

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: 16 January 2014

Following the 2009 pandemic, influenza transmission in Europe has returned to its seasonal epidemic pattern, with peak activity seen 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

During the second week of 2014, widespread geographic activity was observed in three countries as well as a growing number of countries with increasing proportion of specimens testing positive for influenza virus, which is an indicator of influenza transmission, indicating that the influenza transmission season has started in EU/EEA countries.

Non EU Threats

Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013

Latest update: 16 January 2014

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, the outbreak has affected 14 Chinese provinces, causing 181 cases of human infection, including 54 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, 46 sporadic cases have been reported from previously affected provinces or in patients who visited such provinces prior to illness.

→ Update of the week

Since the previous CDTR, 25 new cases of A(H7N9) infection have been reported in Zhejiang (nine), Guangdong (ten), Jiangsu (one), Shanghai (three) and Fujian (two).

Influenza A(H5N1) - Multistate (world) - Monitoring human cases

Opening date: 15 June 2005

Latest update: 16 January 2014

The influenza A(H5N1) virus, commonly known as bird flu, is fatal in about 60% of human infections. Sporadic cases continue to be reported, usually after contact with sick or dead poultry from certain Asian and African countries. No human cases have been reported from Europe.

→Update of the week

Canada health authorities posted a detailed case report on the fatal imported case reported on 8 January in [ProMed](#).

No new cases of A(H5N1) infection have been reported during last week.

Chikungunya outbreak - The Caribbean, 2013

Opening date: 9 December 2013

Latest update: 16 January 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 and the British Virgin Islands. This is the first documented outbreak of chikungunya with autochthonous transmission in the Americas.

→Update of the week

During the past week, three cases of chikungunya were confirmed in Jost Van Dyke island, one of the four British Virgin Islands.

Zika virus infection outbreak - French Polynesia - 2013-2014

Opening date: 9 January 2014

Latest update: 16 January 2014

On 30 October 2013, the health authorities in French Polynesia announced an outbreak of Zika virus (ZIKV) infection from the Society Islands (cases reported from Bora Bora, Moorea, Raitea, Tahaa and Tahiti), the Marquesas Islands (cases reported from Nuku Hiva) and the Tuamotu Islands (cases reported from Arutua). The first cases were reported in early October 2013. It is estimated that more than 20 000 cases (7.6 per cent of the total population) sought medical care with Zika-like symptoms in French Polynesia since the beginning of the outbreak. No deaths and no hospitalisations for acute infection were reported. There is a concurrent dengue outbreak in the region.

→Update of the week

French Polynesia health authorities are reporting a concurrent significant increase in neurological syndromes, the cause of which and possible links with Zika or dengue virus infections are being investigated.

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

Opening date: 24 September 2012

Latest update: 16 January 2014

Since April 2012, 178 laboratory-confirmed cases, including 75 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 no new cases or deaths have been reported.

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005

Latest update: 16 January 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 three countries: Afghanistan, Pakistan and Nigeria, and there are currently outbreaks ongoing in five other countries: Cameroon, Somalia, Syria, Ethiopia and Kenya.

→Update of the week

Since the previous ECDC update, 13 new wild poliovirus 1 (WPV1) cases have been reported to WHO, all with date of onset from 2013. No cases have been reported so far in 2014.

II. Detailed reports

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

Opening date: 4 October 2013

Latest update: 16 January 2014

Epidemiological summary

During the second week of 2014, of the 29 reporting countries, four (Bulgaria, Greece, Portugal and Spain) reported medium intensity influenza activity and Portugal, Spain and the UK (England) reported widespread geographic activity.

Of 842 sentinel specimens tested across 25 countries, 217 (26%) from 16 countries were positive for influenza viruses. Ninety-seven hospitalised laboratory-confirmed influenza cases were reported by Ireland, Romania, Spain, Sweden and the UK.

In the EU/EEA Member States, since week 40/2013, of 669 sentinel specimens positive for influenza viruses, 639 (96%) were type A and 30 (4%) were type B. Of 532 influenza A viruses subtyped, 283 (53%) were A(H1)pdm09 and 249 (47%) were A(H3). The proportion of A(H1)pdm09 viruses among all subtyped influenza A viruses increased over the last weeks indicating a dominance of A(H1)pdm09 viruses at this point of the season. This proportion is still lower than in North America where more than 90% of influenza A viruses are A(H1N1)pdm09.

