



This weekly bulletin provides updates on threats monitored by ECDC.

NEWS

On 29 March 2018, Eurosurveillance published an article on influenza, entitled '[Dominant influenza A\(H3N2\) and B/Yamagata virus circulation in EU/EEA, 2016–17 and 2017–18 seasons, respectively](#)'.

The article states that the ongoing 2017–2018 influenza season is a very severe one. It is dominated by the circulation of influenza B and co-circulation of A(H1N1)pdm09 and/or A(H3N2) viruses. The dominant B/Yamagata virus circulation, with a mixed A virus pattern, is causing high severity, prolonging peak influenza activity, and is leading to all-cause excess mortality in the EU/EEA, similar to the 2012–2013 season, which was also dominated by influenza B/Yamagata virus with co-circulation of A(H1N1)pdm09 and A(H3N2).

In 2016–2017, the dominance of A(H3N2) viruses was associated with high severity, a prolonged season and all-cause excess mortality in the EU/EEA, comparable to the situation in the United States during the 2017–2018 season.

The season in Europe has progressed in a marked west–east direction, and countries in the eastern part of the WHO European Region should prepare for possible cases of severe disease which may have an impact on healthcare services. Influenza activity still remains high in central and western parts of Europe, with continuously observed excess all-cause mortality.

I. Executive summary

EU Threats

Influenza – Multistate (Europe) – Monitoring season 2017 – 2018

Opening date: 11 October 2017

Latest update: 6 April 2018

Influenza transmission in Europe shows a seasonal pattern, with peak activity during the winter months.

→ Update of the week

During week 13 in 2018 (26–31 March 2018), influenza viruses continued to circulate in the region; all countries reported low or medium intensity of activity of respiratory infections.

Dengue – France, La Réunion – 2018

Opening date: 13 March 2018

Latest update: 6 April 2018

Since the beginning of 2018, La Réunion island, a French department in the Indian Ocean, has seen a significant increase in dengue cases.

→Update of the week

Since the beginning of 2018 and as of 1 April, there have been 755 autochthonous confirmed cases of dengue in La Réunion. Among these cases, 167 were reported between 26 March and 1 April 2018.

Non EU Threats

Poliomyelitis – Multistate (World) – Monitoring global outbreaks

Opening date: 8 September 2005

Latest update: 6 April 2018

Global public health efforts are ongoing to eradicate polio 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 7 February 2018, WHO agreed that the spread of poliovirus remains a public health event of international concern and extended the temporary recommendations for an additional three months. In June 2002, the WHO European Region was officially declared polio-free.

→Update of the week

Since the previous CDTR on 2 March and as of 4 April 2018, five cases of wild polio virus type 1 (WPV1) have been reported: four from Afghanistan and one from Pakistan. During the same period, three vaccine-derived polio viruses type 2 (cVDPV2) cases have been reported, all from the Democratic Republic of Congo.

Influenza A(H7N9) – China – Monitoring human cases

Opening date: 31 March 2013

Latest update: 6 April 2018

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, additional cases from China have been reported. 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

During March 2018, no human cases of avian influenza A(H7N9) were reported.

On 23 March 2018, ECDC, EFSA and the European Union Reference Laboratory for Avian Influenza published a report, entitled '[Avian influenza overview November 2017 – February 2018](#)'.

Yellow fever – Brazil – 2017 - 2018

Opening date: 16 January 2017

Latest update: 6 April 2018

[Yellow fever](#) is a mosquito-borne viral infection which occurs in some tropical areas of Africa and South America.

Brazil experienced a major outbreak of yellow fever in 2016–2017. An upsurge of confirmed cases has been reported since December 2017.

→Update of the week

Since the previous CDTR on 23 March 2018 and as of 3 April, [Brazil](#) has reported 29 cases and no deaths. The cases occurred in Minas Gerais (24), São Paulo (4) and Espírito Santo (1) states.

During the same time period, [Brazil](#) has reported confirmed epizootics in non-human primates in São Paulo (51), Rio de Janeiro (6) and Minas Gerais (4) states.

