



MI Flu Focus

Influenza Surveillance Updates

Bureaus of Epidemiology and Laboratories



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<p>MI's Current Influenza Activity Level: <i>Regional</i></p>	<p>Updates of Interest: Minnesota declares H5N2 emergency as spread continues; H5N2 detected in Kentucky wild birds; CDC: 2014-2015 Flu Season Drawing to a Close.</p>
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Influenza Surveillance Report for the Week Ending April 18, 2015

Avian Influenza A/H5 Key Points

- Avian Influenza A/H5 viruses have been identified in many commercial and backyard poultry (e.g. turkeys, chickens) flocks across North America over the past few months.
- Despite states and provinces in close proximity to us (Wisconsin, Ontario) being affected, Michigan has yet to identify any infected flocks.
- There have been no human cases associated with avian influenza A/H5 who were exposed in North America.
 - Canada had 1 confirmed H5N1 case exposed in Asia in 2013. That strain differs from those currently circulating in North America.
- CDC considers the risk for human infection to be low, but advises that these viruses be regarded as having the potential to cause severe disease in humans until shown otherwise.
- People at greatest risk are those who have been in contact with birds from commercial or backyard flocks that have tested positive for an avian influenza A/H5 virus.
- In the event that a flock in Michigan does test positive, public health will be responsible for monitoring the health of people who are exposed to infected birds (e.g. farm workers and those responding to an infected premise).
- Any reports of sick or dying birds should be forwarded immediately to the proper agency:
 - For domestic poultry, contact Michigan Department of Agriculture & Rural Development (MDARD)
 - M-F 8am-5pm at (800) 292-3939 or after hours/weekends at (517) 373-0440
 - For wildlife, contact your local Department of Natural Resources (DNR) office
 - Phone numbers for regional offices are available on the DNR website: <http://www.michigan.gov/dnr>

Resources

- <http://www.cdc.gov/flu/avianflu/severe-potential.htm>
- <http://www.cdc.gov/flu/avianflu/guidance-exposed-persons.htm>
- <http://www.cdc.gov/flu/avianflu/novel-av-chemoprophylaxis-guidance.htm>
- http://www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=avian_influenza.html
- <http://www.aphis.usda.gov/> → Animal Health → Animal Disease Information → Avian Health

Michigan Disease Surveillance System

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

Emergency Department Surveillance

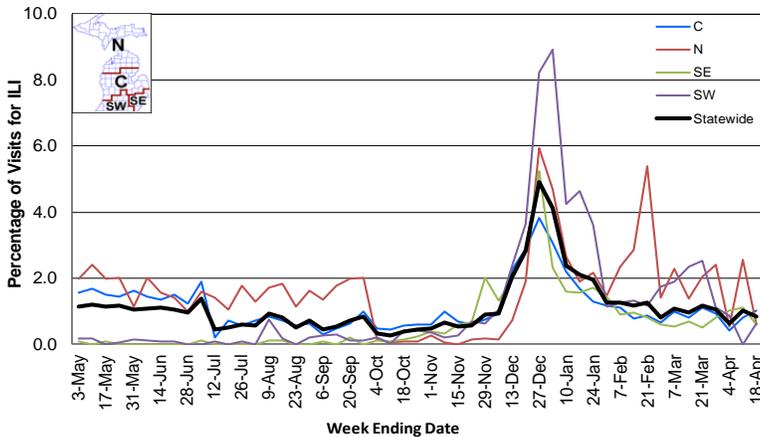
Compared to levels from the week prior, emergency department visits from constitutional complaints and respiratory complaints decreased. Levels of both constitutional and respiratory complaints were higher compared to levels at the same time period last year.

