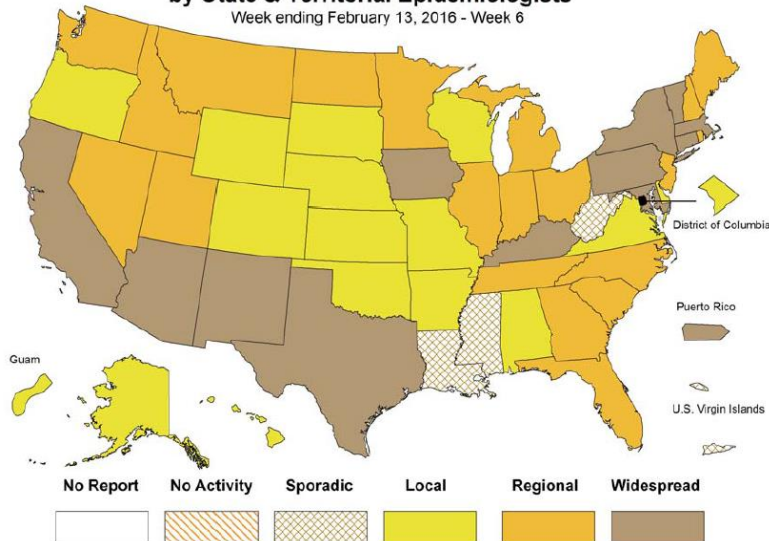
**International:** Globally, flu activity continued to increase in the Northern Hemisphere. In North America, northern Africa, central and western Asia, increasing activity predominantly of influenza A(H1N1)pdm09 was observed. In temperate countries of northern Asia, activity was ongoing with various proportions of circulating viruses. 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



Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists\*

Week ending February 13, 2016 - Week 6





## WHO RECOMMENDS 2016-17 FLU STRAINS

This week, the World Health Organization (WHO) met to [recommend](#) the flu virus strains to be included in the 2016-17 Northern Hemisphere flu vaccines. WHO recommended that trivalent vaccines contain:

- A/California/7/2009 (H1N1)pdm09-like virus;
- A/Hong Kong/4801/2014 (H3N2)-like virus;
- B/Brisbane/60/2008-like virus

Quadrivalent vaccines were recommended to contain the same 3 strains as above plus:

- B/Phuket/3073/2013-like virus.

This represents a new H3N2 strain from 2015-16, and the B viruses from 2015-16 have been swapped between trivalent and quadrivalent vaccines.

## U.S. SEASONAL INFLUENZA NEWS

- [Maricopa County confirms first pediatric flu death of season](#)
- [First confirmed pediatric flu death in Mississippi](#)
- [Flu caseload spikes in San Diego County](#)
- [Has influenza B strain driven mild flu season in California?](#)
- [MMWR: Update: influenza activity - United States, October 4, 2015 - February 6, 2016](#)

## AVIAN INFLUENZA INTERNATIONAL NEWS

- [France reports 2 new H5N1 avian flu outbreaks](#)
- [CHP investigates imported human case of avian influenza A\(H7N9\)](#)
- WHO: [Human infection with avian influenza A\(H7N9\) – situation update as of 12 February 2016](#)
- [Avian flu strikes more birds in Hong Kong, Taiwan, Nigeria](#)
- [PLOS ONE: Intersubtype reassortments of H5N1 highly pathogenic avian influenza viruses isolated from quail](#)

## 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)

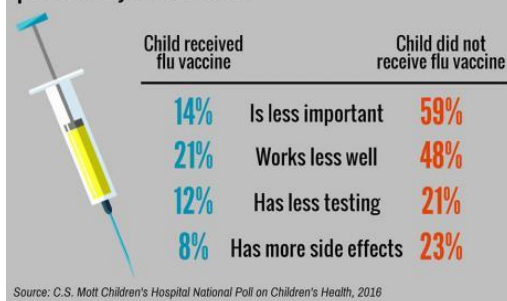
<http://vaccine.healthmap.org/>

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

## INFLUENZA-RELATED JOURNAL ARTICLES

- *Vaccine*: [Place of influenza vaccination among children – U.S. 2010-11 through 2013-14 influenza seasons](#)
  - Most vaccinated children received their flu vaccine at a doctor's office
  - Large variability in vaccination setting by age, race/ethnicity, income, and metropolitan statistical area
- *Clinical Infectious Diseases*: [Effect of previous year vaccination on the efficacy, immunogenicity, and safety of high-dose inactivated influenza vaccine in older adults](#)
  - 2-year study to compare efficacy of high-dose and standard-dose flu vaccines in adults 65 years and older
  - Relative vaccine efficacy for year 2 high-dose recipients 28.3% overall, 25.1% for high-dose both years, 31.6% for those who received standard-dose in year 1
  - Year 1 vaccination had no significant effect on year 2 vaccine efficacy
- [Association between the severity of influenza A\(H7N9\) virus infections and length of the incubation period](#)
  - Researchers found a significant association between a longer incubation period and a greater risk of death among H7N9 cases
- [Parents rate flu vaccine less important, effective, safe than other childhood vaccines](#)

Figure 1. Compared to other childhood vaccines, parents say flu vaccine...



## OTHER INFLUENZA-RELATED NEWS

- Indiana State Board of Animal Health: [Dubois County poultry control area released after negative tests](#)
- CDC: [146.3 million doses of flu vaccine distributed in U.S.](#)
- [Death toll from flu in Ukraine reaches 289](#)
- [Taiwan records 320 severe flu cases in a week, highest in 5 years](#)

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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