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

Opening date: 24 September 2012

Latest update: 6 April 2018

Since the disease was first identified in Saudi Arabia in September 2012, approximately 2 000 MERS-CoV cases have been detected in over 20 countries. In Europe, eight countries have reported confirmed cases, all with direct or indirect connections to the Middle East. The majority of MERS-CoV cases continue to be reported from the Middle East. 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 on 25 February 2018, [Saudi Arabia](#) has reported 21 human cases of MERS-CoV. Of the 21 cases, four were female. The age of the cases ranged between 5 and 74 years, with a mean of 56 years. Five cases in Riyadh were reported as due to nosocomial transmission. Three cases in Jeddah were household contacts. Nine cases reported camel contact. For four cases the possible route of infection was not specified. The 21 cases were reported from Riyadh (8), Jeddah (4), Hufoof (3), Najran (2), Ahad Rufaidah (1), Buraidah (1), Hail (1), and Medinah (1)

[Oman](#) reported one case, a 74-year-old male Omani national, living in Batinah, who had symptom onset on 23 February 2018. The patient had neither recently travelled nor did he report any contacts with persons who experienced respiratory symptoms. He also had not contact with known MERS-CoV cases. The patient took care of camels that were reportedly ill. This is the eleventh case that has been reported from Oman since 2013.

II. Detailed reports

Influenza – Multistate (Europe) – Monitoring season 2017 – 2018

Opening date: 11 October 2017

Latest update: 6 April 2018

Epidemiological summary

During week 13-2018 (26–31 March 2018), influenza viruses continued to circulate in the region; all countries reported low or medium intensity of activity of respiratory infections. In addition, 35% of the individuals sampled from primary healthcare settings tested positive for influenza viruses, which is still very high for this time of the season, especially since the peak rate for the region was already recorded in week 5-2018.

Both influenza virus types (A and B) were co-circulating, with the majority being type B viruses. The B/Yamagata lineage continues to dominate. Similar proportions of influenza type A and B viruses were reported in patients admitted to ICU, with the majority of severe cases reported this season being due to influenza type B and occurring in persons above the age of 15 years.

A seasonal reassortant A(H1N2) influenza virus, consisting of HA and NS genes of human seasonal A(H1N1)pdm09 influenza virus and M, NA, NP, PA, PB1 and PB2 genes of human seasonal A(H3N2) influenza virus, was detected in the Netherlands in March. WHO assesses the risk posed by this virus to be comparable to the risk posed by the currently circulating seasonal influenza viruses, as all the genes of this reassortant virus originate from circulating seasonal viruses

Source: [Flu News Europe](#)

ECDC assessment

Influenza activity continues to be reported in Europe, putting pressure on healthcare systems and creating significant media attention. Excess winter mortality is being reported from several countries and is associated with A(H3N2) circulation. Vaccination programmes targeting the elderly, people with chronic diseases, and healthcare workers should be continued and intensified in countries that have not yet seen a seasonal peak. Antiviral treatment with neuraminidase inhibitors should be advised for people at high risk of complications from influenza, such as people with underlying chronic respiratory or cardiovascular diseases, and for people with severe or rapidly progressive symptoms. Antiviral prophylaxis should be considered during the early phases of outbreaks in closed settings such as nursing homes. Interpersonal distancing measures are also likely to provide protection for infants, the elderly and the frail.

Actions

ECDC monitors influenza activity in Europe during the winter season and publishes its weekly report on the [Flu News Europe website](#). ECDC's risk assessment for the 2017-2018 season is available on [ECDC website](#). Recommendations on the composition of the 2017-2018 influenza virus vaccine are available on [WHO website](#).

Dengue – France, La Réunion – 2018

Opening date: 13 March 2018

Latest update: 6 April 2018

Epidemiological summary

Authorities have reported 755 cases on the island from the beginning of 2018 until 1 April 2018. Of all reported cases, 167 were reported between 26 March and 1 April 2018. The main affected areas are on the western part of the island. The most prevalent serotype is DENV-2.

