



MI FluFocus

Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology
Bureau of Laboratories

Michigan Department
of Community Health



Jennifer M. Granholm, Governor
Janet Olszewski, Director

Editor: Susan Vagasky, DVM
VagaskyS@Michigan.gov

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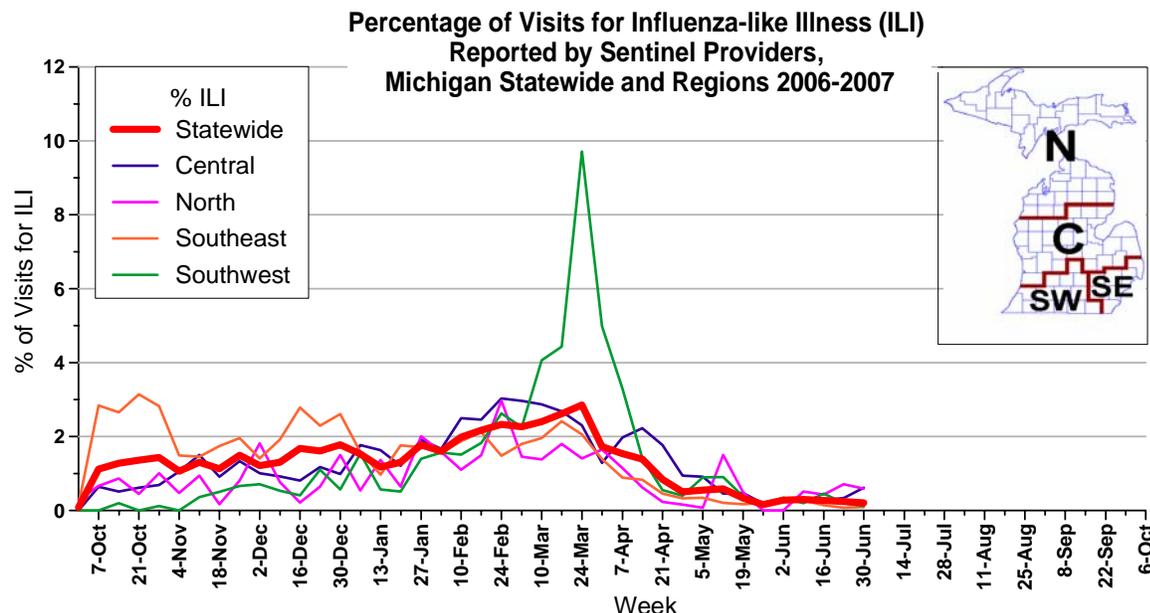
New updates in this issue:

- **Michigan Surveillance:** Influenza-like illness remains at low summer levels.
- **Avian Influenza:** Vietnam reports two new human cases of H5N1 avian influenza.

Michigan Disease Surveillance System: The last week saw a decline in aggregate flu-like illness reports, while individual influenza reports held steady near the previous week's levels. These indicators are expected to continue to fluctuate at baseline levels until fall.

Emergency Department Surveillance: Emergency department visits due to constitutional complaints remained steady, and visits due to respiratory complaints decreased slightly this past week. Reported levels are consistent with levels from this time last year. Four constitutional alerts in Regions 3(2), 5(1) and 7(1) and four respiratory alerts in Regions 1(1), 2S(1), 5(1) and 7(1) were generated last week.

Sentinel Surveillance (as of July 5): During the week ending June 30, 2007, the proportion of visits due to influenza-like illness (ILI) in Michigan remained at low a low level; 0.2% of all visits. This represents 10 cases of ILI out of 4849 total patient visits; twenty sentinels provided data for this report. By surveillance region, the proportion of visits due to ILI was 0.6%, Central; 0.6%, North; 0.1%, Southeast; and 0.1%, 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 July 5): For the 2006-2007 influenza season, there have been 157 culture-confirmed cases from the MDCH Lab:

- 69 A:H1N1 (Southeast (22), Southwest (21), Central (16), North (10))
- 34 A:H3N2 (North (12), Southeast (12), Central (7), Southwest (3))
- 54 B (Southeast (18), Central (17), Southwest (12), North (7))

All influenza B cultures have been B/Malaysia, except for six B/Shanghai results from the Southeast region.

