



MI FluFocus

Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology
Bureau of Laboratories

Michigan Department
of Community Health



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July 31, 2008
Vol. 5; No. 31

New updates in this issue:

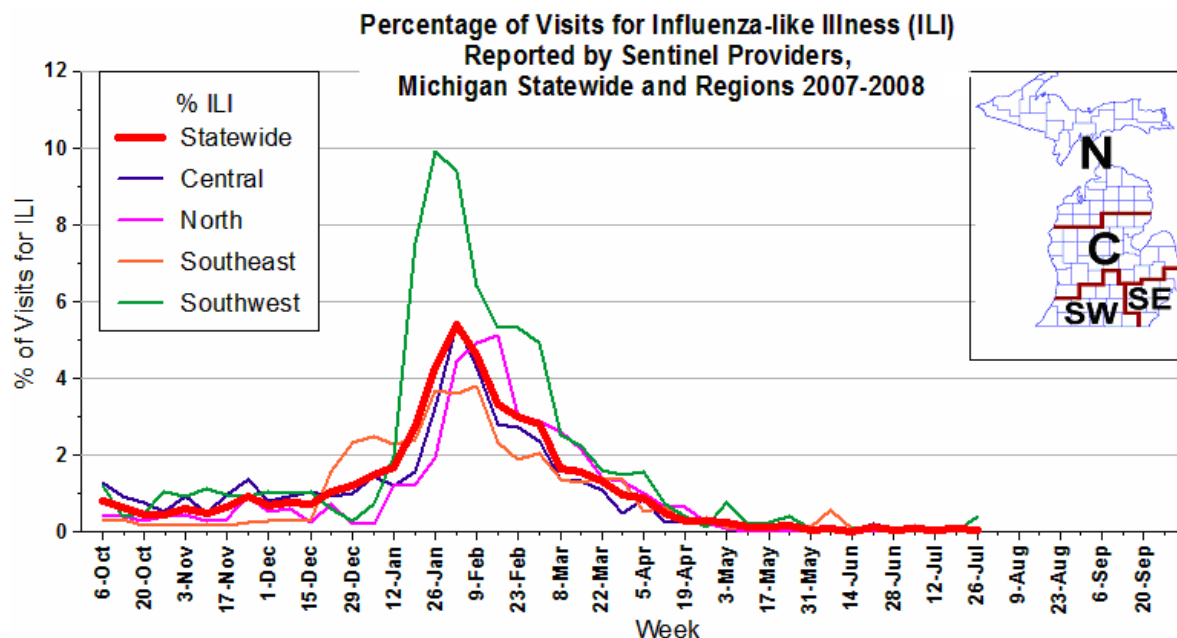
- **International Surveillance:** Alert issued for travelers returning from World Youth Day in Australia.
- **Avian Influenza:** Nigeria reports H5N1 poultry outbreaks; South Korea confirms H5N1 in cat from April.

Michigan Disease Surveillance System: The week ending July 26 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 constitutional complaints remained steady near last week's levels, while respiratory complaints continued to decrease slightly. Both constitutional and respiratory complaints are consistent with numbers seen this time last year. Six constitutional alerts in the C(6) Influenza Surveillance Region and six respiratory alerts in the N(1), SE(1) and SW(4) Influenza Surveillance Regions were generated last week.

Over-the-Counter Product Surveillance: Overall, OTC product sales were mixed last week. Children's electrolytes showed a slight drop in sales, cough and cold medication held steady near last week's levels and the remainder increased slightly. Indicator levels are comparable to those seen at this time last year.

Sentinel Surveillance (as of July 31): During the week ending July 26, 2008, 0.1% of all office visits reported by Michigan influenza sentinel sites were due to influenza-like illness (ILI). This represents 3 cases out of 5267 total patients seen. These cases were reported in the Central and Southwest surveillance regions. Twenty 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 for more information.

Laboratory Surveillance (as of July 31): For the 2007-2008 influenza season, the MDCH Bureau of Laboratories has identified 248 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)
- 52 B: Southeast (29); North (10); Southwest (6); Central (6); Indiana (1). 51 have been typed as B/Shanghai/361/2002-like and 1 was 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 July 31): 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 for the complete protocol. Please immediately call MDCH to ensure that proper clinical specimens are obtained.

Congregate Settings Outbreaks (as of July 31): 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. 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.

International (CDC Epi-X report, July 29): On July 23, 2008, the International Health Regulations (IHR) National Focal Point for Australia alerted the World Health Organization of a public health event of international importance. They have reported ~100 cases of seasonal influenza A and B affecting pilgrims who attended the World Youth Day 2008 (WYD08) celebrations.

WYD08, organized by the Catholic Church, was held during July 15–20. Approximately 400,000 persons attended the major events. An estimated 125,000 international visitors attended, including 15,000 visitors from the United States. The majority of international departures from Sydney occurred during July 20–21.

