

This weekly bulletin provides updates on threats monitored by ECDC.

I. Executive summary

EU Threats

Influenza - Multistate (Europe) - Monitoring 2016-2017 season

Opening date: 13 October 2016

Latest update: 13 January 2017

Influenza transmission in Europe shows a seasonal pattern, with peak activity during winter months. ECDC monitors influenza activity in Europe during the winter season and publishes its weekly report on the [Flu News Europe website](#).

→Update of the week

Influenza activity continued to increase across the region with high or very high intensity in 10 out of 43 reporting countries.

Hepatitis A outbreaks in the EU/EEA mostly affecting MSM - 2016/2017

Opening date: 12 December 2016

Latest update: 13 January 2017

Since February 2016, several EU/EEA Member States reported an increase of hepatitis A among men who have sex with men. Between February and December 2016, 24 cases of hepatitis A infected with two distinct strains of sub-genotype IA have been reported by Ireland, Luxembourg, the Netherlands, Sweden and the United Kingdom (UK). Spain, Italy and Germany observed an increase of hepatitis A among men.

→Update of the week

On 11 January 2017, Germany reported 21 confirmed cases of hepatitis A detected in Berlin between November and December 2016. Three of the male cases have a travel history to Morocco, Asia/Australia and Spain/France, respectively. Twenty cases are men, fourteen of which have stated homosexual contacts.

Non EU Threats

Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013

Latest update: 12 January 2017

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, and up to 12 January 2017, 916 cases have been reported, including at least 355 deaths. No autochthonous cases have been reported outside China. Most cases are isolated, and sporadic zoonotic transmission from poultry to humans is the most likely explanation for the outbreak.

→Update of the week

Between 5 January and 12 January 2017, 106 cases and 35 deaths due to avian influenza A(H7N9) were reported in China. According to [FAO](#) the cases occurred in Jiangsu (52), Zhejiang (21), Guangdong (15), Anhui (6), Jiangxi (5), Shandong (2), Fujian (2), Hunan (1), Guizhou (1), and Shanghai (1).

Zika - Multistate (world) - Monitoring global outbreaks

Opening date: 16 November 2015

Latest update: 13 January 2017

From 1 February to 18 November 2016, Zika virus infection and the related clusters of microcephaly cases and other neurological disorders constituted a public health emergency of international concern (PHEIC). Since 2015, and as of 12 January 2017, 71 countries and territories have reported evidence of mosquito-borne transmission of the virus. According to the [World Health Organization](#) (as of 4 January 2017), 29 countries or territories reported microcephaly and other central nervous system malformations in newborns which are potentially associated with Zika virus infection.

→Update of the week

ECDC maps

In the map of countries and territories with autochthonous vector-borne transmission of Zika virus infection in the past three months, the status of Angola changed to sporadic transmission.

Chikungunya- Multistate (world) - Monitoring global outbreaks

Opening date: 9 December 2013

Latest update: 13 January 2017

Chikungunya virus infection is a vector-borne disease that affects an estimated 3 million people each year. It is transmitted through the bites of infected *Aedes* mosquitoes. Chikungunya has been reported across an increasingly wide area of the world. It is present in Asia, Africa and, since 2013/2014, in the Caribbean, the Americas and the Pacific. No autochthonous chikungunya cases have been detected in EU/EEA Member States in 2016.

→Update of the week

Ongoing outbreaks are being reported in Asia, the Americas and the Pacific.

Dengue - Multistate (world) - Monitoring global outbreaks

Opening date: 20 April 2006

Latest update: 13 January 2017

Dengue fever is one of the most prevalent vector-borne diseases in the world. It affects an estimated 50 to 100 million people each year. It is transmitted through the bites of infected *Aedes* mosquitoes. Dengue is present in Asia, the Pacific, the Caribbean, the Americas and Africa. No autochthonous dengue cases have been detected in EU/EEA Member States in 2016.

→Update of the week

There are several ongoing outbreaks of dengue fever worldwide.

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

Opening date: 24 September 2012

Latest update: 12 January 2017

Since April 2012 and as of 12 January 2017, 1 901 cases of MERS, including 728 deaths, have been reported by health authorities worldwide. The source of the virus remains unknown, but the pattern of transmission and virological studies point towards dromedary camels in the Middle East as being a reservoir from which humans sporadically become infected through zoonotic transmission. Human-to-human transmission is amplified among household contacts and in healthcare settings.

