



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:

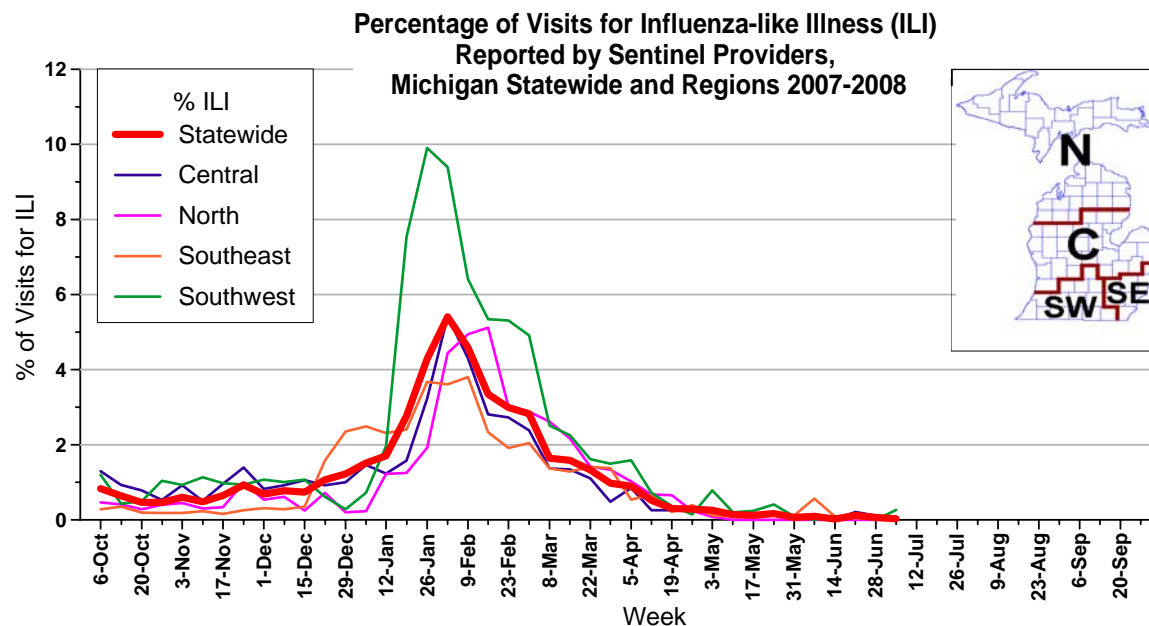
- **Michigan Surveillance:** 2007-2008 Michigan Influenza Season Summary now available.
- **Avian Influenza:** Egypt declares H5N1 avian influenza endemic in their country.

Michigan Disease Surveillance System: The week ending July 5 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. Eight constitutional alerts in the C(3), N(3) and SW(2) Influenza Surveillance Regions and four respiratory alerts in the C(3) and N(1) Influenza Surveillance Regions were generated last week.

Over-the-Counter Product Surveillance: Overall, OTC product sales were steady last week. Children's electrolytes showed a slight increase in sales, while all others held steady. Indicator levels are comparable to those seen at this time last year.

Sentinel Surveillance (as of July 10): During the week ending June July 5, 2008, less than 0.1% of all office visits reported by Michigan influenza sentinel sites were due to influenza-like illness (ILI). This represents 1 case out of 2894 total patients seen. The case was reported in the Southwest 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 for more information.

Laboratory Surveillance (as of July 10): For the 2007-2008 influenza season, the MDCH Bureau of Laboratories has identified 247 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)
- 51 B: Southeast (28); North (10); Southwest (6); Central (6); Indiana (1). 50 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 10): 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 10): 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, Research (Reuters, July 3): Two rival flu drugs, Tamiflu and Relenza, work equally well to fight the symptoms of influenza in children, Japanese researchers reported on Thursday.

Doctors can feel free to choose either drug in treating children and may prefer Relenza, made by GlaxoSmithKline and known generically as zanamivir, for youths aged 10 to 19, they said.

