



MI Flu Focus

Influenza Surveillance Updates
Bureaus of Epidemiology and Laboratories

Michigan Department
of Community Health



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Current Influenza Activity Levels:

- **Michigan:** Local activity
- **National:** During March 24-30, influenza activity decreased in the United States

Updates of Interest

- **International:** 38 influenza A(H7N9) human cases have been confirmed in China, including 10 deaths, 19 severe cases and 9 mild cases

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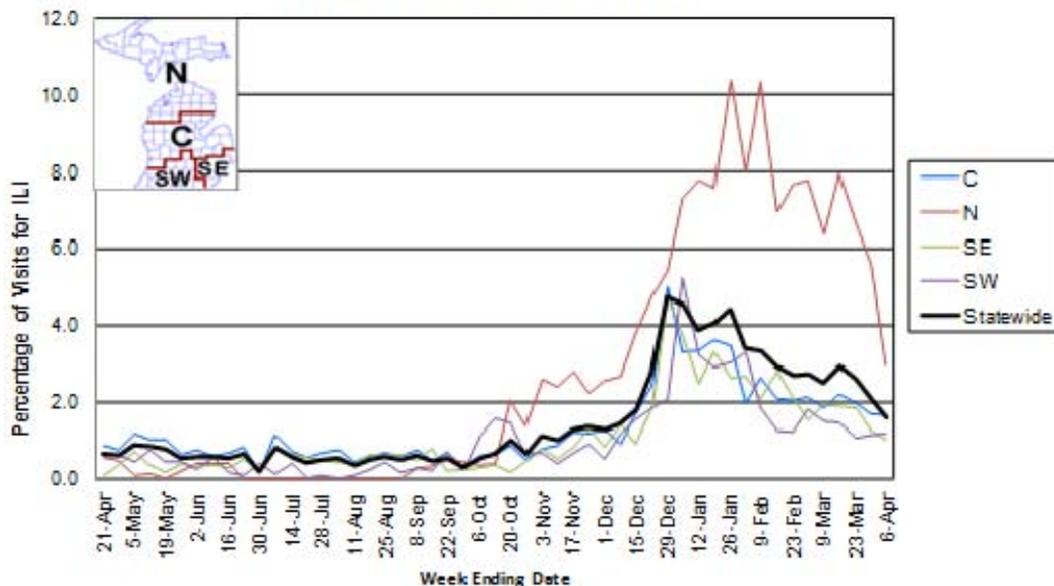
Influenza Surveillance Reports

Michigan Disease Surveillance System (as of April 11): MDSS data for the week ending April 6th indicated that compared to levels from the previous week, individual reports slightly decreased, while aggregate influenza reports moderately decreased. A portion of the decrease in aggregate reports is most likely due to school spring breaks. Aggregate reports are similar to levels seen during the same time period last year, while individual reports are minimally higher.

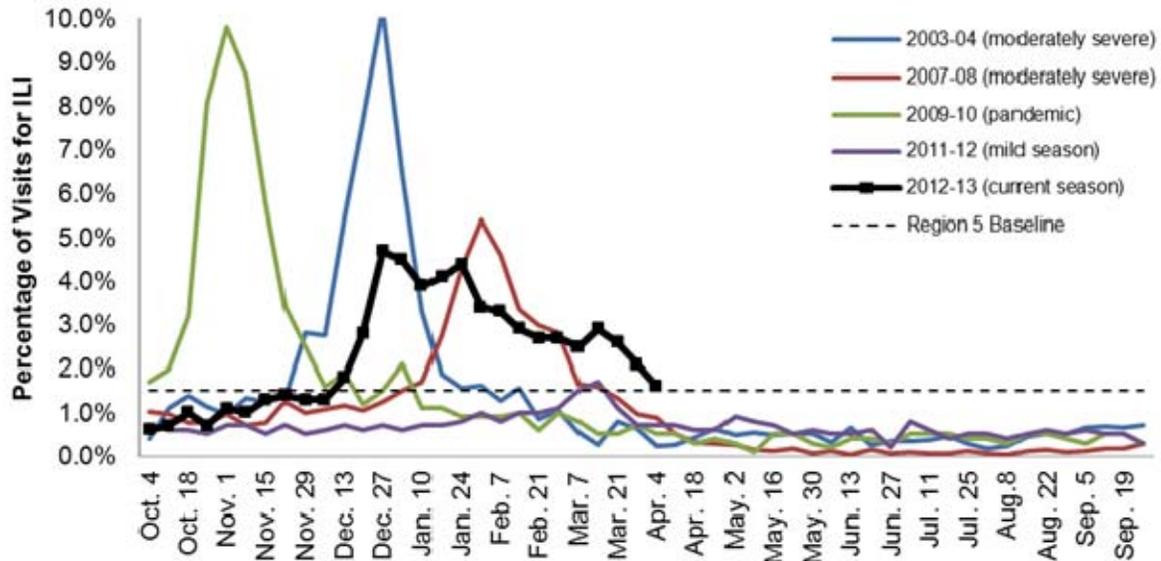
Emergency Department Surveillance (as of April 11): Compared to levels from the week prior, emergency department visits from constitutional and respiratory complaints decreased. Constitutional complaints are minimally higher than levels reported during the same time period last year, while respiratory complaints are similar. In the past week, there were 3 constitutional alerts in the C(3) Influenza Surveillance Region and 3 respiratory alerts in the C(1) and N(2) Regions.

