



MI Flu Focus

Influenza Surveillance Updates Bureaus of Epidemiology and Laboratories



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MI's Current Influenza Activity Level:
Local

Updates of Interest:
Minnesota hit by 8th H5N2 outbreak in turkeys; H5N2 strikes turkey flocks in South Dakota, Minnesota; Asian H9N2 found in Alaska.

Influenza Surveillance Report for the Week Ending March 28, 2015

Michigan Disease Surveillance System

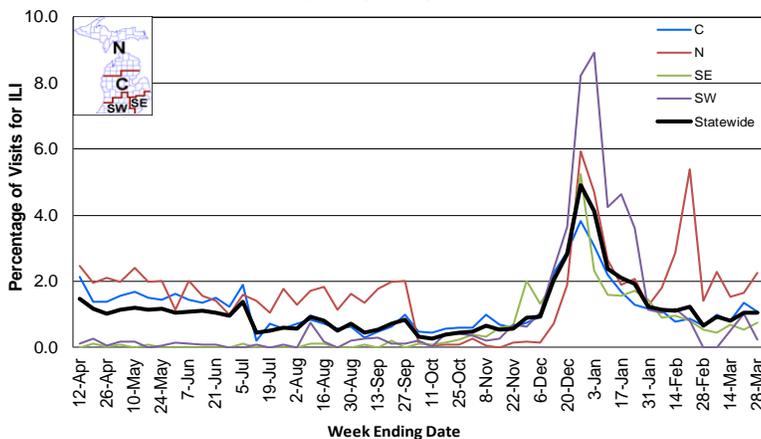
MDSS influenza data indicated that compared to levels from the previous week, both individual reports and aggregate reports increased. Individual reports are higher than levels seen during the same time period last year while aggregate reports are lower compared to the same time period last year.

Emergency Department Surveillance

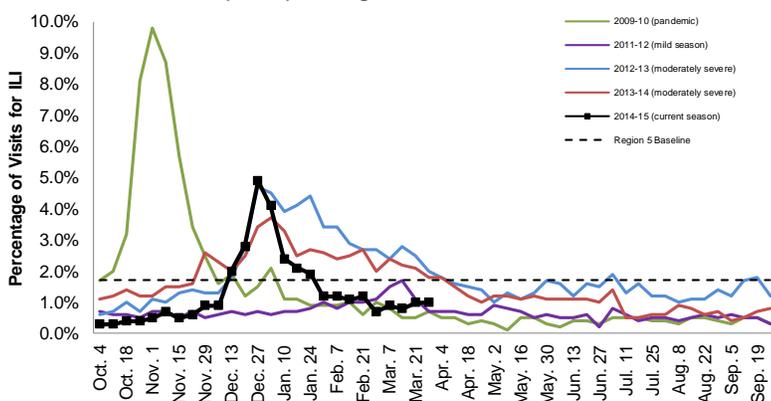
Compared to levels from the week prior, emergency department visits from constitutional complaints decreased while respiratory complaints increased. Levels of both constitutional and respiratory complaints were higher than levels compared to the same time period last year.

- 1 constitutional alert (1C)
- 4 respiratory alerts (1SE, 1SW, 1C, 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) remained the same at 1.0% overall; this is below the regional baseline (1.7%). A total of 106 patient visits due to ILI were reported out of 10,138 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (27 total):

- C (10)
- N (4)
- SE (8)
- SW (5)

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 15 influenza-related hospitalizations reported (accumulated total since Oct. 1: 82 children, 339 adults).

