



MI FluFocus

Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology
Bureau of Laboratories

Michigan Department
of Community Health



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New updates in this issue:

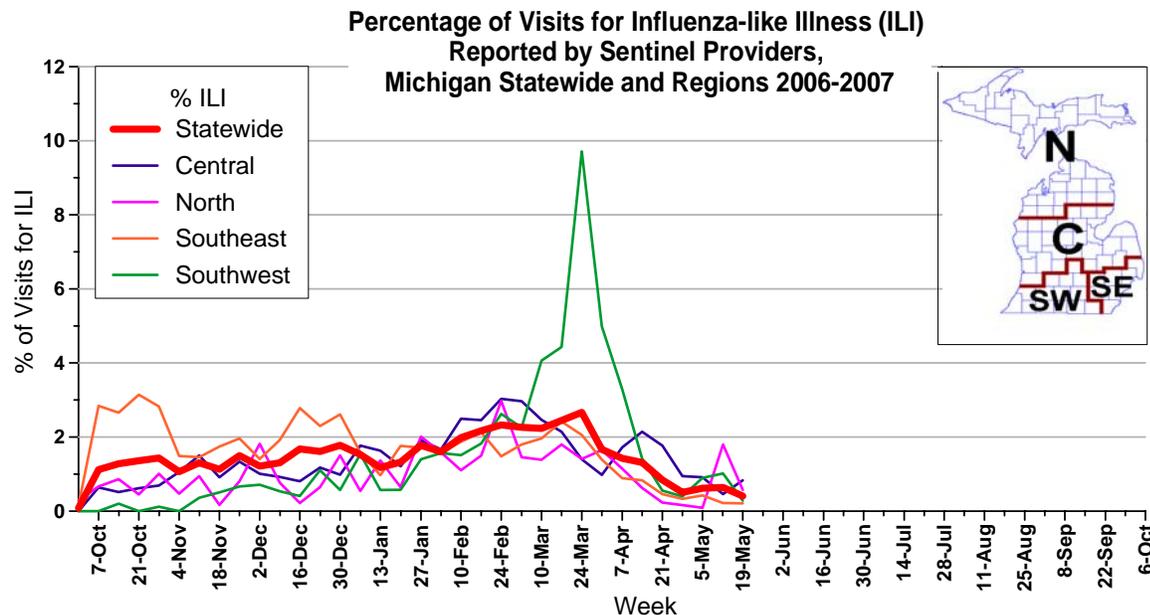
- **Michigan Surveillance:** Overall Michigan activity described as very low
- **National Surveillance:** Activity continues to decline; all but one state report sporadic or no activity
- **Avian Influenza:** New human H5N1 case in Indonesia; H7N2 found in birds in Wales

Michigan Disease Surveillance System: The last week saw both individual influenza and aggregate flu-like illness reports holding steady at the previous week's levels. These indicators are expected to continue to fluctuate at baseline levels until next fall.

Emergency Department Surveillance: Emergency department visits due to constitutional complaints saw a slight decrease last week where respiratory complaints have remained steady. Reported levels are consistent with levels from this time last year. Five constitutional alerts in Regions 1(2), 2N(1), 3(1) and 8(1) and three respiratory alerts in Regions 1(1), 6(1) and 7(1) were generated last week.

Over-the-Counter Product Surveillance: OTC product sales activity remained steady overall last week. Some products (adult cold relief liquid, cough/cold medicine, and children's electrolytes) saw very slight increases, but not to an extent that would be considered outside of normal weekly fluctuations. The indicators levels are comparable to those seen at this time last year, except for the adult and pediatric cold relief liquid, which seem to be holding about 1-2% below its percentage of total sales for this time last year.

Sentinel Surveillance (as of May 25, 2007): During the week ending May 9, 2007, the proportion of visits due to influenza-like illness (ILI) in Michigan remained at a low level, 0.4% of all visits. This represents 23 cases of ILI out of 5543 total patient visits; twenty-three sentinels provided data for this report. The proportion of visits due to ILI remained at a low level in the Central (0.8%), Southeast (0.2%), and Southwest (0.3%) regions, and decreased to 0.6% of all visits in the North. Note that these rates may change as additional reports are received.



