



MI FluFocus

Influenza Surveillance Updates
Bureaus of Epidemiology and Laboratories



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Current Influenza Activity Levels:

- **Michigan:** Regional activity
- **United States:** During week 2 (January 9-15, 2011), influenza activity in the U.S. increased

Updates of Interest:

- **Michigan:** Several new influenza-like illness outbreaks reported to MDCH in the past week

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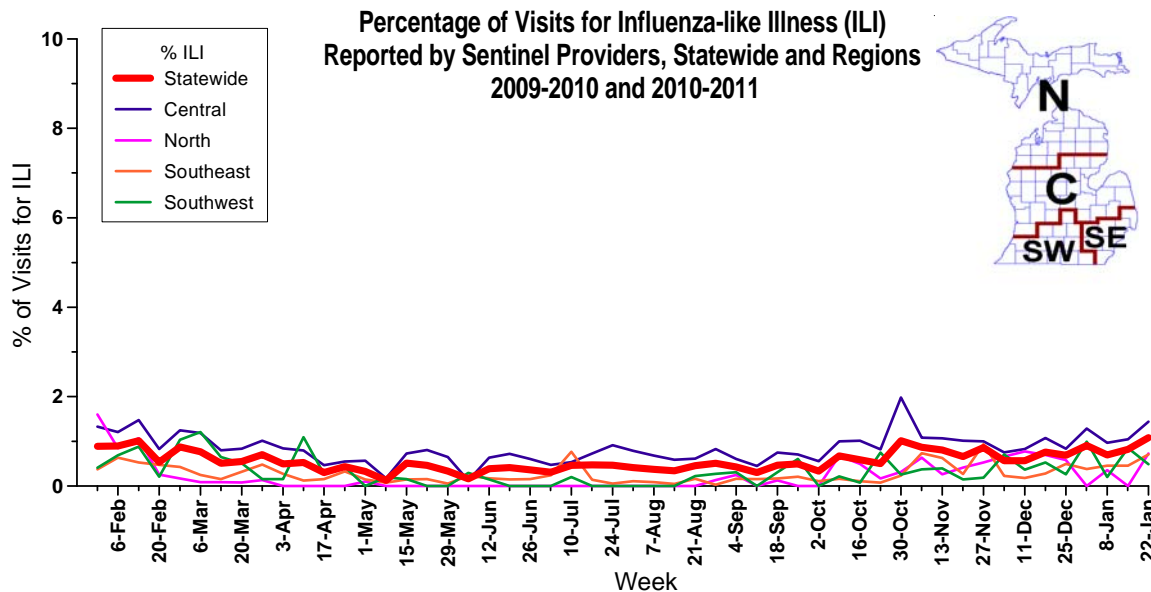
Influenza Surveillance Reports

Michigan Disease Surveillance System: MDSS data for the week ending January 22nd indicated that individual increased when compared to the previous week's levels, while aggregate reports were similar. Individual reports have increased dramatically in the past three weeks. Individual influenza cases are higher, and aggregate influenza cases are similar, than levels seen during the same time last year.

