



MI FluFocus

Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology
Bureau of Laboratories



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New updates in this issue:

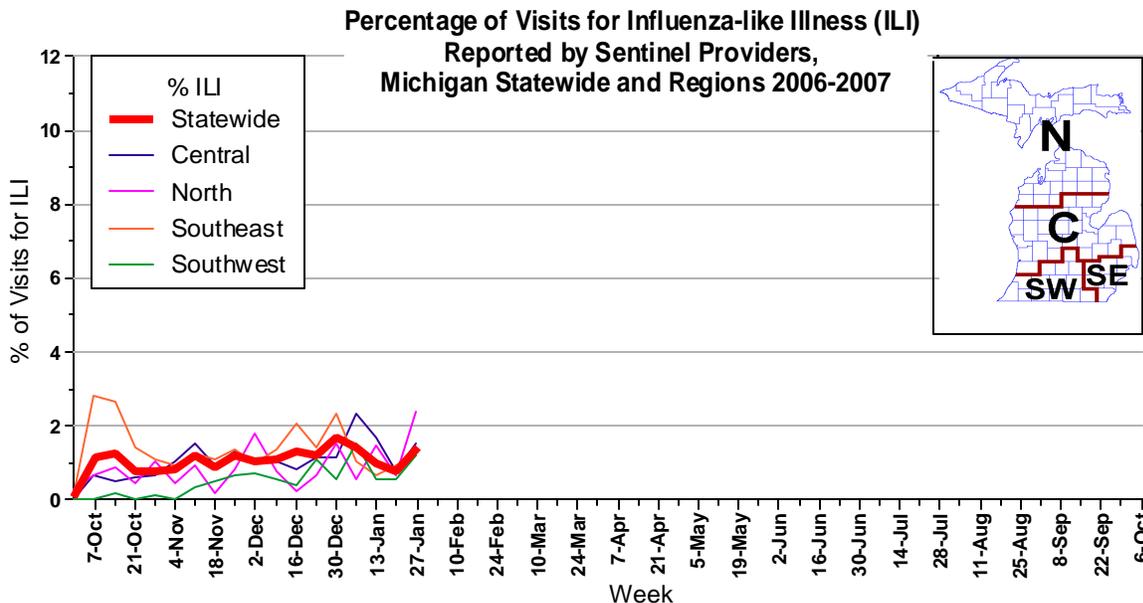
- **Michigan Surveillance:** Michigan reports "Local" activity as key indicators rise slightly over last week
- **National Surveillance:** Activity continues to be steady; 3 states reported "Widespread" activity
- **Avian Influenza:** Human cases in Nigeria and Indonesia; poultry outbreaks in Hungary and Japan

Michigan Disease Surveillance System: The last week has seen a decrease aggregate flu-like illness reports, however there was a slight increase in individual influenza reports to the local health departments. The current flu-like illness reported levels, however, are comparable to that seen at this time last year.

Emergency Department Surveillance: Following a recent period of decreasing activity, emergency department visits due to respiratory complaints have leveled off with constitutional showing a slight increase this past week. The levels reported are consistent with levels reported this time last year. Four constitutional alerts in Regions 2N(1), 3(1), 5(1) and 6(1) and five respiratory alerts in Regions 1(1), 2N(1), 5(1), 6(1) and 7(1) were generated last week.

Over-the-Counter Product Surveillance: OTC product sales seem to reflect a mixed level of activity in the past week. Sales for adult cold relief liquid, and children's electrolytes saw a slight decrease, pediatric cold relief liquids and anti-fever meds as well as cough/cold medicines held steady where chest rubs, thermometers and nasal products saw a slight increase in sales. 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 its percentage of total sales for this time last year.

Sentinel Surveillance (as of February 1, 2006): During the week ending January 27, 2006, the proportion of visits due to influenza-like illness (ILI) in the state increased to 1.4% of all visits, representing 114 cases of ILI out of 8,000 total patient visits; thirty sentinels provided data for this report. On a regional level, the percentage of visits due to ILI increased in all regions to 1.6%, Central; 2.4%, North; 1.2% Southeast; and 1.2% 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 the sentinel surveillance program today! Contact Rachel Potter at 517-335-9710 or potterr1@michigan.gov for more information.

