



MI Flu Focus

Influenza Surveillance Updates
Bureaus of Epidemiology and Laboratories

Michigan Department
of Community Health



Rick Snyder, Governor
James K. Haveman, Director

Editor: Susan Peters, DVM, MPH peterss1@michigan.gov
Surveillance and Infectious Disease Epidemiology

July 10, 2014
Vol. 11; No. 33

Updates of Interest:

- **International:** Globally, 827 lab-confirmed MERS-CoV cases, including at least 287 deaths, have officially been reported to WHO
- **International:** China reports two new avian influenza A/H7N9 human cases
- **International:** Egypt reports one new avian influenza A/H5N1 human case

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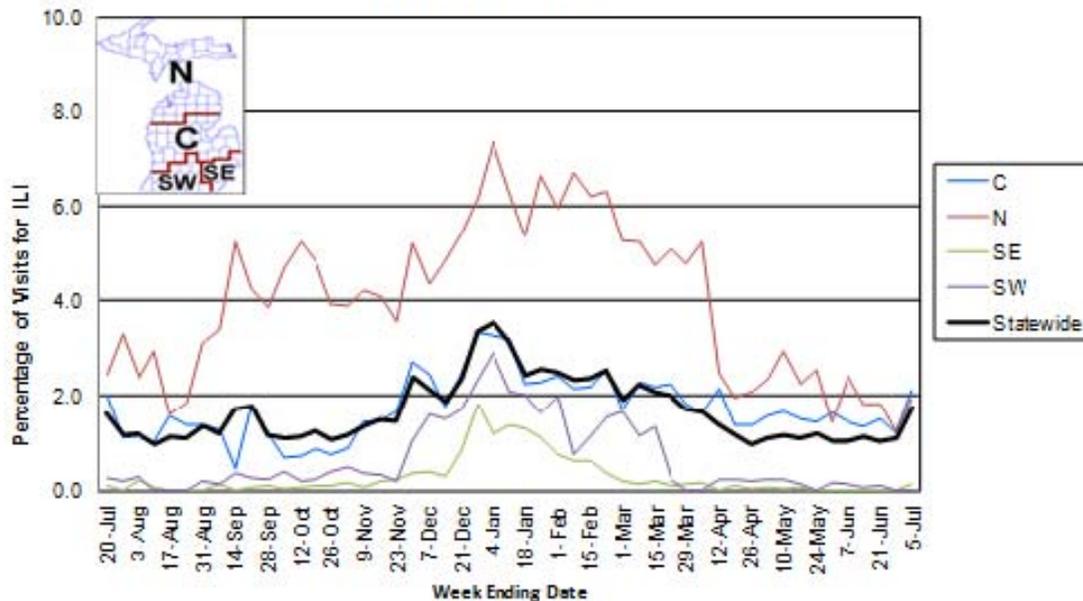
Influenza Surveillance Reports

Michigan Disease Surveillance System (as of July 10): MDSS influenza data for the week ending July 5, 2014 indicated that compared to levels from the previous week, individual and aggregate reports remained steady at very sporadic levels. Both aggregate and individual reports are similar to levels seen during the same time period last year.

