



# MI FluFocus

## Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology  
Bureau of Laboratories

Michigan Department  
of Community Health



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August 14, 2008  
Vol. 5; No. 33

### New updates in this issue:

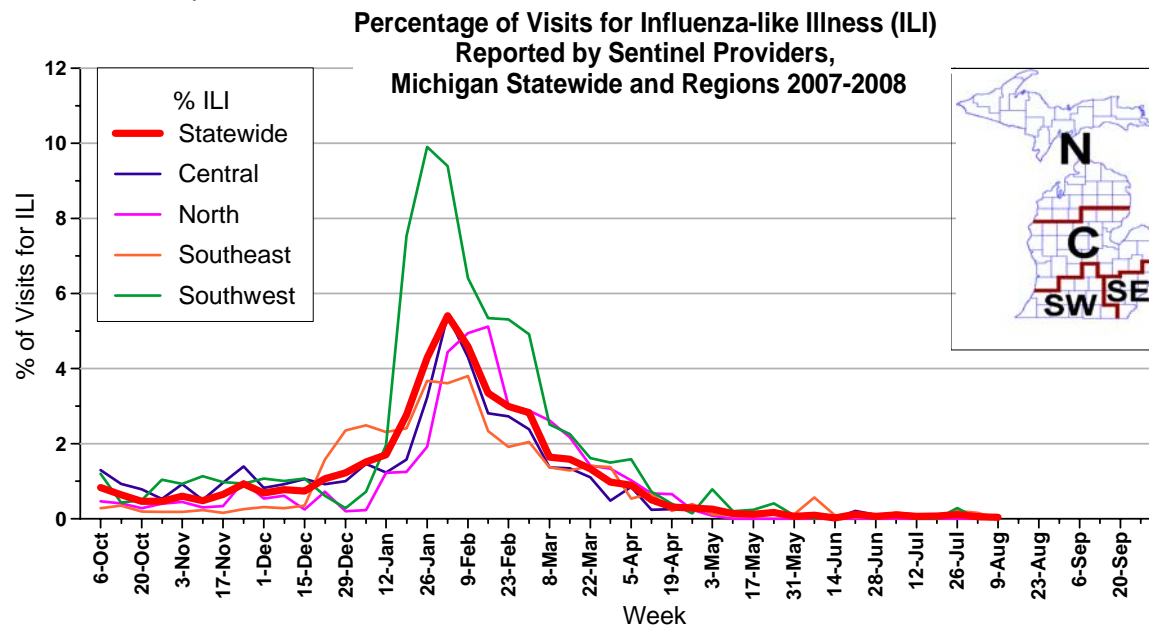
- **Michigan Surveillance:** B/Malaysia isolate from August confirmed at MDCH lab.
- **Avian Influenza:** Recent H5N1 outbreaks in Nigeria due to a different virus strain.

**Michigan Disease Surveillance System:** The week ending August 9 saw both aggregate flu-like disease and individual influenza reports remain steady near last week's levels. Both aggregate flu-like illness and individual influenza reports are expected to fluctuate near baseline levels until the fall.

**Emergency Department Surveillance:** Emergency department visits from both constitutional and respiratory complaints remained steady near last week's levels. Both constitutional and respiratory complaints are consistent with numbers seen this time last year. Three constitutional alerts in the C(1), N(1) and SW(1) Influenza Surveillance Regions and eight respiratory alerts in the C(4), N(1), SE(2) and SW(1) Influenza Surveillance Regions were generated last week.

**Over-the-Counter Product Surveillance:** Overall, OTC product sales increased last week. Only children's electrolytes dropped slightly, while the remainder saw a slight increase. Indicator levels are comparable to those seen at this time last year.

**Sentinel Surveillance (as of August 15):** During the week ending August 9, 2008, less than 0.1% of all office visits reported by Michigan influenza sentinel sites were due to influenza-like illness (ILI). This represents 2 cases out of 5073 total patients seen. These cases were reported in the Central surveillance region. Nineteen practices provided data for this report. Note that these rates may change as additional reports are received.



