



# MI FluFocus

## Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology  
Bureau of Laboratories

Michigan Department  
of Community Health



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### New updates in this issue:

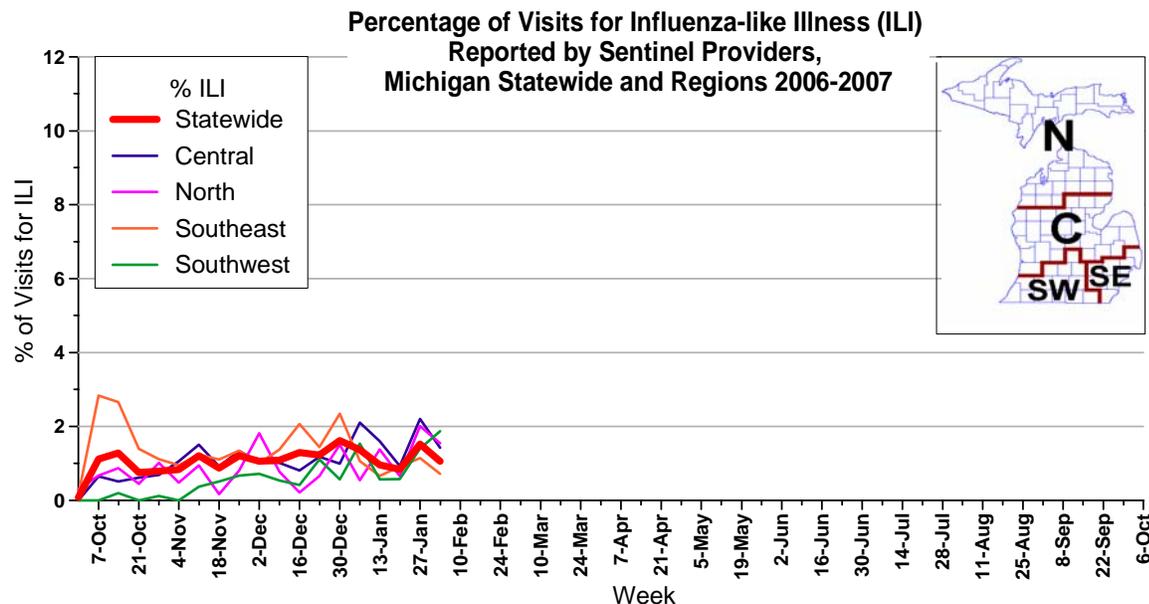
- **Michigan Surveillance:** All indicators, except sentinel ILI visits, are slightly increased.
- **National Surveillance:** Activity is increased with eight states reporting widespread activity.
- **Avian Influenza:** Human deaths in Nigeria and Egypt; United Kingdom reports first poultry outbreak.

**Michigan Disease Surveillance System:** The last week has seen a slight increase in both aggregate flu-like illness and 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 respiratory complaints remained steady while constitutional show a slight increase this past week. The levels reported are consistent with levels reported at this time last year. Six constitutional alerts in Regions 3(1), 5(1), 7(3) and 8(1) and three respiratory alerts in Regions 1(1), 5(1), and 7(1) were generated last week.

**Over-the-Counter Product Surveillance:** OTC product sales seem to reflect the over-all increased level of activity in the past week. Sales in seven of eight products saw a slight increase. Only thermometer sales, which saw a mid-week jump but fell back to hold steady, differed. 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 8, 2006):** During the week ending February 3, 2006, the proportion of visits due to influenza-like illness (ILI) decreased slightly to 1.1% of all visits, representing 85 cases of ILI out of 8,067 total patient visits; twenty-seven sentinels provided data for this report. On a regional level, the percentage of visits due to ILI decreased in all regions except the SW, where a slight increase was noted. The percentage of visits due to ILI in each surveillance region is 1.4%, Central; 1.5%, North; 0.7% Southeast; and 1.9% 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 February 8):** For the 2006-2007 influenza season, there have been 63 culture-confirmed cases from the MDCH Lab:

- 44 A:H1N1 (Southeast (15), Southwest (16), Central (9), North (4))
- 3 A:H1,N pending (Central (2), North (1))
- 2 A:H3N2 (Southeast (1), Southwest (1))
- 1 A:H3,N pending (North (1))
- 10 B (Central (3), Southeast (3), Southwest (3), North (1)).

