



# 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 activity
- **National:** During November 4-10, influenza activity increased in the United States

## Updates of Interest

- **International:** FAO reports that H5N1 avian influenza outbreaks in poultry and wild birds decreased since mid-2011

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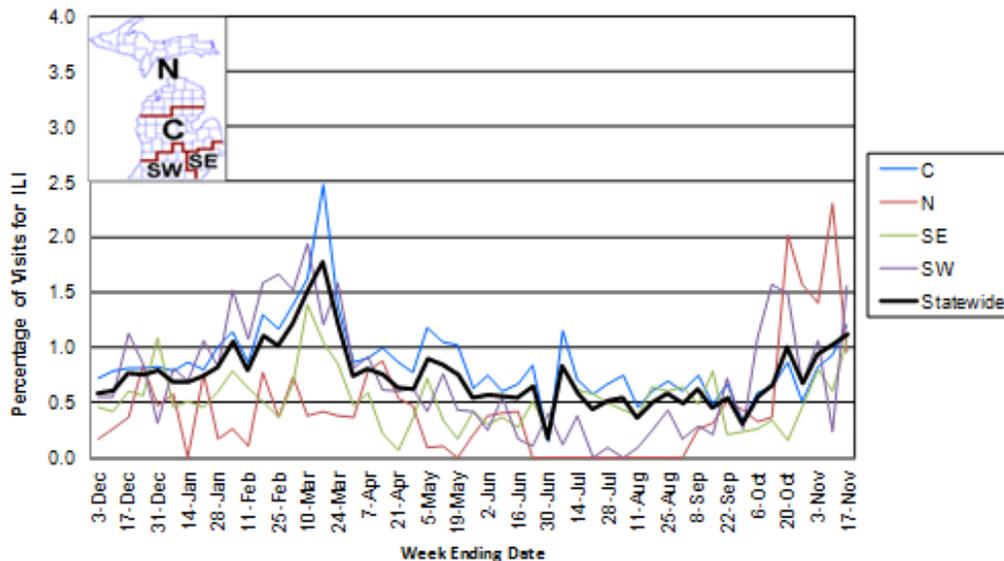
## Influenza Surveillance Reports

**Michigan Disease Surveillance System (as of November 21):** MDSS data for the week ending November 17<sup>th</sup> indicated that compared to levels from the previous week, aggregate reports remained steady, while individual reports increased slightly but remain low. Aggregate reports are slightly lower than levels seen during the same time period last year, while individual reports are slightly increased.

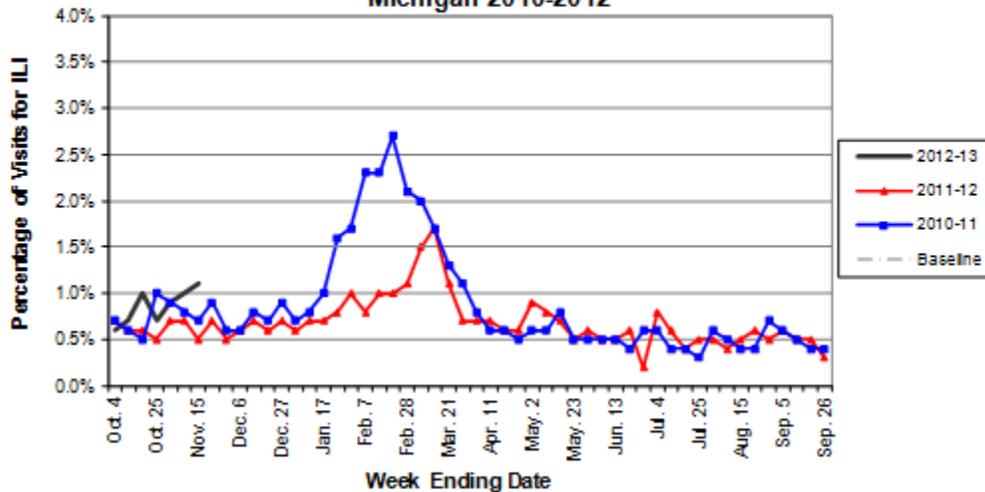
**Emergency Department Surveillance (as of November 21):** Compared to levels from the week prior, emergency department visits from constitutional complaints increased slightly, while respiratory complaints remained steady. Constitutional complaints are similar to levels reported during the same time period last year, while respiratory complaints are lower. In the past week, there were ten constitutional alerts in the SE(1), SW(3), C(4) and N(2) Influenza Surveillance Regions and four respiratory alerts in the SW(1), C(2) and N(1) Regions.