Based on these counts, there have been 42.5 pediatric influenza hospitalizations per 100,000 population and 49.5 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 11 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	3 (C)	29 (27C, 2SE)
18-49 years	0	59 (1N, 11C, 45SE, 2SW)
50-64 years	3 (1C, 1SE, 1SW)	106 (11C, 82SE, 13SW)
65 years & older	9 (1N, 6SE, 2SW)	485 (12N, 17C, 402SE, 54SW)
Total	15 (1N, 4C, 7SE, 3SW)	708 (13N, 87C, 535SE, 73SW)

Laboratory Surveillance

MDCH Bureau of Laboratories reported 7 new positive influenza results: 6 A/H3 and 1 influenza B. A total of 533 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 / 136
Influenza B	7	6	17	11	41	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. Seven labs (SE,SW,C,N) reported low or sporadic influenza A activity. Ten labs (SE,SW,C) reported predominate influenza B activity, with levels remaining highest and/or increasing in the SE and SW regions. Four labs (SW,C) reported only influenza B activity. One site (C) reported no influenza A or B activity. Five labs (SE,SW,C) reported Parainfluenza activity, with nearly all at low levels. Ten labs (SE,SW,C) reported ongoing RSV activity with an overall trend of declining activity, but a few sites (SE,C) showed some increases. Five labs (SE,SW,C) reported low or steady Adenovirus activity. Six labs (SE,SW,C) reported ongoing or increasing hMPV activity. The majority of testing volumes are at moderate or low levels, but several sites (SE,SW) remain in the high volume range with a few showing increases.

Influenza Congregate Settings Outbreaks

There were no new respiratory facility outbreaks reported. There have been a total of 143 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	33	35	105
K-12 School	1		1		2
Daycare				1	1
Unknown / Investigation Pending	16		4	9	29
Healthcare Facility				3	3
Total	43	12	40	48	143

Influenza-associated Pediatric Mortality

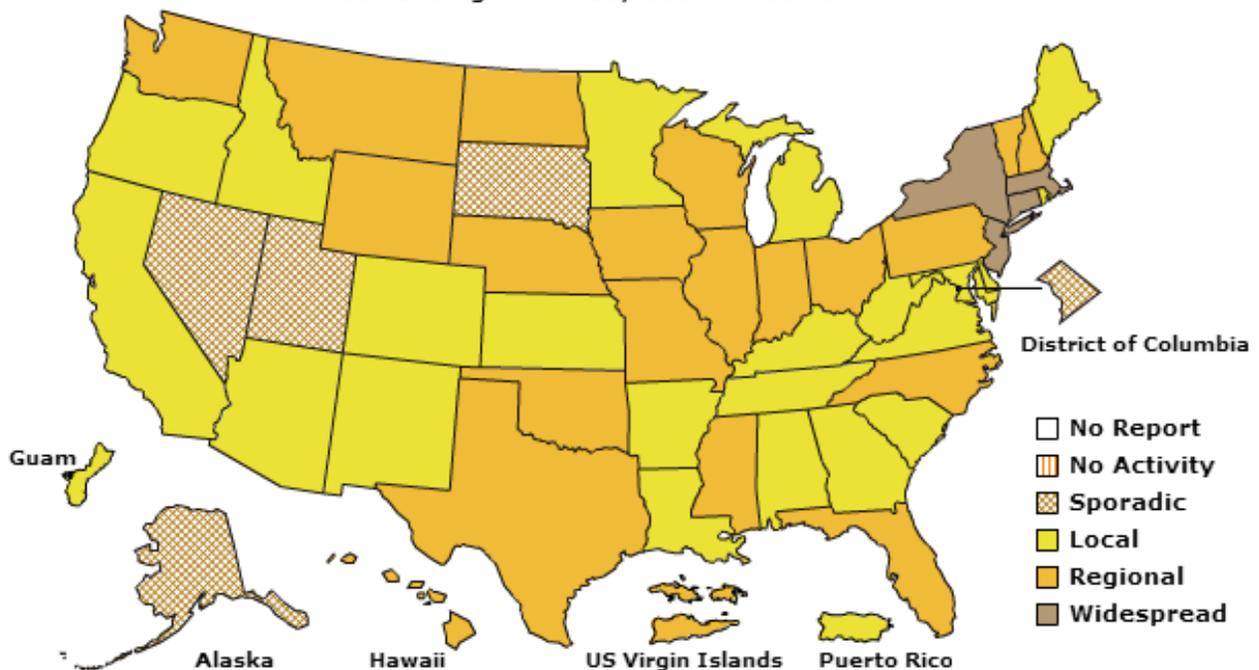
No new influenza-associated pediatric deaths were reported to MDCH. One influenza-associated pediatric death (1SE) has been reported to MDCH for the 2014-15 season.