As part of pandemic influenza preparedness, CDC and MDCH highly encourage and recommend year-round participation from all sentinel providers. New practices are encouraged to join the sentinel surveillance program today! Contact Rachel Potter at 517-335-9710 or potterr1@michigan.gov for more information.

Laboratory Surveillance (as of May 24): For the 2006-2007 influenza season, there have been 156 culture-confirmed cases from the MDCH Lab:

- 69 A:H1N1 (Southeast (22), Southwest (21), Central (16), North (10))
- 34 A:H3N2 (North (12), Southeast (12), Central (7), Southwest (3))
- 53 B (Central (17), Southeast (17), Southwest (12), North (7))

All influenza B cultures have been B/Malaysia, except for five B/Shanghai results from the Southeast region.

***As a reminder, the positive predictive value of influenza rapid tests decreases during times of low influenza prevalence. MDCH suggests that during periods of low influenza activity in your community, all positive rapid tests results be confirmed by sending in a specimen for viral culture; this can be arranged through your local health department.

Influenza-Associated Pediatric Mortality (as of May 24): For the 2006-2007 season, there are no confirmed reports of influenza-related pediatric mortality in Michigan. MDCH and CDC continue to investigate one possible influenza-associated pediatric death in the Southeast region from March.

***Reminder: The CDC has asked all states to continue to collect information on any pediatric death associated with influenza infection. This includes not only any death in a child less than 18 years of age resulting from a clinically compatible illness confirmed to be influenza by an appropriate laboratory or rapid diagnostic test, but also unexplained death with evidence of an infectious process in a child. Refer to http://www.michigan.gov/documents/fluletter_107562_7.pdf for the complete protocol. It is important to immediately call or fax information to MDCH to ensure that appropriate clinical specimens can be obtained.

Congregate Settings Outbreaks (as of May 24): There has been one report of an influenza A outbreak from a Central region extended care facility for the 2006-2007 influenza season. Investigations for two possible facility outbreaks, one each from the Southwest and Central regions, were unable to confirm influenza as the cause of these outbreaks.

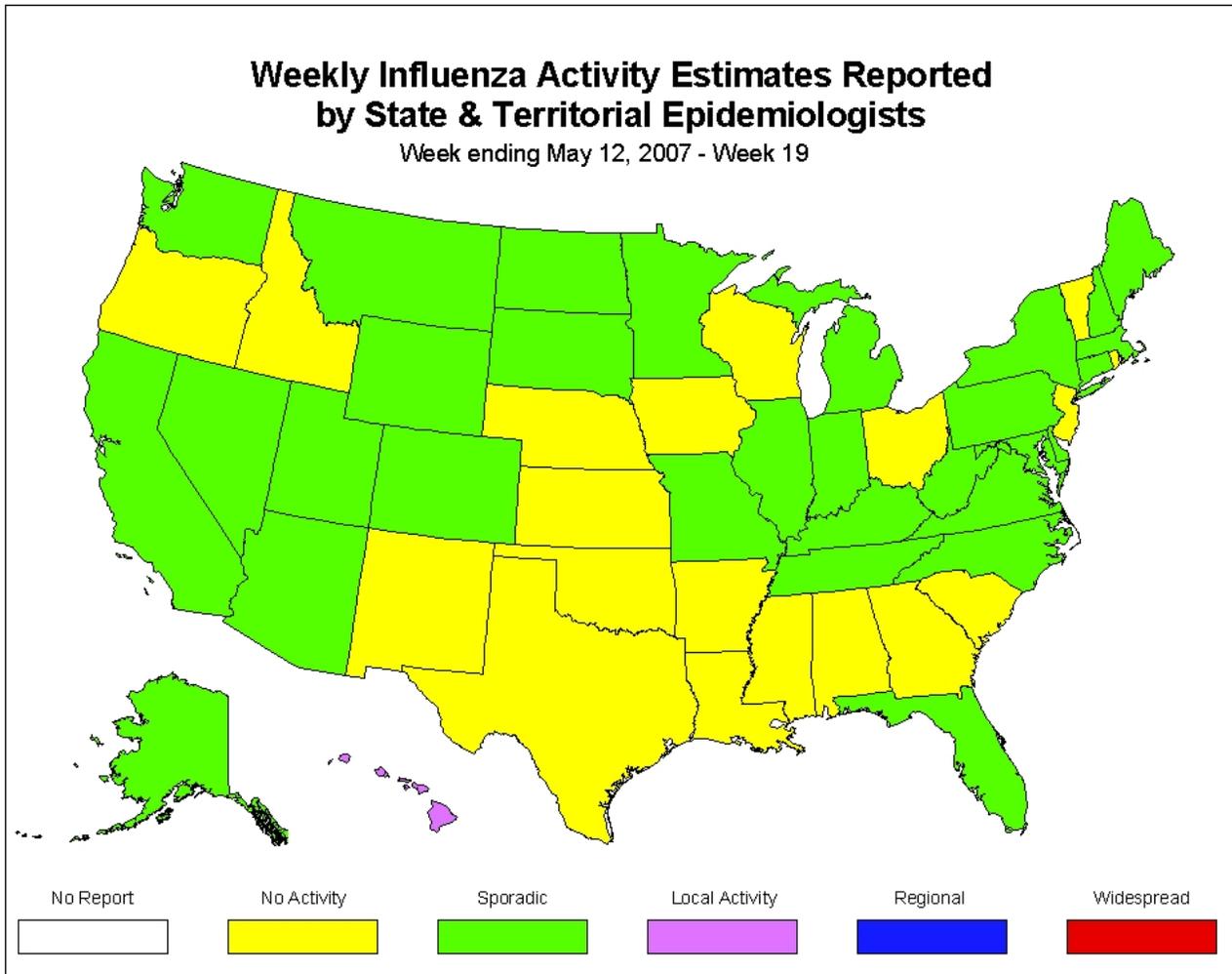
National (CDC, May 18):