→Update of the week

Since the last update of MERS-CoV on 8 December 2016, there have been 26 cases of MERS-CoV reported in Saudi Arabia. The cases were reported from Riyadh (7), Buraidah (6), Aseer (3), Najran (2), Makkah (2), Taif (1), Madinah (1), Hufoof (1), Jeddah (1), Mahd-Aldhahab (1) and Alkhurma (1).

Of the 26 cases, seven report direct or indirect contact with camels. Of the six cases reported in Buraidah, two cases reported in January are due to nosocomial transmission in patients. Two of the three cases in Aseer are asymptomatic female expat healthcare workers.

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005

Latest update: 12 January 2017

Global public health efforts are ongoing to eradicate polio, a crippling and potentially fatal disease, by immunising every child until transmission of the virus has completely stopped and the world becomes polio-free. Polio was declared a public health emergency of international concern (PHEIC) by the World Health Organization (WHO) on 5 May 2014 due to concerns regarding the increased circulation and international spread of wild poliovirus during 2014. On 11 November 2016, at the eleventh [meeting of the Emergency Committee](#), the temporary recommendations in relation to the PHEIC were extended for another three months. WHO recently declared wild poliovirus type 2 (WPV2) eradicated worldwide.

→Update of the week

No new wild poliovirus type 1 (WPV1) cases were reported in the past week. The total number of WPV1 cases for 2016 remains 35.

However, one new circulating vaccine-derived poliovirus type 2 (cVDPV2) case was reported in the past week with onset of paralysis on 17 December 2016. The total number of cVDPV2 cases for 2016 is four.

Pakistan reported three new positive environmental samples: two WPV1-positive samples collected on 8 and 14 December 2016, and one cVDPV2-positive sample collected on 20 December 2016.

The isolates from both the cVDPV2 case and environmental sample are linked to an ongoing, confirmed cVDPV2 outbreak currently affecting Quetta, Balochistan. The case is the first associated with this outbreak – previous isolates of this strain had been found only in environmental samples. An outbreak response is currently ongoing.

II. Detailed reports

Influenza - Multistate (Europe) - Monitoring 2016-2017 season

Opening date: 13 October 2016

Latest update: 13 January 2017

Epidemiological summary

Week 1/2017 (2–8 January 2017)

Influenza activity continued to increase across the region with high or very high intensity in 10 out of 43 reporting countries. The proportion of influenza virus detections among sentinel surveillance specimens was 50% for the second consecutive week. The great majority of influenza viruses detected were type A and, of those subtyped, 99% were A(H3N2). The number of influenza cases from hospital settings also increased, markedly for adults aged over 65 diagnosed with influenza A virus infection.

Excess all-cause mortality seems to have been increasing among the elderly, notably in France and Portugal (EuroMOMO).

Season overview

Influenza activity started early this season compared with previous seasons.

Week 46/2016 is the earliest week that the overall influenza-positivity rate in sentinel specimens reached 10% since the emergence of A(H1N1)pdm09 viruses in the 2009 season; during the last 6 seasons this occurred between weeks 48 and 51.

Since week 40/2016, influenza A viruses have predominated, accounting for 96% of all sentinel detections; the great majority (99%) of subtyped influenza A viruses from sentinel sites have been A(H3N2). This is in contrast to the same period during the 2015-16 season in which influenza A(H1N1)pdm09 viruses predominated, but similar to the 2014-15 influenza season, when influenza A(H3N2) was predominant.

In an influenza season in which A(H3N2) viruses predominate, elderly populations can be expected to be most severely affected.

So far, circulating A(H3N2) viruses are antigenically similar to the vaccine strain. While about two-thirds of the A(H3N2) viruses characterised belong to a new genetic subclade (3C.2a1), these viruses are antigenically similar to the vaccine strain (clade 3C.2a).

Early monitoring of vaccine effectiveness in [Finland](#) and [Sweden](#) suggests levels of effectiveness within those seen during the period 2011–2015 with a 26% (95% CI 22%–30%) and 24% (95% CI 11%–34%) vaccine effectiveness in persons of 65 years and older with laboratory-confirmed influenza A. Given the partial effectiveness of influenza vaccines, rapid use of neuraminidase inhibitors for laboratory-confirmed or probable cases of influenza should be considered for vaccinated and non-vaccinated patients at risk for complications following an influenza virus infection.

ECDC assessment

This season, influenza viruses, mainly A(H3N2), began circulating early in the EU/EEA. It is too early to predict the intensity in primary care and the severity in secondary care, but if A(H3N2) continues to predominate, there is a risk that people over 65 years of age will be the most severely affected, possibly increasing pressure on healthcare systems.

