



# MI FluFocus

## Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology  
Bureau of Laboratories

Michigan Department  
of Community Health



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January 18, 2007  
Vol. 4; No. 3

### New updates in this issue:

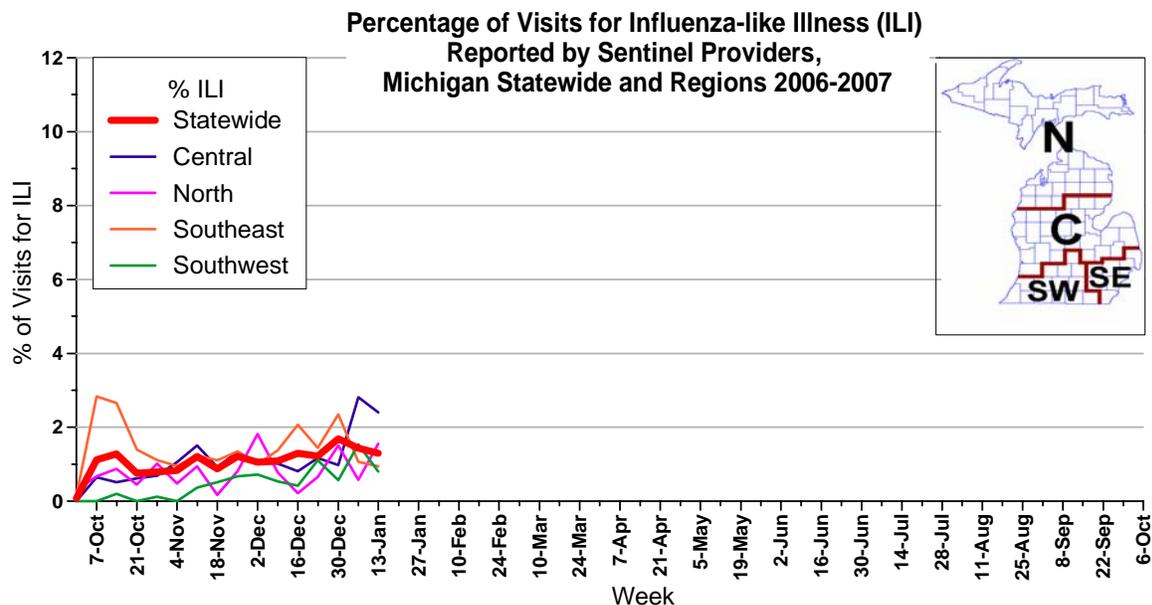
- **Michigan Surveillance:** First A(H3N2) of the season isolated from the SE; overall activity is steady.
- **National Surveillance:** Overall activity is steady to possibly decreasing.
- **Avian Influenza:** 4 human cases (3 deaths) in Indonesia; multiple poultry outbreaks in Asia, Nigeria.

**Michigan Disease Surveillance System:** The last week has seen an increase in aggregate flu-like illness reports, which was expected as schools returned from holiday vacation. However, there was a slight decrease 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:** Emergency department visits due to both respiratory and constitutional complaints have seen a decrease in the last week, continuing down off of a recent period of elevated activity. These levels are slightly higher but not inconsistent with levels reported at this time last year. Two constitutional alerts in Regions 1(1) and 3(1) and no respiratory alerts were generated last week.

**Over-the-Counter Product Surveillance:** OTC product sales seem to reflect the decreased activity seen in the past week. Sales have remained relatively steady or had a very slight increase in sales (pediatric antifever, chest rubs, cough/cold, and nasal products). 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 January 18, 2006):** During the week ending January 13, 2006, the proportion of visits due to influenza-like illness (ILI) in the state remained relatively unchanged from last week at 1.3% of all visits, representing 84 cases of ILI out of 6493 total patient visits; twenty-eight sentinels provided data for this report. On a regional level, the percentage of visits ranged from 2.4%, Central; 1.6%, North; 0.9% Southeast; and 0.8% 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 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 January 18):** For the 2006-2007 influenza season, there have been 47 culture-confirmed cases from the MDCH Lab:

- 33 A:H1N1 (SE(11), SW(12), C(7), N(3))
- 3 A:H1, N pending (SW(1), SE(1), N(1))
- 1 A:H3N2 (Southeast)
- 10 B (Central (3), Southeast (3), Southwest (3), North (1)).