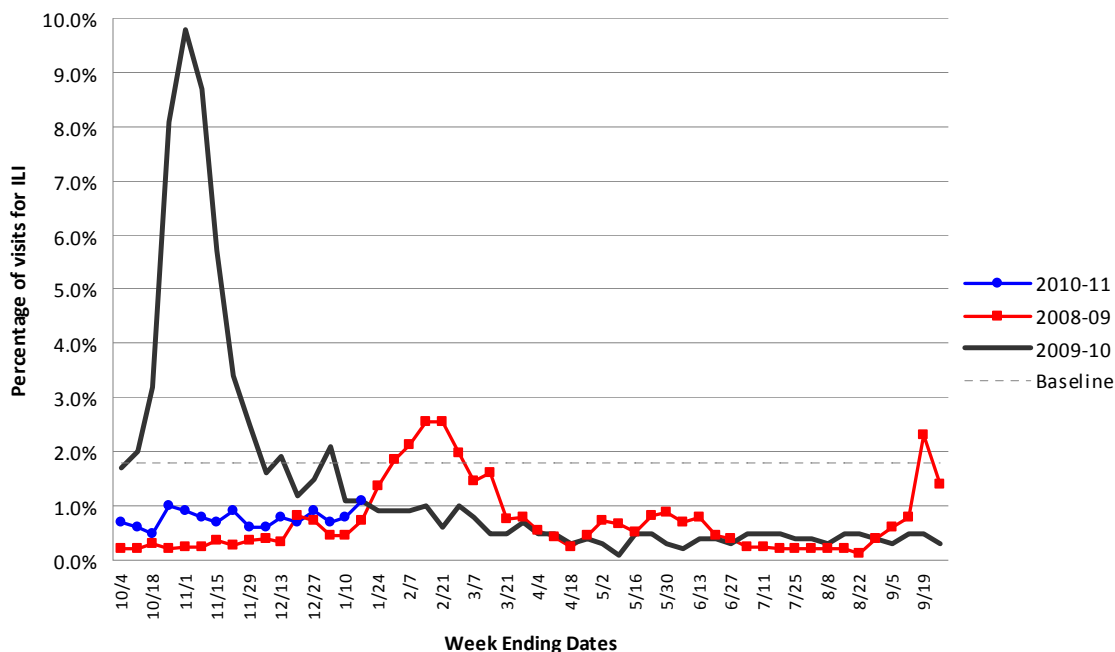
Emergency Department Surveillance: Compared to the previous week's levels, emergency department visits from constitutional and respiratory complaints increased slightly. Both constitutional and respiratory complaints are similar to levels during the same reporting period last year. In the past week, there were six constitutional alerts in the SE(1), C(4), and N(1) Influenza Surveillance Regions and six respiratory alerts in the SW(1), C(3) and N(2) Regions.

Over-the-Counter Product Surveillance: When compared to the previous week's data, sales of chest rubs and un-promoted children's electrolytes increased, while all other indicators remained steady. When compared to this time last year, sales of chest rubs are slightly increased, while all other indicators are at similar levels.

Sentinel Provider Surveillance (as of January 27): During the week ending January 22, 2011, the proportion of visits due to influenza-like illness (ILI) slightly increased for the third week in a row to 1.1% overall; however, this is below the regional baseline of 1.8%. A total of 122 patient visits due to ILI were reported out of 11,279 office visits. Thirty-seven sites provided data for this report. Activity increased in three surveillance regions: Central (1.4%), North (0.7%) and Southeast (0.7%); and decreased in one region: Southwest (0.5%). Please note these rates may change as additional reports are received.



**Percentage of Visits for Influenza Like Illness (ILI) Reported by the US Outpatient
Influenza-like Illness Surveillance Network (ILINet) - Michigan, 2008-2010**



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 January 22): During January 16-22, there was one new lab-confirmed influenza hospitalization within the catchment area (Clinton, Eaton and Ingham counties); the total since October 1, 2010 is 3 adult and 8 pediatric cases. Based on these data, the estimated influenza hospitalization incidence rate in the catchment area, from October 1-January 22, is 8 per 100,000 for children and 0.8 per 100,000 for adults.

Laboratory Surveillance (as of January 22): During January 16-22, five 2009 influenza A/H1N1 and six influenza A/H3 isolates in Michigan residents were reported by MDCH Bureau of Laboratories. For the 2010-11 season (starting October 3, 2010), MDCH BOL has identified 79 influenza isolates from Michigan residents:

- 2009 Influenza A/H1N1: 23
- Influenza A/H3: 51
- Influenza B: 5

17 sentinel labs (SE, SW, C, N) reported for the week ending January 22, 2011. 14 labs (SE, SW, C) reported influenza A positives, of which 9 had sustained or increasing flu A activity. 8 labs (SE, SW, C) reported sporadic or low numbers of flu B positive results. Nine sites (SE, SW, C, N) reported low or slightly increasing RSV positives. Testing volumes continue increasing to moderate to high levels.

Michigan Influenza Antigenic Characterization (as of January 27): No influenza isolates for the 2010-2011 season have undergone further antigenic characterization at the CDC.

Michigan Influenza Antiviral Resistance Data (as of January 27): No influenza isolates for the 2010-2011 season have undergone antiviral resistance testing.

Antiviral resistance testing takes months to complete and cannot be used to guide individual patient treatment. However, 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 January 27): No influenza-associated pediatric mortalities have been reported to MDCH for the 2010-2011 influenza season.