A risk assessment on seasonal influenza in EU/EEA countries was published by [ECDC](#) on 24 December 2016.

Actions

ECDC monitors influenza activity in Europe during the winter season and publishes its weekly report on the [Flu News Europe website](#). Risk assessments for the season are available from the European Centre for Disease Prevention and Control ([ECDC](#)) and the [WHO Regional Office for Europe](#) websites.

Hepatitis A outbreaks in the EU/EEA mostly affecting MSM - 2016/2017

Opening date: 12 December 2016

Latest update: 13 January 2017

Epidemiological summary

Newly reported cases from Berlin:

On 11 January, Germany reported 21 new cases of Hepatitis A (20 male, 1 female) detected in Berlin between November and December 2016. All the cases had clinical symptoms of acute hepatitis and were laboratory confirmed. Three of the male cases have a travel-history to Morocco, Asia/Australia and Spain/France, respectively. Fourteen cases are men which have stated homosexual contacts. Disease onset dates ranged from end of October until end of December without an apparent clustering. Typing revealed two different genotype IA sequences. One is identical to sequences from a cluster observed in Munich and Frankfurt earlier in 2016, the two other cases are identical to the cluster reported by the UK on 6 December 2016. HAV-sequence-typing of additional cases is on-going.

The previous 24 cases from the UK, Ireland, Sweden, Luxembourg and the Netherlands are thoroughly described in the [rapid risk assessment](#) produced on 19 December 2016.

ECDC assessment

On the basis of current evidence, the European population groups most at risk of being affected are men who have sex with men possibly participating in higher-risk sexual practices, and their contacts. Person-to-person sexual transmission is the most likely hypothesis for the spread of this outbreak, as a food-borne transmission would result in more cases affecting the general population. The conclusions of ECDC [rapid risk assessment](#) remain valid.

Actions

ECDC is closely monitoring this event through EPIS-FWD and EPIS STI.

Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013

Latest update: 12 January 2017

Epidemiological summary

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, and up to 11 January 2017, 916 cases have been reported, including at least 355 deaths.

The human cases of influenza A(H7N9) reported by China since March 2013 have the following geographical distribution: Zhejiang (241), Guangdong (212), Jiangsu (161), Fujian (74), Shanghai (53), Anhui (52), Hunan (35), Hong Kong (17), Jiangxi (15), Xinjiang Uyghur (10), Beijing (9), Shandong (8), Guangxi (4), Henan (4), Hebei (4), Hubei (2), Jilin (2), Tianjin (2), Guizhou (2) and Liaoning (1) and one case in Macau and four cases in Taiwan.

Three imported cases have also been reported: one in Malaysia and two in Canada.

Web sources: [Chinese CDC](#) | [WHO](#) | [WHO FAQ page](#) | [ECDC](#)

ECDC assessment

The majority of recently reported human cases are associated with exposure to infected live poultry or contaminated environments, including markets where live poultry are sold. Influenza A(H7N9) viruses continue to be detected in poultry and their environments in the areas where human cases are occurring. Information to date suggests that these viruses do not transmit easily from human to human and the information does not support sustained human-to-human transmission. The current increase correspond to the seasonal transmission seen in previous years.

Imported cases of influenza A(H7N9) may be detected in Europe. However, the risk of the disease spreading among humans following an importation to Europe is considered to be very low. People in the EU presenting with severe respiratory infection and a history of potential exposure in the outbreak area will require careful investigation.