During week 19 (May 6 – 12, 2007)*, influenza activity continued to decrease in the United States. Data from the U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories indicated a decrease in the number of specimens testing positive for influenza. The percentage of visits for ILI to sentinel providers remained at similar levels during week 19 compared to week 18 and was below the national baseline for the eighth consecutive week. One state reported local influenza activity; the District of Columbia, New York City, and 30 states reported sporadic influenza activity; and 19 states reported no influenza activity. The percent of deaths due to pneumonia and influenza has remained below baseline levels for the entire influenza season to date.

During week 19, WHO and NREVSS laboratories reported 1,014 specimens tested for influenza viruses, 76 (7.5%) of which were positive: three influenza A (H1) viruses, 23 influenza A (H3) viruses, 32 influenza A viruses that were not subtyped, and 18 influenza B viruses.

Since October 1, 2006, WHO and NREVSS laboratories have tested a total of 170,452 specimens for influenza viruses and 23,009 (13.5%) were positive. Among the 23,009 influenza viruses, 18,256 (79.3%) were influenza A viruses and 4,753 (20.7%) were influenza B viruses. Six thousand thirty-five (33.1%) of the 18,256 influenza A viruses have been subtyped: 3,847 (63.7%) were influenza A (H1) viruses and 2,188 (36.3%) were influenza A (H3) viruses. While influenza A (H1) viruses were predominant this season, overall influenza A (H3) viruses have been reported more frequently than influenza (H1) viruses since early March. Among specimens tested for influenza during the most recent three weeks (April 22 – May 12, 2007), on a regional basis, only the Mid-Atlantic, South Atlantic, and Pacific regions reported >10% of specimens testing positive.

To access the CDC weekly surveillance report throughout the influenza season, visit <http://www.cdc.gov/flu/weekly/fluactivity.htm>.



International (WHO, as of March 29): Overall influenza activity in the northern hemisphere remained moderate in weeks 8–11. In North America, influenza activity declined in general, while in Europe and some Asian countries and areas, widespread activity continued, with influenza A(H3N2) viruses predominating. Influenza A(H1N1) viruses circulated in the United States and in a few eastern European countries. Influenza B viruses circulated at low levels.

For influenza activity from individual countries, please visit the full WHO article “Seasonal Influenza Activity in the World, 2007” at <http://www.who.int/csr/disease/influenza/update/en/>.

