



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: <i>Michigan had a 2nd influenza-associated pediatric death reported for 2014-15 (see page 3).</i></p>
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Influenza Surveillance Report for the Week Ending April 25, 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://1.usa.gov/1HYgrVp>

Michigan Disease Surveillance System

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

Emergency Department Surveillance

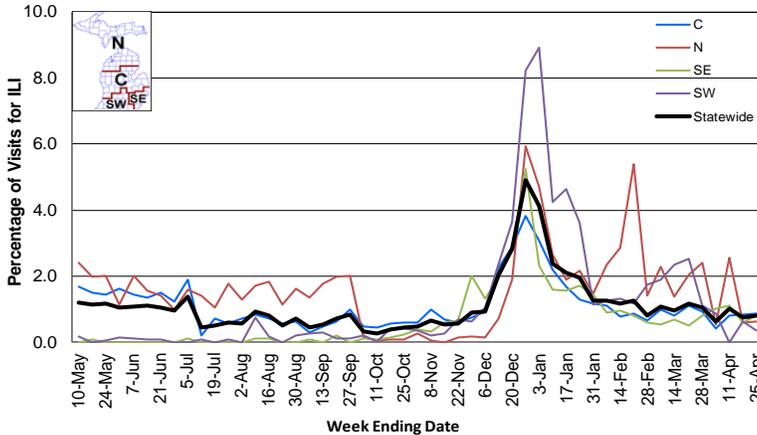
Compared to levels from the week prior, emergency department visits from constitutional complaints and respiratory complaints decreased. Levels of both constitutional and respiratory complaints were similar to levels seen during the same time period last year.

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

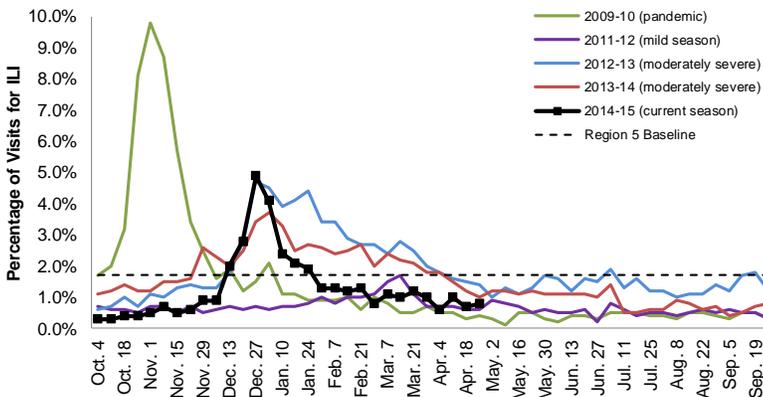
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**Percentage of Visits for Influenza-like Illness (ILI)
Reported by Sentinel Providers, Statewide and Regions
2014-15 Flu Season**



**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) increased to 0.8% overall; this is below the regional baseline (1.7%). A total of 71 patient visits due to ILI were reported out of 8,763 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (28 total):

- C (13)
- N (5)
- SE (8)
- SW (2)

Become a Sentinel Provider!

As part of pandemic influenza surveillance, CDC and MDHHS 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 5 influenza-related hospitalizations reported (accumulated total since Oct. 1: 87 children, 369 adults).

Based on these counts, there have been 45.1 pediatric influenza hospitalizations per 100,000 population and 53.9 adult influenza hospitalizations per 100,000 population within the catchment area.

The MDHHS Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide, and 10 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	0	33 (28C, 5SE)
18-49 years	1 (N)	66 (2N, 12C, 48SE, 4SW)
50-64 years	3 (SE)	128 (3N, 14C, 97SE, 14SW)
65 years & older	8 (3N, 1C, 4SE)	522 (20N, 19C, 428SE, 55SW)
Total	12 (4N, 1C, 7SE)	780 (26N, 94C, 582SE, 78SW)

Laboratory Surveillance

MDHHS Bureau of Laboratories reported 6 new positive influenza results: 6 influenza B. A total of 552 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	18	6	17	18	59	59 (44 B/Yamagata lineage [3* B/Massachusetts/02/2012-like [†]], 12 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. Three labs (SE,SW) reported low or sporadic influenza A activity. Nine labs (SE,SW,C) reported influenza B activity with elevated levels in the SE region but trending downward. Six labs (SE,SW,C) reported only influenza B activity. Four labs (SE,SW,C) reported low or slightly increasing Parainfluenza activity. Eight 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 or slightly elevated Adenovirus activity. Four labs (SE,SW,C) reported ongoing hMPV activity with one site (SE) still in the elevated range. Testing volumes have all dropped but with several sites still in the high range.

