



# MI Flu Focus

Influenza Surveillance Updates  
Bureaus of Epidemiology and Laboratories



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### Current Influenza Activity Levels:

- **Michigan:** Widespread activity
- **National:** During February 26 – March 3, U.S. activity is elevated in some areas, but ILI remains relatively low nationally

### Updates of Interest

- **Michigan:** MDCH is revising the enhanced surveillance for novel A (H3N2) influenza cases; please see notice below

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### **\*\*Update: Novel A (H3N2) Guidance\*\***

In December 2011, CDC asked all states to conduct surveillance for suspect human cases of a novel influenza A (H3N2) virus by increasing influenza testing. Subsequently, MDCH issued an interim guidance requesting all healthcare providers to forward all positive influenza specimens to MDCH for further testing. MDCH would like to thank the healthcare providers who contributed to this effort. Since no cases of novel influenza A (H3N2) have been identified in Michigan, or any additional cases identified nationwide, MDCH is revising this guidance. For surveillance purposes, healthcare providers may now submit up to 5 representative specimens per week to MDCH Bureau of Laboratories, with priority on pediatric or severe cases. Please call the MDCH Division of Communicable Disease at 517-335-8165 with any questions.

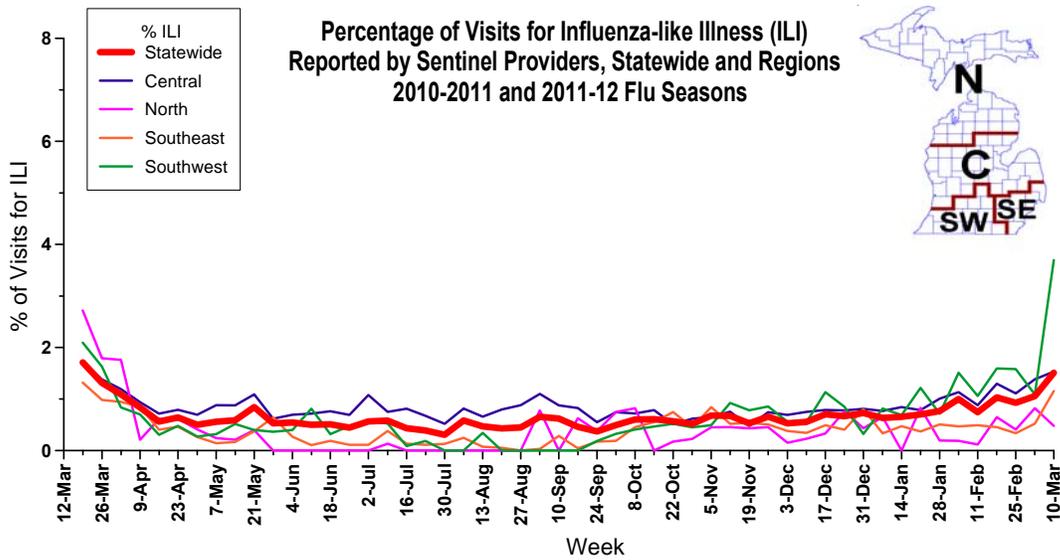
### **Influenza Surveillance Reports**

**Michigan Disease Surveillance System:** MDSS data for the week ending March 10<sup>th</sup> indicated that both individual and aggregate influenza cases remained steady. Both individual and aggregate reports are slightly lower than levels seen during the same time last year.