The main vector of infection implicated in the outbreak is *Aedes albopictus*.

On 27 March 2018, authorities decided to raise the level of the emergency plan [ORSEC](#) to 3. This plan includes:

- active case finding;
- intensification of vector control;
- reinforcement of communication to the public and healthcare workers;
- mobilisation of additional resources such as the firefighters.

Sources: [ARS](#)

ECDC assessment

The persistence at low level of the dengue transmission during the northern hemisphere winter has been of concern and eventually led to a higher dengue virus circulation ahead of the usual dengue season in La Reunion (February to June). The current outbreak is a significant event because the number of cases already exceeds the yearly number of cases reported since 2010. Further transmission is expected as the weather conditions are currently favourable to vector activity and will remain favourable for several more months. Control activities are currently in place and include active reinforced vector control, enhanced surveillance, blood safety measures and social mobilisation.

For continental Europe, the introduction of the virus via viraemic travellers is possible, but considering that the weather conditions are currently not favourable to mosquito activity, the risk of local transmission of the virus is considered very low. However, with the start of the spring in continental Europe, the flight passenger volume between La Réunion and France, and the demonstrated vector capacity of *Aedes albopictus*, which is largely present in southern Europe, the risk of occurrence of outbreaks of autochthonous cases will increase.

ECDC will closely monitor the situation and will reassess the situation as needed.

Actions

ECDC reports monthly dengue outbreaks detected through epidemic intelligence in the CDTR.

Poliomyelitis – Multistate (World) – Monitoring global outbreaks

Opening date: 8 September 2005

Latest update: 6 April 2018

Epidemiological summary

Since the beginning of 2018, two countries have recorded cases of wild polio virus type 1 (WPV1): Afghanistan (seven cases) and Pakistan (one case). For the same period in 2017, cases were reported from Afghanistan (three cases) and Pakistan (two cases).

Since the beginning of 2018, three vaccine-derived polio viruses type 2 (cVDPV2) cases have been reported, all from the Democratic Republic of Congo. For the same time period in 2017, no cVDPV2 were reported.

ECDC links: [ECDC poliomyelitis web page](#) | [Information to travellers to polio-infected countries](#)

Sources: [WHO IHR Emergency Committee](#) | [Polio eradication: weekly update](#)

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. Importation of the infection as well as of polio cases in to the EU remains possible.

ECDC links: [Rapid Risk Assessment on suspected polio cases in Syria and the risk to the EU/EEA](#) | [ECDC poliomyelitis web page](#)

Actions

ECDC provides updates on the polio situation on a monthly basis. 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](#).

Influenza A(H7N9) – China – Monitoring human cases

Opening date: 31 March 2013

Latest update: 6 April 2018

Epidemiological summary

In March 2013, a novel avian influenza A(H7N9) virus was detected in humans in China. Since then and up to 27 February 2018, 1 567 cases have been reported, including 567 deaths. The outbreak shows a seasonal pattern. The first wave in spring 2013

(weeks 7-2013 to 40-2013) resulted in 135 cases, the second wave (weeks 41-2013 to 40-2014) led to 320 cases, the third wave (weeks 41-2014 to 40-2015) caused 223 cases, the fourth wave (weeks 41-2015 to 40-2016) caused 120 cases, the fifth wave (weeks 41-2016 to 40-2017) resulted in 766 cases, and the sixth wave which started on week 40-2017 has resulted in three cases.

The 1 567 cases were reported from Zhejiang (310), Guangdong (259), Jiangsu (253), Fujian (108), Anhui (101), Hunan (95), Shanghai (56), Jiangxi (50), Sichuan (38), Beijing (35), Guangxi (32), Hubei (31), Hebei (29), Henan (28), Shandong (27), Hong Kong (21), Guizhou (20), Xinjiang (14), Chongqing (9), Gansu (5), Shaanxi (7), Yunnan (8), Taiwan (5), Tianjin (5), Liaoning (5), Jilin (3), Tibet (3), Shanxi (3), Inner Mongolia (2), and Macau (2). Three imported cases were reported in Canada (2) and Malaysia (1).

