



MI FluFocus

Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology
Bureau of Laboratories

Michigan Department
of Community Health



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December 28, 2006
Vol. 3; No. 51

New updates in this issue:

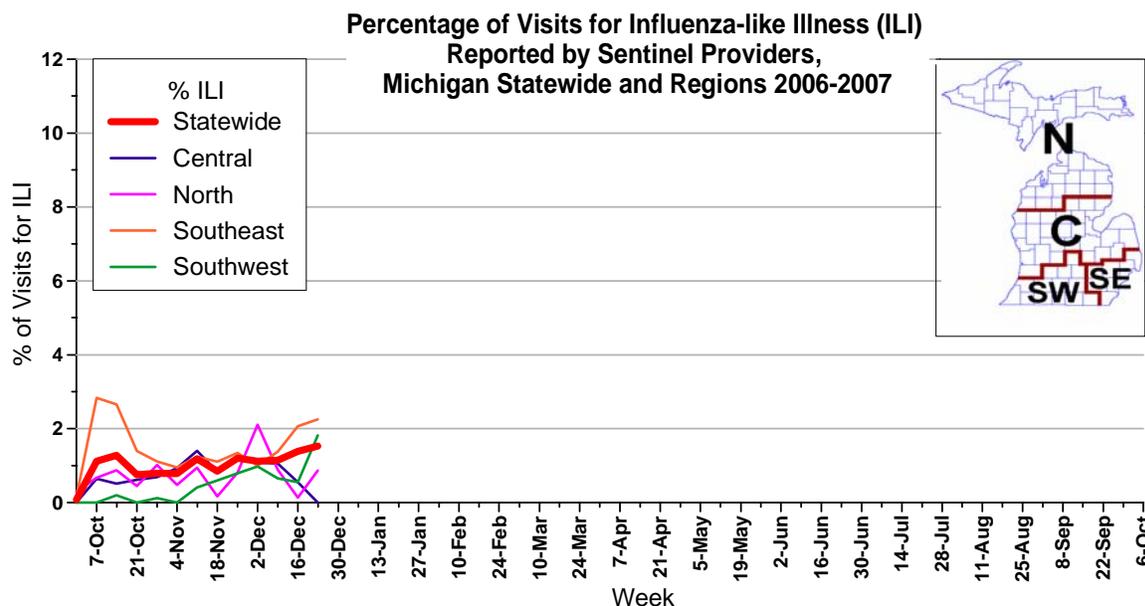
- **Michigan Surveillance:** Overall activity is increasing slightly, especially in Southeast Michigan.
- **National Surveillance:** Overall influenza activity and influenza-like illness is increasing.
- **Avian Influenza:** 3 human deaths in Egypt bring the worldwide total to 261 cases and 157 deaths.

Michigan Disease Surveillance System: The last week has seen an increase in flu-like illness reports. This increasing trend is expected to continue as the respiratory illness season progresses. The current flu-like illness reported levels, however, are comparable to that seen at this time last year.

Emergency Department Surveillance: Emergency department visits due to both respiratory and constitutional complaints increased in the last week. These levels are slightly higher but still consistent with levels seen at this time last year. Nine constitutional alerts in Regions 1(1), 2S(2), 5(2), 6(1), 7(2) and Statewide(1) and two respiratory alerts in Regions 5(1) and 7(1) were generated last week.

Over-the-Counter Product Surveillance: OTC product sales seem to reflect the increased activity seen in the past week. Most sales remained relatively steady or slightly increased, with the exception of thermometers, which saw a slight decrease after a recent rise. However, the indicators levels are comparable to those seen at this time last year, except for the adult and pediatric cold relief liquid, which seem to be holding about 1-2% below their percentage of total sales for this time last year.

Sentinel Surveillance (as of December 28, 2006): During the week ending December 23, 2006, the proportion of visits due to influenza-like illness (ILI) in the state increased slightly from last week to 1.5% of all visits, representing 64 cases of ILI out of 4192 total patient visits; nineteen sentinels provided data for this report. On a regional level, the percentage of visits was 0.0%, Central; 0.9%, North; 2.3% Southeast; and 1.8% Southwest. Note that these rates may change as additional reports are received.



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 influenza sentinel surveillance program today! Contact Rachel Potter at 517-335-9710 or potterr1@michigan.gov for more information.

Laboratory Surveillance (as of December 28): For the 2006-2007 influenza season, there have been 18 culture-confirmed cases from the MDCH Lab; 14 influenza A (Southeast (8), Southwest (3), Central (2), North (1)) and four influenza B (Central (2), Southeast (1), Southwest (1)). All influenza A cultures have been H1N1 or H1-like. Overall submission activity is light. Sentinel laboratories are reporting low numbers of positive influenza tests, with several Southeast laboratories and one Southwest lab reporting an increased number of positive tests. 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 December 28): For the 2006-2007 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 or fax information to MDCH to ensure that appropriate clinical specimens can be obtained.

