



MI FluFocus

Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology
Bureau of Laboratories



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January 3, 2008
Vol. 5; No. 1

New updates in this issue:

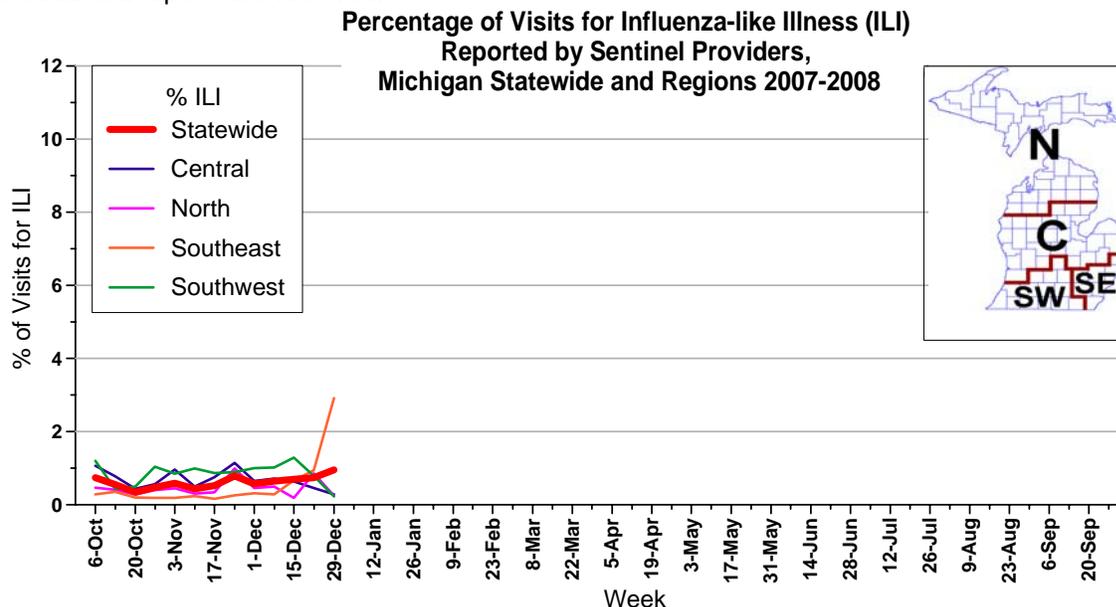
- **Michigan Surveillance:** Weekly report to CDC upgraded to “local” due to increasing SE MI activity.
- **National Surveillance:** Influenza activity continues to increase nationwide.
- **Avian Influenza:** Human H5N1 cases in Egypt and Vietnam; poultry outbreaks in multiple countries.

Michigan Disease Surveillance System: The week ending December 29 saw aggregate flu-like illness reports decrease from last week’s levels, which was expected to due holiday school closings. Individual influenza reports, however, saw a slight increase. Both aggregate flu-like illness and individual influenza reports are consistent with numbers seen this time last year.

Emergency Department Surveillance: Emergency department visits due to both respiratory complaints and constitutional complaints showed increases last week triggering two statewide alerts (one in each syndromic category). Respiratory complaints are consistent with numbers seen this time last year, while constitutional complaints are slightly lower. Eleven constitutional alerts in the C(4), N(1), SE(3) and SW(2) Influenza Surveillance Regions, including one Statewide alert, and twelve respiratory alerts in the C(2), N(2), and SE(7) Influenza Surveillance Regions, including one Statewide alert, were generated last week.

Over-the-Counter Product Surveillance: Overall, OTC product sales activity remained fairly steady this week, with a moderate rise in unpromoted thermometer sales and a very slight increase in cough/cold medication sales. The indicators levels are comparable to those seen at this time last year, except for chest rubs, which are slightly higher, and thermometers, which are slightly lower.

Sentinel Surveillance (as of January 3): During the week ending December 29, 2007, the proportion of visits due to influenza-like illness (ILI) in Michigan remained at a low level, 1.0%. This represents 30 cases of ILI out of 3136 total patient visits; twenty-three sentinels provided data for this report. The proportion of visits due to ILI remained at a low level in the in the Central (0.3%), North (0.2%), and Southwest (0.3%) regions, but increased to 2.9% of all visits in the Southeast region. Increased activity was reported by most reporting sentinel sites in the Southeast region. Note that these rates may change as additional reports are received.



As part of pandemic influenza preparedness, CDC and MDCH highly encourage 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 for more information.