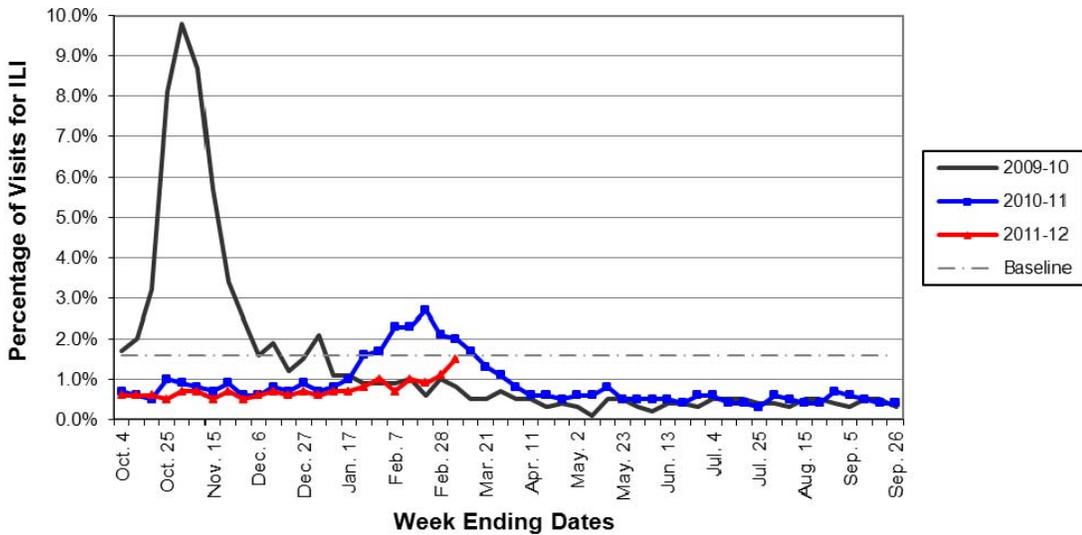
**Emergency Department Surveillance:** Compared to levels from the week prior, emergency department visits from constitutional complaints slightly increased, while respiratory complaints decreased. Both constitutional and respiratory complaints are slightly lower than levels reported during the same time period last year. In the past week, there were twelve constitutional alerts in the SW(6), C(4) and N(2) Influenza Surveillance Regions and four respiratory alerts in the SE(1), SW(1), C(1), and N(1) Regions.

**Sentinel Provider Surveillance (as of March 15):** During the week ending March 10, 2012, the proportion of visits due to influenza-like illness (ILI) increased to 1.5% overall; this is slightly below the regional baseline of 1.6%. A total of 155 patient visits due to ILI were reported out of 10,294 office visits. Thirty-one sentinel sites provided data for this report. Activity increased in three surveillance regions: Central (1.5%), Southeast (1.2%) and Southwest (3.7%) and decreased in the remaining surveillance region: North (0.5%). Only 3 sites from the Southwest region have reported; these rates may change as additional reports are received.

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.



**Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet): Michigan, 2009-2012**



**Hospital Surveillance (as of March 10):** The Influenza Hospitalization Surveillance Project provides population-based rates of severe influenza illness in Clinton, Eaton and Ingham counties. 3 lab-confirmed influenza hospitalizations were reported during the week ending March 10, 2012. For the 2011-12 season, 8 influenza hospitalizations (3 adult, 5 pediatric) have been reported in the catchment area.

The MDCH Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide. 9 hospitals (SE, SW, N) reported for the week ending March 10, 2012. Results are listed in the table below. Total hospitalizations were adjusted to reflect amended reports from past weeks.

Age Group	Hospitalizations Reported During Current Week	Total Hospitalizations 2011-12 Season
0-4 years	1	11
5-17 years	0	7
18-49 years	3	13
50-64 years	3	11
≥65 years	4	9
<b>Total</b>	<b>11</b>	<b>51</b>

**Laboratory Surveillance (as of March 10):** During March 4-10, 98 influenza A/H3 (56SE, 13SW, 29C), 7 2009 A/H1N1 (5SE, 1SW, 1C) and 2 influenza B (SW) results were reported by MDCH BOL. For the 2011-12 influenza season (starting October 2, 2011), MDCH has identified 635 influenza results:

- Influenza A(H3): 607 (315SE, 31SW, 230C, 31N)
- Influenza A(H1N1)pdm09: 16 (10SE, 1SW, 4C, 1N)
- Influenza B: 12 (7SE, 3SW, 2C)
- Parainfluenza: 2 (1SE, 1C)
- Adenovirus: 1 (SE)
- RSV: 2 (1C, 1N)

16 sentinel labs (SE, SW, C, N) reported for the week ending March 10, 2012. 13 labs (SE, SW, C, N) reported steady or increasing influenza A activity. 4 labs (SE) reported low levels of influenza B positives. 14 labs (SE, SW, C, N) saw steady or decreasing RSV activity. 2 labs (SE, SW) had sporadic adenovirus positives. 2 labs (SE, SW) saw decreasing hMPV activity. Testing volumes are moderate to high.