As part of pandemic influenza preparedness, CDC and MDCH highly encourage 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 August 14):** For the 2007-2008 influenza season, the MDCH Bureau of Laboratories has identified 249 influenza isolates:

- 190 A/H3N2: Central (58); Southwest (51); Southeast (49); North (32)
- 4 A/H1N1: Southeast (2); North (2)
- 2 A subtyping unable to be performed: Southeast (2)
- 53 B: Southeast (30); North (10); Southwest (6); Central (6); Indiana (1). 51 have been typed as B/Shanghai/361/2002-like and 2 were B/Malaysia/2506/2004-like (SE).

\*\*\*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 August 14):** For the 2007-2008 season, MDCH has confirmed one influenza-related pediatric mortality in Michigan. The case was a 13 year-old from the Central region with an influenza A/H3N2 and MRSA co-infection; disease onset was in late February.

\*\*\*The CDC has asked all states to collect information on any pediatric death associated with influenza infection. This includes not only any death in a child (<18 years) resulting from a compatible illness confirmed to be influenza by an appropriate diagnostic test, but also any unexplained death with evidence of an infectious process in a child. See [www.michigan.gov/documents/fluletter\\_107562\\_7.pdf](http://www.michigan.gov/documents/fluletter_107562_7.pdf) for the complete protocol. Please immediately call MDCH to ensure that proper clinical specimens are obtained.

**Congregate Settings Outbreaks (as of August 14):** Congregate setting outbreaks have been reported in all regions of the state, peaking in the first two weeks of February. Seven outbreaks have been culture-confirmed at MDCH; six as influenza A/H3N2 and one as influenza B for the 2007-2008 season.

**Michigan Influenza Season Summary:** The 2007-2008 Michigan Influenza Season Summary is now available online at [www.michigan.gov/influenza](http://www.michigan.gov/influenza). Overall, this influenza season was moderate in activity with peak activity occurring in early February and was dominated by influenza A/H3N2.

**National (CDC):** To access the entire CDC weekly surveillance report throughout the influenza season, visit <http://www.cdc.gov/flu/weekly/fluactivity.htm>. The 2007-2008 national influenza season summary is available at [http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5725a5.htm?s\\_cid=mm5725a5\\_e](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5725a5.htm?s_cid=mm5725a5_e).

**International (WHO, August 14):** During weeks 30–32, the level of overall influenza activity in the world increased. In the southern hemisphere, increase in both influenza activity and detection of influenza viruses was observed. Influenza A (H1), A(H3) and Influenza B circulated. Widespread outbreaks were reported in New Zealand. Countries in the northern hemisphere reported sporadic or no activity.

*China, Hong Kong Special Administrative Region.* Increase in influenza activity continued, with circulation of both A (H3) and A (H1) viruses. Regarding influenza B viruses detected, B/Yamagata lineage predominated over B/Victoria lineage.

*New Zealand.* Widespread influenza activity was reported, with influenza A (H3) and influenza B viruses circulating.

Between weeks 30 to 32, sporadic influenza activity was detected in Argentina A (H1), Brazil (A,B), Canada, Chile (A, B), the Islamic Republic of Iran A (H3), Poland (A) Uruguay (A ,B)

Madagascar reported sporadic influenza activity, but no influenza cases were laboratory confirmed

Belgium, Cameroon, Germany, Norway, Portugal, and Slovenia reported no influenza activity.

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Seasonal influenza reporting to the CDC has ended for the 2007-2008 influenza season.

For stakeholders interested in additional information regarding influenza vaccination and education, the MDCH publication *Michigan FluBytes* is available online at [http://www.michigan.gov/mdch/0,1607,7-132-2940\\_2955\\_22779\\_40563-125027--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2940_2955_22779_40563-125027--,00.html). *FluBytes* is published biweekly during the summer months.

## **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, Poultry (The Jakarta Post online, August 7):** The number of poultry, mostly chickens, that have died of bird flu in Purbalingga District, Central Java in the first half of 2008 has already surpassed the 2007 total, the Head of the local Development Planning Agency, Heni Ruslanto, said on Wednesday [6 Aug 08].

"Some 58,000 poultry died of bird flu in 2007, while more than 60,000 have already died during the first six months of this year," Ruslanto said.

"It has been confirmed that the poultry died of bird flu."

Ruslanto added that people in the region had received limited information about preventive health measures and how to handle bird flu cases.

"Therefore, we are calling on organization to address this problem," he said.

