



# MI Flu Focus

Influenza Surveillance Updates  
Bureaus of Epidemiology and Laboratories

Michigan Department  
of Community Health



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Surveillance and Infectious Disease Epidemiology

May 23, 2013  
Vol. 10; No. 20

## Current Influenza Activity Levels:

- **Michigan:** Sporadic activity
- **National:** During May 5-11, influenza activity remained low in the United States

## Updates of Interest

- **International:** WHO is reporting 43 human cases of nCoV including 21 deaths, all with a travel connection to the Middle East

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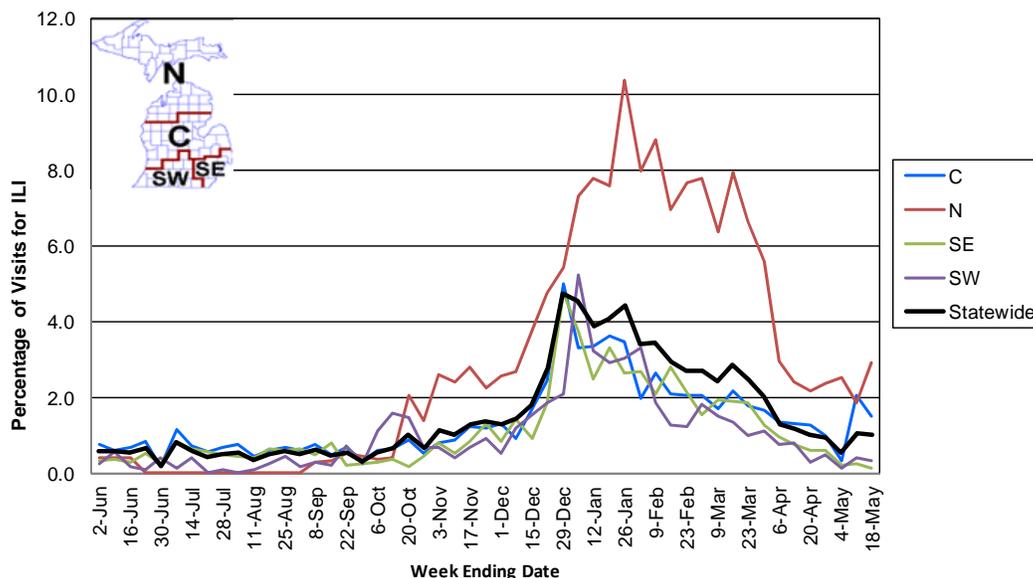
## Influenza Surveillance Reports

**Michigan Disease Surveillance System (as of May 23):** MDSS influenza data for the week ending May 18<sup>th</sup> indicated that compared to levels from the previous week, both aggregate and individual reports decreased. Aggregate and individual reports are lower than levels seen during the same time period last year.

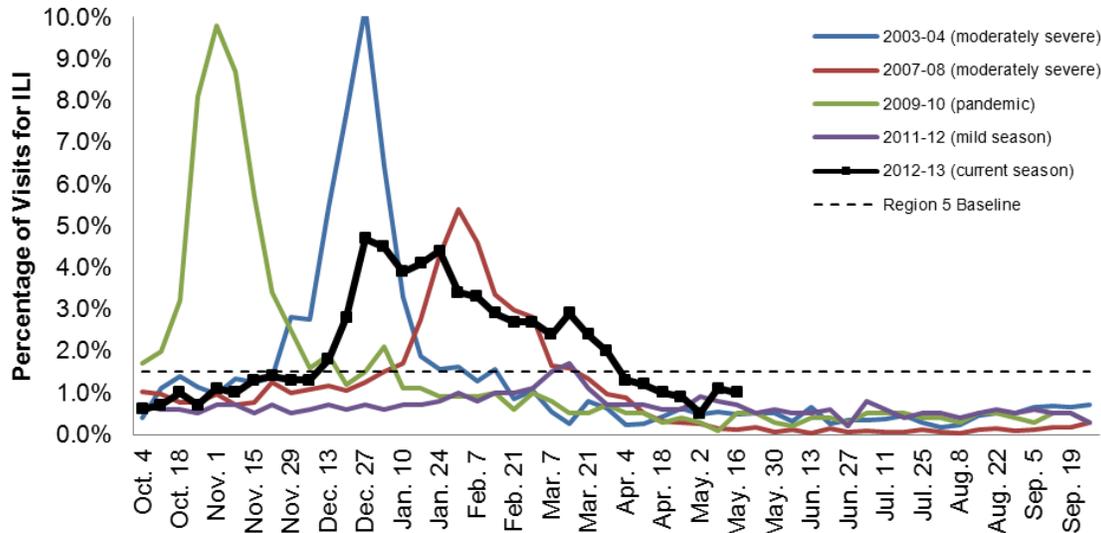
**Emergency Department Surveillance (as of May 23):** Compared to levels from the week prior, emergency department visits from constitutional complaints remained steady, while respiratory complaints decreased slightly. Constitutional complaints are slightly lower when compared to levels reported during the same time period last year while respiratory complaints are similar to levels reported during the same time period last year. In the past week, there were 2 constitutional alerts in the C(2) Region and 1 respiratory alert in the C Influenza Surveillance Region.