***CDC has asked states for information on any pediatric death associated with influenza. This includes not only any pediatric death (<18 years) resulting from a compatible illness with laboratory confirmation of

influenza, but also any unexplained pediatric death with evidence of an infectious process. Please immediately call MDCH to ensure proper specimens are obtained. View the complete MDCH protocol online at http://www.michigan.gov/documents/mdch/ME_pediatric_influenza_guidance_v2_214270_7.pdf.

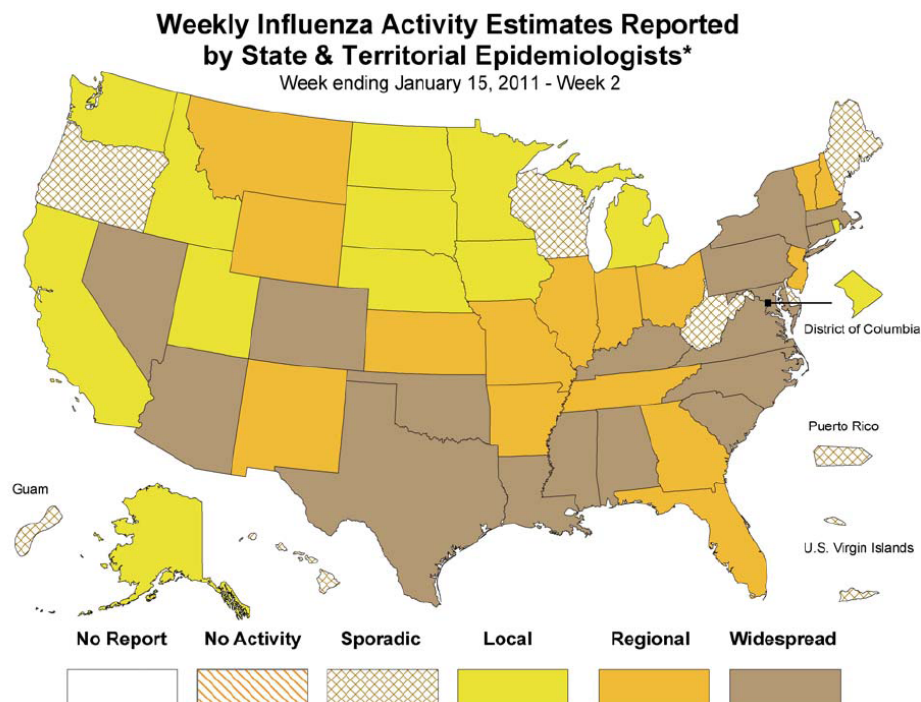
Influenza Congregate Settings Outbreaks (as of January 27): Five new respiratory outbreaks (3SE, 2N) were reported to MDCH during the past week, including facilities such as nursing homes, colleges and K-12 schools. Seven total outbreaks have been reported to MDCH for the 2010-2011 season:

- Influenza A/H3 confirmed: 2 (2SE)
- Influenza A, unsubtype or subtyping pending: 3 (3SW)
- No testing performed or testing negative: 2 (2N)

