



MI Flu Focus

Influenza Surveillance Updates Bureaus of Epidemiology and Laboratories

Michigan Department
of Community Health



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March 11, 2015
Vol. 12; No. 8

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

Updates of Interest:

[Minnesota](#) and [Missouri](#) have recently identified avian influenza H5 viruses in poultry; until now all states with H5 in birds have been in the western U.S.

Influenza Surveillance Report for the Week Ending February 28, 2015

Michigan Disease Surveillance System

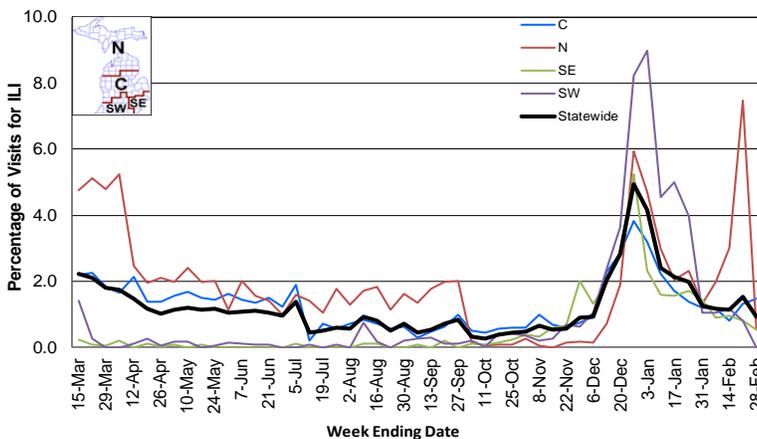
MDSS influenza data indicated that compared to levels from the previous week, individual reports decreased while aggregate reports increased. Individual reports and aggregate reports are higher than levels seen during the same time period last year.

Emergency Department Surveillance

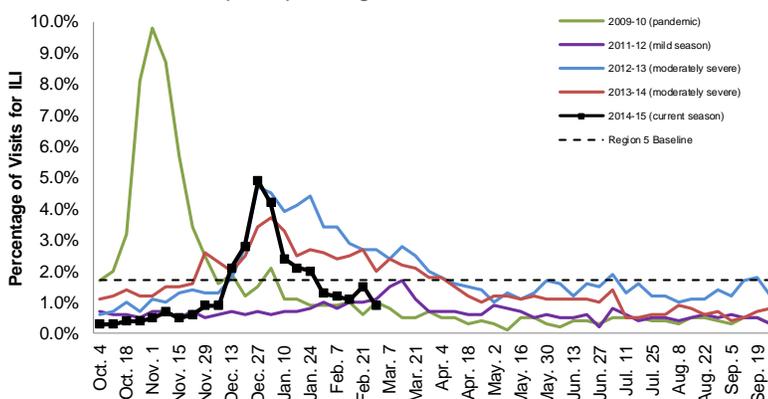
Compared to levels from the week prior, emergency department visits from constitutional and respiratory complaints decreased. Levels of both constitutional and respiratory complaints were higher than levels compared to the same time period last year.

- 4 constitutional alerts (2SW, 2C)
- 2 respiratory alerts (1SW, 1N)

**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 0.9% overall; this is below the regional baseline (1.7%). A total of 71 patient visits due to ILI were reported out of 7,616 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (30 total):

- C (11)
- N (4)
- SE (12)
- 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 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 8 influenza-related hospitalizations reported (accumulated total since Oct. 1: 74 children, 296 adults).

Based on these counts, there have been 38.4 pediatric influenza hospitalizations per 100,000 population and 43.2 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 10 hospitals (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.**

Age Group	New Flu Hospitalizations Reported	Total 2014-15 Flu Hospitalizations to Date
0-4 years	2 (C)	29 (21C, 4SE, 4SW)
5-17 years	0	25 (24C, 1SE)
18-49 years	1 (SE)	56 (1N, 10C, 43SE, 2SW)
50-64 years	1 (SE)	92 (10C, 72SE, 10SW)
65 years & older	6 (SE)	437 (7N, 17C, 367SE, 46SW)
Total	10 (2C, 8SE)	639 (8N, 82C, 487SE, 62SW)

