



# 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:** Sporadic influenza activity
- **National:** During March 23-29, activity continued to decrease in most U.S. regions

## Updates of Interest:

- **International:** Additional new human cases of avian influenza H7N9 and MERS-CoV continue to be reported

## Table of Contents

Influenza Surveillance Reports	
Michigan.....	1-3
National.....	3-4
International.....	4
Novel Influenza and Other News	
WHO Pandemic Phase.....	4
Avian Influenza in Humans.....	4-6
MERS-CoV.....	5

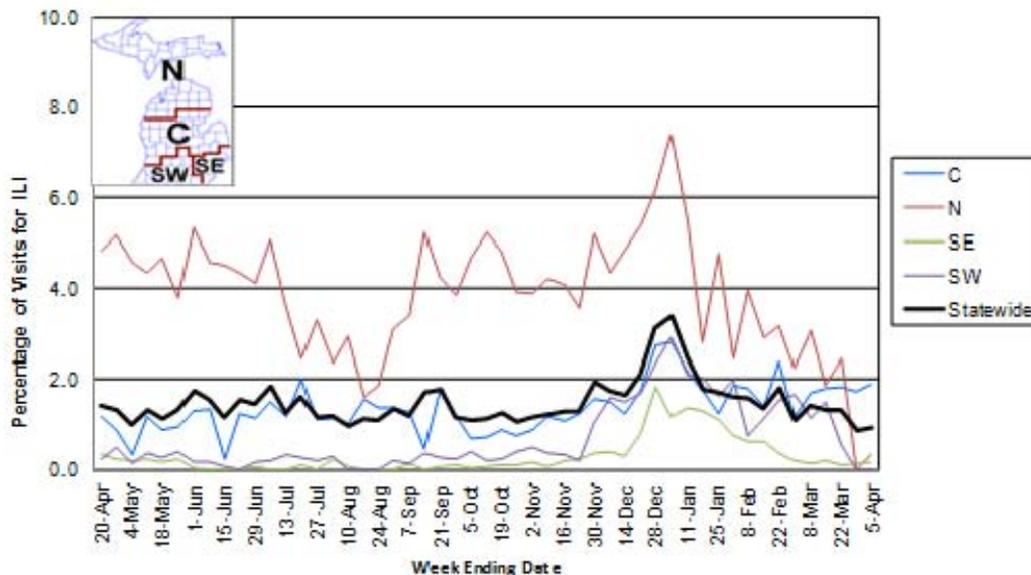
## Influenza Surveillance Reports

**Michigan Disease Surveillance System (as of April 10):** MDSS influenza data for the week ending April 5, 2014 indicated that compared to levels from the previous week, both individual and aggregate reports remained steady. Aggregate reports are moderately lower than levels seen during the same time period last year, while individual reports are slightly lower.