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

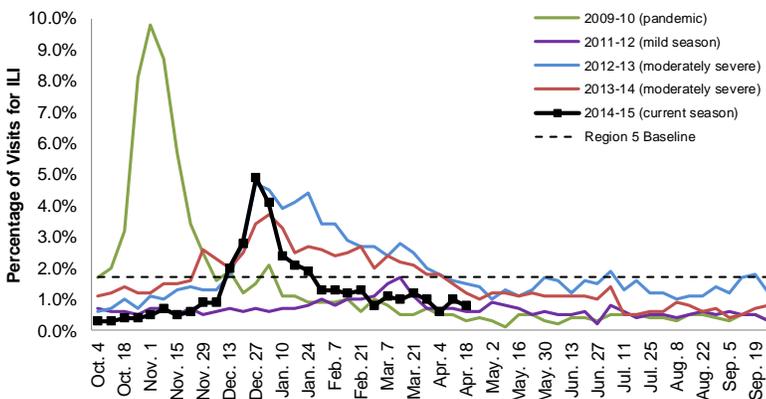
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**Percentage of Visits for Influenza-like Illness (ILI)
Reported by Sentinel Providers, Statewide and Regions
2014-15 Flu Season**



**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 0.8% overall; this is below the regional baseline (1.7%). A total of 89 patient visits due to ILI were reported out of 10,740 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (27 total):

- C (9)
- N (6)
- SE (10)
- SW (2)

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.

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 9 influenza-related hospitalizations reported (accumulated total since Oct. 1: 87 children, 364 adults).

Based on these counts, there have been 45.1 pediatric influenza hospitalizations per 100,000 population and 53.2 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.**

Age Group	New Flu Hospitalizations Reported	Total 2014-15 Flu Hospitalizations to Date
0-4 years	0	31 (1N, 21C, 4SE, 5SW)
5-17 years	1 (SE)	33 (28C, 5SE)
18-49 years	3 (1C, 1SE, 1SW)	65 (1N, 12C, 48SE, 4SW)
50-64 years	9 (3N, 1C, 5SE)	125 (3N, 14C, 94SE, 14SW)
65 years & older	8 (1N, 1C, 6SE)	514 (17N, 18C, 424SE, 55SW)
Total	21 (4N, 3C, 13SE, 1SW)	768 (22N, 93C, 575SE, 78SW)

Laboratory Surveillance

MDCH Bureau of Laboratories reported 3 new positive influenza results: 2 influenza B and 1 influenza A/H3. A total of 545 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	247	490	15* (3 A/Texas/50/2012-like**, 12 A/Switzerland/9715293/2013-like)	0 / 146
Influenza B	16	6	17	14	53	51 (41 B/Yamagata lineage [3* B/Massachusetts/02/2012-like [†]], 7 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; [†]B/Massachusetts/02/2012 virus is the B/Yamagata component of the 2014-15 Northern Hemisphere trivalent and quadrivalent flu vaccines.

In addition, 10 sentinel clinical labs (3SE,2SW,5C) reported influenza results. Five labs (SE,C) reported low or sporadic influenza A activity. All 10 labs (SE,SW,C) reported influenza B activity with elevated levels continuing in the SE and SW regions but starting a downward trend. Five labs (SW,C) reported only influenza B activity. Five labs (SE,SW,C) reported low or slightly elevated Parainfluenza activity. Nine labs (SE,SW,C) reported ongoing RSV activity with an overall trend of steady or declining activity, but a few sites still in the elevated range. Three labs (SE,SW,C) reported low Adenovirus activity. Three labs (SE,SW,C) reported ongoing hMPV activity with one site (SE) remaining in the elevated range. Testing volumes range from low to continued high levels.