Laboratory Surveillance (as of January 3): For the 2007-2008 influenza season, the MDCH Bureau of Laboratories has identified 16 influenza isolates:

- 9 A/H3N2: Southeast (7); Central (1); Southwest (1)
- 2 A/H3-like: Southeast (1); North (1)
- 1 A/H1-like: North (1)
- 3 B/Shanghai: Southeast (2); North (1)
- 1 B strain type pending: Southeast (1)

Sentinel laboratories statewide are reporting low numbers of positive influenza A tests and rare influenza B positives, with labs in the Southeast region seeing a notable increase in the amount of influenza A positives over the past week. Low but increasing levels of RSV have been reported statewide.

***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.

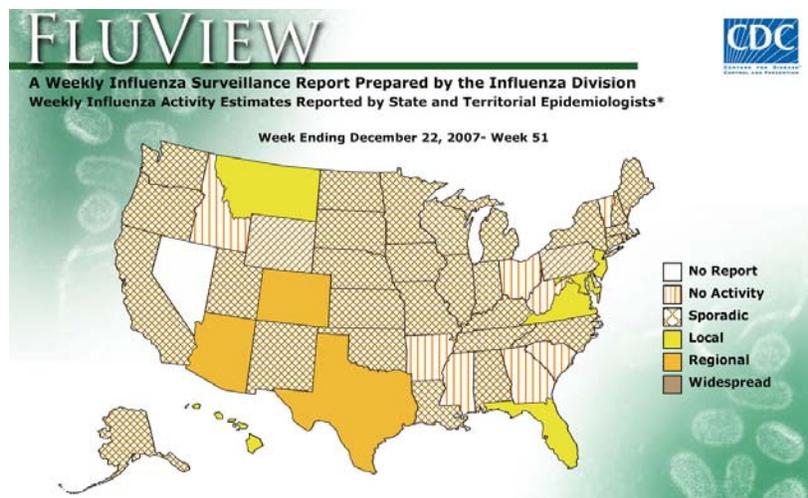
Influenza-Associated Pediatric Mortality (as of January 3): For the 2007-2008 season, there are no confirmed reports of influenza-related pediatric mortality in Michigan.

***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 for the complete protocol. It is important to immediately call MDCH to ensure that appropriate clinical specimens can be obtained.

Congregate Settings Outbreaks (as of January 3): There have been no reports for the 2007-2008 influenza season.

National (CDC [edited], December 28): During week 51 (December 16-22, 2007), influenza activity continued to increase in the United States. During week 51, WHO and NREVSS laboratories reported 2,059 specimens tested for influenza viruses, 77 (3.7%) of which were positive, including 16 influenza A (H1) viruses, four influenza A (H3) viruses, 38 influenza A viruses that were not subtyped, and 19 influenza B viruses. The proportion of deaths attributed to pneumonia and influenza was below the epidemic threshold. The proportion of outpatient visits for influenza-like illness (ILI) was equal to the national baseline. The Mountain, Pacific, and West South Central regions reported ILI above their region-specific baselines. The proportion of outpatient visits for acute respiratory illness (ARI) was below national baseline levels. Three states reported regional influenza activity; six states reported local influenza activity; 32 states reported sporadic influenza activity; eight states reported no influenza activity; and one state and the District of Columbia did not report.

To access the entire CDC weekly surveillance report throughout the influenza season, visit <http://www.cdc.gov/flu/weekly/fluactivity.htm>



International, WHO (Weekly Epidemiological Record, November 28): During weeks 46–47, the level of overall influenza activity in the world remained low. Only sporadic activity was observed in some countries of the northern hemisphere: Belgium, the Islamic Republic of Iran, Norway and Switzerland detected influenza A for the first time in the 2007–2008 winter season.

Japan. Regional outbreak was reported with influenza A (H1N1) detected.

United States of America. A slight increase in the level of influenza activity was observed in weeks 46 and 47, with 3 states reporting localized activity. Of all samples tested, 2.8 % were positive for influenza, predominantly influenza A.

During weeks 46-47, sporadic influenza activity was detected in Belgium (B), Bulgaria (H1), Canada (A, B), China (B predominant, H3), Hong Kong Special Administrative Region of China (A, B), Denmark (B), France (A), Islamic Republic of Iran (H1, B), Japan (H1), Republic of Korea (H1), Madagascar (H1), Mexico (A), Norway (A, B), Poland (A, B), Russian Federation (B predominant, H1, H3), Sri Lanka (A), Switzerland (A, B) and United Kingdom (H1). Croatia, Italy, Latvia, Luxembourg, Mongolia, Panama, Portugal, Romania, Slovenia, Spain, Tunisia, Ukraine reported no influenza activity.

