



# MI FluFocus

## Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology  
Bureau of Laboratories

Michigan Department  
of Community Health



Jennifer M. Granholm, Governor  
Janet Olszewski, Director

Editor: Susan Vagasky, DVM  
VagaskyS@Michigan.gov

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### New updates in this issue:

- **Michigan Surveillance:** Most indicators show decreasing influenza activity; State is at localized activity.
- **National Surveillance:** U.S. influenza activity decreases for the seventh consecutive week.
- **Avian Influenza:** Cambodia has 1<sup>st</sup> human death of 2007; Egypt reports 2 new human cases.

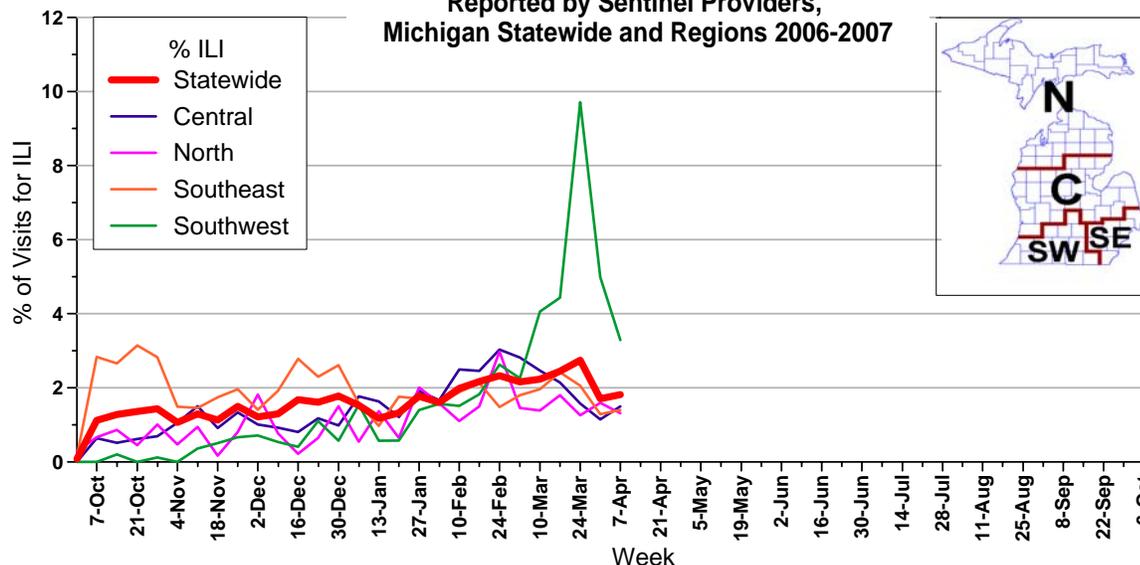
**Michigan Disease Surveillance System:** The last week saw a decrease in both aggregate flu-like illness and individual influenza reports. Although the closing of schools for spring break most likely influenced the sharp decline in aggregate reports, diminished reports across multiple surveillance systems may suggest that the flu season is starting to wane.

**Emergency Department Surveillance:** Emergency department visits due to constitutional and respiratory complaints decreased this past week. Reported levels are consistent with levels from this time last year. One constitutional alert in Region 6 and one respiratory alert in Region 5 were generated last week.

**Over-the-Counter Product Surveillance:** OTC product sales generally remained steady last week. Chest rub sales saw a slight increase, while pediatric anti-fever and thermometer sales slightly decreased, all of which were very minor changes. The indicators levels are comparable to those seen at this time last year, except for the adult and pediatric cold relief liquid, which are holding about 1-2% below its percentage of total sales for this time last year.

**Sentinel Surveillance (as of April 11, 2007):** During the week ending March 7, 2007, the proportion of visits due to influenza-like illness (ILI) in Michigan remained relatively unchanged from last week at 1.8% of all visits, representing 79 cases of ILI out of 4,352 total patient visits; twenty-three sentinels provided data for this report. A continued decrease in the proportion of visits due to ILI was noted in the Southwest region, but activity remains elevated at 3.3%. Activity in the other regions remained at low levels, 1.5%, Central: 1.3%, North; 1.4%, Southeast.