ECDC links: [Zoonotic influenza web page](#) | [ECDC rapid risk assessment Influenza A\(H7N9\) virus in China - implications for public health - 7th update, 3 July 2017](#) | [ECDC/EFSA joint report: Avian influenza overview October 2016–August 2017](#)

Sources: [Chinese CDC](#) | [Hong Kong CHP](#) | [WHO](#) | [WHO FAQ page](#) | [ECDC](#)

ECDC assessment

Based on the seasonal pattern of avian influenza A(H7N9) viruses, more human cases are expected as the influenza activity increases during the winter months. During previous seasons, the number of human cases peaked in January. During the entire month of January 2018, one case was identified; this might indicate a change in the disease pattern.

The possibility of humans who were infected with influenza A(H7N9) in China and return to the EU/EEA cannot be excluded. However, the risk of the disease spreading in Europe through humans is still considered low, as there is no evidence of sustained human-to-human transmission.

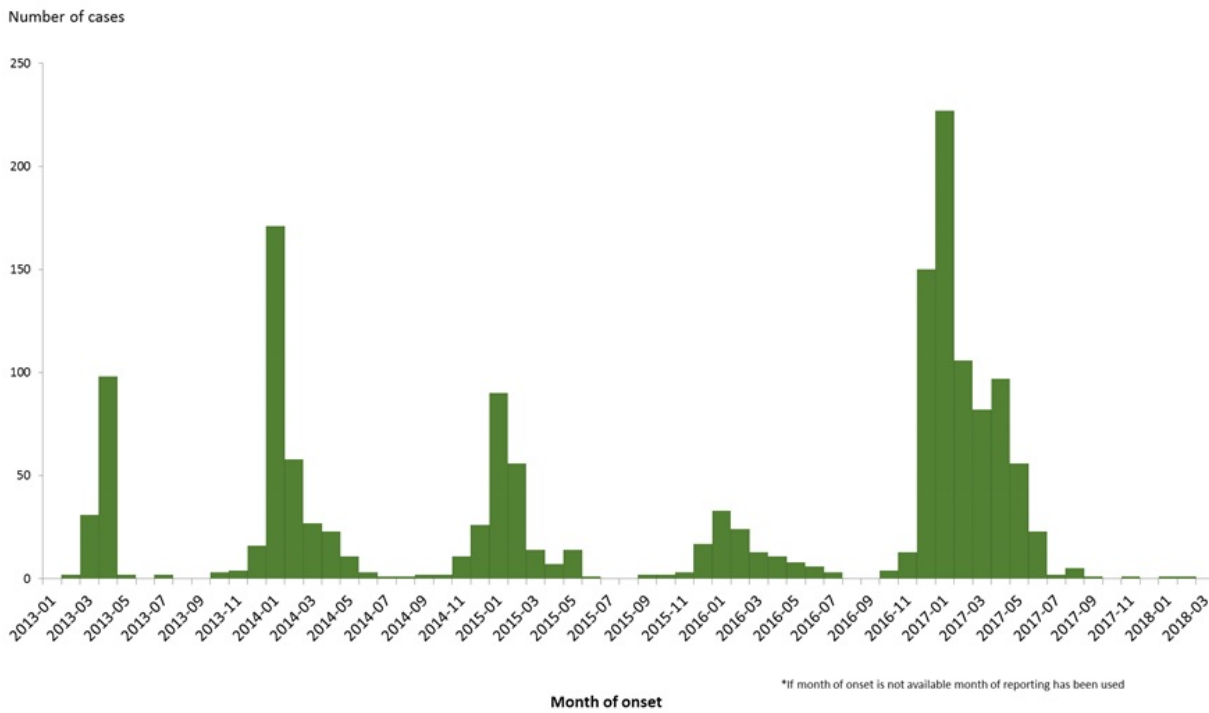
Sources: [WHO](#)

Actions

ECDC published the seventh update of its [rapid risk assessment](#) on 3 July 2017, addressing the genetic evolution of influenza A (H7N9) virus in China and the implications for public health. ECDC monitors this event through epidemic intelligence and will report only if there is an epidemiological update.