**Sentinel Provider Surveillance (as of November 21):** During the week ending November 17, 2012, the proportion of visits due to influenza-like illness (ILI) slightly increased to 1.1% overall; this is below the regional baseline of (1.5%). A total of 107 patient visits due to ILI were reported out of 9,540 office visits. Data were provided by thirty-two sentinel sites from the following regions: C (14), N (5), SE (12) and SW (1). ILI activity increased in three surveillance regions: Central (1.2%), Southeast (1.1%), and Southwest (1.6%); and decreased in the remaining region: North (1.0%). 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  
2011-2012 and 2012-13 Flu Seasons



**Percentage of Visits for Influenza-like Illness (ILI) Reported by the US Outpatient Influenza-like Illness Surveillance Network (ILINet): Michigan 2010-2012**



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 Cristi Carlton at 517-335-9104 or CarltonC2@michigan.gov for more information.

**Hospital Surveillance (as of November 17):** The 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, 2012, in the Clinton, Eaton, Genesee, and Ingham counties. Three new pediatric cases were identified during the past week. As of November 17<sup>th</sup>, there have been 4 influenza hospitalizations (1 adult and 3 pediatric cases) 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 November 17, 2012. Results are listed in the table below.

Age Group	Hospitalizations Reported During Current Week	Total Hospitalizations 2012-13 Season
0-4 years	2 (1SE, 1C)	2 (1SE, 1C)
5-17 years	1 (1N)	1 (1N)
18-49 years	0	0
50-64 years	0	0
≥65 years	0	0
<b>Total</b>	<b>3</b>	<b>3</b>

**Laboratory Surveillance (as of November 17):** During November 11-17, four positive influenza A/H3 results (1SE, 2SW, 1N) were reported by MDCH BOL. For the 2012-13 season (starting September 30, 2012), MDCH has identified 17 influenza results:

- Influenza A(H3): 7 (4SE, 2SW, 1N)
- Influenza B: 9 (3SE, 1SW, 5C)
- Influenza A(H1N1)pdm09: 1 (1SE)
- Parainfluenza: 3 (1SW, 2N)

13 sentinel labs (SE, SW, C, N) reported for the week ending November 17, 2012. 2 labs (SW, C) reported sporadic influenza A activity. 2 labs (SE, C) reported sporadic or low parainfluenza activity. 5 labs (SE, C) reported low or slightly increasing RSV activity. No labs reported influenza B or HMPV activity. Most testing volumes are at low or moderate levels.

**Michigan Influenza Antigenic Characterization (as of November 21):** For the 2012-13 season, 8 Michigan influenza B specimens have been characterized at MDCH BOL. 7 specimens are B/Wisconsin/01/2010-like, matching the B component of the 2012-13 influenza vaccine. 1 influenza B specimen was characterized as B/Brisbane/60/2008-like, which is not included in the 2012-13 vaccine.

**Michigan Influenza Antiviral Resistance Data (as of November 21):** For the 2012-13 season, no influenza isolates have been tested for antiviral resistance.

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>.

