



# MI Flu Focus

Influenza Surveillance Updates  
Bureaus of Epidemiology and Laboratories



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Surveillance and Infectious Disease Epidemiology

January 19, 2012  
Vol. 9; No. 3

### Current Influenza Activity Levels:

- **Michigan:** Sporadic activity
- **National:** During January 1-7, influenza activity remained relatively low, below baseline

### Updates of Interest

- **International:** Three new human cases of H5N1 avian influenza in Indonesia and Egypt reported

### Table of Contents

Influenza Surveillance Reports	
Michigan.....	1-3
National.....	3-4
International.....	5
Novel Influenza and Other News	
WHO Pandemic Phase.....	5
Avian Influenza Surveillance.....	5-6
Avian Influenza H5N1 in Humans.....	6

### **\*\*Notice to Readers\*\***

Twelve human cases of a novel influenza A (H3N2) virus have recently been reported by CDC. There are no known cases in Michigan to date, but recent investigations in those states with cases have suggested some instances of limited human-to-human transmission. CDC has asked all states to conduct surveillance for suspect cases of this novel virus by increasing influenza testing. Therefore, the Michigan Department of Community Health is requesting all healthcare providers, hospitals and laboratories to assist in this effort. Influenza testing for all patients with an influenza-like illness is highly recommended, and all positive influenza specimens should be forwarded to the MDCH Bureau of Laboratories for additional confirmation. Please call the MDCH Division of Communicable Disease at 517-335-8165 with questions or to report suspect cases. Additional guidance is available at [www.michigan.gov/flu](http://www.michigan.gov/flu).

### **Influenza Surveillance Reports**

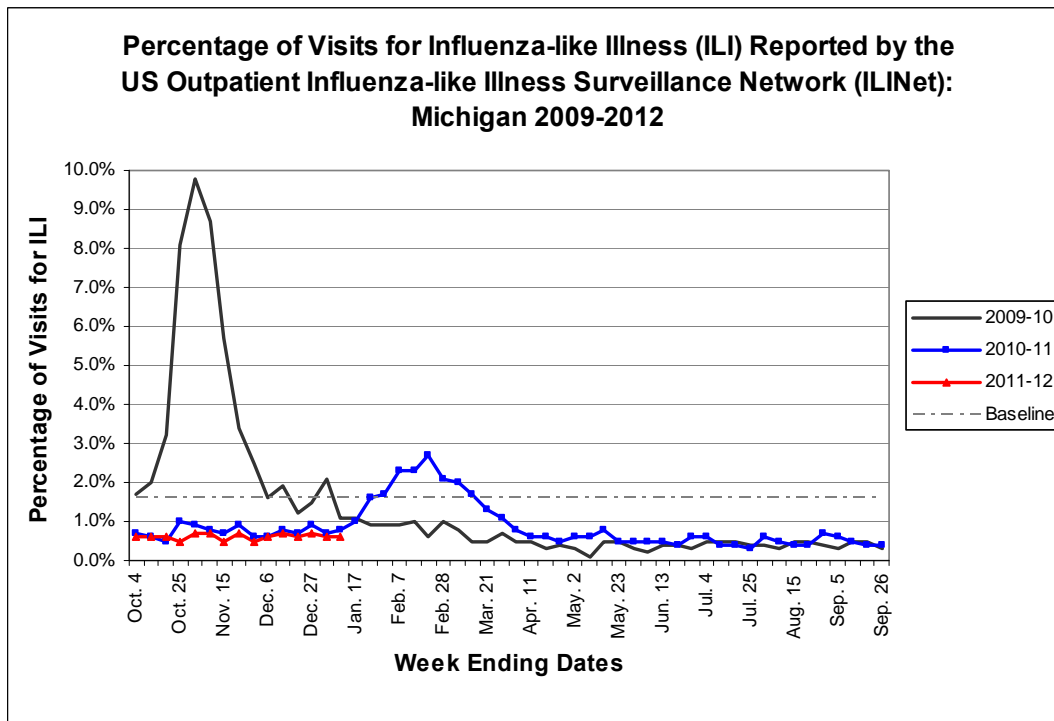
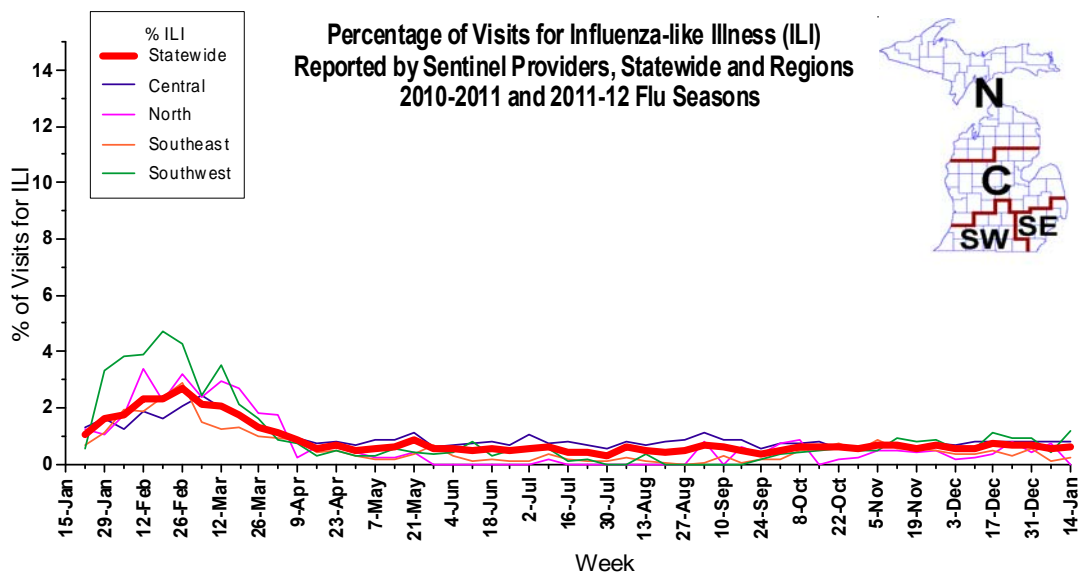
**Michigan Disease Surveillance System:** MDSS data for the week ending January 14<sup>th</sup> indicated that individual influenza cases remained at levels similar to the previous week. Aggregate reports held steady compared to the previous week, where individual cases rose slightly. Both individual and aggregate reports are lower than levels seen during the same time last year.

