COMMUNICABLE DISEASE THREATS REPORT

CDTR
Week 9, 23 February-1 March 2014

All users

This weekly bulletin provides updates on threats monitored by ECDC.

I. Executive summary

EU Threats

Influenza - Multistate (Europe) - Monitoring 2013-2014 season

Opening date: 4 October 2013 Latest update: 27 February 2014

Following the 2009 pandemic, influenza transmission in Europe has returned to its seasonal epidemic pattern, with peak activity during winter months. ECDC monitors influenza activity in Europe during the winter seasons and publishes the results on its website in the Weekly Influenza Surveillance Overview.

➔Update of the week

In week 8/2014, fifteen of the 27 reporting countries reported geographically widespread influenza activity.

Non EU Threats

Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013 Latest update: 27 February 2014

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since March 2013, 370 cases have been reported, including 116 deaths. Most cases have been unlinked and sporadic zoonotic transmission from poultry to humans is the most likely explanation for the outbreak. Sustained person-to-person transmission has not been documented. Since October 2013, 235 cases have been reported, the majority in previously affected provinces or in patients who visited such provinces prior to illness.

➔Update of the week

Between 20 and 28 February, 15 new cases of influenza A(H7N9) infection have been reported in China: Guangdong (eleven), Hunan (two), Anhui (one) and Jilin (one).

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Chikungunya outbreak - The Caribbean, 2013

Opening date: 9 December 2013 Latest update: 14 February 2014

On 6 December 2013, France reported two laboratory-confirmed autochthonous cases of chikungunya in the French part of the Caribbean island of Saint Martin. Since then, local transmission has been confirmed in the Dutch part of Saint Martin, on Martinique, Saint Barthélemy, Guadeloupe, British Virgin Islands, Dominica, Anguilla and French Guyana. Aruba only reported imported cases. This is the first documented outbreak of chikungunya with autochthonous transmission in the Americas. As of 27 February 2014, the number of suspected cases in the region is almost 8 000 in the region. There have been three fatalities reported.

➔Update of the week

During the past week the number of new cases reported increased in all the affected areas. No new affected areas or islands were reported. The number of suspected cases in the region is almost 8 000. The islands affected are Saint Martin, Martinique, Saint Barthélemy, Guadeloupe, Virgin Islands (UK), Sint Maarten, Anguilla, Dominica, Aruba, Saint Kitts and Nevis and French Guiana in mainland South America. In French Guiana, a cluster of autochthonous cases was detected in Kourou bringing the number of cases to 17.

Zika virus infection outbreak - The Pacific - 2013-2014

Opening date: 9 January 2014 Latest update: 6 February 2014

Two French overseas territories are affected by outbreaks of Zika virus (ZIKAV) infection: French Polynesia and New Caledonia. This is the second documented outbreak of ZIKAV infection reported in the Pacific. It is estimated that more than 29 000 cases have sought medical care with Zika-like symptoms in French Polynesia since the beginning of the outbreak in October 2013. There is a simultaneous dengue outbreak in the region. The French Polynesian health authorities report a concurrent significant increase in neurological syndromes and autoimmune illnesses. The cause and possible links with Zika or dengue virus infections are being investigated.

➔Update of the week

In **French Polynesia**, 61 new suspected cases were recorded during the last week bringing the number of suspected cases to 8 503. One additional case of Guillain-Barré syndrome has been reported since the last update. There have been 74 cases of neurological and auto-immune complications of which 41 cases were Guillain-Barré syndrome. The outbreak is declining in the majority of the islands.

In **New Caledonia**, an additional 73 autochthonous cases of Zika virus (ZIKAV) infection were reported during the last week. As of 26 February 2014, 140 confirmed cases have been reported, of which 32 are imported cases.

On 25 February 2014, the Norwegian Institute of Public Health (NIPH) reported one confirmed case of Zika virus (ZIKAV) infection in a returning traveller from Tahiti.

Middle East respiratory syndrome- coronavirus (MERS CoV) - Multistate

Opening date: 24 September 2012 Latest update: 27 February 2014

Since April 2012, 187 laboratory-confirmed cases, including 81 deaths, of acute respiratory disease caused by Middle East respiratory syndrome coronavirus (MERS-CoV), have been reported by national health authorities. To date, all cases have either occurred in the Middle East, have had direct links to a primary case infected in the Middle East, or have returned from the Middle East. The source of the virus remains unknown but the pattern of transmission points towards an animal reservoir in the Middle East, from which humans sporadically become infected through zoonotic transmission. Human-to-human transmission to close contacts and in hospital settings has occurred, but there is no evidence of sustained transmission among humans. MERS-CoV is genetically distinct from the coronavirus that caused the SARS outbreak.

➔Update of the week

Since the previous CDTR, one new case has been reported by local health authorities in Saudi Arabia. The case is a 56 year old woman with comorbidities from Riyadh and she is currently in a critical condition.

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 27 February 2014

Polio, a crippling and potentially fatal vaccine-preventable disease that mainly affects children, is close to being eradicated as a result of global public health efforts. Polio remains endemic in Afghanistan, Pakistan and Nigeria. In addition, there were cases reported from five other countries in 2013: Cameroon, Ethiopia, Kenya, Somalia and Syria.