MDCH reported **SPORADIC ACTIVITY** to the CDC for this past week ending May 19, 2007.

End of Seasonal Report

Avian Influenza Activity

WHO Pandemic Phase: Phase 3 - Human infection(s) with a new subtype, but no human-to-human spread or rare instances of spread to a close contact.

International, Human (WHO, May 24): The Ministry of Health of Indonesia has announced a new case of human infection of H5N1 avian influenza. A 5-year-old female from Wonogiri district, Central Java Province developed symptoms on 8 May, was hospitalized on 15 May and died in hospital on 17 May.

Initial investigations into the source of her infection indicate exposure to dead poultry. Of the 97 cases confirmed to date in Indonesia, 77 have been fatal.

International, Poultry (Promed, May 24): The Chief Veterinary Officer for Wales, Dr Christianne Glossop, has confirmed a case of avian influenza in birds in North Wales. The strain identified is H7N2 low pathogenic avian influenza. The strain is different to the highly pathogenic H5N1 strain currently circulating in Southeast Asia, and in Europe last year [2006]. GB (Great Britain) and Wales contingency plans have been activated. In line with this, the farm has been placed under restriction and a 1 km (0.62 mi) restriction zone has been placed around the infected premises. Within this zone, birds and bird products cannot be moved, bird gatherings can only take place under licence from Animal Health, we are advising poultry keepers to observe strict biosecurity measures.

The 30 remaining birds on the farm are being slaughtered today [24 May 2007], and the source of infection is being investigated. [The government] would like to remind poultry keepers to report any suspicious signs of a notifiable avian disease to their local Animal Health Divisional Office [at the numbers below]. Members of the National Poultry Register will receive updates by text.

Avian influenza is a disease of birds. It is very rare for humans to become infected and even then, it is normally associated with close contact with infected birds. The risk to the health of the general public is very low.

Routine tests are being carried out on people who work on the farm and anybody else who has been in close contact. The small number of people who have potentially come into contact is very low. There are no on-going risks to the public but if people have concerns NHS [National Health Service] Direct is always available for general health advice. The NHS Direct number is 0845 46 47. Further information is available from

http://new.wales.gov.uk/topics/environmentcountryside/ahw/disease_surveillance_control/avianflu/?lang=en

International, Poultry (Promed, May 22): Avian influenza has struck Viet Nam again with 6 outbreaks of the H5N1 strain since the weekend [19 - 20 May 2007], killing almost 2000 unvaccinated ducks, veterinary officials said on Tuesday [22 May 2007]. Almost 6000 more birds were culled on the affected farms, stretching from Son La province in the mountainous north to the southern Mekong Delta province of Can Tho, said the animal health department in an online report. "It's not a surprise," said UN Food and Agriculture Organization (FAO) representative Andrew Speedy. "It's unfortunate that it goes on happening, but it will go on happening."

Speedy said efforts will focus on containing H5N1 with vaccination campaigns that have proved highly effective, rather than trying to eradicate the virus, which is thought to be widespread across Viet Nam's bird population. "We are now convinced that it's pretty much endemic and that the vaccinations will be required for the foreseeable future, although there will be an attempt to find an exit strategy at some point," he said.

Outbreaks among unvaccinated ducks have also been reported in the northern provinces of Quang Ninh and Nam Dinh, and the virus is spreading in central Nghe An province, where an outbreak was reported early this month [May 2007]. Viet Nam -- once the country worst hit by avian influenza, with 42 human deaths between 2003 and 2005 -- has since won plaudits for effectively containing the spread of the virus through culls, vaccinations, and public education.

However, ducks, which traditionally roam across Vietnamese rice fields and ponds, have been a special source of concern because they carry and spread the virus without showing symptoms of illness. Earlier this year [2007], Viet Nam lifted a ban on raising ducks that experts said had been widely ignored. Veterinarians are now starting the year's [2007] 2nd nationwide round of vaccinations in order to contain the H5N1 strain of avian influenza.

Avian influenza has killed 185 people since late 2003, most of them in Southeast Asia, according to World Health Organization (WHO) figures. In its present form, H5N1 is lethal for birds and people in close proximity to infected fowl, but experts fear that it could one day mutate to easily spread from human to human and trigger a deadly pandemic.

