



MI Flu Focus

Influenza Surveillance Updates

Bureaus of Epidemiology and Laboratories



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Updates of Interest:

- On June 15, 2015, the USDA's Animal and Plant Health Inspection Service released a preliminary epidemiologic [analysis](#) of US poultry flocks affected by Highly Pathogenic Avian Influenza.

Influenza Surveillance Report for the Week Ending June 13, 2015

Highly Pathogenic Avian Influenza A (H5N2) Detected in Wild Birds in Michigan

- On June 8, 2015, the Michigan Departments of Natural Resources (MDNR) and Agriculture and Rural Development (MDARD) announced the state's first confirmation of the presence of highly pathogenic avian influenza A (HPAI) (H5N2) in free-ranging Canada geese in Sterling Heights, Macomb County.
- HPAI has not been detected in domestic poultry flocks (e.g. commercial, backyard) in Michigan at this time.
- On June 1, 2015, MDARD made the decision to cancel all poultry and waterfowl exhibitions in Michigan for the remainder of the year to prevent the comingling of birds from different locations. This includes, but is not limited to, shows, exhibitions, swap meets, petting zoos at fairs, game bird and waterfowl fair displays, and Miracle of Life exhibits.
- Although Michigan has had previous cases of low pathogenic avian influenza in free-ranging birds, this is the first case of HPAI in free-ranging birds in Michigan.
- To date, no human cases of these recent HPAI H5 viruses have been detected in the United States.
- Although the risk of infection is low for people, some highly pathogenic avian flu viruses can infect people causing mild to severe respiratory illness. Signs and symptoms of human illness to watch for include fever or feeling feverish, cough, runny nose, sore throat, headache, muscle aches, difficulty breathing, shortness of breath, diarrhea and red, itchy eyes (conjunctivitis).
- The Michigan Department of Health and Human Services (MDHHS) is coordinating with CDC and local health departments on appropriate human health measures in the event that people are exposed to infected or dead birds due to HPAI.
 - As a general precaution, people exposed to HPAI-infected birds will be monitored by their local health department for any signs or symptoms of illness consistent with influenza.
 - To assist in these efforts, MDHHS developed three documents: (1) the HPAI Evaluation and Monitoring Protocol for local public health to conduct health monitoring for those individuals who have been exposed to HPAI-infected birds, (2) an HPAI fact sheet for distribution to those people who need to be monitored, and (3) a symptom monitoring log.
 - All MDHHS HPAI documents can be found at www.michigan.gov/cdinfo.

Any reports of sick or dying birds should be forwarded immediately to the proper agency:

- For domestic poultry, contact MDARD:
 - M-F 8am-5pm at (800) 292-3939 or after hours/weekends at (517) 373-0440.
- For wildlife, residents who notice a die-off of waterfowl, gulls, or shorebirds, report it to DNR.
 - M-F 8am-5pm at (517) 336-5030 or after hours at (800) 292-7800.
- For more information on reporting sick or dead wild birds, please refer to the [MDHHS avian influenza](#) website.

Michigan Disease Surveillance System

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

Emergency Department Surveillance

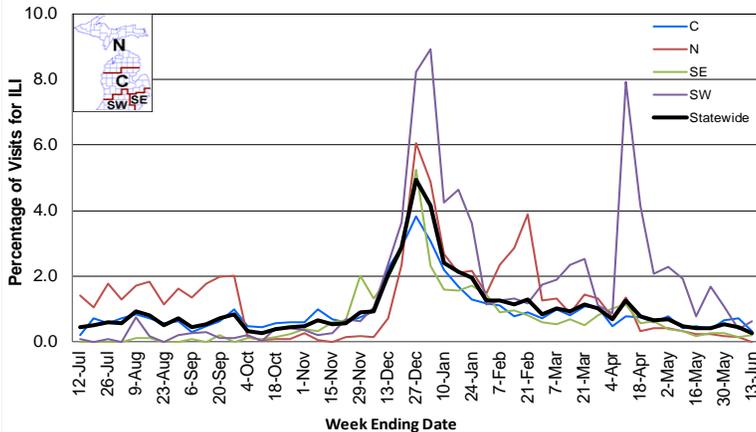
Compared to levels from the week prior, emergency department visits from constitutional complaints slightly increased and respiratory complaints slightly decreased. Levels of constitutional complaints are slightly lower while levels of respiratory complaints are similar to levels seen during the same time period last year.

