



# MI Flu Focus

Influenza Surveillance Updates  
Bureaus of Epidemiology and Laboratories



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### Current Influenza Activity Levels:

- **Michigan:** Widespread activity
- **National:** For March 4-10, activity remained elevated in some areas, but influenza-like-illness continued to be relatively low nationally

### Updates of Interest

- **International:** Egypt reports a new human case of avian influenza H5N1

### Table of Contents

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

### **\*\*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.

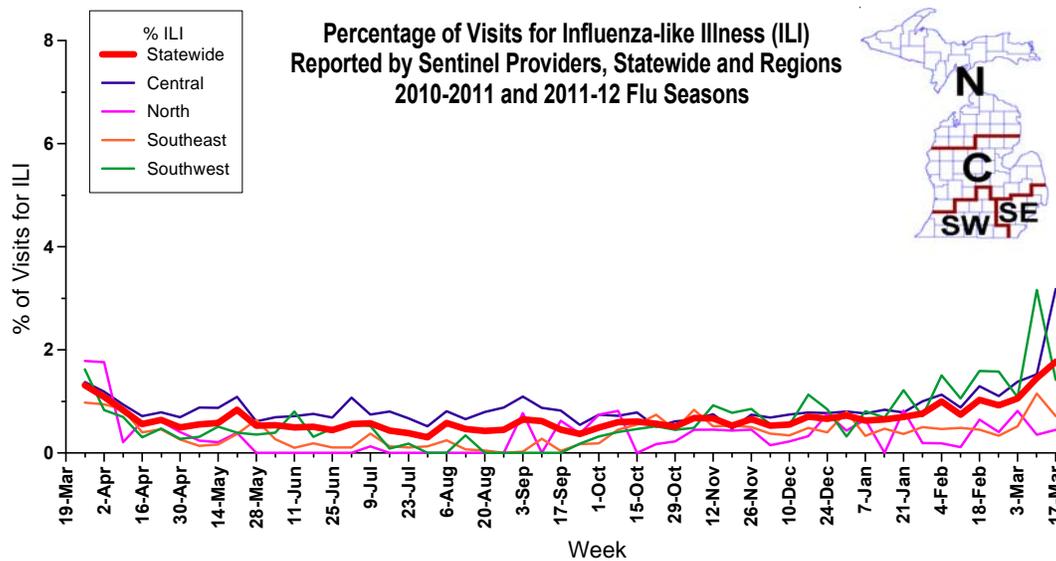
### **Influenza Surveillance Reports**

**Michigan Disease Surveillance System:** MDSS data for the week ending March 17<sup>th</sup> indicated that both individual reports significantly increased, while aggregate influenza cases remained steady. Individual reports are higher, while aggregate reports are slightly lower, than levels seen during the same time last year.

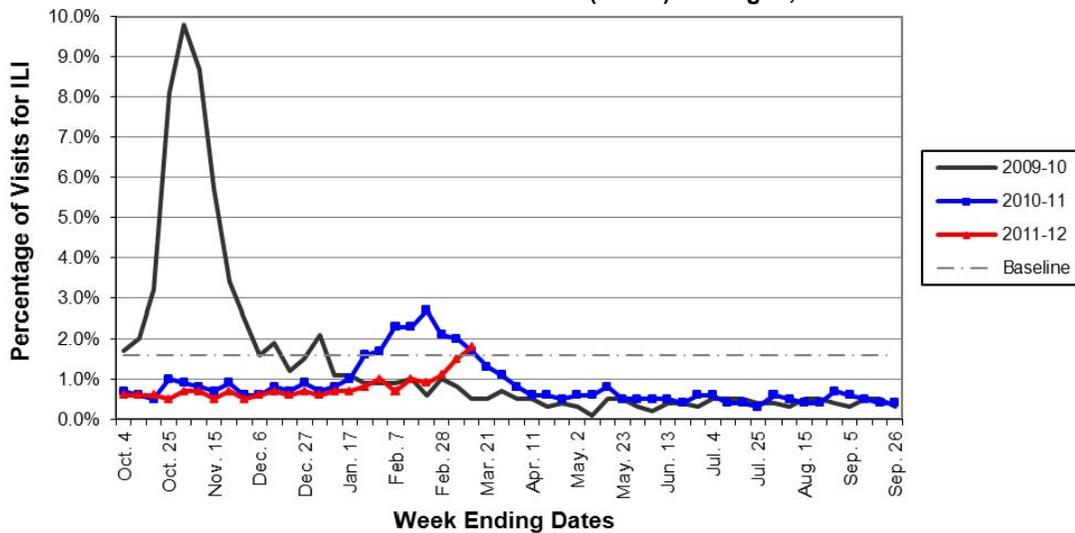
**Emergency Department Surveillance:** Compared to levels from the week prior, emergency department visits from constitutional complaints moderately increased, while respiratory complaints decreased. Both constitutional and respiratory complaints are slightly lower than levels reported during the same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