Laboratory Surveillance (as of February 1): For the 2006-2007 influenza season, there have been 55 culture-confirmed cases from the MDCH Lab:

- 41 A:H1N1 (SE(14), SW(15), C(8), N(4))
- 2 A:H3N2 (SE(1), SW(1))
- 11 B (C(2), SE(3), SW (5), N(1)).

Of the 11 influenza B cultures, 10 have been B/Malaysia and 1 subtype is still pending. Overall submission activity is light at the MDCH lab. Several of the sentinel labs are showing small increases in the number of influenza positives, similar to the level seen a few weeks ago. Parainfluenza and adenovirus continue to be reported at low levels. Reports of respiratory syncytial virus have increased somewhat over the past two weeks.

Chippewa County has its first case of influenza in a 16-year-old, confirmed by a rapid test at War Memorial Hospital. A specimen has been sent to the state lab for further sub-typing.

***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 February 1): 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.

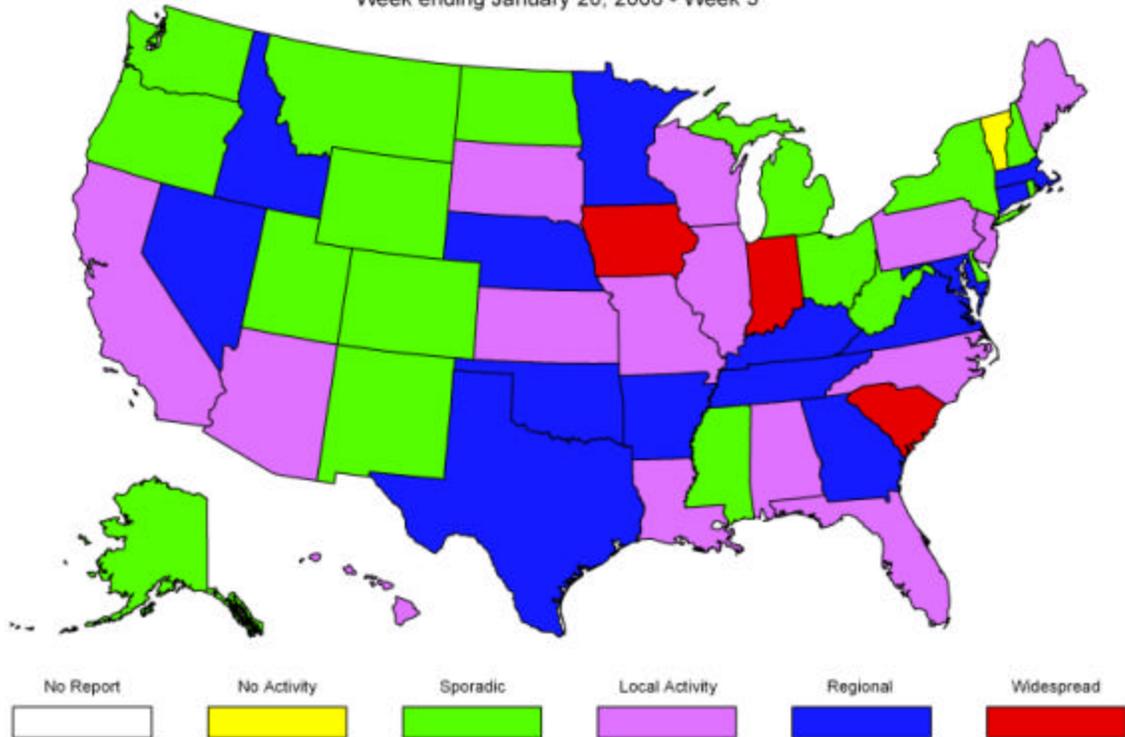
Congregate Settings Outbreaks (as of February 1): No reports were received during the past week. There have been no reports of influenza outbreaks to MDCH for the 2006-2007 influenza season.

National (CDC, January 26): During week 3 (January 14 – January 20, 2007), influenza activity in the United States remained at approximately the same level as in the previous week. During week 3, WHO and NREVSS laboratories reported 3,229 specimens tested for influenza viruses, 280 (8.7%) of which were positive: 44 influenza A (H1) viruses, 10 influenza A (H3) virus, 196 influenza A viruses that were not subtyped, and 30 influenza B viruses. ILI data was above baseline for week 3. Three states reported widespread influenza activity; 15 states reported regional influenza activity; 14 states reported local influenza activity; 17 states, the District of Columbia, and New York City reported sporadic influenza activity; and one state reported no influenza activity. The reporting of widespread or regional influenza activity increased from 15 states for week 2 to 18 states for week 3. The percent of deaths due to pneumonia and influenza remained below baseline level.

