



# MI Flu Focus

Influenza Surveillance Updates  
Bureaus of Epidemiology and Laboratories

Michigan Department  
of Community Health



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## Current Influenza Activity Levels:

- **Michigan:** Widespread influenza activity
- **National:** During January 5-11, influenza activity remained high in the United States

## Updates of Interest:

- **International:** China reports additional human avian influenza H7N9 cases

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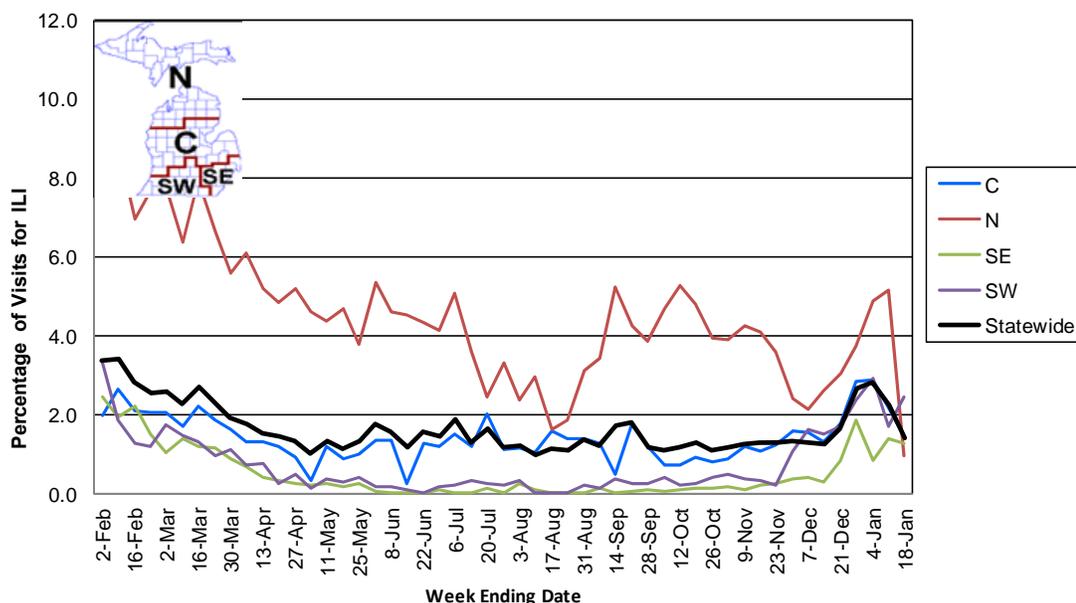
## Influenza Surveillance Reports

**Michigan Disease Surveillance System (as of January 23):** MDSS influenza data for the week ending January 18, 2014 indicated that compared to levels from the previous week, aggregate reports slightly increased and individual reports moderately decreased. Aggregate reports are significantly lower than levels seen during the same time period last year, while individual reports are moderately lower.