On July 25, the New South Wales Government Department of Health (NSW DoH) reported on Pro-MED (<http://www.promedmail.org>) that they had detected a number of outbreaks of infectious disease among pilgrims, including 30 outbreaks of influenza A and B in pilgrim groups from Western and Eastern Europe, North America, Southern Asia, Southeast Asia, and the Pacific region. They also detected three outbreaks of gastroenteritis in groups from France and New Zealand. As of July 19, the NSW DoH website has reported 153 influenza cases, as well as numerous cases of gastroenteritis.

Mass gatherings are known to be associated with an increase in the incidence of communicable diseases, especially respiratory and foodborne illnesses. Presently, the response to this event is being managed effectively by NSW DoH and is not posing a serious health impact. There is a low risk of pilgrims returning to the United States causing outbreaks of influenza in their home states.

This information is being shared by CDC via *Epi-X* primarily to assist states in the risk assessment of returning pilgrims presenting with influenza-like illness. CDC suggests that disease-control authorities and laboratories consider influenza in the differential diagnosis of returning travelers who present with influenza-like illnesses, even though the risk for influenza activity in the United States during the summer is otherwise low.

This event underlines the value of influenza vaccination for international travelers who wish to reduce their risk of influenza.

International (WHO, July 24): During weeks 28–29, the level of overall influenza activity in the world increased. In the southern hemisphere, a considerable 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 and South Africa. Countries in the northern hemisphere reported sporadic or no activity.

Argentina. Regional influenza activity was reported. Mostly influenza A viruses were detected and influenza B also circulated.

China, Hong Kong Special Administrative Region. Increase in influenza activity continued, with circulation of A (H3) and A (H1) viruses. All viruses detected from influenza B were of B/Yamagata lineage.

New Zealand. Widespread influenza activity was reported, with mostly influenza A (H3) viruses circulating. Influenza B viruses were also detected.

South Africa. Widespread influenza activity was reported. Influenza A viruses predominated. Influenza A(H1) virus circulated. Regarding Influenza B, viruses from B/Yamagata lineage and B-Victoria lineage were detected.

Between weeks 28 and 29, sporadic influenza activity was detected in Canada (A), Chile (A, B), Panama (A, B), Poland (B), and Uruguay (A, B).

Brazil and Sri Lanka reported sporadic influenza activity, but no influenza cases were laboratory confirmed.

Cameroon, Estonia, Germany, the Islamic Republic of Iran, Mexico, Mongolia, Oman, Portugal, and Slovenia reported no influenza activity.

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. *FluBytes* is published biweekly during the summer months.

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, Poultry (AFP, July 29): Nigerian authorities have reported a fresh outbreak of the deadly H5N1 bird flu virus in the northern states of Katsina and Kano, the official NAN news agency said Tuesday.

The virus was confirmed through tests on affected birds on a poultry farm in Kano State and it has killed 4,249 birds, NAN quoted a state agriculture official as saying.

The official said the outbreak was first reported at the weekend following an initial loss of 1,514 birds on the farm. He said 15 local chickens, 60 guinea fowls and 10 ducks had also been confirmed dead in another outbreak in Katsina State.

He said the government had asked scientists to carry out forensic investigation in the affected areas and some parts of the country. "It is suspected that the disease might have been transmitted by migratory birds or through illegal importation of birds, because one of the affected birds in Gombe was a water animal," he added.

Nigeria, Africa's most populous nation with some 140 million people, last year reported west Africa's first human bird flu death. A 22-year-old woman died in Lagos in January 2007 weeks after plucking and disemboweling a chicken.

Bird flu was first detected in Nigeria on a farm in Jaji town outside the northern city of Kano in February 2006 from where it spread to other parts of the country. Kano, northern Nigeria's most populous city, was the worst affected by the flu outbreak which ravaged 97 farms in the city resulting in the death or culling of at least 300,000 birds.

International, Feline (Yonhap News Agency, July 28): The government confirmed Monday that a cat found dead in April had been infected with the virulent strain of the bird flu influenza.

The National Veterinary Research and Quarantine Service (NVRQS) said tests conducted by Chungnam National University showed the cat, found in Gimje located 262 kilometres south of Seoul, died of the H5N1 virus that swept through the country from early April to mid-May.

Gimje, North Cholla Province, was one of the first regions hit by this year's avian influenza that resulted in a record 8.46 million birds being culled at the cost of 264.1 billion won (US\$262.0 million).

"Since the cat died of the bird flu, it probably had eaten a sick bird or came in very close contact with chickens or ducks," said a quarantine inspector. He added that because there has been no reported case of a cat spreading the bird flu, there was no risk to human health.

Cats and dogs are usually not susceptible to the avian influenza, so quarantine officials only check animals that have regular contact with birds. In contrast, pigs are checked thoroughly because they are more likely to contract the disease. Under existing operating procedures, the movement of pigs is banned during an outbreak.