Laboratory Surveillance

MDCH Bureau of Laboratories reported 7 new positive influenza results: 6 A/H3 and 1 influenza B. A total of 494 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	111	33	96	221	461	12* (3 A/Texas/50/2012-like**, 9 A/Switzerland/9715293/2013-like)	0 / 104
Influenza B	4	6	16	4	30	27 (26 B/Yamagata lineage [3* B/Massachusetts/02/2012-like [†]], 1 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; [†]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. Twelve labs (SE,SW,C,N) reported influenza A activity with most sites at steadily lowered levels. Eleven labs (SE,SW,C,N) reported low or slightly increasing influenza B activity. Five labs (SE,SW,C) reported low Parainfluenza activity. Twelve labs (SE,SW,C,N) reported ongoing RSV activity, with most sites now at steady or gradually declining levels. Four labs (SE,SW,C) reported low or slightly decreasing Adenovirus activity. Five labs (SE,SW,C) reported ongoing or slightly elevated hMPV activity. Most testing volumes continue to drop further or remain steady, but multiple sites remain in the high range.

Influenza Congregate Settings Outbreaks

There were 3 respiratory facility outbreaks reported (2 confirmed flu and 1 confirmed flu A). There have been a total of 136 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	26	10	30	32	98
K-12 School	1		1		2
Daycare				1	1
Unknown / Investigation Pending	16		4	9	29
Healthcare Facility				3	3
Total	43	11	37	45	136

Influenza-associated Pediatric Mortality

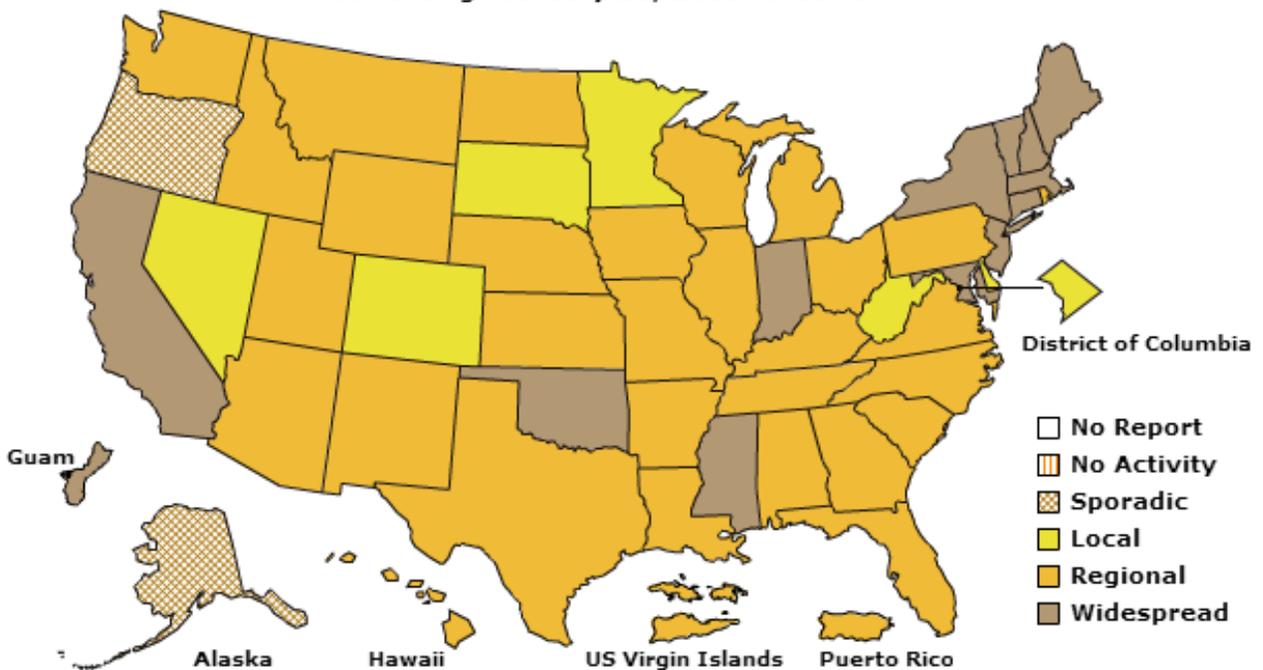
No new influenza-associated pediatric deaths were reported to MDCH. One influenza-associated pediatric death (1SE) has been reported to MDCH for the 2014-15 season.