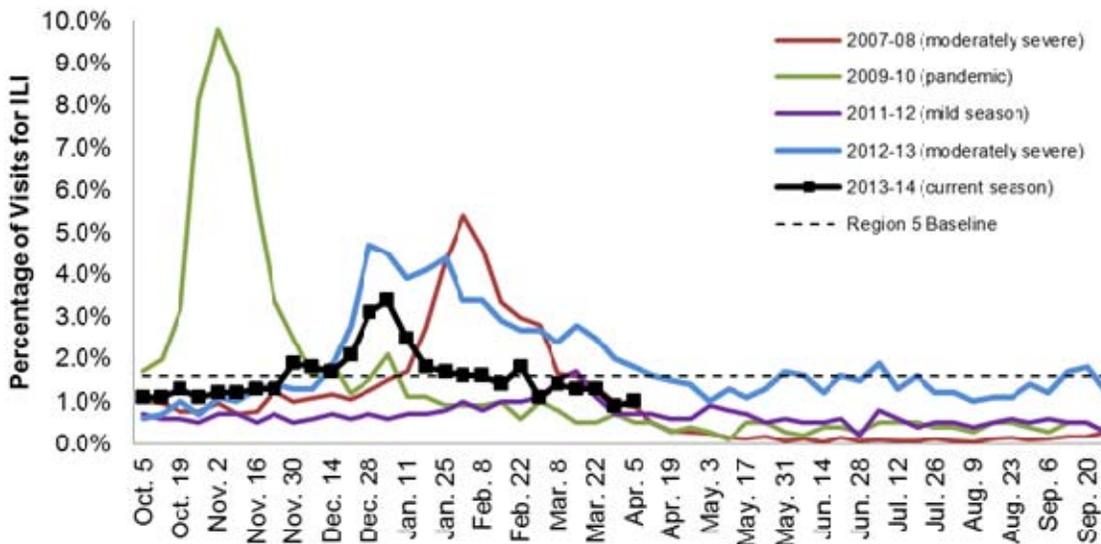
**Emergency Department Surveillance (as of April 10):** Emergency department visits due to constitutional complaints increased slightly during the week ending April 5, 2014, while respiratory complaints remained steady. Emergency department visits from both constitutional and respiratory complaints are slightly lower than levels during the same time period last year. Respiratory complaints are at fall/winter baseline levels. In the past week, there were 3 constitutional alerts in the SW(1), C(1) and N(1) Influenza Surveillance Regions and 2 respiratory alerts in the SW(1) and C(1) Regions.

**Sentinel Provider Surveillance (as of April 10):** During the week ending April 5, 2014, the proportion of visits due to influenza-like illness (ILI) increased to 1.0% overall; this is below the regional baseline (1.6%). A total of 72 patient visits due to ILI were reported out of 7,569 office visits. Data were provided by 23 sentinel sites from the following regions: Central (9), North (3), Southeast (9), and Southwest (2). ILI activity remained the same in one region: SW (0.0%) and increased in three regions: C (1.9%), N (0.3%), and SE (0.2%). 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 April 10):** 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. 8 new cases (3 pediatric, 5 adult) were identified since the last report. Two previous reported cases (2 pediatric) were removed from case counts upon further review. As of April 10<sup>th</sup>, there have been 225 influenza hospitalizations (65 pediatric, 160 adult) within the catchment area. Based on these counts, there are 31.1 pediatric influenza hospitalizations/100,000 population and 23.5 adult influenza hospitalizations/100,000 population within the catchment area.

The MDCH Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide. 7 hospitals (SE,SW,C,N) reported for the week ending April 5, 2014. Results are listed in the table below.

Age Group	Hospitalizations Reported During the Previous Week	Total Hospitalizations 2013-14 Season
0-4 years	2 (2C)	52 (7SE,2SW,43C,4N)
5-17 years	0	21 (1SE,20C)
18-49 years	2 (1SW,1C)	117 (63SE,4SW,41C,9N)
50-64 years	0	138 (87SE,5SW,31C,15N)
≥65 years	1 (1SE)	115 (72SE,7SW,15C,21N)
<b>Total</b>	<b>5 (1SE,1SW,3C)</b>	<b>447 (230SE,18SW,150C,49N)</b>