Percentage of Visits for Influenza-like Illness (ILI)  
Reported by Sentinel Providers,  
Michigan Statewide and Regions 2006-2007



As part of pandemic influenza preparedness, CDC and MDCH highly encourage and recommend year-round participation from all sentinel providers. New practices are encouraged to join the sentinel surveillance program today! Contact Rachel Potter at 517-335-9710 or [potterr1@michigan.gov](mailto:potterr1@michigan.gov) for more information.

**Laboratory Surveillance (as of April 12):** For the 2006-2007 influenza season, there have been 150 culture-confirmed cases from the MDCH Lab:

- 69 A:H1N1 (Southeast (22), Southwest (21), Central (16), North (10))
- 26 A:H3N2 (North (11), Southeast (9), Southwest (3), Central (3))
- 4 A subtype pending
- 51 B (Central (17), Southeast (17), Southwest (12), North (5))

All influenza B cultures have been B/Malaysia, except for one B/Shanghai from the Southeast region. Submissions to MDCH BOL are light to moderate.

Sentinels labs across the state are reporting a decrease in the number of positive tests, especially in areas outside of the Southeast region. The Southeast region is still seeing both influenza A and B, but at lower levels than previous weeks. Preliminarily, the majority of sentinel labs appeared to have peaked in the weeks ending March 3<sup>rd</sup> or March 10<sup>th</sup>. Low levels of parainfluenza, adenovirus and respiratory syncytial virus are being reported as well.

\*\*\*As a reminder, the positive predictive value of influenza rapid tests decreases during times of low influenza prevalence. MDCH suggests that during periods of low influenza activity in your community, all positive rapid tests results be confirmed by sending in a specimen for viral culture; this can be arranged through your local health department.

**Influenza-Associated Pediatric Mortality (as of April 12):** For the 2006-2007 season, there are no confirmed reports of influenza-related pediatric mortality in Michigan. MDCH, in conjunction with CDC, is currently investigating a possible pediatric death due to influenza from the Southeast region.

\*\*\*Reminder: The CDC has asked all states to continue to collect information on any pediatric death associated with influenza infection. This includes not only any death in a child less than 18 years of age resulting from a clinically compatible illness confirmed to be influenza by an appropriate laboratory or rapid diagnostic test, but also unexplained death with evidence of an infectious process in a child. Refer to [http://www.michigan.gov/documents/fluletter\\_107562\\_7.pdf](http://www.michigan.gov/documents/fluletter_107562_7.pdf) for the complete protocol. It is important to immediately call or fax information to MDCH to ensure that appropriate clinical specimens can be obtained.

**Congregate Settings Outbreaks (as of April 12):** There has been one report of an influenza A outbreak from a Central region extended care facility for the 2006-2007 influenza season. Three facility outbreaks of respiratory illness/suspected influenza, two from the Southwest and one from the Central, are currently under investigation. A suspected influenza outbreak from the Central region was not culture-confirmed.

**National (CDC, April 6):** During week 13 (March 25 – March 31, 2007), influenza activity continued to decrease in the United States. Data from the U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories indicated a decline in activity for the seventh consecutive week; 10.3% of specimens tested positive for influenza this week. ILI data remained at similar levels nationally and fewer regions were above baseline levels this week compared to last week (two versus four, respectively). Ten states reported widespread influenza activity; nine states reported regional influenza activity; 13 states, and New York City reported local influenza activity; the District of Columbia and 17 states reported sporadic influenza activity; and one state reported no influenza activity. The number of jurisdictions reporting widespread or regional influenza activity decreased from 29 for week 12 to 19 for week 13. The percent of deaths due to pneumonia and influenza remained below baseline level.