Web sources: [WISO](#) | [ECDC Seasonal influenza](#) | [US-CDC health advisory](#) | [CDC Seasonal influenza](#) | [FluWatch, Canada](#) | [FluView, USA](#)

ECDC assessment

Based on reports of widespread geographic activity in three countries and the growing number of countries with increasing proportion of specimens testing positive for influenza virus, which is an indicator of influenza transmission, the season has started in EU/EEA countries.

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: 16 January 2014

Epidemiological summary

In March 2013, Chinese authorities announced the identification of a novel reassortant A(H7N9) influenza virus in patients in eastern China. Since then, 181 cases of human infection with influenza A(H7N9) have been reported from: Zhejiang (63 cases), Shanghai (38), Jiangsu (29), Henan (4), Anhui (4), Beijing (2), Shandong (2), Fujian (7), Hunan (3), Jiangxi (5), Hebei (1), Guangdong (18), Hong Kong (3) and Taiwan (2). In addition, the virus has been detected in one asymptomatic case in Beijing. Most cases have developed severe respiratory disease. Fifty-four patients have died (case-fatality ratio=30 %).

Forty-six cases have been reported since October 2013. Forty of these cases have occurred in previously affected provinces (Zhejiang, Shanghai, Jiangsu and Guangdong). Two cases have been reported in Fujian. Three of the cases have been reported in Hong Kong and one case in Taiwan. Both the cases in Hong Kong and the case in Taiwan have visited mainland China prior to falling ill.

Web sources: [Chinese CDC](#) | [WHO](#) | [WHO FAQ page](#) | [OIE](#) | [Chinese MOA](#) | [Hong Kong NHFPC](#) | [Hong Kong government news release](#) | [WHO DON](#) | [Taiwan CDC](#)

ECDC assessment

Influenza A(H7N9) is a zoonotic disease that has spread in poultry in parts of eastern China, causing severe disease in humans. There is no evidence of sustained person-to-person transmission. Close to 3 000 contacts have been followed up, and only a few are reported to have developed symptoms, as part of three small family clusters. Many unanswered questions remain regarding this disease, e.g. the reservoir, the route of transmission, the spectrum of disease and the reason for an unusual age-gender imbalance.

There is an increasing number of cases reported from China since October signalling a new wave of the outbreak. However, this is not unexpected and the majority of patients live in areas where the virus has previously been detected and have had contact with poultry. There is no sign of sustained human-to-human transmission.

EU citizens travelling to and living in China are strongly advised to avoid live bird markets. The risk of the disease spreading to Europe via humans is considered to be low. However, it is not unlikely that people presenting with severe respiratory infection in the EU and a history of potential exposure in the outbreak area will require investigation in Europe.