MDCH reported **LOCAL ACTIVITY** to the CDC for the week ending December 29, 2007.

For stakeholders interested in additional information regarding influenza vaccination and education, the MDCH publication *Michigan FluBytes* is available online at http://www.michigan.gov/mdch/0,1607,7-132-2940_2955_22779_40563-125027--,00.html. *FluBytes* is published weekly during the influenza season.

End of Seasonal Report

Avian Influenza Activity

WHO Pandemic Phase: Phase 3 - Human infection(s) with a new subtype, but no human-to-human spread or rare instances of spread to a close contact.

International, Human (WHO, December 28): The Ministry of Health in Viet Nam has confirmed a new case of human infection of H5N1 avian influenza. The case has been confirmed by the National Institute of Hygiene and Epidemiology (NIHE).

The case is a 4 year old male from Son La Province. He developed symptoms on 7 December, was hospitalized on 11 December and died on 16 December.

Control measures have been implemented and close contacts have been identified. All remain healthy and will continue to be monitored. The source of exposure is currently under investigation. Of the 101 cases confirmed to date in Vietnam, 47 have been fatal.

International, Human (WHO, December 28): The Ministry of Health and Population, Egypt has announced two new cases of human infection of H5N1 avian influenza. The first case is a 50 year old female from Domiat Governorate. She was hospitalized on 24 December and is in critical condition.

The second case is a 22 year old female chicken seller from Menofia Governorate. She was hospitalized on 26 December and is presently recovering in intensive care.

Both women had contact with sick and dead poultry prior to illness onset. Of the 41 cases confirmed to date in Egypt, 16 have been fatal.

International, Human (WHO, January 2): The Ministry of Health and Population, Egypt has announced two new cases of human infection of H5N1 avian influenza.

The first case is a 25 years old female from Dekerns District, Dakahlyah Governorate. She developed symptoms on 26 December, was hospitalized on 27 December and died on 30 December.

The second case is a 36 years old female from Menof District, Menofia Governorate. She developed symptoms on 26 December, was hospitalized on 29 December and died on 31 December. To date, there has been no evidence of an epidemiological link between this case and the previous case from Menofia Governorate announced on the [28 December](#).

Both women had contact with sick and dead poultry prior to illness onset. Of the 43 cases confirmed to date in Egypt, 18 have been fatal.

International, Human (WHO, January 3): The Ministry of Health and Population of Egypt has announced the death of a previously confirmed case of H5N1 infection. The 50 years old female from Domiatt governorate died on 31 December. Of the 43 cases confirmed to date in Egypt, 19 have been fatal.

International, Poultry (Xinhua News Agency, December 29): A fresh bird flu case was detected in Myanmar's eastern Shan state and confirmed on Thursday [27 Dec 2007] following an unusual death of domestic chickens in Yankham village in the state's Mongphyat township in the last week-end, according to a statement of the Livestock Breeding and Veterinary Department Saturday [29 Dec 2007].

The unusual death of chickens started from 23 Dec 2007 and after laboratory tests, H5N1 was detected and further confirmed on Thursday, the statement said.

The authorities assessed that the H5N1 was spread to the area from the same state's Kengtung township where bird flu broke out on 18 Nov, infecting a 7-year-old girl.

Preventive measures are being taken under the bird flu control program which include setting up of restricted zones and control zones, culling of poultry in these zones, disinfecting, banning of the marketing of chickens in the township and enhancing of bio-security, the statement said.

Human infection of bird flu in Myanmar was first officially reported on 15 Dec 2007 to the public after a bird-flu-infected girl had been discharged from a local hospital in Kengtung on 12 Dec 2007 after treatment.

H5N1 virus was detected on some chickens and ducks of local species which died unusually at the village farm in Kengtung on 18 Nov 2007.

In its prevention and control measures, the local authorities culled 14,889 chickens, ducks, geese and Muscovy ducks within a week after such unusual deaths were found on the fowls traded in the area.

International, Poultry (Reuters, December 31): Bangladesh culled more than 2,500 chickens after the H5N1 bird flu virus infected more farms in the northern part of the country, officials said on Monday.