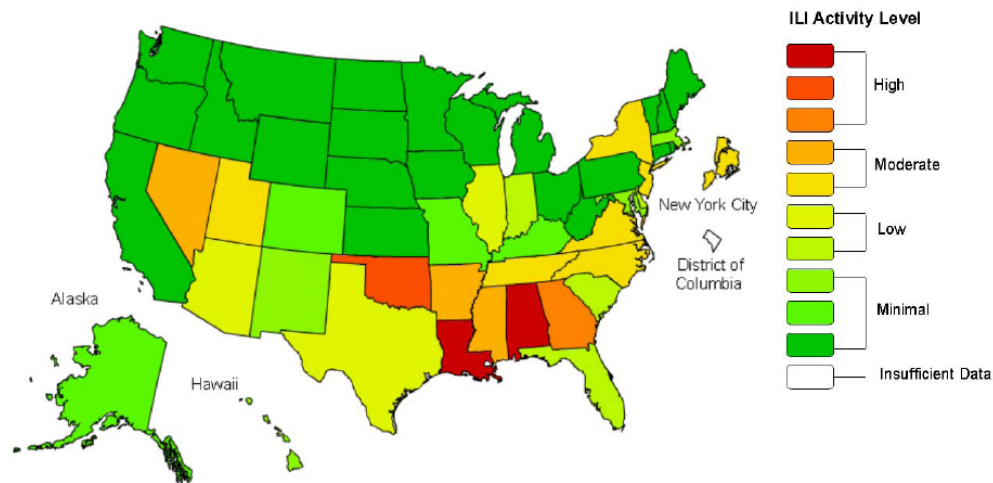
National (CDC [edited], January 21): During week 2 (January 9-15, 2011), influenza activity in the United States increased. Of the 4,983 specimens tested by U.S. World Health Organization and National Respiratory and Enteric Virus Surveillance System collaborating laboratories and reported to CDC/Influenza Division, 1,288 (25.9%) were positive for influenza. The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold. Two influenza-associated pediatric deaths were reported. One of these deaths was associated with an influenza A (H3) virus and one was associated with an influenza A virus for which the subtype was not determined. The proportion of outpatient visits for influenza-like illness (ILI) was 2.9%, which is above the national baseline of 2.5%. Three of the 10 regions (Regions 2, 4, and 5) reported ILI above region-specific baseline levels. Four states experienced high ILI activity, New York City and nine states experienced moderate ILI activity, seven states experienced low ILI activity, 30 states experienced minimal ILI activity, and data were insufficient from the District of Columbia. The geographic spread of influenza in 17 states was reported as widespread; 15 states reported regional influenza activity; the District of Columbia and 12 states reported local activity, and Guam, Puerto Rico, the U.S. Virgin Islands, and six states reported sporadic activity.

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

	Week 2
No. of specimens tested	4,983
No. of positive specimens (%)	1,288 (25.9%)
Positive specimens by type/subtype	
Influenza A	1,092 (84.8%)
A (2009 H1N1)	173 (15.8%)
A (subtyping not performed)	432 (39.6%)
A (H3)	487 (44.6%)
Influenza B	196 (15.2%)



**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2010-11 Influenza Season Week 2 ending Jan 15, 2011**



This map uses the proportion of outpatient visits to health care 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 in 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], January 14): North America is continuing to report increases in influenza activity primarily related to influenza A (H3N2) with lower numbers of influenza type B. In the United Kingdom, severe and fatal cases are increased compared to 2 weeks ago, associated predominantly with influenza A (H1N1) 2009 and less commonly with influenza type B. Currently, 25% of intensive care beds in the U.K. are occupied by influenza patients. Notably, the Chief Medical Officer has issued an alert to clinicians warning of increasing rates of bacterial infections often associated with influenza (S. pneumoniae, Group A streptococcus, and meningococcus), though the association with the current influenza circulation is still under investigation. Severe disease associated with H1N1 (2009) and to a lesser extent influenza type B is also being increasingly reported on the European continent and areas of the Middle East. Tropical areas of the world and the temperate countries of the Southern Hemisphere are currently reporting very little influenza circulation.

The entire summary is available online at http://www.who.int/csr/disease/influenza/2011_01_14_GIP_surveillance/en/index.html

Map of International Activity (CDC): A Map of International Co-circulation of Seasonal Influenza is available online at <http://cdc.gov/flu/international/map.htm>.

MDCH reported **REGIONAL INFLUENZA ACTIVITY** to CDC for the week ending January 22, 2011.

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.

National, 2009 H1N1 (The Pediatric Infectious Disease Journal abstract, January 18): Nelson CA, France EK, Shetterly SM, Glanz JM. Seasonal Influenza Vaccination Status Among Children With Laboratory Evidence of Pandemic H1N1 Infection. *Pediatr Infect Dis J.* 2011 Jan 18. [Epub ahead of print]

Background: The 2009 pandemic H1N1 influenza virus emerged in March 2009 and spread rapidly, causing many thousands of deaths worldwide. A case-control study of 60 Mexican adults with H1N1 suggested that the seasonal influenza vaccine protected against H1N1 infection (odds ratio [OR], 0.27; 95% confidence interval [CI], 0.11-0.66), but subsequent studies have had varied results and few have

addressed this question in children. The objective of this study was to evaluate the effect of 2008-2009 seasonal influenza vaccination on pandemic H1N1 infection in children.

