



# MI Flu Focus

## Influenza Surveillance Updates Bureaus of Epidemiology and Laboratories

Michigan Department  
of Community Health



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

**Updates of Interest:**  
[H5N2](#) strikes 8 more Minnesota farms, reaches Iowa; H5N2 reaches [Wisconsin](#), expands in South Dakota; bird flu reported in [North Dakota](#).

### Influenza Surveillance Report for the Week Ending April 4, 2015

#### Michigan Disease Surveillance System

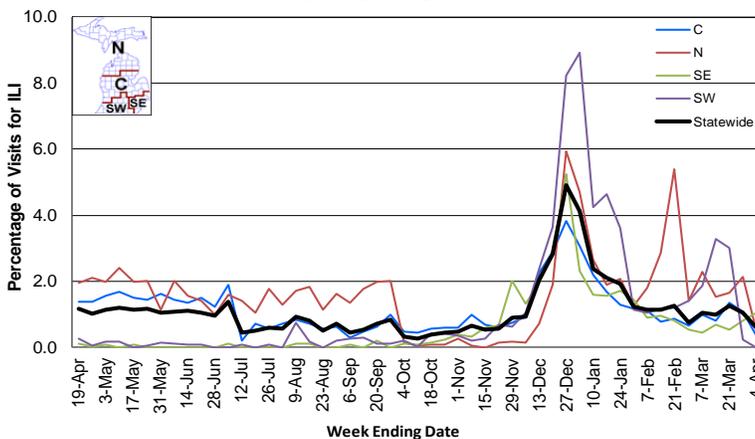
MDSS influenza data indicated that compared to levels from the previous week, individual reports increased and aggregate reports decreased. The decrease in aggregate reports may be in part due to school spring breaks. Individual reports are higher than levels seen during the same time period last year while aggregate reports are lower compared to the same time period last year.

#### Emergency Department Surveillance

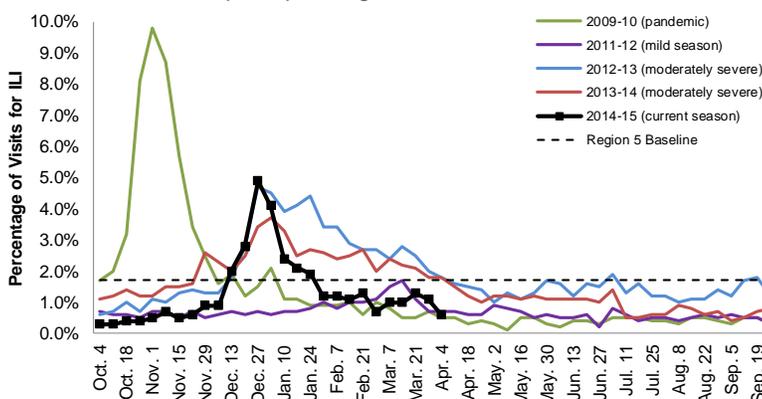
Compared to levels from the week prior, emergency department visits from constitutional complaints increased while respiratory complaints decreased. Levels of both constitutional and respiratory complaints were higher than levels compared to the same time period last year.

- 5 constitutional alerts (3C, 2N)
- 6 respiratory alerts (1SW, 3C, 2N)

Percentage of Visits for Influenza-like Illness (ILI)  
Reported by Sentinel Providers, Statewide and Regions  
2014-15 Flu Season



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



#### Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) decreased to 0.6% overall; this is below the regional baseline (1.7%). A total of 57 patient visits due to ILI were reported out of 9,454 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (30 total):

- C (13)
- N (3)
- SE (11)
- SW (3)

#### Become a Sentinel Provider!

As part of pandemic influenza surveillance, CDC and MDCH highly encourage year-round participation from all sentinel providers. New practices are encouraged to join the sentinel surveillance program today! Contact Stefanie DeVita at [devitas1@michigan.gov](mailto:devitas1@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, starting on October 1, 2014, for Clinton, Eaton, Genesee, and Ingham counties. There were 7 influenza-related hospitalizations reported (accumulated total since Oct. 1: 84 children, 344 adults).

Based on these counts, there have been 43.5 pediatric influenza hospitalizations per 100,000 population and 50.2 adult influenza hospitalizations per 100,000 population within the catchment area.