**Sentinel Provider Surveillance (as of May 23):** During the week ending May 18, 2013, the proportion of visits due to influenza-like illness (ILI) decreased to 1.0% overall; this is below the regional baseline (1.5%). A total of 72 patient visits due to ILI were reported out of 7,224 office visits. Data were provided by 20 sentinel sites from the following regions: Central (6), North (1), Southeast (9) and Southwest (4). ILI activity increased in one region: N (2.9%). ILI activity decreased in three regions: C (1.5%), SE (0.1%) and SW (0.3%). 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 Stefanie DeVita at 517-335-3385 or DeVitaS1@michigan.gov for more information.

**Hospital Surveillance (as of May 18):** 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. Reporting for the season has concluded. There were 258 influenza hospitalizations (168 adult, 90 pediatric) within the catchment area. The incidence rate for adults was 24.7 hospitalizations per 100,000 population and for children was 43.0 hospitalizations per 100,000.

The MDCH Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide. Reporting for the 2012-13 influenza season has concluded. 437 hospitalizations (278SE, 21SW, 64C, 74N) were reported by 12 hospitals during the 2012-13 season.

**Laboratory Surveillance (as of May 18):** During May 12-18, no positive influenza results were reported by MDCH. For the 2012-13 season (starting Sept. 30, 2012), MDCH has identified 679 influenza results:

- Influenza A(H3): 500 (124SE, 169SW, 169C, 38N)
- Influenza A(H1N1)pdm09: 35 (19SE, 4SW, 9C, 3N)
- Influenza B: 152 (30SE, 31SW, 74C, 18N)
- Parainfluenza: 8 (3SW, 1C, 4N)
- RSV: 1 (1N)
- hMPV: 2 (2SW)

7 sentinel labs (SE (1), SW (1), C (5), N (0)) reported for the week ending May 18, 2013. No labs reported influenza A activity. Two labs (SE, C) reported sporadic influenza B activity. No labs reported parainfluenza activity or RSV activity. One lab (SW) reported sporadic hMPV activity. All sites were at low or very low testing volumes with the exception of the SE region.

**Michigan Influenza Antigenic Characterization (as of May 23):** For the 2012-13 season, 113 Michigan influenza B specimens have been characterized at MDCH BOL. 94 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 May 23):** For the 2012-13 season, 32 influenza A/H3 specimens and 25 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 May 23):** 7 pediatric influenza-associated influenza mortalities (3 A/H3, 4B) have been reported for the 2012-13 season.