The latest infection was detected in two villages in Gaibandha district, about 350 km (210 miles) from the capital Dhaka, an official at the government's livestock department said.

Bird flu was first detected near the capital in March and has since spread mainly to northern districts and forced authorities to cull around 278,000 chickens.

About 4 million Bangladeshis are directly or indirectly associated with poultry farming, but so far there have been no cases of human infection, government and health officials say.

But experts fear the bird flu virus might mutate or combine with the highly contagious seasonal influenza virus and spark a deadly pandemic which could kill millions of people. Bird flu has killed 213 people in 12 countries since 2003, the World Health Organisation says.

International, Poultry (Forbes, January 1): Bird flu has hit 2 more poultry farms in southern Viet Nam, forcing the slaughter of hundreds of geese last week, animal health officials in the communist country said Wednesday [2 Jan 2008].

More than 600 of the birds were culled after the virus killed several geese in 2 flocks in Da Loc commune of Tra Vinh province, where an outbreak was also reported earlier in December 2007, the Animal Health Department said.

Viet Nam's government has warned of a higher risk of avian influenza, as the northern winter months favor the spread of flu viruses and ahead of February's [2008] Tet lunar New Year, when travel and poultry consumption go up.

A 4-year-old Vietnamese boy died of bird flu on 16 Dec 2007, becoming the country's 5th victim of the H5N1 strain in 2007 and the 47th since late 2003, when bird flu 1st hit the Southeast Asian country.

International, Poultry (Reuters, January 2): The H5N1 bird flu virus has been detected in another poultry farm in northern Bangladesh, forcing authorities to cull nearly 300 chickens, officials said on Wednesday.

The latest infection was at Dinajpur town, 410 km (250 miles) from the capital, said Salehuddin Khan, director of the government's livestock department.

Bird flu was first reported near the capital in March last year and has since spread mainly to northern districts, forcing authorities to kill more than 300,000 chickens. Since March, 69 farms in 20 districts have been infected with the H5N1 virus.

There are around 150,000 poultry farms in Bangladesh, with an annual turnover of \$750 million, officials said. About 4 million Bangladeshis are directly or indirectly associated with poultry farming, but so far there have been no cases of human infection in the densely populated country, government and health officials say.

Experts fear the bird flu virus might mutate or combine with the highly contagious seasonal influenza virus and spark a pandemic that could kill millions of people.

Bird flu has killed more than 210 people in 12 countries since 2003, the World Health Organization says.

International, Poultry (YNET [edited], January 3): Health Ministry makes positive ID of H5N1 bird flu virus in Binyamina kindergarten. Agriculture Ministry quarantines all chicken coops, hatcheries within 6-mile radius pending further testing.

The Haifa District Physician, Prof. Shmuel Rishpon, confirmed Thursday [3 Jan 2008] that a deadly strain of the bird flu virus has infected chickens at a petting zoo in a Binyamina kindergarten. Earlier Thursday morning 18 of the 25 chickens in the kindergarten's petting zoo were found dead.

Michigan Wild Bird Surveillance (USDA, as of January 3): For the 2007 testing season, 1756 Michigan samples have been taken so far, comprised of 100 live bird samples, 1209 hunter-killed birds, 172 morbidity/mortality samples, and 275 environmental samples. A hunter-killed mallard duck from Bay, MI that initially tested positive for LPAI H5N1 in October 2007 has been confirmed to be negative for HPAI H5N1. Test results for a hunter-killed American Black duck from St. Clair, MI that initially tested positive for LPAI H5N1 in October 2007 have been confirmed; this is not the highly pathogenic avian influenza found in the Eastern Hemisphere.

HPAI subtype H5N1 has not been recovered from any Michigan samples tested to date, or from the 72,815 birds or environmental samples tested nationwide. The 2007 testing season will run from April 1, 2007-March 31, 2008. For more information, visit the National HPAI Early Detection Data System website at <http://wildlifedisease.nbio.gov/ai/>.

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 with any questions regarding this newsletter or to be added to the weekly electronic mailing list.