➔Update of the week

During the past week, seven new cases (six wild poliovirus type 1 - WPV1 - and one circulating vaccine-derived poliovirus type 2 - cVDPV2) have been reported from the Federally Administered Tribal Areas (FATA) and Khyber Pakhtunkhwa in Pakistan. No new cases were reported from other countries.

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II. Detailed reports

Influenza - Multistate (Europe) - Monitoring 2013-2014 season

Opening date: 4 October 2013 Latest update: 27 February 2014

Epidemiological summary

For week 8/2014:

- Of the 27 countries providing clinical data, Greece and Finland reported high intensity influenza activity, ten reported medium intensity and 15 countries reported low-intensity influenza activity.
- Of the 1 355 sentinel specimens tested across 25 countries, 441 (33%) were positive for influenza virus. Seven countries reported 213 hospitalised, laboratory-confirmed influenza cases, including 112 cases admitted to intensive care units (ICU).

Based on the various indicators for the influenza season, the status of the season is considerably varied among EU/EEA Member States in regard to the phase of the epidemic, dominant subtype and number of severe cases.

Web sources: WISO | ECDC Seasonal influenza | US-CDC health advisory | CDC Seasonal influenza | FluWatch, Canada | FluView, USA

ECDC assessment

The influenza season started in EU/EEA countries in week 2/2014.

Actions

ECDC will continue to produce the weekly influenza surveillance overviews during the northern hemisphere influenza season.

Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013 Latest update: 27 February 2014

Epidemiological summary

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, human cases have continued to be reported, and as of 27 February 2014, there have been 370 laboratory-confirmed cases: Zhejiang (135), Guangdong (80), Shanghai (42), Jiangsu (40), Fujian (20), Hunan (15), Anhui (9), Jiangxi (5), Henan (4), Beijing (4), Guangxi (3), Shandong (2), Hebei (1), Guizhou (1), Jilin (1), Hong Kong (5), Taiwan (2) and one case reported in Malaysia imported from China.

Most cases have developed severe respiratory disease. One hundred and sixteen patients have died (case-fatality ratio=31%).

Since October 2013, 235 cases were reported from Zhejiang (89), Guangdong (79), Fujian (15), Jiangsu (13), Hunan (12), Shanghai (8), Anhui (5) Beijing (2), Guangxi (3), Guizhou (1), Jilin (1), Taiwan (1) and Hong Kong (5). One exported case from China was diagnosed in Malaysia.

Web sources: Chinese CDC | WHO | WHO FAQ page | ECDC | Malaysian Ministry of Health |

ECDC assessment

The continued and increasing transmission of a novel reassortant avian influenza virus, capable of causing severe disease in humans in one of the most densely populated areas in the world, is a cause for concern due to the pandemic potential. However, the most likely scenario for China is that this remains a local (but widespread) zoonotic outbreak, in which the virus is transmitted sporadically to humans in close contact with the animal reservoir, similar to the influenza A(H5N1) situation.

The recent fatal case of influenza A(H5N1) imported to Canada and the recent imported case of influenza A(H7N9) in

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Malaysia provides support to the notion that imported cases of influenza A(H7N9) might also be seen in Europe. However, the risk of the disease spreading to Europe via humans in the near future is still considered low. People in the EU presenting with severe respiratory infection and a history of potential exposure in the outbreak area will require careful investigation in Europe.

The risk of increased transmission of H7N9 viruses between humans is not negligible. European countries should continue to prepare for the eventuality of future pandemics, including one caused by A(H7N9). Preparedness activities should include the precautionary development of early human vaccine candidates and increased monitoring of animal influenzas at the animal–human interface.

Actions

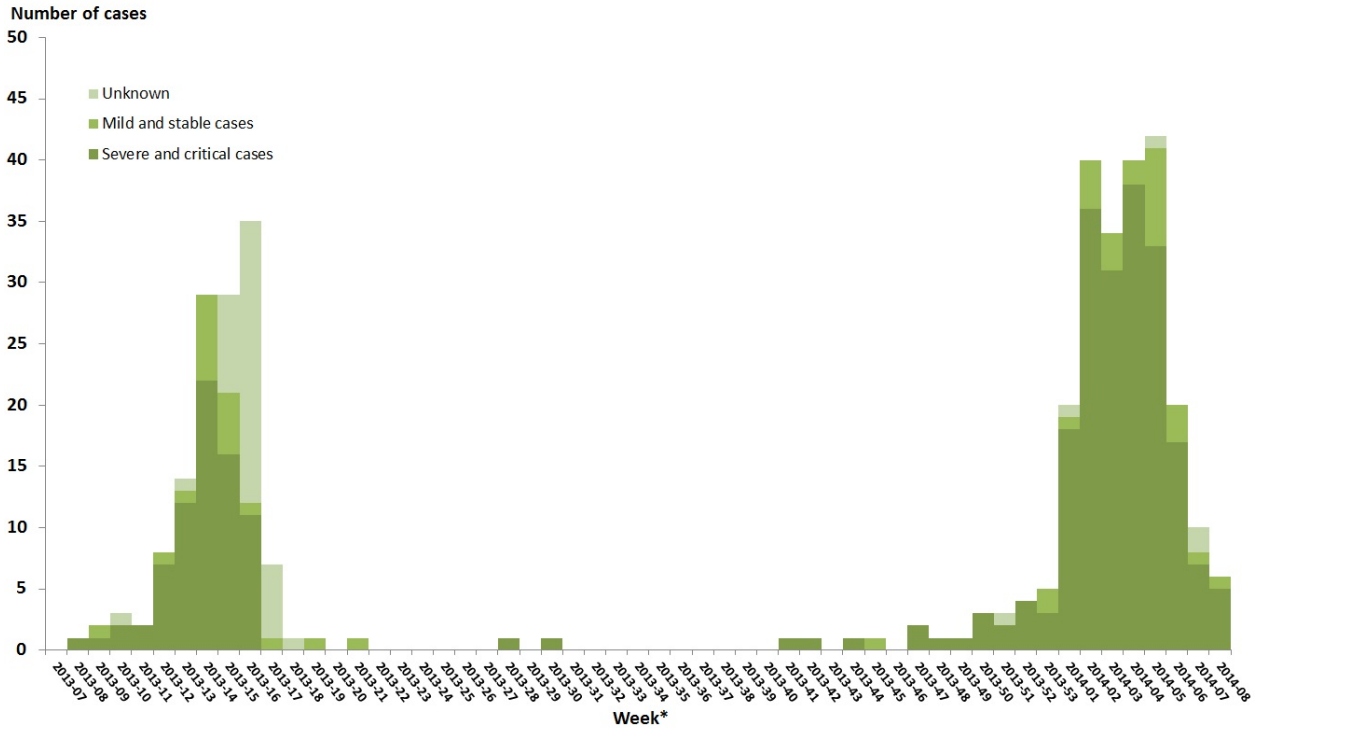
The Chinese health authorities continue to respond to this public health event with enhanced surveillance, epidemiological and laboratory investigation, including scientific research. ECDC is closely monitoring developments.