All influenza B cultures have been B/Malaysia. Overall MDCH submission activity is light to moderate. Sentinel laboratories in the Southwest and Central regions are reporting increasing numbers of positive results, while the Southeast region labs are continue to report steady positive results. 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 February 8):** 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 February 8):** No reports were received during the past week. An initial media report of a school closure in Charlevoix County due to influenza was investigated, and the closure was found to be due to GI illness. There have been no reports of influenza outbreaks to MDCH for the 2006-2007 influenza season.

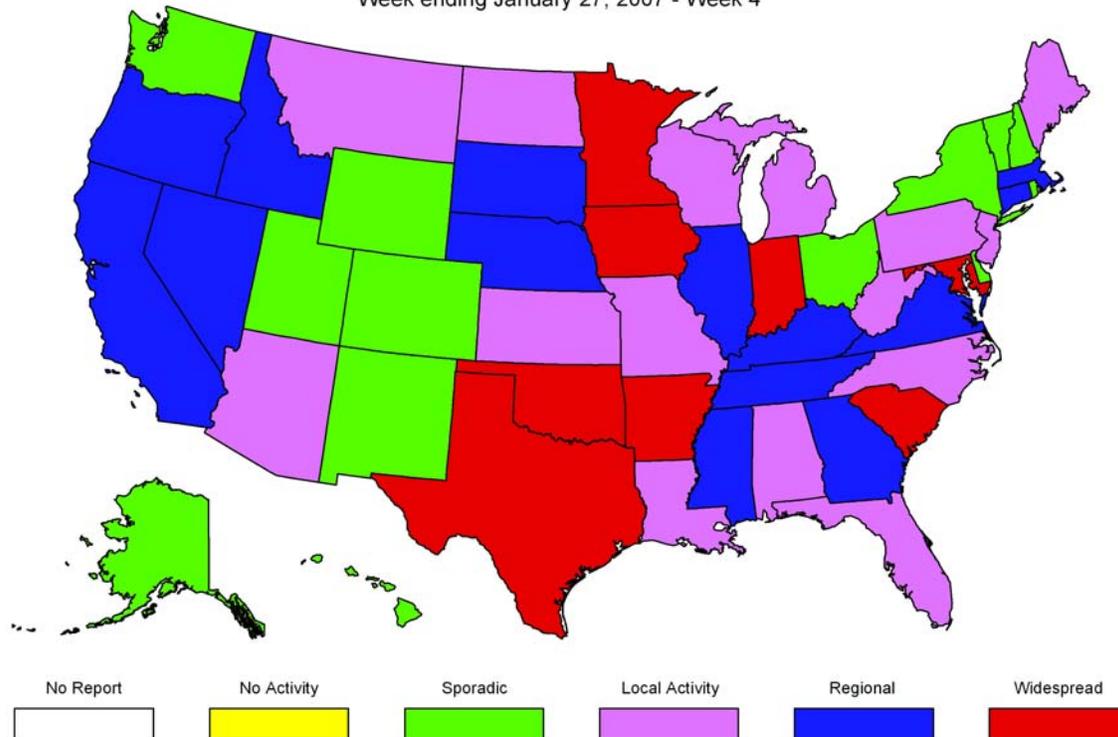
**National (CDC, February 2):** During week 4 (January 21 - January 27 2007), influenza activity increased in the United States. During week 4, WHO and NREVSS laboratories reported 3,450 specimens tested for influenza viruses, 618 (17.9%) of which were positive: 117 influenza A (H1) viruses, 44 influenza A (H3) virus, 381 influenza A viruses that were not subtyped, and 76 influenza B viruses. ILI data was above baseline for week 4. Eight states reported widespread influenza activity; 14 states reported regional influenza activity; 15 states reported local influenza activity; and 13 states, the District of Columbia, and New York City reported sporadic influenza activity. The reporting of widespread or regional influenza activity increased from 18 states for week 3 to 22 states for week 4. 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 75,765 specimens for influenza viruses and 5,109 (6.7%) were positive. Among the 5,109 influenza viruses, 4,162 (81.5%) were influenza A viruses and 947 (18.5%) were influenza B viruses. One thousand three hundred eighty-eight (33.3%) of the 4,162 influenza A viruses have been subtyped: 1,234 (88.9%) were influenza A (H1) viruses and 154 (11.1%) were influenza A (H3) viruses. Among specimens tested for influenza during the most recent three weeks (January 7 – January 27, 2007), on a regional basis, the percent of specimens testing positive for influenza exceeded 10% in the East North Central (33.5%), West North Central (17.4%), East South Central (17.7%), West South Central (13.7%), Mountain (13.8%), and the Pacific (12.6%) regions. In the remaining three regions, the percent of specimens testing positive for influenza in the most recent three weeks was below 10% and ranged from 3.6% to 8.8%.