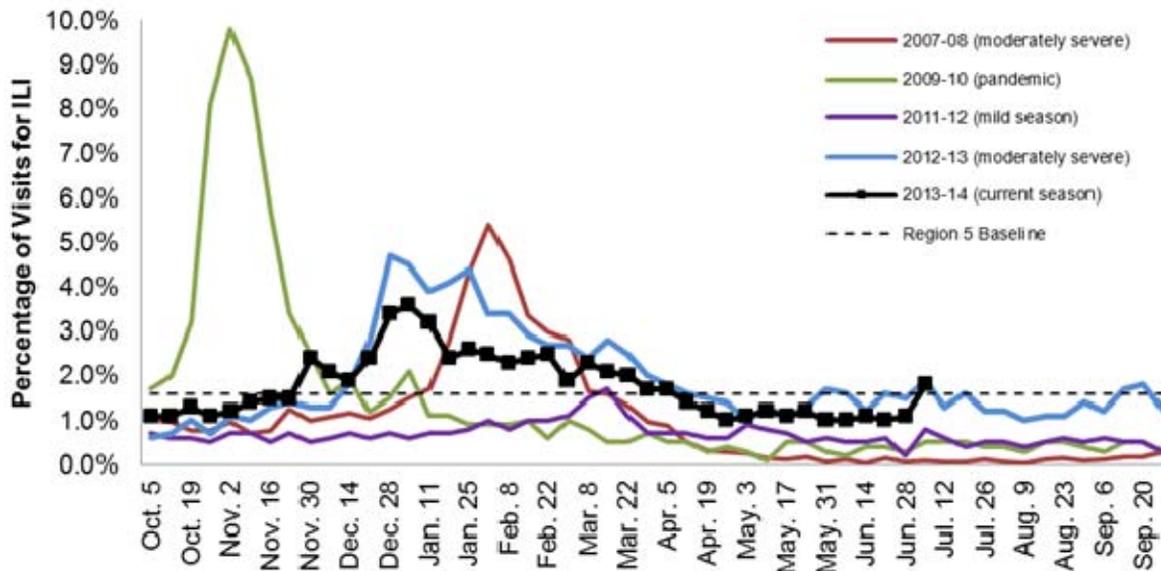
Emergency Department Surveillance (as of July 10): Emergency department visits due to both constitutional and respiratory complaints remained steady during the week ending July 5, 2014. Emergency department visits from both constitutional and respiratory complaints are similar to levels during the same time period last year. In the past week, there were 7 constitutional alerts in the SE(1), SW(3) and N(3) Influenza Surveillance Regions and 7 respiratory alerts in the SW(1), C(5) and N(1) Regions.

Sentinel Provider Surveillance (as of July 10): During the week ending July 5, 2014, the proportion of visits due to influenza-like illness (ILI) increased to 1.8% overall; this is above the regional baseline (1.6%). A total of 90 patient visits due to ILI were reported out of 5,100 office visits. Data were provided by 17 sentinel sites from the following regions: Central (8), North (2), Southeast (6), and Southwest (1). ILI activity increased in three regions: C (2.1%), N (1.9%), and SE (0.1%). ILI activity remained the same in one region: SW (0.0%). 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
2013-14 Flu Season



**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 July 11): 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, 2013 and ending April 30, 2014, for Clinton, Eaton, Genesee, and Ingham counties. There were 232 influenza hospitalizations (69 pediatric, 163 adult) within the catchment area. Based on these counts, within the catchment area there are 33.0 pediatric influenza hospitalizations/100,000 population and 23.9 adult influenza hospitalizations/100,000.

The MDCH Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide. Reporting for the 2013-14 season has concluded. 458 hospitalizations were reported during September 29, 2013-April 26, 2014.

Laboratory Surveillance (as of July 5): During June 22-July 5, 1 positive A/H3 (1SE) influenza result was reported by MDCH Bureau of Laboratories. For the 2013-14 season (starting Sept. 29, 2013), MDCH has identified 409 positive influenza results:

- Influenza 2009 A/H1N1pdm: 340 (77SE,132SW,94C,38N)
- Influenza A/H3: 31 (14SE,11SW,6C)
- Influenza A unsubtypeable: 1 (1SE)
- Influenza A and B (LAIV recovery): 1 (1SE)
- Influenza B: 41 (11SE,15SW,9C,6N)
- RSV: 2 (2SW)
- Adenovirus: 2 (1SE,1SW)
- Parainfluenza: 3 (1SE,2SW)
- Human metapneumovirus: 4 (4SW)

9 sentinel labs (SE,SW,C) reported for the week ending July 5, 2014. 1 lab (SW) reported sporadic adenovirus activity. 2 labs (SW,C) had sporadic parainfluenza activity. No labs reported influenza A or B, RSV or hMPV activity. Testing volumes are at very low levels.