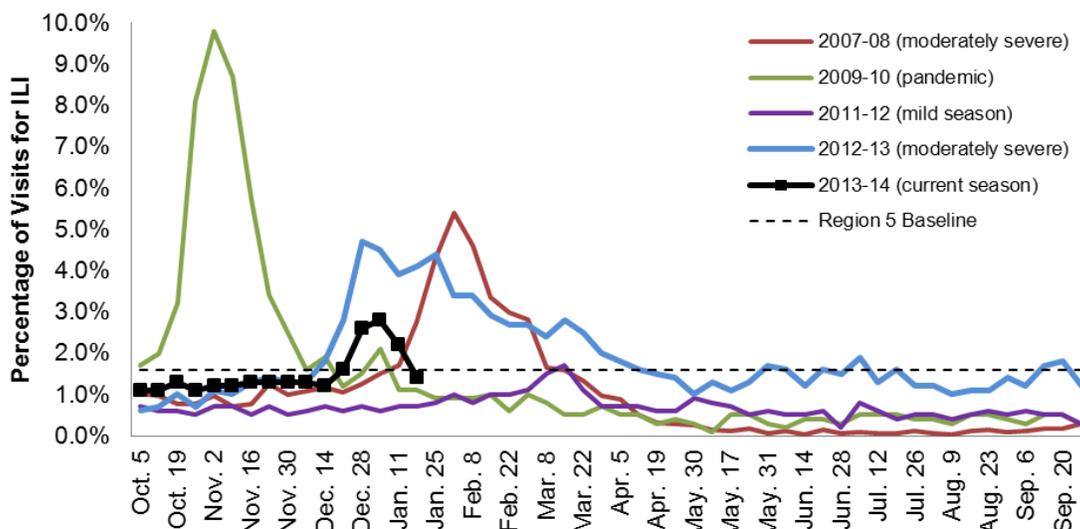
**Emergency Department Surveillance (as of January 23):** Emergency department visits due to constitutional complaints decreased slightly during the week ending January 18, 2014, while respiratory complaints moderately decreased. Emergency department visits from constitutional complaints were significantly lower than levels during the same time period last year, while respiratory complaints moderately lower. In the past week, there were constitutional alerts in the C(3) and N(2) Influenza Surveillance Regions and respiratory alerts in the C(3) and SW(1) Regions.

**Sentinel Provider Surveillance (as of January 23):** During the week ending January 18, 2014, the proportion of visits due to influenza-like illness (ILI) decreased to 1.4% overall; this is below the regional baseline (1.6%). A total of 137 patient visits due to ILI were reported out of 9,872 office visits. Data were provided by 31 sentinel sites from the following regions: Central (12), North (3), Southeast (13), and Southwest (3). ILI activity increased in one region: SW (2.4%). ILI activity decreased in three regions: C (1.5%), N (0.9%), and SE (1.2%). Please note: These rates may change as additional reports are received.

**Percentage of Visits for Influenza-like Illness (ILI)  
Reported by Sentinel Providers, Statewide and Regions  
2013-14 Flu Season**



**Percentage of Visits for Influenza-like Illness (ILI) Reported by  
the US Outpatient Influenza-like Illness Surveillance Network  
(ILINet): Michigan, Select Seasons**



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 517-335-3385 or DeVitaS1@michigan.gov for more information.

**Hospital Surveillance (as of January 23):** The CDC Influenza Hospitalization Surveillance Project provides population-based rates of severe influenza illness through active surveillance and chart review of lab-confirmed cases, starting on October 1, 2013, for Clinton, Eaton, Genesee, and Ingham counties. Four new cases (4 adult) were identified since the last report. As of January 17<sup>th</sup>, there have been 127 influenza hospitalizations (39 pediatric, 88 adult) within the catchment area.

The MDCH Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide. 8 hospitals (SE,SW,C,N) reported for the week ending January 11, 2013. Results are listed in the table below.

Age Group	Hospitalizations Reported for week ending Jan11	Total Hospitalizations 2013-14 Season
0-4 years	3 (2SE,1C)	26 (6SE,20C)
5-17 years	3 (3C)	12 (1SE,11C)
18-49 years	10 (6SE,4C)	65 (36SE,1SW,22C,6N)
50-64 years	13 (5SE,3C,5N)	68 (41SE,3SW,14C,10N)
≥65 years	8 (4SE,1C,3N)	53 (36SE,1SW,6C,10N)
<b>Total</b>	37 (17SE,12C,8N)	224 (120SE,5SW,73C,26N)

**Laboratory Surveillance (as of January 18):** During January 12-18, 14 influenza 2009 A/H1N1pdm (2SE,4SW,7C,1N) results were reported by MDCH Bureau of Laboratories. For the 2013-14 season (starting Sept. 29, 2013), MDCH has identified 232 positive influenza results:

- Influenza 2009 A/H1N1pdm: 217 (55SE,61SW,65C,36N)
- Influenza A and B (LAIV recovery): 1 (1SE)
- Influenza A/H3: 9 (7SE,2SW)
- Adenovirus: 1 (1SE)
- Influenza A unsubtypeable: 1 (1SE)
- Parainfluenza: 2 (1SE,1SW)
- Influenza B: 4 (1SE,1SW,2C)

13 sentinel labs (4SE, 2SW, 5C, 2N) reported for the week ending January 18, 2014. 12 labs (SE, SW, C, N) reported influenza A activity, with most showing notably declining levels or steady levels. Three labs (SW, C) reported sporadic influenza B activity. Two labs (SE) reported sporadic Parainfluenza activity. Eleven labs (SE, SW, C, N) reported RSV activity, with several sites in the SE showing elevated levels or further increases. Four labs (SE, SW) reported sporadic hMPV activity. Two labs (SE, SW) reported sporadic Adenovirus activity. Testing volumes at many sites remain high or very high but overall declines in volumes continue to be observed.

**Michigan Influenza Antigenic Characterization (as of January 23):** For the 2013-14 season, no influenza specimens have been characterized at MDCH BOL.

**Michigan Influenza Antiviral Resistance Data (as of January 23):** For the 2013-14 season, 23 2009 A/H1N1pdm (12SE,2SW,5C,4N) and 4 A/H3 (4SE) influenza specimens have been tested at the MDCH BOL for antiviral resistance. None of the influenza specimens tested have been resistant.

CDC has made recommendations regarding the use of antivirals for treatment and prophylaxis of influenza, which are available at <http://www.cdc.gov/flu/professionals/antivirals/index.htm>.

**Influenza-associated Pediatric Mortality (as of January 16):** No new pediatric influenza-associated deaths were reported to MDCH during the previous week. One pediatric influenza-associated influenza mortality (1C) has been reported to MDCH for the 2013-14 season.

CDC requires reporting of flu-associated pediatric deaths (<18 yrs), including pediatric deaths due to an influenza-like illness with lab confirmation of influenza or any unexplained pediatric death with evidence of an infectious process. Contact MDCH immediately for proper specimen collection. The MDCH protocol is at [www.michigan.gov/documents/mdch/ME\\_pediatric\\_influenza\\_guidance\\_v2\\_214270\\_7.pdf](http://www.michigan.gov/documents/mdch/ME_pediatric_influenza_guidance_v2_214270_7.pdf).

**Influenza Congregate Settings Outbreaks (as of January 23):** One new influenza A 2009/H1N1pdm outbreak in a long-term care facility (C) was reported during the current week. 7 respiratory outbreaks (3SW,3C) have been reported during the 2013-14 season:

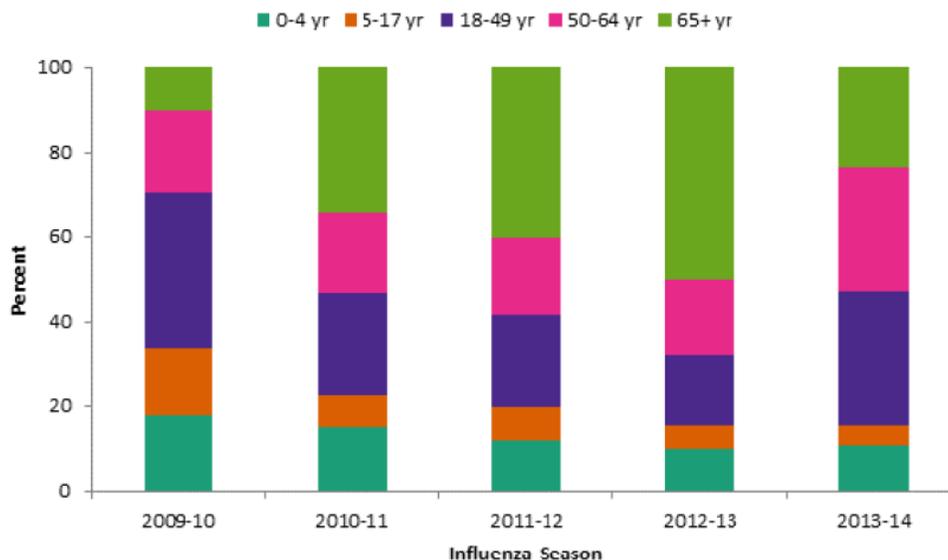
- Influenza 2009 A/H1N1pdm: 2 (1C, 1SW)
- Influenza A/H3 positive: 1 (1SW)
- Influenza A positive: 1 (1SW)
- Negative/no testing: 3 (3C)