***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 July 5): For the 2006-2007 season, there are no confirmed reports of influenza-related pediatric mortality in Michigan. MDCH and CDC are currently investigating a two possible influenza-associated pediatric mortalities from March, one in the Southwest region and one in the Southeast region.

***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 July 5): An investigation of a mild respiratory disease outbreak in an extended care facility in the Central region has concluded; influenza was not isolated and no definitive cause of the outbreak was identified. There has been one report of an influenza A outbreak from a Central region extended care facility for the 2006-2007 influenza season.

National: For CDC weekly surveillance report archives, visit <http://www.cdc.gov/flu/weekly/fluactivity.htm>.

International (WHO, as of March 29): Overall influenza activity in the northern hemisphere remained moderate in weeks 8–11. In North America, influenza activity declined in general, while in Europe and some Asian countries and areas, widespread activity continued, with influenza A(H3N2) viruses predominating. Influenza A(H1N1) viruses circulated in the United States and in a few eastern European countries. Influenza B viruses circulated at low levels.

For influenza activity from individual countries, please visit the full WHO article “Seasonal Influenza Activity in the World, 2007” at <http://www.who.int/csr/disease/influenza/update/en/>.

Weekly reporting to the CDC has concluded for the 2006-2007 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, June 29): The Ministry of Health in Viet Nam has confirmed two new human cases of influenza A(H5N1) virus infection, the first human cases to have been reported from Viet Nam since November 2005. Both cases have been confirmed by the National Institute of Hygiene and Epidemiology (NIHE) and by the WHO H5 Reference Laboratory, US Centers for Disease Control and Prevention (CDC).

The first case is a 29 year old male from Vinh Phuc Province. He developed symptoms on May 10 some days after slaughtering poultry for a wedding. He was admitted to hospital on May 15 and was discharged on June 11.

The second human is a 19 year old male from Thai Nguyen Province. He developed symptoms on May 20 following exposure to poultry at a slaughter house. He was admitted to hospital on May 25 and remains in hospital in a stable condition.

To date, there has been no evidence of an epidemiological link between the human cases, and no evidence of infection in close contacts of the cases.

These human cases have coincided with a large number of new poultry outbreaks of highly pathogenic avian influenza reported in Viet Nam during May and June this year.

International, Poultry (Reuters Alertnet, June 27): Bird flu has spread to another district in Bangladesh forcing health and veterinary workers to cull 5000 chickens, officials said on Wednesday [June 27].

The latest case was reported from a village in Thakurgaon district, 500 km (310 mi) northwest of the capital, Dhaka, said Abdul Motalib, a senior officer of the fisheries and livestock ministry.

The H5N1 strain of bird flu was first detected near the capital Dhaka, in central Bangladesh, in March [2007], and has since spread to northern districts. The virus has affected 16 of the 64 districts in Bangladesh, but there have been no reported cases of human infection.

About 4 million Bangladeshis are directly or indirectly associated with poultry farming.

International, Poultry (Reuters India, July 4): Viet Nam has sent officials on an urgent mission to China to buy 50 million doses of vaccine for poultry after 2 people died of the H5N1 bird flu virus.

Viet Nam has only 15 million doses left, jeopardizing a nationwide campaign to vaccinate waterfowl and chickens.

Prime Minister Nguyen Tan Dung has approved an order to import 200 million doses of vaccine to stop the spread of H5N1.

International experts hailed a poultry vaccination program and other measures Viet Nam adopted from late 2005, as a model that helped keep the virus at bay. However, this year [2007], it has spread nationwide in birds and humans.

Since May [2007], 5 people have been infected by the virus, 2 of who have died, the 1st human casualties in the Southeast Asian country since November 2005.

The World Health Organization (WHO) confirmed only the 1st 2 cases of infection, both in men who subsequently recovered.

"Bird flu is now on a declining trend in the northern region but in the southern region the risk of bird flu recurrence is extremely serious," Agriculture Minister, Cao Duc Phat, was quoted by the newspaper as saying at a government meeting on Tuesday.

The Animal Health Department said 8 provinces and Haiphong city -- all in the northern and central regions -- all of which have detected bird flu outbreaks in poultry in the past month [June 2007], remained on the government's watch list.

International, Poultry (OIE press release [edited], July 4): The OIE provided Togo with one million doses of AI vaccines from its vaccine bank for protecting adult poultry against the H5N1 avian influenza strain immediately following the confirmation of a 1st outbreak in this country.