During week 13, WHO and NREVSS laboratories reported 2,524 specimens tested for influenza viruses, 260 (10.3%) of which were positive: 17 influenza A (H1) viruses, 19 influenza A (H3) viruses, 145 influenza A viruses that were not subtyped, and 79 influenza B viruses. This represents a substantial drop in the percentage of specimens that have tested positive for influenza compared to the two prior weeks of 19.7% and 15.3% positive.



**International, Human (WHO, April 10):** The Ministry of Health in Cambodia has confirmed the country's seventh case of human infection with the H5N1 avian influenza virus. It is the first case to be confirmed in humans in Cambodia in 2007. The 13-year-old girl, from Ponhea Kreak district in Kampong Cham province, developed symptoms on April 2<sup>nd</sup> and was hospitalized the following day. She died on April 5<sup>th</sup>. Samples taken from the girl have tested positive for H5N1 at the Pasteur Institute in Phnom Penh.

Initial investigations into the source of the girl's infection indicate the presence of sick and dead poultry in the village in recent weeks and that she had consumed a sick chicken prior to onset of symptoms. A team from the Ministry of Health, WHO, and the Pasteur Institute are following up with close contacts of the girl and are conducting awareness raising activities in the area. Of the 7 cases confirmed to date in Cambodia, all have been fatal.

**International, Human (WHO, April 10):** The Egyptian Ministry of Health and Population has announced two new human cases of avian influenza A(H5N1) virus infection. The cases have been confirmed by the Egyptian Central Public Health Laboratory and by the US Naval Medical Research Unit No.3 (NAMRU-3).

The first case, a 2-year-old female from Menia Governorate, developed symptoms on April 3<sup>rd</sup> and was admitted to hospital the following day. She is currently in a stable condition. Initial investigations into the source of her infection indicate recent contact with backyard poultry.

The second case is a 15-year-old female from Cairo Governorate. She developed symptoms on March 30<sup>th</sup> and was admitted to hospital on April 5<sup>th</sup> where she remains in a critical condition.

Of the 34 cases confirmed to date in Egypt, 13 have been fatal.

**International, Human (WHO, April 11):** The Egyptian Ministry of Health and Population has announced the death on April 10<sup>th</sup> of the [15-year-old female](#) from Cairo Governorate. Of the 34 cases confirmed to date in Egypt, 14 have been fatal.

**International, Poultry (The Daily Star, Bangladesh, April 9):** The avian influenza virus was detected yesterday [Apr 7] at another poultry farm in Savar. Chickens were being culled at the farm last night. Laboratory tests confirmed infection of the virus at Laura Poultry Farm at Aukpara in Savar yesterday evening. A total of 2000 chickens were culled as of 10:00 pm yesterday.

All the chickens at the infected farm will be culled, Livestock Department Director Abdul Motaleb told reporters last night. The army and police cordoned off the infected farm. Suspicion arose that the farm was infected with avian influenza -- bird flu -- after a considerable number of chickens died there on Friday [Apr 6], sources in the Savar Upazila [subdistrict] Livestock Office said.

Upon receiving information, livestock officers from both the capital and Savar rushed to the farm yesterday morning and sent samples of chickens to the laboratory in Dhaka for testing. Four teams of the Savar Livestock Office have been conducting drives in the area to investigate whether there is any fresh infection of the avian flu virus at any farm or place in the upazila.

Meanwhile, our Narayanganj correspondent reports that Fisheries and Livestock Adviser Dr Chowdhury Sajedul Karim visited 2 bird flu-infected poultry farms in the district yesterday and urged all to remain alert about virus infection. "Although infection and spreading of the virus has been prevented temporarily, everyone should always remain alert to keep the poultry farm industry alive," said Sajedul Karim at a meeting with poultry farm owners, local journalists and government officials. "The [fisheries and livestock] ministry will sort out a working plan by next week to determine how to help or compensate the affected poultry farm owners," he added.