International, Poultry (Promed, May 22): On Tue 22 May 2007, veterinary officials in Ghana declared the 2nd outbreak of the deadly H5N1 bird flu virus in the west African country.

The latest outbreak was on a farm in Sunyani, a provincial capital 400 km (250 mi) north of Accra. Gary Quarcoo, head of veterinary services at the agriculture ministry, confirmed that samples from the farm had tested positive for the deadly bird flu virus. The latest case comes less than a month after Ghana's 1st case of H5N1 was detected on a farm near Tema, a port city to the east of Accra.

Quarcoo said veterinary officials have culled thousands of birds in Sunyani and destroyed animal feed and farm equipment. Ghana is the 8th African country to report a case of the H5N1 bird flu virus in poultry.

According to World Health Organization (WHO) figures, avian influenza has killed 185 people since late 2003, most of them in Southeast Asia. In its present form, H5N1 is lethal for birds and people in close proximity to infected fowl, but experts fear that it could one day mutate to easily spread from human to human and trigger a deadly pandemic.

International, Poultry (Promed, May 22): The livestock wing of ministry of food and agriculture has confirmed the presence of the menacing bird flu in 4 chicken farms of Chak Shazad [Islamabad]. [The owners of the farms had refused to cooperate but agreed to the culling of 10 000 birds after the livestock department's assurance of compensation.]

The commissioner for livestock, Dr. R. H. Usmani, informed the [media about the situation and said that although tests have confirmed the presence of bird flu virus, it is not widespread.] He added that a survey was underway, but so far, there has been no information regarding bird flu. Still, the vigilance has been enhanced, and [Usmani] cautioned that if the farm owners continued to resist, help of the district administration would be sought in order to contain the virus.

International, Poultry (Reuters, May 19): China has confirmed an outbreak of the H5N1 birdflu virus among poultry in the central province of Hunan, but no cases of human infection in the area hit, state media reported on Saturday. The outbreak was in a village near Yiyang city in Hunan and killed 11,172 birds, a Ministry of Agriculture spokesman told Xinhua news agency. Scientists had sourced the poultry deaths to H5N1, the strain of avian influenza that scientists fear could mutate into a form that jumps easily from human to human, threatening an epidemic. People in close contact with infected birds can fall ill and die, but the latest report did not mention any human cases.

Worldwide, the virus has killed 185 people since 2003, including 15 in China, according to the World Health Organisation. China's most recent reported human death from bird flu was in March. China has millions of backyard birds and a strained rural medical system that is seen as key in the fight against bird flu. Hunan authorities have taken steps to contain the outbreak, culling close to 53,000 other birds, Xinhua reported. Yiyang, the site of the outbreak, lies next to Lake Dongting, which hosts many migratory birds.

Michigan Wild Bird Surveillance (USDA, May 18): The final numbers for Michigan's 2006 season were 3099 total samples, of which DNR collected 1090 and USDA-WS collected 2009. Samples consisted of live-captured birds (193), agency harvested birds (378), hunter-harvested (1191), sentinel animals (195), morbidity/mortality events (136), and environmental samples (1006, USDA-WS). 90 Michigan samples have been taken so far for the 2007 testing season (82 from USDA-WS and 8 from DNR).

According to the USDA Wildlife Services weekly Avian Influenza Surveillance report, HPAI subtype H5N1 has not been recovered from any Michigan samples tested to date, or from the 633 birds or environmental samples tested nationwide. The 2007 testing season will run from April 1, 2007-March 31, 2008. For more information, visit the National HPAI Early Detection Data System website at <http://wildlifedisease.nbio.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>.

Please contact Susan Vagasky at VagaskyS@Michigan.gov with any questions regarding this newsletter or to be added to the weekly electronic mailing list.