Sentinel Provider Surveillance (as of April 11): During the week ending April 6, 2013, the proportion of visits due to influenza-like illness (ILI) slightly decreased to 1.6% overall; this is slightly above the regional baseline (1.5%). A total of 157 patient visits due to ILI were reported out of 9,734 office visits. Data were provided by 31 sentinel sites from the following regions: Central (13), North (7), Southeast (7) and Southwest (4). ILI activity decreased in all four surveillance regions: C (1.6%), N (2.9%), SE (1.0%) and SW (1.2%). Please Note: these rates may change as additional reports are received.

Percentage of Visits for Influenza-like Illness (ILI)
Reported by Sentinel Providers, Statewide and Regions
2011-2012 and 2012-13 Flu Seasons



Percentage of Visits for Influenza-like Illness (ILI) Reported by the US Outpatient Influenza-like Illness Surveillance Network (ILINet): Michigan, Select Seasons



As part of pandemic influenza surveillance, CDC and MDCH highly encourage year-round participation from all sentinel providers. New practices are encouraged to join the sentinel surveillance program today! Contact Cristi Carlton at 517-335-9104 or CarltonC2@michigan.gov for more information.

Hospital Surveillance (as of April 6): The CDC Influenza Hospitalization Surveillance Project provides population-based rates of severe influenza illness through active surveillance and chart review of lab-confirmed cases, starting on October 1, 2012, in the Clinton, Eaton, Genesee, and Ingham counties. 5 new cases were identified during the past week. As of April 6th, there have been 250 influenza hospitalizations (164 adult, 86 pediatric) within the catchment area. The incidence rate for adults is 24.1 hospitalizations per 100,000 population and for children is 41.2 hospitalizations per 100,000.

The MDCH Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide. 10 hospitals (SE, SW, C, N) reported for the week ending April 6, 2013. Results are listed in the table below.

Age Group	Hospitalizations Reported During Current Week	Total Hospitalizations 2012-13 Season
0-4 years	0	32 (6SE, 21C, 5N)
5-17 years	0	15 (3SE, 1SW, 9C, 2N)
18-49 years	1 (1SE)	50 (33SE, 2SW, 10C, 5N)
50-64 years	1 (1SE)	82 (59SE, 4SW, 7C, 12N)
≥65 years	0	235 (158SE, 14SW, 15C, 48N)
Total	2 (2SE)	414 (259SE, 21SW, 62C, 72N)

Laboratory Surveillance (as of April 6): During March 31-April 6, 2 influenza A(H3) (2C), 2 influenza A(H1N1)pdm09 (2SE) and 2 influenza B (1SE, 1C) results were reported by MDCH. For the 2012-13 season (starting Sept. 30, 2012), MDCH has identified 651 influenza results:

- Influenza A(H3): 496 (124SE, 169SW, 166C, 37N)
- Influenza A(H1N1)pdm09: 23 (15SE, 2SW, 3C, 3N)
- Influenza B: 140 (30SE, 28SW, 69C, 14N)
- Parainfluenza: 8 (3SW, 1C, 4N)
- RSV: 1 (1N)

15 sentinel labs (SE, SW, C, N) reported for the week ending April 6, 2013. 9 labs (SE, SW, C) reported low or decreasing flu A activity. 12 labs (SE, SW, C) reported declining or low levels of flu B activity. Flu B activity remains higher than flu A activity. 3 labs (SE, SW) had sporadic parainfluenza activity. 12 labs (SE, SW, C, N) reported steady or decreasing RSV activity. 2 labs (SE, SW) had low HMPV activity. Testing volumes are low to moderate with continued decreases.