**Michigan Influenza Antigenic Characterization (as of March 15):** For the 2011-12 season, 9 Michigan influenza B specimens have been characterized at MDCH BOL. 5 specimens have been characterized as B/Brisbane/60/2008-like, matching the B component of the 2011-12 influenza vaccine. 4 influenza B specimens were characterized as B/Wisconsin/01/2010-like, which is not included in the 2011-12 vaccine.

**Michigan Influenza Antiviral Resistance Data (as of March 15):** For the 2011-12 season, 12 Michigan influenza A(H1N1)pdm09 specimens have been tested for antiviral resistance at MDCH Bureau of Laboratories; all have tested negative for oseltamivir resistance.

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>.

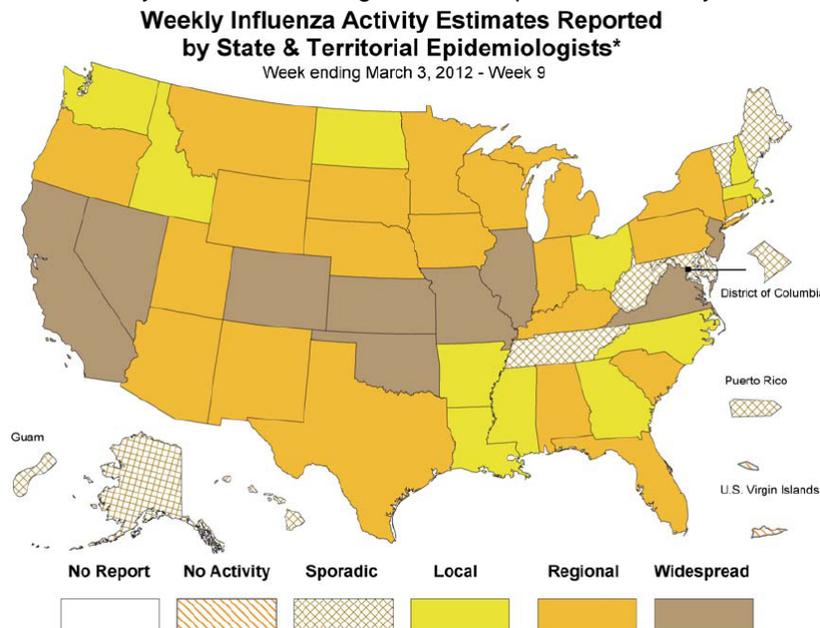
**Influenza-associated Pediatric Mortality (as of March 15):** No pediatric influenza-associated influenza mortalities have been reported to MDCH for the 2011-12 season.

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](http://www.michigan.gov/documents/mdch/ME_pediatric_influenza_guidance_v2_214270_7.pdf).