Congregate Settings Outbreaks (as of December 28): No reports were received during the past reporting week. There have been no reports of congregated influenza outbreaks to MDCH for the 2006-2007 influenza season.

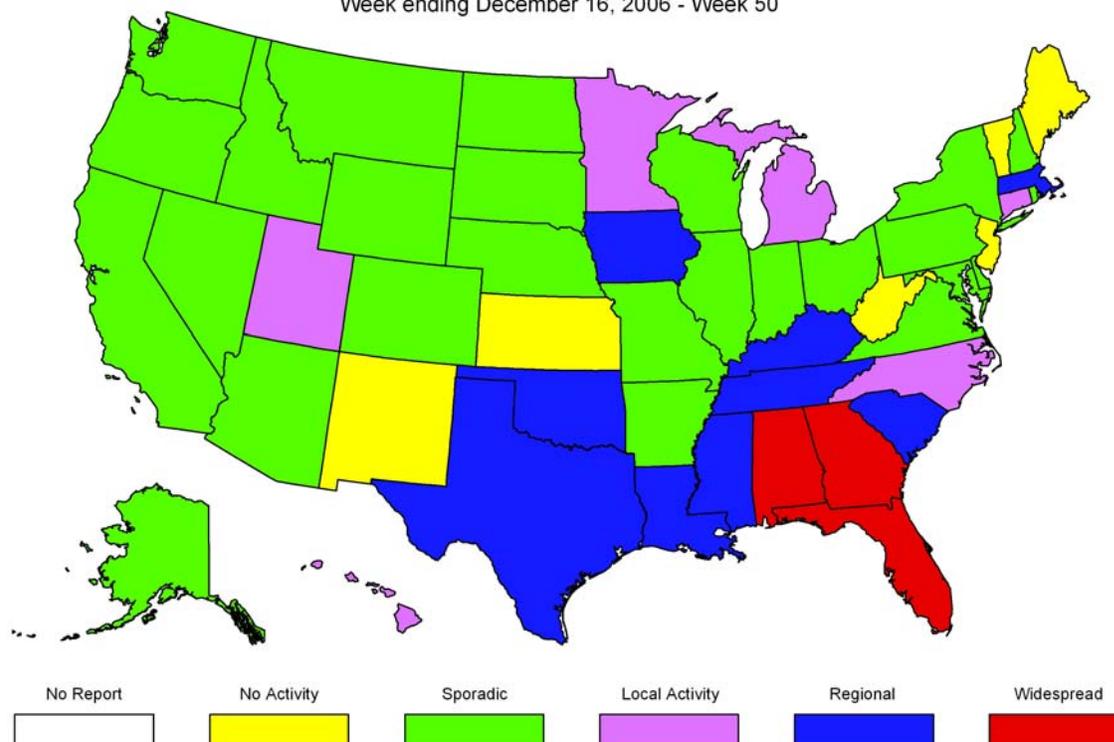
National (CDC, December 22): During week 50 (December 10 – December 16, 2006), influenza activity increased in the United States. WHO and NREVSS laboratories reported 2,909 specimens tested for influenza viruses, 232 (8.0%) of which were positive: 39 influenza A (H1) viruses, one influenza A (H3), 152 influenza A viruses that were not subtyped, and 40 influenza B viruses. Three states reported widespread influenza activity; nine states reported regional influenza activity; six states reported local influenza activity; 26 states, the District of Columbia, and New York City reported sporadic influenza activity; and six states reported no influenza activity. The reporting of reporting widespread or regional influenza activity increased from four states for week 49 to 12 states for week 50. On a national level, laboratory and outpatient influenza-like illness (ILI) surveillance data indicated an increase from week 49 to week 50, and ILI was above its baseline for the first time this season. However, the percent of deaths due to pneumonia and influenza remained below baseline level.

Since October 1, 2006, WHO and NREVSS laboratories have tested a total of 33,030 specimens for influenza viruses and 1,218 (3.7%) were positive. Among the 1,218 influenza viruses, 962 (79%) were influenza A viruses and 256 (21%) were influenza B viruses. Two hundred thirty-four (24%) of the 962 influenza A viruses have been subtyped: 222 (95%) were influenza A (H1) viruses and 12 (5%) were influenza A (H3) viruses. Of the 1,218 influenza positive tests reported this season, 503 (41%) have been reported from Florida.