There are 989 poultry farms in Narayanganj. A total of 2476 chickens have so far died since the detection of the virus, while 12 004 chickens were culled at the bird flu-infected farms in the district.

**International, Poultry (Reuters via ProMed, April 10):** Pakistan reported new bird flu cases on Monday [Apr 9 2007] in commercial poultry farms in the southern province of Sindh and in North West Frontier Province, a government official said.

"Two to 3 days back, we found traces of H5N1 virus in small poultry farms in Sindh and NWFP," Mohammad Afzal, Commissioner for Livestock at the Ministry of Food and Agriculture, told Reuters. "We have culled all the birds at these farms and disinfected the area." He said some 300 to 350 birds had been culled at one farm but did not say how many H5N1 cases of bird flu had been discovered.

Several outbreaks have been detected in chickens in small poultry farms this year in Pakistan, and birds have been culled. Authorities temporarily shut Islamabad Zoo in February 2007 after 4 peacocks and a goose died of the H5N1 strain. Pakistan has had no human cases of the virus.

Afzal said quarantine and vaccination measures were also being used in and around the affected farms. Pakistan 1st detected the H5N1 strain of the virus in February 2006 in North West Frontier Province and ordered about 40,000 birds culled.

**Michigan Wild Bird Surveillance (USDA, April 11):** According to the National HPAI Early Detection Data System website, available at <http://wildlifedisease.nbio.gov/ai/>, Michigan has results for a total of 2656 samples submitted for testing as of April 11<sup>th</sup>. 232 of these were live-captured birds, 634 were hunter-killed, 174 were sentinel animals, 610 were dead birds that were submitted for testing, and 1006 were environmental samples. HPAI subtype H5N1 has not been recovered from any Michigan samples tested to date, or from the 156,997 birds or environmental samples tested nationwide.

To learn about avian influenza surveillance in Michigan wild birds or to report dead waterfowl, go to Michigan's Emerging Disease website at <http://www.michigan.gov/emergingdiseases>.

**Please contact Susan Vagasky at [VagaskyS@Michigan.gov](mailto:VagaskyS@Michigan.gov) with any questions regarding this newsletter or to be added to the weekly electronic mailing list.**