Michigan Influenza Antigenic Characterization (as of April 11): For the 2012-13 season, 109 Michigan influenza B specimens have been characterized at MDCH BOL. 90 specimens are

B/Wisconsin/01/2010-like, matching the B component of the 2012-13 influenza vaccine. 19 influenza B specimens were characterized as B/Brisbane/60/2008-like, which is not included in the 2012-13 vaccine.

Michigan Influenza Antiviral Resistance Data (as of April 11): For the 2012-13 season, 30 influenza A/H3 specimens and 15 influenza A(H1N1)pdm09 specimens have been tested at the MDCH BOL for antiviral resistance. None of the influenza isolates tested have been resistant.

CDC has made recommendations regarding the use of antivirals for treatment and prophylaxis of influenza, which are available at <http://www.cdc.gov/flu/professionals/antivirals/index.htm>.

Influenza-associated Pediatric Mortality (as of April 11): 6 pediatric influenza-associated influenza mortalities (2 A/H3, 4B) have been reported for the 2012-13 season.

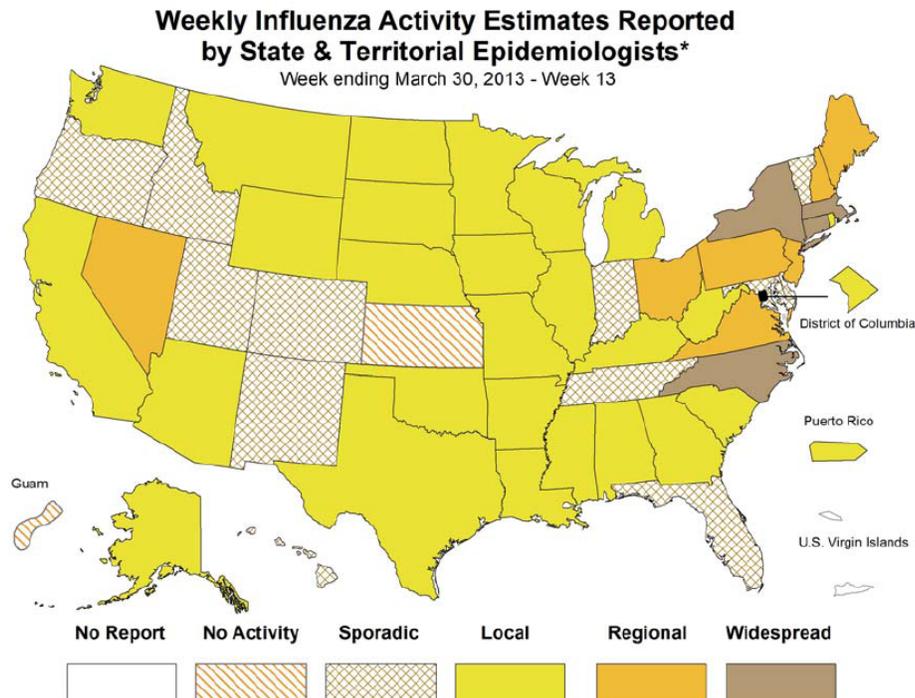
CDC requires reporting of flu-associated pediatric deaths (<18 yrs), including pediatric deaths due to an influenza-like illness with lab confirmation of influenza or any unexplained pediatric death with evidence of an infectious process. Contact MDCH immediately for proper specimen collection. The MDCH protocol is at www.michigan.gov/documents/mdch/ME_pediatric_influenza_guidance_v2_214270_7.pdf.

Influenza Congregate Settings Outbreaks (as of April 11): 2 outbreaks (1SE, 1C) were reported during the previous week. 1 outbreak was due to influenza B and RSV in an assisted living facility; the other was due to influenza B in a long term care facility. 109 respiratory outbreaks (22SE, 29SW, 41C, 17N) have been reported to MDCH during the 2012-13 season; testing results are listed below.

