



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:
Widespread

Updates of Interest:

On January 9, CDC distributed a Health Update regarding treatment of influenza patients with antiviral medications, see the Update [here](#).

Influenza Surveillance Report for the Week Ending January 3, 2015

Michigan Disease Surveillance System

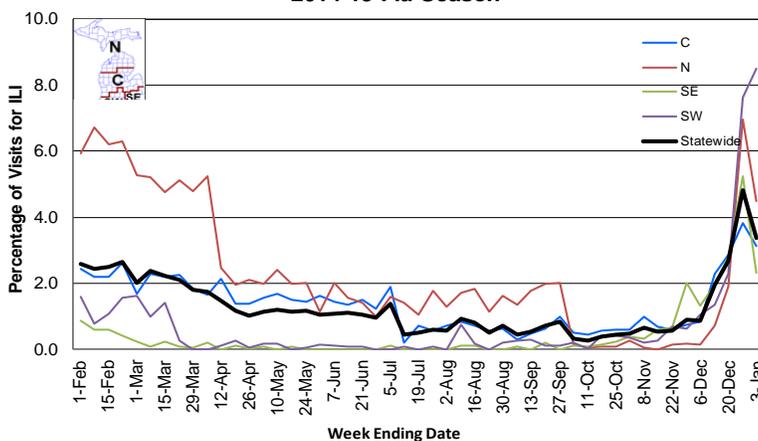
MDSS influenza data indicated that compared to levels from the previous week, aggregate reports remained the same and individual reports increased slightly. Aggregate reports were low compared to previous weeks which may be partially due to the school holiday break. Aggregate reports are higher and individual reports are much 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 complaints decreased while respiratory complaints remained the same. Levels of constitutional and respiratory complaints were slightly higher when compared to the same time period last year.

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

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



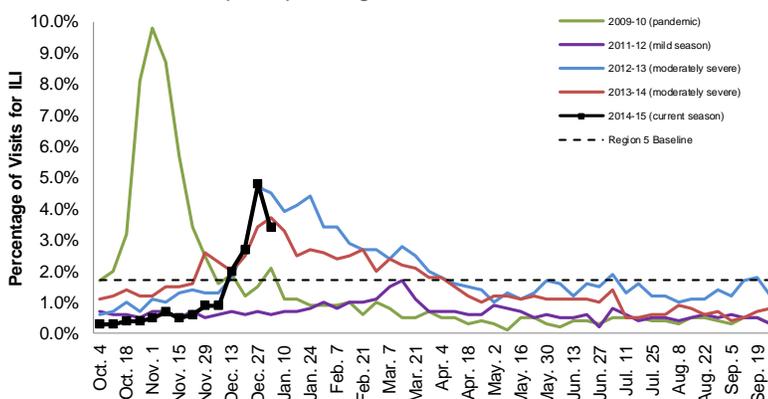
Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) decreased to 3.4% overall; this is above the regional baseline (1.7%). A total of 277 patient visits due to ILI were reported out of 8,207 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (39 total):

- C (18)
- N (4)
- SE (13)
- SW (4)

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 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 73 influenza-related hospitalizations reported (accumulated total since Oct. 1: 49 children, 178 adults).

Based on these counts, there have been 25.4 pediatric influenza hospitalizations per 100,000 population and 26.0 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. Six hospitals (SE,SW,C) 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	1 (SE)	16 (14C, 2SE)
5-17 years	1 (C)	23 (22C, 1SE)
18-49 years	4 (SE)	36 (6C, 30SE)
50-64 years	7 (SE)	50 (8C, 41SE, 1SW)
65 years & older	47 (4C, 33SE, 10SW)	260 (13C, 235SE, 12SW)
Total	60 (5C, 45SE, 10SW)	385 (63C, 309SE, 13SW)

Laboratory Surveillance

MDCH Bureau of Laboratories reported 47 new positive influenza results: 47 A/H3. A total of 282 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	70	24	79	89	262	8* (3 A/Texas/50/2012-like**, 5 A/Switzerland/9715293/2013-like)	0 / 34
Influenza B	3		11	4	18	18 (17 B/Yamagata lineage, 1 inconclusive)	
Influenza A, unsubtypeable	1				1		

*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.

In addition, 14 sentinel labs (4SE,2SW,6C,2N) reported influenza results. All 14 labs (SE,SW,C,N) reported ongoing high or elevated influenza A activity but with a prominent downward trend. There were no sites showing further increases. Six labs (SE,SW,C) reported sporadic or low influenza B activity. Five labs (SE,SW,C) reported low or slightly elevated Parainfluenza activity. Twelve labs (SE,SW,C,N) reported low or moderate RSV activity, with further increases continuing in the SE region. Three labs (SE,C) reported low Adenovirus activity. Four labs (SE,SW,C) reported low hMPV activity. Nearly all testing volumes are showing declines but with many sites remaining in the high or very high range.