Michigan Influenza Antigenic Characterization (as of July 10): For the 2013-14 season, 3 Michigan influenza specimens (1SE,2C) have been characterized at CDC as A/California/07/2009-like/H1N1/pdm09, matching the influenza A/H1N1pdm09 strain in the 2013-14 Northern Hemisphere vaccine. 2 specimens (2C) have been characterized at CDC and MDCH as B/Brisbane/60/2008-like, which is a B/Victoria lineage virus; it is not in the 2013-14 Northern Hemisphere trivalent vaccine but is in the quadrivalent vaccine. 13 specimens (8SE,4SW,1C) have been characterized at CDC and MDCH as B/Massachusetts/02/2012-like, which is a B/Yamagata lineage virus that is included in the 2013-14 trivalent and quadrivalent vaccines.

Michigan Influenza Antiviral Resistance Data (as of July 10): For the 2013-14 season, 123 2009 A/H1N1pdm (33SE,37SW,41C,12N) and 15 A/H3 (6SE,7SW,2C) influenza specimens have been tested at the MDCH BOL for antiviral resistance. None of the influenza specimens 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 July 10): 3 pediatric influenza-associated influenza mortalities (1SE,2C) have been reported to MDCH for the 2013-14 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_pediatic_influenza_guidance_v2_214270_7.pdf.

Influenza Congregate Settings Outbreaks (as of July 10): One new respiratory outbreak from a long-term care facility in the N Region was reported to MDCH during the previous week. 22 respiratory outbreaks (2SE,10SW,7C,3N) have been reported to MDCH during the 2013-14 season:

- Influenza 2009 A/H1N1pdm: 4 (1SE,2SW,1C)
- Influenza A/H3: 1 (1SW)
- Influenza A: 4 (3SW,1C)
- Influenza B: 3 (1SW,1C,1N)
- Influenza positive: 1 (1SW)
- Human metapneumovirus: 2 (1SE,1N)
- RSV: 1 (1SW)
- Negative/no testing: 7 (1SW,5C,1N)

National (CDC): Past weekly reports and updated data during the summer months are available online at: <http://www.cdc.gov/flu/weekly/>.

International (WHO [edited], June 30): Globally influenza activity was low. In North America and Europe, overall influenza activity was at inter-seasonal levels. In eastern Asia, influenza activity approached inter-seasonal levels in most countries. Influenza activity slightly increased, however, in the southern region of China, mainly due to influenza A(H3N2) viruses. In southern and south-eastern Asia, influenza activity continued to decline, except for Singapore where an increase was noticed, although the acute respiratory infections rate remained low. In northern Africa and western Asia, influenza activity remained low. In the southern hemisphere, influenza activity was still low, although some of the countries in the temperate zone of South America showed higher influenza-like illness activity with an increase in influenza detections. Based on FluNet reporting (as of 26 Jun 2014), during weeks 23 to 24 (1 Jun to 14 Jun 2014), National Influenza Centres and other national influenza laboratories from 76 countries, areas or territories reported data. The WHO GISRS laboratories tested more than 26592 specimens. 1838 were positive for influenza, of which 1345 (73.2%) were typed as influenza A and 493 (26.8%) as influenza B. Of the sub-typed A viruses, 207 (18.9%) were A(H1N1)pdm09 and 888 (81.1%) were A(H3N2). Of the characterized B viruses, 10 (71.4%) belong to the B-Yamagata lineage and 4 (28.6%) to the B-Victoria lineage.

The full report is online at www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html.

Weekly reporting of influenza activity to the CDC has ended for the 2013-2014 influenza season.

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.

Novel Influenza Activity and Other News

WHO Pandemic Phase: Post-pandemic – Influenza disease activity has returned to levels normally seen for seasonal influenza.

International, MERS-CoV (WHO [edited], June 25): On 17 June 2014, the National IHR Focal Point of Saudi Arabia notified WHO of 2 additional laboratory-confirmed cases of infection with Middle East respiratory syndrome coronavirus (MERS-CoV).