All influenza B cultures have been B/Malaysia. Overall submission activity is light to moderate. Sentinel laboratories in the Southeast and Southwest are reporting low but steady numbers of positive tests; sentinel labs from the North and most of the Central region are reporting no positives. 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 January 18):** 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](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 January 18):** 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, January):** During week 1 (December 31, 2006 – January 6, 2007), laboratory and outpatient influenza-like illness (ILI) surveillance data indicated a decrease in influenza activity in the United States from week 52 to week 1. During week 1, WHO and NREVSS laboratories reported 2,939 specimens tested for influenza viruses, 222 (7.6%) of which were positive: 62 influenza A (H1) viruses, one influenza A (H3) virus, 120 influenza A viruses that were not subtyped, and 39 influenza B viruses. The proportion of visits for ILI may have been influenced by a reduction in routine healthcare visits during the holiday season as has been seen in past seasons. However, ILI remained above baseline for the fourth consecutive week this season. Five states reported widespread influenza activity; 11 states reported regional influenza activity; 15 states reported local influenza activity; 19 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 14 states for week 52 to 16 states for week 1. The percent of deaths due to pneumonia and influenza remained below baseline level.

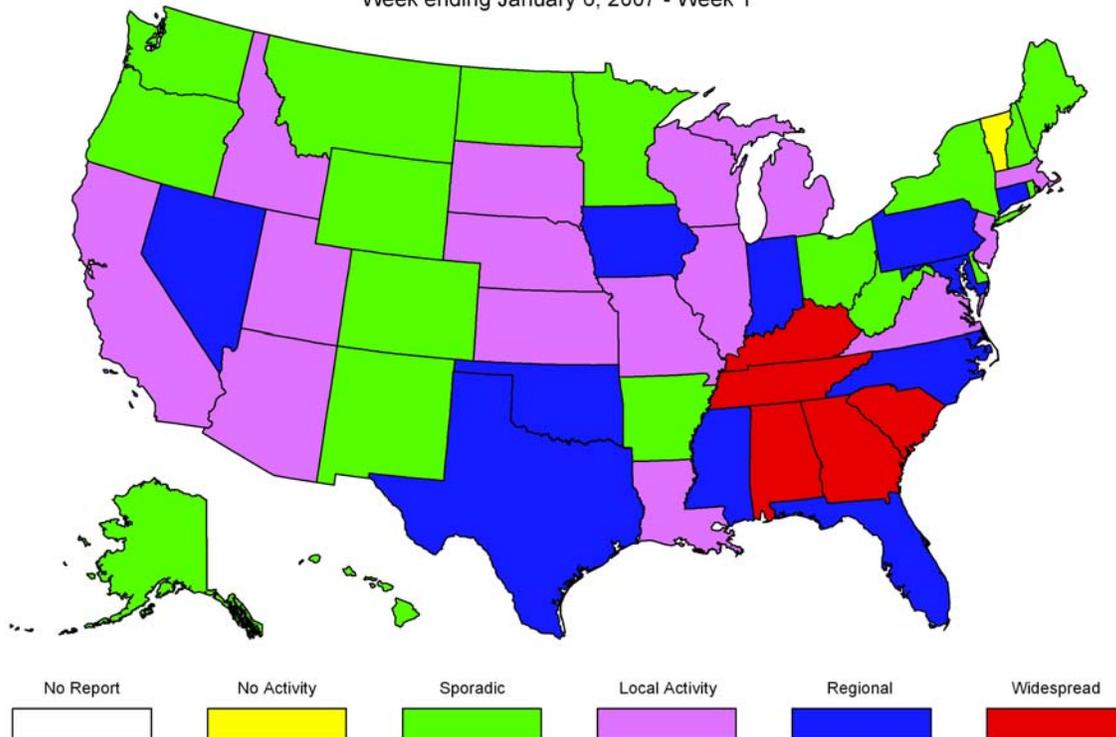
CDC has antigenically characterized 98 influenza viruses [59 influenza A (H1), two influenza A (H3) viruses, and 37 influenza B viruses] collected by U.S. laboratories since October 1, 2006. For influenza A (H1), fifty-three (90%) of the 59 viruses characterized were similar to A/New Caledonia/20/99-like, which is the influenza A (H1) component of the 2006-07 influenza vaccine. Six (10%) of the 59 viruses showed somewhat reduced titers with antisera produced against A/New Caledonia/20/99. For influenza A (H3), the two viruses tested were characterized as A/Wisconsin/67/2005-like, which is the influenza A (H3) component of the 2006-07 influenza vaccine. For influenza B, twenty-two (59%) of the 37 influenza B viruses characterized belong to the B/Victoria lineage of viruses. Nine (41%) of these 22 viruses were similar to B/Ohio/01/2005, the B component of the 2006-07 influenza vaccine. Thirteen (59%) of these 22