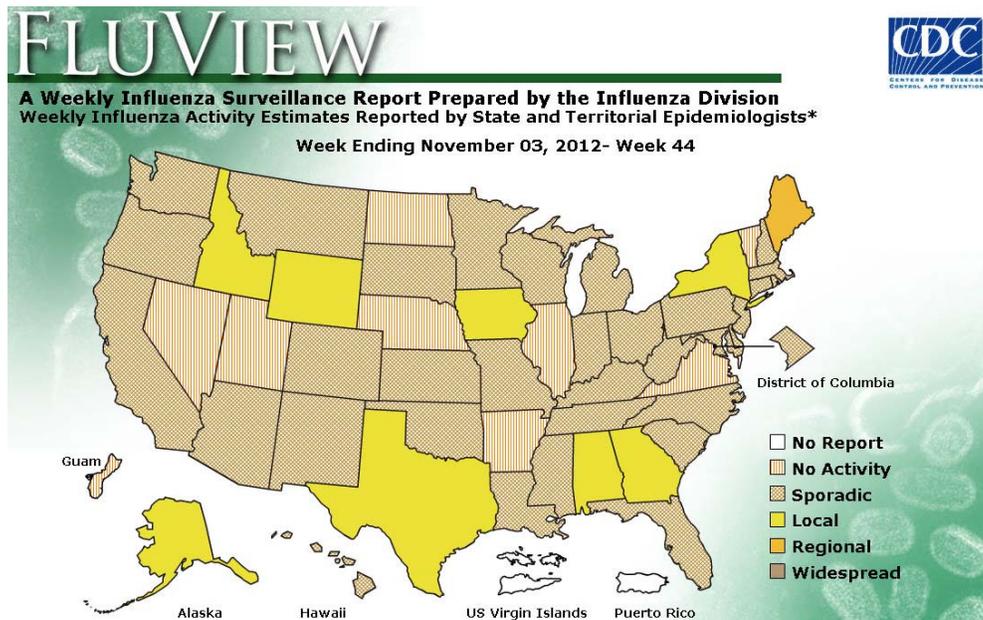
**Influenza-associated Pediatric Mortality (as of November 21):** No pediatric influenza-associated influenza mortalities have been reported to MDCH for the 2012-13 season.

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).

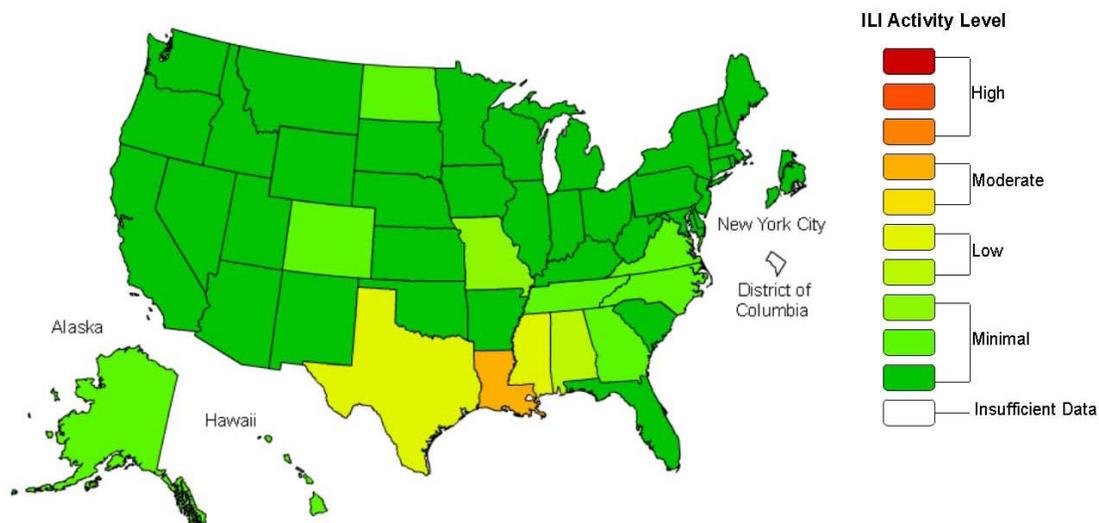
**Influenza Congregate Settings Outbreaks (as of November 21):** No new respiratory outbreaks were reported to MDCH during the past week. 1 respiratory outbreak (1C) has been reported to MDCH during the 2012-13 season; testing results are listed below.