- 6 constitutional alerts (1SW, 3C, 2N)
- 1 respiratory alert (1SE)

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



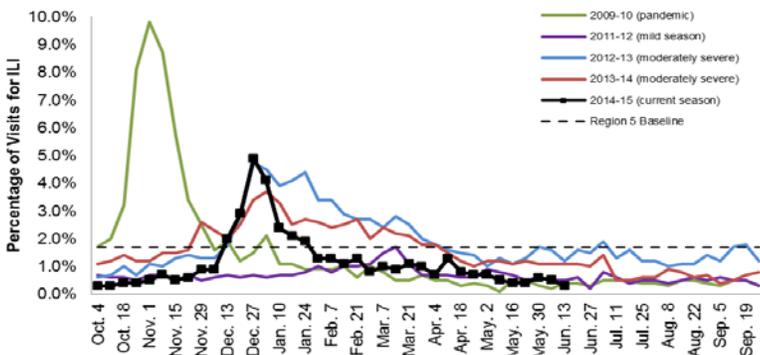
Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) decreased to 0.3% overall; this is below the regional baseline (1.7%). A total of 18 patient visits due to ILI were reported out of 6,619 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (27 total):

- C (10)
- N (5)
- SE (9)
- SW (3)

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 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 and ending April 30, 2015, for Clinton, Eaton, Genesee, and Ingham counties. The cumulative total during the reporting period was 88 pediatric hospitalizations and 374 adult hospitalizations. Based on these counts, there were 45.6 pediatric influenza hospitalizations per 100,000 population and 54.6 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 9 hospitals (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	0	68 (2N, 12C, 49SE, 5SW)
50-64 years	0	130 (3N, 14C, 99SE, 14SW)
65 years & older	0	529 (20N, 19C, 435SE, 55SW)
Total	0	791 (26N, 94C, 592SE, 79SW)

Laboratory Surveillance

MDHHS Bureau of Laboratories reported no new positive influenza results. A total of 560 positive influenza results have been reported for the 2014-15 season. Influenza results for the 2014-15 season are 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	20	6	19	21	67	66 (46 B/Yamagata lineage [3* B/Massachusetts/02/2012-like [†] , 9* B/Phuket/3073/2013-like ^{††}], 17 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; ^{††}B/Phuket/3073/2013 virus is the B/Yamagata component of the 2015-16 Northern Hemisphere trivalent and quadrivalent flu vaccines.

In addition, 8 sentinel clinical labs (3SE, 2SW, 3C) reported influenza results. No labs reported influenza A activity. Two labs (SE, SW) reported sporadic influenza B activity. Three labs (SE, SW, C) reported low or sporadic Parainfluenza activity. No labs reported RSV activity. Three labs (SE, SW, C) reported low or sporadic Adenovirus activity. No labs reported hMPV activity. Most testing volumes remain in the low range but a few sites are still in the moderate range.

Influenza Congregate Settings Outbreaks

No new facility outbreaks were reported to MDHHS. There have been a total of 151 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	37	111
K-12 School	1		2		3
Daycare				1	1
Unknown / Investigation Pending	16		4	9	29
Healthcare Facility				3	3
Correctional Facility				1	1
Total	45	13	42	51	151

Influenza-associated Pediatric Mortality

No new influenza-associated pediatric deaths were reported to MDHHS. There have been a total of 3 influenza-associated pediatric deaths (1C, 1SE, 1SW) reported to MDHHS for the 2014-15 season.