viruses showed somewhat reduced titers with antisera produced against B/Ohio/01/2005. Fifteen (41%) of the 37 influenza B viruses characterized belong to the B/Yamagata lineage of viruses.

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 6, 2007 - Week 1



**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.

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MDCH reported **LOCAL ACTIVITY** to the CDC for this past week ending January 13, 2006.

**End of Seasonal Report**

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## **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 12):** The Ministry of Health in Indonesia has confirmed the country's 59th death from H5N1 avian influenza. The 38-year-old woman from Tangerang, Banten Province whose infection was announced on January 9<sup>th</sup>, died in hospital on January 11, 2007.

The Ministry of Health has also confirmed a new case of human infection with the H5N1 avian influenza virus. The 22-year-old woman from Banten Province developed symptoms on January 3<sup>rd</sup> and remains in hospital. An initial investigation into the source of her exposure found reports of chicken deaths near her home in the days prior to symptom onset.

**International, Human (WHO, January 15):** The Ministry of Health of Indonesia has confirmed the death of a 22-year-old woman from Tangerang City, Banten Province. The woman, whose infection was announced on January 12<sup>th</sup>, died later that day.

The Ministry of Health has also confirmed two additional cases of human infection of H5N1 avian influenza.

A 22-year-old woman from South Jakarta developed symptoms on January 6<sup>th</sup> and died on January 12<sup>th</sup>. Investigations into the source of her exposure found reports of bird deaths near her home in the days prior to symptom onset.

The 18-year-old son of the 37-year-old woman from Tangerang City, Banten Province has now also been confirmed as infected with H5N1 avian influenza. He remains in hospital in a critical condition. Investigations into the source of his infection indicate similar environmental exposure as his mother.

Of the 79 cases confirmed to date in Indonesia, 61 have been fatal.

**International, Human (Promed via Canadian Press, January 14):** An Indonesian man investigated as a possible case of avian flu in the latest family cluster of infections does not have the H5N1 virus, a senior health ministry official said on January 14<sup>th</sup>. The man, whose wife died last week and whose son is battling the disease, will soon be released from hospital, said Dr Nyoman Kandun, Indonesia's director general of disease control and environmental health. "The husband is negative," Kandun said from Jakarta. "Only the son is positive. He (the husband) will be discharged tomorrow or the day after tomorrow. He's all right now."

Kandun said 3 rounds of testing on the man, 46, failed to produce a positive test. Specimens were also taken for testing from a number of other family members and close contacts. "All of them are negative," Kandun said. The family lived in Tangerang, in Banten Province. The recently purchased, slaughtered and ate chickens believed to be infected with H5N1. The man's wife, 38, died on January 11<sup>th</sup>. Their son, 18, tested positive for the virus.

After several months of no human cases, Indonesia has seen a resurgence of infections since the start of 2007. To date this year, the country has confirmed 5 cases: the mother and son; a 14 year old boy from West Jakarta; a 22 year old woman from Banten Province and a 27 year old woman from South Jakarta. All but the 18 year old died last week.

**International, Poultry (Promed via All Headline News, January 12):** Nigerian health authorities on Friday [January 12] confirmed a new outbreak of H5N1 bird flu in the Sokoto state in country's far north. This is the first case of bird flu after months of any such infections in Africa's most-populous nation. The last known infection occurred in September. Authorities are also investigating at least 2 suspected cases in nearby Katsina and sufficient steps are taken to contain the infection.

