



# MI Flu Focus

Influenza Surveillance Updates  
Bureaus of Epidemiology and Laboratories



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## Updates of Interest

- **Michigan:** MDCH reports the first presumptive positive variant influenza H3N2 infection in a Washtenaw County child who had swine exposure at the Ingham County Fair
- **National:** Over 150 human cases of H3N2v influenza have been reported since July 2012

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### **\*\*H3N2v Influenza Update\*\***

On August 15, MDCH reported the first presumptive positive variant influenza A (H3N2) (H3N2v) infection in Michigan in a Washtenaw county child who had swine exposure at the Ingham County Fair (see press release on page 4). In addition, over 154 human cases of H3N2v have been reported in association with swine exposure since July 2012 in Indiana, Ohio, Illinois and Hawaii. The Michigan Department of Community Health issued updated guidance for healthcare providers, laboratories and local health departments on August 14 on the MDCH Influenza Website: [www.michigan.gov/flu](http://www.michigan.gov/flu). Current information on this situation and updated case counts can be found on the CDC H3N2v website at [www.cdc.gov/flu/swineflu/influenza-variant-viruses-h3n2v.htm](http://www.cdc.gov/flu/swineflu/influenza-variant-viruses-h3n2v.htm). Please call the MDCH Division of Communicable Disease at (517) 335-8165 with any questions.

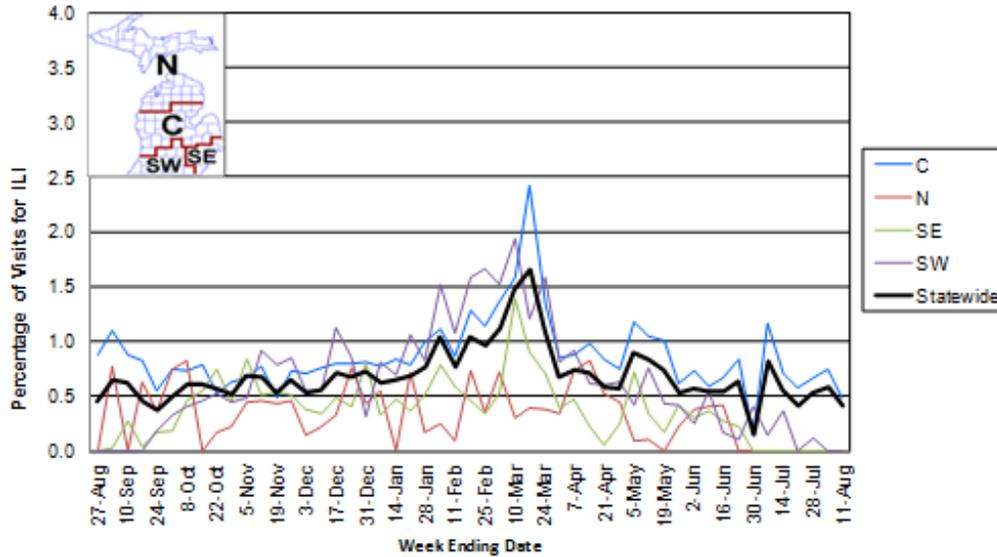
### **Influenza Surveillance Reports**

**Michigan Disease Surveillance System (as of August 16):** MDSS data for the week ending August 11<sup>th</sup> indicated that compared to levels from the previous week, aggregate and individual reports remained steady at sporadic levels. Individual and aggregate reports are similar to levels seen during the same time period last year.