Influenza Congregate Settings Outbreaks

There was 1 new respiratory facility outbreak reported (confirmed flu A and B). There have been a total of 146 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	28	11	34	35	108
K-12 School	1		1		2
Daycare				1	1
Unknown / Investigation Pending	16		4	9	29
Healthcare Facility				3	3
Total	45	12	41	48	146

Influenza-associated Pediatric Mortality

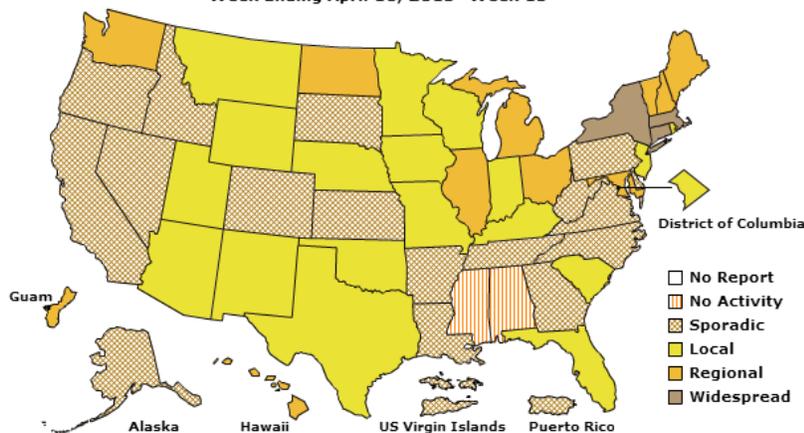
No new influenza-associated pediatric deaths were reported to MDCH. One influenza-associated pediatric death (1SE) has been reported to MDCH for the 2014-15 season.

National: Influenza activity continued to decrease in the United States, with 1.4% of outpatient visits due to influenza-like illness. Influenza B viruses were 87% of all positive flu specimens reported. The Midwest region saw the highest percentage of respiratory specimens positive for flu at 16.9%. Three influenza-associated pediatric deaths were reported, bringing the 2014-15 total to 128. Additional information is in the weekly FluView reports available online at: www.cdc.gov/flu/weekly/.

International: Influenza activity declined further in the Northern Hemisphere and was low in most regions globally. While influenza A(H3N2) viruses predominated this season in the Northern Hemisphere, the proportions of influenza A(H1N1)pdm09 and B viruses increased during the past 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 April 18, 2015- Week 15



FluBytes



AVIAN INFLUENZA NEWS IN U.S., CANADA

- [Minnesota declares H5N2 emergency as spread continues](#)
- [Minnesota National Guard activated for avian influenza control measures](#)
- [H5N2 turns up in Kentucky wild birds](#)
- [Avian flu strikes again in North Dakota, Minnesota](#)
- [Avian flu detected on 3rd Ontario farm](#)
- [Canadian Food Inspection Agency establishes second avian influenza control zone](#)
- [USDA hopes weather will help as H5N2 outbreaks mount](#)

AVIAN INFLUENZA A(H5N1)

- [Trial shows Vietnam-made H5N1 vaccine safe, immunogenic](#)
- [Avian flu outbreaks confirmed in Niger, Taiwan, South Africa](#)

NATIONAL INFLUENZA VACCINATION DISPARITIES PARTNERSHIP NEWSLETTER

The April issue of the NIVDP newsletter has been [posted](#). NIVDP is a national multi-sector campaign committed to promoting the importance of flu vaccination among underserved populations.

FLU WEBSITES

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

INFLUENZA-RELATED JOURNAL ARTICLES

- [Beyond resistance: social factors in the general public response to pandemic influenza](#)
- [Identification of TMPRSS2 as the susceptible gene for severe illness of 2009 pandemic A\(H1N1\) influenza and infection of A\(H7N9\) influenza](#)
- [Uptake of influenza vaccination in pregnancy amongst Australian Aboriginal and Torres Strait Islander women: a mixed-methods pilot study](#)

AVIAN INFLUENZA A(H7N9)

- Global case count since 2013 at [658 cases](#)
- [Central China province reports first H7N9 human infection](#)
 - This is Hubei province's first case
 - In 2014, a Hubei resident fell ill while in Guangdong province, that case was attributed to Guangdong's case count

OTHER INFLUENZA-RELATED NEWS

- CDC: [2014-2015 flu season drawing to a close](#) (April 27)
- [Canine influenza confirmed in Sioux City, first case in Iowa](#)
- CDC: [key facts about canine influenza \(dog flu\)](#)

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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