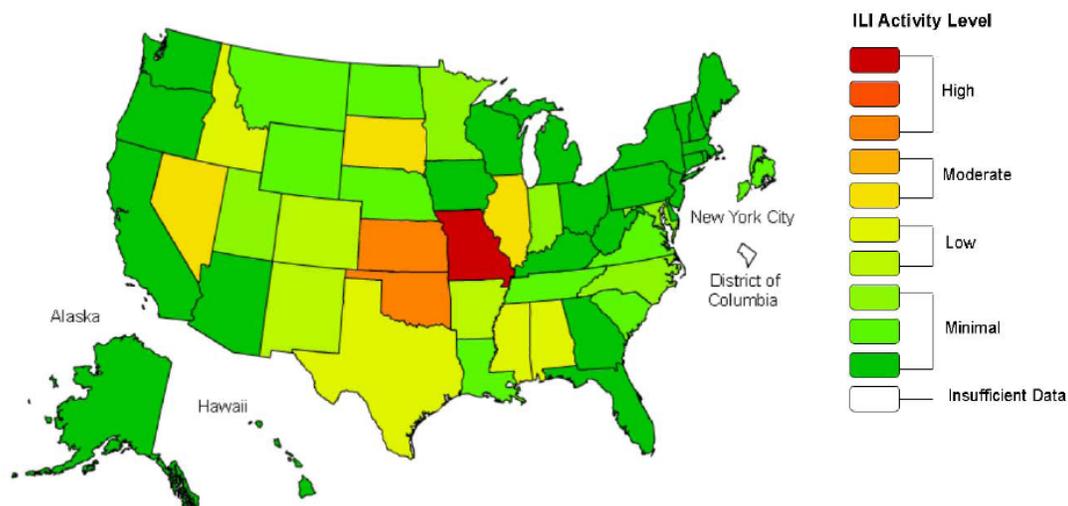
**Influenza Congregate Settings Outbreaks (as of March 15):** One influenza A/H3 outbreak in an assisted living facility (SE), one influenza A outbreak in a long-term care facility (SE), and one respiratory outbreak from a rehab facility (C) were reported during the previous week. 17 respiratory outbreaks (4SE, 2SW, 11C) have been reported to MDCH during the 2011-12 season; testing results are listed below.

- Influenza A/H3: 6 (2SE, 4C)
- Influenza A: 2 (1SE, 1C)
- Human metapneumovirus: 1 (SW)
- Negative or not tested: 8 (1SE, 1SW, 6C)

**National (CDC [edited], March 9):** During week 9 (February 26 – March 3, 2012), influenza activity is elevated in some areas in the U.S., but influenza-like-illness remains relatively low nationally. Of the 4,776 specimens tested by U.S. WHO and NREVSS collaborating labs and reported to CDC/Influenza Division, 1,019 (21.3%) were positive for influenza. The proportion of deaths attributed to P&I was below the epidemic threshold. One influenza-associated pediatric death was reported and was associated with a seasonal influenza A (H3) virus. The proportion of outpatient visits for influenza-like illness (ILI) was 2.0%, which is below the national baseline of 2.4%. Regions 5 and 7 reported ILI above region-specific baseline levels. Three states experienced high ILI activity; 3 states experienced moderate ILI activity; 7 states experienced low ILI activity; New York City and 37 states experienced minimal ILI activity, and the District of Columbia had insufficient data. Nine states reported widespread geographic activity; 21 states reported regional activity; 12 states reported local activity; the District of Columbia, Guam, Puerto Rico, and 8 states reported sporadic activity, and the U.S. Virgin Islands reported no activity.