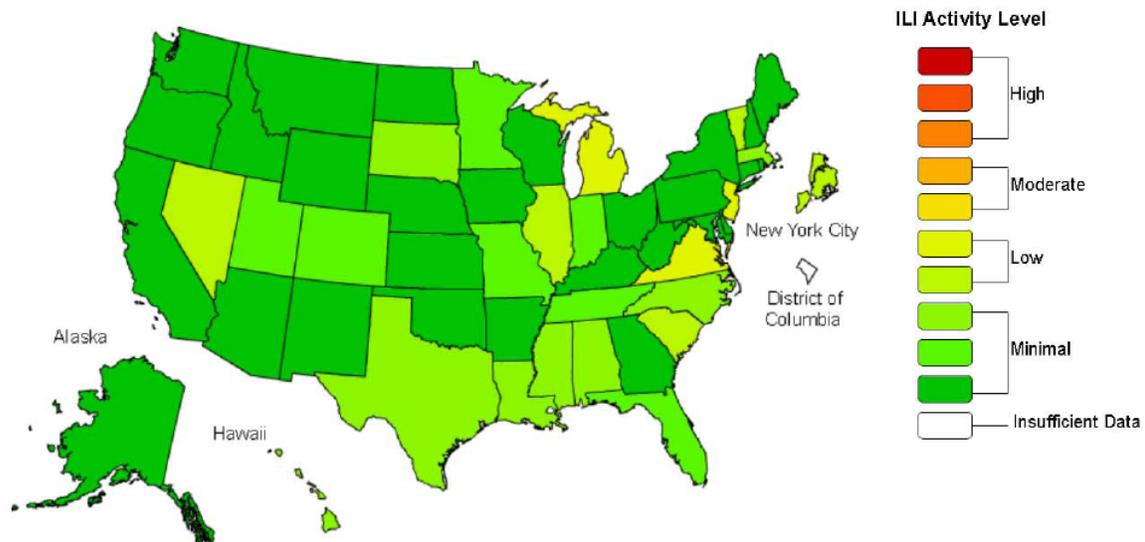
- Influenza A/H3: 16 (7SW, 9C)
- Influenza A: 55 (10SE, 13SW, 20C, 12N)
- Influenza B: 8 (1SE, 3SW, 3C, 1N)
- Influenza A and B: 2 (1SE, 1SW)
- Influenza positive: 4 (1SE, 1SW, 2C)
- Influenza and RSV positive: 1 (1C)
- Influenza B and RSV positive: 1 (1SE)
- Negative/no testing: 22 (8SE, 4SW, 6C, 4N)

National (CDC [edited], April 5): During week 13 (March 24 – 30, 2013), influenza activity decreased in the United States. Of 4,909 specimens tested and reported by collaborating laboratories, 555 (11.3%) were positive for influenza. The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold. One pediatric death was reported. A cumulative rate for the season of 42.3 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. Of reported hospitalizations, 50% were among adults 65 years and older. The proportion of outpatient visits for influenza-like illness (ILI) was 1.8%. This is below the national baseline of 2.2%. Three of 10 regions reported ILI at or above region-specific baseline levels. Seven states and New York City experienced low activity; 43 states experienced minimal activity, and the District of Columbia had insufficient data. Four states reported widespread influenza activity; 7 states reported regional influenza activity; the District of Columbia, Puerto Rico, and 26 states reported local influenza activity; 12 states reported sporadic influenza activity; Guam and one state reported no activity, and the U.S. Virgin Islands did not report.

The complete FluView report is available online at <http://www.cdc.gov/flu/weekly/fluactivity.htm>.



**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2012-13 Influenza Season Week 13 ending Mar 30, 2013**



This map uses the proportion of outpatient visits to healthcare providers for influenza-like illness to measure the ILI activity level within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels. Data collected in ILINet may disproportionately represent certain populations within a state, and therefore, may not accurately depict the full picture of influenza activity for the whole state. Data displayed on this map are based on data collected in ILINet, whereas the State and Territorial flu activity map are based on reports from state and territorial epidemiologists.