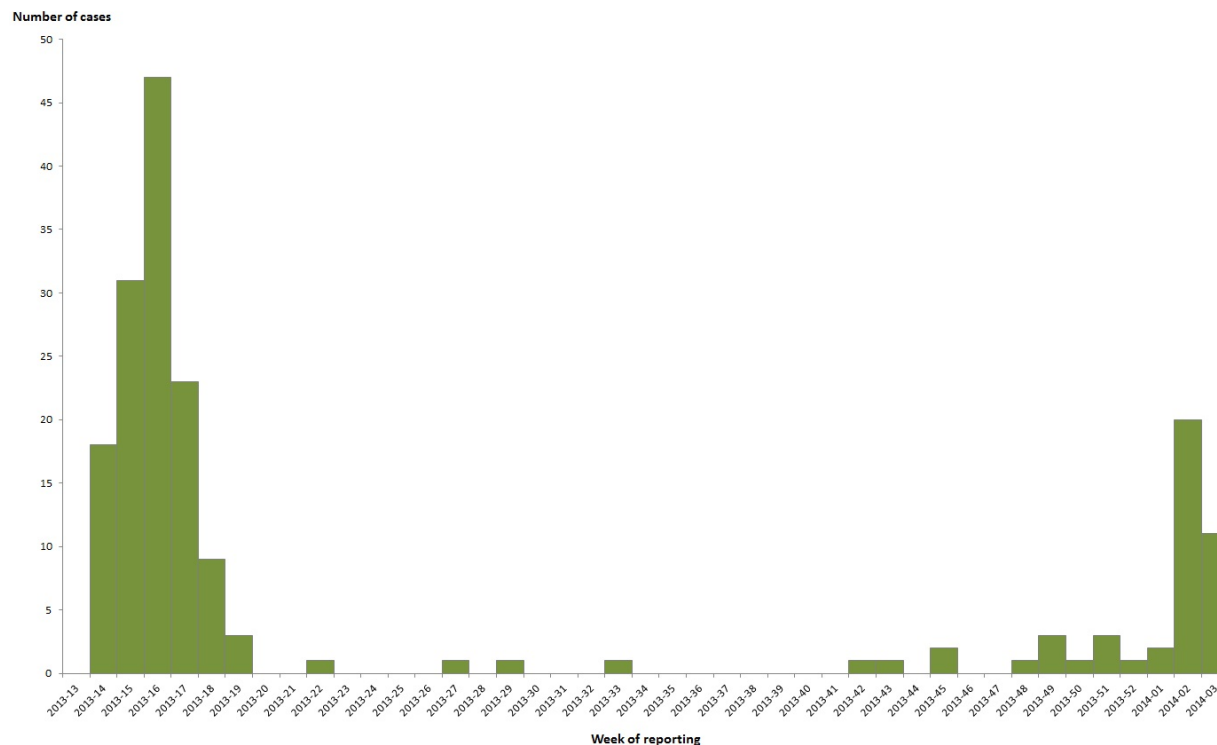
Actions

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 8 May 2013 and a guidance for [Supporting diagnostic preparedness for detection of avian influenza A\(H7N9\) viruses in Europe](#) for laboratories on 24 April 2013.

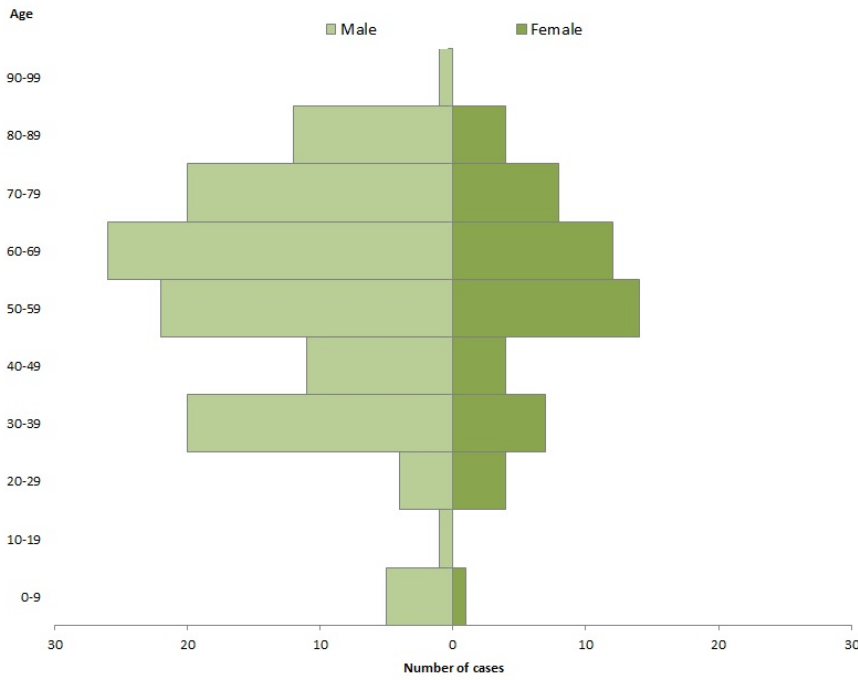
Distribution of confirmed A(H7N9) cases by week of reporting, week 14/2013 to 03/2014, China (n=181)

Source: ECDC SRS



Distribution of confirmed A(H7N9) cases by age and gender, 31/03/2013-16/01/2014, China (n=176*)