ECDC published an updated Rapid Risk Assessment on 26 February 2014.

ECDC published an epidemiological update on 7 February 2014.

ECDC published a guidance document for Supporting diagnostic preparedness for detection of avian influenza A(H7N9) viruses in Europe for laboratories on 24 April 2013.

Distribution of confirmed A(H7N9) cases by week of onset and severity, week 14/2013 to week 08/2014, China (n=370)



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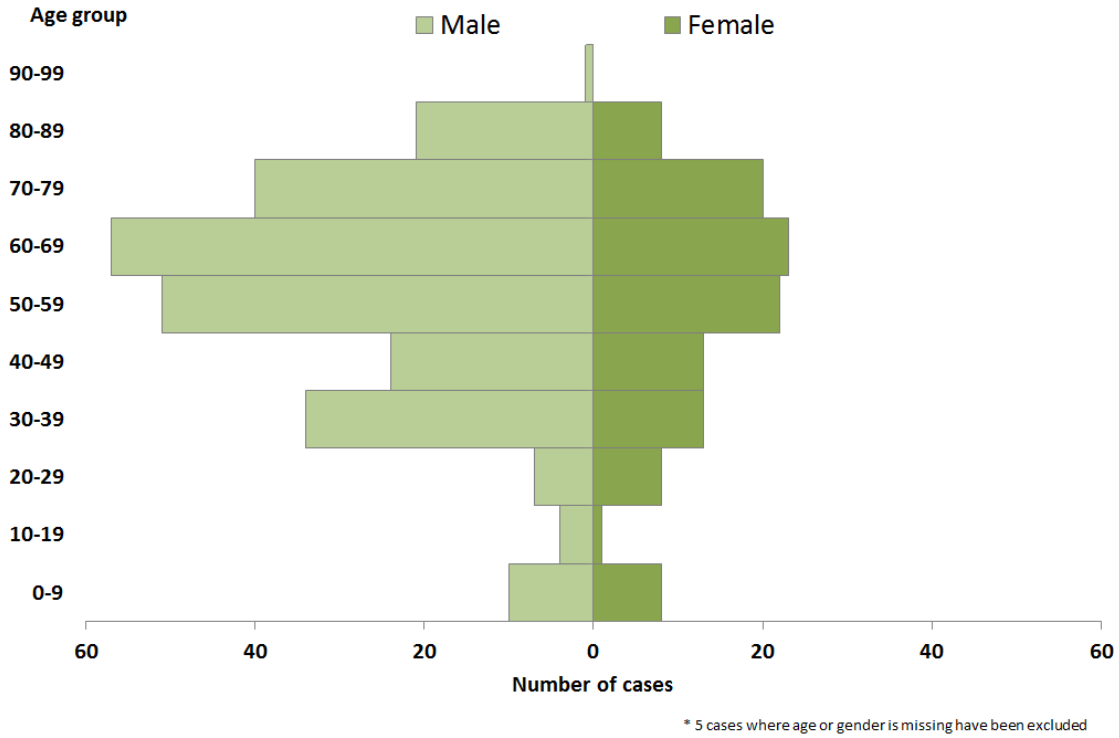
Distribution of confirmed A(H7N9) cases by age and gender, 31/03/2013 - 27/02/2014, China (n=365)