**Sentinel Provider Surveillance (as of March 22):** During the week ending March 17, 2012, the proportion of visits due to influenza-like illness (ILI) increased to 1.8% overall; this marks the first time this season ILI activity is above the regional baseline (1.6%) this influenza season. A total of 174 patient visits due to ILI were reported out of 9,825 office visits. Thirty-two sentinel sites provided data for this report. Activity increased in one surveillance region: Central (3.2%); remained the same in one surveillance region North (0.4%); and decreased in the remaining two surveillance regions: Southeast (0.7%) and Southwest (1.4%). 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.



**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 17):** The Influenza Hospitalization Surveillance Project provides population-based rates of severe influenza illness in Clinton, Eaton and Ingham counties. 5 lab-confirmed influenza hospitalizations were reported during the week ending March 17, 2012. For the 2011-12 season, 13 influenza hospitalizations (5 adult, 8 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, C, N) reported for the week ending March 17, 2012. Results are listed in the table below. Total hospitalizations were adjusted to reflect amended reports from past weeks.

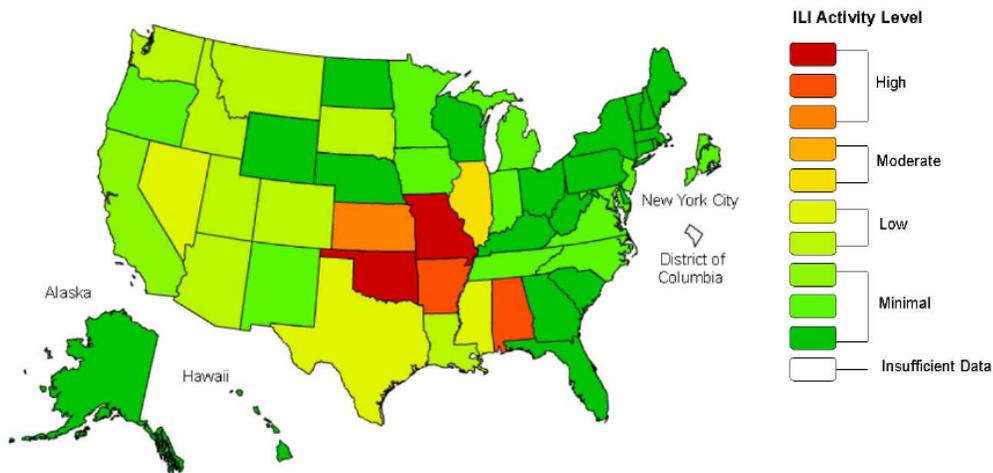
| Age Group    | Hospitalizations Reported During Current Week | Total Hospitalizations 2011-12 Season |
|--------------|---|---------------------------------------|
| 0-4 years    | 1   | 12                                    |
| 5-17 years   | 2   | 11                                    |
| 18-49 years  | 3   | 15                                    |
| 50-64 years  | 6   | 16                                    |
| ≥65 years    | 2   | 14                                    |
| <b>Total</b> | <b>14</b>                                     | <b>68</b>                             |

**Laboratory Surveillance (as of March 17):** During March 11-17, 127 influenza A/H3 (83SE, 16SW, 23C, 5N), 5 2009 A/H1N1 (4SE, 1C) and 4 influenza B (1SE, 1SW, 1C, 1N) results were reported by MDCH BOL. For the 2011-12 season (starting October 2, 2011), MDCH has identified 771 influenza results:

- Influenza A(H3): 734 (398SE, 47SW, 253C, 36N)
- Influenza A(H1N1)pdm09: 21 (14SE, 1SW, 5C, 1N)
- Influenza B: 16 (8SE, 4SW, 3C, 1N)
- Parainfluenza: 2 (1SE, 1C)
- Adenovirus: 1 (SE)
- RSV: 4 (1SW, 1C, 2N)



**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet  
2011-12 Influenza Season Week 10 ending Mar 10, 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.