The MDCH Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide, and 12 hospitals (N,C,SE,SW) reported. Results 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 2014-15 Flu Hospitalizations to Date
0-4 years	1 (N)	30 (21C, 1N, 4SE, 4SW)
5-17 years	2 (1C, 1SE)	31 (28C, 3SE)
18-49 years	1 (SE)	60 (1N, 11C, 46SE, 2SW)
50-64 years	5 (1C, 3SE, 1SW)	111 (12C, 85SE, 14SW)
65 years & older	14 (4N, 10SE)	499 (16N, 17C, 412SE, 54SW)
<b>Total</b>	<b>23 (5N, 2C, 15SE, 1SW)</b>	<b>731 (18N, 89C, 550SE, 74SW)</b>

## Laboratory Surveillance

MDCH Bureau of Laboratories reported 3 new positive influenza results: 3 influenza B. A total of 536 positive influenza results have been reported for the 2014-15 season. Influenza results for the 2014-15 season are reported 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				1	1		
Influenza A/H3	113	33	97	246	489	15* (3 A/Texas/50/2012-like**, 12 A/Switzerland/9715293/2013-like)	0 / 146
Influenza B	8	6	17	13	44	44 (38 B/Yamagata lineage [3* B/Massachusetts/02/2012-like <sup>†</sup> ], 3 B/Victoria lineage, 3 inconclusive)	
Influenza A, unsubtypeable	1			1	2		

\*Specimens antigenically characterized by CDC; \*\*A/Texas/50/2012 (H3N2) virus is the H3N2 component of the 2014-15 Northern Hemisphere flu vaccine, A/Switzerland/9715293/2013-like is an antigenic variant of the current vaccine virus; <sup>†</sup>B/Massachusetts/02/2012 virus is the B/Yamagata component of the 2014-15 Northern Hemisphere trivalent and quadrivalent flu vaccines.

In addition, 13 sentinel clinical labs (4SE,2SW,6C,1N) reported influenza results. Eight labs (SE,SW,C) reported low or sporadic influenza A activity. Eleven labs (SE,SW,C) reported predominate influenza B activity, with ongoing high levels in the SE region and elevated or increasing levels in the SW. Three labs (SW,C) reported only influenza B activity. Two sites (C,N) reported no influenza A or B activity. Five labs (SE,SW,C) reported low levels of Parainfluenza activity. Eight labs (SE,SW,C,N) reported ongoing RSV activity with an overall trend of declining activity, but several sites are still in the elevated range. Four labs (SE,C) reported low or steady Adenovirus activity. Six labs (SE,SW,C) reported ongoing or somewhat elevated hMPV activity. Testing volumes range from low to notably high with several sites (SW,C) showing new increases.

### Influenza Congregate Settings Outbreaks

There was 1 new respiratory facility outbreak reported (confirmed flu). There have been a total of 144 respiratory facility outbreaks reported to MDCH for the 2014-15 season. Respiratory facility outbreaks are listed in the table below by facility type and surveillance region.

Facility Type	C	N	SE	SW	Total
Adult Care Facility		1	2		3
Long-Term Care / Assisted Living Facility	27	11	33	35	106
K-12 School	1		1		2
Daycare				1	1
Unknown / Investigation Pending	16		4	9	29
Healthcare Facility				3	3
<b>Total</b>	<b>44</b>	<b>12</b>	<b>40</b>	<b>48</b>	<b>144</b>

### Influenza-associated Pediatric Mortality

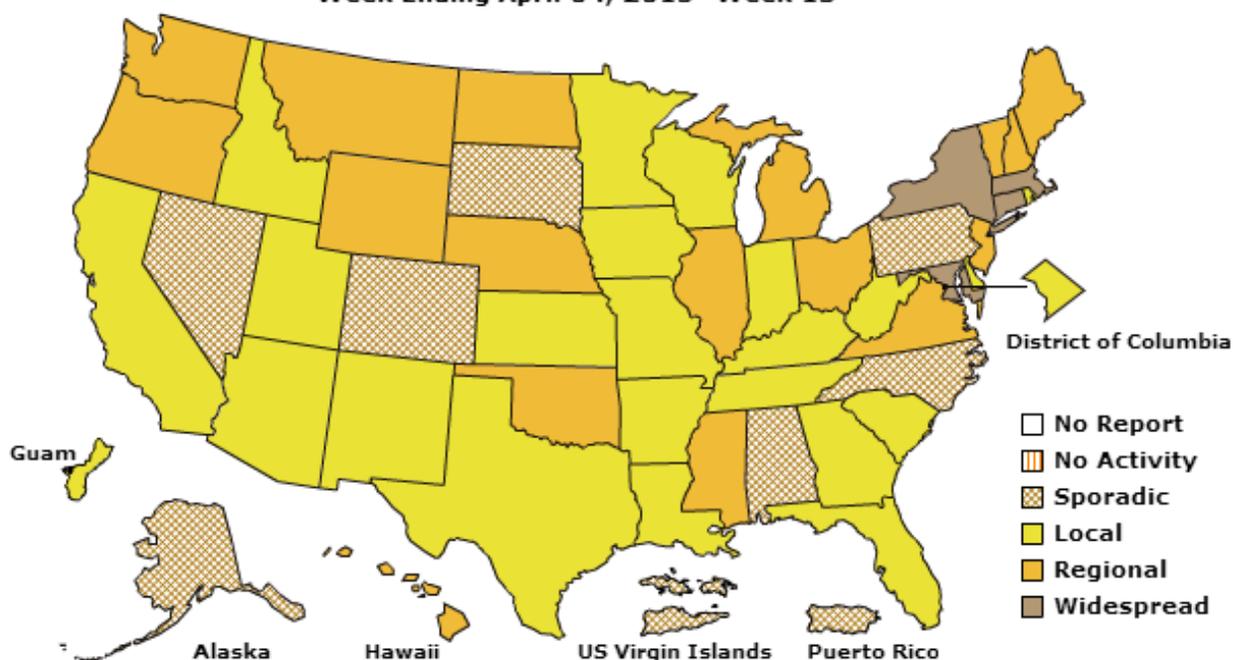
No new influenza-associated pediatric deaths were reported to MDCH. One influenza-associated pediatric death (1SE) has been reported to MDCH for the 2014-15 season.