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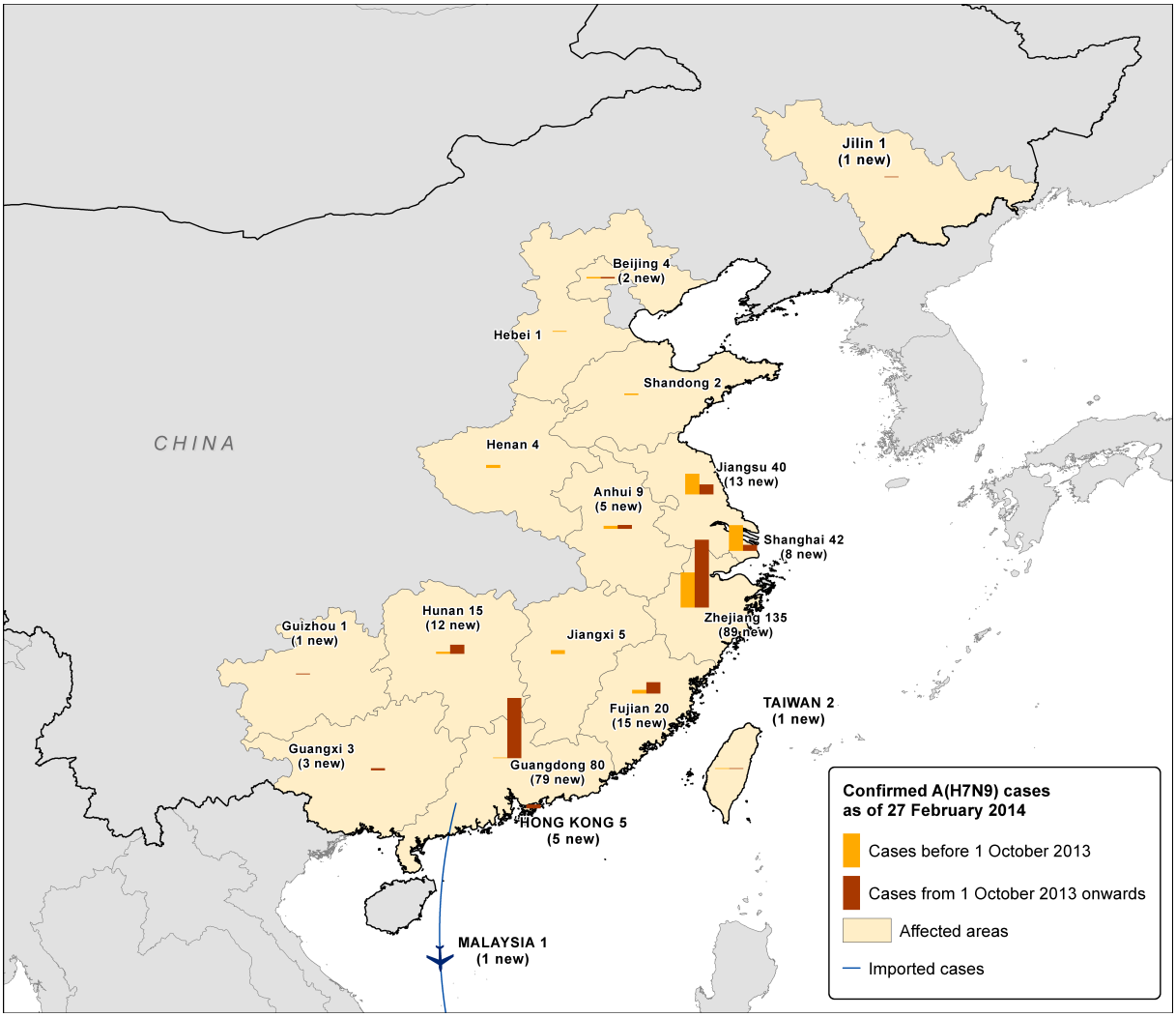
Distribution of confirmed A(H7N9) cases by place of reporting, week 14/2013 to 09/2014 (n=370)

Source: ECDC SRS



Chikungunya outbreak - The Caribbean, 2013

Opening date: 9 December 2013 Latest update: 14 February 2014

Epidemiological summary

Cases reported as of 28 February 2014:

- Virgin Islands (UK), 6 confirmed cases;
- Saint Martin (FR), 2 030 suspected and 765 confirmed or probable cases;
- Sint Maarten (NL), 115 confirmed autochthonous cases;
- Martinique, 3940 suspected and 1058 confirmed or probable cases;
- Saint Barthélemy, 380 suspected and 127 confirmed or probable cases;

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- Guadeloupe, 1 460 suspected and 476 confirmed or probable cases;
- Dominica, 45 confirmed cases (imported) and 44 autochthonous cases;
- French Guiana, 17 confirmed cases, 10 of which are autochthonous cases;
- Anguilla, 11 confirmed cases on the island with one case probably originating from Saint Martin;
- Aruba, one imported case originating from Sint Maarten;
- St. Kitts and Nevis one confirmed case.

ECDC assessment

Epidemiological data indicate that the outbreak, which started in Saint Martin (FR), is expanding. An increasing number of cases have been observed from most of the affected areas. The vector is endemic in the regions, where it also transmits dengue virus. Vigilance is recommended for the occurrence of imported cases of chikungunya in tourists returning to the EU from the Caribbean, including awareness among clinicians, travel clinics and blood safety authorities. The autochthonous cases in French Guyana are the first autochthonous chikungunya cases in mainland South America.

Actions

ECDC published a rapid risk assessment on 12 December 2013 and an epidemiological update on 10 January and on 7 February 2014.

The Caribbean islands

Zika virus infection outbreak - The Pacific - 2013-2014

Opening date: 9 January 2014 Latest update: 6 February 2014

Epidemiological summary

It is estimated that more than 29 000 cases have sought medical care with Zika-like symptoms in French Polynesia since the beginning of the outbreak in October 2013. Health authorities in the territory report a concurrent significant increase in neurological syndromes and autoimmune illnesses. There is a simultaneous dengue outbreak in the region. The cause of the complications and their possible links with ZIKAV or dengue virus infections are being investigated. No neurological complications have been reported to date in New Caledonia.