Actions

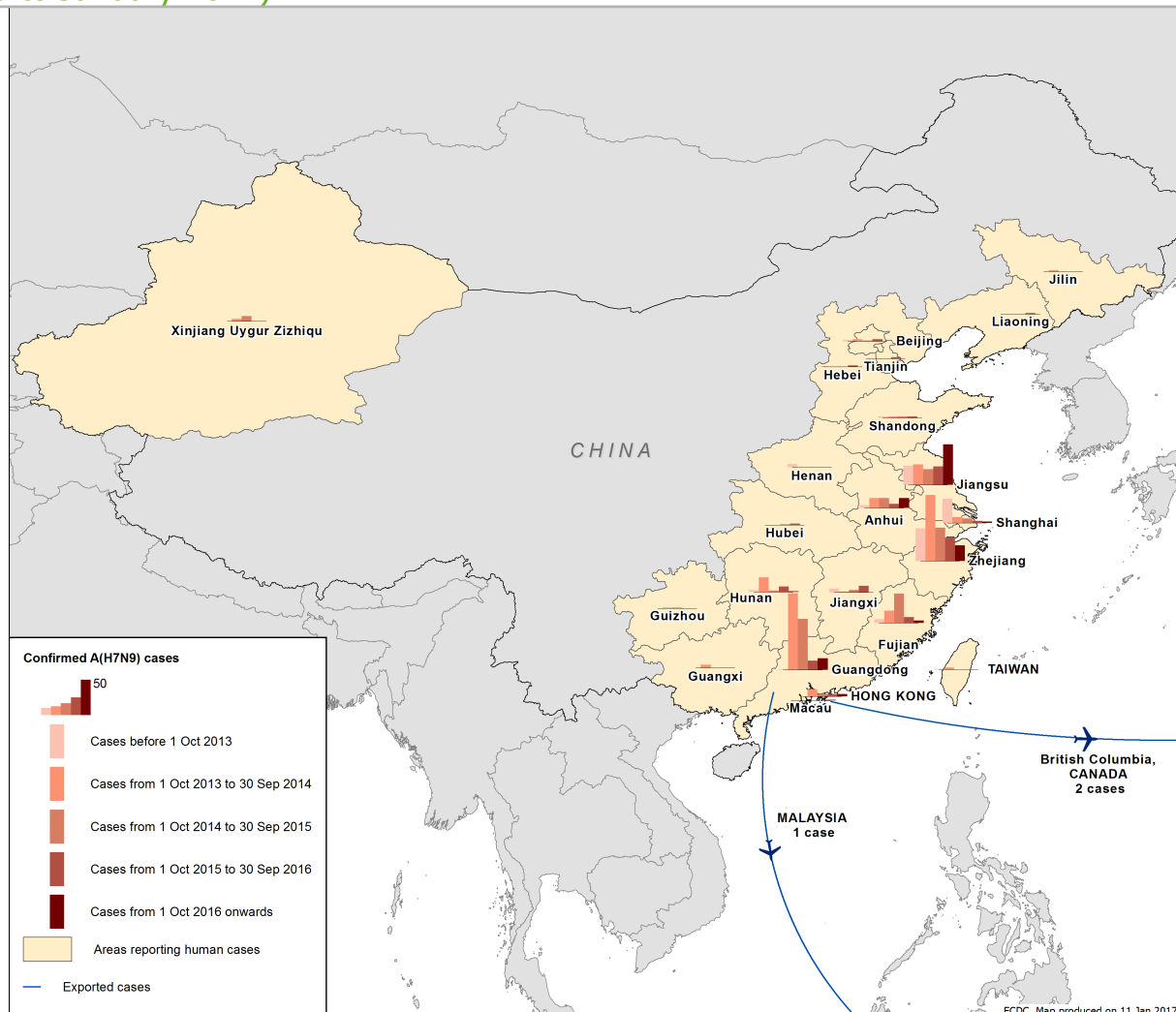
The Chinese health authorities continue to respond to this public health event with enhanced surveillance, epidemiological and laboratory investigation, and scientific research.

ECDC published an updated [Rapid Risk Assessment](#) on 3 February 2015.

ECDC published a guidance document entitled [Supporting diagnostic preparedness for detection of avian influenza A\(H7N9\)](#)

[viruses in Europe](#) for laboratories on 24 April 2013.

Distribution of confirmed cases of A(H7N9) by place of reporting and season (February 2013 to January 2017)



Zika - Multistate (world) - Monitoring global outbreaks

Opening date: 16 November 2015

Latest update: 13 January 2017

Epidemiological summary

Worldwide

Since 2015 and as of 12 January 2017, 71 countries and territories have reported evidence of mosquito-borne transmission of the virus. Since February 2016 and as of 4 January 2017, 13 countries or territories have reported evidence of person-to-person transmission of the virus, probably via sexual transmission.

USA

In Florida, 256 locally acquired and 1 011 travel-related cases have been reported as of 28 December 2016. In Texas, six locally acquired and 298 travel-related cases have been reported as of 10 January 2017.

EU/EEA imported cases

Since June 2015 (week 26), 21 countries (Austria, Belgium, the Czech Republic, Denmark, Finland, France, Greece, Hungary, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom) have reported 2 077 travel-associated Zika virus infections through The European Surveillance System ([TESSy](#)). Over the same time period, nine EU/EEA Member States have reported 102 Zika cases among pregnant women.

