



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:

Local

Updates of Interest:

Highly pathogenic avian influenza [H5N8](#) found in Oregon, Canada, and Sweden; CDC - [H5 in U.S. birds and human health implications](#).

Influenza Surveillance Report for the Week Ending March 14, 2015

Michigan Disease Surveillance System

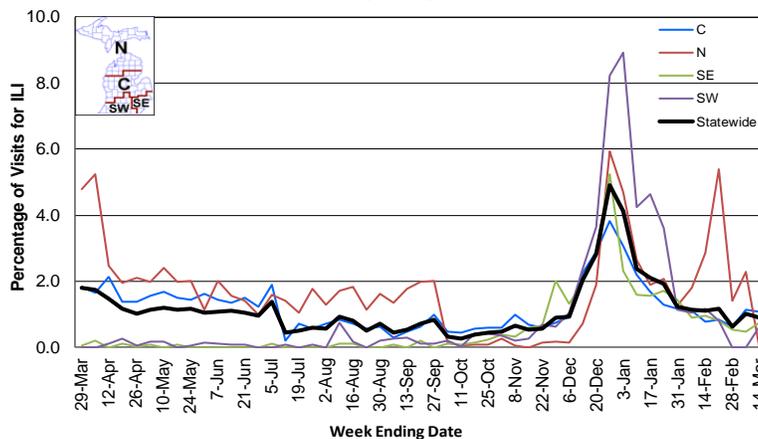
MDSS influenza data indicated that compared to levels from the previous week, individual reports increased while aggregate reports decreased. Individual reports are higher than levels seen during the same time period last year while aggregate reports are lower compared to the same time period last year.

Emergency Department Surveillance

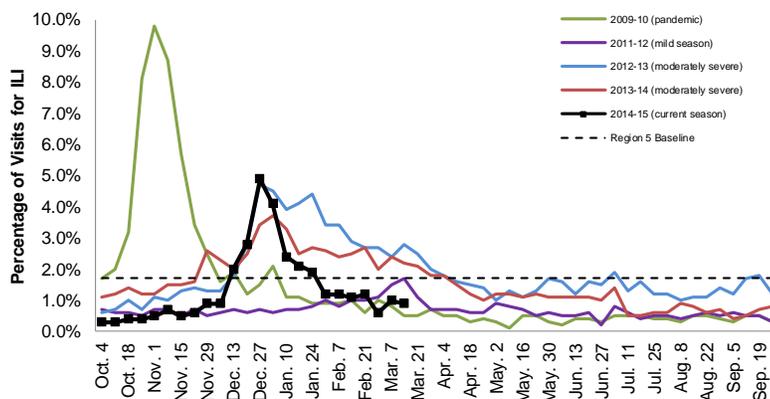
Compared to levels from the week prior, emergency department visits from both constitutional and respiratory complaints increased. Levels of constitutional and respiratory complaints were higher than levels compared to the same time period last year.

- 4 constitutional alerts (1SW, 3C)
- 1 respiratory alert (1C)

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 87 patient visits due to ILI were reported out of 9,569 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (28 total):

- C (12)
- N (3)
- SE (10)
- 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.

Table of Contents:

Michigan Surveillance.....	1-3
National Surveillance.....	3
International Surveillance....	3
FluBytes	4

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 12 influenza-related hospitalizations reported (accumulated total since Oct. 1: 76 children, 317 adults).

Based on these counts, there have been 39.4 pediatric influenza hospitalizations per 100,000 population and 46.3 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.**

Age Group	New Flu Hospitalizations Reported	Total 2014-15 Flu Hospitalizations to Date
0-4 years	0	29 (21C, 4SE, 4SW)
5-17 years	0	25 (24C, 1SE)
18-49 years	1 (SE)	57 (1N, 10C, 44SE, 2SW)
50-64 years	5 (4SE, 1SW)	99 (10C, 77SE, 12SW)
65 years & older	13 (10SE, 3SW)	463 (10N, 17C, 387SE, 49SW)
Total	19 (15SE, 4SW)	673 (11N, 82C, 513SE, 67SW)