**International, Poultry (FAO, August 11):** A strain of Highly Pathogenic Avian Influenza previously not recorded in sub-Saharan Africa has been detected in Nigeria for the first time, FAO said today. Nigeria has recently reported two new Highly Pathogenic Avian Influenza outbreaks in the states of Katsina and Kano.

Laboratory results from Nigeria and an FAO reference laboratory in Italy show that the newly discovered virus strain is genetically different from the strains that circulated in Nigeria during earlier outbreaks in 2006 and 2007. The new strain has never been reported before in Africa; it is more similar to strains previously identified in Europe (Italy), Asia (Afghanistan) and the Middle East (Iran) in 2007.

"The detection of a new avian influenza virus strain in Africa raises serious concerns as it remains unknown how this strain has been introduced to the continent," warned Scott Newman, International Wildlife Coordinator of FAO's Animal Health Service.

"It seems to be unlikely that wild birds have carried the strain to Africa, since the last migration of wild birds from Europe and Central Asia to Africa occurred in September 2007 and this year's southerly migration into Africa has not really started yet," Newman said. "It could well be that there are other channels for virus introduction: international trade, for example, or illegal and unreported movement of poultry. This increases the risk of avian influenza spread to other countries in Western Africa."

"Uncertainty about virus spread and transmission is a major challenge for control campaigns. Increased surveillance is key to monitor the situation and keep track of virus spread," said FAO Chief Veterinary Officer Joseph Domenech. "FAO greatly appreciates Nigeria's swift reporting and sharing of the relevant information about this new virus strain."

Since the avian influenza epidemic caused by the H5N1 strain started five years ago in Asia, the disease has affected over 60 countries; the vast majority of countries have succeeded to eliminate the virus from poultry. In Nigeria, the virus was first confirmed in February 2006 and infected poultry in 25 states before being contained.

FAO supports affected countries and countries at risk to detect bird flu outbreaks at a very early stage.

FAO has also contributed to an efficient global response to HPAI.

In Nigeria, FAO has a team of animal health experts and veterinary epidemiologists working with the government and its veterinary services. FAO has assisted the government with disease surveillance and outbreak investigations, as well as establishing a stockpile of veterinary drugs both at central and state levels. FAO and the Federal Government of Nigeria have identified priority areas where animal health and transboundary animal disease prevention measures need to be improved.

“Many countries have succeeded in getting the virus under control; but as long as avian influenza remains endemic in some countries, the international community needs to be on alert. Both, at risk and affected countries have to keep a high level of surveillance,” Domenech said.

**Michigan Wild Bird Surveillance (USDA, as of August 14):** For the 2008 testing season, 616 Michigan samples have been taken so far, comprised of 238 live birds, 339 hunter-killed birds, 14 morbidity/mortality samples and 25 environmental samples.

HPAI subtype H5N1 has not been recovered from any Michigan samples tested to date, or from the 13,753 birds or environmental samples tested nationwide for the 2008 testing season, which will run from April 1, 2008 - March 31, 2009. For more information, visit the National HPAI Early Detection Data System website at <http://wildlifedisease.nbio.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](mailto:VagaskyS@Michigan.gov) with any questions regarding this newsletter or to be added to the weekly electronic mailing list.**