- A 42 year old resident of Jeddah city, Mecca Region. He was admitted to a hospital in Jeddah for a medical condition on 26 May and was discharged on 4 June. The patient visited his physician as follow up in the same hospital on 11 June. On 13 June, he developed respiratory symptoms, was diagnosed

with pneumonia and was re-admitted to the hospital. He was laboratory-confirmed with MERS-CoV on 16 June. His condition deteriorated and he died on 18 June. The patient is reported not to have had contact with a laboratory-confirmed case with MERS-CoV. He neither had a history of recent travel nor a history of contact with animals. Preliminary investigations indicate that none of the personnel working in the ward where the patient was initially admitted had illnesses that fit the case definition for MERS-CoV.

- A 58 year old resident of Riyadh city, Riyadh Region. He became ill on 4 June and was admitted to a hospital on 12 June. He was laboratory-confirmed with MERS-CoV on 15 June. The patient is currently in a stable condition. He travelled to Mecca, Jeddah City, to perform Umrah on 31 May and travelled from there to Egypt on 3 June. He returned from Egypt to Riyadh on 9 June. The patient is reported not to have had contact with a previously laboratory-confirmed case with MERS-CoV and is reported not to have had contact with animals. The patient is reported not to have any underlying medical condition.

Further investigations and follow up of contacts are ongoing. Globally, 703 laboratory-confirmed cases of infection with MERS-CoV, including at least 250 related deaths have officially been reported to WHO.

The full report is available online at http://www.who.int/csr/don/2014_06_25_mers/en/.

International, MERS-CoV (WHO [edited], June 26): On 3 June 2014, the National IHR Focal Point of Saudi Arabia reported 113 laboratory-confirmed cases of infection with Middle East respiratory syndrome coronavirus (MERS-CoV), including 34 deaths. These cases and deaths were identified through retrospective review of hospital records, dating between 5 May 2013 and 6 May 2014.

The majority of the cases (84) occurred after 1 March 2014; and the rest of cases (29) occurred between 5 May 2013 and 28 February 2014.

The 113 cases are residents of the following regions: 49 from Mecca (including 44 from the city of Jeddah, 2 from the city of Mecca, 2 from Taif and 1 from Shamyah), 47 from Riyadh (including 21 from the city of Riyadh, 12 from Kharj, 9 from Delam, 2 from Wadi Addawaseer, 2 from Aflaj and 1 from Hanakia), 9 from Medina (including 8 from the city Medina and 1 from Yanbu), 4 cases from Ash Sharqiyah (including 2 from the city of Hassa, 1 from Dammam and 1 from Hafr Al Batin) 2 from Asir(including 1 from the city of Khamis Mshet and 1 from Bisha), 1 case from Tabuk (Tabuk city) and 1 case from Jawf (Jawf city).

Of the 113 cases, 69 are Saudi nationals, while 44 are non-Saudi nationals. The median age of the cases is 41 years (ranging from 3 months to 89 years) and 57% (64) are males.

Information on the symptoms was reported for 111 of the 113 cases. Of these, 32 cases had no symptoms of illness (asymptomatic), while 79 were reported to have symptoms. Of the cases with symptoms, 70 were reported to have been hospitalized. No information was provided on existing underlying medical conditions.

Information on the final outcome was provided for 113 cases as follow: 76 recovered, 3 were still hospitalized and 34 died.

Information on possible source of infection was reported for 72 out of the 113 cases. Of these 18 cases acquired infection from a non-human source at the community level and 54 cases acquired infection from another person. Of the infections acquired from another person: health care acquired infection was reported for 41 cases and household infection was reported for 13 cases.

Thirty-seven percent (42 out of 113 cases) are health care workers. Among these, 19 were reported as asymptomatic and 23 were reported to have symptoms. Information on the severity of these symptoms was not reported. The final outcome for the health care workers was provided as follow: 39 recovered, 1 still hospitalized and 2 died.