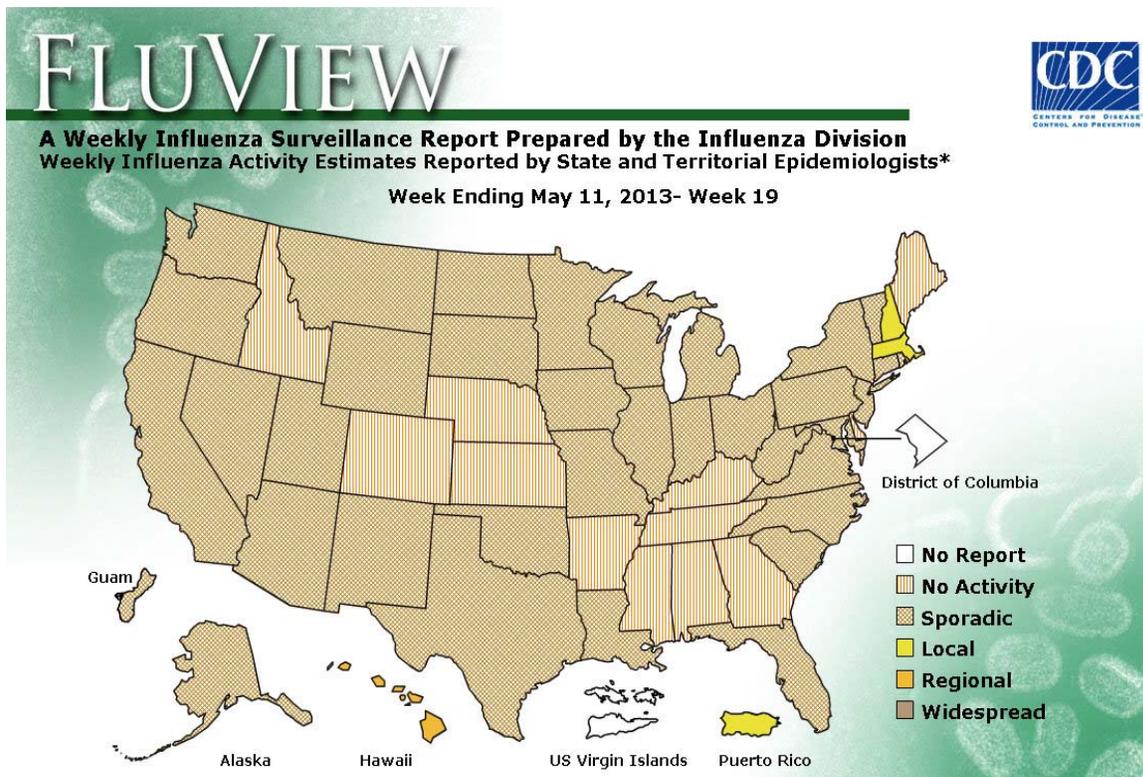
CDC requires reporting of flu-associated pediatric deaths (<18 yrs), including pediatric deaths due to an influenza-like illness with lab confirmation of influenza or any unexplained pediatric death with evidence of an infectious process. Contact MDCH immediately for proper specimen collection. The MDCH protocol is at [www.michigan.gov/documents/mdch/ME\\_pediatric\\_influenza\\_guidance\\_v2\\_214270\\_7.pdf](http://www.michigan.gov/documents/mdch/ME_pediatric_influenza_guidance_v2_214270_7.pdf).

**Influenza Congregate Settings Outbreaks (as of May 23):** 111 respiratory outbreaks (22SE, 29SW, 41C, 19N) have been reported to MDCH during the 2012-13 season; testing results are listed below.

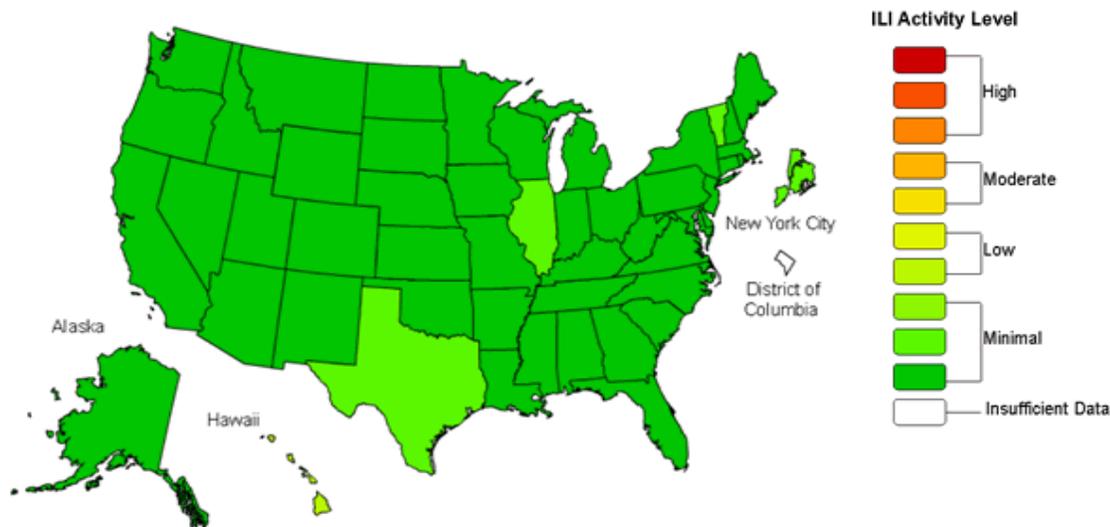
- Influenza A/H3: 16 (7SW, 9C)
- Influenza A: 55 (10SE, 13SW, 20C, 12N)
- Influenza B: 8 (1SE, 3SW, 2C, 2N)
- Influenza A and B: 2 (1SE, 1SW)
- Influenza A/H3 and B: 1 (1C)
- Influenza positive: 4 (1SE, 1SW, 2C)
- Influenza and RSV positive: 1 (1C)
- Influenza B and RSV positive: 1 (1SE)
- Negative/no testing: 23 (8SE, 4SW, 6C, 5N)

