



# MI Flu Focus

## Influenza Surveillance Updates

### Bureaus of Epidemiology and Laboratories



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### Influenza Surveillance Report for the Week Ending March 26, 2016

**M Influenza**  
**Activity Level:**  
 Widespread

**Updates of Interest:**

A recent [study](#) found that mothers who received trivalent flu vaccination during pregnancy were significantly less likely to experience stillbirth compared with unvaccinated mothers.

#### Michigan Disease Surveillance System

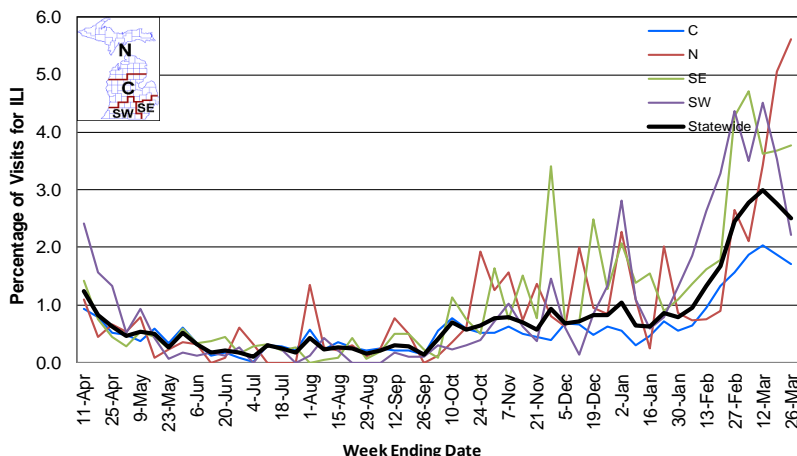
MDSS influenza data indicated that compared to levels from the previous week, both aggregate and individual reports had decreased. Aggregate reports were lower than levels seen during the same time period last year, while individual reports were higher.

#### Emergency Department Surveillance

Compared to levels from the week prior, emergency department visits from constitutional complaints had decreased, 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 lower.

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

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



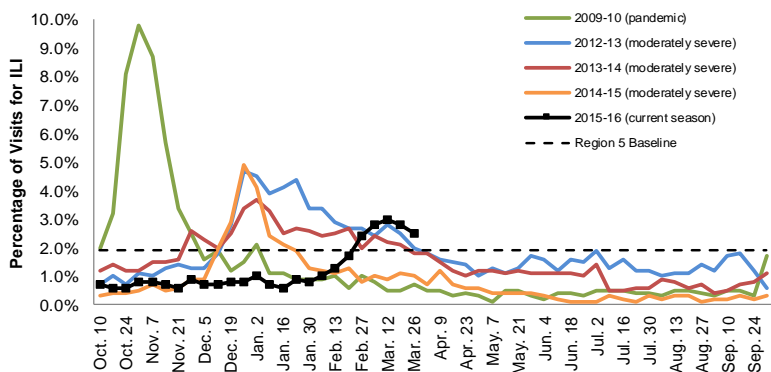
#### Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) decreased to 2.5% overall; this is above the regional baseline (1.9%). A total of 361 patient visits due to ILI were reported out of 14,391 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (36 total):

- C (13)
- N (4)
- SE (12)
- 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 55 pediatric (28.8 per 100,000 population) and 179 adult (26 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	5 (4N, 1SE)	33 (17N, 8SW, 8SE)
5-17 years	1 (N)	22 (11N, 4SW, 7SE)
18-49 years	20 (5N, 2C, 2SW, 11SE)	144 (24N, 3C, 29SW, 88SE)
50-64 years	19 (4N, 2C, 13SE)	190 (24N, 5C, 34SW, 127SE)
65 years & older	19 (4N, 4SW, 11SE)	206 (22N, 5C, 33SW, 146SE)
<b>Total</b>	<b>64 (18N, 4C, 6SW, 36SE)</b>	<b>595 (98N, 13C, 108SW, 376SE)</b>

## Laboratory Surveillance

MDHHS Bureau of Laboratories reported 1 adenovirus and 12 new positive influenza results: 9 influenza B and 3 2009 A/H1N1pdm. A total of 314 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	69	94	237	18* (18 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	6	12	12	34	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, 13 sentinel clinical labs (4SE,2SW,6C,1N) reported influenza results. Twelve labs (SE,SW,C,N) reported influenza A positives with all regions showing elevated levels but a downward trend continued. No sites showed further increases. Eleven labs (SE,SW,C,N) reported low to upper moderate influenza B activity, at overall steady levels but with a few sites showing small upticks. One site (C) reported no influenza A or B positives. Three labs (SE,SW) reported sporadic Parainfluenza activity. Eleven labs (SE,SW,C,N) reported low to moderate RSV activity, with an overall gradually decreasing trend continuing. Four labs (SE,SW,C) reported low or mildly elevated Adenovirus activity. Six labs (SE,SW,C) reported low to moderate hMPV activity, at overall steady levels. Testing volumes remained high but most sites continued 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 27 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	7	18
Healthcare Facility			1		1
Daycare				1	1
Correctional Facility		1			1
<b>Total</b>	<b>7</b>	<b>4</b>	<b>5</b>	<b>11</b>	<b>27</b>