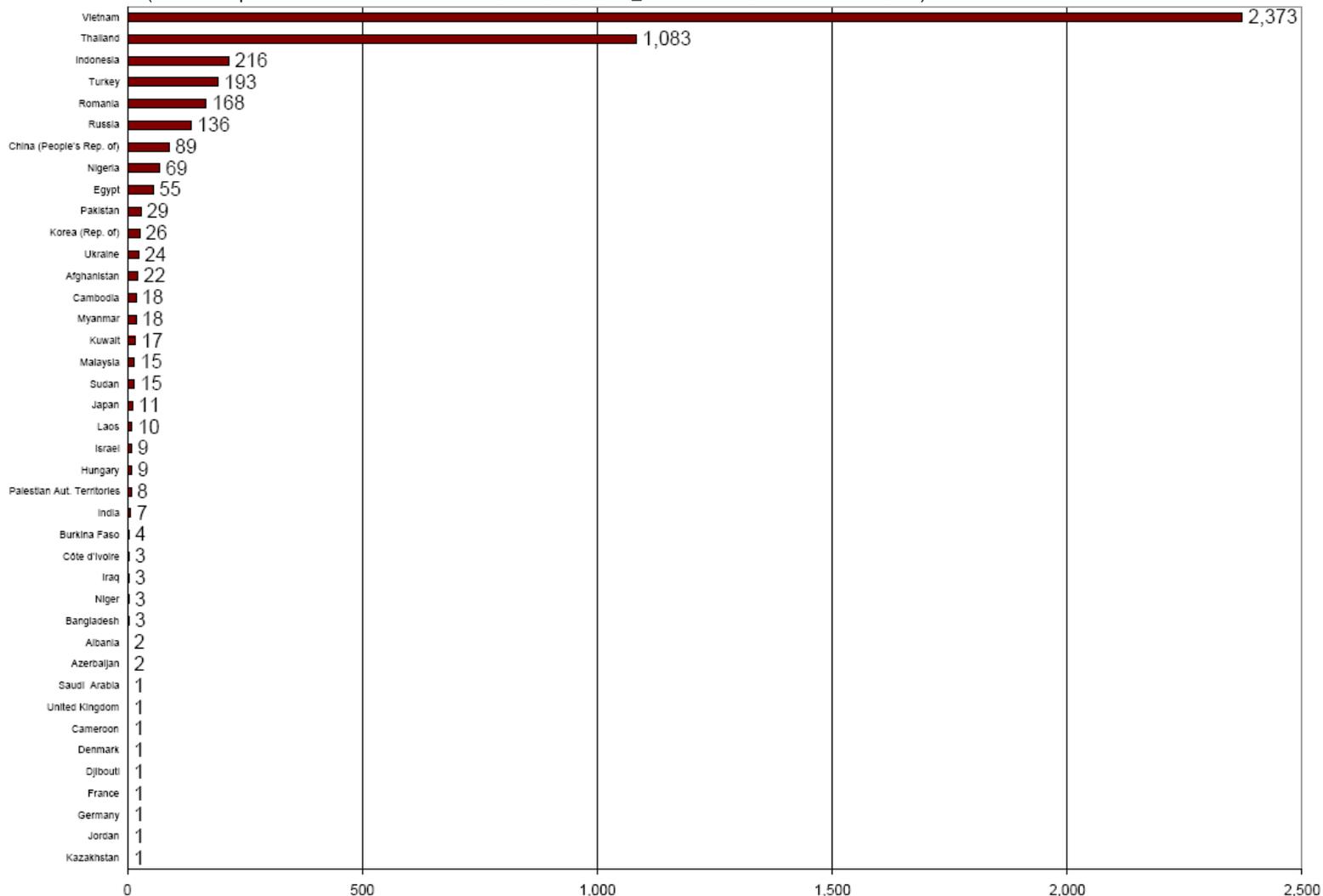
**Contributors**

**MDCH Bureau of Epidemiology - Sally Bidol, MPH; Edward Hartwick, MS; Elizabeth Lewis, MHS; Rachel Potter, DVM, MS**

**MDCH Bureau of Laboratories – Patricia Clark, MPH**

**Table 1. H5N1 Influenza in Poultry (Outbreaks up to April 4, 2007)**

(Source: [http://www.oie.int/download/AVIAN%20INFLUENZA/A\\_AI-Asia.htm](http://www.oie.int/download/AVIAN%20INFLUENZA/A_AI-Asia.htm) Downloaded 4/4/2007)



**Table 2. H5N1 Influenza in Humans (Cases up to April 11, 2007)**

([http://www.who.int/entity/csr/disease/avian\\_influenza/country/cases\\_table\\_2007\\_04\\_11/en/index.html](http://www.who.int/entity/csr/disease/avian_influenza/country/cases_table_2007_04_11/en/index.html) Downloaded 4/11/2007)

Cumulative number of lab-confirmed human cases reported to WHO. Total number of cases includes deaths.

Country	2003		2004		2005		2006		2007		Total	
	cases	deaths										
Azerbaijan	0	0	0	0	0	0	8	5	0	0	8	5
Cambodia	0	0	0	0	4	4	2	2	1	1	7	7
China	1	1	0	0	8	5	13	8	1	0	24	15
Djibouti	0	0	0	0	0	0	1	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	16	4	34	14
Indonesia	0	0	0	0	20	13	55	45	6	5	81	63
Iraq	0	0	0	0	0	0	3	2	0	0	3	2
Lao PDR	0	0	0	0	0	0	0	0	2	2	2	2
Nigeria	0	0	0	0	0	0	0	0	1	1	1	1
Thailand	0	0	17	12	5	2	3	3	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	0	0	93	42
Total	4	4	46	32	98	43	115	79	28	14	291	172