**National (CDC [edited], May 17):** During week 19 (May 5-11, 2013), influenza activity remained low in the United States. Of 2,416 specimens tested and reported by collaborating laboratories, 124 (5.1%) 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 44.3 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. Of reported hospitalizations, about 50% were among adults 65 years and older. The proportion of outpatient visits for influenza-like illness (ILI) was 0.9%. This is below the national baseline of 2.2%. All 10 regions reported ILI below region-specific baseline levels. One state experienced low activity, 49 states and New York City experienced minimal activity, and the District of Columbia had insufficient data. 1 state reported regional influenza activity; Puerto Rico and 2 states reported local influenza activity; Guam and 35 states reported sporadic influenza activity; 12 states reported no influenza activity, and the District of Columbia 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 19 ending May 11, 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], May 10):** The influenza season is gradually coming to an end with inter seasonal levels seen in much of North America, Europe, and northern Asia though low level persistent transmission was still observed in a few countries. The persistence of transmission at low levels in the northern hemisphere temperate regions has been associated with increasing numbers of influenza type B virus appearing late in the season across North America and parts of Europe. Prior to this, influenza A(H3N2) was the most commonly detected virus in North America, A(H1N1)pdm09 in Europe, and both in varying proportions in different countries of northern Asia. 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. The majority of influenza A viruses characterized so far this season have been antigenically related to those contained in the current trivalent vaccine. Among the B viruses characterized, those that were of the Yamagata lineage were antigenically related to the viruses recommended for the trivalent vaccine. Although 10-30% of reported B viruses were of the Victoria lineage. Only very low numbers of oseltamivir and zanamivir resistant viruses have been detected so far this season. In China, new cases of H7N9 have been reported with 131 cases and 32 deaths to date, for more information see link below: A summary review of the Northern Hemisphere influenza season is expected to be published in the World Epidemiological Report on 31 May 2013.

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 INFLUENZA ACTIVITY to CDC for the week ending May 18, 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](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, May 17):** Since 8 May 2013, no new laboratory-confirmed cases of human infection with avian influenza A(H7N9) have been reported to WHO by the National Health and Family

Planning Commission, China. However, four additional deaths have been reported from previously laboratory-confirmed cases.

To date, WHO has been informed of a total of 131 laboratory-confirmed cases, including 36 deaths. Authorities in affected locations continue to maintain enhanced surveillance, epidemiological investigations, close contact tracing, clinical management, laboratory testing and sharing of samples as well as prevention and control measures. In the past week, the Shanghai and Zhejiang provincial governments have started to normalize their emergency operations into their routine surveillance and response activities. WHO offices in country, regional and headquarters continue to work closely to ensure timely information updates.

Until the source of infection has been identified and controlled, it is expected that there will be further cases of human infection with the virus.

So far, there is no evidence of sustained human-to-human transmission.

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

WHO continues to work with Member States and international partners. WHO will provide updates as the situation evolves.

The update is available online at [http://www.who.int/csr/don/2013\\_05\\_17/en/index.html](http://www.who.int/csr/don/2013_05_17/en/index.html)

**International, Human (WHO, May 22):** The Ministry of Health in Tunisia has notified WHO of two laboratory-confirmed cases and a probable case of infection with the novel coronavirus (nCoV).