**National:** Influenza activity continued to decrease in the United States, with 1.8% of outpatient visits due to influenza-like illness. The proportion of influenza B viruses continued to increase; 86% of positive flu specimens reported were influenza B viruses. Two influenza-associated pediatric deaths were reported, bringing the 2014-15 total to 125. Additional information is in the weekly FluView reports available online at: [www.cdc.gov/flu/weekly/](http://www.cdc.gov/flu/weekly/).

**International:** Influenza activity decreased further but remained above the seasonal threshold in the Northern Hemisphere. While influenza A(H3N2) viruses predominated this season, the proportions of influenza B and influenza A(H1N1)pdm09 detections increased in the last few weeks. Summary information is available online 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 April 04, 2015- Week 13





## AVIAN INFLUENZA NEWS IN THE U.S.

- [Wisconsin is 14th state to report avian influenza](#)
- [First case of bird flu reported in North Dakota](#)
- [Minnesota Governor issues emergency executive order](#)
- [H5N2 strikes 8 more Minnesota farms, reaches Iowa](#)
- [H5N2 reaches Wisconsin, expands in South Dakota, Minnesota](#)
- [Journal of Virology: The spread and persistence of influenza A viruses in waterfowl hosts in the North American Mississippi Migratory Flyway](#)
- [CDC: Interim guidance on the use of antivirals for treatment of human infections with novel influenza A viruses associated with severe human disease](#) (April 7)
- [CDC: H5 viruses in the United States](#) (April 14)

## INFLUENZA-RELATED JOURNAL ARTICLES

- [Adverse events following influenza immunization reported by healthcare personnel using active surveillance based on text messages](#)
  - Information obtained can be used to reassure HCP of vaccine safety, potentially can improve uptake
- [Study: neuraminidase antibodies help protect against flu](#)
- [Cytomegalovirus infection enhances the immune response to influenza](#)
  - CMV-seropositive young adults exhibited enhanced antibody responses to flu vaccination
- [Eurosurveillance: Excess mortality among the elderly in European countries, December 2014 – February 2015](#)
  - Weekly number of excess deaths from all causes among people 65 years and older significantly higher than in 4 previous flu seasons
- [Serological survey of canine H3N2, pandemic H1N1/09, and human seasonal H3N2 influenza viruses in cats in northern China, 2010-2014](#)

## 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/>

## AVIAN INFLUENZA A(H5N1)

- [H5N1 avian flu outbreak in Egypt prompts CDC travel advisory](#)
- [WHO: several factors fueling surge of H5N1 in Egypt](#)
- [WHO notes 9 new H5N1 cases in Egypt, outlines pattern](#)
- [Egypt 2015 H5N1 case count at 137 cases](#)
- [WHO: Avian influenza A\(H5N1\) in Egypt, April 2015](#)
- [India reports bird flu outbreak, culls poultry](#)

## AVIAN INFLUENZA A(H7N9)

- [Response level in China lowered from "serious" to "alert"](#)
- [China reports 13 H7N9 avian flu cases from 3 provinces](#)
- [Nature Communications: Mammalian adaptation of influenza A\(H7N9\) virus is limited by a narrow genetic bottleneck](#)
- [Global case count since 2013 at 656 cases](#)

## OTHER INFLUENZA-RELATED NEWS

- [CDC: Canine influenza \(dog flu\) outbreak in Chicago area](#)
- [Midwest canine influenza outbreak caused by new strain of virus](#)
- [Bird flu quarantine encompasses 29 Ontario farms](#)

## NATIONAL INFANT IMMUNIZATION WEEK

[National Infant Immunization Week](#) (NIIW) is next week, April 18-25! This is an annual observance to promote the benefits of childhood immunizations and improve the health of children aged 2 years and younger. Check out the NIIW [website](#) where you will find promotional materials and educational resources free for use.



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 DeVita at [devitas1@michigan.gov](mailto:devitas1@michigan.gov).

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