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Public health control measures, including increased surveillance and the promotion of measures to avoid mosquito bites, have been implemented in both affected territories.

Web sources: ECDC fact sheet | Bureau de Veille Sanitaire| NaTHNac | DASS New Caledonia

ECDC assessment

This is the first documented outbreak of ZIKAV infection in French Polynesia and New Caledonia. ZIKAV infection is considered an emerging infectious disease with the potential to spread to new areas where the *Aedes* mosquito vector is present. There is a risk for the disease spreading further in the Pacific, and for sporadic imported cases in Europe from endemic areas. Vigilance must be enhanced towards imported cases of ZIKAV infection in the EU Member States and EU overseas countries and territories and outermost regions, in particular where effective vectors are present. Early detection of cases is essential to reduce the risk of autochthonous transmission. Clinicians and travel medicine clinics should be aware of the situation in the Pacific islands and include ZIKAV infection in their differential diagnosis.
There is no available vaccine against ZIKAV infection. Travellers can protect themselves by preventing mosquito bites.

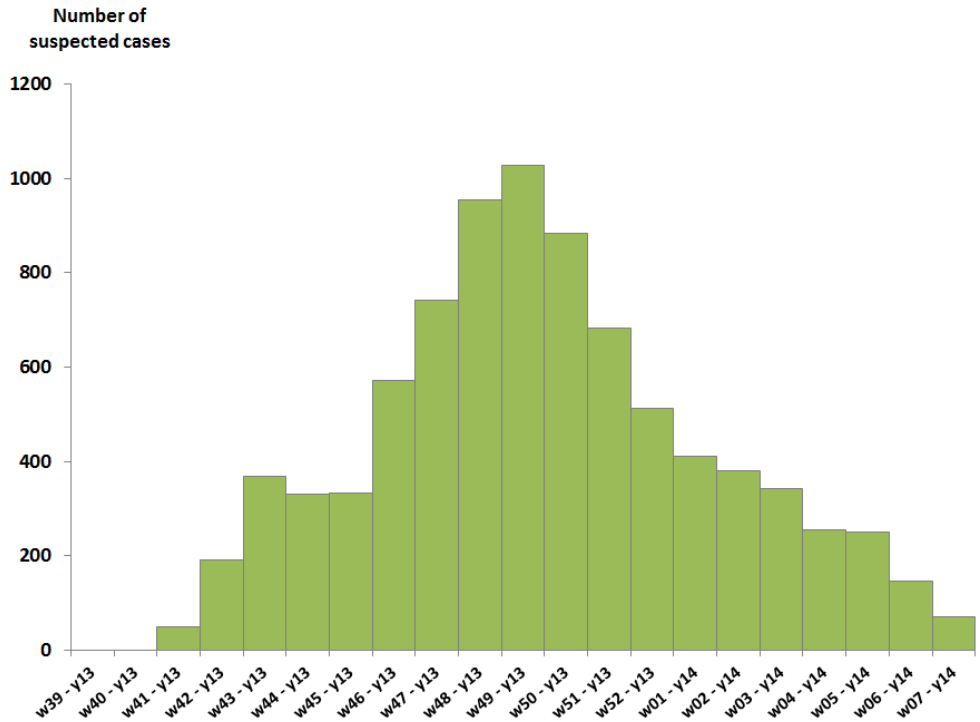
ZIKAV infection is a mild illness and has not been known to have neurological complications. The reported complications in French Polynesia are not confirmed to be caused by ZIKAV infections. However, there is a temporal association with the simultaneous outbreaks of ZIKAV and dengue. It is important to determine the cause of this increase and a possible association with the ongoing transmission of DENV-1, DENV-3 and ZIKAV.

Actions

ECDC prepared a risk assessment on this event.

Distribution of suspected Zika infection cases notified by sentinel network by week of reporting, as of week 07/2014

Bureau de Veille Sanitaire, Polynesie Francaise



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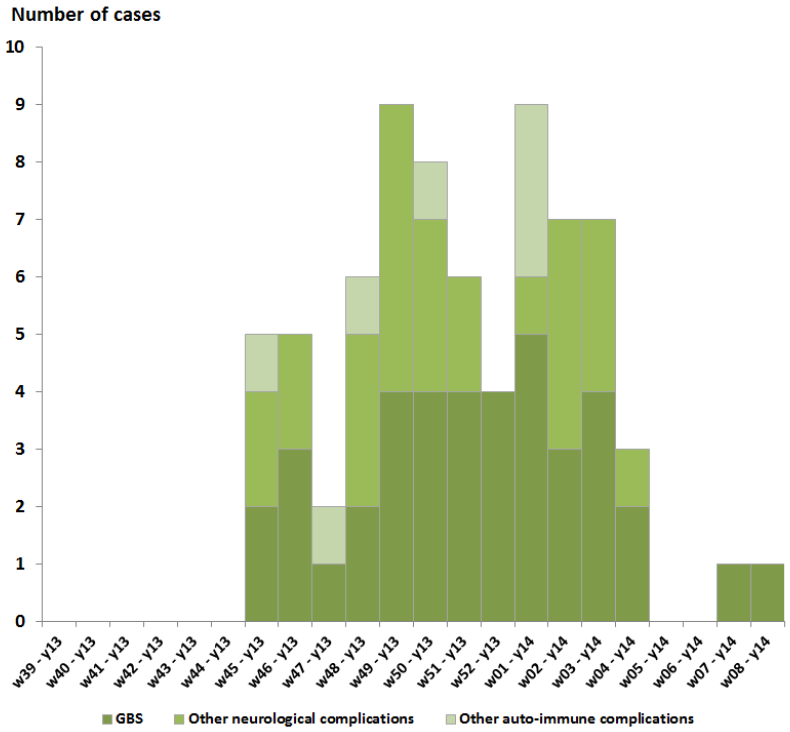
Distribution of suspected Zika infection cases presenting with neurological and auto-immunes complications notified by sentinel network by week of reporting and, as of week 08/2014