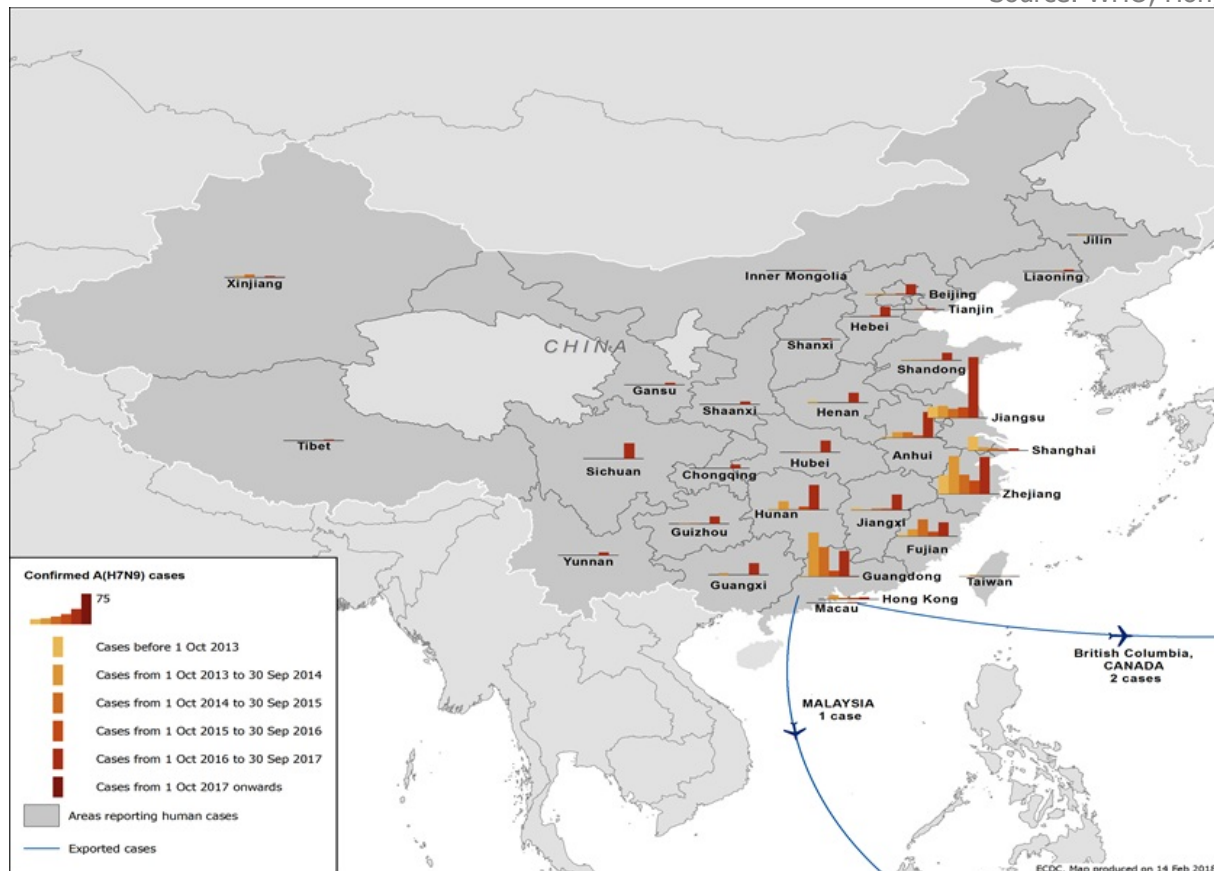
Distribution of confirmed cases of A(H7N9) by first available month February 2013 – 31 March 2018 (n= 1 567)

Source: WHO, Hong Kong



Distribution of confirmed cases of A(H7N9) by first available month, February 2013 to 31 March 2018

Source: WHO, Hong Kong



Yellow fever – Brazil – 2017 - 2018

Opening date: 16 January 2017

Latest update: 6 April 2018

Epidemiological summary

Between July 2017 and week 13-2018, the Ministry of Health in Brazil reported 1 127 confirmed human cases of yellow fever, including 328 deaths. The cases occurred in Minas Gerais (477), São Paulo (455), Rio de Janeiro (188), Espírito Santo (6) and Distrito Federal (1).