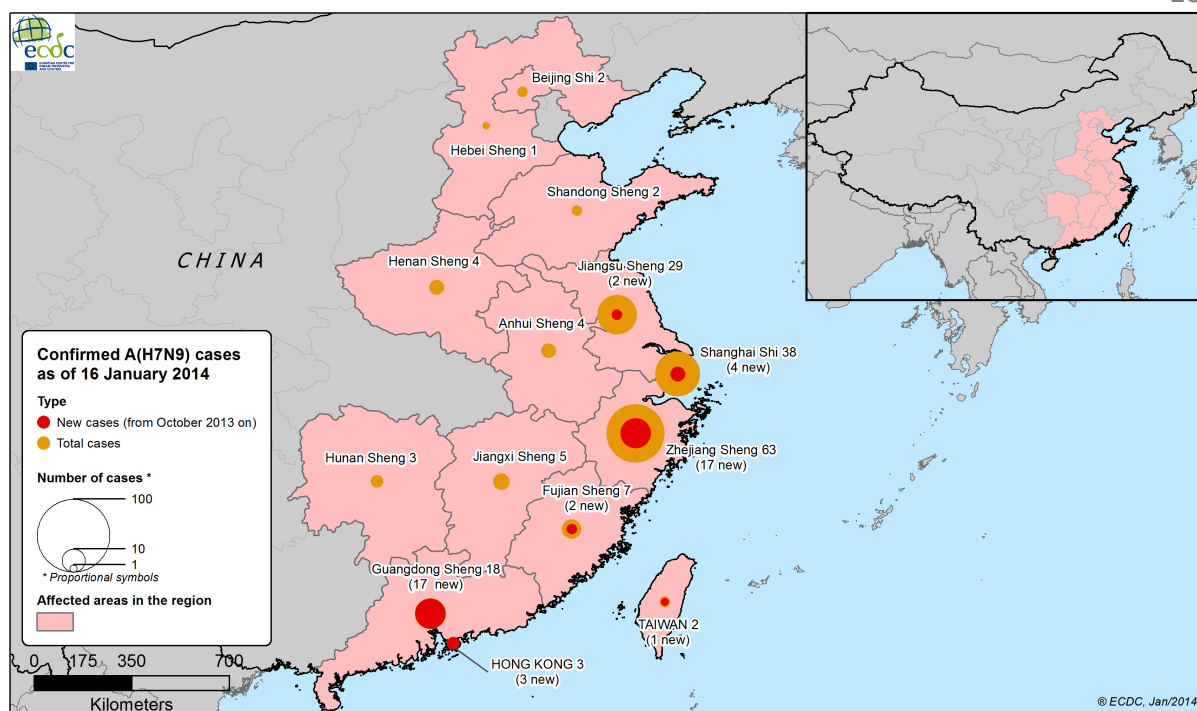
Source: ECDC SRS



* 5 cases where age or gender is missing have been excluded

Distribution of confirmed A(H7N9) cases by place of reporting, week 14/2013 to 03/2014 (n=181)

ECDC SRS



Influenza A(H5N1) - Multistate (world) - Monitoring human cases

Opening date: 15 June 2005

Latest update: 16 January 2014

Epidemiological summary

A fatal case of A(H5N1) was reported on 8 January 2014 in Canada. The case had onset of symptoms on 27 December 2013 during a return flight from Beijing to Edmonton via Vancouver. The patient developed symptoms while flying that worsened during travel. The patient was admitted to hospital on arrival in Edmonton and passed away on 3 January 2014. Tests at a reference laboratory confirmed influenza A(H5N1) infection on 7 January. The case had not been outside of Beijing during the trip to China and had not visited live bird markets or farms.

Thirty-nine human cases with influenza A(H5N1) virus infection have been laboratory-confirmed worldwide since the beginning of 2013 and as of 16 January 2014. The countries affected during this period are Cambodia (26), Egypt (4), Indonesia (3), China (2), Vietnam (2), Bangladesh (1) Canada ex China (1). Among these cases, 25 were fatal, most of them in Cambodia (14). The last case of A(H5N1) in China was reported in February 2013.

6/14

From 2003 through to 16 January 2014, 649 laboratory-confirmed human cases with avian influenza A(H5N1) virus infection have been officially reported from 16 countries. Of these cases, 385 have died.

In Cambodia, the reported incidence of human cases has increased in 2013 compared to previous years (26 cases in 2013 compared with 21 cases from 2005 through to December 2012). However, the case-fatality ratio among reported cases has decreased (54% in 2013 compared with 90% over all previous years).

Web sources: [ECDC Rapid Risk Assessment](#) | [Avian influenza on ECDC website](#) | [WHO updates](#) | [WPRO updates](#)

ECDC assessment

The risk of secondary cases and co-primary cases among the close contacts of the Canadian case is considered to be very low since more than 20 days have passed since the onset of disease, transmission of A(H5N1) on board aircrafts has never been documented, and there is no evidence of sustained human-to-human transmission of A(H5N1) ever occurring. The risk of healthcare-associated transmission in Canada is considered to be very low.

The evidence points to an isolated case who was infected following exposure in China, although the source and mode of transmission has not yet been established. A(H5N1) is a strain of avian influenza that occasionally crosses the species barrier and infects humans. Sporadic cases originating in areas where A(H5N1) transmission has been documented in the recent past are therefore not unexpected.