Update on microcephaly and/or central nervous system malformations potentially associated with Zika virus infection

As of 4 January 2017, 29 countries or territories have reported microcephaly and other central nervous system malformations in newborns which are potentially associated with Zika virus infection. Brazil is reporting the highest number of cases. As of 4 January 2017, 21 countries or territories have reported Guillain-Barré syndrome potentially associated with Zika virus infection.

Web sources: [ECDC Zika Factsheet](#) | [PAHO](#) | [Colombian MoH](#) | [Brazilian MoH](#) | [Brazilian microcephaly case definition](#) | [SAGE MOH Brazil](#) | [Florida Health department](#)

ECDC assessment

The spread of the Zika virus in the Americas and Asia is likely to continue as the vectors (*Aedes aegypti* and *Aedes albopictus* mosquitoes) are widely distributed there. The likelihood of travel-related cases in the EU is increasing. A detailed [risk assessment](#) was published on 28 October 2016. As neither treatment nor vaccines are available, prevention is based on personal protection measures. Pregnant women should consider postponing non-essential travel to Zika-affected areas.

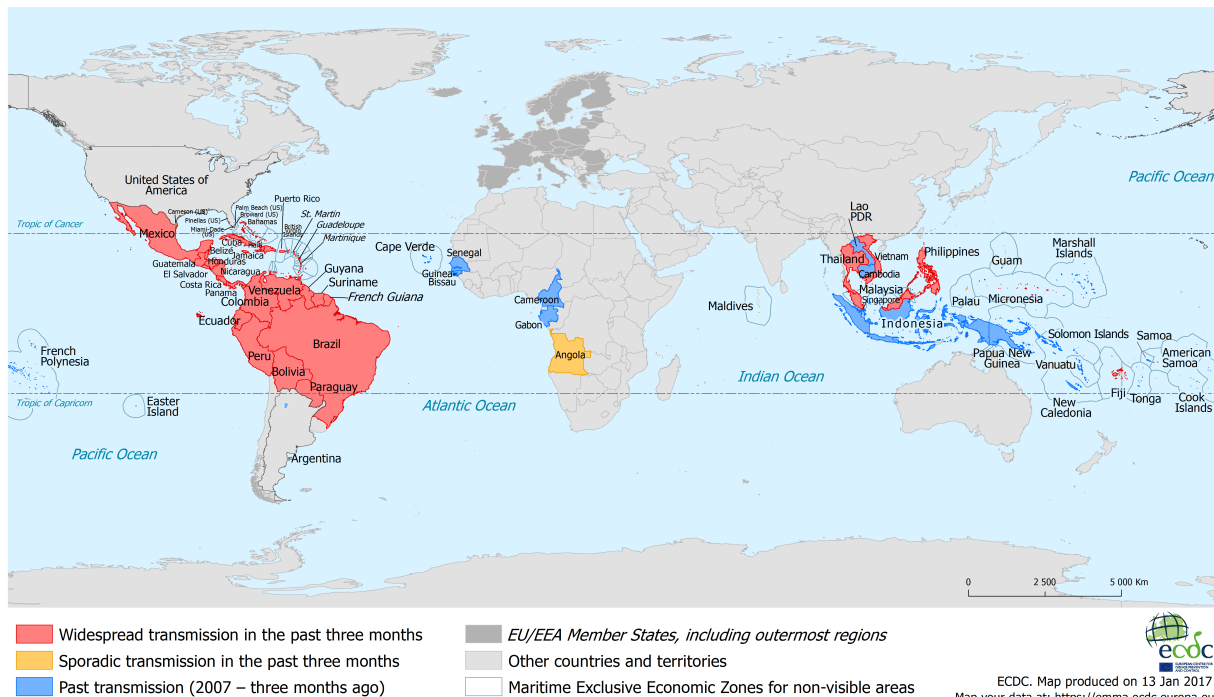
Actions

ECDC publishes an [epidemiological update](#) every Friday together with [maps](#) containing information on countries or territories which have reported confirmed autochthonous cases of Zika virus infection. A Zika virus infection atlas is also available on the ECDC [website](#).

ECDC publishes information concerning vector distribution on the [ECDC website](#), showing the distribution of the vector species at 'regional' administrative levels (NUTS3).

Countries or territories with reported confirmed autochthonous cases of Zika virus infection in the past three months, as of 13 January 2017

ECDC



Chikungunya- Multistate (world) - Monitoring global outbreaks

Opening date: 9 December 2013

Latest update: 13 January 2017

Epidemiological summary

Europe

No autochthonous cases of chikungunya virus infection were reported in EU Member States in 2016.