Bureau de Veille Sanitaire, Polynesie Francaise



Middle East respiratory syndrome- coronavirus (MERS CoV) - Multistate

Opening date: 24 September 2012 Latest update: 27 February 2014

Epidemiological summary

As of 27 February 2014, 187 laboratory-confirmed cases of MERS-CoV have been reported by local health authorities worldwide, including 81 deaths. The following countries have reported MERS-CoV cases:

Saudi Arabia: 148 cases / 61 deaths
United Arab Emirates: 13 cases / 5 deaths
Qatar: 7 cases / 4 deaths
Jordan: 3 cases / 3 deaths
Oman: 2 case / 2 deaths
Kuwait: 2 cases / 0 death
UK: 4 cases / 3 deaths
Germany: 2 cases / 1 death
France: 2 cases / 1 death
Italy: 1 case / 0 death
Tunisia: 3 cases / 1 death

Twelve cases have been reported from outside the Middle East: the UK (4), France (2), Tunisia (3), Germany (2) and Italy (1). In France, Tunisia and the UK, there has been local transmission among patients who had not been to the Middle East, but had been in close contact with laboratory-confirmed or probable cases. Person-to-person transmission has occurred both among close contacts and in healthcare facilities. However, with the exception of a possible nosocomial outbreak in Al-Ahsa, Saudi Arabia, secondary transmission has been limited. Twenty-two asymptomatic cases have been reported by Saudi Arabia and three by the United Arab Emirates.

The fourth meeting of the IHR Emergency Committee concerning MERS-CoV was held on 4 December 2013. The Committee concluded that there was no reason to change its previous advice to the Director-General. Their unanimous decision was that the conditions for a Public Health Emergency of International Concern (PHEIC) had not been met.

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Based on events since its last meeting, the Committee emphasised the need for:

- investigative studies, including international case-control, serological, environmental, and animal-human interface studies, to better understand risk factors and the epidemiology;
- further review and strengthening of tools, such as standardised case definitions and surveillance, and further emphasis on infection control and prevention.

Web sources: ECDC's latest rapid risk assessment| ECDC novel coronavirus webpage | WHO | WHO MERS updates | WHO travel health update | WHO Euro MERS updates | CDC MERS | Saudi Arabia MoH | Eurosurveillance article 26 September |Oman MoH |

ECDC assessment

The source of MERS-CoV infection and the mode of transmission have not been identified, but the continued detection of cases in the Middle East indicates that there is an ongoing source of infection in the region. There is therefore a continued risk of cases presenting in Europe following exposure in the Middle East, and surveillance for MERS-CoV cases is essential.

The risk of secondary transmission in the EU remains low and could be reduced further through screening for exposure among patients presenting with respiratory symptoms and their contacts, and strict implementation of infection prevention and control measures for patients under investigation.

Actions

ECDC's latest epidemiological update was published on 25 November 2013.

The latest update of a rapid risk assessment was published on 7 November 2013.

The first 133 cases are described in Eurosurveillance published on 26 September 2013.

ECDC is closely monitoring the situation, in collaboration with WHO and EU Member States.