Methods: Cases (n = 165) were Kaiser Permanente Colorado inpatients and outpatients aged between 18 months and 18 years, with laboratory-confirmed pandemic H1N1 infection from May to November 2009. Controls (n = 660) were pediatric Kaiser Permanente members without documented H1N1 infection who were matched by age and gender. Seasonal influenza vaccination status was recorded for all cases and controls; conditional logistic regression analyses were used to calculate matched odds ratios.

Results: Cases were more likely than controls to have underlying chronic health conditions (45% vs. 21%, $P < 0.0001$). Pandemic H1N1 cases were neither more nor less likely to have received the 2008-2009 seasonal influenza vaccine (OR, 1.31; 95% CI, 0.92-1.88). After adjustment for chronic medical conditions and health-seeking behavior, H1N1 cases were as likely as controls to have received the 2008-2009 seasonal influenza vaccine (OR, 1.08; 95% CI, 0.75-1.57).

Conclusions: There was no overall association-either protection or risk-between seasonal influenza vaccination and medically attended pandemic H1N1 infection in children. These results have important implications for understanding influenza immunity and future public health efforts to prevent pandemic influenza.

National, Antivirals (FDA [edited], January 19): Shortage of Tamiflu Oral Suspension 12mg/ml 25 ml
Company: Genentech: Product support: 1-800-551-2231; for medical information: 1-800-821-8590
Reason for Shortage: Increased demand

Related Information: Genentech has Tamiflu for Oral Suspension on backorder, however supplies remain in distribution at wholesalers and pharmacies. Tamiflu 75mg, 45 mg and 30 mg capsules remain available. For those patients who have difficulty swallowing capsules, the contents can be mixed into sweetened liquids, such as chocolate syrup, as directed by a healthcare professional.

If there is difficulty locating commercial Tamiflu for Oral Suspension, FDA would like to remind healthcare professionals of the FDA-approved Instructions for the emergency compounding of an oral suspension from Tamiflu 75 mg capsules. These instructions provide for an alternative oral suspension when commercially manufactured oral suspension formulation is not readily available.

Please refer to the Tamiflu package insert for information regarding compounding an oral suspension from Tamiflu 75mg capsules or see the following link for healthcare professionals: [Tamiflu](#)

National, Transmission (National Foundation for Infectious Diseases, January 25): Have you ever ventured out of the house, gone to a business meeting or traveled by air when you thought you might have the flu? If you answered yes, you are among a majority of Americans who fessed up in a recent survey to being “that guy” who goes about his or her day despite experiencing the sudden onset of fever, aches and chills – commonly recognized symptoms of the flu.

As the U.S. flu season peaks, the National Foundation for Infectious Diseases (NFID) has launched *Are You That Guy?*, a national influenza educational campaign that encourages personal and social responsibility by raising awareness of how easily the flu virus spreads.

According to a recent national poll, almost seven out of 10 Americans (68%) did not realize that flu viruses can travel five to six feet from a sneeze or a cough, and two-thirds (66%) admitted to going about their daily activities despite experiencing flu symptoms.

“It’s easy to downplay the signs of influenza, particularly when daily obligations call,” said Dr. Susan J. Rehm, NFID medical director and vice chairman of the Department of Infectious Diseases at the Cleveland Clinic. “While many of us feel we can power through the flu without getting others sick by avoiding shared objects or shaking hands, it’s important to remember that the influenza virus is commonly spread through the air and can travel up to six feet away when someone coughs, sneezes or even speaks.”

“Influenza is serious and highly-contagious,” added Dr. Rehm. “Vaccination and good hygiene habits are important steps to avoid getting the flu. If you have flu symptoms, it’s important to act quickly, see a doctor and follow your doctor’s advice. No one wants to be ‘that guy’ who puts others at risk for flu.”

Millions of Americans get the flu each year and it is associated with substantial medical costs, more than 200,000 hospitalizations and thousands of deaths every year in the U.S. Influenza symptoms include

sudden onset of fever, aches, chills and extreme tiredness. Colds are usually milder than the flu, come on more slowly and people with colds are more likely to have a runny or stuffy nose. If diagnosed with the flu, a doctor may prescribe an antiviral medication to attack the flu virus and help stop it from spreading inside the body. Antivirals can also help prevent individuals exposed to the flu virus from becoming sick.