International (WHO [edited], April 2): Influenza activity in North America continued to decrease overall, though activity remained high in some areas. Proportionally influenza B increased although influenza A(H3N2) was the most commonly detected virus in North America overall for this season. In the United States this season has been more severe than any since 2003-4 as reflected in numbers of pneumonia and influenza deaths with the highest impact for individuals over the age of 65 years. Influenza activity continued to decline in the most part of Western Europe, while it remained elevated in the eastern part of the region. The proportion of subtypes of viruses circulating was not uniform across the continent and has changed through the season. It has been notably different from North America with a mix of A(H3N2) and A(H1N1)pdm09 and B viruses. Influenza B mainly reported in western and northern countries and influenza A in eastern and central Europe. Excess mortality in most countries has been moderate and most deaths occurred among people aged 65 and older. Influenza activity throughout the temperate region of Asia decreased overall with the exception of Mongolia where activity levels were sustained but still within seasonal tolerance levels. Low levels of influenza activity continued to be reported across the tropical regions of the world and activity in countries of the southern hemisphere remained at inter-seasonal levels. Since the start of the season a few viruses with reduced susceptibility to neuraminidase inhibitors have been detected in the countries performing antiviral resistance testing. The majority of characterized viruses were antigenically similar to the 2012-13 northern hemisphere vaccine viruses.

The entire WHO report is available online at www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html.

MDCH reported LOCAL INFLUENZA ACTIVITY to CDC for the week ending April 6, 2013.
For additional flu vaccination and education information, the MDCH *FluBytes* newsletter is available at http://www.michigan.gov/mdch/0,1607,7-132-2940_2955_22779_40563-125027--,00.html.

Novel Influenza Activity and Other News

WHO Pandemic Phase: Post-pandemic – Influenza disease activity has returned to levels normally seen for seasonal influenza. It is expected that the pandemic virus will behave as a seasonal influenza A virus. It is important to maintain surveillance and update pandemic preparedness/response plans accordingly.

International, Human (WHO, April 11): As of 11 April 2013 (17:00 CET), the National Health and Family Planning Commission notified WHO of an additional 10 laboratory-confirmed cases of human infection with influenza A(H7N9) virus.

The patients include:

- A 70-year-old man from Jiangsu who became ill on 29 March 2013;
- a 74-year-old man from Jiangsu who became ill on 2 April 2013;
- a 65-year-old man from Zhejiang who became ill on 3 April 2013;
- a 76-year-old woman from Shanghai who became ill on 1 April 2013;
- an 81-year-old woman from Shanghai who became ill on 4 April 2013;
- a 74-year-old man from Shanghai who became ill on 31 March 2013 and died on 11 April 2013;
- an 83-year-old woman from Shanghai who became ill on 2 April 2013;
- a 68-year-old man from Shanghai who became ill on 4 April 2013;
- a 31-year-old man from Jiangsu who became ill on 31 March 2013; and
- a 56-year-old man from Jiangsu who became ill on 3 April 2013.

To date, a total of 38 patients have been laboratory confirmed with influenza A(H7N9) virus in China; including 10 deaths, 19 severe cases and nine mild cases.

More than 760 close contacts of the confirmed cases are being closely monitored.

The Chinese government is actively investigating this event and has heightened disease surveillance. Retrospective testing of recently reported cases with severe respiratory infection may uncover additional cases that were previously unrecognized. An inter-government task force has been formally established, with the National Health and Family Planning Commission leading the coordination along with the Ministry of Agriculture and other key ministries. The animal health sector has intensified investigations into the possible sources and reservoirs of the virus.

WHO is in contact with national authorities and is following the event closely. The WHO-coordinated international response is also focusing on work with WHO Collaborating Centres for Reference and Research on Influenza and other partners to ensure that information is available and that materials are developed for diagnosis and treatment and vaccine development. No vaccine is currently available for this subtype of the influenza virus. Preliminary test results provided by the WHO Collaborating Centre in China suggest that the virus is susceptible to the neuraminidase inhibitors (oseltamivir and zanamivir).

At this time there is no evidence of ongoing human-to-human transmission.

WHO does not advise special screening at points of entry with regard to this event, nor does it recommend that any travel or trade restrictions be applied.

About this Disease Outbreak News

1. WHO is currently publishing information on laboratory confirmed cases received through the official notification from the Chinese National International Health Regulations (IHR) Focal Point once a day. This formal notification and publication follows verification of the information, and may therefore come after, or not include, some cases reported through public media and other sources.