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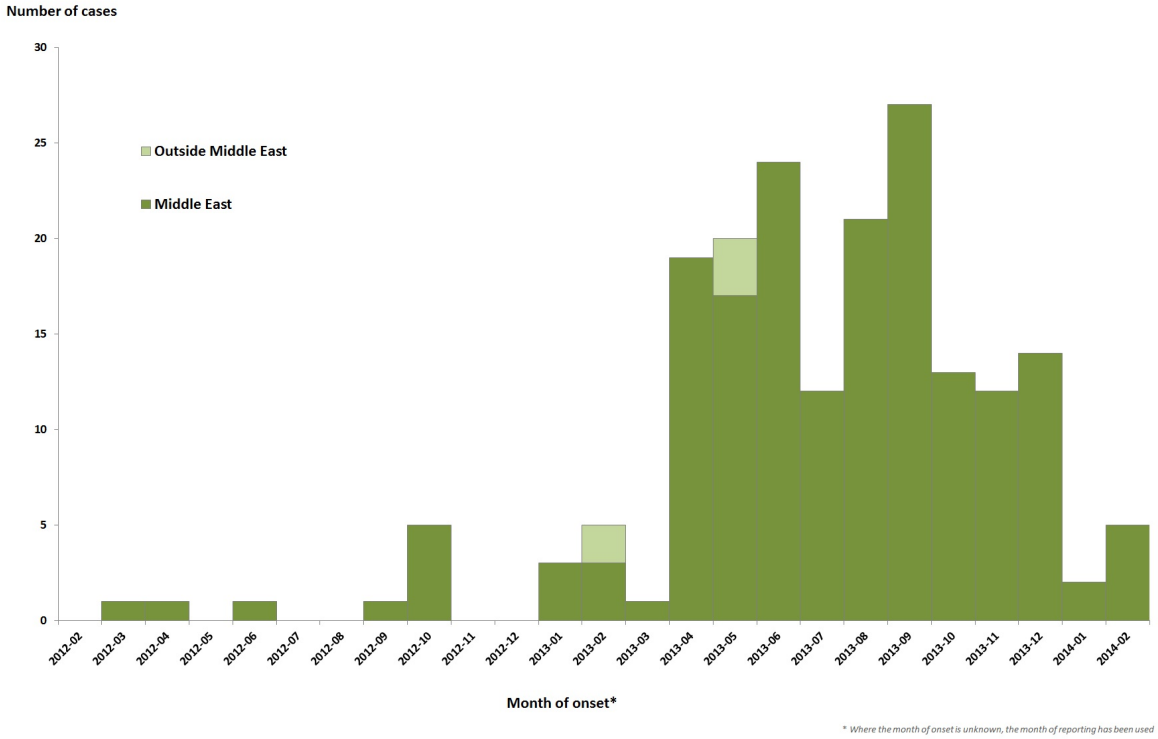
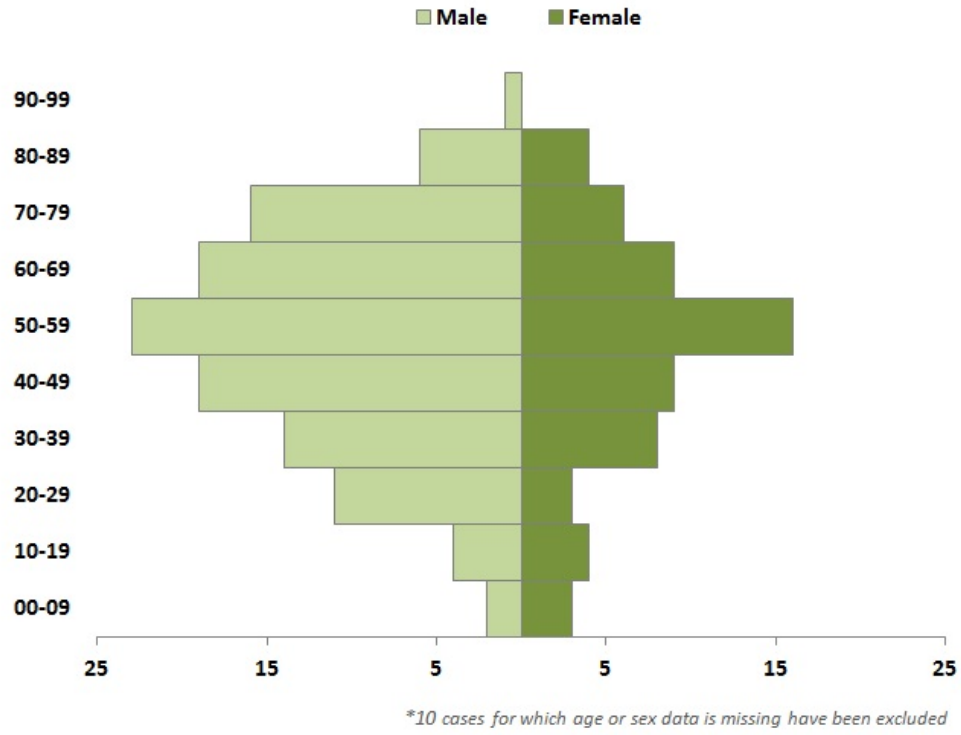
Distribution of confirmed cases of MERS-CoV by month of onset and place of probable infection, March 2012 - 27 February 2014 (n=187*)

Source: ECDC SRS



Distribution of confirmed cases of MERS-CoV by gender and age group, March 2012 - 27 February 2014 (n=177*)