This delivery comes as a result of the OIE partnership with donors to the OIE World Animal Health and Welfare Fund and the financial support of Canada via the Canadian International Development Agency (CIDA).

Since its inception in May 2006, the vaccine bank also delivered 20,300,000 [doses of] vaccines to African countries: Egypt (14 million doses), Mali (one million), Mauritania and Ghana (2 million), Senegal (one million) and Mauritius (300 000) within the OIE/Inter-African Bureau for Animal Resources of the African Union (AU-IBAR) partnership, with the financial support of the European Commission (EC) and of Canada.

The OIE initially established the virtual vaccine bank for African countries and for rapidly assisting infected countries with vaccinating poultry populations at risk. Countries free of infection but wishing to establish a strategic stockpile can also appeal to it. A strategic stockpile can be used by a country in case of a persistent worsening of the situation.

The bank is not entirely reliant on physical stocks of vaccines but also on commitments from the supplier to deliver vaccines when needed. This avoids vaccine loss due to lapsing expiration dates.

The OIE has succeeded in maintaining and extending this virtual AI Vaccine Bank to other regions of the world. The Canadian International Development Agency (CIDA) has already confirmed a financial participation in this global project for 3 years (2007-2009).

International, Poultry and Wild Birds (Reuters, June 28): The deadly strains of bird flu that has killed birds in the Czech Republic and southern Germany are similar and most likely have a common origin, Germany's top state veterinary laboratory said on Thursday.

The Czech Republic reported finding the deadly H5N1 strain of avian influenza virus at two poultry farms and in a dead swan. Germany has found the virus in a number of wild birds in the eastern state of Saxony and southern state of Bavaria.

Germany's Friedrich Loeffler Institute said it compared the viruses found in a wild swan near the Bavarian city of Nuremberg with samples from a Czech turkey farm and found that they had a 99.2 percent match.

"The degree of similarity points to an as yet undetermined common origin for both viruses," the institute said in statement.

The institute said it was not clear if there was a direct connection between the outbreaks in Bavaria and Czech Republic but said they appeared to be the highly pathogenic Asian strain of H5N1 circulating in the Middle East.

Last year, some 13 European Union member states had confirmed cases of bird flu -- Germany, Austria, Denmark, Italy, Greece, Britain, the Czech Republic, Poland, Slovakia, Slovenia, Sweden, France and Hungary.

Bird flu has been spreading across southeast Asia, killing two people in Vietnam this month, the first deaths there since 2005.

Globally, the H5N1 virus has killed nearly 200 people out of over 300 known cases, according to the World Health Organization. None of the victims were from Europe.

International, Wild Birds (Forbes News, July 3): The Thuringian (Germany) health ministry said a black-necked grebe found dead in Kelbra near Erfurt was infected with the H5N1 strain of avian influenza, which is potentially lethal to humans.

A 3 km security cordon has been installed around the site where the bird was found. Poultry must remain confined within that area and cats and dogs must be kept on leashes.

This brings the number of dead wild birds found to be carrying the virus in Germany to 13 since last week.

Michigan Wild Bird Surveillance (USDA, July 5): For the 2007 testing season, 126 Michigan samples have been taken so far, comprised of 98 live bird samples and 28 morbidity/mortality samples.

According to the National HPAI Early Detection Data System website, HPAI subtype H5N1 has not been recovered from any Michigan samples tested to date, or from the 2164 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.nhii.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

MDCH Bureau of Epidemiology - Sally Bidol, MPH; Edward Hartwick, MS; Elizabeth Lewis, MHS; Rachel Potter, DVM, MS

MDCH Bureau of Laboratories – Patricia Clark, MPH

Table 1. H5N1 Influenza in Poultry (Outbreaks up to June 29, 2007)

(Source: http://www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm Downloaded 7/2/2007)