The characteristics of the 113 cases are similar to those previously reported. The pattern and dynamic of the epidemic and the risk assessment remain unchanged.

Globally, 820 laboratory-confirmed cases of infection with MERS-CoV including at least 286 related deaths have officially been reported to WHO. This global total includes all the cases in this update.

The full report is available online at http://www.who.int/csr/don/2014_06_26/en/.

International, MERS-CoV (WHO [edited], June 26): On 19, 20, 22 and 23 June 2014, National IHR Focal Point of Saudi Arabia notified WHO of 4 additional laboratory-confirmed cases of infection with Middle East respiratory syndrome coronavirus (MERS-CoV).

- A 38-year-old woman from Riyadh city, Riyadh Region. The patient was admitted to a hospital for another illness on 20 April. She developed respiratory symptoms on 11 June, and was laboratory-confirmed with MERS-CoV on 18 June. She is currently in a stable condition. Investigation on the source of infection is ongoing.
- A 45-year-old man from Riyadh city, Riyadh Region. The patient became ill on 6 June and was admitted to a hospital on 19 June and was laboratory-confirmed with MERS-CoV on 20 June. The patient is reported to have no history of contact with a previously laboratory-confirmed MERS CoV case. He does not have a history of travel or a history of contact with animals. The patient is currently in a stable condition.
- A 57-year-old man from a village located 50 km away from Umluj city, Tabuk Region. He was admitted to a hospital on 16 June and was laboratory-confirmed with MERS-CoV on 22 June. The patient was air-ambulated to Jeddah on 24 June and is currently in a critical condition. He has a history of exposure to camels on a daily basis. He is reported to have an underlying medical condition.
- A 85-year-old man from Jeddah city, Makkah Region. He became ill on 15 June, was admitted to a hospital on 21 June and was laboratory-confirmed with MERS-CoV on 22 June. The patient has an underlying medical condition. He is currently in a stable condition. The patient is reported to have no history of contact with animals.

Investigation and follow up of contacts of the laboratory-confirmed cases are ongoing. In addition, 2 additional deaths were reported among previously laboratory-confirmed cases of infection with MERS-CoV. Globally, 707 laboratory-confirmed cases of infection with MERS-CoV, including at least 252 related deaths have officially been reported to WHO.

The full report is available online at http://www.who.int/csr/don/2014_06_26_mers/en/.

International, MERS-CoV (WHO [edited], July 2): On 22 June 2014, the National IHR Focal Point for the Islamic Republic of Iran reported to WHO an additional laboratory-confirmed case of Middle East respiratory syndrome coronavirus (MERS-CoV) infection. On 25 and 27 June 2014, the National IHR Focal Point of Saudi Arabia reported the diagnosis of an additional 3 cases of MERS-CoV infection.

Details for the case in Iran are as follows:

The patient is a 44-year-old male, national, health-care worker (HCW) resident of Kerman province located in southeast Iran. He developed mild symptoms of an influenza-like illness on 6 June 2014. His condition deteriorated as he developed dyspnea and was admitted to hospital on 17 June 2014. Specimens were collected on 17 June 2014 and initially tested negative for MERS-CoV on 18 June 2014. His condition continued to deteriorate and he was transferred to an Intensive Care Unit (ICU) on 19 June 2014. Additional specimens were collected that day and tested positive for MERS-CoV on 20 June 2014.

The patient is currently in isolation in a negative pressure respiratory ICU. He does not have a history of travel or contact with animals or consumption of raw camel products in the 14 days prior to the onset of symptoms. He is reported to have a comorbidity. In addition, he is reported not to have had contact with a laboratory-confirmed case of MERS; however, he is reported to have had close contact on 26 May 2014 with a patient diagnosed with Severe Acute Respiratory Infection (SARI) at the same hospital where he was working. He is currently in a stable condition.