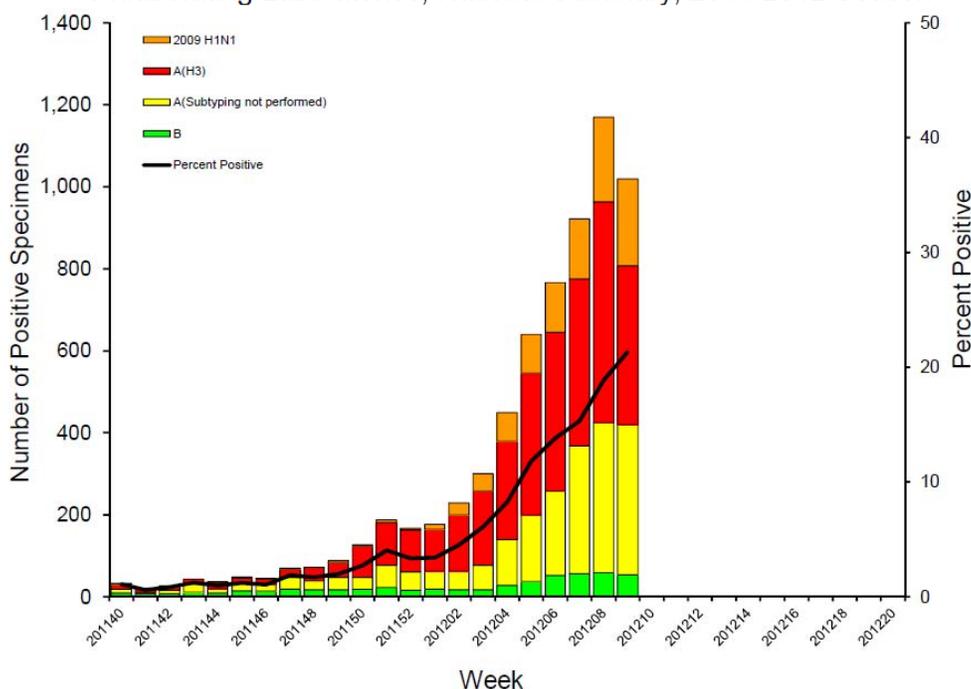


**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet  
2011-12 Influenza Season Week 9 ending Mar 03, 2012**



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.

**Influenza Positive Tests Reported to CDC by U.S. WHO/NREVSS  
Collaborating Laboratories, National Summary, 2011-2012 Season**



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

**International (WHO [edited], March 2):** Influenza activity in the temperate regions of the northern hemisphere is low but increasing in North America and most of Europe. A few countries of southern Europe appear to have now peaked along with the countries of northern Africa and the Middle East. Countries in the tropical zone reported low levels of influenza activity. Influenza activity in the temperate countries of the southern hemisphere is at inter-seasonal levels. The most commonly detected virus type or subtype throughout the northern hemisphere temperate zone has been A(H3N2). Mexico is the exception, where A(H1N1)pdm09 is the predominant subtype circulating and China and the surrounding countries where influenza B is predominant. Influenza B has been increasing in recent weeks in Canada as well. Oseltamivir resistance has not increased notably over levels reported in previous seasons. While most of the viruses characterized early this season were antigenically related viruses in the current trivalent vaccine, the vaccine strain selection committee in a meeting held on 20-24 February noted that

there is evidence of increasing antigenic and genetic drift in circulating influenza A(H3N2) recently and that the proportion of B viruses that are from the Yamagata lineage has been increasing relative to the Victoria lineage. The committee therefore recommended the composition of the next northern hemisphere vaccine include an A/Victoria/361/2011 (H3N2)-like virus and a B/Wisconsin/1/2010-like virus of the Yamagata lineage, and continuing inclusion of an A/California/7/2009 (H1N1)pdm09-like virus.

The entire WHO report is available online at [www.who.int/influenza/surveillance\\_monitoring/updates/latest\\_update\\_GIP\\_surveillance/en/index.html](http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html).

MDCH reported **WIDESPREAD ACTIVITY** to the CDC for the week ending March 10, 2012.

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](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, March 12):** The Ministry of Health, Viet Nam has reported a confirmed case of human infection with highly pathogenic avian influenza A(H5N1) virus in the country.

The case is a 31 year-old male from Dak Lak province. He developed symptoms on 29 February 2012 and sought health care on the same day. On 4 March 2012, he was admitted to a hospital and was diagnosed with viral pneumonia. He was transferred to a referral hospital on 5 March 2012, where he is currently being treated.

Laboratory tests were confirmed by the Pasteur Institute Ho Chi Minh City, a WHO National influenza Centre.

Epidemiological investigation indicates that the man was involved in the slaughter and consumption of sick poultry. Pasteur Institute Ho Chi Minh City and the local health sector are conducting further investigation and providing appropriate response. No close contacts of the case have reported respiratory symptoms.

To date, of the 123 confirmed cases reported in Viet Nam, 61 have been fatal.

**International, Human (WHO, March 12):** The Ministry of Health of Indonesia has notified WHO of a new case of human infection with avian influenza A(H5N1) virus. The case is a 24 year-old female from Bengkulu Province. She developed fever on 23 February 2012 and was hospitalized on the following day. She had breathing difficulty, her condition deteriorated and she died on 1 March 2012.