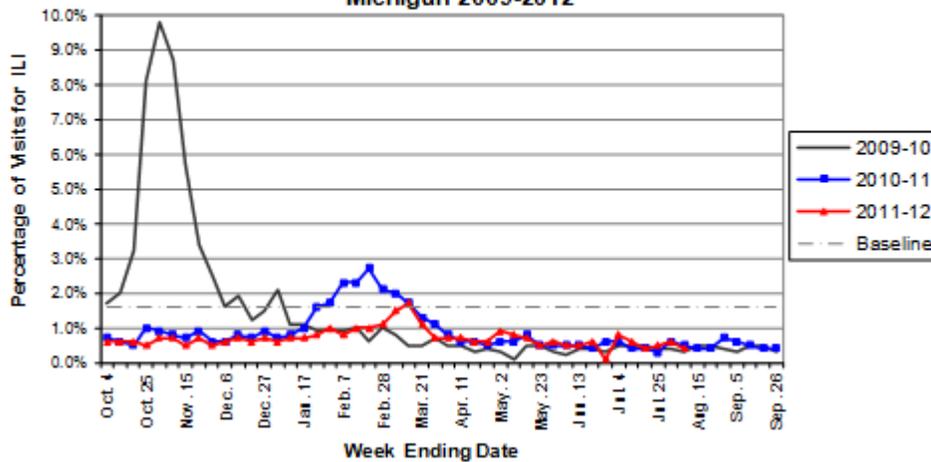
**Emergency Department Surveillance (as of August 16):** Compared to levels from the week prior, emergency department visits from constitutional complaints slightly decreased, while respiratory complaints slightly increased. Both constitutional and respiratory complaints are similar to levels reported during the same time period last year. In the past week, there were six constitutional alerts in the C(5) and N(1) Influenza Surveillance Regions and five respiratory alerts in the SE(1), SW(1), C(2) and N(1) Regions.

**Sentinel Provider Surveillance (as of August 16):** During the week ending August 11, 2012, the proportion of visits due to influenza-like illness (ILI) slightly decreased to 0.4% overall; this is below the regional baseline of (1.6%). A total of 27 patient visits due to ILI were reported out of 6,495 office visits. Data were provided by twenty sentinel sites from the following regions: C (13), N (2), SE (3) and SW (2). ILI activity decreased in one surveillance region: Central (0.6%). The remaining three surveillance regions continued to report no ILI activity: North (0.0%), Southwest (0.0%) and Southeast (0.0%). These rates may change as additional reports are received.

**Percentage of Visits for Influenza-like Illness (ILI)  
Reported by Sentinel Providers, Statewide and Regions  
2010-2011 and 2011-12 Flu Seasons**



**Percentage of Visits for Influenza-like Illness (ILI) Reported by the  
US Outpatient Influenza-like Illness Surveillance Network (ILINet):  
Michigan 2009-2012**



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 August 11):** The Influenza Hospitalization Surveillance Project provides population-based rates of severe influenza illness in Clinton, Eaton and Ingham counties. For the 2011-12 season, 27 influenza hospitalizations (9 adult, 18 pediatric) were reported in the catchment area.

The MDCH Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide. 3 hospitals (SE, SW) reported for the week ending August 11, 2012. Results are listed in the table below.

Age Group	Hospitalizations Reported During Current Week	Total Hospitalizations 2011-12 Season
0-4 years	0	21
5-17 years	0	23
18-49 years	0	32
50-64 years	0	28
≥65 years	0	43
<b>Total</b>	0	147

**Laboratory Surveillance (as of August 11):** During August 5-11, no positive seasonal influenza results were reported by MDCH BOL. For the 2011-12 season (starting Oct. 2, 2011), MDCH has identified 1166 seasonal influenza results:

- Influenza A(H3): 1054 (607SE, 97SW, 303C, 47N)
- Influenza A(H1N1)pdm09: 32 (22SE, 3SW, 5C, 2N)
- Influenza B: 79 (30SE, 32SW, 12C, 5N)
- Influenza A(H3) and B co-infection: 1 (SE)
- Parainfluenza: 3 (2SE, 1C)
- Adenovirus: 3 (3SE)
- RSV: 4 (1SW, 1C, 2N)

5 sentinel labs (SE, SW, C) reported for the week ending August 11, 2012. One lab (SW) reported sporadic RSV activity. No labs reported influenza A, influenza B, parainfluenza, adenovirus or HMPV activity. Testing volumes are at very low levels.

**Michigan Influenza Antigenic Characterization (as of August 16):** For the 2011-12 season, 69 Michigan influenza B viruses have been characterized at MDCH. 8 viruses are B/Brisbane/60/2008-like (included in the 2011-12 vaccine). 61 are B/Wisconsin/01/2010-like (not included in the 2011-12 vaccine).

**Michigan Influenza Antiviral Resistance Data (as of August 16):** For the 2011-12 season, 26 Michigan influenza A(H1N1)pdm09 specimens and 95 influenza A(H3) specimens have been tested for antiviral resistance at MDCH Bureau of Laboratories; all have tested negative for oseltamivir resistance. 11 Michigan influenza A(H3N2), 2 influenza A(H1N1)pdm09, and 4 influenza B specimens have been tested for antiviral resistance at the CDC; all have tested negative for oseltamivir and zanamivir 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 August 16):** No pediatric influenza-associated influenza mortalities have been reported to MDCH for the 2011-12 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\\_pediatic\\_influenza\\_guidance\\_v2\\_214270\\_7.pdf](http://www.michigan.gov/documents/mdch/ME_pediatic_influenza_guidance_v2_214270_7.pdf).