National: In the United States, 0.9% of outpatient visits were due to influenza-like illness during week 23. This percentage is below the national baseline of 2.0%. Additional information is in the weekly FluView reports available at:

www.cdc.gov/flu/weekly/. **NOTE:** The May 17-23, 2015 FluView marked the final full influenza surveillance report for the 2014-2015 flu season in the United States. Influenza surveillance in the U.S. will continue through the summer months with condensed reports available at www.cdc.gov/flu/weekly/; though this page will not be updated until publication of the full FluView resumes on October 16, 2015. [FluView interactive](#) will be updated over the summer months.

International: Globally, influenza activity has decreased from its peak in early 2015 to low levels. In the Northern Hemisphere, flu activity was low or at inter-seasonal levels. In the Southern Hemisphere, flu activity was slightly higher in most countries but remained at low levels. Summary information is available online at www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/.



AVIAN INFLUENZA NEWS IN NORTH AMERICA

- USDA: Birds affected more than [48 million](#)
- CDC Health Advisory: [Bird infections with highly-pathogenic avian influenza A \(H5N2\), \(H5N8\), and \(H5N1\) viruses: Recommendations for human health investigations and response](#) (June 2)
- [Avian flu finding on Nebraska farm goes unconfirmed; quarantine lifted](#)
- [Update from Nebraska](#)
- [Minnesota to expand wild bird flu testing; only 1 infected bird found](#)
- [Pennsylvania imposes precautionary interstate quarantine orders for live bird markets, breaker eggs](#)

MMWR: SUMMARY OF 2014-15 FLU SEASON

CDC published a summary of flu activity in the U.S. during 2014-15 in the [June 5 issue](#) of *Morbidity and Mortality Weekly Report*. The report covers surveillance data from September 28, 2014 through May 23, 2015 including viral surveillance, novel flu A viruses, antigenic characterization, antiviral resistance, outpatient illness, geographic spread of flu, hospitalizations, and pediatric mortality, as well as the composition of the 2015-16 flu vaccines.

AVIAN INFLUENZA A(H5N1) NEWS ARTICLES

- [Palestinian Authority report HPAI H5N1](#)
- [China, Israel report H5N1 outbreaks in poultry](#)

CANINE INFLUENZA NEWS IN THE U.S.

- [Twin Cities see first known case of canine influenza at St. Paul Shelter](#)
- [Canine flu rising fast in Metro Atlanta](#)

ALANA'S FOUNDATION ANNUAL FUNDRAISER

Save the date! Alana's Foundation is holding their annual fundraiser on August 6, 2015. Their Summer Concert Bash will be in Pontiac at the Crofoot at 7:30 PM. Tickets are \$35 in advance and \$40 at the door. More info on this year's fundraiser can be found [here](#).

UPCOMING ACIP MEETING JUNE 24-25

The draft agenda for the upcoming Advisory Committee on Immunization Practices (ACIP) meeting on June 24-25, 2015 is [online](#). Influenza A(H5N1) and seasonal influenza vaccination recommendations are scheduled to be discussed on June 24 and will include votes on proposed recommendations for both. If you would like to listen in to the ACIP meeting, the webcast instructions can be found [here](#).

INFLUENZA-RELATED JOURNAL ARTICLES

- [Newly-emergent highly pathogenic H5N9 subtype avian influenza A virus](#)
 - The novel H5N9 subtype avian influenza A virus is a reassortant strain origination from H5N1, H7N9, and H9N2 subtypes.
 - It is unknown whether this novel H5N9 subtype will become a pandemic subtype.
- [The role of human transportation networks in mediating the genetic structure of seasonal influenza in the United States](#)
 - Commuters can play an integral role in interstate influenza transmission.
 - Study highlights need to incorporate host movement patterns when studying spatial population structure.

OTHER INFLUENZA-RELATED NEWS

- [Egyptian officials confirm H5N1 in Egyptian girl](#)
- [Nigeria reports 30 H5N1 outbreaks involving 65,000 poultry](#)
- [3600 birds destroyed in Ghana](#)
- [Avian flu threatens West Africa poultry farmers](#)
- [Ghana reports 5 more H5N1 outbreaks affecting 4600 birds](#)
- WHO Europe: [Training course on laboratory preparedness for emerging respiratory pathogens](#)

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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