Americas and the Caribbean

Since the beginning of 2016 and as of 6 January 2017, the Pan American Health Organization (PAHO) has reported 498 261 suspected and confirmed cases, including 172 deaths, in the Americas and Caribbean region. This is an increase of 57 183 (11%) suspected and confirmed cases since the last update on 30 November. The most affected countries are Brazil, Bolivia, Colombia and Honduras. Brazil is reporting with 408 657 the highest number of cases. In 2015 Brazil reported 23 630 cases.

Asia
India

8/14

As of 31 December 2016, India reported 58 136 cases, more than doubling the 27 500 cases reported in 2015. Of the cases reported, Delhi accounts for more than 12 000 cases. This is a significant increase as between 2010 and 2015, six to 120 yearly cases were reported in Delhi.

Pakistan

On 22 December, three cases of the chikungunya virus were confirmed in Karachi, the provincial capital of Sindh by the National Institute of Health. For the first time, the Ministry of National Health Services, Regulation and Coordination (NHSRC), reported an outbreak of chikungunya in Pakistan to the World Health Organization (WHO).

On 7 January, according to the media, the number of suspected chikungunya cases reported by the Sindh health department has risen to 399. The majority of the cases has been reported in the district Malir.

Web sources: [PAHO](#) | [India MoH](#) | [Pacific Public Health Surveillance Network](#) | [Pakistan Media](#)

ECDC assessment

Outbreaks are still ongoing in the Americas and the Pacific region but at a lower level than during the same period last year. Continued vigilance is needed to detect imported cases of chikungunya in tourists returning to the EU from these regions.

Europe is vulnerable to the autochthonous transmission of chikungunya virus. The risk of onward transmission in Europe is linked to importation of the virus by viraemic patients in areas with competent vectors (*Aedes albopictus* in mainland Europe, primarily around the Mediterranean, and *Aedes aegypti* on Madeira). Autochthonous transmission from an imported viraemic chikungunya case is possible during the summer season in the EU.

Actions

ECDC published new [mosquito maps](#) on 3 August 2016 showing the geographical distribution of *Aedes* mosquitoes in Europe.

ECDC monitors the global chikungunya situation on a monthly basis.

Dengue - Multistate (world) - Monitoring global outbreaks

Opening date: 20 April 2006

Latest update: 13 January 2017

Epidemiological summary

Europe

No autochthonous dengue cases have been reported in 2016.

Americas and Caribbean

Since the beginning of the year and as of 12 December 2016, the Pan American Health Organization (PAHO) has reported over 2.2 million confirmed and probable cases, including 947 deaths, in the Americas and Caribbean region. The most affected countries are Brazil, Paraguay, Mexico and Colombia.

Asia

In 2016, the most affected countries in Asia were India, Malaysia, Vietnam, Sri Lanka and Thailand.

India reported 111 880 cases in 2016 compared with 99 913 in 2015.

Malaysia reported 100 028 cases in 2016 compared with 118 325 cases in 2015.

In Vietnam, the cumulative number of cases (79 204) increased by 96% compared with the same period in 2011- 2015.

Sri Lanka reported 49 930 cases in 2016 and Thailand reported 57 425 cases.

China reported 2 098 dengue cases in 2016, a decrease compared with 2015 (3 884 cases).

Laos reported 5 373 cases, a three-fold increase compared with 2015.

In Singapore, the cumulative number of cases in 2016 reached 13 051, which was 20% higher than cases reported during the same period in 2015 (10 842 cases).

Pacific region and Australia

The Philippines, the most affected country in the Pacific region, reported 176 411 cases, compared with 177 767 in 2015.

Australia reported 2 106 cases in 2016, compared with 1 667 in 2015. In 2016 and as of 9 January 2017, New Caledonia reported 730 cases. Since 15 August and as of 11 December 2016, 6 294 cases of dengue have been detected in Solomon Island. Dengue serotype-2 was identified in 60% of samples sent. In Vanuatu, as of 5 January 2017, 4 011 suspected cases have been reported since 11 November 2016. Dengue serotype-2 was confirmed in two samples.

Web sources: [ECDC Dengue](#) | [Healthmap Dengue](#) | [ProMED Asia](#) | [Pacific Public Health Surveillance Network](#) | [WHO](#) | [DoH Australia](#) | [National Environment Agency's \(NEA\)](#) | [Malaysia MoH](#) | [New Caledonia MoH](#) | [WHO Western Pacific Region](#)

ECDC assessment

Dengue is widely spread in tropical and subtropical regions. Introduction and autochthonous transmission of dengue fever in Europe is possible where competent vectors are present. This underlines the importance of surveillance and vector control in European countries that have competent vectors.