2. To date, there is limited information to determine whether the reported number of cases represents some or all of the cases actually occurring. As some relatively mild cases of illness have now been reported, it is possible that there are other such cases that have not been identified and reported.

3. If the current pattern of sporadic infections continues, WHO will cease frequent reporting of case numbers, and focus its Disease Outbreak News on new developments or changes in the pattern or presentation of infections.

The article is available online at http://www.who.int/csr/don/2013_04_11/en/index.html.

Previous WHO updates:

April 4: www.wpro.who.int/mediacentre/releases/2013/20130404b/en/index.html

April 5: http://www.who.int/csr/don/2013_04_05/en/index.html

April 7: http://www.who.int/csr/don/2013_04_07/en/index.html

April 9: http://www.who.int/csr/don/2013_04_09/en/index.html

April 10: http://www.who.int/csr/don/2013_04_10/en/index.html

April 10: WHO weekly summary of influenza A(H7N9) cases:

http://www.who.int/influenza/human_animal_interface/influenza_h7n9/01_ReportWebH7N9Number.pdf.

International, Research (American Journal of Obstetrics and Gynecology abstract, April 9): Saito S, Minakami H, Nakai A, Unno N, Kubo T, Yoshimura Y, Outcomes of infants exposed to oseltamivir or zanamivir in utero during pandemic (H1N1) 2009, American Journal of Obstetrics and Gynecology (2013).

Objective: To assess adverse fetal outcomes and short-term prognoses of infants exposed to oseltamivir or zanamivir in utero during pandemic (H1N1) 2009 in Japan.

Study Design: Case series study. We asked the 2611 obstetrical facilities in Japan that are members of the Japan Society of Obstetrics and Gynecology to participate, and data were provided from 157 facilities. We evaluated the numbers of pregnancy complications and neonatal abnormalities.

Results: We evaluated 624 infants born to 619 women given oseltamivir and 50 infants born to 50 women given zanamivir. Of patients given oseltamivir before gestational week 22, three experienced miscarriage and one experienced induced abortion. The overall rate of congenital malformations was 2.1% (14/670). In infants exposed during the first trimester, the rate of malformations was 1.3% (2/156) with oseltamivir and 0.0% (0/15) with zanamivir, while in infants exposed during the second and third trimesters, this rate was 2.6% (12/464) with oseltamivir and 0.0% (0/35) with zanamivir. Increased rates of miscarriage in women given antiviral drugs before gestational week 22 (0.9% [3/322]), preterm delivery in women given antiviral drugs before gestational week 37 (5.5% [33/600]), stillbirth (0% [0/670]), neonatal death (0.15% [1/670]), birth weight <2500 g (8.7% [58/670]), small-for-gestational-age infants (8.4% [56/670]), necrotizing enterocolitis (0.0%), intraventricular hemorrhage (0.0%), seizures (0.15% [1/670]), and other transient abnormalities in the neonatal period (4.3% [29/670]) were not observed in those exposed to antiviral drugs before the corresponding episodes or complications.

Conclusions: Short-term prognoses of infants exposed to oseltamivir or zanamivir in utero were not adversely affected.

The abstract is available online at <http://www.sciencedirect.com/science/article/pii/S0002937813003566>.

International, Poultry (OIE [edited], April 4): Low pathogenic avian influenza H7N9; China
Outbreak 1: Huhuai agricultural products wholesale market, Songjiang, Shanghai, SHANGHAI
Date of start of the outbreak: 04/04/2013; Outbreak status: Continuing
Species: Birds; Cases: 1; Deaths: 0; Affected population: A pigeon for consumption in a wholesale market

International, Poultry (OIE [edited], April 5): Low pathogenic avian influenza H7N9; China
Outbreak 1: Jingchuan market, Minhang, Shanghai, SHANGHAI
Date of start of the outbreak: 05/04/2013; Outbreak status: Continuing
Species: Birds; Cases: 1; Deaths: 0; Affected population: 1 chicken sample and 1 environment sample

Outbreak 2: Fengzhuang market, Minhang, Shanghai, SHANGHAI
Date of start of the outbreak: 05/04/2013; Outbreak status: Continuing
Affected animals: Birds; Cases: 4; Deaths: 0
Affected population: 2 samples from chickens, 2 samples from pigeons and 4 samples from environment