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 January 20, 2006 - Week 3



International (WHO, as of January 16): During weeks 51-52 of 2006, overall seasonal influenza activity worldwide remained low, except in the United States, where widespread activity was reported. In Canada, localized activity of influenza A was reported in parts of Canada during weeks 51-52, with an overall influenza-like illness (ILI) consultation rate below the expected range for the time of year. In New Caledonia, an increase of influenza A(H3N2) activity was observed during week 51 for the first time in the past 3 months. Activity was reported as localized. Localized activity of influenza A(H1) was observed in parts of Norway. Regional activity of influenza A continued to be reported in northern part of Sweden. In the United States, influenza activity increased during weeks 51-52 and was reported as widespread. The overall ILI consultation rate was above the national baseline, but the percentage of deaths due to pneumonia and influenza remained below the baseline level. During week 52, 82% of the influenza viruses detected were influenza A and 18% influenza B. Of the A viruses subtyped, 95% were influenza A(H1) and 5% A(H3) viruses.

During weeks 51-52, low influenza activity was reported in Bulgaria, France (H3 and A), Greece (H3), Hong Kong, Special Administrative Region of China (H1, H3 and B), Islamic Republic of Iran (H3 and B), Italy (H3), Japan, Madagascar (B), Mongolia, Portugal (H3), Romania, Russian Federation (H1, H3 and B), Switzerland (H3), Tunisia (H1) and the United Kingdom (H1 and H3). Argentina, Austria, Croatia, Denmark, Finland, Latvia, Mexico, Poland, Senegal, Slovenia, Spain and Ukraine reported no influenza activity.

MDCH reported **LOCAL ACTIVITY** to the CDC for this past week ending January 27, 2007.

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, January 31): The government of Nigeria has announced the death from suspected avian influenza infection in a 22-year-old female from Lagos. She died on 16 January 2007. The mother of the 22-year-old died on 4 January with similar symptoms. Preliminary tests on the samples from the 22-year-old were positive for influenza A/H5. Samples have now been sent to a WHO Collaborating Centre for Reference and Research on Influenza for confirmation. Results are expected shortly. No samples were taken from the mother.

Contacts have been followed up and have shown no symptoms at twice the incubation period for avian influenza infection. Samples have been tested from these contacts as well as from three other suspected cases, including one fatal case and have all been negative in preliminary tests. These samples have also been sent to a WHO Collaborating Centre for Reference and Research on Influenza.

It is important to reiterate that properly cooked poultry meat is safe to consume when cooked at temperatures at or above 70°C in all parts, until none of the meat is red. There is no epidemiological evidence to indicate that people have been infected with H5N1 virus following consumption of properly cooked poultry or eggs. The greatest risk of exposure to the virus is through the slaughter and handling of live or already dead infected poultry. More detailed recommendations can be found [here](#).

WHO is working with the government of Nigeria to monitor the situation.

International, Human (WHO, January 29): The Ministry of Health of Indonesia has announced a new case of human infection of H5N1 avian influenza. A 6-year-old female from Magelang District in Central Java Province developed symptoms on January 8th and died in hospital on January 19th. Initial investigations into the source of her infection indicate exposure to dead poultry. Of the 81 cases confirmed to date in Indonesia, 63 have been fatal.

International, Poultry, (Department for Environment, Food and Rural Affairs, January 24): Hungary has reported a case of highly pathogenic avian influenza, virus type H5 in a commercial geese flock in the central county of Csongrad. The 1st clinical signs appeared on January 21, 2007, and the entire flock is being destroyed. Laboratory investigations are underway to confirm the strain of the virus. The Hungarian authorities stated that there are no poultry within a 1-km zone from the affected premise. There are 57 poultry holdings within a 3-km zone and 850 small-scale farms within a 10-km zone.