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

Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists

Week ending December 16, 2006 - Week 50



International (WHO, as of December 21): During weeks 47-50, overall influenza activity worldwide remained low. Iran reported localized activity of influenza B virus during week 50. In Sweden, localized activity of influenza A virus has been reported since week 47. For the United States, during weeks 47-49 influenza activity was reported as localized with the overall influenza-like illness (ILI) consultation rate below the national baseline. During week 49, 79% of viruses detected were influenza A and 21% influenza B. Of the A viruses subtyped, all were influenza A(H1).

During weeks 47-50, low influenza activity was reported in Belarus (A), Brazil, Bulgaria (H1 and H3), Canada (A and B), Chile (A and B), France (H3 and A), Hong Kong, Special Administrative Region of China (H1, H3 and B), Italy (A), Japan (H1, H3 and B), Luxemburg (H3), Madagascar (H3 and B), Mexico (A and B), Mongolia, Morocco (H3), Romania (B), the Russian Federation (H1 and H3), South Korea (H3), Switzerland (A), Thailand (H1, H3 and B), Tunisia (B) and the United Kingdom (H3).

Austria, Argentina, Croatia, Denmark, Finland, Greece, Latvia, Norway, Poland, Portugal, Senegal, Slovenia, Spain and Ukraine reported no influenza activity.

MDCH reported **LOCAL ACTIVITY** to the CDC for this past week ending December 23, 2006.

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 (WHO, December 27): The Egyptian Ministry of Health and Population has informed WHO of three new human cases of avian influenza A(H5N1) virus infection. All three cases belong to one extended family in Gharbiyah province, 80 kilometers northwest of the capital city, Cairo. While being

transferred and cared for at the country's designated avian influenza hospital, a 30 year-old female, a 15 year-old girl and a 26 year-old male died. The most recent death occurred on December 27th. The cases reportedly had contact with sick poultry (ducks).

Clinical specimens from the three cases were tested positive for avian influenza A(H5N1) virus by the Egyptian Central Public Health Laboratory. The virus was also detected in specimens from two of the three patients by US Naval Medical Research Unit No.3 (NAMRU-3). The samples will be sent to WHO Collaborating Centre for further testing including virus characterization. The Egyptian Ministry of Health and Population is conducting further investigations and has initiated public health measures. The other family members remain healthy and have been placed under close observation.

International (Promed via the Korea Times, December 24): Quarantine officials on December 24 culled more than 4000 pigs and 2000 chickens in Asan, South Korea, the site of the latest outbreak of avian influenza. About 100 quarantine officials were dispatched to cull 4177 pigs from one pig farm located within a 500-meter radius of the outbreak site and 2000 chickens from one farm located about 3-km away. Consequently, after the 4th outbreak of highly virulent bird flu was found in Asan late on the 21st, about 21,000 ducks, 2820 chickens and 4177 pigs have been culled there. Also, quarantine officials have collected 1000 samples of excrement from migratory birds near affected areas, to find out whether the virus is present in them. In addition, they have blocked the transportation of rice straw in farmlands located near the habitats of migratory birds in the region. Experts have been claiming that feeding rice straw to cows from farmlands near habitats of migratory birds should be blocked since the possibility that migratory birds could be the source of the bird flu has not been ruled out yet. The government has also banned the movement of chickens, ducks and eggs within a 10-km radius of the affected area. South Korea reported 3 separate outbreaks of the disease before the latest incident in Asan, about 90 km south of Seoul.

Pandemic Planning (CDC, December 21): CDC has released two software programs, FluWorkLoss 1.0 and FluAid 2.0, which are, respectively, designed to estimate the potential number of days lost from work due to an influenza pandemic and assist state and local level planners in preparing for the next influenza pandemic by providing estimates of potential impact specific to their locality. To download the software visit <http://www.cdc.gov/flu/whatsnew.htm>.

Michigan Wild Bird Surveillance (USDA, December 22): According to the National HPAI Early Detection Data System website, available at <http://wildlifedisease.nbio.gov/ai/>, Michigan has results for a total of 2182 samples, from both wild birds and the environment, submitted for testing as of December 22. 470 of these were live-captured birds, 1207 were hunter-killed, 123 were sentinel animals, 175 were dead birds that were submitted for testing, and 207 were environmental samples. HPAI subtype H5N1 has not been recovered from any Michigan samples tested to date, or from the 69,522 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 with any questions regarding this newsletter or to be added to the weekly electronic mailing list.