As part of the *Are You That Guy?* campaign, NFID released a broadcast public service announcement (PSA) to motivate Americans to take care of themselves and be considerate of others when exhibiting flu symptoms. The PSA is also available on YouTube for download – search for <http://www.youtube.com/flufacts>.

More information about the campaign can be obtained by visiting www.NFID.org. People can also track flu outbreaks in their region and receive alerts about flu in their communities by visiting www.FluFACTS.com and using the Flu Tracker or by downloading a free *Fight the Flu* iPhone app www.FluFACTS.com/iphone-app.jsp. The *Are You That Guy?* campaign and survey is supported by Genentech, a member of the Roche Group.

The survey was conducted by Infogroup/Opinion Research Corp. in November 2010. The findings are based on telephone interviews with a national sample of 1,006 adults, 18 years and older. The findings are projectable to the adult U.S. population with a margin of sampling error of \pm 3 percentage points.

Subgroups will have a large margin of sampling error. Interviewing was conducted from November 18-21, 2010. Responses were weighted by demographic factors, including sex, age, geographic region, and race to ensure a reliable and accurate representation of the population.

The NFID is a non-profit, tax-exempt (501c3) organization founded in 1973 and dedicated to educating the public and health care professionals about the causes, treatment and prevention of infectious diseases.

International, Antivirals (CIDRAP, January 20): Zanamivir might be a better flu treatment for children than oseltamivir, according to a research group from Japan who observed the two drugs over four flu seasons, finding that zanamivir produced shorter virus-shedding times with fewer links to resistance.

The group based its findings on 144 pediatric patients who were seen as outpatients at four hospitals in Japan over four flu seasons between 2005 and 2009. Their findings appeared yesterday in an early online edition of *Clinical Infectious Diseases*. The group was led by Yoshihiro Kawaoka, DVM, PhD, a virologist from Japan who is also with the University of Wisconsin, Madison's Department of Pathological Sciences.

Though zanamivir (Relenza) and oseltamivir (Tamiflu) are both neuraminidase inhibitors that are useful therapies for flu, Kawaoka's group noted that flu virus resistance to zanamivir, an inhaled drug, is reported less frequently than with oseltamivir, which is taken orally. They therefore wanted to compare the drugs to see if their drug-resistance and virus-shedding profiles were different. They questioned whether resistance was less likely to be reported with zanamivir because of its less frequent use or because of its unique properties.

Oseltamivir-resistant seasonal H1N1 flu viruses emerged in 2006, with and without selective pressure from antiviral use. However, during the 2009 H1N1 pandemic few cases of resistance in the new strain were confirmed. According to the World Health Organization's (WHO's) Jan 14 update, only 319 oseltamivir-resistant 2009 H1N1 cases have been reported.

The children in the study received either oseltamivir or zanamivir based on their clinical symptoms, such as vomiting or wheezing. Illnesses were relatively mild, and none of the patients required hospitalization. They were treated within 48 hours of symptom onset. None of them were immunocompromised or receiving corticosteroids or immunosuppressive therapy.

Researchers collected clinical specimens from patients two or three times: during their initial visit, on day 3 to 4 and/or on day 5 to 7 after drug treatment. Half were treated with oseltamivir and half received zanamivir. Using the follow-up testing to gauge the drugs' effects on viral shedding, they collected 60 and 50 "second" specimens from the oseltamivir and zanamivir patients, respectively. The group obtained 33 "second or third" specimens from each group.

They used neuraminidase inhibition assay to test the sensitivity of the viruses to the two drugs.

A comparison of the two drugs' effects on virus shedding were based on 41 oseltamivir and 25 zanamivir samples collected on days 3 to 4 after treatment and on 23 oseltamivir and 13 zanamivir samples collected on days 5 to 7 post treatment.

The group didn't find a statistically significant difference between the two treatment groups among the earlier specimens, but they found that the viral isolation rate in the later specimens was significantly higher in the kids who were treated with oseltamivir. Researchers concluded that zanamivir was more efficient than oseltamivir at reducing the virus-shedding period.

To detect drug resistance, they sequenced the viral neuraminidase (NA) gene for all specimens they collected. They detected NA substitutions in specimens collected from six (8.3%) patients who were treated with oseltamivir, but none were found in specimens from those who received zanamivir. All of the resistant mutations were detected on or after day 4 of drug treatment, and the oseltamivir-resistant viruses didn't appear to be linked to prolonged virus shedding or increased illness severity, according to the researchers.