International, Poultry (OIE press release, January 30): The H5N1 avian influenza strain isolated from the outbreak notified by Hungary is 99.4 percent similar to the strain that infected some countries of Europe in 2006, the OIE's Reference Laboratory for avian influenza in Weybridge (UK) confirmed yesterday. "This information tells us that the genetic characterization of the virus isolated in Hungary has still not mutated significantly" Dr Bernard Vallat, OIE Director General, explained.

Avian and human influenza viruses are known to be able to mutate or exchange genetic material to form new strains. In certain conditions, these can be more deadly to both animals and humans. Since the start of the H5N1 crisis in late 2003, the OIE calls for increased global monitoring and control measures of the virus at animal source. Transparent sharing and sequencing of virus samples is also key to tracking the least genetic evolution of the virus and trigger appropriate global rapid response mechanisms.

International, Poultry (ProMed via Xinhua News, January 25 and 29): The Japan agriculture ministry on January 25 confirmed that the virus detected in the 2nd case in a month of birds' mass death in Miyazaki Prefecture is the highly virulent H5 strain of the bird flu virus. The result was based on a test by the National Institute of Animal Health in Tsukuba, Ibaraki Prefecture, which will further analyze the virus sample to determine if it was the lethal H5N1 type, Kyodo News reported. About 1300 birds died in mass from January 22-24 at a farm in the city of Hyuga. It was the 2nd bird flu case in a month in the prefecture and the 6th in Japan since 2004.

A local government in Japan confirmed Monday that the 3rd case of bird flu outbreak within the month involved the highly virulent H5 strain of avian influenza, Kyodo News said. Dozens of chickens died of H5 infection in a poultry farm in the city of Takahashi, Okayama prefecture, during the past days, the prefectural government said on Monday morning.

Bird flu infections hit dozens of farms in central Japan's Ibaraki prefecture in 2005 and 2006, resulting in the killing of at least 5.8 million poultry.

International, Poultry (Reuters, January 29): Russia has recorded its 1st cases this year of the highly pathogenic H5N1 strain of bird flu in dead domestic birds, the country's animal and plant health agency said on Monday. Rosselkhoznadzor (the Russian agriculture inspection agency) said in a statement the virus was detected in dead birds found in 3 domestic yards in the Krasnodar region of southern Russia. "Yes, it's H5N1," a spokesman for the agency said, when asked to confirm the strain of the virus. Rosselkhoznadzor said measures were being taken to prevent the spread of infection in the 3 settlements where cases were found -- Labinsk, Upornaya and Borodinskaya. The agency said tests had been carried out in regional laboratories and further tests would now be conducted in Moscow.

Russia recorded more than 90 cases of bird flu last year. Most were in southern regions, particularly the North Caucasus area that borders Georgia and Azerbaijan. Several cases were also found in the Siberian regions of Novosibirsk and Omsk.

International, Wild Bird (Associated Press, January 29): Two dead birds found earlier in urban Hong Kong have tested positive for the deadly H5N1 strain of bird flu, bringing the year's tally of cases to seven, the government said in a statement Monday. The two birds, a peregrine falcon and a house crow, were found last week in Hong Kong's Kowloon peninsula, which adjoins the Chinese mainland.

The latest laboratory test results bring the number of wild birds confirmed with H5N1 this year to seven. Hong Kong has discovered sporadic cases of the disease in dead birds, but there is no sign it has infected humans. The territory tested 11,000 birds for the H5 strain of bird flu in 2006 and 17 were positive. Hong Kong aggressively tests for bird flu because of the outbreak in 1997, when the disease jumped to humans and killed six people. That prompted the government to slaughter the entire poultry population of about 1.5 million birds.

Michigan Wild Bird Surveillance (USDA, January 26): According to the National HPAI Early Detection Data System website, available at <http://wildlifedisease.nbj.gov/ai/>, Michigan has results for a total of 2182 samples, from both wild birds and the environment, submitted for testing as of January 26th. 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 73,720 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 January 31, 2007)

(Source: http://www.oie.int/downld/AVIAN%20INFLUENZA/A_A-Asia.htm Downloaded 1/31/2007)