**National (CDC [edited], January 17):** During week 2 (January 5-11, 2014), influenza activity remained high in the United States. Of 10,841 specimens tested and reported during week 2 by U.S. World Health Organization and National Respiratory and Enteric Virus Surveillance System collaborating laboratories, 2,721 (25.1%) were positive for influenza. The proportion of deaths attributed to pneumonia and influenza was above the epidemic threshold. Ten influenza-associated pediatric deaths were reported. A cumulative rate for the season of 13.8 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The proportion of outpatient visits for influenza-like illness (ILI) was 3.6%, above the national baseline of 2.0%. All 10 regions reported ILI above region-specific baseline levels. 14 states experienced high ILI activity; 12 states experienced moderate ILI activity; eight states and New York City experienced low ILI activity; 16 states experienced minimal ILI activity, and the District of Columbia had insufficient data. The geographic spread of influenza in 40 states was reported as widespread; 9 states and Guam reported regional influenza activity; the District of Columbia and Puerto Rico reported local activity; one state reported sporadic activity, and the U.S. Virgin Islands did not report.

Complete weekly FluView reports are available online at: <http://www.cdc.gov/flu/weekly/>.

### Laboratory-Confirmed Hospitalizations by Age Group

Preliminary data as of Jan 11, 2014





(86.4%) were typed as influenza A and 2406 (13.6%) as influenza B. Of the sub-typed influenza A viruses, 6889 (67.2%) were A(H1N1)pdm09, and 3365 (32.8%) were A(H3N2). Of the characterized B viruses, 352 (81.1%) belong to the B-Yamagata lineage and 82 (18.9%) to the B-Victoria lineage.

The full report is online at

[www.who.int/influenza/surveillance\\_monitoring/updates/latest\\_update\\_GIP\\_surveillance/en/index.html](http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html).

MDCH reported WIDESPREAD INFLUENZA ACTIVITY to CDC for the week ending Jan. 18, 2014

For additional flu vaccination and education information, the MDCH *FluBytes* newsletter is available at [http://www.michigan.gov/mdch/0,1607,7-132-2940\\_2955\\_22779\\_40563-125027--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2940_2955_22779_40563-125027--,00.html).

### ***Novel Influenza Activity and Other News***

**WHO Pandemic Phase:** Post-pandemic – Influenza disease activity has returned to levels normally seen for seasonal influenza.

**International, Human (WHO [edited], January 17):** On 15 January 2014, the National Health and Family Planning Commission of China notified WHO of four additional laboratory-confirmed cases of human infection with avian influenza A(H7N9) virus.

Details of the cases are as follows:

- A 35 year old man from Shanghai who became ill on 1 January and was admitted to hospital on 12 January. He is currently in a critical condition. The patient has a history of exposure to poultry.
- A 41 year old man from Hangzhou City, Zhejiang Province, who became ill on 5 January and was admitted to hospital on 9 January and then transferred to another hospital on 12 January. He is currently in a critical condition.
- A 48 year old man from Foshan City, Guangdong Province, who became ill on 2 January and was admitted to hospital on 12 January. He is currently in a critical condition.
- A 55 year old man from Dongguan City, Guangdong Province, who became ill on 1 January and was admitted to hospital on 9 January. He is currently in a critical condition. The patient has a history of exposure to poultry.