- Influenza B: 1 (1C)

**National (CDC [edited], November 16):** During week 45 (November 4-10, 2012), influenza activity increased in the United States. Of 4,147 specimens tested and reported by U.S. WHO and NREVSS collaborating laboratories during week 45, 311 (7.5%) were positive for influenza. The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold. No influenza-associated pediatric deaths were reported. The proportion of outpatient visits for influenza-like illness (ILI) was 1.4%, which is below the national baseline of 2.2%. All 10 regions reported ILI below region-specific baseline levels. One state experienced moderate ILI activity, three states experienced low ILI activity; New York City and 46 states experienced minimal ILI activity, and the District of Columbia had insufficient data. The geographic spread of influenza in 4 states was reported as regional; 8 states reported local activity; the District of Columbia and 32 states reported sporadic activity; Guam and 5 states reported no influenza activity, and Puerto Rico, the U.S. Virgin Islands, and 1 state did not report.



**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet  
 2012-13 Influenza Season Week 45 ending Nov 10, 2012**



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.

The complete FluView report is available online at <http://www.cdc.gov/flu/weekly/fluactivity.htm>.

**International (WHO [edited], November 9):** Many countries of the Northern Hemisphere temperate region reported increasing detections of influenza viruses, particularly in North America and Western Europe, however none have crossed their seasonal threshold for ILI/ARI consultation rates. Several countries in the tropical areas experienced active transmission of influenza virus in recent weeks. In the Americas, Nicaragua and Costa Rica reported mainly influenza B virus detections. In Asia, India, Sri Lanka, Nepal, and Cambodia are all reporting a mixture of all three virus subtypes. In Sub-Saharan Africa, Cameroon and Ethiopia have reported an increase in influenza virus detections. Influenza activity in the temperate countries of the Southern Hemisphere is at inter-seasonal levels. A review of the 2012 southern hemisphere influenza season was published in the Weekly Epidemiological Record (WER) 2 November 2012, vol. 87, 44 (pp. 421–436)

The entire WHO report is available 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 FLU ACTIVITY to CDC for the week ending November 17, 2012.

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. It is expected that the pandemic virus will behave as a seasonal influenza A virus. It is important to maintain surveillance and update pandemic preparedness/response plans accordingly.

**International, Poultry and Wild Birds (CIDRAP, November 19):** The number of reported H5N1 avian influenza outbreaks in poultry and wild birds has decreased since mid 2011 and was down sharply in the second quarter of this year, the United Nations Food and Agriculture Organization (FAO) said in a quarterly update on the ongoing situation.

Six countries reported a total of 98 domestic poultry outbreaks and 5 wild bird cases or outbreaks from April through June of this year, which was far below the 508 outbreaks reported in the second quarter of 2011, the FAO said. The affected countries were Bangladesh, Cambodia, China (including Hong Kong), Egypt, India, and Indonesia.

The global number of H5N1 outbreaks dropped from 2003 to mid 2008, increased again from mid-2008 to mid-2011, and has dropped since then, according to the FAO figures.

Factors in the second-quarter decline included lower numbers reported from Egypt and Indonesia and an absence of reported outbreaks in countries where the disease has occurred sporadically, such as Japan, South Korea, and Vietnam, the agency reported.

But the FAO cautioned that not all outbreaks are reported, making it difficult to tell if the world has actually made progress in H5N1 control.

"Clinical signs [of disease] can be masked by the use of regular vaccination in poultry populations. As a result, outbreaks are underreported," the report says. Also, some countries have little information on the disease status in their commercial poultry sectors, it adds.

Outbreaks and affected countries were fewer in the second quarter than in the first quarter of this year, which is typical because the April-through-June period generally marks the end of the H5N1 season, the FAO said. From January through March there were 198 outbreaks in 11 countries.

Egypt reported 19 outbreaks in the second quarter, including 15 in mostly unvaccinated household flocks and four in vaccinated commercial flocks, the report says.