They said their study was the first head-to-head comparison in children of the two drugs, in a class known as neuraminidase inhibitors.

The issue is important in Japan, where the drugs are heavily used and where doctors are still trying to determine if Roche's Tamiflu, known generically as oseltamivir, may have been linked with some suicides.

Dr. Norio Sugaya of Keiyu Hospital in Yokohama and colleagues studied nearly 350 children treated with either one of the drugs for influenza.

"More than 70 percent of the total amount of oseltamivir prescribed throughout the world each year is used in Japan," they wrote in the journal *Clinical Infectious Diseases*.

"Most patients in Japan with an influenza-like illness are now tested with rapid diagnostic tests; when results are positive, they are treated with a neuraminidase inhibitor, usually oseltamivir," they said.

But because of reports of psychiatric reactions, the Health, Labor, and Welfare Ministry of Japan suspended use of Tamiflu for patients aged 10 to 19.

"Accordingly, zanamivir will be prescribed widely for teenaged patients with influenza," the researchers wrote.

Both drugs can reduce the severity of illness if given soon enough and can cut a few days off how long a patient is ill.

Sugaya's team found almost no differences between the drugs when used to treat flu in children. Both drugs cut about two days off the time the children had fever, they found.

"Oseltamivir and zanamivir were equally effective in reducing the febrile period of children with influenza A (H1N1), influenza A (H3N2), and influenza B virus infection," they wrote.

Both drugs worked better against H3N2 flu than they did against either H1N1 or influenza B viruses, the researchers added.

Such comparisons may also be useful in planning for a pandemic of influenza. Many experts predict a pandemic is coming, with the current chief suspect the H5N1 avian influenza strain that has become entrenched in birds across much of Asia, Europe, the Middle East and Africa.

It rarely infects people now but has killed 243 out of 385 infected. Quick use of Tamiflu has been credited with saving some lives.

International (WHO, June 26): During weeks 24–25, the level of overall influenza activity in the world was low. Countries in the northern hemisphere reported sporadic or no activity. In the southern hemisphere, influenza activity remained moderate.

China, Hong Kong Special Administrative Region. Mild increase in influenza activity was noted, with mostly A(H3) viruses detected. A(H1) were also detected. From Influenza B the majority of viruses were B/Yamagata lineage.

New Zealand. Local activity of influenza was reported, with mostly influenza A viruses circulating. Influenza B viruses were also detected.

Between weeks 24 and 25, sporadic influenza activity was detected in Canada (B, A), Chile (A, B), Germany (B), Iran (Islamic Republic of) (B), Norway (B), Sri Lanka (A), United States of America (B, A) and Uruguay (H1, B).

France, Poland, 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 (OIE, July 7): In a report submitted to the OIE on July 7, Egypt declared that the ongoing outbreaks of H5N1 highly pathogenic avian influenza in their country have not been contained, and that the disease is now considered endemic. As a result, follow-up reports to current outbreaks will not be provided individually, but instead in their six-month reports. For the complete notification report, visit http://www.oie.int/wahid-prod/public.php?page=single_report&pop=1&reportid=7012.

International, Poultry (Nhan Dan [edited], July 7): Bird flu has occurred in Tra Vinh province, announced the Veterinary Department. The department said that ducks died in Phuong Thach commune, Cang Long district, Tra Vinh province, from 24 Jun 2008.

By 4 Jul 2008, around 1000 unvaccinated ducks had died. Their samples were tested positive to H5N1 virus. The local veterinary service culled the ducks.

So far, Quang Ngai and Tra Vinh provinces are yet to be free from bird flu for 21 days.

Michigan Wild Bird Surveillance (USDA, as of July 10): For the 2008 testing season, 236 Michigan samples have been taken so far, comprised of 228 hunter-killed birds and 8 morbidity/mortality samples.

HPAI subtype H5N1 has not been recovered from any Michigan samples tested to date, or from the 4830 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 with any questions regarding this newsletter or to be added to the weekly electronic mailing list.