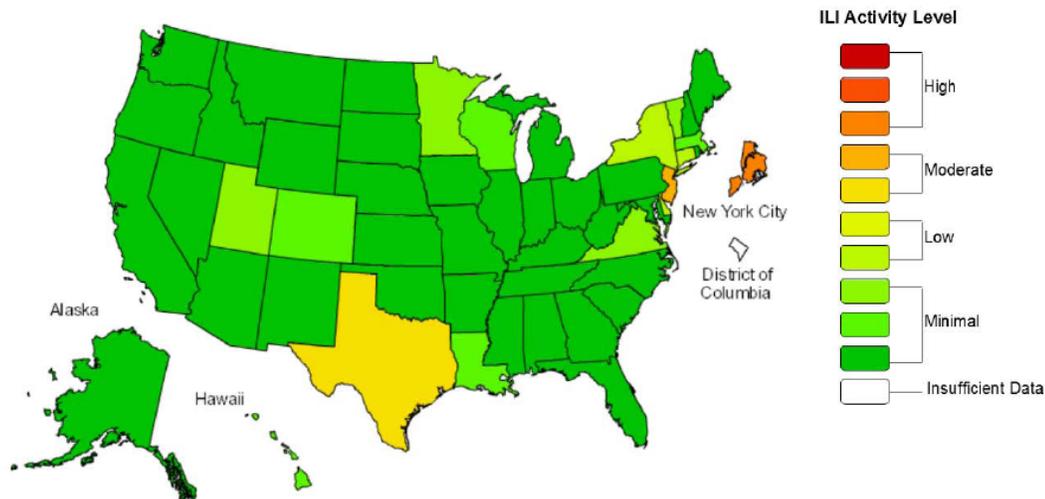
**Laboratory Surveillance (as of April 5):** During March 30-April 5, 3 positive 2009 A/H1N1pdm (3SW) and 1 B (1C) influenza results were reported by MDCH Bureau of Laboratories. For the 2013-14 season (starting Sept. 29, 2013), MDCH has identified 360 positive influenza results:

- Influenza 2009 A/H1N1pdm: 331 (74SE,124SW,94C,38N)
- Influenza A/H3: 13 (10SE,2SW,1C)
- Influenza A unsubtypeable: 1 (1SE)
- Influenza A and B (LAIV recovery): 1 (1SE)
- Influenza B: 14 (7SE,2SW,4C,1N)
- RSV: 2 (2SW)
- Adenovirus: 1 (1SE)
- Parainfluenza: 2 (1SE,1SW)
- Human metapneumovirus: 4 (4SW)

11 sentinel labs (SE,SW,C,N) reported for the week ending April 5, 2014. 9 labs (SE,SW,C) reported low influenza A activity. 6 labs (SE,SW,C) had sporadic influenza B activity. 3 labs (SE,C) had sporadic parainfluenza activity. 8 labs (SE,SW,C) had low or declining RSV activity. 4 labs (SE,SW) had low or steady hMPV activity. 4 labs (SE,SW) reported sporadic adenovirus activity. Most testing volumes are at low to moderate levels and continue to slowly decline.



**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet**  
**2013-14 Influenza Season Week 13 ending Mar 29, 2014**



This map uses the proportion of outpatient visits to healthcare providers for influenza-like illness to measure the ILI activity level within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels. Data collected in ILINet may disproportionately represent certain populations within a state, and therefore, may not accurately depict the full picture of influenza activity for the whole state. Data displayed on this map are based on data collected in ILINet, whereas the State and Territorial flu activity map are based on reports from state and territorial epidemiologists.

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

**International (WHO [edited], April 7):** Globally, the northern hemisphere influenza season appeared to be approaching interseasonal levels in most countries. The proportion of influenza B detections however increased slightly in many regions, especially Asia, the Middle East, and North America. In North America, influenza levels continued to decline and the season was coming to its end. Late season circulation of influenza B continued, however, the overall levels of influenza remained low. In Eastern Asia, activity was approaching interseasonal levels, with influenza B emerging as the current predominant virus. This timing aligns with previous seasonal trends in the region. Mongolia continues to experience elevated activity, despite levels beginning to decline. In Tropical Asia, activity continued to decline, aligning with global seasonal trends. While in Thailand activity remained elevated, small decreases were seen. In Northern Africa and Western Asia, activity remained low despite the increasing proportion of influenza B positive samples. In the Caribbean, activity remained low and at interseasonal levels in most countries, however ILI activity and influenza detections increased in Guyana and Guadeloupe. In the Southern Hemisphere, activity remained low and detections were sporadic. Based on FluNet reporting (as of 3 April 2014), during 9 March to 22 March 2014, National Influenza Centres and other national influenza labs from 96 countries, areas or territories reported data. The WHO GISRS labs tested more than 65498 specimens. 10986 were positive for influenza viruses, of which 7407 (67.4%) were typed as A and 3579 (32.6%) as B. Of the sub-typed A viruses, 2747 (57%) were A(H1N1)pdm09 and 2072 (43%) were A(H3N2). Of the characterized B viruses, 222 (87.1%) belong to the B-Yamagata lineage and 33 (12.9%) 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 SPORADIC INFLUENZA ACTIVITY to CDC for the week ending April 5, 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], April 3):** On 31 March 2014, the National Health and Family Planning Commission (NHFPC) of China notified WHO of three additional laboratory-confirmed cases of human infection with avian influenza A(H7N9) virus.