The SARI patient had a history of travel to Saudi Arabia to perform Umrah between 5 and 15 May 2014. He was diagnosed with SARI on 17 May 2014 and was admitted on the same day. Specimens were collected from him on 22 May 2014 and tested negative for influenza and for MERS-CoV on 24 May 2014. He was transferred to ICU on 26 May 2014 and was intubated. On 30 May 2014, the SARI patient died. Investigation of contacts among health-care workers and family members is ongoing by the provincial health authorities and more information will be provided as it becomes available.

Details for two of three cases in Saudi Arabia reported on 25 June are as follows:

A 46-year-old male, non-national, and resident of Riyadh city, Riyadh Region who works in construction developed cough and fever on 21 June 2014. He presented to hospital on 24 June 2014 and had evidence of pneumonia on chest X-ray. He was admitted to the hospital on the same day. On 24 June 2014, a specimen was collected and tested positive for MERS-CoV on the same day. He is reported to have a comorbidity. He reports not to have had contact with laboratory-confirmed cases of MERS or contact with

animals. He also reports that he did not perform Umrah or seek health care or consume camel products in the 14 days prior to onset of symptoms. He is currently in a stable condition in the hospital.

A 57-year-old retired male, national, and resident of Jeddah city, Mecca Region developed respiratory symptoms and fever on 13 June 2014. He presented to hospital on 21 June 2014 and had evidence of pneumonia on chest X-ray. He was admitted to the hospital on the same day. On 23 June 2014, a specimen was collected and tested positive for MERS-CoV on the same day. He is reported to have comorbidities. He reports not to have had contact with laboratory-confirmed cases of MERS or contact with animals. He also reports that he did not perform Umrah or seek health care or consume camel products in the 14 days prior to onset of symptoms. He is currently in a stable condition in the hospital.

Details for third case in Saudi Arabia reported on 27 June are as follows:

The case is a 58-year-old male, non-national, farmer who works and lives in a farm south of Bisha city, Bisha Region. He had onset of illness with cough and fever on 15 June 2014. He presented to hospital in Bisha city on 22 June 2014 and was admitted on the same day with a diagnosis of community-acquired pneumonia. On 24 June 2014, a specimen was collected and tested positive for MERS-CoV on the same day. The case is reported not to have any co-morbid conditions. He reports not to have had contact with laboratory-confirmed cases of MERS or contact with animals. In the farm where he works, he reports that there are no animals, including camels. He also reports not to have performed Umrah or sought health care or consumed camel products in the 14 days prior to the onset of symptoms. He is in a critical condition and was transferred to the ICU on 27 July 2014. On the same day, he was transferred to a center in Jeddah to have extracorporeal membrane oxygenation.

Contact investigation and follow-up of all these cases are ongoing and additional information will be communicated as it becomes available. Globally, 824 laboratory-confirmed cases of infection with MERS-CoV, including at least 286 related deaths have officially been reported to WHO.

The full report is available online at http://www.who.int/csr/don/2014_07_02_mers/en/.

International, MERS-CoV (WHO [edited], July 4): On 30 June and 1 July 2014, the National IHR Focal Point for Saudi Arabia reported an additional 3 laboratory-confirmed cases of infection with Middle East respiratory syndrome coronavirus (MERS-CoV), and a death in a previously reported case.

Details of the case reported on 30 June are as follows:

A 15-year-old boy from Riyadh City, Riyadh Region who became ill on 26 June. He visited a hospital where samples were collected for laboratory test on 28 June. Following laboratory-confirmation with MERS-CoV infection on 30 June, the patient was called back and admitted at the hospital. He is currently in a stable condition. The patient had a recent history of travel to Mecca City, Mecca Region. He had no history of contact with a previously laboratory-confirmed case with MERS-CoV. The patient had no history of contact with animals or history of consumption of camel products in the last 14 days prior to onset of symptoms.