Actions

ECDC monitors the dengue situation worldwide on a monthly basis.

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

Opening date: 24 September 2012

Latest update: 12 January 2017

Epidemiological summary

As of 12 January 2017, 1 901 cases of MERS, including 728 deaths, have been reported by health authorities worldwide.

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](#) | [ECDC factsheet for professionals](#)

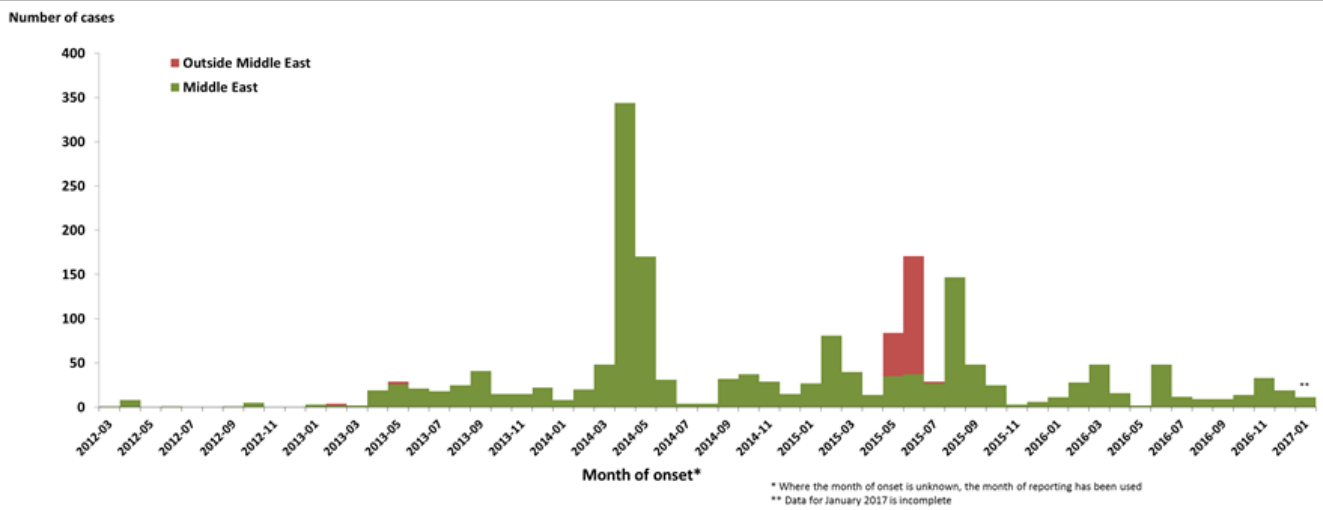
ECDC assessment

The risk of sustained human-to-human transmission in Europe remains very low. The ECDC's conclusion continues to be that the MERS-CoV outbreak poses a low risk to the EU, as stated in a [rapid risk assessment](#) published on 21 October 2015, which provides details on the last case reported in Europe.