National: Influenza activity continued to decrease but remained elevated in the United States, with 2.0% of outpatient visits due to influenza-like illness. The proportion of influenza B viruses continued to increase; 80% of positive flu specimens reported were influenza B viruses. Seven influenza-associated pediatric deaths were reported, bringing the 2014-15 total to 123. Additional information is in the weekly FluView reports available online at: www.cdc.gov/flu/weekly/.

International: Influenza activity decreased 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/.

A Weekly Influenza Surveillance Report Prepared by the Influenza Division Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists*

Week Ending March 28, 2015- Week 12





REGISTER NOW FOR PINK BOOK COURSE

Registration is now open for the CDC Epidemiology and Prevention of Vaccine-Preventable Diseases Course (a.k.a. Pink Book Course)! The Pink Book Course will be June 16-17, 2015 at the Lansing Center. The course is for healthcare professionals who want to learn more about immunization and vaccine-preventable diseases. To register, go to <https://pinkbook2015.mihealth.org/>.

AVIAN INFLUENZA NEWS IN THE U.S.

- [H5N2 strikes turkey flocks in South Dakota, Minnesota](#)
- [Minnesota hit by 8th H5N2 outbreak in turkeys](#)
- Minnesota Board of Animal Health: [Summary of premises and barns affected by highly pathogenic avian influenza](#)
- [USDA confirms highly pathogenic H5N2 avian influenza in backyard flock in Montana](#)
- [H5N8 in wild California ducks, Asian H9N2 in Alaska](#)
- *Emerging Infectious Diseases*: [Novel Eurasian highly pathogenic influenza A H5 viruses in wild birds, Washington, USA, 2014](#)
- U.S. Geological Survey: [Circulation of highly pathogenic avian flu in North American birds](#)

INFLUENZA-RELATED JOURNAL ARTICLES

- [Immunogenicity and reactogenicity of an inactivated quadrivalent influenza vaccine administered intramuscularly to children 6 to 35 months of age in 2012-13: a randomized, double-blind, controlled, multicenter, multicountry, clinical trial](#)
 - Quadrivalent had superior immunogenicity for added B strain, no difference in reactogenicity, safety compared to trivalent
- [Comparative effectiveness of high-dose versus standard-dose influenza vaccination in community-dwelling veterans](#)
 - High-dose vaccine reduced risk of hospitalization for flu/pneumonia in those 85 years and older

AVIAN INFLUENZA A(H5N1)

- [Study: new H5N1 strain in Egypt may be tied to rise in human cases](#)
- [China: Yunnan boy recovers after bout with H5N1 avian influenza](#)
- *mBio*: [Characterization of H5N1 influenza virus variants with hemagglutinin mutations isolated from patients](#)

AVIAN INFLUENZA A(H7N9)

- *Emerging Infectious Diseases*: [Detecting spread of avian influenza A\(H7N9\) virus beyond China](#)
- *Emerging Infectious Diseases*: [Transmission potential of influenza A\(H7N9\) virus, China, 2013-2014](#)
 - “Small but significant amount of transmission between humans in the first and second waves”
 - Market closures were very effective in reducing risk of animal-to-human transmission
- Global case count at [654 cases](#)
- [CHP closely monitors additional human case of avian influenza A\(H7N9\) in Mainland China](#)

OTHER INFLUENZA-RELATED NEWS

- [Canine flu strikes Chicago metropolitan area](#)
- [Delayed flu vaccine arrives in New Zealand](#)
- [8 Ontario farms quarantined in scramble to contain bird flu found on turkey farm](#)

NATIONAL INFANT IMMUNIZATION WEEK

[National Infant Immunization Week](#) (NIIW) is 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.



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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