Influenza Congregate Settings Outbreaks

There was 1 new respiratory facility outbreak reported (confirmed flu A). There have been a total of 147 respiratory facility outbreaks reported to MDHHS 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	12	34	35	109
K-12 School	1		1		2
Daycare				1	1
Unknown / Investigation Pending	16		4	9	29
Healthcare Facility				3	3
Total	45	13	41	48	147

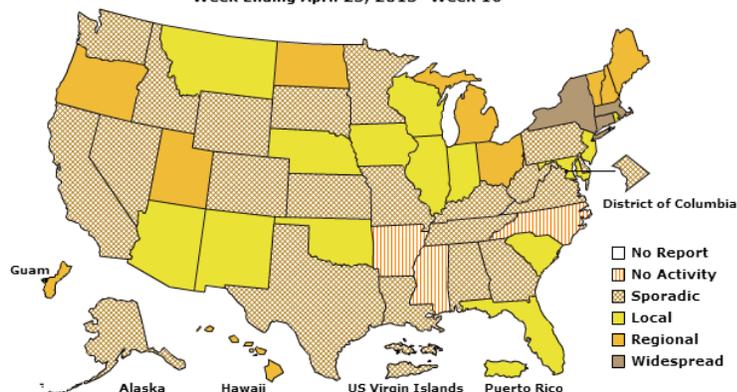
Influenza-associated Pediatric Mortality

One new influenza-associated pediatric death in a school-aged child from the SW region associated with an influenza B virus was reported to MDHHS. There have been a total of 2 influenza-associated pediatric deaths (1SE, 1SW) reported to MDHHS 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 89% of all positive flu specimens reported. The Midwest region saw the highest percentage of respiratory specimens positive for flu at 14.6%. Five influenza-associated pediatric deaths were reported (including Michigan's 2nd), bringing the 2014-15 total to 133. Additional information is in the weekly FluView reports available at: www.cdc.gov/flu/weekly/.

International: Influenza activity declined further in the Northern Hemisphere with mainly influenza B viruses circulating and was low in most regions globally. 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 25, 2015- Week 16



FluBytes



AVIAN INFLUENZA NEWS IN U.S., CANADA

- USDA: Birds affected up to [nearly 24 million](#)
- [H5N2 suspected on 5 more Iowa, Minnesota farms](#)
 - U.S. government approved \$330 million in emergency funds
- [3 Midwest states report 14 more H5N2 outbreaks](#)
- [Iowa becomes 3rd state to declare 'bird flu' emergency](#)
 - Wisconsin, Minnesota also declared states of emergency
- [Avian flu taking big toll in Iowa; virus found in Minnesota hawk](#)

INFLUENZA-RELATED JOURNAL ARTICLES

- [Predictors of influenza diagnosis among patients with lab-confirmed flu](#)
 - Flu clinically diagnosed in only 29% of patients with lab-confirmed flu
 - Being diagnosed with a bacterial infection reduced odds of flu diagnosis >3-fold
- [Seropositivity for avian influenza H6 virus among humans, China](#)
 - Seropositivity highest among live poultry market workers, backyard poultry farmers, and workers in wild bird habitats

CDC'S IMMUNIZATION WORKS NEWSLETTER

CDC has posted the latest issue of their [Immunization Works](#) newsletter. The April issue has info on U.S. measles cases, progress towards worldwide polio eradication, the National Adult and Influenza Immunization Summit, and several flu vaccine resources.

AVIAN INFLUENZA A(H7N9)

- [Anhui province reports China's 2nd H7N9 case this month](#)
- [Differences in the epidemiology of human cases of avian influenza A\(H7N9\) and A\(H5N1\) viruses infection](#)
 - Suggests potential pandemic risk may be greater for H7N9 than H5N1

AVIAN INFLUENZA A(H5N1)

- [H5N1 revisits Turkey as H5N8 plagues Taiwan](#)
- [7 new outbreaks of H5N1 in Burkina Faso](#)

OTHER INFLUENZA-RELATED NEWS

- CDC: [Sanofi Pasteur reports flu vaccine recall for 3 lots of vaccine from 2014-2015 season](#)
- CDC: [Update on H3N2 canine influenza \(dog flu\) virus](#)
- [Vietnam reports new outbreak of high-path H5N6](#)
- [Canadian government financially supports influenza vaccine research](#)

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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