



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 week 46 (November 11-17, 2012), influenza activity increased in the U.S.

Updates of Interest

- **International:** WHO has been notified of 4 additional cases, including one death, due to infection with the novel coronavirus

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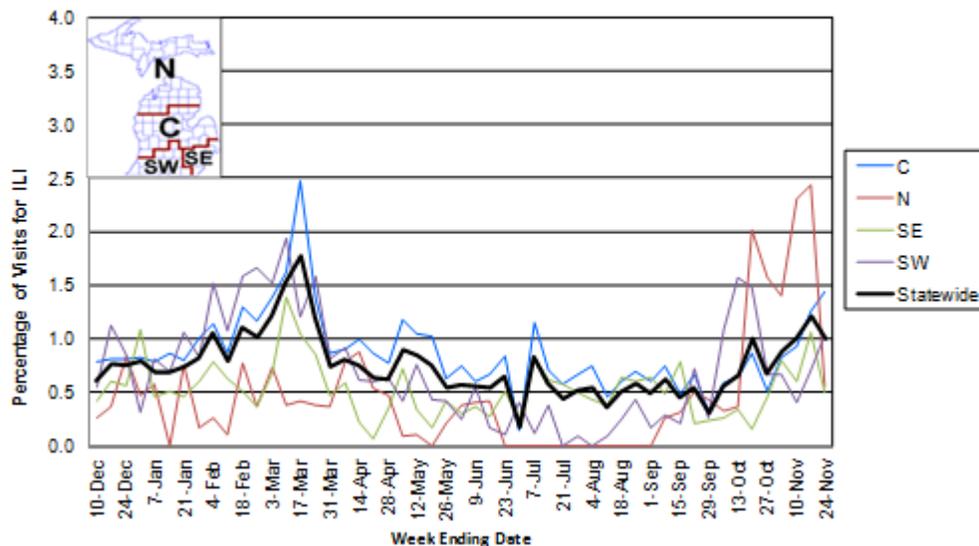
Influenza Surveillance Reports

Michigan Disease Surveillance System (as of November 29): MDSS data for the week ending November 24th indicated that compared to levels from the previous week, both aggregate and individual reports remained steady. Aggregate reports are similar to levels seen during the same time period last year, while individual reports are slightly increased.

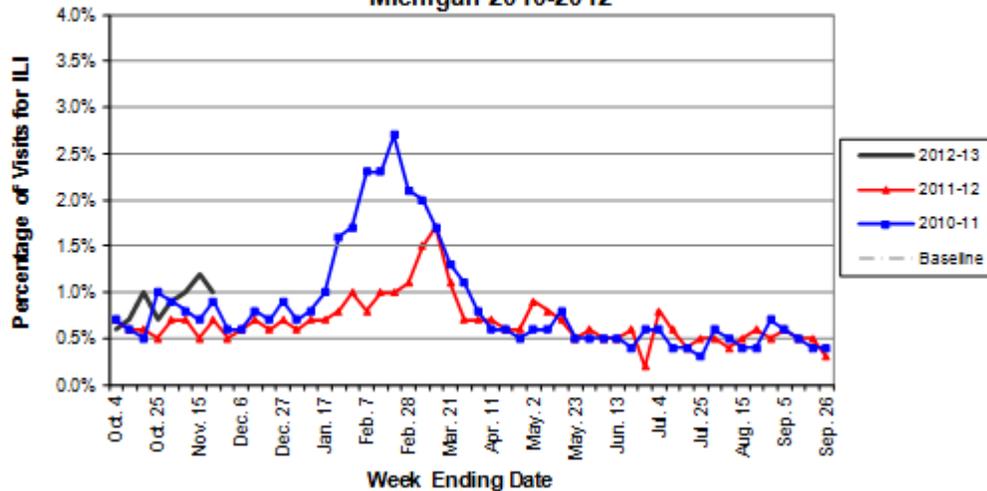
Emergency Department Surveillance (as of November 29): Compared to levels from the week prior, emergency department visits from constitutional complaints increased slightly, while respiratory complaints remained steady. Constitutional complaints are similar to levels reported during the same time period last year, while respiratory complaints are lower. In the past week, there were nine constitutional alerts in the SW(3) and C(6) Influenza Surveillance Regions and ten respiratory alerts in the SW(6) and C(4) Regions.