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

#### **Sentinel Provider Surveillance (as of January 19):**

During the week ending January 14, 2012, the proportion of visits due to influenza-like illness (ILI) remained at 0.6% overall; this is below the regional baseline of 1.6%. A total of 64 patient visits due to ILI were reported out of 10,274 office visits. Thirty-two sentinel sites provided data for this report. Activity increased in two surveillance regions: Southwest (1.2%) and Southeast (0.2%); remained the same in one region: Central (0.8%); and decreased in the remaining region: North (0.0%). Please note 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.



**Hospital Surveillance (as of January 14):** The Influenza Hospitalization Surveillance Project provides population-based rates of severe influenza illness in Clinton, Eaton and Ingham counties. There were no laboratory-confirmed influenza hospitalizations reported during the week ending January 14, 2012. For the 2011-12 season, there have been 2 lab-confirmed influenza hospitalizations, one adult and one pediatric, reported in the catchment area.

The MDCH Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide. Eight hospitals (SE, SW, C, N) reported for the week ending January 14, 2012. Results are listed in the table below.

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

**Laboratory Surveillance (as of January 14):** During January 8-14, sixteen influenza A/H3, (12SE, 5C), one influenza 2009 A/H1 (C) and one influenza B (C) positive results were reported by the MDCH Bureau of Laboratories. For the 2011-12 influenza season (starting October 2, 2011), MDCH has identified 31 influenza results:

- Influenza A/H3: 28 (22SE, 6C)
- Influenza 2009 A/H1: 1 (C)
- Parainfluenza: 2 (1SE, 1C)
- Influenza B: 2 (1SE, 1C)
- Adenovirus: 1 (SE)

14 sentinel labs (SE, SW, C, N) reported for the week ending January 14, 2012. Five (5) labs (SE, C) reported sporadic influenza A positives. One (1) lab (SE) reported one influenza B positive test. Eight (8) labs (SE, SW, C) reported low or increasing RSV activity. Testing volumes are low to moderate at most sites with a few sites approaching high levels.

**Michigan Influenza Antigenic Characterization (as of January 19):** For the 2011-12 season, one Michigan influenza B specimen has been characterized as B/Brisbane/60/2008-like at MDCH BOL; this strain matches the influenza B component for the 2011-12 Northern Hemisphere influenza vaccine.

**Michigan Influenza Antiviral Resistance Data (as of January 19):** No Michigan influenza specimens have been tested for antiviral resistance at this time for the 2011-12 season.

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 19):** 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 January 19):** Two new respiratory outbreaks from the C Region, both in long-term care facilities, were reported to MDCH during the past week. Influenza testing at MDCH for one of these outbreaks was negative and is pending for the other outbreak. Three respiratory outbreaks (3C) have been reported thus far during the 2011-12 season.