**Influenza Congregate Settings Outbreaks (as of August 16):** No new respiratory outbreaks were reported to MDCH during the past week. 30 respiratory outbreaks (5SE, 3SW, 20C, 2N) have been reported to MDCH during the 2011-12 season; testing results are listed below.

- Influenza A/H3: 15 (4SE, 1SW, 10C)
- Influenza A: 2 (2C)
- Human metapneumovirus: 1 (SW)
- Negative or not tested: 12 (1SE, 1SW, 8C, 2N)

**National (CDC):** Past weekly reports and updated data during the summer months are available online at <http://www.cdc.gov/flu/weekly/fluactivity.htm>.

**International (WHO [edited], August 3):** Most countries in the northern temperate zone have stopped weekly reporting or moved over to out of season surveillance schedules. In the tropical zone, the countries to report notable influenza activity are Brazil, Cuba, Ecuador, El Salvador and Panama in the Americas (influenza A(H1N1)pdm09 and type B); Ghana and Madagascar in sub-Saharan Africa (influenza A(H3N2)); southern China, Singapore and Viet Nam in Asia (A(H3N2) in China and Viet Nam, A(H3N2), A(H1N1)pdm09, and B in Singapore). The influenza season has continued in most temperate countries of the southern hemisphere for which there is data and appears to have peaked in Chile and South Africa, where many indicators have recently begun to decline. In contrast, very low numbers of detections have been reported throughout the last several weeks in Argentina. Rates of disease have continued to increase across Australia and New Zealand. Influenza A(H3N2) viruses were the most commonly reported type/sub-type in recent weeks across the Southern Hemisphere temperate region in Chile, South Africa, Australia, and New Zealand. However, the distribution is not uniform across Australia where influenza type B accounts for a significant portion of viruses detected in the Western Australia, Northern Territory, and Queensland. A(H1N1)pdm09 is the most common influenza virus detected in Paraguay as well as neighboring areas of southern Brazil and the Plurinational State of Bolivia.

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).

Weekly reporting to the CDC has ended for the 2011-2012 influenza season.

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.

**Michigan, Human (MDCH press release, August 15):** LANSING – The Michigan Department of Community Health (MDCH) announced today that the first case of variant H3N2 influenza infection in Michigan has been reported in a Washtenaw County child. State laboratory results indicate the child has tested positive for influenza A (H3N2) variant, or H3N2v. The child, who had recent exposure to swine at the Ingham County Fair, experienced mild illness and was not hospitalized. The state laboratory results will be sent to the Centers for Disease Control and Prevention (CDC) for confirmatory testing. MDCH is working with local health departments to identify any other potential cases.

“While this strain of flu is new to Michigan, it’s important that people remember the common-sense, simple steps that can be taken to protect their health as we would with any flu season,” said Dr. Dean Sienko, Interim Chief Medical Executive of the MDCH. “Washing your hands, covering your nose and mouth when you sneeze or cough, and staying home when you feel sick are some of the best ways to protect yourself and others from becoming ill.”

“This is not a food safety issue as influenza viruses are not transmitted by food. You cannot get influenza from eating pork or pork products,” said Dr. Nancy Frank, Assistant State Veterinarian, Michigan Department of Agriculture and Rural Development (MDARD).

Michigan joins the national investigation of recent H3N2v cases. On Aug. 10, the CDC announced 153 cases of H3N2v infection had been reported in the United States since July 12. Cases have been reported in Hawaii, Indiana, Ohio, and Illinois. Most cases have occurred in children, have been mild and not required treatment, and have resolved on their own. MDCH and MDARD recommend anyone experiencing flu symptoms who had recent exposure to swine visit their health care provider and tell them about this exposure.

Most human infections with H3N2v have occurred following direct contact with pigs. As a precaution, MDARD has been notifying swine exhibitors, fairs, and veterinarians of proper safety measures to prevent spreading illnesses.