Details of the two cases reported on 1 July are as follow:

A 53 year-old pharmacist from Najran city, Najran Region. He became ill on 16 June and was admitted to a hospital on 28 June and is currently in a stable condition. He was laboratory-confirmed with MERS-CoV infection on 30 June 2014. The patient has underlying medical conditions. He has no history of contact with animals or history of consumption of camel products in the last 14 days prior to developing the illness. He travelled to Abha city, Asir region, 20 days before falling ill and stayed there for a day.

A 28 year-old-housewife from Riyadh city, Riyadh Region. She became ill on 23 June, was admitted to a hospital on 29 June, and is currently in a stable condition. The patient was laboratory-confirmed with MERS-CoV on 30 June. She is reported not to have any underlying medical condition. The patient had no contact with previously laboratory-confirmed case with MERS-CoV, and no history of travel. She has no history of contact with animals or history of consumption of camel products in the 14 days prior to developing the illness.

Investigation into contacts of the patients are ongoing. In addition, an additional death in a previously laboratory-confirmed case with MERS-CoV infection has been reported. Globally, 827 laboratory-confirmed cases of infection with MERS-CoV, including at least 287 related deaths have officially been reported to WHO.

The full report is available online at http://www.who.int/csr/don/2014_07_04_mers/en/.

International, Human (WHO [edited], June 27): Influenza at the human-animal interface: Summary and assessment as of 27 June 2014

Human infection with avian influenza A(H5N1) viruses

From 2003 through 27 June 2014, 667 laboratory-confirmed human cases of avian influenza A(H5N1) virus infection have been officially reported to WHO from 15 countries. Of these cases, 393 have died.

Since the last WHO Influenza at the Human-Animal Interface update on 5 May 2014, two laboratory-confirmed human cases of influenza A(H5N1) virus infection were reported to WHO; one from Indonesia in a 33-year-old man from DKI Jakarta and the other from Egypt in a 34-year-old man from Menia governorate. This is not unexpected as influenza A(H5N1) viruses are known to be circulating in poultry in these areas in both countries.

Overall public health risk assessment for avian influenza A(H5N1) viruses: Whenever influenza viruses are circulating in poultry, sporadic infections or small clusters of human cases are possible, especially in people exposed to infected poultry or contaminated environments. These influenza A(H5N1) viruses do not currently appear to transmit easily among people. As such, the risk of community-level spread of these viruses remains low.

Human infections with avian influenza A(H7N9) viruses in China

WHO is closely monitoring this event and separate risk assessments have been posted. Please find the most updated information at

http://www.who.int/influenza/human_animal_interface/influenza_h7n9/Risk_Assessment/en/index.html.

The full report is available online at

http://www.who.int/influenza/human_animal_interface/Influenza_Summary_IRA_HA_interface_27June14.pdf?ua=1.

International, Human (WHO, June 27): On 22-23 and 25 April 2014, Taipei Centers for Disease Control (CDC) reported 2 additional laboratory-confirmed cases of human infection with avian influenza A(H7N9). These are the third and fourth cases with infection of avian influenza A(H7N9) virus reported from Taipei CDC.

The patient reported on 22 April is a 44-year-old woman from Nanjing, Jiangsu Province, China, who travelled to Taipei with a 33-member tourist group. She was ill on 12 April and had been to a local hospital in Nanjing. The patient had an underlying medical condition. Despite general weakness and poor appetite, she travelled to Taipei with the group on 17 April. She was admitted to hospital in Taipei on 19 April and subsequently transferred to a medical center on 20 April. She was laboratory confirmed on 22 April.

Within one week before disease onset she had purchased a slaughtered chicken at a wet market and cooked in Mainland China.

Taipei CDC obtained the list of the other 32 tour members on 22 April; the tour group returned to its origin on 24 April. As of 23 April, one member developed fever.

The patient reported on 25 April is a previously healthy 39 year-old man who frequently travels across the Taiwan Strait. He became ill on 19 April and was hospitalized on 23 April. He was laboratory confirmed on 25 April. The patient visited Beijing and Jiangsu from 31 March to 19 April. He denied exposure to poultry or wet markets while in Mainland China.