**Neuraminidase Inhibitor Resistance Testing Results  
on Samples Collected Since October 1, 2011.**

|                           | Oseltamivir              |                               | Zanamivir                |                               |
|---------------------------|--------------------------|-------------------------------|--------------------------|-------------------------------|
|                           | Virus Samples Tested (n) | Resistant Viruses, Number (%) | Virus Samples tested (n) | Resistant Viruses, Number (%) |
| <b>Influenza A (H3N2)</b> | 502                      | 0 (0.0)                       | 502                      | 0 (0.0)                       |
| <b>Influenza B</b>        | 99                       | 0 (0.0)                       | 99                       | 0 (0.0)                       |
| <b>2009 H1N1</b>          | 213                      | 1 (0.5)                       | 148                      | 0 (0.0)                       |

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

**International (WHO [edited], March 16):** Active influenza transmission continued in the temperate regions of the Northern Hemisphere with increasing activity in North America, northern China and several countries in Europe. A few countries in southern Europe and North Africa have peaked as well as Japan and the Republic of Korea. Most countries of the tropical zone reported low levels of influenza activity. The most commonly detected virus type or subtype throughout most of the temperate areas of northern hemisphere temperate zone has been influenza A(H3N2). In Mexico and Central America where influenza A(H1N1)pdm09 is the predominant subtype circulating; China and the surrounding countries which are still reporting a predominance of influenza type B virus. Antiviral resistance continues to be observed at very low levels and has not increased notably over levels reported in previous seasons.

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 17, 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 [edited], March 19):** The Ministry of Health and Population of Egypt has notified WHO of a new case of human infection with avian influenza A (H5N1) virus. The case is a 40 year-old female from Dakahlia Governorate. She developed symptoms on 6 March 2012, was hospitalised on 12 March 2012. She was in critical condition and received oseltamivir upon admission. She died on 15 March 2012.

The case was laboratory confirmed by the Central Public Health Laboratories (NIC). Investigations into the source of infection indicate that the case had exposure to sick backyard poultry. Of the 164 cases confirmed to date in Egypt, 58 have been fatal.

**International, Feline (OIE [edited], March 15):** Highly pathogenic avian influenza H5; Israel Province: HADAROM; District: Ashkelon; Location: SHALWA  
Species: Cats; Susceptible: 50; Cases: 8; Deaths: 4; Destroyed: 16  
Affected Population: H5N1 was diagnosed in turkeys on 8 March 2012. On 9 March 2012, just before the culling of the birds, cats were seen eating carcasses. On 14 March 2012, 4 cats were found dead around the affected pen and some showed clinical signs such as respiratory signs and weakness. On 15 March 2012, the authorities succeeded to catch 16 cats roaming around the infected pen and euthanized them.

**International, Poultry (OIE [edited], March 16):** Highly pathogenic avian influenza H5N1; India  
Outbreak: State Poultry Farm, Gandhigram, Mohanpur, West Tripura, TRIPURA  
Date of start of the outbreak: 07/03/2012; Outbreak status: Continuing; Epidemiological unit: Farm  
Species: Birds; Susceptible: 3000; Cases: 2000; Deaths: 2000  
Affected population: A state government-run poultry farm

**International, Poultry (OIE [edited], March 16):** High path avian influenza H5N2; Chinese Taipei  
Outbreak: Min-Jian Township, NAN-T'OU; Affected population: Layer chickens  
Date of start of the outbreak: 21/02/2012; Outbreak status: Continuing; Epidemiological unit: Farm  
Species: Birds; Susceptible: 45200; Deaths: 0; Destroyed: 0

**International, Poultry (OIE [edited], March 19):** Low pathogenic avian influenza H5N2; Netherlands  
Province: LIMBURG; Unit Type: Farm; Location: Kelpen-Oler; Start date: 17/03/2012  
Species: Birds; Susceptible: 44500; Cases: 200; Deaths: 0; Destroyed: 44500  
Affected Population: Turkeys for meat production  
Epidemiology: All commercial poultry holdings will be screened in a 3-km-zone around the index farm.