"These results reveal that the frequency of viruses resistant to zanamivir is significantly lower than the frequency of those resistant to oseltamivir," Kawaoka and his colleagues wrote.

They suggested that young children's relatively immature immune system, compared with adults', could lead to more persistent viral replication, which has been reflected in increased and sustained infections in this group in influenza pandemics. "Taken together, oseltamivir-resistant variants may emerge more frequently in a pandemic situation in which the majority of patients are immunologically naive to the virus," the group wrote.

Zanamivir's comparable efficacy to oseltamivir and its efficacy against oseltamivir-resistant strains shows that it may play a key role in flu treatment, they concluded.

Dr Raphael Dolin, a virologist at Beth Israel Deaconess Medical Center-Harvard Medical School in Boston, wrote in an accompanying commentary that the Kawaoka study provides important information about the frequency of resistant viruses after treatment with both drugs.

He noted that zanamivir-resistant virus infections are rare but have mainly been described in immunosuppressed patients.

The observational nature of the study and its relatively small sample size limit some of the study's interpretations, Dolin wrote. The children's illnesses were relatively mild, which limited the researchers' ability to compare the clinical treatment effects and complication rates.

Studies such as the Kawaoka one highlight the importance of strategies to reduce antiviral resistance against flu, which should be based on the latest molecular, pharmacokinetic, and physiologic findings and on data from rigorous clinical trials, he added.

Though one traditional approach to block resistance has been combination therapies that have synergistic or additive effects, Dolin wrote that a recent randomized trial combining oseltamivir and zanamivir was less effective than oseltamivir alone for treating influenza A (H3N2) infections in adults.

He said comparative antiviral studies should be confirmed and extended to other patient populations and flu subtypes, and surveillance for resistance plays a key role in guiding appropriate antiviral use and future clinical studies.

Tamura T, Sugaya N, Ozawa M, et al. Frequency of drug-resistant viruses and virus shedding in pediatric influenza patients treated with neuraminidase inhibitors. *Clin Infect Dis* 2011 (Epub Jan 19) [[Abstract](#)]

Dolin R. Resistance to neuraminidase inhibitors. *Clin Infect Dis* 2011 (Epub Jan 19) [[Extract](#)]

International, Human (WHO, January 20): The Ministry of Health of Egypt has announced a new case of human infection of H5N1 avian influenza. A 1-year-old male from Alexandria Governorate, developed symptoms on 12 January and was hospitalized on 13 January. He is in a stable condition. Investigations into the source of infection indicated that the case had exposure to poultry.

The case was confirmed by the Egyptian Central Public Health Laboratories, a National Influenza Center of the WHO Global Influenza Surveillance Network (GISN). Of the 121 cases confirmed to date in Egypt, 40 have been fatal.

International, Poultry (OIE [edited], January 10): Country: Bangladesh
Causal Agent: Highly pathogenic avian influenza virus Serotype(s) H5N1
Date of report: 10/01/2011; Date Submitted To OIE: 10/01/2011
Division: DHAKA; District: Dhaka; Sub-district: Narisha, Dohar; Location: Narisha Khamarbari
Species: Birds; Susceptible: 6500; Cases: 530; Deaths: 530; Destroyed: 5970; Slaughtered: 0
Affected Population: a commercial poultry farm

International, Poultry (OIE [edited], January 18): Country: Myanmar
Causal Agent: Highly pathogenic avian influenza virus Serotype(s) H5
Date of first confirmation of the event: 16/01/2011; Date of Start of Event: 06/01/2011
Date of report: 18/01/2011; Date Submitted To OIE: 18/01/2011
Province: RAKHINE STATE; District: Sittwe; Sub-district: Sittwe; Location: Bumay-Letthamar village
Species: Birds; Susceptible: 800; Cases: 500; Deaths: 500; Destroyed: 300; Slaughtered: 0
Affected Population: Layers
Epidemiological comments: The layer chickens were 3 months old. There were a total of 800 chickens. Deaths started from 6 January and a total of 500 chickens died. HPAI virus was detected by PCR. There are 8 farms in this village with a total of 5,000 chickens. All are layer chickens of different ages.

