



# MI Flu Focus

## Influenza Surveillance Updates

### Bureaus of Epidemiology and Laboratories



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### Influenza Surveillance Report for the Week Ending April 23, 2016

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

**Updates of Interest:**

[Study](#) suggests morning vaccination enhances antibody response over afternoon vaccination.

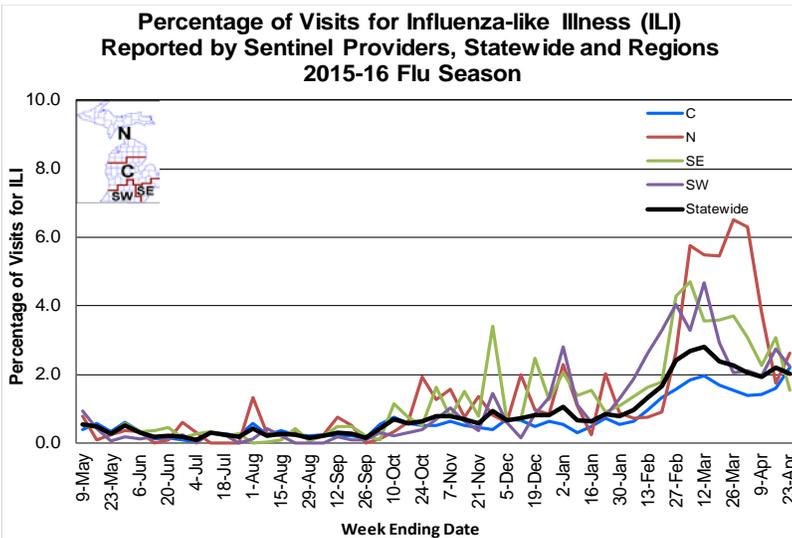
#### Michigan Disease Surveillance System

MDSS influenza data indicated that compared to levels from the previous week, aggregate reports had increased, while 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 were similar, while those from respiratory complaints were lower. Levels of constitutional complaints were similar to those recorded during the same time period last year, while respiratory complaints were lower.

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



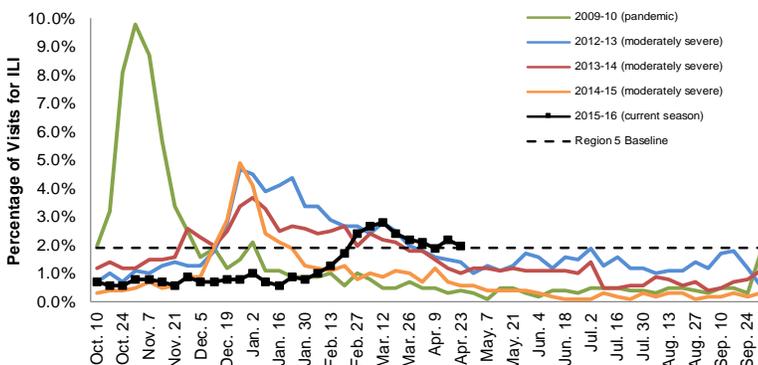
#### Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) decreased to 2.0% overall; this is above the regional baseline (1.9%). A total of 145 patient visits due to ILI were reported out of 7,172 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (22 total):

- C (7)
- N (3)
- SE (9)
- SW (3)

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 73 pediatric (38.2 per 100,000 population) and 209 adult (30.4 per 100,000 population) hospitalizations reported within the catchment area. Note: IHSP case classification is an ongoing process and 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	0	37 (20N, 8SW, 9SE)
5-17 years	0	24 (12N, 4SW, 8SE)
18-49 years	2 (SE)	162 (30N, 3C, 32SW, 97SE)
50-64 years	4 (1N, 1C, 2SW)	222 (29N, 8C, 40SW, 145SE)
65 years & older	3 (1SW, 2SE)	252 (28N, 9C, 39SW, 176SE)
<b>Total</b>	<b>9 (1N, 1C, 3SW, 4SE)</b>	<b>697 (119N, 20C, 123SW, 435SE)</b>