The NVRQS, which is under the agriculture ministry, said earlier in the month that samples from the latest outbreak sent to the US Centre for Disease Control and Prevention were confirmed to be from the virulent strain of bird flu. However, it said the particular sub-strain has no prior history of actually causing people to get sick.

South Korea has been hit three times with the bird flu, but humans have not caught the disease.

Michigan Wild Bird Surveillance (USDA, as of July 31): For the 2008 testing season, 541 Michigan samples have been taken so far, comprised of 221 live birds, 287 hunter-killed birds, 8 morbidity/mortality samples and 25 environmental samples.

H5N1 subtype H5N1 has not been recovered from any Michigan samples tested to date, or from the 11,912 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 H5N1 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 with any questions regarding this newsletter or to be added to the weekly electronic mailing list.

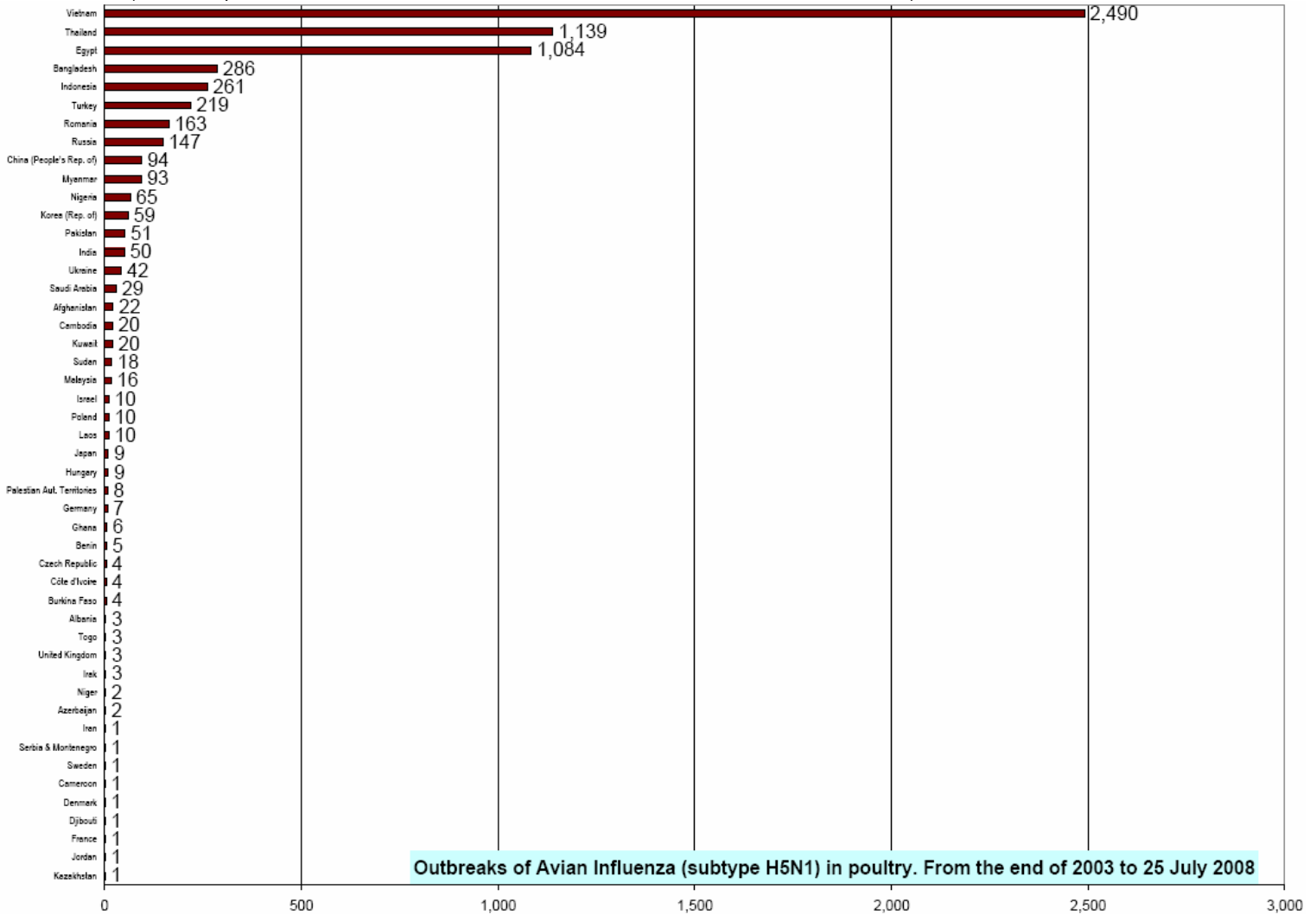
Contributors

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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 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 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
Total	4	4	46	32	98	43	115	79	88	59	34	26	385	243