The source of infection is still under investigation. So far, there is no evidence of sustained human-to-human transmission.

The full report is available online at [http://www.who.int/csr/don/2014\\_01\\_17/en/index.html](http://www.who.int/csr/don/2014_01_17/en/index.html).

**International, Human (WHO [edited], January 20):** On 16 January 2014, the National Health and Family Planning Commission of China notified WHO of seven additional laboratory-confirmed cases of human infection with avian influenza A(H7N9) virus.

Details of the cases are as follows:

- A 38 year old man, reportedly from Guizhou Province, who was working in Wenzhou City, Zhejiang Province, and then returned to Guizhou Province on 3 January. He was admitted to hospital on 8 January and died on 9 January. Investigation on when and where he became ill are continuing.
- A 59 year old man from Guangzhou City, Guangdong Province, who became ill on 6 January and was admitted to hospital on 13 January. He is currently in a serious condition.
- A 20 year old woman from Hangzhou City, Zhejiang Province, who became ill on 7 January and was admitted to hospital on 11 January and then transferred to another hospital on 14 January. She is currently in a critical condition. The patient has a history of exposure to poultry.
- A 58 year old man from Taizhou City, Zhejiang Province, who became ill on 7 January and was admitted to hospital on 14 January. He is currently in a critical condition. The patient has a history of exposure to poultry.
- A 30 year old man from Quanzhou City, Fujian Province, who became ill on 9 January and was admitted to hospital on 14 January. He is currently in a critical condition.
- A 60 year old man from Quanzhou City, Fujian Province, who became ill on 10 January and was admitted to hospital on 13 January. He is currently in a serious condition. The patient has a history of exposure to a live poultry market.
- A 76 year old woman from Foshan City, Guangdong Province, who became ill on 12 January and was admitted to hospital on the same day. She is currently in a critical condition.

The source of infection is still under investigation. So far, there is no evidence of sustained human-to-human transmission.

The full report is available online at [http://www.who.int/csr/don/2014\\_01\\_20/en/index.html](http://www.who.int/csr/don/2014_01_20/en/index.html)

**International, Human (WHO [edited], January 20):** The National Health and Family Planning Commission of China notified WHO of 16 additional laboratory-confirmed cases of human infection with avian influenza A(H7N9) virus. The source of infection is still under investigation. So far, there is no evidence of sustained human-to-human transmission.

Details of the cases notified on January 17, 18, and 20, 2014 are available in the full online report at [http://www.who.int/csr/don/2014\\_01\\_20bis/en/index.html](http://www.who.int/csr/don/2014_01_20bis/en/index.html)

**International, Human (WHO [edited], January 22):** On 20 January 2014, the National Health and Family Planning Commission of China notified WHO of five additional laboratory-confirmed cases of human infection with avian influenza A(H7N9) virus, including two deaths.

Details of the cases are as follows:

- A 31 year old man from Shanghai City who became ill on 11 January. He visited a hospital on 15 January and was admitted to hospital on 17 January and died on 18 January.
- A 77 year old man from Shanghai City who became ill on 10 January. He visited hospital on 14 January and was transferred to another hospital on 17 January and died on 18 January. The patient had a history of exposure to poultry.
- A 71 year old woman from Hangzhou City, Zhejiang Province, who became ill on 12 January. She visited hospital on 15 January and transferred to another hospital on 18 January. She is currently in a critical condition. The patient has a history of exposure to poultry.
- A 63 year old man from Jiaxing City, Zhejiang Province, who became ill on 12 January. He visited hospital on 17 January and transferred to another hospital on 18 January. He is currently in a serious condition. The patient has a history of exposure to poultry.
- A 55 year old man from Ningbo City, Zhejiang Province, who became ill on 11 January. He visited hospital on 17 January. He is currently in a critical condition. The patient has a history of exposure to poultry.

The source of infection is still under investigation. So far, there is no evidence of sustained human-to-human transmission.