Influenza-associated Pediatric Mortality

No pediatric influenza-associated mortalities have been reported to MDCH for the 2014-15 season.

Influenza Congregate Settings Outbreaks

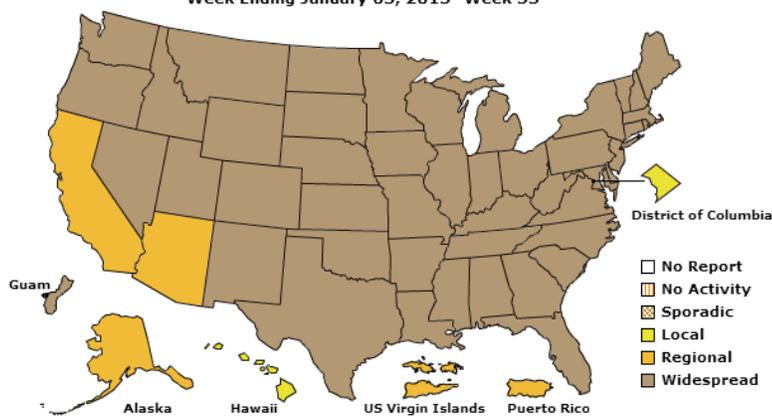
There were 15 respiratory facility outbreaks (13 confirmed flu A and 2 unknown etiology/no testing) reported. There have been a total of 55 respiratory facility outbreaks reported to MDCH for the 2014-15 season. Respiratory facility outbreaks are listed in the table below by facility type and surveillance region.

Facility Type	C	N	SE	SW	Total
Adult Care Facility		1	2		3
Long-Term Care/Assisted Living Facility	14	3	16	16	49
K-12 School	1		1		2
Daycare				1	1
Total	15	4	19	17	55

National: Influenza activity continued at elevated levels in the United States, with 5.6% of outpatient visits due to influenza-like illness. Five influenza-associated pediatric deaths were reported, bringing the 2014-15 total to 26. Additional information is in the weekly FluView reports available online at: www.cdc.gov/flu/weekly/.

International: Influenza activity continued to increase in the Northern Hemisphere with influenza A(H3N2) viruses predominating so far. 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 January 03, 2015- Week 53



FluBytes

INFLUENZA ACTIVITY THROUGHOUT THE U.S.

- [CDC Health Update Regarding Treatment of Patients with Influenza with Antiviral Medications](#) (1/9/15)
- [Transcript for CDC telebriefing: update on flu season 2014-15](#)
- MDCH: [As flu season progresses, Michigan residents urged to get vaccinated, take precautions](#) (1/8/15)
- [South Dakota 2-year-old died after influenza A](#)

AVIAN INFLUENZA A(H5N1)

- [WHO sees no major H5N1 genetic changes in Egypt](#)
- [Flurry of H5N1 cases in Egypt adds 6 more](#)

AVIAN INFLUENZA A(H7N9)

- [CHP notified of two human cases of avian influenza A\(H7N9\) in Shenzhen](#)
 - Global case count now [more than 490](#)
- [Characterization of drug-resistant influenza A\(H7N9\) variants isolated from an oseltamivir-treated patient in Taiwan](#)

OTHER AVIAN INFLUENZA NEWS

- [Avian flu outbreaks reported on four continents](#)
 - H5N8 and H5N2 in Taiwan, H5N1 in China, an H5 virus in Nigeria, and H5N2 in Canada
- *Nature Communications*: [Structural basis for preferential avian receptor binding by the human-infecting H10N8 avian influenza virus](#)
 - Determined to be typical avian flu virus

OTHER INFLUENZA-RELATED NEWS

- [Scientists find brain protein aids flu recovery](#)

INFLUENZA-RELATED JOURNAL ARTICLES

- [Registry-linked electronic influenza vaccine provider reminders: a cluster-crossover trial](#)
 - Immunization registry vaccination reminders increased vaccination later in winter when fewer doses are given
- [Text message reminders for second dose of influenza vaccine: a randomized controlled trial](#)
 - Embedding health literacy info improved effectiveness of text message reminders
- [Influenza D virus in cattle, France, 2011-2014](#)
 - Influenza virus genus D isolated in U.S. pigs and cattle first identified in French cattle in 2011, increase detected in 2014
 - France virus genome is 94-99% identical to U.S. counterpart
- [Zanamivir versus trivalent split virus influenza vaccine: a pilot randomized trial](#)
 - Trial occurred during 2008-09 season
 - Breakthrough flu occurred in both vaccinated participants and those receiving antiviral prophylaxis

FluBytes is distributed to MDCH flu partners for informational and communication purposes. Please feel free to distribute widely. Archived editions of FluBytes are available [here](#) and MI FluFocus archives are [here](#).

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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