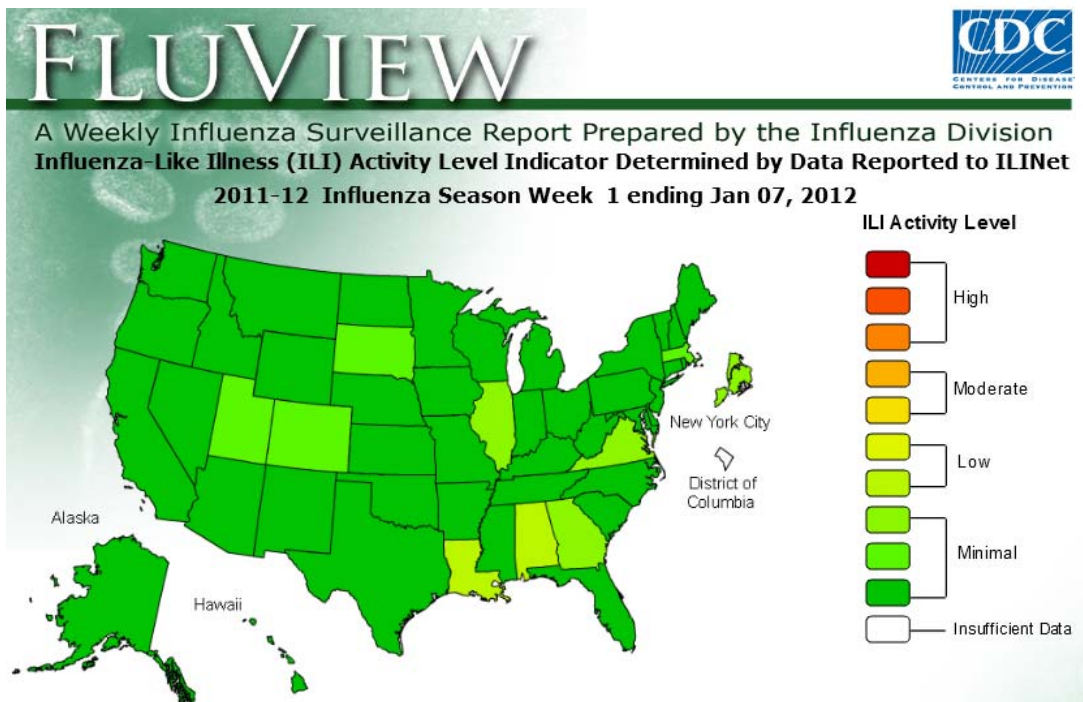
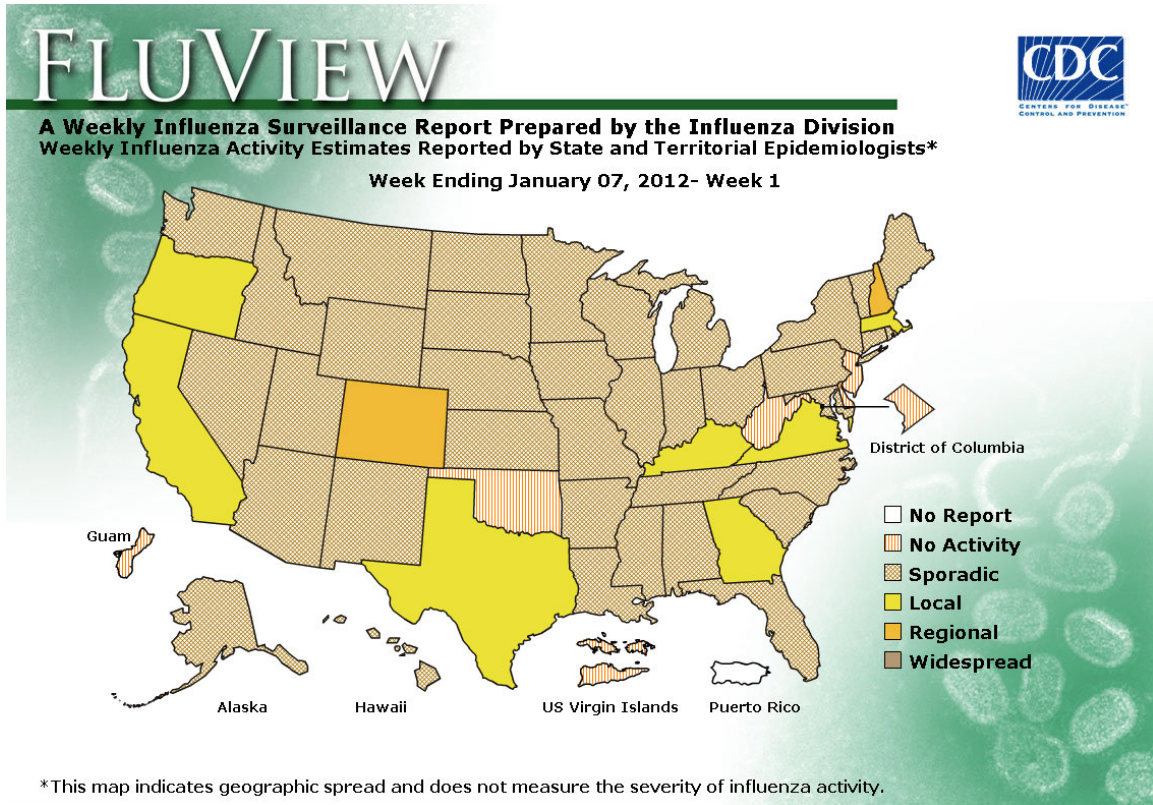
**National (CDC [edited], as of January 13):** During week 1 (January 1-7, 2012), influenza activity in the United States remained relatively low. Of the 3,199 specimens tested by U.S. World Health Organization and National Respiratory and Enteric Virus Surveillance System collaborating laboratories and reported to CDC/Influenza Division, 108 (3.4%) were positive for influenza. The proportion of deaths attributed to P&I was below the epidemic threshold. No influenza-associated pediatric deaths were reported. The proportion of outpatient visits for influenza-like illness (ILI) was 1.4%, which is below the national baseline of 2.4%. All 10 regions reported ILI below region-specific baseline levels. Two states experienced low ILI activity, New York City and 48 states experienced minimal ILI activity, and the District of Columbia had insufficient data. The geographic spread of influenza in two states was reported as regional; seven states reported local activity; 37 states reported sporadic activity; the District of Columbia, Guam, the U.S. Virgin Islands and four states reported no activity, and Puerto Rico did not report.