Epidemiological investigation conducted by a team of public health and animal health authorities indicated an exposure to a potentially contaminated environment where sudden deaths of poultry had recently occurred. The case was confirmed by the National Institute of Health Research and Development, Ministry of Health. To date, of the 187 cases reported in Indonesia since 2005, 155 have been fatal.

**International, Poultry (OIE [edited], March 9):** Highly pathogenic avian influenza H5N1; Israel  
Outbreak 1: HADAROM, Beer-sheva, HOLIT  
Species: Birds; Susceptible: 40,000; Cases: 19,000; Deaths: 10,000  
Affected Population: 12-week-old turkeys. In one of the two pens there were 19,000 turkeys with very high morbidity and more than 50% mortality.

Outbreak 2: HADAROM, Ashkelon Village, SHALWA  
Species: Birds; Susceptible: 11,000; Cases: 500; Deaths: 500  
Affected Population: 8-week-old turkeys. The flock is divided in 3 pens. Mortality was found in two pens.

**International, Poultry (OIE [edited], March 9):** Highly pathogenic avian influenza H5N1; Bhutan  
Outbreak 1: Burkey, Sampheling, Chhukha, CHHUKHA

Date of start of the outbreak: 02/03/2012; Outbreak status: Continuing; Epidemiological unit: Village  
 Species: Birds; Susceptible: 1050; Cases: 1; Deaths: 1; Destroyed: 131  
 Affected population: Backyard scavenging poultry

**International, Wild Birds (OIE [edited], March 9):** Highly pathogenic avian influenza H5N1; Hong Kong  
 Outbreak 1: Castle Peak Power Station Plant B, Tuen Mun, HONG KONG  
 Date of start of the outbreak: 02/03/2012; Outbreak status: Resolved  
 Species: Wild species; Cases: 1; Deaths: 1  
 Affected population: A black-headed gull (*Chroicocephalus ridibundus*) was collected on 2 March 2012 at Tuen Mun. The black-headed gull is a common winter visitor in Hong Kong.

Outbreak 2: Kam Fung Court, Ma On Shan, HONG KONG  
 Date of start of the outbreak: 03/03/2012; Outbreak status: Resolved  
 Species: Wild species; Cases: 1; Deaths: 1  
 Affected population: A peregrine falcon (*Falco peregrinus calidus*) was collected on 3 March 2012 at Ma On Shan. The peregrine falcon is a rare winter visitor in Hong Kong.

**Michigan Wild Bird Surveillance (USDA, as of March 15):** For the 2011 season (April 1, 2011-March 31, 2012), highly pathogenic avian influenza H5N1 has not been recovered from 7 Michigan samples or 408 samples tested nationwide. For more information, visit <http://www.nwhc.usgs.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\\_Al-Asia.htm](http://www.oie.int/download/AVIAN%20INFLUENZA/A_Al-Asia.htm).

For questions or to be added to the distribution list, please contact Susan Peters at [peterss1@michigan.gov](mailto:peterss1@michigan.gov)

**Contributors**

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**Table. H5N1 Influenza in Humans – As of March 12, 2012.** [http://www.who.int/influenza/human\\_animal\\_interface/EN\\_GIP\\_20120312CumulativeNumberH5N1cases.pdf](http://www.who.int/influenza/human_animal_interface/EN_GIP_20120312CumulativeNumberH5N1cases.pdf). Downloaded 3/14/2012. Cumulative lab-confirmed cases reported to WHO. Total cases includes deaths.

Country	2003-2005		2006		2007		2008		2009		2010		2011		2012		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Azerbaijan	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	4	4	2	2	1	1	1	0	1	0	1	1	8	8	1	1	19	17
China	9	6	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	18	10	25	9	8	4	39	4	29	13	39	15	5	2	163	57
Indonesia	20	13	55	45	42	37	24	20	21	19	9	7	12	10	4	4	187	155
Iraq	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Lao PDR	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	22	14	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Vietnam	93	42	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	148	79	115	79	88	59	44	33	73	32	48	24	62	34	18	10	596	350