**International, Poultry (OIE [edited], March 19):** High path avian influenza H5N2; Chinese Taipei  
Outbreak: Chu-Tang Township, CHANG-HUA; Affected population: Layer chickens  
Date of start of the outbreak: 05/03/2012; Outbreak status: Continuing; Epidemiological unit: Farm  
Species: Birds; Susceptible: 8647; Cases: 426; Deaths: 426; Destroyed: 8221

**International, Poultry (OIE [edited], March 19):** High path avian influenza H5N1; Bangladesh  
All outbreaks are at commercial poultry farms

Outbreak 1: Win poultry and hatchery, Enaetpur, Etimkhana bazar, Dagonbhuian, Feni, CHITTAGONG  
Date of start of the outbreak: 15/02/2012; Outbreak status: Resolved; Epidemiological unit: Farm  
Species: Birds; Susceptible: 7239; Cases: 987; Deaths: 987; Destroyed: 6252

Outbreak 2: Mitri poultry farm, Hetalbungia, Manukhari, Dumuria, Khulna, KHULNA  
Date of start of the outbreak: 02/03/2012; Outbreak status: Resolved; Epidemiological unit: Farm  
Species: Birds; Susceptible: 168; Cases: 147; Deaths: 147; Destroyed: 21

Outbreak 3: Manjurul Islam farm, Brahmandi purbapara, Fausa bazar, Araihasar, Narayangonj, DHAKA  
Date of start of the outbreak: 20/01/2012; Outbreak status: Resolved; Epidemiological unit: Farm  
Species: Birds; Susceptible: 820; Cases: 177; Deaths: 177; Destroyed: 643

Outbreak 4: M.S. poultry farm, Joyra, Jagir, Manikgonj, DHAKA  
Date of start of the outbreak: 30/01/2012; Outbreak status: Resolved; Epidemiological unit: Farm  
Species: Birds; Susceptible: 12984; Cases: 270; Cases: 270; Destroyed: 12714

Outbreak 5: Maerdoa poultry farm, Raujan Kadamtali, Dhanbari, Tangail, DHAKA  
Date of start of the outbreak: 08/02/2012; Outbreak status: Resolved; Epidemiological unit: Farm  
Species: Birds; Susceptible: 2040; Cases: 543; Deaths: 543; Destroyed: 1497

Outbreak 6: Green Valley Agro Complex, Andharmanik, Beotha Manikgonj sadar, Manikgonj, DHAKA  
 Date of start of the outbreak: 13/02/2012; Outbreak status: Resolved; Epidemiological unit: Farm  
 Species: Birds; Susceptible: 22226; Cases: 241; Deaths: 241; Destroyed: 21985

Outbreak 7: Agriculture training centre for village women, Jirani, Gazipur, DHAKA  
 Date of start of the outbreak: 19/02/2012; Outbreak status: Resolved; Epidemiological unit: Farm  
 Species: Birds; Susceptible: 1570; Cases: 137; Deaths: 137; Destroyed: 1433

Outbreak 8: Musafir poultry farm, Barua, Khilkhet, Dhaka, DHAKA  
 Date of start of the outbreak: 02/03/2012; Outbreak status: Resolved; Epidemiological unit: Farm  
 Species: Birds; Susceptible: 1008; Cases: 283; Deaths: 283; Destroyed: 725

Outbreak 9: Joynal Abedin poultry farm, Nado Saidpur, Magura binod, Tarash, Sirajgonj, RAJSHAHI  
 Date of start of the outbreak: 19/01/2012; Outbreak status: Resolved; Epidemiological unit: Farm  
 Species: Birds; Susceptible: 150; Cases: 80; Deaths: 80; Destroyed: 70

Outbreak 10: Masud Rana farm, Jahid nagar, Rohonpur, Gomostapur, Chanpai Nawabgonj, RAJSHAHI  
 Date of start of the outbreak: 22/02/2012; Outbreak status: Resolved; Epidemiological unit: Farm  
 Species: Birds; Susceptible: 1040; Cases: 21; Deaths: 21; Destroyed: 1019

**Michigan Wild Bird Surveillance (USDA, as of March 22):** 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\\_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 Susan Peters at [peterss1@michigan.gov](mailto:peterss1@michigan.gov)**

**Contributors**

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**Table. H5N1 Influenza in Humans – As of March 19, 2012.** [http://www.who.int/influenza/human\\_animal\\_interface/EN\\_GIP\\_20120319CumulativeNumberH5N1cases.pdf](http://www.who.int/influenza/human_animal_interface/EN_GIP_20120319CumulativeNumberH5N1cases.pdf). Downloaded 3/20/2012. 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        | 6         | 3         | 164        | 58         |
| 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         |
| <b>Total</b> | <b>148</b> | <b>79</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>19</b> | <b>11</b> | <b>597</b> | <b>351</b> |