Although the case reported from Canada had an atypical clinical presentation and exposure to potentially infected birds has not been established, these circumstances do not change the ECDC recommendations that: Europeans travelling to China and South-East Asia should avoid live poultry markets and any contact with chickens, ducks, wild birds, and their droppings. This reduces the risk of exposure not only to A(H5N1) but also to A(H7N9). Poultry meat and eggs should be well cooked.

Hong Kong reported the world's first outbreak of bird flu among humans in 1997, when six people died. Most human infections are the result of direct contact with infected birds, and countries with large poultry populations in close contact with humans are considered to be most at risk of bird flu outbreaks. There are currently no indications of a significant change in the epidemiology associated with any clade or strain of the A(H5N1) virus from a human health perspective. This assessment is based on the absence of sustained human-to-human transmission, and on the observation that there is no apparent change in the size of clusters or reports of chains of infection. However, vigilance for avian influenza in domestic poultry and wild birds in Europe remains important.

Actions

ECDC follows the worldwide A(H5N1) situation through epidemic intelligence activities in order to identify significant changes in the epidemiology of the virus. ECDC re-assesses the potential of a changing risk for A(H5N1) to humans on a regular basis.

WHO is now reporting H5N1 cases on a monthly basis. ECDC will continue monthly reporting in the CDTR to coincide with WHO reporting.

Chikungunya outbreak - The Caribbean, 2013

Opening date: 9 December 2013

Latest update: 16 January 2014

Epidemiological summary

Cases reported as of 16 January 2014:

- Virgin Islands (UK), 3 confirmed cases;
- Saint Martin (FR), 201 confirmed cases;
- Saint Martin (NL), 2 confirmed cases;
- Martinique, 48 confirmed cases and probable cases;
- Saint Barthélemy, 25 confirmed cases and probable cases;
- Guadeloupe, 10 confirmed and probable cases (with one imported from Saint Martin);
- French Guyana, 1 confirmed case imported from Martinique. Eleven suspected cases are being investigated.

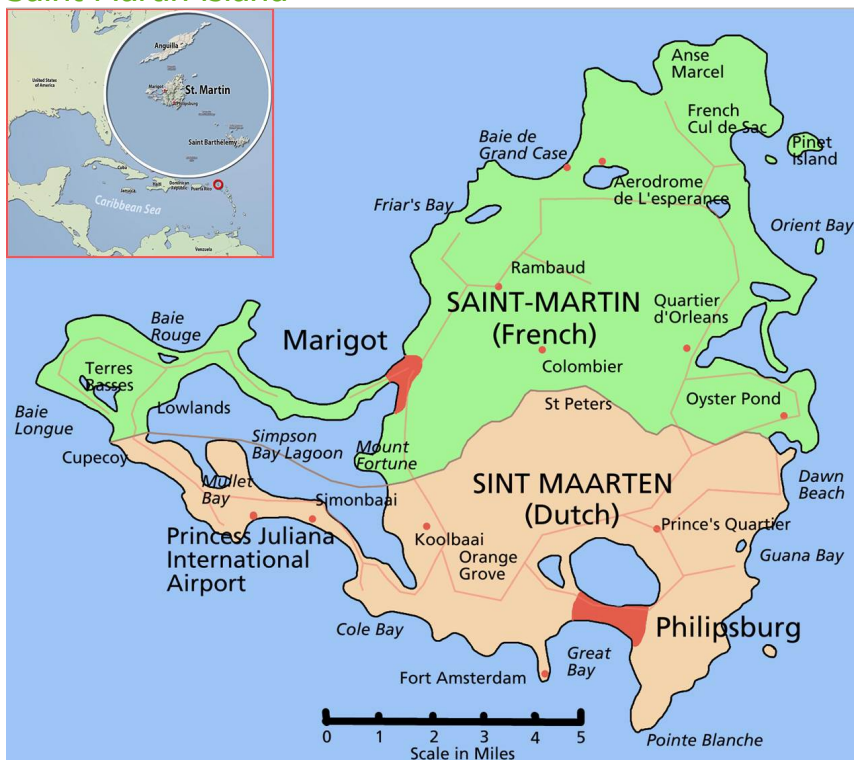
ECDC assessment

Epidemiological data indicate that the outbreak that started in Saint Martin is expanding. Increasing number of cases are expected from the affected areas and the outbreak is likely to continue to spread geographically, supporting the conclusions in the [ECDC risk assessment published on 12 December](#), stating that there is a high risk of chikungunya spreading in the Caribbean region. 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 from the Caribbean in the EU, including awareness among clinicians, travel clinics and blood safety authorities.

Actions

ECDC published a [rapid risk assessment](#) on 12 December 2013 and an [epidemiological update](#) on 10 January 2014.