International, Poultry (OIE [edited], April 10): Low pathogenic avian influenza H7N9; China
Outbreak 1: Yingqing live bird market, Gaoyou, JIANGSU
Date of start of the outbreak: 10/04/2013; Outbreak status: Continuing
Species: Birds; Cases: 0; Deaths: 0; Affected population: 8 samples from chickens

Outbreak 2: Beihai live bird market, Gaoyou, JIANGSU
Date of start of the outbreak: 10/04/2013; Outbreak status: Continuing
Species: Birds; Cases: 2; Deaths: 0; Affected population: 2 samples from chickens

Outbreak 3: Xinzaocun live bird market, Yushan, Changshu, JIANGSU
Date of start of the outbreak: 10/04/2013; Outbreak status: Continuing
Species: Birds; Cases: 1; Deaths: 0; Affected population: One sample from chicken

Outbreak 4: Huishangcheng live bird market, Hefei, ANHUI
Date of start of the outbreak: 10/04/2013; Outbreak status: Continuing
Species: Birds; Cases: 1; Deaths: 0; Affected population: One sample from duck

Outbreak 5: Zhebei live bird market, Huzhou, ZHEJIANG

Date of start of the outbreak: 10/04/2013; Outbreak status: Continuing
Species: Birds; Cases: 2; Deaths: 0; Affected population: 2 samples from ducks

International, Poultry (OIE [edited], April 11): Highly pathogenic avian influenza H5N1; Nepal
Outbreak 1: Kumarkhod 6, Kumarkhod, Jhapa, MECHI
Date of start of the outbreak: 12/02/2013; Outbreak status: Resolved; Epidemiological unit: Village
Species: Birds; Susceptible: 60; Cases: 34; Deaths: 34; Destroyed: 26
Affected population: Backyard birds in a small village reared in free range system

Outbreak 2: Fungling 3, Fungling, Taplejung, MECHI
Date of start of the outbreak: 22/02/2013; Outbreak status: Resolved; Epidemiological unit: Village
Species: Birds; Susceptible: 663; Cases: 31; Deaths: 31; Destroyed: 632
Affected population: Backyard birds of different age group raised in free range system.

Outbreak 3: Chandragadi 4, Chandragadi, Jhapa, MECHI
Date of start of the outbreak: 24/02/2013; Outbreak status: Resolved; Epidemiological unit: Village
Species: Birds; Susceptible: 102; Cases: 33; Deaths: 33; Destroyed: 69
Affected population: Backyard birds of different age group raised in free range system

Outbreak 4: Bhadrapur N P 10, Bhadrapur, Jhapa, MECHI
Date of start of the outbreak: 04/03/2013; Outbreak status: Resolved; Epidemiological unit: Village
Species: Birds; Susceptible: 111; Cases: 30; Deaths: 30; Destroyed: 81
Affected population: Backyard birds of different age group raised in free range system.

Outbreak 5: Prithivinagar 5, Prithivinagar, Jhapa, MECHI
Date of start of the outbreak: 04/03/2013; Outbreak status: Resolved; Epidemiological unit: Farm
Species: Birds; Susceptible: 350; Cases: 198; Deaths: 198; Destroyed: 152
Affected population: A commercial broiler flock of 32 days

Outbreak 6: Mukundapur 7, Harkapur, Nawalparasi, LUMBINI
Date of start of the outbreak: 14/03/2013; Outbreak status: Resolved; Epidemiological unit: Farm
Species: Birds; Susceptible: 1600; Cases: 1600; Deaths: 1600 Destroyed: 0
Affected population: A commercial layer flock of 44 weeks raised in a confined area

Outbreak 7: Bharatpur N P 8, Sharadpur, Chitwan, NARAYANI
Date of start of the outbreak: 25/03/2013; Outbreak status: Resolved; Epidemiological unit: Farm
Species: Birds; Susceptible: 4000; Cases: 1800; Deaths: 1800; Destroyed: 2200
Affected population: A commercial layer farm with birds of 29 weeks raised in a closed farming system.