Sentinel Provider Surveillance (as of November 29): During the week ending November 24, 2012, the proportion of visits due to influenza-like illness (ILI) slightly decreased to 1.0% overall; this is below the regional baseline of (1.5%). A total of 79 patient visits due to ILI were reported out of 7,853 office visits. Data were provided by thirty-three sentinel sites from the following regions: C (13), N (4), SE (10) and SW (6). ILI activity increased in two surveillance regions: Central (1.4%) and Southwest (1.0%); and decreased in the remaining two regions: North (0.5%) and Southeast (0.5%). 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 24): 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. One new adult case was identified during the past week. As of November 24th, there have been 5 influenza hospitalizations (2 adult and 3 pediatric cases) 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 November 24, 2012. Results are listed in the table below.

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

Laboratory Surveillance (as of November 24): During November 18-24, 8 positive influenza A/H3 results (2SE, 3SW, 2C, 1N) and 1 influenza B (1SW) were reported by MDCH BOL. For the 2012-13 season (starting September 30, 2012), MDCH has identified 26 influenza results:

- Influenza A(H3): 15 (6SE, 5SW, 2C, 2N)
- Influenza B: 10 (3SE, 2SW, 5C)
- Influenza A(H1N1)pdm09: 1 (1SE)
- Parainfluenza: 6 (2SW, 4N)

16 sentinel labs (SE, SW, C, N) reported for the week ending November 24, 2012. 5 labs (SE, SW, C) reported sporadic or low influenza A activity. 2 labs (SE, C) reported sporadic influenza B positives. 2 labs (SE, C) reported sporadic parainfluenza activity. 4 labs (SE, C) reported sporadic or low RSV activity. No labs reported HMPV activity. Most testing volumes are at low or moderate levels.

Michigan Influenza Antigenic Characterization (as of November 29): 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 29): 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>.

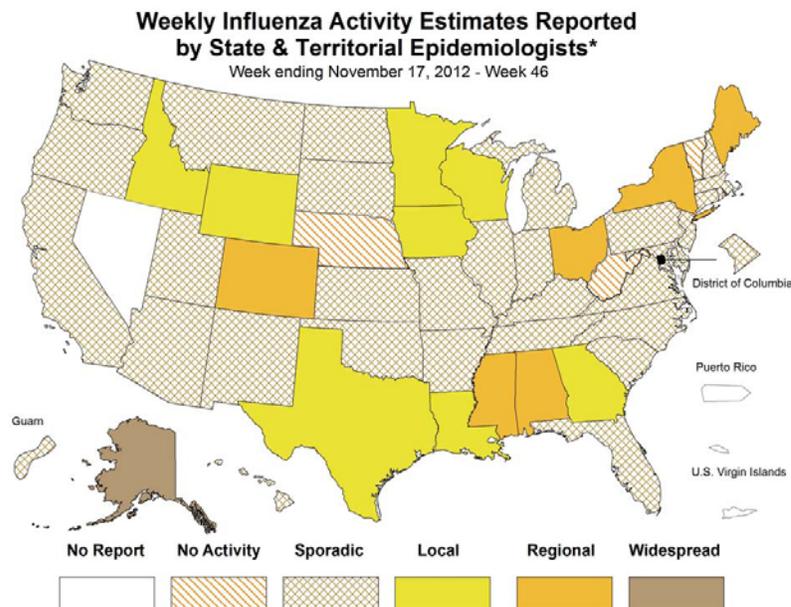
Influenza-associated Pediatric Mortality (as of November 29): No pediatric influenza-associated influenza mortalities have been reported to MDCH for the 2012-13 season.

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.