CDC has antigenically characterized 140 influenza viruses collected by U.S. labs since October 1, 2011:

- 2009 H1N1 [19]: All 19 viruses were characterized as A/California/7/2009-like, the influenza A (H1N1) component of the 2011-12 influenza vaccine for the Northern Hemisphere.
- Influenza A (H3N2) [104]: 103 (99.0%) of the 104 viruses were characterized as A/Perth/16/2009-like, the influenza A (H3N2) component of the 2011-12 influenza vaccine for the Northern Hemisphere. One virus (1.0%) tested showed reduced titers with antiserum produced against A/Perth/16/2009.
- Influenza B (B/Victoria/02/87 and B/Yamagata/16/88 lineages) [17]:
  - Victoria Lineage [8]: Eight of the 17 influenza B viruses tested belong to the B/Victoria lineage of viruses and were characterized as B/Brisbane/60/2008-like, the recommended influenza B component for the 2011-12 Northern Hemisphere influenza vaccine.
  - Yamagata Lineage [9]: 9 of the 17 B viruses tested belong to the B/Yamagata lineage of viruses.

It is too early in the influenza season to determine how well the seasonal influenza vaccine viruses and circulating influenza viruses will match.

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



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 epidemiologist.

**International (WHO [edited], January 6):** Influenza activity in the temperate regions of the northern hemisphere remains below seasonal threshold levels, though notable increases in activity have been reported in some areas of Canada, Europe (Spain and Turkey), northern Africa (Tunisia and Algeria), and the middle East (Iran). The persistence of the increased activity over the last few weeks in these areas likely represents the start of the influenza transmission season. The viruses detected throughout the northern hemisphere temperate zone have been predominantly of the A(H3N2) subtype. Only very small numbers of influenza A(H1N1)pdm09 have been reported in recent weeks. Countries in the tropical zone reported low levels of activity except for Costa Rica, which is primarily detecting A(H3N2). Influenza activity in the temperate countries of the southern hemisphere is at inter-seasonal levels though Chile and Australia both report persistent transmission of A(H3N2) with smaller numbers of influenza B in Australia.

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 **SPORADIC ACTIVITY** to CDC for the week ending January 14, 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.