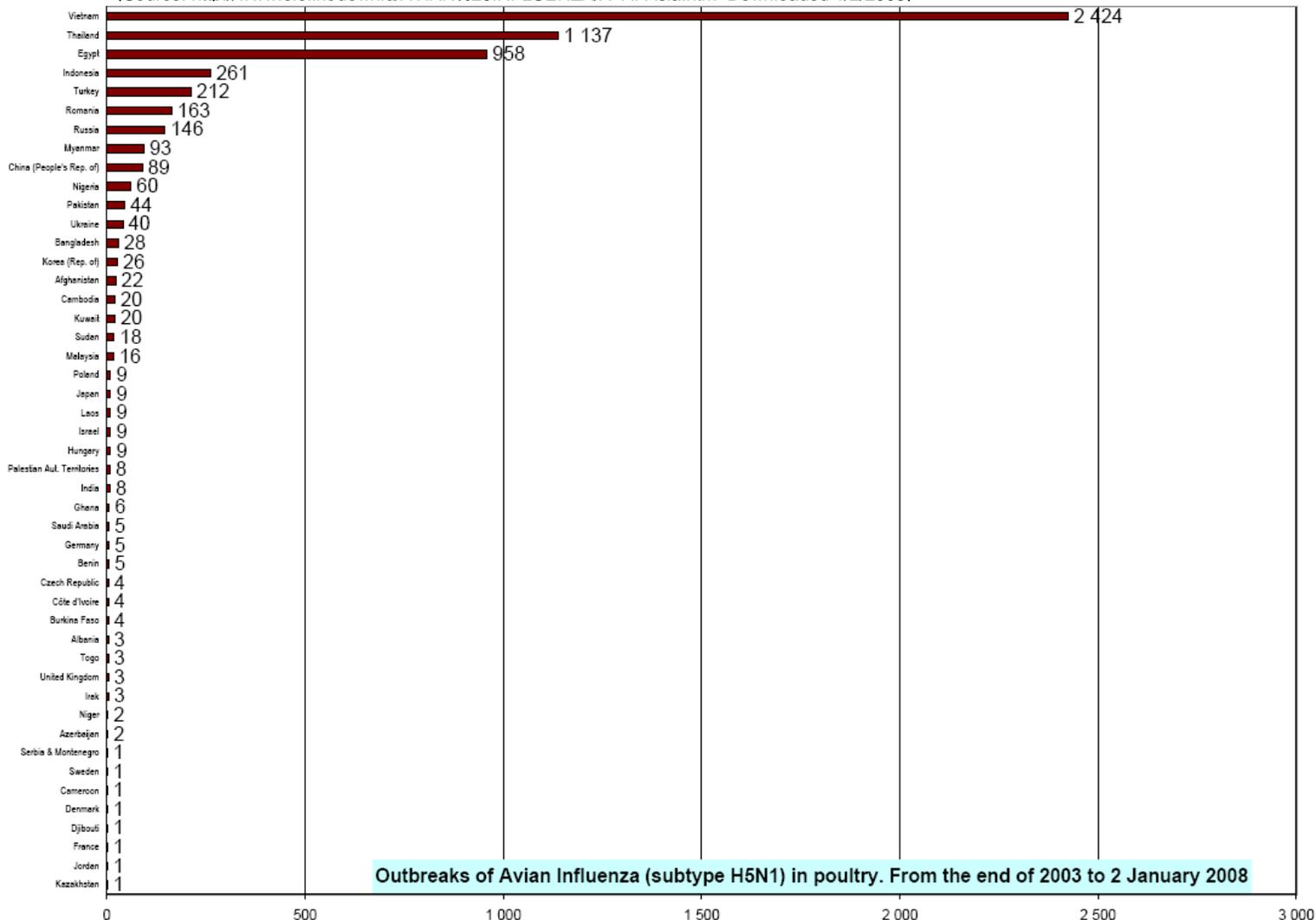
Contributors

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Table 1. H5N1 Influenza in Poultry (Outbreaks up to January 2, 2008)

(Source: http://www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm Downloaded 1/2/2008)



Outbreaks of Avian Influenza (subtype H5N1) in poultry. From the end of 2003 to 2 January 2008

Table 2. H5N1 Influenza in Humans (Cases up to January 3, 2008)

(http://www.who.int/entity/csr/disease/avian_influenza/country/cases_table_2008_01_03/en/index.html Downloaded 1/3/2008)

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	5	3	27	17
Djibouti	0	0	0	0	0	0	1	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	43	19
Indonesia	0	0	0	0	20	13	55	45	41	36	116	94
Iraq	0	0	0	0	0	0	3	2	0	0	3	2
Lao People's Dem. Rep.	0	0	0	0	0	0	0	0	2	2	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	1	1
Pakistan	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	8	5	101	47
Total	4	4	46	32	98	43	115	79	85	58	348	216