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 27, 2007 - Week 4



**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 February 3, 2007.

**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, February 3):** The government of Nigeria has announced today the presence of A/H5N1 avian influenza virus in a 22-year-old deceased female from Lagos. The initial positive test findings from a laboratory in Nigeria were confirmed by the WHO Collaborating Centre for Reference and Research on Influenza in London ([see previous report](#)). Further investigations are under way to identify the source of her infection. All samples from contacts of the deceased have tested negative by the WHO Collaborating Centre.

H5N1 virus has been identified in poultry outbreaks in Nigeria and similar to other affected countries, sporadic cases of human infection with avian influenza are not unexpected. WHO is working with the government of Nigeria to carry out intensive surveillance and reports of additional suspected cases may occur as people with influenza-like symptoms seek medical advice.

**International, Human (WHO, February 6):** The Egyptian Ministry of Health and Population has announced a new human case of avian influenza A(H5N1) virus infection. The case was confirmed by the Egyptian Central Public Health Laboratory and by the US Naval Medical Research Unit No.3 (NAMRU-3). The 17-year-old female from Fayyoun Governorate developed symptoms on January 25, 2007 and was initially treated for seasonal influenza. She was hospitalized on February 1<sup>st</sup> with fever and breathing difficulties, and died on February 2<sup>nd</sup>. Initial investigations into the source of her exposure indicate the presence of sick and dead poultry at her home in the days prior to the onset of symptoms. Of the 20 cases confirmed to date in Egypt, 12 have been fatal.

**International, Poultry (Reuters, February 6):** Pakistani scientists have found the deadly H5N1 strain of bird flu in small flock of chickens near the capital, Islamabad, almost a year after the virus was found in two poultry flocks. Mohammad Afzal, Livestock Commissioner at the Ministry of Agriculture, said all the chickens in the flock of about 40 birds at a house in Rawalpindi, a city adjoining Islamabad, had died or been culled. "They tested positive for the H5N1 strain," Afzal told Reuters. "It has been contained and there is no danger of the spread of this virus because there are no poultry farms near this house."

**International, Poultry (ProMed via Reuters, February 3):** Japan has confirmed that a bird flu outbreak at a poultry farm in a southwestern prefecture was caused by the H5N1 virus, making it the 4th such outbreak to hit the country in 2007. The Agriculture Ministry said in a statement on Saturday that test results had shown that the outbreak in Miyazaki prefecture, first detected earlier this week, was due to the H5N1 virus. The H5N1 bird flu has already been confirmed at 2 other poultry farms in Miyazaki, Japan's largest poultry-producing region, and at one farm in the western prefecture of Okayama.

**International, Poultry (ProMed via BBC, February 2):** About 1,000 turkeys at a farm in Suffolk have died from bird flu, government vets have confirmed. The birds are being tested after falling ill at the farm at Holton near Halesworth. Vets from the Department of Environment, Food and Rural Affairs (Defra) said the birds had tested positive for H5 avian flu. Further tests are now being carried out, said a Defra spokesperson.