Saint Martin island



Zika virus infection outbreak - French Polynesia - 2013-2014

Opening date: 9 January 2014

Latest update: 16 January 2014

Epidemiological summary

Since early October 2013, 7 156 suspected cases of ZIKV infection were reported by the syndromic surveillance sentinel network of French Polynesia. Of those tested, 361 were confirmed by RT-PCR as ZIKV infections. It is estimated that more than 26 000 cases have sought medical care with Zika-like symptoms in French Polynesia since the beginning of the outbreak. The actual number of cases is believed to be significantly higher as, due to mild symptoms and the self-limiting nature of the disease, the proportion of people not seeking medical care for Zika infection is likely to be high.

All archipelagos and most of the islands of French Polynesia are affected. The epidemic is still unfolding, in particular in the Leeward and Austral Islands, but seems to be stabilising in other islands affected earlier.

Since early November 2013, 60 cases presented with neurological or auto-immune complications, including 33 cases of Guillain-Barré syndrome (GBS), 10 cases of encephalitis or meningo-encephalitis (ME), 10 other neurological complications, such as paraesthesia, facial paralysis and subdural haematoma. Seven cases had autoimmune illnesses, four of which were immune thrombocytopenic purpura (ITP), two were ophthalmologic complications and one had cardiac complication. The apparent clustering of such cases is very unusual, as the 33 GBS cases only occurred during two months, compared with the three or four

cases per year on average in French Polynesia. All cases developed neurological symptoms following a viral infection compatible with symptoms of Zika virus infection but were not tested initially. Among the GBS cases, 72 per cent are male and all were born in French Polynesia. Eleven of these patients required hospitalisation in the intensive care unit, and seven cases required mechanical ventilation. No deaths have been reported. In addition, there is suspicion about the recurrence of the infection which may indicate the presence of several genotypes of the Zika virus similar to dengue virus.

Public health control measures, including increased surveillance and the promotion of mosquito bite avoidance measures, have been implemented.

Web sources: [ECDC fact sheet](#) | [PROMED/Bureau de veille sanitaire de Polynésie Française](#) | [NaTHNaC](#) | [Tahiti Infos](#)