### Laboratory Surveillance

MDHHS Bureau of Laboratories reported 9 new positive influenza results: Five 2009 A/H1N1pdm and four influenza B. A total of 346 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	62	19	71	107	259	18* (18 A/California/07/2009-like (H1N1)pdm09**)	2 / 96
Influenza A/H3	13	1	11	15	40	4* (4 A/Switzerland/9715293/2013-like <sup>†</sup> )	0 / 20
Influenza B	6	6	14	16	42	32 (18 B/Yamagata lineage [2 B/Phuket/3073/2013-like <sup>††</sup> ], 14 B/Victoria lineage)	
A / unsubtypeable				5	5		
LAIV recovery				1	1		
RSV			2		2		
Adenovirus	2		1		3		
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, 12 sentinel clinical labs (3SE,2SW,6C,1N) reported influenza results. Ten labs (SE, SW, C) reported influenza A positives with nearly all sites showing steady or further declining levels. Eleven labs (SE, SW, C, N) reported influenza B activity with several sites showing small upticks and one site (SE) showing sustained moderate activity. Four labs (SE, SW, C) reported sporadic Parainfluenza activity. Seven labs (SE, SW, C,) reported declining or low RSV activity. Five labs (SE, SW, C) reported Adenovirus activity at low levels. Four labs (SE, SW, C) reported ongoing hMPV activity at overall steady levels. Most testing volumes are still elevated but continue to trend down.

### Influenza Congregate Settings Outbreaks

There was 1 new respiratory facility outbreak reported, which tested positive for influenza. There have been a total of 31 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		4	7
Long-term Care / Assisted Living Facility	8	1	5	7	21
Healthcare Facility			1		1
Daycare				1	1
Correctional Facility		1			1
<b>Total</b>	<b>9</b>	<b>4</b>	<b>6</b>	<b>12</b>	<b>31</b>

### Influenza-associated Pediatric Mortality

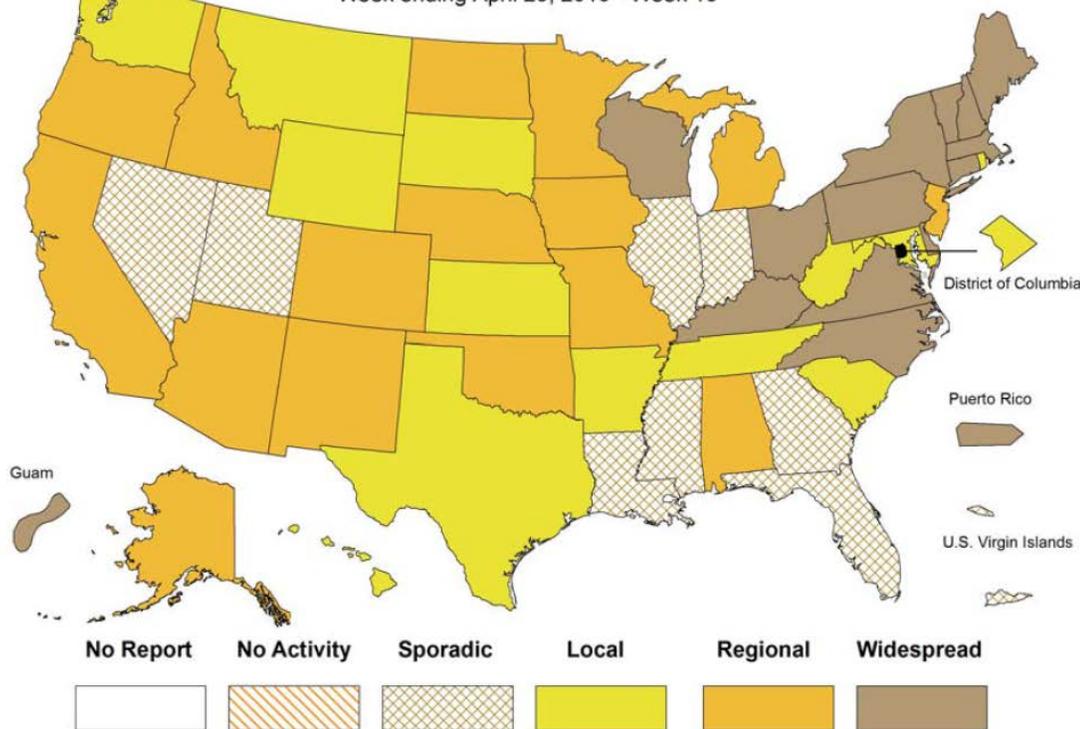
No new influenza-associated pediatric deaths were reported to MDHHS. One influenza-associated pediatric death (SE) has been reported to MDHHS for the 2015-16 season.