During the same time period, the Ministry of Health reported 691 confirmed epizootics in non-human primates. Of those, 554 were reported in São Paulo State, 97 in Minas Gerais, 36 in Rio de Janeiro State, two in Tocantins, and one each in Mato Grosso and Espírito Santo.

Cases among returning travellers

Since the beginning of 2018, unvaccinated travellers from France (1), the Netherlands (1), Romania (1), Switzerland (1) and

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Germany (two confirmed cases, one of whom was reported by the United Kingdom) have contracted yellow fever in Brazil.

Vaccination recommendations

WHO determined that, in addition to the areas listed in previous updates, the entire state of São Paulo should be considered at risk for yellow fever transmission. Consequently, vaccination against yellow fever is recommended for international travellers visiting the state of São Paulo.

The [MoH Brazil](#) announced a progressive extension of the standard vaccination recommendations for the whole of Brazil. It will be expanded gradually until 2019.

Sources: [MoH](#) | [WHO](#)

ECDC assessment

The detection of confirmed yellow fever cases in the vicinity of major cities such as São Paulo and Rio de Janeiro is of concern. Authorities are conducting vaccination campaigns. In this context, European citizens travelling to areas at risk should seek medical advice prior travel and receive the yellow fever vaccine at least 10 days prior to travelling. They should also follow measures to avoid mosquito bites and be aware of yellow fever signs and symptoms.

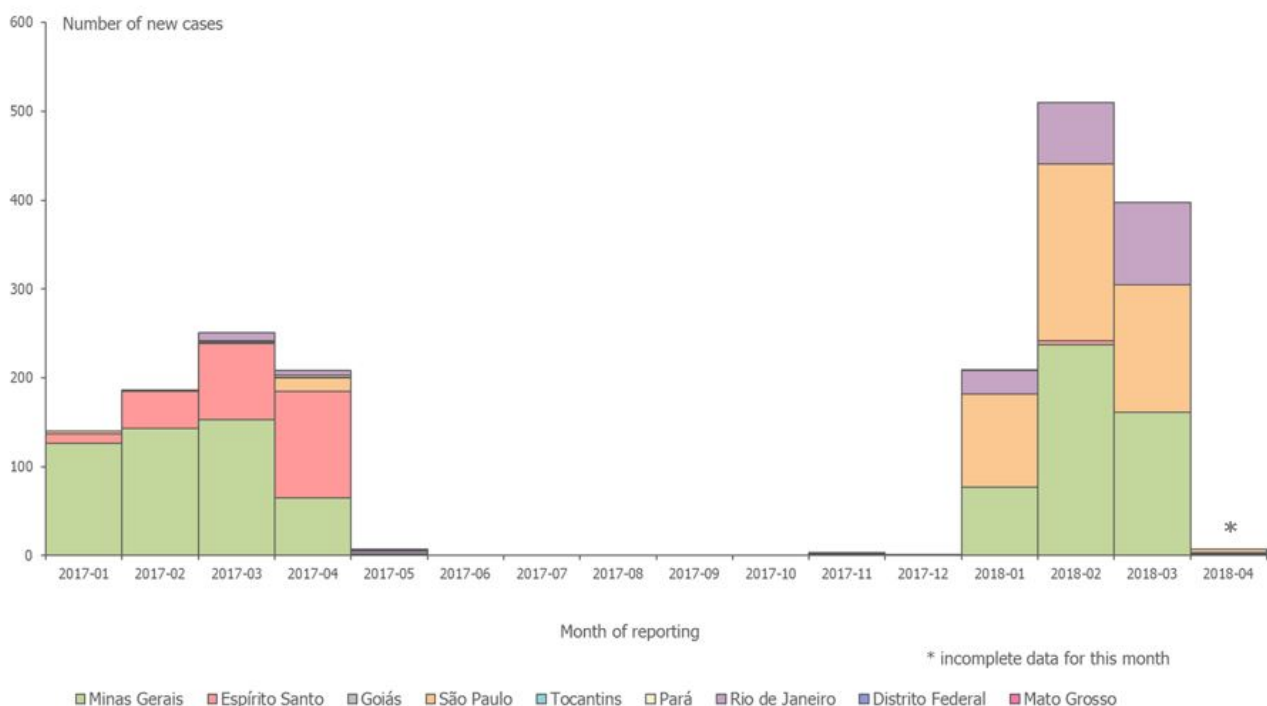
In Europe, *Aedes aegypti*, the primary vector of yellow fever in urban settings, has been established in Madeira, Portugal, since 2005. Presence of *Aedes aegypti* was first reported in 2017 in Fuerteventura, Canary Islands, Spain. The probability of local yellow fever transmission in the EU/EEA following introduction by a viraemic traveller is currently considered very low as weather conditions during the winter season in the continental EU/EEA are not favourable to vector activity.