Outbreak 8: Bahundagi 1, Bahundagi, Jhapa, MECHI
Date of start of the outbreak: 27/03/2013; Outbreak status: Resolved; Epidemiological unit: Farm
Species: Birds; Susceptible: 4000; Cases: 250; Deaths: 250; Destroyed: 3750
Affected population: A commercial layer farm of 19 weeks raised in a closed confined area

Outbreak 9: Mechinagar 10, Mechinagar, Jhapa, MECHI
Date of start of the outbreak: 30/03/2013; Outbreak status: Resolved; Epidemiological unit: Village
Species: Birds; Susceptible: 15; Cases: 6; Deaths: 6; Destroyed: 9
Affected population: Backyard birds of different age group raised in free range system

International, Poultry (CNN [edited], April 5): Chinese authorities have killed more than 20,000 birds from a live-poultry trading zone in Shanghai after an unusual strain of bird flu that has so far killed six people in the country was found in pigeons on sale in the city, state-run media outlet Xinhua reported.

Details of the slaughter of chickens, ducks, geese and pigeons come as the city prepares to temporarily close all its live poultry markets. It wasn't clear how long the market closures -- announced Friday on the Shanghai Municipal Government's microblog account -- would last.

By Friday morning, authorities in Shanghai had already closed the Huhai agricultural market, where the H7N9 avian flu virus had been found in pigeons, Xinhua reported. The virus had not previously been found in humans until a series of cases were reported in China this week.

The cull at the Shanghai poultry trading zone came as researchers in the United States said they had started work on developing a vaccine for H7N9.

The Chinese Minister of Agriculture said Thursday an analysis showed a strong genetic overlap between the strain found in the Huhai market pigeons and the one detected in infected humans.

At the Huhai market, Shanghai authorities were disinfecting the area and objects that came into contact with the birds, Xinhau reported.

Officials are trying to track where the infected pigeons came from.

"We don't know yet where the humans got their virus from," said Dr. Joseph Bresee, who heads the epidemiology and prevention branch in the U.S. Centers for Disease Control and Prevention's (CDC) influenza division. The virus has not been shown to spread easily between humans, he added.

The CDC, based in Atlanta, is working closely with Chinese authorities trying to find the source of the human infections, Bresee said. "There are lots of things happening at CDC to prepare for this virus," Bresee said. "State health departments are readying themselves just in case," and researchers are working on developing a vaccine for this strain, he said.

The full article is online at www.cnn.com/2013/04/05/world/asia/china-bird-flu/index.html?hpt=hp_t2.

Michigan Wild Bird Surveillance (USDA, as of April 11): For the 2012 season (April 1, 2012-March 31, 2013), highly pathogenic avian influenza H5N1 has not been recovered from the 201 samples tested nationwide. For more information, visit <http://www.nwhc.usgs.gov/ai/>. To learn about avian influenza surveillance in wild birds or to report dead waterfowl, go to the Emerging Disease website at <http://www.michigan.gov/emergingdiseases>.

International Poultry and Wild Bird Surveillance (OIE): Reports of avian influenza activity, including summary graphs of avian influenza H5N1 outbreaks in poultry, can be found at the following website: http://www.oie.int/download/AVIAN%20INFLUENZA/A_AI-Asia.htm.

For questions or to be added to the distribution list, please contact Susan Peters at peterss1@michigan.gov

Contributors

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Table. H5N1 Influenza in Humans – As of March 12, 2013. http://www.who.int/influenza/human_animal_interface/EN_GIP_20130312_CumulativeNumberH5N1cases.pdf. Downloaded 3/20/2013. Cumulative lab-confirmed cases reported to WHO. Total cases include deaths.

Country	2003-2006		2007		2008		2009		2010		2011		2012		2013		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Azerbaijan	8	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	1	0	0	0	0	0	2	0	3	0	0	0	6	0
Cambodia	6	6	1	1	1	0	1	0	1	1	8	8	3	3	9	8	30	27
China	22	14	5	3	4	4	7	4	2	1	1	1	2	1	2	2	45	30
Djibouti	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	18	10	25	9	8	4	39	4	29	13	39	15	11	5	1	1	170	61
Indonesia	75	58	42	37	24	20	21	19	9	7	12	10	9	9	0	0	192	160
Iraq	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Lao PDR	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	25	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	12	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Vietnam	93	42	8	5	6	5	5	5	7	2	0	0	4	2	0	0	123	61
Total	263	158	88	59	44	33	73	32	48	24	62	34	32	20	12	11	622	371