National: Influenza activity continued to decrease but remained elevated in the United States, with 2.5% of outpatient visits due to influenza-like illness. The proportion of influenza B viruses has been steadily increasing over the past month. Six influenza-associated pediatric deaths were reported (one of which occurred during the 2013-14 season), bringing the 2014-15 total to 97. Additional information is in the weekly FluView reports available online at: www.cdc.gov/flu/weekly/.

International: Influenza activity remained high in the Northern Hemisphere with influenza A(H3N2) viruses predominating. Some countries in Africa, Asia, and the southern part of Europe reported increased influenza A(H1N1)pdm09 activity. Summary information is available online at 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 February 28, 2015- Week 8





2015-16 FLU VACCINES FOR N. HEMISPHERE

The World Health Organization (WHO) has [recommended](#) the following flu strains be included in the 2015-16 Northern Hemisphere flu vaccines:

- an A/California/7/2009 (H1N1)pdm09-like virus;
- an A/Switzerland/9715293/2013 (H3N2)-like virus;
- a B/Phuket/3073/2013-like virus;
- a B/Brisbane/60/2008-like virus [in quadrivalent vaccines only].

The A/Switzerland and B/Phuket strains are changes from 2014-15. Last week, the Food and Drug Administration [endorsed](#) WHO's recommendation.

INFLUENZA-RELATED JOURNAL ARTICLES

- [Influenza vaccination during pregnancy: a systematic review of fetal death, spontaneous abortion, and congenital malformation safety outcomes](#)
 - Results do not indicate maternal flu vaccination is associated with increased risk of adverse effects on pregnancy-related or birth outcomes
- [Estimating influenza disease burden from population-based surveillance data in the U.S.](#)
 - CDC calculates 5,000-27,000 Americans died of flu-related causes during each flu season from 2010-11 through 2012-13
 - Estimated annual hospitalizations ranged from ~114,000 to ~624,000
 - Elderly people accounted for 54% to 70% of hospitalizations, 71% to 85% of deaths
- [Relationship between Guillain-Barré Syndrome, influenza-related hospitalizations, and influenza vaccine coverage](#)
 - Being hospitalized for pneumonia and influenza associated with hospitalization for GBS, but flu vaccine was not associated
- [Low uptake of influenza vaccine among university students: evaluating predictors beyond cost and safety concerns](#)
 - Making vaccine easily obtained and education about why vaccine is necessary in healthy individuals may help increase uptake

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

MMWR: UPDATE ON FLU ACTIVITY IN THE U.S.

Last week, CDC published an article in *MMWR* providing an [update on flu activity](#) in the U.S. through February 21. Of note, 70% of H3N2 viruses antigenically characterized did not match the vaccine strain. The predominance of drifted H3N2 viruses has resulted in reduced vaccine effectiveness this season.

AVIAN INFLUENZA A(H5N1)

- [Egypt's bird flu death toll rises to 13 in 2015](#)
- [Egypt reports 65 H5N1 cases in past six weeks](#)

AVIAN INFLUENZA A(H7N9)

- [19 additional human cases of H7N9 in mainland China](#)
- Global case count at [643](#) cases
- [Update of human influenza in Guangdong and reminder on not bringing game, meat and poultry into Hong Kong](#)
- [Serious response level under the government's preparedness plan for influenza pandemic is activated](#)

OTHER AVIAN INFLUENZA NEWS

- [In big jump, H5N2 virus hits Minnesota turkey farm](#) (Mar. 6)
- [H5N2 strikes Missouri turkey farm](#) (Mar. 9)
- [Missouri's second H5N2 outbreak in turkeys confirmed](#) (Mar. 10)
- [Missouri Dept. of Ag. implementing response to contain, eliminate virus](#)
- [Avian flu in South Korea, Taiwan prompts massive culling](#)

OTHER INFLUENZA-RELATED NEWS

- [Bipartisan committee leaders press administration on flu preparedness and response as officials plan for next year's vaccine](#)
- [Hong Kong flu activity decreasing, influenza B rising](#)

FLU WEBSITES

www.michigan.gov/flu
www.cdc.gov/flu
www.flu.gov
<http://vaccine.healthmap.org/>

For questions or to be added to the distribution list, please contact Stefanie DeVita at devitas1@michigan.gov.

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