Details of the cases reported to WHO are as follows:

- A 35 year-old man from Wuxi City, Jiangsu Province. He became ill on 17 March, and was admitted to hospital on 24 March. He is currently in a critical condition.
- A 72 year-old man from Fuzhou City, Fujian Province. He became ill on 23 March, and was admitted to hospital on 27 March. He is currently in a severe condition. The patient has a history of exposure to poultry.
- A 65 year-old man from Shaoyang City, Hunan Province. He became ill on 21 March and was admitted to hospital on 29 March. He is currently in a severe condition. The patient has a history of exposure to poultry.

The full report is available online at [http://www.who.int/csr/don/2014\\_04\\_03/en/](http://www.who.int/csr/don/2014_04_03/en/).

**International, Human (WHO [edited], April 4):** On 3 April 2014, the National Health and Family Planning Commission (NHFPC) of China notified WHO of two additional laboratory-confirmed case of human infection with avian influenza A(H7N9) virus.

Details of the cases reported to WHO are as follows:

- A 28 year-old man from Suzhou City, Jiangsu province. He became ill on 23 March, and was admitted to hospital on 28 March. He is currently in a severe condition. The patient has a history of exposure to poultry.
- A 68 year-old man from Guangzhou City, Guangdong province. He became ill on 20 March and was admitted to hospital on 24 March. He is currently in a critical condition. The patient has a history of exposure to poultry.

The full report is available online at [http://www.who.int/csr/don/2014\\_04\\_04/en/](http://www.who.int/csr/don/2014_04_04/en/).

**International, Human (WHO [edited], April 8):** On 4 April 2014, the Centre for Health Protection (CHP) of the Department of Health, Hong Kong SAR, China, notified WHO of an additional laboratory-confirmed case of human infection with avian influenza A(H7N9) virus.

Details of the case reported to WHO are as follows:

- A 65 year-old man from Longgang, Shenzhen, Guangdong province. He became ill on 31 March in Shenzhen. He travelled to Hong Kong, SAR on 3 April, and was admitted to hospital upon arrival. He is currently in a stable condition. The patient has a history of exposure to poultry.

The full report is available online at [http://www.who.int/csr/don/2014\\_04\\_08\\_HKSAR/en/](http://www.who.int/csr/don/2014_04_08_HKSAR/en/).

**International, Human (WHO [edited], April 8):** On 4 April 2014, the National Health and Family Planning Commission (NHFPC) of China notified WHO of 3 additional laboratory-confirmed cases of human infection with avian influenza A(H7N9) virus.

Details of the cases reported to WHO are as follows:

- A 30 year-old man from Tongling City, Anhui province. He became ill on 23 March and was admitted to hospital on 29 March. He is currently in a critical condition.
- A 37 year-old man from Shenzhen City, Guangdong province. He became ill on 25 March and was admitted to hospital on 1 April. He is currently in a stable condition. The patient has a history of exposure to poultry.
- A 62 year-old man from Heyuan City, Guangdong province. He became ill on 23 March and was admitted to hospital on 30 March. He is currently in a critical condition. He has a history of exposure to poultry.

The full report is available online at [http://www.who.int/csr/don/2014\\_04\\_08/en/](http://www.who.int/csr/don/2014_04_08/en/).