The full report is available online at [http://www.who.int/csr/don/2014\\_01\\_22/en/index.html](http://www.who.int/csr/don/2014_01_22/en/index.html)

As of 20 January, the World Health Organization (WHO) has been officially notified by the China health authorities of more than forty additional laboratory-confirmed cases of human infection with avian influenza A (H7N9) virus, since 1 January 2014. Additional information can be found at <http://www.wpro.who.int/china/en/index.html>

**International, Human (WHO [edited], January 23):** On 22 January 2014, the National Health and Family Planning Commission of China notified WHO of 10 additional laboratory-confirmed cases of human infection with avian influenza A(H7N9) virus. The source of infection is still under investigation. So far, there is no evidence of sustained human-to-human transmission.

Details of the cases are available in the full online report available at [http://www.who.int/csr/don/2014\\_01\\_23/en/index.html](http://www.who.int/csr/don/2014_01_23/en/index.html)

**International, Poultry (OIE [edited], January 17):** Highly pathogenic avian influenza H5N8; Korea Outbreak 1: Murim-ri, Sillim-myeon, Gochang-gun, JEOLLABUK-DO; Date of start of the outbreak: 16/01/2014; Epidemiological unit: Farm  
Species: Birds; Susceptible: 21180; Cases: 10; Deaths: 7; Destroyed: 21173

**International, Poultry (OIE [edited], January 20):** Low pathogenic avian influenza H5N2; China Outbreak 1: Hongdao Economic Development Zone, Qingdao, SHANDONG; Date of start of the outbreak: 16/01/2014; Epidemiological unit: Farm  
Species: Birds; Susceptible: 18857; Cases: 5; Deaths: 0; Destroyed: 18857

**International Poultry and Wild Bird Surveillance (OIE):** Reports of avian influenza activity, including summary graphs of avian influenza H5N1 outbreaks in poultry, can be found at the following website: [http://www.oie.int/download/AVIAN%20INFLUENZA/A\\_Al-Asia.htm](http://www.oie.int/download/AVIAN%20INFLUENZA/A_Al-Asia.htm).

For questions or to be added to the distribution list, please contact Susan Peters at [peterss1@michigan.gov](mailto:peterss1@michigan.gov)

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**Table. H5N1 Influenza in Humans – As of December 10, 2013.** [http://www.who.int/influenza/human\\_animal\\_interface/EN\\_GIP\\_20131210CumulativeNumberH5N1cases.pdf](http://www.who.int/influenza/human_animal_interface/EN_GIP_20131210CumulativeNumberH5N1cases.pdf). Downloaded 01/23/2014. Cumulative lab-confirmed cases reported to WHO. Total cases include deaths.

Country	2003-2009		2010		2011		2012		2013		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Azerbaijan	8	5	0	0	0	0	0	0	0	0	8	5
Bangladesh	1	0	0	0	2	0	3	0	1	1	7	1
Cambodia	9	7	1	1	8	8	3	3	26	14	47	33
China	38	25	2	1	1	1	2	1	2	2	45	30
Djibouti	1	0	0	0	0	0	0	0	0	0	1	0
Egypt	90	27	29	13	39	15	11	5	4	3	173	63
Indonesia	162	134	9	7	12	10	9	9	3	3	195	163
Iraq	3	2	0	0	0	0	0	0	0	0	3	2
Lao PDR	2	2	0	0	0	0	0	0	0	0	2	2
Myanmar	1	0	0	0	0	0	0	0	0	0	1	0
Nigeria	1	1	0	0	0	0	0	0	0	0	1	1
Pakistan	3	1	0	0	0	0	0	0	0	0	3	1
Thailand	25	17	0	0	0	0	0	0	0	0	25	17
Turkey	12	4	0	0	0	0	0	0	0	0	12	4
Vietnam	112	57	7	2	0	0	4	2	2	1	125	62
Total	468	282	48	24	62	34	32	20	38	24	648	384