**National:** In the United States, flu activity dropped to 2.0% of outpatient visits due to influenza-like illness, which is slightly below the national baseline of 2.1%. Three of 10 regions reported ILI at or above region-specific baselines. Four new influenza-associated pediatric deaths were reported, for a total of 60 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:** In the Northern Hemisphere, influenza activity continued to decrease, with influenza B predominating in many parts. In the Southern Hemisphere, slight increases in influenza-like illness activity was reported. 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/).

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

Week ending April 23, 2016 - Week 16





## INFLUENZA-RELATED JOURNAL ARTICLES

- *Pediatrics*: [Influenza in infants born to women vaccinated during pregnancy](#)
  - Infants born to women reporting flu vaccination during pregnancy had risk reductions of 64% for ILI, 70% for lab-confirmed flu, and 81% for flu hospitalization
- [Influenza seasonality in the tropics and subtropics – when to vaccinate?](#)
  - Main flu season in most of South America and Asia started between April – June
  - Start of main season varied widely in Africa
  - 8 “influenza vaccination zones” were defined with recommendations for vaccination timing and vaccine formulation
- *Vaccine*: [Morning vaccination enhances antibody response over afternoon vaccination: a cluster-randomized trial](#)
- *Clinical Infectious Diseases*: [Long-acting neuraminidase inhibitor laninamivir octanoate as post-exposure prophylaxis for influenza](#)
  - Single administration of laninamivir octanoate was effective, well tolerated as post-exposure prophylaxis to prevent flu
- *Journal of Infectious Diseases*: [Consecutive infections with influenza A and B virus in children during the 2014-2015 seasonal influenza epidemic](#)
  - Preceding flu A infection may not provide cross-protection against flu B infection
- *American Journal of Infection Control*: [Impact of the flu mask regulation on health care personnel influenza vaccine acceptance rates](#)
- [Influenza and pneumococcal vaccination uptake in patients with rheumatoid arthritis treated with immunosuppressive therapy in the UK](#)
- *Journal of Infectious Diseases*: [Modest waning of influenza vaccine efficacy and antibody titers during the 2007-2008 influenza season](#)
  - Both LAIV and IIV were efficacious, but LAIV less so
  - IIV efficacy decreased slowly over time, but IIV remained significantly efficacious for majority of the season

## AVIAN INFLUENZA INTERNATIONAL NEWS

- [Low-path H9 case reported in Egypt; Italy reports high-path H7N7 in poultry](#)
- [France bans foie gras for 3 months over bird flu scare](#)
- [China reports another human H7N9 case](#)
- [H5N1 strikes backyard poultry in southern Vietnam](#)
- [Novel avian influenza A\(H5N8\) viruses in migratory birds, China, 2013-2014](#)
  - Asymptomatic migratory birds may play a role in geographic dissemination and facilitate viral evolution and reassortment of high-path H5N8
- [Iraq reports first H5N1 outbreak in 10 years, affecting more than 700,000 poultry](#)
- [H5N6 hospitalizes girl in China's Hunan province; Lebanon reports first H5N1 outbreak as Ghana, Mexico report events](#)
- [CHP notified of additional human case of avian influenza A\(H5N6\) in Hubei](#)

## MI IMMUNIZATION TIMELY TIPS NEWSLETTER

The March/April issue of the Michigan Immunization Timely Tips (MITT) newsletter is now posted [online!](#) This issue has great information on HPV, varicella, and a study linking outbreaks to skipped vaccinations.

## OTHER INFLUENZA-RELATED NEWS

- [After losing pregnant wife to flu, Minnesota man has message for others](#)

## 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](#).

For questions or to be added to the distribution list, please contact Seth Eckel at [eckels1@michigan.gov](mailto:eckels1@michigan.gov).

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