The following measures have been taken by Taipei CDC:

1. Epidemiological investigation, tracing of close contacts, medical observation.
2. Strengthen surveillance of pneumonia of unknown causes and routine influenza sentinel surveillance, as well flu and avian flu virology surveillance.
3. The list of tour members relating to the case reported on 22 April has been sent to the National Health and Family Planning Commission of China for further investigation. The travel history of the case reported on 25 April has been sent to the National Health and Family Planning Commission of China for further investigation.

The report is available online at http://www.who.int/csr/don/2014_06_27_avian_influenza/en/.

International, Human (WHO, July 8): The Ministry of Health and Population, Egypt recently notified WHO of a new case of human infection from avian influenza A (H5N1).

The case was a 34-year-old male, a construction worker from the Samallot district in the Menia governorate. He developed symptoms on 15 June 2014 in the form of fever, sore throat, cough and difficulty in breathing. He was admitted to hospital on 22 June 2014 after frequent visits to private physicians with no clinical improvement.

Naso-pharyngeal specimens were positive at Menia subnational virology laboratory on 24 June 2014, which was later re-confirmed at the Central Public Health Laboratory in Cairo on 25 June 2014 by RT-PCR. The man was referred to Abbaseya Chest Hospital in Cairo on 25 June 2014 in critical condition and later died on 7 July 2014.

Findings from initial field investigation revealed that the deceased has close contact with sick poultry in a poultry market near his house. Follow up of close contacts of this patient has not revealed any further case with influenza-like symptoms. The local authorities have implemented necessary measures to prevent any further human infection from the poultry market.

Of the 176 cases laboratory-confirmed to date in Egypt, 64 have been fatal.

The report is available online at <http://www.emro.who.int/surveillance-forecasting-response/surveillance-news/h5n1-july-2014.html>.

International, Poultry (OIE [edited], July 9): Low pathogenic avian influenza H7N9; China Outbreak 1: Market (Company 2), Hualong district, Puyang, HENAN; Date of start of the outbreak: 3/6/14 Affected population: 30 oral/cloacal swabs collected from the market and 2 tested positive.

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.

For questions or to be added to the distribution list, please contact Susan Peters at peterss1@michigan.gov

MDCH Contributors

Bureau of Epidemiology – S. Bidol, MPH, S. DeVita, RN, MPH; Bureau of Labs – B. Robeson, MT, V. Vavricka, MS

Table. H5N1 Influenza in Humans – As of January 24, 2014. http://www.who.int/influenza/human_animal_interface/EN_GIP_20130124_CumulativeNumberH5N1cases.pdf. Downloaded 02/05/2014. Cumulative lab-confirmed cases reported to WHO. Total cases include deaths.

Country	2003-2010		2011		2012		2013		2014		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Azerbaijan	8	5	0	0	0	0	0	0	0	0	8	5
Bangladesh	1	0	2	0	3	0	1	1	0	0	7	1
Cambodia	10	8	8	8	3	3	26	14	0	0	47	33
Canada	0	0	0	0	0	0	1	1	0	0	1	1
China	40	26	1	1	2	1	2	2	0	0	45	30
Djibouti	1	0	0	0	0	0	0	0	0	0	1	0
Egypt	119	40	39	15	11	5	4	3	0	0	173	63
Indonesia	171	141	12	10	9	9	3	3	0	0	195	163
Iraq	3	2	0	0	0	0	0	0	0	0	3	2
Lao PDR	2	2	0	0	0	0	0	0	0	0	2	2
Myanmar	1	0	0	0	0	0	0	0	0	0	1	0
Nigeria	1	1	0	0	0	0	0	0	0	0	1	1
Pakistan	3	1	0	0	0	0	0	0	0	0	3	1
Thailand	25	17	0	0	0	0	0	0	0	0	25	17
Turkey	12	4	0	0	0	0	0	0	0	0	12	4
Vietnam	119	59	0	0	4	2	2	1	1	1	126	63
Total	516	306	62	34	32	20	39	25	1	1	650	386