Contributors

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Table 1. H5N1 Influenza in Poultry (Outbreaks up to May 25, 2007)

(Source: http://www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm Downloaded 5/25/2007)

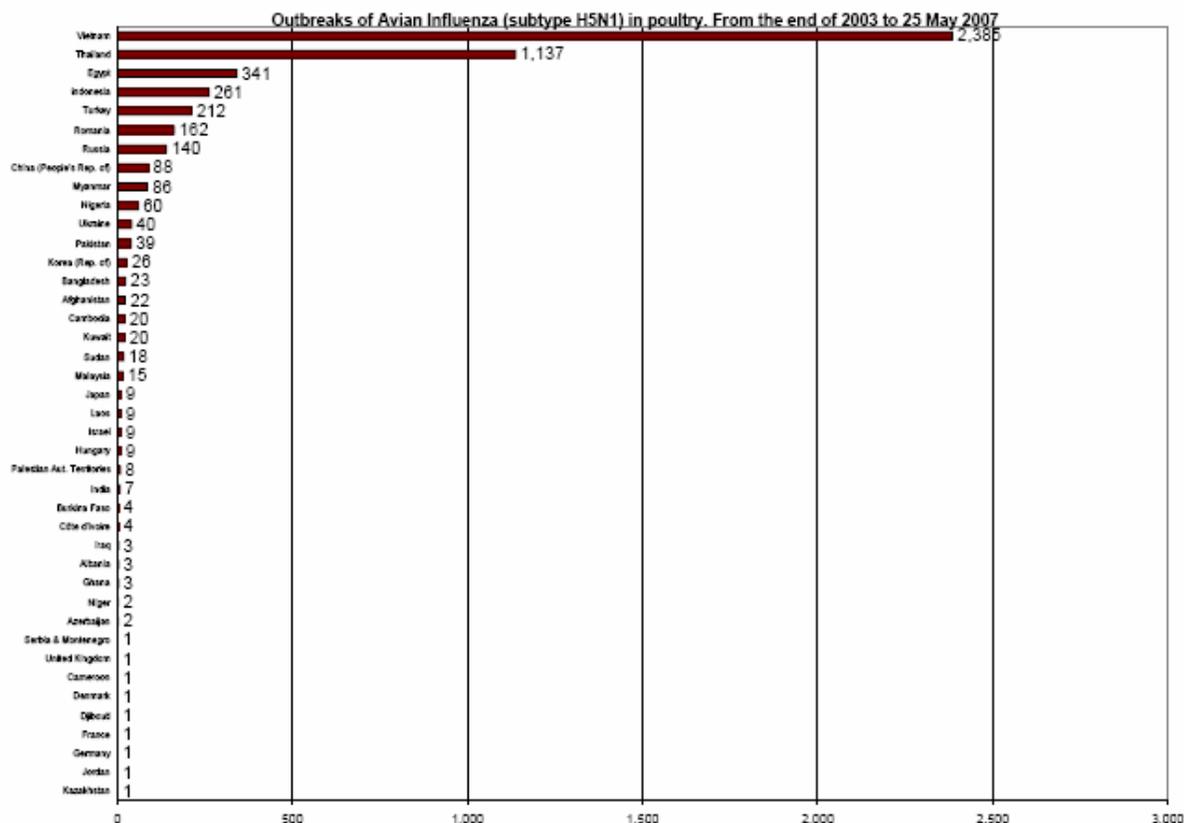


Table 2. H5N1 Influenza in Humans (Cases up to May 24, 2007)

(http://www.who.int/csr/disease/avian_influenza/country/cases_table_2007_05_24/en/index.html Downloaded 5/25/2007)

Cumulative number of lab-confirmed human cases reported to WHO. Total number of cases includes deaths.

Country	2003		2004		2005		2006		2007		Total	
	cases	deaths										
Azerbaijan	0	0	0	0	0	0	8	5	0	0	8	5
Cambodia	0	0	0	0	4	4	2	2	1	1	7	7
China	1	1	0	0	8	5	13	8	2	1	24	15
Djibouti	0	0	0	0	0	0	1	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	16	4	34	14
Indonesia	0	0	0	0	20	13	55	45	22	19	97	77
Iraq	0	0	0	0	0	0	3	2	0	0	3	2
Lao PDR	0	0	0	0	0	0	0	0	2	2	2	2
Nigeria	0	0	0	0	0	0	0	0	1	1	1	1
Thailand	0	0	17	12	5	2	3	3	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	0	0	93	42
Total	4	4	46	32	98	43	115	79	44	28	307	186