Source: ECDC SRS



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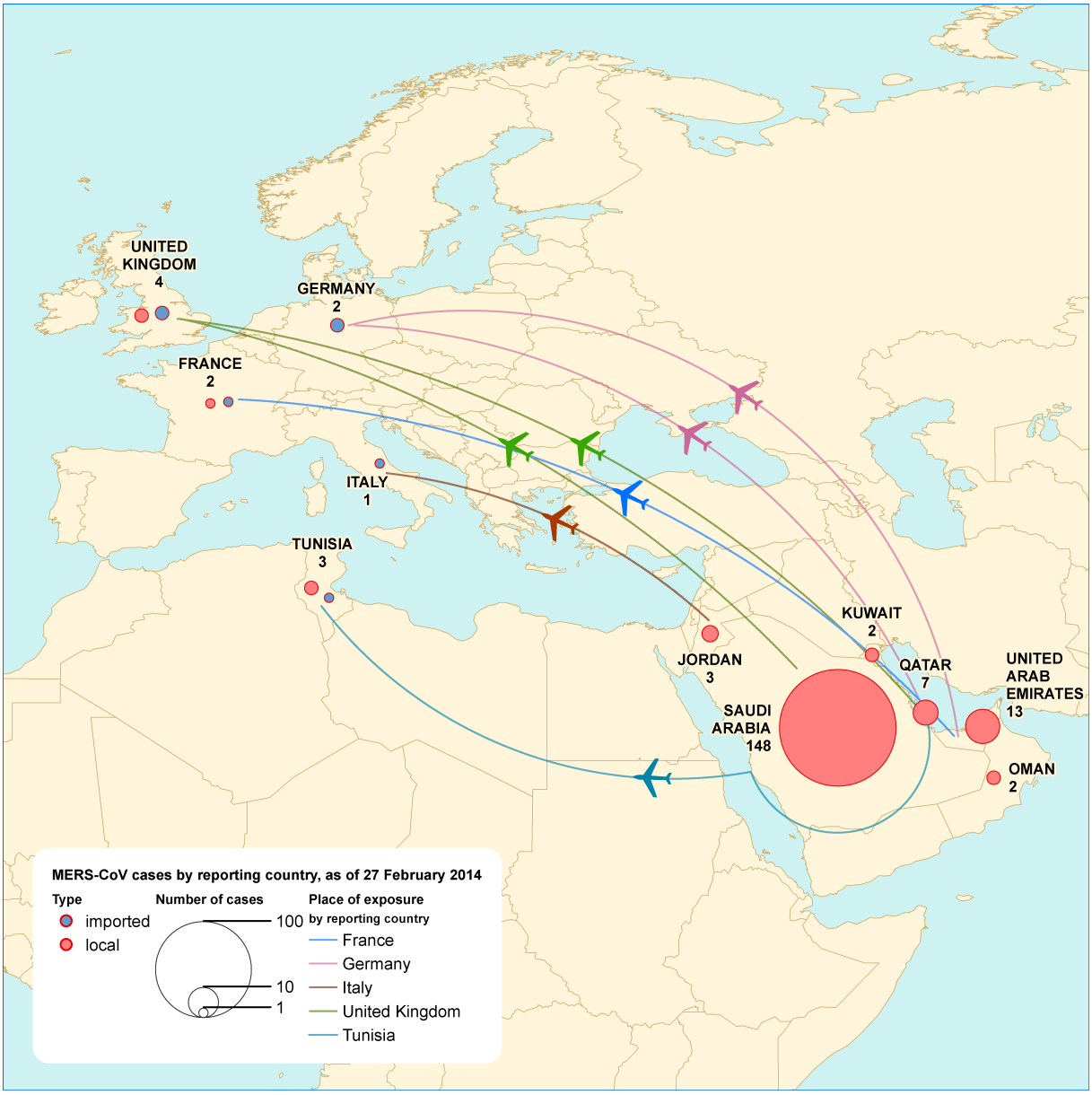
Distribution of confirmed MERS-CoV cases by place of reporting, March 2012 - 27 February 2014

Source: ECDC SRS



Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 27 February 2014

Epidemiological summary

The seven new cases reported during the past week from Pakistan (six WPV1 and one cVDPV2) are all from the Federally Administered Tribal Areas (FATA) and Khyber Pakhtunkhwa. The new cVDPV2 reported in FR Bannu, FATA, had onset of paralysis on 27 January. This case is the most recently reported cVDPV2 in the country.

North Waziristan in Pakistan is the district with the largest number of children being paralysed by poliovirus in the world (both wild and vaccine-derived poliovirus type 2). Immunisation activities have been suspended by local leaders since June 2012. Immunisations in neighbouring high-risk areas are being intensified, to further boost population immunity levels in those areas and prevent further spread of this outbreak.

In addition, one new WPV1 case was reported from Somalia in the past week with onset of paralysis on 19 June 2013. This case was reported late due to a laboratory processing backlog.

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WPV1 positive samples have been detected by environmental surveillance in Israel since 3 February 2013 and continue to be detected in 2014 (14 positive samples collected this year, the most recent of which was collected during the week of 2 February).

In 2014, 24 cases have been recorded to date (compared to five cases for the same time period in 2013), 21 from Pakistan and three from Afghanistan. Pakistan remains the only country with areas of uncontrolled transmission of polio, particularly in parts of FATA and Khyber Pakhtunkhwa.

Web sources: Polio Eradication: weekly update | MedISys Poliomyelitis | ECDC Poliomyelitis factsheet

ECDC assessment

Europe is polio free. The last polio cases within the current EU borders were reported from Bulgaria in 2001. This was an imported outbreak and it was demonstrated that the WPV originated from India. An outbreak in the Netherlands, in a religious community opposed to vaccinations, caused two deaths and 71 cases of paralysis in 1992.

The last indigenous WPV case in the WHO European Region was in Turkey in 1998.
The latest outbreak in the WHO European Region was in Tajikistan in 2010, when importation of WPV1 from Pakistan resulted in 460 cases.

The recent detection of WPV in environmental samples in Israel, and the confirmed and ongoing outbreaks in Syria and Somalia, highlight the risk of re-importation into Europe. Recommendations are provided in the recent ECDC risk assessments:
Rapid Risk Assessment on suspected polio cases in Syria and the risk to the EU/EEA
Wild-type poliovirus 1 transmission in Israel – what is the risk to the EU/EEA?

Actions

ECDC follows reports of polio cases worldwide through epidemic intelligence, in order to highlight polio eradication efforts and identify events that increase the risk of re-introduction of wild poliovirus into the EU.

Due to the current situation of polio, the threat is being followed weekly.

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