Defra said reports from the farm were received late on Thursday night and the premises were immediately placed under restrictions. "A full investigation began at 0900 GMT this (Friday) morning, with samples being sent to Veterinary Laboratories Agency, Weybridge, for testing," she said. Sources at Defra have told the BBC that the alarm was raised by the farmer after he noticed "significant mortality" among his flock. About 80% to 90% of the turkeys in the shed were showing signs of illness -going off their food and general malaise which are among the symptoms of avian flu.

Follow-up (DEFRA news release, February 3): Tests from the Veterinary Laboratories Agency (VLA) have confirmed that the sample from the poultry found dead on a farm near Lowestoft in Suffolk did contain the H5N1 avian flu virus. Further tests are underway to determine whether the strain of the virus is similar to that found in Asia. Results are expected later today.

The State Veterinary Service are enforcing a Protection Zone of 3 km radius and a Surveillance Zone of 10 km around the premises where movement restrictions will be imposed and poultry must be isolated from wild birds. The farm itself has been under restrictions since Thursday [1 Feb 2007] evening. In addition the national general license on bird gatherings has been revoked, and bird shows and pigeon racing will no longer be permitted.

An urgent veterinary risk assessment is being carried out in consultation with ornithological experts to consider the specific circumstances of this case and determine the level of risk, if any, it may pose to poultry and other kept birds. On the basis of this risk assessment further wider restrictions will be imposed in the area.

Fred Landeg, the Deputy Chief Veterinary Officer said: "I urge keepers of birds to be vigilant, to take care if handling birds which appear to be unwell and to observe high levels of biosecurity. Owners that suspect disease, should act quickly consult their vet. Avian influenza is a notifiable disease and must be reported to the local Divisional Veterinary Manager in the State Veterinary Service".

There is no reason for public health concern. Avian Influenza is a disease of birds and whilst it can pass very rarely and with difficulty, to humans this requires extremely close contact with infected birds, particularly feces. The Health Protection Agency has advised that, despite this incident, the current level of risk to humans from H5N1 remains extremely low.

"Any possibility of exposure is taken very seriously and the Health Protection Agency has worked closely with Defra and local NHS to ensure that all the necessary actions are being taken to protect those people on the farm who may have been exposed to the virus."

**International, Poultry (ProMed via TNA, February 1):** Thailand's Department of Livestock Development confirmed February 1<sup>st</sup> that it has found the H5N1 virus in samples of fighting cocks and native chickens in the central province of Ang Thong, the 3rd location in which the deadly virus detected this year.

Livestock Development Department director-general Pirom Srichan said the lab tests confirmed the samples of 6 fighting cocks and native chickens from Samko district in the province tested positive to H5N1 virus. All poultry in the flock were culled on January 23, 2007. Officials sprayed disinfectant and checkpoints have been set up to prevent poultry movement in the area.

**International, Poultry (ProMed via Yahoo, January 31):** Three chickens were found dead and positively identified as [having died of] bird flu earlier this week in Purwakarta, West Java. "According to the results of laboratory tests, the chickens positively died of bird flu," the head of the district's animal husbandry office, Yosi Sukmajaya, said here on January 30, 2007. The chickens belonged to residents of Sinangpanong village in Bojong subdistrict and of Raharja village in Wanayasa sub district.

The local animal husbandry office had already taken measures to prevent the virus from spreading such as conducting limited depopulation, intensive immunization and spraying chicken coops with disinfectant. "We have already taken measures to prevent the spread of the virus to other birds," he said. We have also coordinated with the health service to examine the state of health of the villagers, especially the owners of the chickens and their families," he said.

**Michigan Wild Bird Surveillance (USDA, February 2):** 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 February 2<sup>nd</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 74,135 birds or environmental samples tested nationwide.