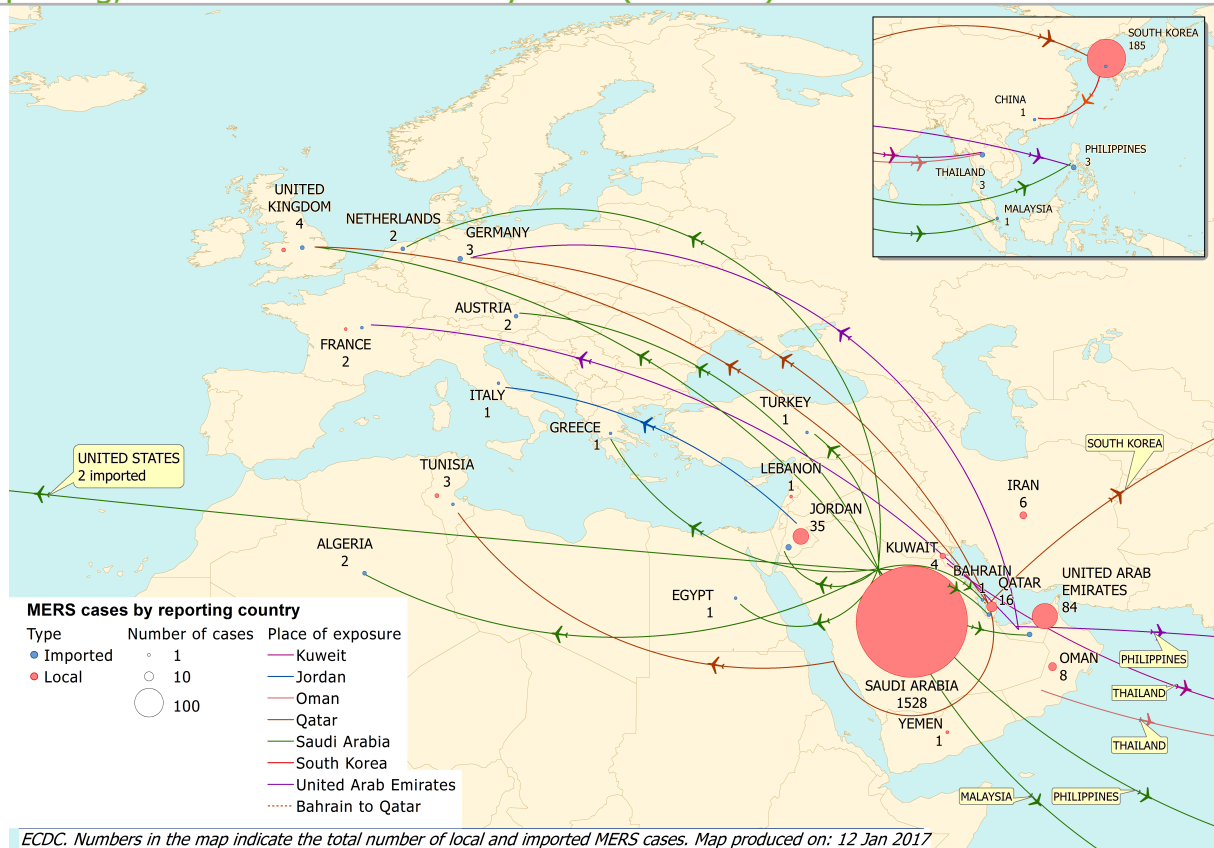
Actions

ECDC published the 21st update of its MERS-CoV [rapid risk assessment](#) on 21 October 2015.

Distribution of confirmed cases of MERS-CoV by probable place of infection and country of reporting, March 2012 – 12 January 2017 (n=1 901)



Distribution of confirmed cases of MERS-CoV by probable place of infection and country of reporting, March 2012 – 12 January 2017 (n=1 901)



Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005

Latest update: 12 January 2017

Epidemiological summary

As of 11 January 2017, no cases of WPV1 have been reported to WHO in 2017.

Officially reported WPV1 cases as of 11 January 2017:

- Total global cases in 2016: 35 (compared with 70 for the same period in 2015)
- Afghanistan: 12 cases in 2016 (compared with 19 for the same period in 2015), onset of paralysis of the most recent case: 12 October 2016
- Pakistan: 19 cases in 2016 (compared with 51 for the same period in 2015), onset of paralysis of the most recent case: 3 November 2016
- Nigeria: 4 cases in 2016 (compared with 0 for the same period in 2015), onset of paralysis of the most recent case: 21 August 2016

Officially reported cVDPV2 cases as of 11 January 2017:

12/14

- Total number of cases in 2016: 4
- Lao People's Democratic Republic: 3 cases in 2016
- Pakistan: 1 case in 2016

Web sources: [Polio eradication: weekly update](#) | [ECDC Poliomyelitis factsheet](#) | [Temporary Recommendations to Reduce International Spread of Poliovirus](#) | [WHO Statement on the Seventh Meeting of the International Health Regulations Emergency Committee on Polio](#)

ECDC assessment

The last locally-acquired wild polio cases within the current EU borders were reported from Bulgaria in 2001. The most recent wild polio outbreak in the WHO European Region was in Tajikistan in 2010, when importation of WPV1 from Pakistan resulted in 460 cases.

References: [ECDC latest RRA](#) | [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?](#) | [RRA Outbreak of circulating vaccine-derived poliovirus type 1 \(cVDPV1\) in Ukraine](#)

Actions

ECDC monitors reports of polio cases worldwide through epidemic intelligence in order to highlight polio eradication efforts and identify events that increase the risk of wild poliovirus being reintroduced into the EU. Following the declaration of polio as a PHEIC, ECDC updated its [risk assessment](#). ECDC has also prepared a background document with travel recommendations for the EU.

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