Laboratory Surveillance

MDCH Bureau of Laboratories reported 14 new positive influenza results: 8 A/H3 and 6 influenza B. A total of 514 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	112	33	97	233	475	15* (3 A/Texas/50/2012-like**, 12 A/Switzerland/9715293/2013-like)	0 / 104
Influenza B	5	6	16	9	36	35 (34 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, 12 sentinel clinical labs (4SE,2SW,5C,1N) reported influenza results. Eleven labs (SE,SW,C,N) reported influenza A activity with most sites now at or near low levels. Eleven labs (SE,SW,C,N) reported influenza B activity, with sites in the SE and SW regions showing specific increases in influenza B virus which continues to predominate most notably in these regions. One site (C) reported no influenza activity. Five labs (SE,SW,C) reported low Parainfluenza activity. All 12 labs (SE,SW,C,N) reported ongoing RSV activity, with most in the low to moderate range, but a few sites showed small increases. Four labs (SE,SW,C) reported Adenovirus activity. Six labs (SE,SW,C) reported ongoing or slightly elevated hMPV activity. Overall testing volumes continue to drop or remain steady, but a few sites showed small increases in testing volumes and multiple sites remain in the high volume range.

Influenza Congregate Settings Outbreaks

There were 2 respiratory facility outbreaks reported (1 confirmed flu B and 1 unknown etiology/no testing). There have been a total of 141 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	11	32	34	103
K-12 School	1		1		2
Daycare				1	1
Unknown / Investigation Pending	16		4	9	29
Healthcare Facility				3	3
Total	43	12	39	47	141

Influenza-associated Pediatric Mortality

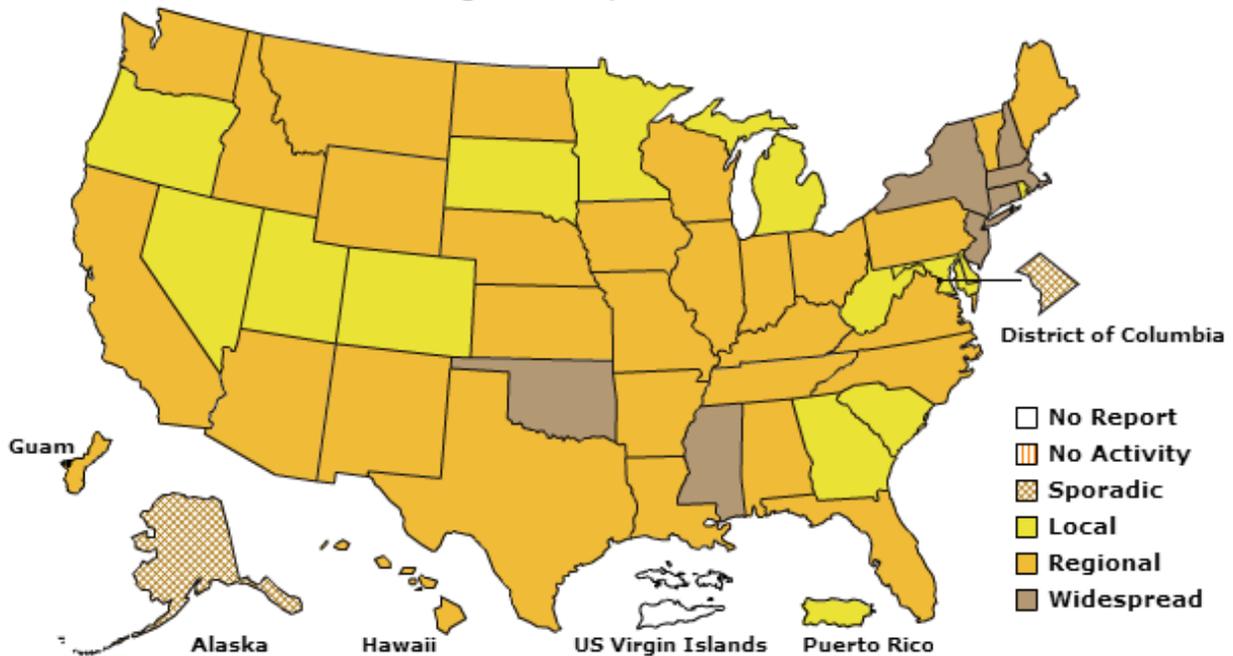
No new influenza-associated pediatric deaths were reported to MDCH. One influenza-associated pediatric death (1SE) has been reported to MDCH for the 2014-15 season.