Among 374 Egyptian commercial farms where active surveillance was conducted, the virus was found on only three. Active surveillance conducted in household poultry in 103 villages produced two positive samples, the FAO said.

The report also notes that 76 samples from commercial farms in 11 Egyptian governorates tested positive for low-pathogenicity H9 flu viruses.

Indonesia continues to report "a high proportion" of H5N1 outbreaks, but outbreaks in the second quarter were lower than in previous years, the FAO said. Unlike other countries, however, Indonesia counts H5N1 outbreaks at the village level rather than the household level, and the report does not offer specific year-on-year comparisons.

Officers in Indonesia's Participatory Disease Surveillance and Response (PDSR) program visited 1,078 villages in May, of which 62 (5.8%) were infected, the report says. Fifty-seven of the 62 infections were new. Over the preceding 12 months, about 5.5% of villages visited were classified as newly infected, the FAO reported.

In China, three poultry H5N1 outbreaks were reported in three provinces, while five wild-bird cases were reported in Hong Kong, the report says.

Since 2011 China has had an apparent increase in outbreaks in several northern provinces and other areas outside the identified high-risk zones in the south and east, the FAO said. It said more investigation is needed to uncover the reason for the increase.

The agency reported the following about other countries and regions:

- Bangladesh and India had one outbreak apiece, but the pattern of outbreaks in India suggests that H5N1 may be endemic in some regions.
- Vietnam officially reported no outbreaks, but the virus may be endemic in the southern part of the country.
- No outbreaks were reported in the Middle East. The last one in that region was reported in Israel in the first quarter of this year.
- The last wild bird outbreak in Europe was reported in Russia in June 2010.
- The last country to see its first H5N1 outbreak was Bhutan in February 2010.

The report says that nine confirmed human cases of H5N1 illness were reported in the second quarter of 2012 in four countries: Cambodia, China, Egypt, and Indonesia.

So far this year, 30 human H5N1 cases and 19 deaths have been reported, with the most recent case reported in Indonesia in August, according to the World Health Organization (WHO). In 2011 there were 62 cases with 34 deaths.

View the article at <http://www.cidrap.umn.edu/cidrap/content/influenza/avianflu/news/nov1912fao.html>.

**International, Poultry (OIE [edited], November 19):** High path avian influenza H5N1; Bangladesh  
Outbreak 1: Brothers poultry farm, Pabur, Kapasia, Gazipur, DHAKA  
Date of start of the outbreak: 23/10/2012; Outbreak status: Resolved; Epidemiological unit: Farm  
Species: Birds; Susceptible: 4191; Cases: 156; Deaths: 156; Destroyed: 4035  
Affected population: A commercial poultry farm

**Michigan Wild Bird Surveillance (USDA, as of November 21):** For the 2012 season (April 1, 2012-March 31, 2013), highly pathogenic avian influenza H5N1 has not been recovered from the 68 samples tested nationwide. For more information, visit <http://www.nwhc.usgs.gov/ai/>. To learn about avian influenza surveillance in wild birds or to report dead waterfowl, go to the Emerging Disease website at <http://www.michigan.gov/emergingdiseases>.

**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).

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**Table. H5N1 Influenza in Humans – As of August 10, 2012.** [http://www.who.int/influenza/human\\_animal\\_interface/EN\\_GIP\\_20120810CumulativeNumberH5N1cases.pdf](http://www.who.int/influenza/human_animal_interface/EN_GIP_20120810CumulativeNumberH5N1cases.pdf). Downloaded 8/13/2012. Cumulative lab-confirmed cases reported to WHO. Total cases include deaths.

Country	2003-2005		2006		2007		2008		2009		2010		2011		2012		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Azerbaijan	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	9	6	13	8	5	3	4	4	7	4	2	1	1	1	2	1	43	28
Djibouti	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Lao PDR	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	22	14	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Vietnam	93	42	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	148	79	115	79	88	59	44	33	73	32	48	24	62	34	30	19	608	359