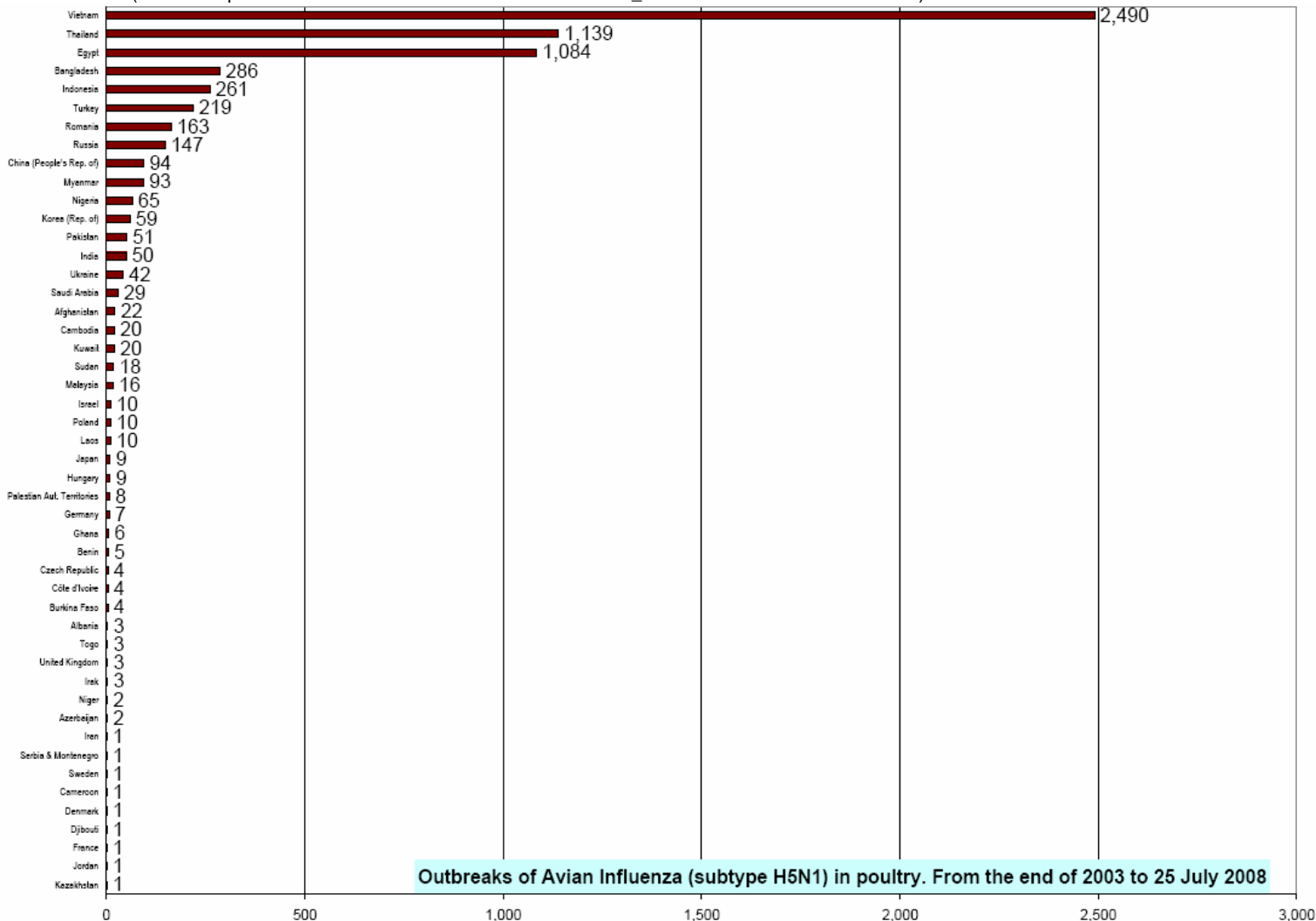
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**Table 1. H5N1 Influenza in Poultry (Outbreaks up to July 25, 2008)**

(Source: [http://www.oie.int/downld/AVIAN%20INFLUENZA/A\\_AI-Asia.htm](http://www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm) Downloaded 7/29/08)



**Outbreaks of Avian Influenza (subtype H5N1) in poultry. From the end of 2003 to 25 July 2008**

**Table 2. H5N1 Influenza in Humans (Cases up to June 19, 2008)**

([http://www.who.int/csr/disease/avian\\_influenza/country/cases\\_table\\_2008\\_06\\_19/en/index.html](http://www.who.int/csr/disease/avian_influenza/country/cases_table_2008_06_19/en/index.html) Downloaded 6/19/2008)

Cumulative number of lab-confirmed human cases reported to WHO. Total number of cases includes deaths.

Country	2003		2004		2005		2006		2007		2008		Total	
	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Cambodia	0	0	0	0	4	4	2	2	1	1	0	0	7	7
China	1	1	0	0	8	5	13	8	5	3	3	3	30	20
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	7	3	50	22
Indonesia	0	0	0	0	20	13	55	45	42	37	18	15	135	110
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	3	2
Lao PDR	0	0	0	0	0	0	0	0	2	2	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	5	5	106	52
<b>Total</b>	<b>4</b>	<b>4</b>	<b>46</b>	<b>32</b>	<b>98</b>	<b>43</b>	<b>115</b>	<b>79</b>	<b>88</b>	<b>59</b>	<b>34</b>	<b>26</b>	<b>385</b>	<b>243</b>