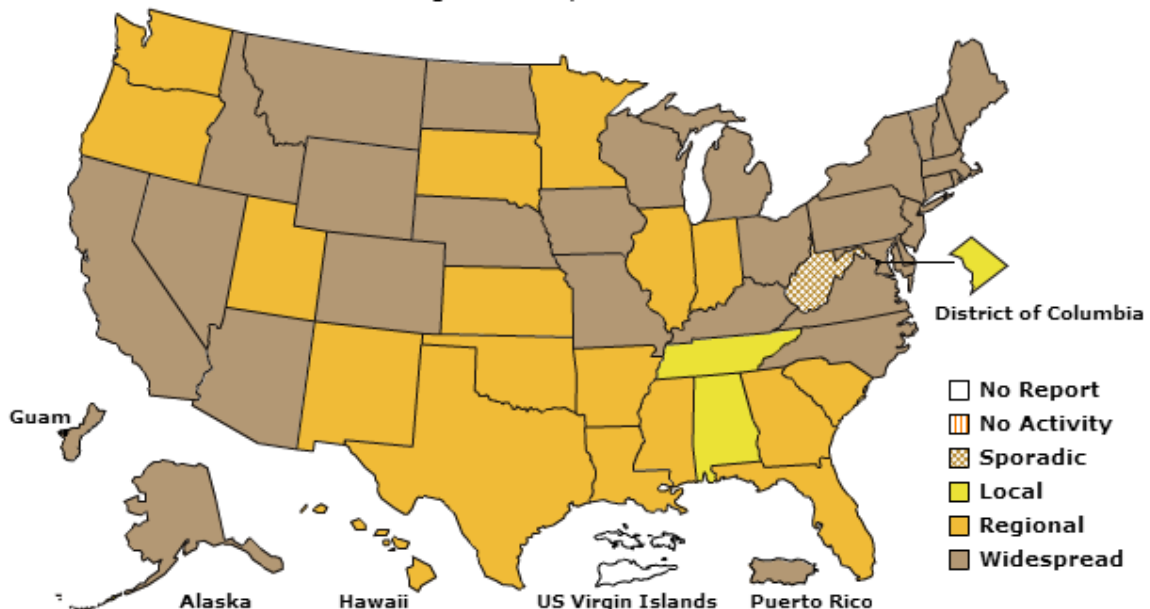
### Influenza-associated Pediatric Mortality

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 but remained elevated with 2.9% 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. Three new influenza-associated pediatric deaths were reported, for a total of 33 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, elevated levels of flu activity continued to be reported in North America, in parts of Europe and in northern temperate Asia. An increase in influenza B activity was reported in northern temperate Asia, southeast Asia, and Europe. 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 26, 2016- Week 12**





## U.S. SEASONAL INFLUENZA NEWS

- [US flu activity continues retreating, but 3 pediatric deaths reported](#)
- Branch-Hillsdale-St. Joseph: [First flu death of the year reported](#)

## INFLUENZA-RELATED JOURNAL ARTICLES

- *Clinical Infectious Diseases*: [Seasonal trivalent influenza vaccination during pregnancy and the incidence of stillbirth: population-based retrospective cohort study](#)
  - Mothers who received IIV3 during pregnancy significantly less likely to experience stillbirth compared with unvaccinated mothers
  - [IDSA Press Release](#)
- *Eurosurveillance*: [Effectiveness of seasonal influenza vaccine in preventing laboratory-confirmed influenza in primary care in the United Kingdom: 2015-16 mid-season results](#)
  - Adjusted VE of 41.5% against lab-confirmed primary care consultations, 49.1% against influenza A(H1N1)pdm09
  - Estimates similar to the 2010-11 season
- [Temporal patterns of influenza A and B in tropical and temperate countries: what are the lessons for influenza vaccination?](#)
  - Flu seasonality less well defined in tropics than in temperate regions, implications for vaccination programs
- *Clinical Infectious Diseases*: [A perfect storm: impact of genomic variation and serial vaccination on low influenza vaccine effectiveness during the 2014-15 season](#)
  - A combination of agent-host factors likely contributed to poor vaccine effectiveness in 2014-15
- *Journal of Virology*: [Pathogenesis of influenza D virus in cattle](#)
  - Cattle have been proposed as the natural reservoir of influenza D virus
  - Study shows influenza D virus causes mild respiratory disease upon experimental infection of cattle and can be transmitted effectively among cattle by in-pen contact, but not from cattle to ferrets through fomite exposure
  - Findings support hypothesis that cattle are natural reservoir

## AVIAN INFLUENZA INTERNATIONAL NEWS

- *Emerging Infectious Diseases*: [Surveillance for highly pathogenic avian influenza virus in wild birds during outbreaks in domestic poultry, Minnesota, 2015](#)
  - Tested over 3,100 waterfowl fecal samples and 104 sick and dead birds
  - High-path avian influenza was isolated from a Cooper's hawk but not from waterfowl
- *Virology Journal*: [Surveillance for Eurasian-origin and intercontinental reassortant highly pathogenic influenza A viruses in Alaska, spring and summer 2015](#)
  - Prevalence and genetic characteristics of low-path avian flu viruses during the sampling period were concordant with previous findings of relatively low viral prevalence in geese during spring, non-detection in geese during summer, and evidence for intercontinental exchange of viruses in western Alaska
- [Low-path H5N3 detected on French goose farm](#)
- [Feed mill seminar emphasizes importance of avian flu prevention](#)

## 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!

## 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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