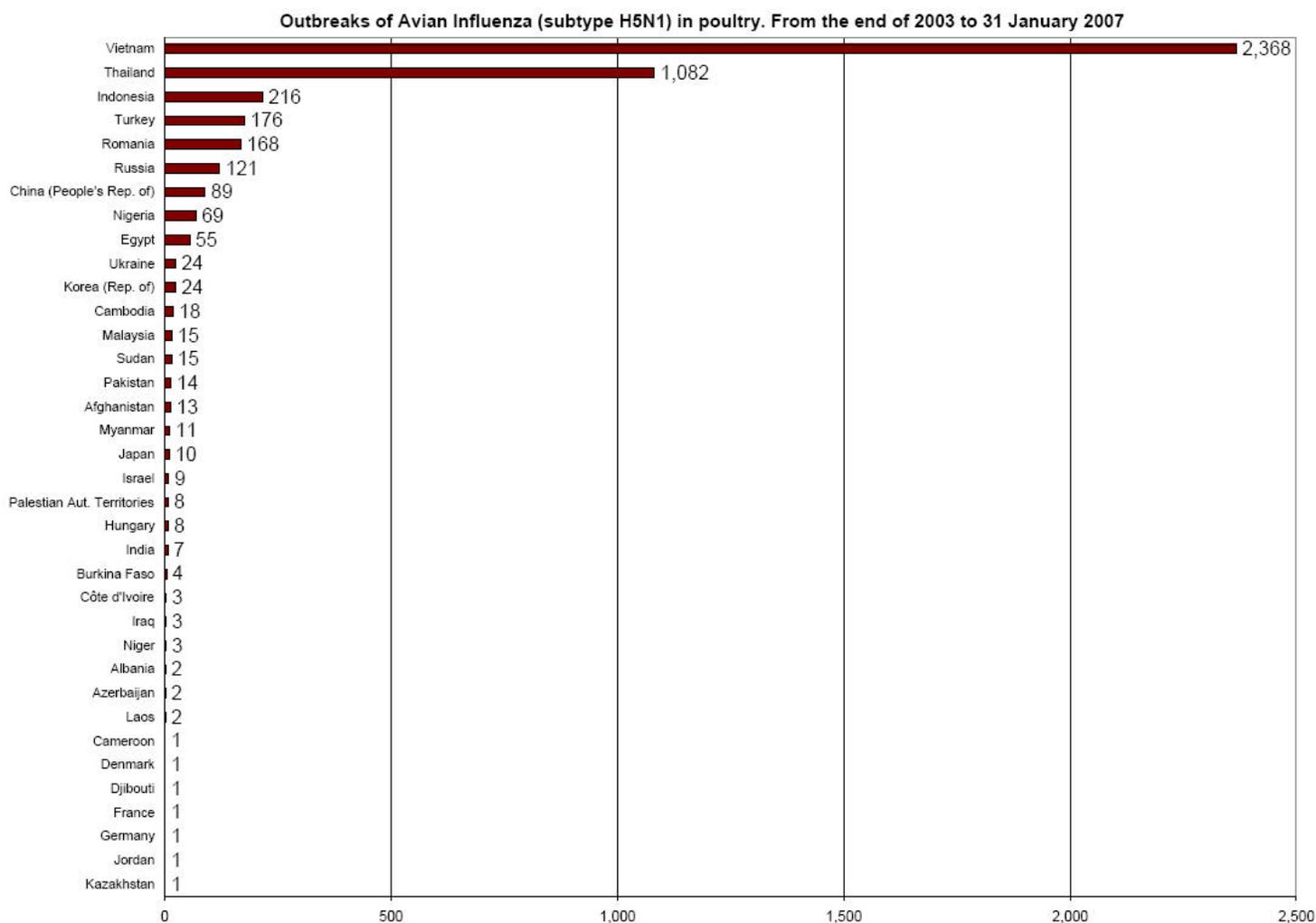


Table 2. H5N1 Influenza in Humans (Cases up to January 29, 2007)

(http://www.who.int/entity/csr/disease/avian_influenza/country/cases_table_2006_06_06/en/index.html Downloaded 1/29/2007)

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		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	0	0	6	6
China	1	1	0	0	8	5	13	8	0	0	22	14
Djibouti	0	0	0	0	0	0	1	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	1	1	19	11
Indonesia	0	0	0	0	19	12	56	46	6	5	81	63
Iraq	0	0	0	0	0	0	3	2	0	0	3	2
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	97	42	116	80	7	6	270	164