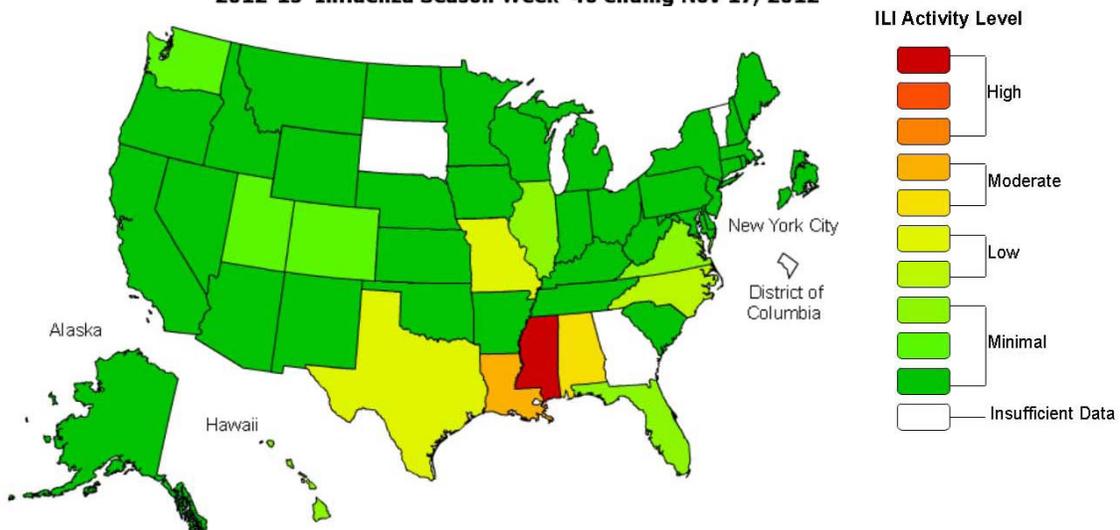
Influenza Congregate Settings Outbreaks (as of November 29): No new respiratory outbreaks were reported to MDCH during the past week. 1 respiratory outbreak (1C) has been reported to MDCH during the 2012-13 season; testing results are listed below.

- Influenza B: 1 (1C)

National (CDC [edited], November 21): During week 46 (November 11-17, 2012), influenza activity increased in the U.S. Of 3,742 specimens tested and reported by U.S. WHO and NREVSS collaborating laboratories during week 46, 494 (13.2%) were positive for influenza. The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold. One influenza-associated pediatric death was reported and was associated with an influenza A (H3) virus. The proportion of outpatient visits for influenza-like illness (ILI) was 1.6%, which is below the national baseline of 2.2%. All 10 regions reported ILI below region-specific baseline levels. One state experienced high ILI activity, two states experienced moderate ILI activity; 3 states experienced low ILI activity; New York City and 41 states experienced minimal ILI activity, and the District of Columbia and 3 states had insufficient data. The geographic spread of influenza in 1 state was reported as widespread; 6 states reported regional activity; 8 states reported local activity; the District of Columbia, Guam, and 31 states reported sporadic activity; 3 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 46 ending Nov 17, 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 23): Countries of the Northern Hemisphere temperate region report increasing influenza virus detections, however none have crossed their seasonal threshold or announced the beginning of their season. Countries in southern and southeast Asia, except Cambodia, reported decreasing influenza virus detections. Cambodia has reported increased detections of influenza A(H3N2) for at least 6 weeks. In Sub-Saharan Africa, Cameroon has continued to experience circulation of influenza A(H3N2) but appears to have peaked and the rate of detections has decreased. Ethiopia and Ghana reported increases in influenza A(H1N1)pdm09 while Madagascar, Kenya and Togo reported low circulation of mainly influenza B. Influenza activity in the temperate countries of the Southern Hemisphere is now at inter-seasonal levels.

The entire WHO report is available online at 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 24, 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.

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, Human (WHO, November 23): WHO has been notified of 4 additional cases, including one death, due to infection with the novel coronavirus. The additional cases have been identified as part of the enhanced surveillance in Saudi Arabia (3 cases, including 1 death) and Qatar (1 case). This brings the total of laboratory confirmed cases to 6.

Investigations are ongoing in areas of epidemiology, clinical management, and virology, to look into the likely source of infection, the route of exposure, and the possibility of human-to-human transmission of the virus. Close contacts of the recently confirmed cases are being identified and followed-up.

So far, only the 2 most recently confirmed cases in Saudi Arabia are epidemiologically linked - they are from the same family, living in the same household. Preliminary investigations indicate that these 2 cases presented with similar symptoms of illness. One died and the other recovered.