Table 1. H5N1 Influenza in Poultry (Outbreaks up to December 21, 2006)

(Source: http://www.oie.int/download/AVIAN%20INFLUENZA/A_AI-Asia.htm Downloaded 12/22/2006)

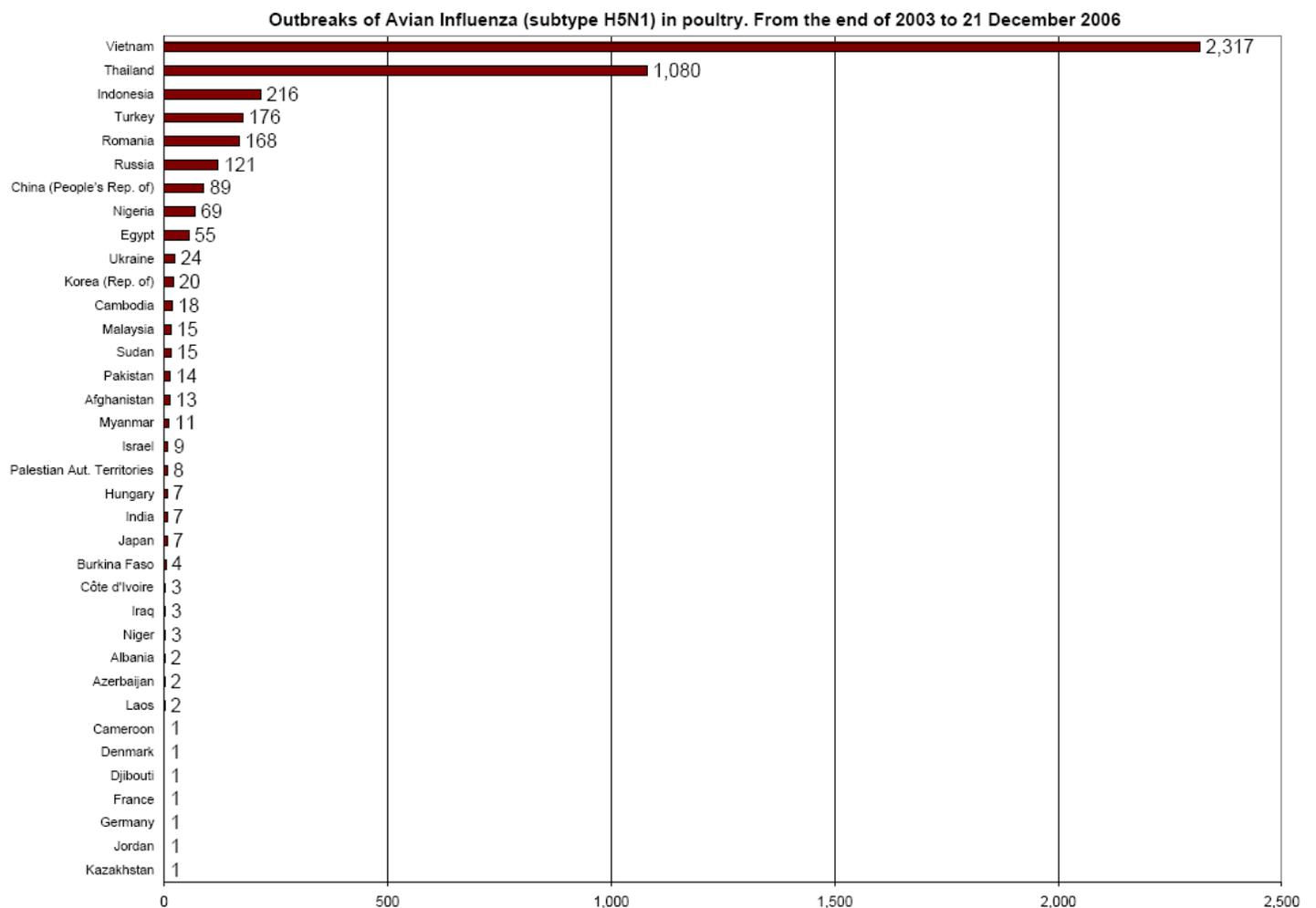


Table 2. H5N1 Influenza in Humans (Cases up to December 27, 2006)

(http://www.who.int/entity/csr/disease/avian_influenza/country/cases_table_2006_06_06/en/index.html Downloaded 12/27/2006)
 Cumulative number of confirmed human cases of Avian Influenza A(H5N1) reported to WHO. The total number of cases includes number of deaths. WHO only reports laboratory-confirmed cases.

Country	2003		2004		2005		2006		Total	
	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths
Azerbaijan	0	0	0	0	0	0	8	5	8	5
Cambodia	0	0	0	0	4	4	2	2	6	6
China	1	1	0	0	8	5	12	8	21	14
Djibouti	0	0	0	0	0	0	1	0	1	0
Egypt	0	0	0	0	0	0	18	10	18	10
Indonesia	0	0	0	0	19	12	55	45	74	57
Iraq	0	0	0	0	0	0	3	2	3	2
Thailand	0	0	17	12	5	2	3	3	25	17
Turkey	0	0	0	0	0	0	12	4	12	4
Viet Nam	3	3	29	20	61	19	0	0	93	42
Total	4	4	46	32	97	42	114	79	261	157