“Throughout this fair season, MDARD has continued to stress the importance of implementing stringent bio-security practices to reduce exposure to animal diseases, especially those that might impact people,” said Dr. Frank. “Swine owners, fairs showing livestock or exhibits featuring animals need to be diligent about their livestock and contact their veterinarian if animals become ill or exhibit signs of illness.”

There are steps that can be taken to prevent the spread of influenza between people and pigs:

- Wash your hands frequently with soap and running water before and after exposure to animals.
- Never eat, drink, or put things in your mouth while in animal areas, and don’t take food or drink into animal areas.
- Children younger than 5, people 65 and older, pregnant women, and people with certain chronic medical conditions (such as, asthma, diabetes, heart disease, weakened immune systems, and neurological or neurodevelopmental conditions) are at high risk for serious complications if they get influenza. People with these risk factors should consider avoiding exposure to pigs and swine barns this summer, especially if sick pigs have been identified.
- If you have animals – including swine – watch them for signs of illness, and call a veterinarian if you suspect they might be sick.

For more information about the investigation and H3N2v, please visit the CDC’s website at <http://www.cdc.gov/flu/swineflu/influenza-variant-viruses-h3n2v.htm>.

MDCH CONTACT: Angela Minicuci (517) 241-2112. MDARD CONTACT: Jennifer Holton (517) 241-2485

**International, Human (WHO, August 10):** The Ministry of Health of Indonesia has notified WHO of a new case of human infection with avian influenza A(H5N1) virus.

The case is a 37 year old male from Yogyakarta province. He developed fever on 24 July 2012, was hospitalized on 27 July and died on 30 July.

Epidemiological investigation on the case found that the case had four pet caged birds in his home, which is about 50 metres from a poultry slaughter house and near a farm.

Infection with avian influenza A(H5N1) virus was confirmed by the National Institute of Health Research and Development (NIHRD), Ministry of Health and reported to WHO by the National IHR Focal Point.

To date, the total number of human influenza A(H5N1) cases in Indonesia is 191 with 159 fatalities, 8 (all fatal) of which occurred in 2012.

**International, Poultry (OIE [edited], August 14):** Low pathogenic avian influenza H7N7; Netherlands  
Outbreak 1: Hagestein, UTRECHT

Date of start of the outbreak: 09/08/2012; Outbreak status: Continuing; Epidemiological unit: Farm  
Species: Birds; Susceptible: 31870; Destroyed: 31870; Affected population: Free range laying hens

**International, Poultry (OIE [edited], August 15):** Highly pathogenic avian influenza H5N1; Vietnam  
Outbreak 1: Yen Nghia, Yen Nghia, Y Yen, NAM DINH

Date of start of the outbreak: 05/08/2012; Outbreak status: Continuing; Epidemiological unit: Village  
Species: Birds; Susceptible: 2950; Destroyed: 2950

Outbreak 2: Yen Phu, Yen Phu, Y Yen, NAM DINH

Date of start of the outbreak: 26/07/2012; Outbreak status: Continuing; Epidemiological unit: Village  
Species: Birds; Susceptible: 3612; Destroyed: 3512

Outbreak 3: Yen Phuong, Yen Phuong, Y Yen, NAM DINH

Date of start of the outbreak: 08/08/2012; Outbreak status: Continuing; Epidemiological unit: Village  
Species: Birds; Susceptible: 500; Destroyed: 500

Outbreak 4: Yen Tan, Yen Tan, Y Yen, NAM DINH

Date of start of the outbreak: 12/08/2012; Outbreak status: Continuing; Epidemiological unit: Village  
Species: Birds; Susceptible: 180; Destroyed: 180

Outbreak 5: Yen Chinh, Yen Chinh, Y Yen, NAM DINH

Date of start of the outbreak: 11/08/2012; Outbreak status: Continuing; Epidemiological unit: Village  
Species: Birds; Susceptible: 360; Destroyed: 360

Outbreak 6: Yen Tri, Yen Tri, Y Yen, NAM DINH

Date of start of the outbreak: 11/08/2012; Outbreak status: Continuing; Epidemiological unit: Village  
Species: Birds; Susceptible: 100; Destroyed: 100

**Michigan Wild Bird Surveillance (USDA, as of August 16):** For the 2012 season (April 1, 2012-March 31, 2013), highly pathogenic avian influenza H5N1 has not been recovered from the 7 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).

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

**Contributors**

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MDCH Bureau of Laboratories – A. Muyombwe, PhD; V. Vavricka, MS

**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