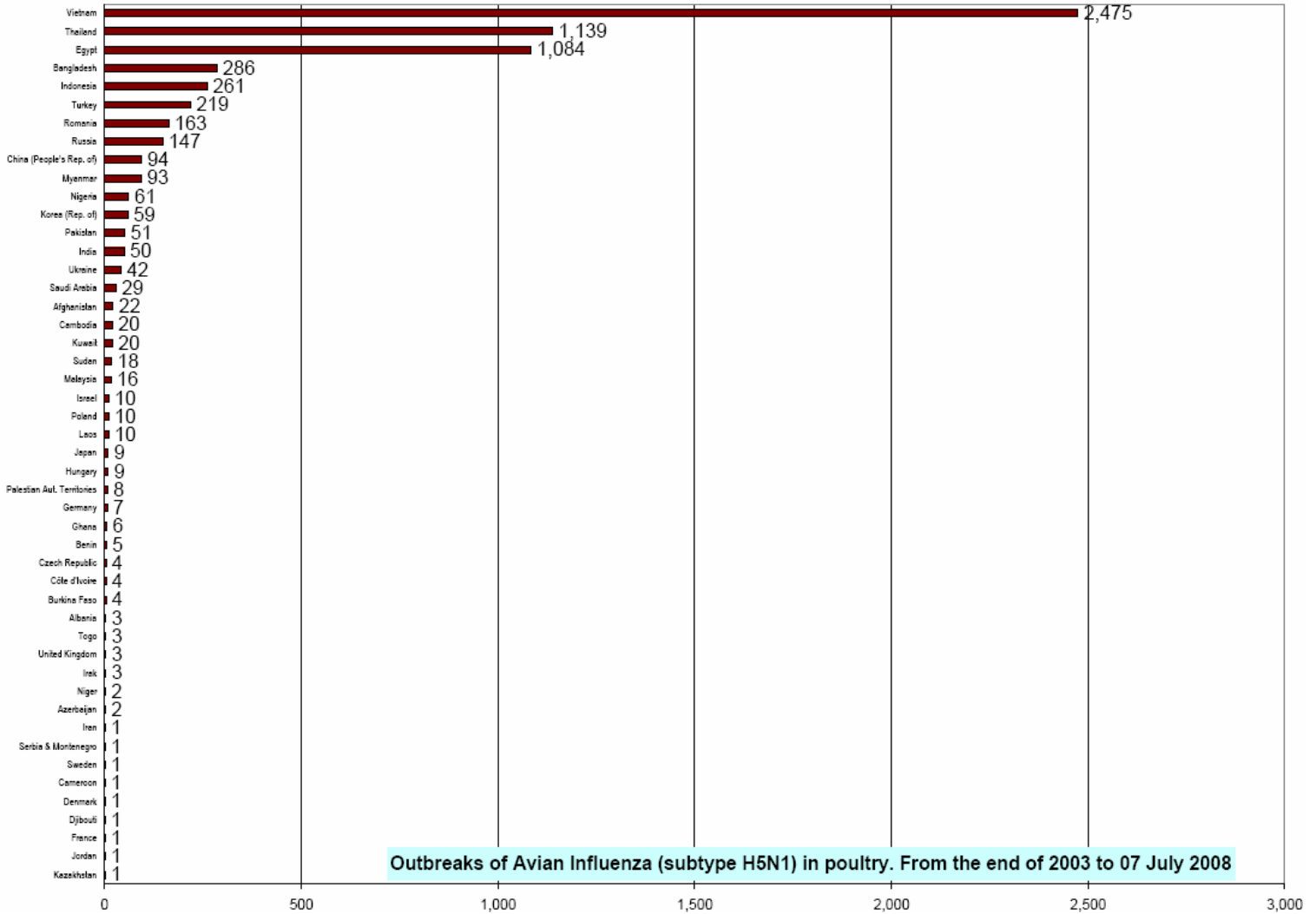
Contributors

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Table 1. H5N1 Influenza in Poultry (Outbreaks up to July 7, 2008)

(Source: http://www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm Downloaded 7/10/08)



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