**International, Human (WHO [edited], April 10):** On 8 April 2014, the National Health and Family Planning Commission (NHFPC) of China notified WHO of two additional laboratory-confirmed cases of human infection with avian influenza A(H7N9) virus.

Details of the cases reported to WHO are as follows:

- A 73 year-old man from Taizhou city, Jiangsu province. He became ill on 26 March, was admitted to a hospital on 30 March and is currently in a critical condition.
- A 28 year-old woman from Suzhou city, Jiangsu province. She became ill on 26 March, was admitted to a hospital on 30 March and is currently in a critical condition.

The full report is available online at [http://www.who.int/csr/don/2014\\_04\\_10\\_h7n9/en/](http://www.who.int/csr/don/2014_04_10_h7n9/en/).

**International, MERS-CoV (WHO [edited], April 10):** 10 April 2014 - The Ministries of Health of Saudi Arabia and the United Arab Emirates (UAE) recently announced additional laboratory-confirmed cases of infection with Middle East respiratory syndrome coronavirus (MERS-CoV).

The 4 additional laboratory-confirmed cases reported to WHO by the Ministry of Health of Saudi Arabia on 28 March and 2 April 2014 include:

- A 26 year-old man from Jeddah. He became ill on 22 March, was hospitalised on 23 March, and died on 6 April.
- A 26 year-old man from Jeddah. He became ill on 16 March and has been hospitalised since 25 March.
- A 77 year-old woman from Riyadh region. She became ill on 25 March and is currently in a stable condition. She is not known to have a history of exposure to animals.
- A 59 year-old man from Riyadh region who became ill on 22 March, 2014. He is not known to have contact with animals or a known case.

The additional laboratory-confirmed case reported to WHO by the Ministry of Health of the UAE on 30 March includes:

- A 64 year-old man from Abu Dhabi with underlying medical conditions. He became ill on 21 March, was hospitalised on 25 March and died on 30 March. He had underlying medical conditions. He did not have contact with a previously laboratory-confirmed case, but has had exposure to animals. The patient visited a camel farm in Harb city in Saudi Arabia on 10 March and visited Nezwa city in Oman for a day on 20 March. He owned an animal farm in the UAE with poultry and sheep, but had no recent visit to the farm. Investigation into the family and health care contacts is ongoing.

Globally, from September 2012 to date, WHO has been informed of a total of 211 laboratory-confirmed cases of infection with MERS-CoV, including 88 deaths.

The full report is available online at [http://www.who.int/csr/don/2014\\_04\\_10\\_mers/en/](http://www.who.int/csr/don/2014_04_10_mers/en/).

**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\\_AI-Asia.htm](http://www.oie.int/download/AVIAN%20INFLUENZA/A_AI-Asia.htm).

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

**MDCH Contributors**

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**Table. H5N1 Influenza in Humans – As of January 24, 2014.** [http://www.who.int/influenza/human\\_animal\\_interface/EN\\_GIP\\_20130124\\_CumulativeNumberH5N1cases.pdf](http://www.who.int/influenza/human_animal_interface/EN_GIP_20130124_CumulativeNumberH5N1cases.pdf). Downloaded 02/05/2014. Cumulative lab-confirmed cases reported to WHO. Total cases include deaths.

Country	2003-2010		2011		2012		2013		2014		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	2	0	3	0	1	1	0	0	7	1
Cambodia	10	8	8	8	3	3	26	14	0	0	47	33
Canada	0	0	0	0	0	0	1	1	0	0	1	1
China	40	26	1	1	2	1	2	2	0	0	45	30
Djibouti	1	0	0	0	0	0	0	0	0	0	1	0
Egypt	119	40	39	15	11	5	4	3	0	0	173	63
Indonesia	171	141	12	10	9	9	3	3	0	0	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	119	59	0	0	4	2	2	1	1	1	126	63
Total	516	306	62	34	32	20	39	25	1	1	650	386