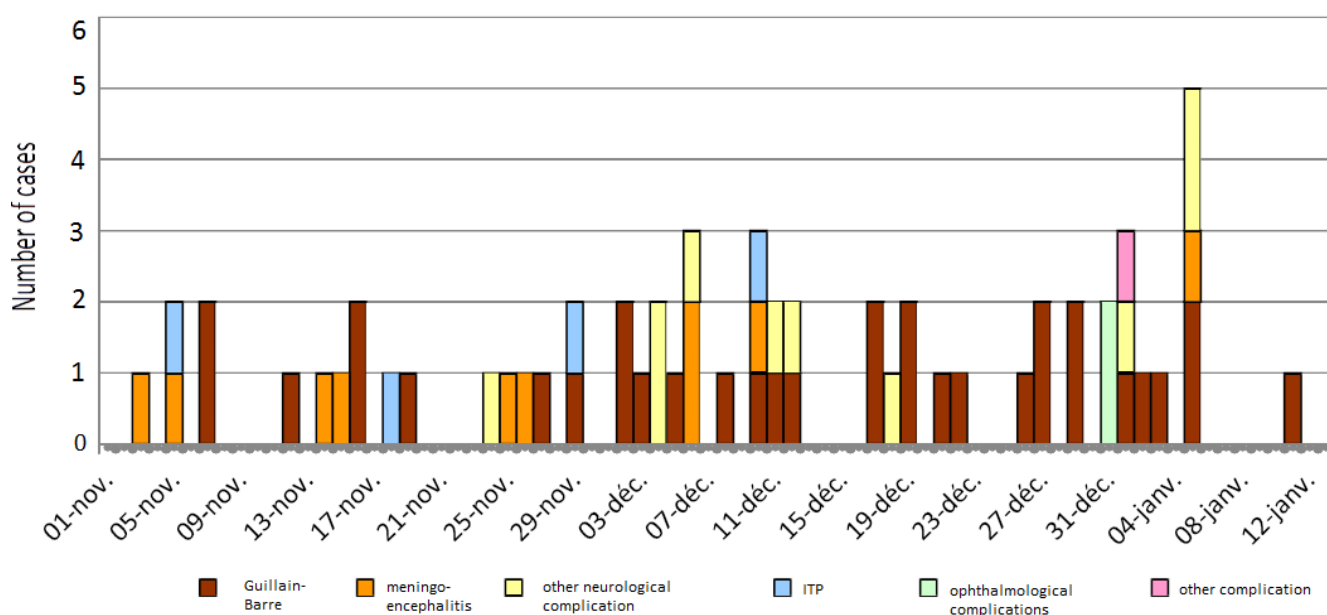
ECDC assessment

This is the second documented outbreak of ZIKV infection in the Pacific. The first documented transmission outside of the virus' traditional endemic areas in Africa and Asia occurred on the island of Yap in Micronesia in 2007. ZIKV is a member of the *Flaviviridae* family and is transmitted to humans by mosquitoes. It is related to other pathogenic vector borne flaviviruses including dengue, West-Nile and Japanese encephalitis viruses. ZIKV 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. Travellers can protect themselves by preventing mosquito bites.

Zika 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 ZIKV. However, they have temporal relationship to the simultaneous outbreaks of Zika and dengue. Investigations are currently underway to identify the cause of the increase in reported neurological and autoimmune complications to determine their possible association with the ongoing transmission of DENV -1, DENV-3 and Zika, and whether ZIKV has several genotypes. The ongoing research involves the WHO, experts of the Secretariat of the Pacific Community and researchers at the Pasteur Institute.

reported complications during Zika virus outbreak, French Polynesia, 1 November 2013 - 12 January 2014

Bureau de Veille Sanitaire, Polynesie Francaise



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

Opening date: 24 September 2012

Latest update: 16 January 2014

Epidemiological summary

As of 16 January 2014, 178 laboratory-confirmed cases of MERS-CoV have been reported by local health authorities worldwide, including 75 deaths. The following countries have reported MERS-CoV cases:

Saudi Arabia: 141 cases / 57 deaths
United Arab Emirates: 12 cases / 4 deaths
Qatar: 7 cases / 4 deaths
Oman: 2 case / 2 death
Kuwait: 2 cases/ 0 deaths
Jordan: 2 cases / 2 deaths
UK: 4 cases / 3 deaths
Germany: 2 cases / 1 death
France: 2 cases / 1 death
Italy: 1 case / 0 deaths
Tunisia: 3 cases / 1 death

Twelve cases have been reported from outside the Middle East: in the UK (4), France (2), Tunisia (3), Germany (2) and Italy (1). In France, Tunisia and the United Kingdom, there has been local transmission among patients who have not been to the Middle East but have 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 (UAE).

The 4th 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) have not at present been met.

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 such 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.

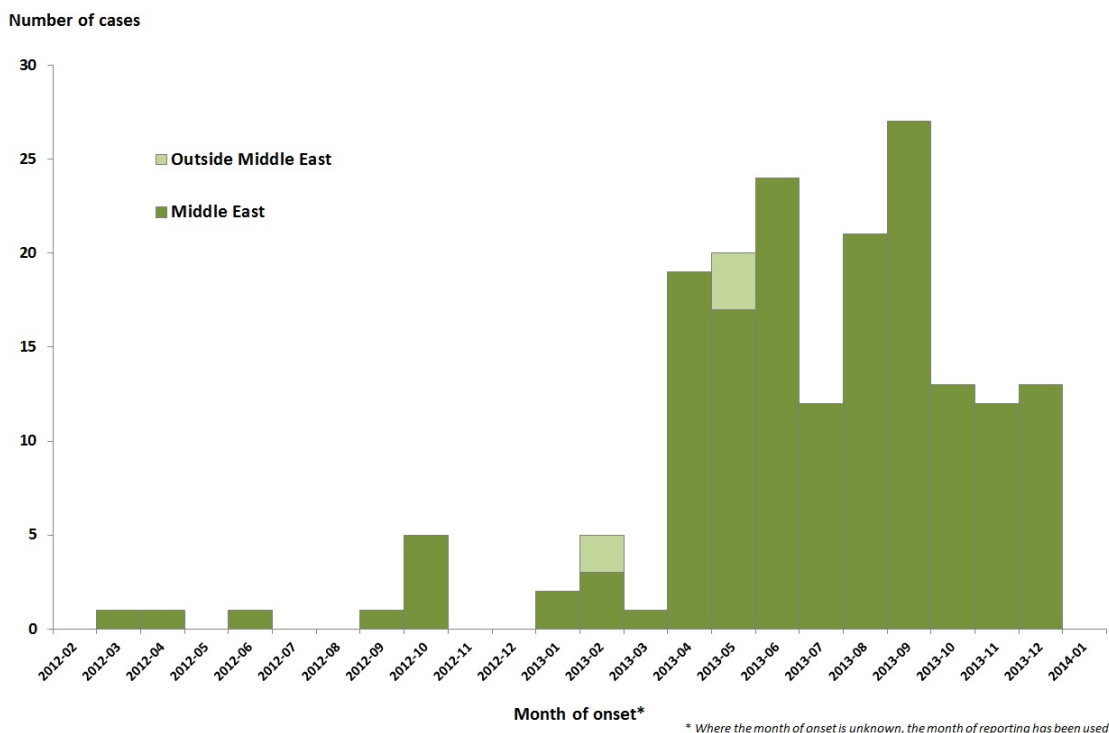
The latest update of a [rapid risk assessment](#) was published on 7 November 2013.