Additionally, 2 other members of this family presented with similar symptoms of illness, where one died and the other is recovering. Laboratory results of the fatal case is pending, while the case that is recovering tested negative for the novel coronavirus.

WHO continues to work with the governments of Saudi Arabia, Qatar and other international health partners to gain a better understanding of the novel coronavirus and the disease in humans. Further epidemiological and scientific studies are needed to better understand the virus.

WHO encourages all Member States to continue their surveillance for severe acute respiratory infections (SARI) and is currently reviewing the case definition and other guidance related to the novel coronavirus. Until more information is available, it is prudent to consider that the virus is likely more widely distributed than just the 2 countries which have identified cases. Member States should consider testing of patients with unexplained pneumonias for the new coronavirus even in the absence of travel or other associations with the 2 affected countries. In addition, any clusters of SARI or SARI in health care workers should be thoroughly investigated regardless of where in the world they occur.

Of the 6 laboratory confirmed cases reported to WHO, 4 cases (including 2 deaths) are from Saudi Arabia and 2 cases are from Qatar.

The notice is available online at http://www.who.int/csr/don/2012_11_23/en/index.html.

International, Human (CIDRAP [edited], November 29): A third case in a family cluster of novel coronavirus infections has been confirmed, raising the global case count to seven, and the fourth illness in the family is now listed as a probable case, the World Health Organization (WHO) has announced.

In a statement dated yesterday, the WHO also indicated that only one death has been attributed to the novel virus so far, contradicting a Nov 23 announcement that reported two deaths among the first six cases.

The WHO also offered new surveillance recommendations for the novel virus. The agency called for testing of patients in any cluster of severe, unexplained respiratory infections, regardless of location or travel history, and testing of healthcare workers who suffer unexplained pneumonia after caring for patients with severe respiratory infections.

And in a related development, the *Saudi Medical Journal* reported that the person who had the third known novel coronavirus case is a 45-year-old gym teacher who visited a farm 3 days before he got sick and who survived his severe illness despite having preexisting health problems and only one kidney.

Update on cases

In reporting on cases 3 through 6 on Nov 23, the WHO said two of the confirmed patients belonged to the same family and household in Saudi Arabia and that two more members of the same family were sick, but their cases had not been confirmed. The latest statement said three of the confirmed case-patients and the person with the probable case all belong to the same family.

The statement did not specify whether the family members are thought to have passed the virus to one another or caught it from another source. "The source of the virus is unknown, as is the mode of transmission," the statement says.

The cases occurred in the Jeddha and Riyadh areas of Saudi Arabia, which are about 850 kilometers apart, and in Doha, Qatar, the WHO noted.

The new announcement notes only one death from the novel coronavirus so far, a change from last week's statement noting two deaths among the first six cases. The WHO did not respond to a query about this point this afternoon.

The statement says all seven patients had an acute respiratory infection with signs and symptoms of pneumonia. Four patients had renal failure, and one of these died. "The remaining three patients had pneumonia that required intensive support, without renal failure, and recovered," it adds.

The WHO gave no update on the second case-patient, a Qatari man who was flown to London for treatment in September and has been hospitalized there since then.

The entire article is at <http://www.cidrap.umn.edu/cidrap/content/other/sars/news/nov2912corona.html>.

International, Poultry (OIE [edited], November 23): Low path avian influenza H5N2; Chinese Taipei Outbreak 1: Pu-Zih, CHIA-I

Date of start of the outbreak: 12/11/2012; Outbreak status: Continuing; Epidemiological unit: Farm
Species: Birds; Susceptible: 15700; Deaths: 0; Destroyed: 0

Epidemiologic comments: The notifiable avian influenza (NAI) viral infection was detected on a layer chicken farm during active surveillance and identified as H5N2 strain by virus isolation. Movement restriction was implemented on the infected farm. Clinical and epidemiological investigation in the infected farm was done and the result showed that the layers were in healthy condition without drop of egg production. The positive results of serological, virological tests and analyzed data of gene sequencing confirmed this H5N2 outbreak as LPAI. The clinical and epidemiological investigations of surrounding poultry farms were conducted.

Michigan Wild Bird Surveillance (USDA, as of November 29): 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.

For questions or to be added to the distribution list, please contact Susan Peters at peterss1@michigan.gov

Contributors

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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. 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