Actions

ECDC published updates of its rapid risk assessment 'Outbreak of yellow fever in Brazil' on [13 April 2017](#) and [18 January 2018](#). On 16 March 2018, ECDC published the third update of the RRA on its [website](#).

Distribution of confirmed human cases of yellow fever by month, Brazil, January 2017 - 3 April 2018

ECDC



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

Opening date: 24 September 2012

Latest update: 6 April 2018

Epidemiological summary

Since April 2012 and as of 4 April 2018, 2 216 cases of MERS, including 829 deaths, have been reported by health authorities worldwide.

Web sources: [ECDC's latest rapid risk assessment](#) | [ECDC novel coronavirus webpage](#) | [WHO](#) | [WHO MERS updates](#) | [Saudi Arabia MoH](#) | [ECDC factsheet for professionals](#)

ECDC assessment

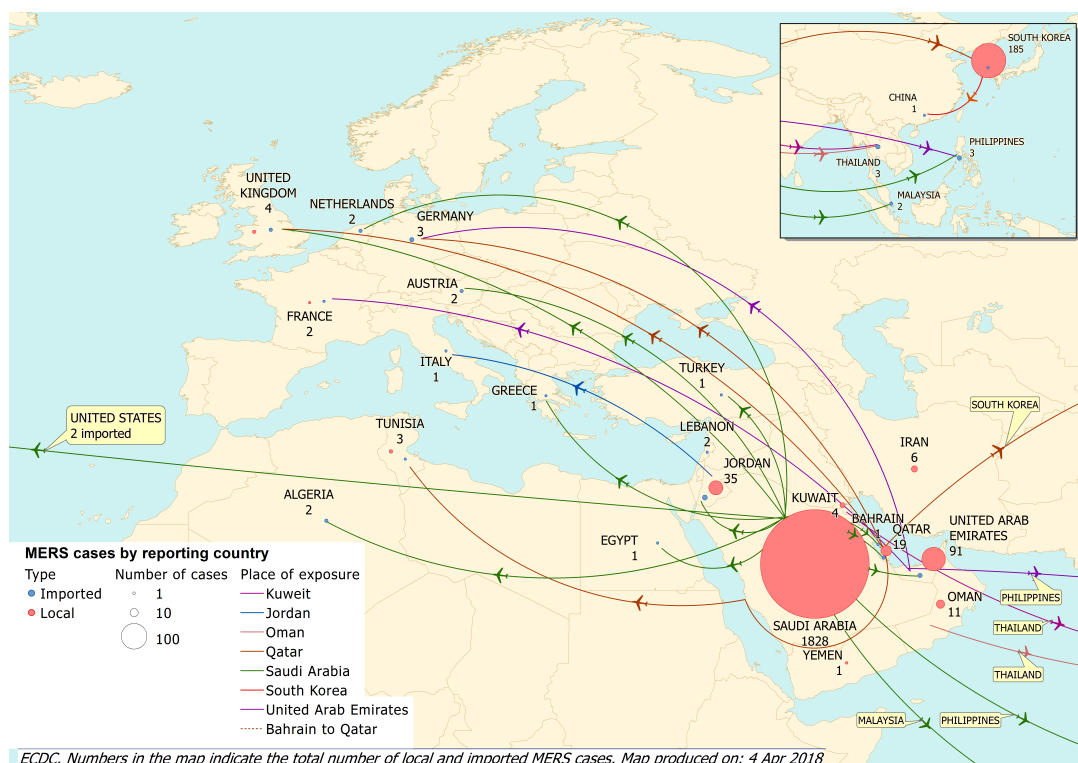
The risk of sustained human-to-human transmission in Europe remains very low. ECDC's conclusion continues to be that the MERS-CoV outbreak poses a low risk to the EU, as stated in a [rapid risk assessment](#) published on 21 October 2015, which also provides details on the last case reported in Europe.