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.

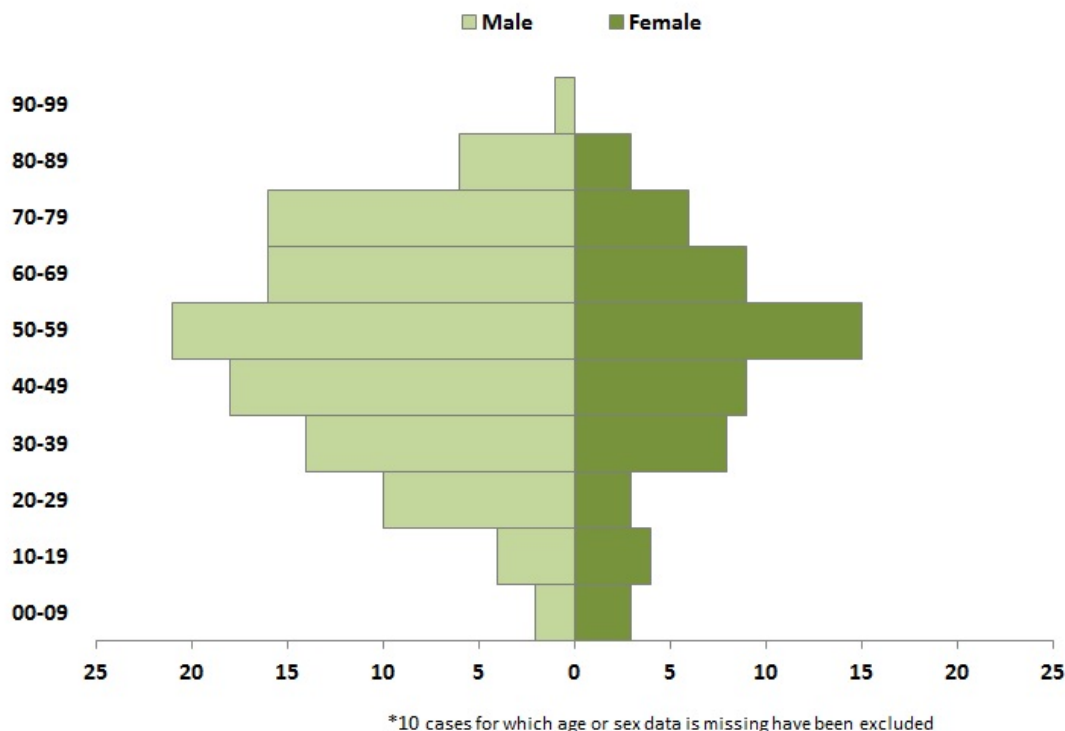
Distribution of confirmed cases of MERS-CoV by month of onset and place of probable infection, March 2012-16 January 2014 (178*)

Source: ECDC SRS



Distribution of confirmed cases of MERS-CoV by gender and age group, March 2012- 16 January 2014 (168*)

Source: ECDC SRS



WHO has published a [WHO/UNICEF strategic plan for polio outbreak response](#).

Web sources: [Polio Eradication: weekly update](#) | [MedISys Poliomyelitis](#) | [ECDC Poliomyelitis factsheet](#) | [WHO mission to Israel](#) | [Somalia Humanitarian Bulletin](#)

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. The latest outbreak in the WHO European Region was in Tajikistan in 2010, when importation of WPV1 from Pakistan resulted in 460 cases. The last indigenous WPV case in the WHO European Region was in Turkey in 1998. An outbreak in the Netherlands in a religious community opposed to vaccinations caused two deaths and 71 cases of paralysis in 1992.

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 on 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 will be followed weekly.

The Communicable Disease Threat Report may include unconfirmed information which may later prove to be unsubstantiated.