The two laboratory confirmed cases are a 34-year-old man and a 35-year-old woman. They are siblings. Both of them had mild respiratory illness and did not require hospitalization. Retrospective investigation into the cases revealed that the probable case, their father, 66 year old, became ill three days after returning from a visit to Qatar and Saudi Arabia on 3 May 2013. He was admitted to a hospital after developing acute respiratory disease. His condition deteriorated and he died on 10 May 2013. He had an underlying health condition. Initial laboratory tests conducted on the probable case tested negative for nCoV.

Further investigation into this outbreak is ongoing and close contacts of the family are being monitored for any unusual signs of illness. These are the first confirmed cases of infection with nCoV in Tunisia. In Saudi Arabia, a patient earlier reported as part of the ongoing investigation into an outbreak that began in a health care facility since the beginning of April 2013, has died. To date, a total of 22 patients including 10 deaths have been reported from this outbreak in the Eastern part of Saudi Arabia. The government is conducting an ongoing investigation into the outbreak.

Globally, from September 2012 to date, WHO has been informed of a total of 43 laboratory-confirmed cases of infection with nCoV, including 21 deaths. Several countries in the Middle East have been affected. They are Jordan, Qatar, Saudi Arabia, and the United Arab Emirates (UAE). Cases have also been reported by four additional countries: France, Germany, Tunisia and the United Kingdom. All of the cases have had a direct or indirect connection to the Middle East, including two cases with recent travel history from the UAE. In France and the United Kingdom, there has been limited local transmission among close contacts who had not been to the Middle East but had been in contact with a traveler who recently returned from the Middle East.

Based on the current situation and available information, WHO encourages all Member States to continue their surveillance for severe acute respiratory infections (SARI) and to carefully review any unusual patterns.

Health care providers are advised to maintain vigilance. Recent travelers returning from the Middle East who develop SARI should be tested for nCoV as advised in the current surveillance recommendations. Specimens from patients' lower respiratory tracts should be obtained for diagnosis where possible. Clinicians are reminded that nCoV infection should be considered even with atypical signs and symptoms, such as diarrhoea, particularly in patients who are immunocompromised. Health care facilities are reminded of the importance of systematic implementation of infection prevention and control (IPC). Health care facilities that provide care for patients with suspected nCoV infection

should take appropriate measures to decrease the risk of transmission of the virus to other patients, health care workers and visitors.

All Member States are reminded to promptly assess and notify WHO of any new case of infection with nCoV, along with information about potential exposures that may have resulted in infection and a description of the clinical course. Investigation into the source of exposure should promptly be initiated to identify the mode of exposure, so that further transmission of the virus can be prevented.

WHO does not advise special screening at points of entry with regard to this event nor does it currently recommend the application of any travel or trade restrictions.

WHO continues to closely monitor the situation.

The update is available online at [http://www.who.int/csr/don/2013\\_05\\_22\\_ncov/en/index.html](http://www.who.int/csr/don/2013_05_22_ncov/en/index.html)

May 18 WHO update: [http://www.who.int/csr/don/2013\\_05\\_18\\_ncov/en/index.html](http://www.who.int/csr/don/2013_05_18_ncov/en/index.html)

**Michigan and National Wild Bird Surveillance (USDA, as of May 23):** For the 2012 season (April 1, 2012-March 31, 2013), highly pathogenic avian influenza H5N1 has not been recovered from the 213 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](http://www.oie.int/download/AVIAN%20INFLUENZA/A_AI-Asia.htm).

For questions or to be added to the distribution list, please contact Bethany Reimink at [ReiminkB@michigan.gov](mailto:ReiminkB@michigan.gov)

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**Table. H5N1 Influenza in Humans – As of April 26, 2013.** [http://www.who.int/influenza/human\\_animal\\_interface/EN\\_GIP\\_20130426CumulativeNumberH5N1cases.pdf](http://www.who.int/influenza/human_animal_interface/EN_GIP_20130426CumulativeNumberH5N1cases.pdf). Downloaded 4/29/2013. 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	1	1	7	1
Cambodia	6	6	1	1	1	0	1	0	1	1	8	8	3	3	10	8	31	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	3	2	172	62
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	2	1	125	62
<b>Total</b>	<b>263</b>	<b>158</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>32</b>	<b>20</b>	<b>18</b>	<b>14</b>	<b>628</b>	<b>374</b>