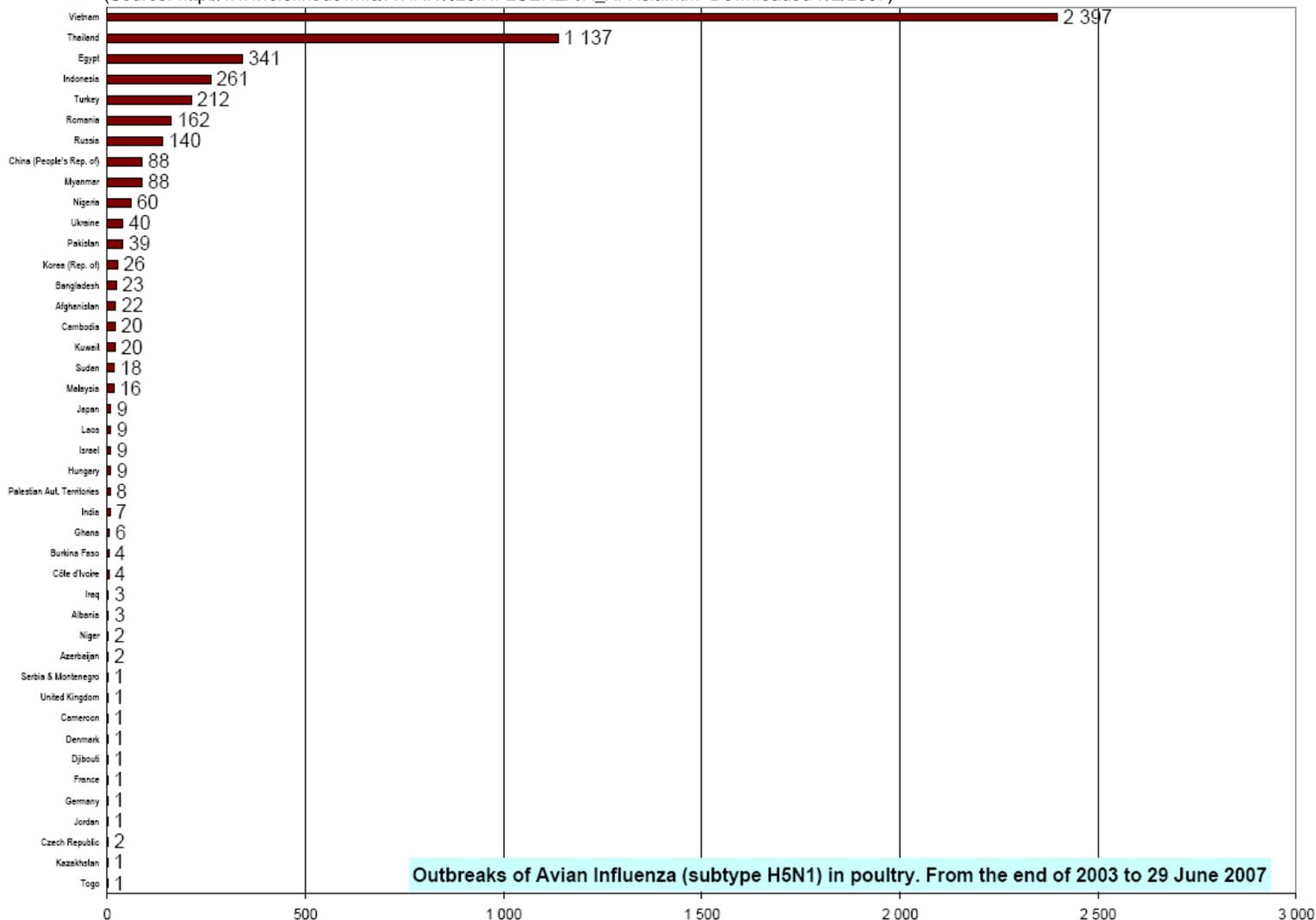


Table 2. H5N1 Influenza in Humans (Cases up to June 29, 2007)

(http://www.who.int/entity/csr/disease/avian_influenza/country/cases_table_2007_06_29/en/index.html Downloaded 6/29/2007)

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 | 3 | 2 | 25 | 16 |
| Djibouti | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Egypt | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 10 | 19 | 5 | 37 | 15 |
| Indonesia | 0 | 0 | 0 | 0 | 20 | 13 | 55 | 45 | 26 | 22 | 101 | 80 |
| Iraq | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 3 | 2 |
| Lao PDR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 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 | 2 | 0 | 95 | 42 |
| Total | 4 | 4 | 46 | 32 | 98 | 43 | 115 | 79 | 54 | 33 | 317 | 191 |