Actions

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

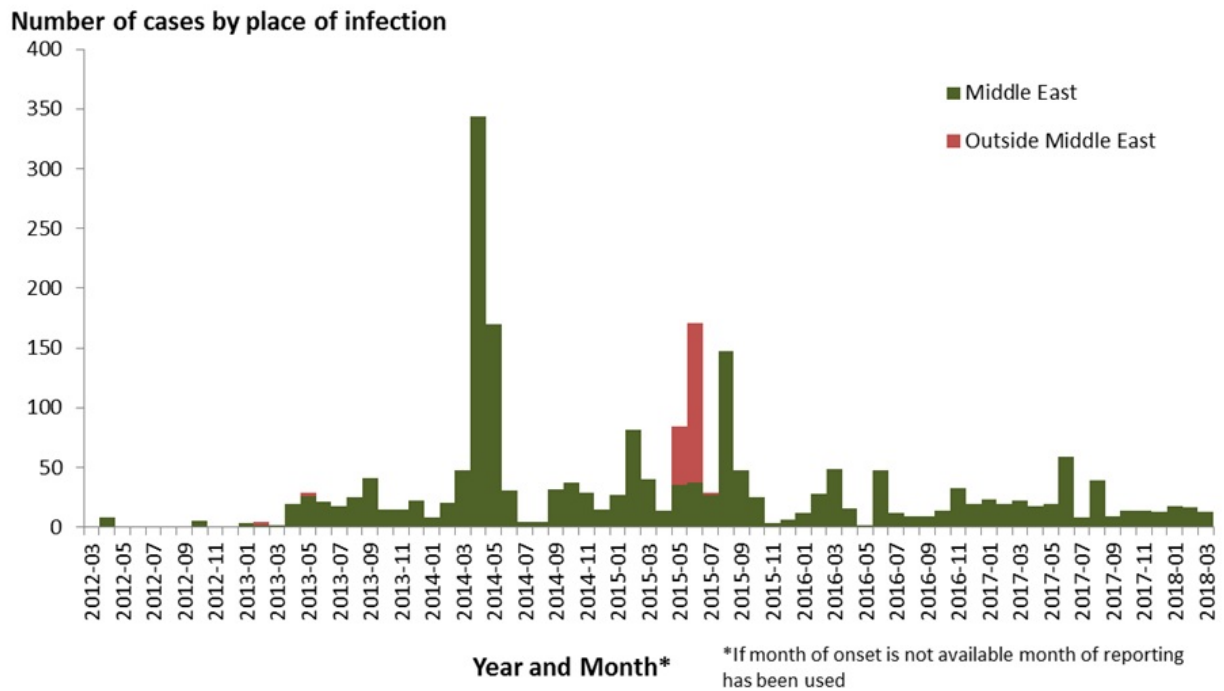
Distribution of confirmed cases of MERS-CoV by country of probable infection and country of report from March 2012 and as of 31 March 2018

Source: ECDC



Distribution of confirmed cases of MERS-CoV by first available month and region, from March 2012 and as of 31 March 2018

Source: ECDC



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