According to Dr. Garba Sharabutu, a veterinarian and president of the Nigerian veterinarian association, "We have one [case] that has been confirmed in one of the farms here in Sokoto." "Right now, we have moved most of our people there. And, they are actually doing the stamping out, trying to control the disease

within the farm. They are really spraying the farm, and they have killed all the birds and buried them properly," he added.

**International, Poultry (Promed via Japan Today, January 14):** The Miyazaki prefectural government on Sunday [January 14] began disposal of some 12,000 chickens at a poultry farm in the southwestern Japan prefecture, after a large number of fowl there were confirmed to have died from avian influenza. The local government mobilized about 150 workers to dispose of all the chickens at the farm in the town of Kiyotake, including about 3800 already dead, under the law to prevent infectious disease in livestock. The chickens, to be killed with carbon dioxide, will be put in bags and incinerated, while the farm will be cleaned and disinfected. The work is expected to be completed in about 3 days.

The prefectural government plans on-site inspections of 16 other chicken farms located within 10 km of the farm concerned to check for any signs of the spread of avian flu. The Agriculture, Forestry and Fisheries Ministry said Saturday [January 13] that the cause of the large number of chicken deaths at the farm had been confirmed to be avian influenza. The Miyazaki prefectural government the same day announced that the type of bird flu virus had been identified as H5. The National Institute of Animal Health in Tsukuba, Ibaraki Prefecture is testing to determine whether the virus is the virulent H5N1 strain.

**International, Poultry (Reuters, January 14):** Bird flu has been confirmed in poultry in a sixth Vietnamese province despite efforts by the government to stop it spreading. The Animal Health Department said in a report on Sunday the H5N1 bird flu virus had been found in ducks in the Mekong Delta province of Tra Vinh, extending the spread of bird flu in southern provinces in recent weeks. Tra Vinh is adjacent to Vinh Long province where bird flu struck a chicken farm a week ago. Officials have confirmed outbreaks of the virus in ducks and chickens in four other Mekong delta provinces further southwest of Ho Chi Minh City, where market inspectors have restricted the movement and sale of poultry. Vietnam has had no human H5N1 cases since November 2005 but the virus that first hit the Southeast Asian country in late 2003 re-emerged last month in Mekong delta poultry. Agriculture officials have warned the country's 84 million people that the virus could spread nationwide via migrating birds. The risk of infections could also rise before the Tet Lunar New Year festival in mid-February, where the slaughter and eating of poultry is a traditional part of the new year's feast. Bird flu killed 42 of the 93 people infected in Vietnam in 2003-2005.

**International, Poultry (Reuters, January 15):** Thailand has suffered its first outbreak of the H5N1 bird flu virus in six months, an Agriculture Ministry official said on Monday after a rash of outbreaks in Vietnam and four human deaths in Indonesia this year. "The lab results confirmed that some ducks in the northern province of Phitsanulok have been infected with H5N1 bird flu virus," Livestock Department chief Pirom Srichan told Reuters. "We have culled about 1,900 ducks in the area." The last outbreak of the virus in poultry in Thailand was late July.

**International, Wild Birds (Hong Kong's Agriculture, Fisheries and Conservation Department Website, January 14):** Preliminary testing of a dead bird found in Shek Kip Mei has indicated a suspected case of H5 avian influenza, a spokesman for the Agriculture, Fisheries and Conservation Department said today (January 13). Further confirmatory tests are still being conducted. The carcass of the crested goshawk was collected by department staff at the hill behind Shek Kip Mei Health Centre on January 9, after being alerted by a member of the public.