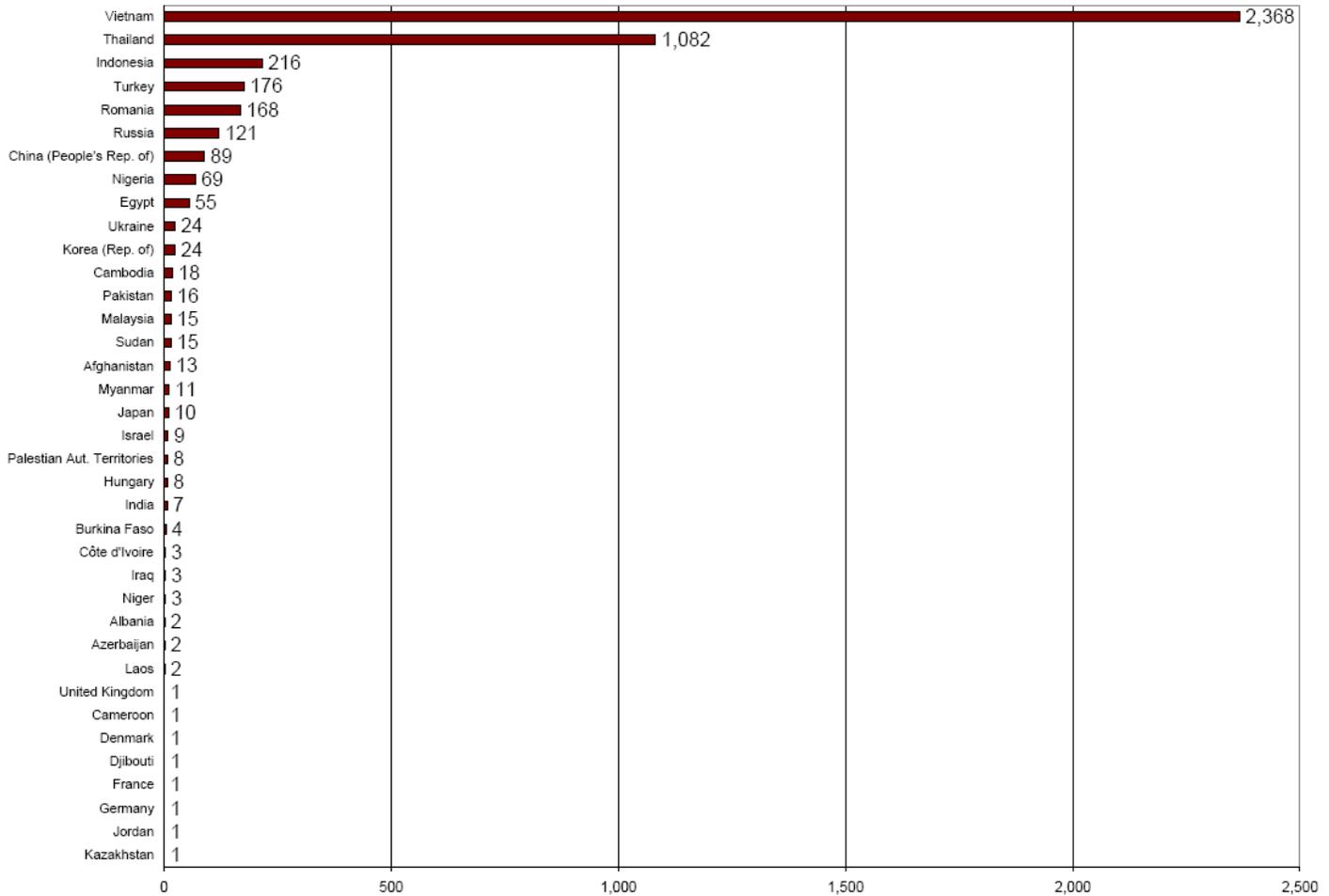
To learn about avian influenza surveillance in Michigan wild birds or to report dead waterfowl, go to Michigan's Emerging Disease website at <http://www.michigan.gov/emergingdiseases>.

**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 February 7, 2007)**

(Source: <http://www.oie.int/download/AVIAN%20INFLUENZA/AI-Asia.htm> Downloaded 2/7/2007)

**Outbreaks of Avian Influenza (subtype H5N1) in poultry. From the end of 2003 to 07 February 2007**



**Table 2. H5N1 Influenza in Humans (Cases up to February 6, 2007)**

([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 2/6/2007)

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	2	2	20	12
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
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	97	42	116	80	9	8	272	166