National: Influenza activity continued to decrease but remained elevated in the United States, with 2.3% of outpatient visits due to influenza-like illness. The proportion of influenza B viruses continued to increase; for the week ending March 14, 67% of positive flu specimens reported were influenza B viruses. Three influenza-associated pediatric deaths were reported, bringing the 2014-15 total to 107. Additional information is in the weekly FluView reports available online at: www.cdc.gov/flu/weekly/.

International: Influenza activity remained elevated in the Northern Hemisphere with influenza A(H3N2) viruses predominating. Some countries in Asia, Europe, and North Africa reported high levels of activity associated with influenza A(H1N1)pdm09 viruses. 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 March 14, 2015- Week 10





MDCH IMMUNIZATION PINK BOOK COURSE

MDCH will host the CDC Epidemiology and Prevention of Vaccine-Preventable Diseases Course (a.k.a. Pink Book Course) on June 16-17, 2015 at the Lansing Center. The course is for health care professionals who want to learn more about immunization and vaccine-preventable diseases. Online registration for this class will begin on April 6. For more info on the Pink Book Course, go to michigan.gov/immunize, click on Health Care Professionals/Providers, and it is listed under Provider Education Resources.

NATIONAL INFANT IMMUNIZATION WEEK

[National Infant Immunization Week](#) (NIIW) will be held this year on 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.

INFLUENZA-RELATED JOURNAL ARTICLES

- [Severity of influenza A\(H1N1\) illness and emergence of D225G variant, 2013-14 flu season, Florida, USA](#)
- [Case series of rash associated with influenza B in school children](#)
 - Morbilliform, other rash presentations among schoolchildren during March 2014 outbreak of flu-like illness in B.C.
- [New approach to improving healthcare personnel influenza immunization programs: a randomized controlled trial](#)
 - Intervention tool had little impact in Canadian hospitals
- [Integrated sentinel surveillance linking genetic, antigenic and epidemiologic monitoring of influenza vaccine-virus relatedness and effectiveness, 2013-14 season](#)
 - Canadian study concluded surveillance linking genotypic, phenotypic and epidemiologic measures of vaccine-virus relatedness, effectiveness could better inform predictions of vaccine performance
- [Public preferences for vaccination and antiviral medicines under different pandemic flu outbreak scenarios](#)
 - Promoters and barriers to being vaccinated and taking antivirals are multi-dimensional
 - Communications to promote uptake likely to be most effective if they address several components of behavior

AVIAN INFLUENZA NEWS IN THE U.S.

- [USDA to test avian flu vaccine; wild birds nixed as Minnesota H5N2 source](#)
- CDC: [Update: outbreaks of avian influenza A H5 in U.S. wild and domestic birds, human health implications](#) (Mar. 20)
- [Role of wild birds in US H5N2 outbreaks questioned](#)
- [Low-pathogenic H7N3 virus found in California turkey flock](#)

AVIAN INFLUENZA A(H7N9)

- [Characterization of influenza A\(H7N9\) viruses isolated from human cases imported into Taiwan](#)
- [Genetic diversity of the 2013-14 human isolates of influenza H7N9 in China](#)
- [Impact of adjuvants on the immunogenicity and efficacy of split-virion H7N9 vaccine in ferrets](#)
 - Adjuvanted vaccines demonstrated superior immunogenicity and protective efficacy

AVIAN INFLUENZA A(H5N1)

- [WHO update shows ongoing H5N1 activity in Egypt](#)
- [CHP notified of one human case of avian influenza A\(H5N1\) in Yunnan, China](#)
- [WHO seeks vaccine viruses based on recent H5N1, H5N8 strains](#)

OTHER INFLUENZA-RELATED NEWS

- [As flu continues to ebb, CDC probes reports of rashes](#)
- [Taiwan, India, Vietnam report avian flu of three types](#)
- [Hong Kong flu update: more than 400 deaths, southern hemisphere seasonal flu shot recommended](#)

FLU WEBSITES

www.michigan.gov/flu
www.cdc.gov/flu
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 Stefanie DeVita at devitas1@michigan.gov.

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