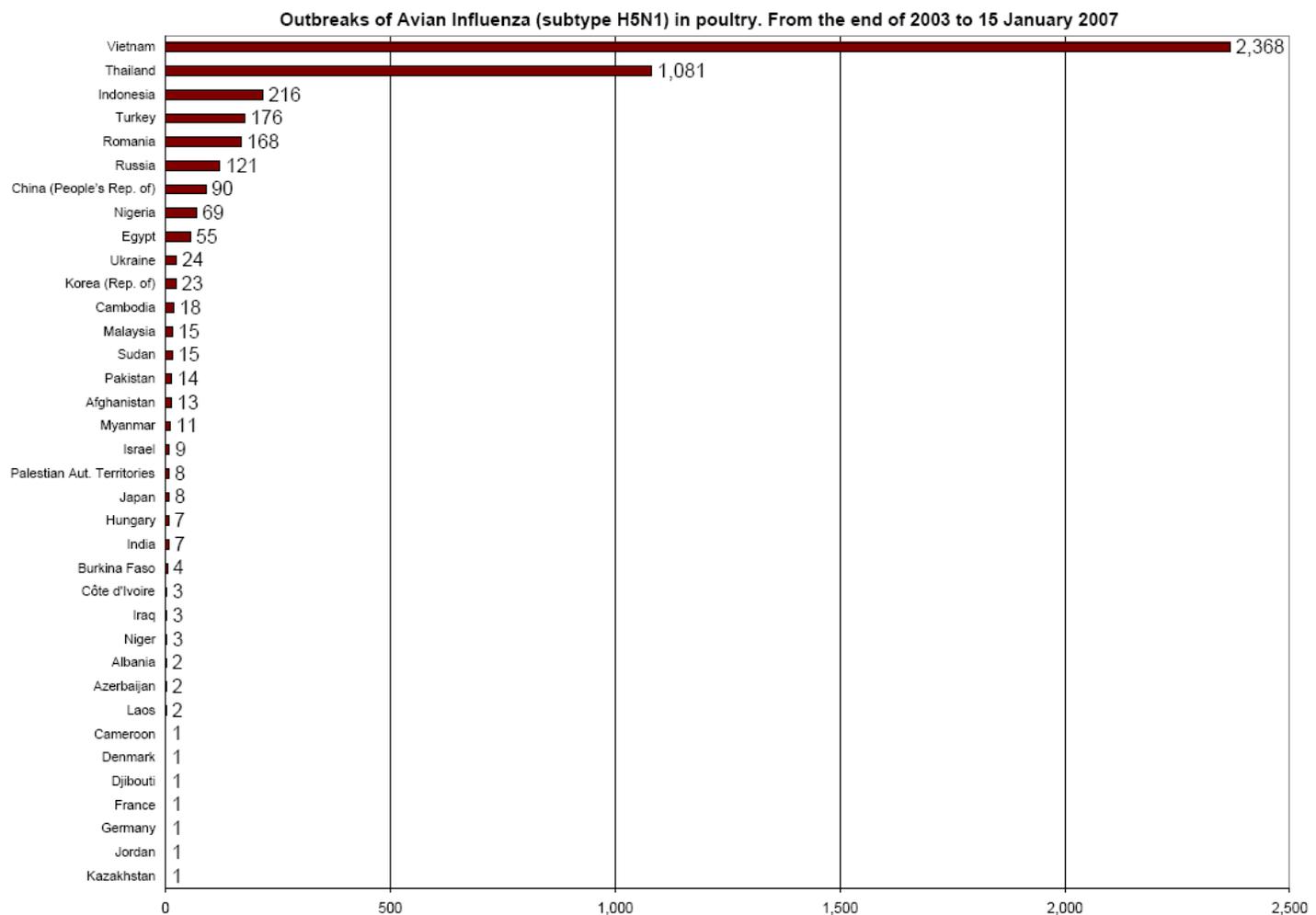
**Michigan Wild Bird Surveillance (USDA, January 5):** According to the National HPAI Early Detection Data System website, available at <http://wildlifedisease.nbio.gov/ai/>, Michigan has results for a total of 2182 samples, from both wild birds and the environment, submitted for testing as of January 5<sup>th</sup>. 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 70,959 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.**

**Table 1. H5N1 Influenza in Poultry (Outbreaks up to January 15, 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 1/17/2007)



**Table 2. H5N1 Influenza in Humans (Cases up to January 15, 2006)**

([http://www.who.int/entity/csr/disease/avian\\_influenza/country/cases\\_table\\_2006\\_06\\_06/en/index.html](http://www.who.int/entity/csr/disease/avian_influenza/country/cases_table_2006_06_06/en/index.html) Downloaded 1/15/2007)

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	0	0	18	10
Indonesia	0	0	0	0	19	12	56	46	4	3	79	61
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	4	3	267	161