**National, Research (CIDRAP, January 12):** In assessing data from 11 flu seasons, researchers found that the association between invasive pneumococcal pneumonia and influenza and respiratory syncytial virus (RSV) activity varied but was stronger in seasons when the H3N2 flu strain dominated. US scientists analyzed data from the 1994-95 through 2004-05 seasons, adjusting for seasonal temperature, precipitation, and sunshine, which are believed to be associated with pneumococcal pneumonia, flu, and RSV. They found "significant" associations in 5 of the 11 seasons, in all of which H3N2 predominated. (The strain dominated in three other seasons as well.) In contrast, they found no association in seasons when non-H3N2 strains were dominant, though the difference was not significant. They write that their finding is consistent with the idea that H3N2 may lead to more pneumococcal superinfections compared with H1N1.

The paper can be accessed online at [http://wwwnc.cdc.gov/eid/article/18/2/10-2025\\_article.htm](http://wwwnc.cdc.gov/eid/article/18/2/10-2025_article.htm).

**International, Poultry (OIE [edited], January 13):** High path avian influenza H5N1; Country: India  
Date of first confirmation of the event: 10/01/2012; Report date: 13/01/2012  
Outbreak 1: William Nagar, William Nagar, East Garo Hills, MEGHALAYA  
Date of start of the outbreak: 04/01/2012; Outbreak status: continuing  
Epidemiological unit: Farm; Affected population: A state government-run poultry farm  
Species: Birds; Susceptible: 20194; Cases: 2732; Deaths: 2732  
Epidemiological comments: Epidemiological investigation is ongoing. Stamping out of all domestic poultry is being applied in an approximately 3-km radius zone around the outbreak followed by compensation to the owners. An intensive surveillance campaign has been launched in a 10-km radius zone including: closure of poultry markets and prohibition on sale and transportation of poultry products in the infected zone, disinfection of premises after culling and sealing of premises where appropriate. Restocking will be applied in accordance with a specified protocol.  
Control Measures applied: Stamping out, Quarantine, Movement control inside the country, Screening, No vaccination, No treatment of affected animals  
Measures to be applied: Disinfection of infected premises/establishment(s), Dipping / Spraying

**International, Equine (OIE [edited], January 12):** Equine influenza; Country: Chile  
Date of first confirmation of the event: 09/01/2012; Date of Start of Event: 21/12/2011  
Date of report: 12/01/2012; Date Submitted To OIE: 12/01/2012  
Province: METRO. DE SANTIAGO; Unit Type: Farm; Location: Colina  
Species: Equidae; Susceptible: 5; Cases: 2; Deaths: 0; Destroyed: 0; Slaughtered: 0

Source of the outbreak(s) or origin of infection: Unknown or inconclusive  
 Control Measures Applied: Vaccination in response to the outbreak (s)  
 Animals treated: No; Vaccination Prohibited: No

**Michigan Wild Bird Surveillance (USDA, as of January 19):** 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://wildlifedisease.nbj.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](http://www.oie.int/download/AVIAN%20INFLUENZA/A_AI-Asia.htm).

**International Human Infection with Avian Influenza A(H5N1) Virus (WHO, January 19):**

The World Health Organization (WHO) confirmed three new H5N1 avian influenza cases from Indonesia and Egypt, one of them fatal, a day after Vietnam's health ministry announced a death from the disease, its first in nearly 2 years. [http://www.who.int/influenza/human\\_animal\\_interface/en/index.html](http://www.who.int/influenza/human_animal_interface/en/index.html)

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

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**Table. H5N1 Influenza in Humans – As of January 19, 2012.**

[http://www.who.int/influenza/human\\_animal\\_interface/EN\\_GIP\\_20120119CumulativeNumberH5N1cases.pdf](http://www.who.int/influenza/human_animal_interface/EN_GIP_20120119CumulativeNumberH5N1cases.pdf).  
 Downloaded 1/19/2012. Cumulative lab-confirmed cases reported to WHO. Total cases includes deaths.

Country	2003		2004		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	cases	deaths	cases	deaths
Azerbaijan	0	0	0	0	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	0	0	0	0	1	0	0	0	0	0	2	0	0	0	3	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	1	1	19	17
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	0	0	41	27
Djibouti	0	0	0	0	0	0	1	0	0	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	39	15	1	0	159	55
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	1	1	184	152
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Lao People's Democratic Republic	0	0	0	0	0	0	0	0	2	2	0	0	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	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	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	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	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	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	0	0	119	59
<b>Total</b>	<b>4</b>	<b>4</b>	<b>46</b>	<b>32</b>	<b>98</b>	<b>43</b>	<b>115</b>	<b>79</b>	<b>88</b>	<b>59</b>	<b>44</b>	<b>33</b>	<b>73</b>	<b>32</b>	<b>48</b>	<b>24</b>	<b>62</b>	<b>34</b>	<b>3</b>	<b>2</b>	<b>581</b>	<b>342</b>