International, Wild Birds (OIE [edited], January 19): Country: Japan
Causal Agent: Highly pathogenic avian influenza virus Serotype(s) H5N1
Date of report: 19/01/2011; Date Submitted To OIE: 19/01/2011

Outbreak (this report - submitted)
Province: KAGOSHIMA; District: Izumi city; Location: Izumi Crane Park
Species: Wild species; Cases: 5; Deaths: 5; Destroyed: 0; Slaughtered: 0
Affected Population: *Grus monacha* (hooded crane)

Outbreak (other report - submitted)
Province: KAGOSHIMA; District: Izumi city; Location: Izumi Crane Park
Species: Wild species; Cases: 1; Deaths: 1; Destroyed: 0; Slaughtered: 0
Affected Population *Grus monacha* (hooded crane)

Outbreak (this report - submitted)
Province: FUKUSHIMA; District: Koriyama city; Location: Toyoda-cho water purification facility
Species: Wild species; Cases: 2; Deaths: 2; Destroyed: 0; Slaughtered: 0
Affected Population: *Aythya fuligula* (tufted duck)

Epidemiological comments: The first case detected in the Izumi Crane Park (national bird sanctuary) was reported to the OIE in the follow-up report No. 1. A total of 36 dead birds including the first case were found out in the sanctuary between the start date and 18 January 2011: 22 hooded cranes, 4 white-necked cranes and 10 wild ducks. Influenza virus A subtype H5N1 was isolated only from 6 dead hooded cranes including the first case (1 bird). There is no sign of accelerating and explosive spread of infection such as massive deaths of wild birds and a sudden increase of weak birds in the sanctuary. A total of 1,197 faeces of birds collected in the sanctuary between 25 December 2010 and 27 December 2010 were negative to influenza virus. In addition, on 19 December 2010, Hokkaido University confirmed the isolates from dead tufted ducks detected in Fukushima prefecture were positive to influenza virus A subtype H5N1. A total of 3 dead tufted ducks were collected at a water reservoir in Koriyama city on 4 January 2011 and 5 January 2011. The viruses were isolated from a bird collected on 4 January 2011 and another collected on 5 January 2011.

International, Wild Birds (OIE [edited], January 21): Country: Hong Kong (SAR - PRC)
Causal Agent: Highly pathogenic avian influenza virus Serotype(s) H5N1
Date of first confirmation of the event: 19/01/2011; Date of Start of Event: 17/01/2011
Date of report: 21/01/2011; Date Submitted To OIE: 21/01/2011

Outbreak (this report - submitted)
Province: HONG KONG; District: Yuen Long; Location: Fairview Park
Affected Population: An Oriental Magpie Robin (*Copsychus saularis*) was collected on 17 January 2011 at the Fairview Park. Oriental Magpie Robin is a common and widespread resident in Hong Kong.

Outbreak (this report - submitted)

Province: HONG KONG; District: Lantau Island; Location: Tai O

Affected Population: A Large-billed Crow (*Corvus macrorhynchus*) carcass was collected on 18 January 2011 at Tai O. Large-billed Crow is a common and widespread resident in Hong Kong.

Epidemiological comments: An intensive surveillance system is in place for all poultry farms, poultry markets, pet bird shops and wild birds in Hong Kong. The H5N1 infected wild birds were detected in our ongoing surveillance programme on wild birds. No spread of disease was evident. As this report concerns wild birds, the dates of end of the outbreaks are the same as the dates on which the birds were found (17 and 18 January 2011, respectively).

Michigan Wild Bird Surveillance (USDA, as of January 27): For the 2010 season (April 1, 2010-March 31, 2011), highly pathogenic avian influenza H5N1 has not been recovered from 36,192 samples tested nationwide, including 1283 Michigan samples (7 live bird, 1203 hunter-killed birds, 73 morbidity/mortality). For more information, visit <http://wildlifedisease.nbii.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>.

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 - Cases up to January 20, 2011. http://www.who.int/csr/disease/avian_influenza/country/cases_table_2011_01_20/en/index.html. Downloaded 1/24/2011. Cumulative number of lab-confirmed cases reported to WHO. Total cases includes deaths.

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		Total	
	cases	deaths	cases	deaths	cases	deaths	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	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	0	0	10	8
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	0	0	40	26
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	2	0	121	40
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	0	0	171	141
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	3	2
Lao PDR	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	119	59
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	2	0	518	306