

This weekly bulletin provides updates on threats monitored by ECDC.

News

ECDC Threat Reports app available for downloading

ECDC just released its Threat Reports app, a free application that gives direct access to key updates and reports on communicable disease threats of concern to the EU.

Content can be searched by disease or agent - from avian influenza to Zika - or by report type (for example Communicable Disease Threat Reports, rapid risk assessments or epidemiological updates).

The app lets you read reports offline and you can receive push notifications when new reports are available. The application is free of charge and can be accessed by anyone. ECDC partners can access additional reports by logging in with their ECDC credentials.

The Threat Reports app can be downloaded from the [App Store](#), [Google Play](#) and the [Windows App Store](#).



I. Executive summary

EU Threats

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

Opening date: 13 October 2016

Latest update: 10 February 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

During week 5/2017, influenza activity remained elevated across the region, with 28 of 43 countries reporting increased activity.

An updated risk assessment on seasonal influenza in EU/EEA countries was published by [ECDC](#) on 25 January 2017.

Non EU Threats

Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013

Latest update: 10 February 2017

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, and up to 9 February 2017, 918 cases have been reported to WHO, including at least 359 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

According to the weekly bulletin issued by [Hong Kong](#), between 29 January and 4 February, China reported 63 human cases of avian influenza A(H7N9) from Jiangsu (13 cases), Guangdong (10 cases), Hunan (9 cases), Zhejiang (8 cases), Jiangxi (7 cases), Anhui (5 cases), Fujian (5 cases), Hubei (4 cases), Guangxi (1 case) and Sichuan (1 case). In addition, health authorities in Taiwan reported one imported human case of avian influenza A(H7N9). Since March 2013 (as of 6 February 2017), 1 107 human cases of avian influenza A(H7N9) have been reported globally.

These cases have not yet been acknowledged by WHO and do not appear in the summary.

Yellow fever - Brazil - 2016-2017

Opening date: 16 January 2017

Latest update: 10 February 2017

Yellow fever is a viral infection that is present in some tropical areas of Africa and South America. The virus is transmitted by mosquitoes, which also act as an important reservoir. Brazil has been experiencing an outbreak of yellow fever since December 2016; the outbreak was notified on 6 January 2017.

→Update of the week

Epidemic in humans:

On 9 February 2017, the state of Rio Grande do Norte reported its first suspected case of locally acquired yellow fever. Since the beginning of the outbreak in December 2016, six states have reported autochthonous transmission of yellow fever: Minas Gerais, Espírito Santo and São Paulo have reported confirmed cases, while Bahia, Tocantins and Rio Grande do Norte have reported suspected cases.

As of 9 February 2017, 1 038 cases (including 220 confirmed) have been reported in Brazil. This represents an increase of 212 cases (including 65 confirmed) since the last CDTR. The most-affected state remains Minas Gerais, with 900 cases (including 195 confirmed) reported.

Epizootics in non-human primates:

Between 1 December 2016 and 9 February 2017, 623 epizootics in non-human primates were reported in Brazil, involving the death of 1 513 animals, 341 of which were confirmed for yellow fever.

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

Opening date: 24 September 2012

Latest update: 10 February 2017

Since April 2012 and as of 9 February 2017, 1 913 cases of MERS, including 733 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 12 January 2017, there have been 15 cases of MERS-CoV reported in Saudi Arabia. The cases were reported from Taif (4), Hufoof (2), Jeddah (2), Najran (2), Alqarah (1), Hafer Albatin (1), Jubail (1), Madinah (1) and Riyadh (1).

Among the 15 cases, one case in Jeddah is a healthcare worker who cared for a MERS-CoV patient, also in Jeddah. All but two cases were male. Eight of the 15 cases reported that they had contact with camels, and seven drank camel milk prior to the onset of symptoms.

II. Detailed reports

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

Opening date: 13 October 2016

Latest update: 10 February 2017

Epidemiological summary

Week 5/2017 (30 January–5 February 2017)

Influenza activity remained elevated across the region, with 28 of 43 countries reporting medium to very high intensity. Most countries reported stable or decreasing activity compared to the previous week.

Excess all-cause mortality has been observed in people 15–64 years of age and people 65 years or older in many of the 18 countries that provide data on excess all-cause mortality. Most likely, this is mainly due to the circulation of influenza A(H3N2) viruses.

The proportion of influenza virus detections among sentinel surveillance specimens decreased to 45% from 51–52% seen since week 51/2016.

The great majority of influenza viruses detected were type A (94%) and, of those subtyped, 97% were A(H3N2). However, there was evidence that influenza type B detections were on the increase, as is often seen towards the end of an influenza season. Most of the hospitalised laboratory-confirmed influenza cases that were reported occurred in people aged 65 years or older.

Season overview

Influenza activity started early this season compared to 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 six 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 has been A(H3N2).

In an influenza season in which A(H3N2) viruses predominate, elderly populations might be expected to be the most severely affected. Indeed, confirmed cases of influenza virus type A infection reported from hospitals have predominantly been in adults over 65 years of age.

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

Early monitoring of vaccine effectiveness in [Finland](#) and [Sweden](#) suggests levels of effectiveness in persons aged 65 years or older, similar to the suboptimal estimates from annual multi-country studies in the 2011–2012 and 2014–2015 seasons. Given the typically suboptimal vaccination coverage and the partial effectiveness of influenza vaccines, rapid use of neuraminidase inhibitors (NAIs) for laboratory-confirmed or probable cases of influenza infection should be considered for vaccinated and non-vaccinated patients at risk of developing complications.

Reduced susceptibility to oseltamivir or zanamivir has not been observed for any of the tested viruses so far this season.

A [risk assessment](#) on seasonal influenza in EU/EEA countries was published by ECDC on 24 December 2016 and was [updated](#) on 25 January 2017. The above description is in line with the findings of these assessments.

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.

An updated risk assessment on seasonal influenza in EU/EEA countries was published by [ECDC](#) on 25 January 2017.

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.

Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013

Latest update: 10 February 2017

Epidemiological summary

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, and up to 9 February 2017, 918 cases have been reported to WHO, including at least 359 deaths.

The A(H7N9) outbreak shows a seasonal pattern peaking in the winter months, with only sporadic cases during the summer. Cases reported between weeks 41 and 40 in the subsequent year are considered to belong to one epidemic wave. The first wave in spring 2013 (weeks 7/2013–40/2013) included 135 cases; 319 cases were reported during the second wave (weeks 41/2013–40/2014), 223 cases were reported during the third wave (weeks 41/2014–40/2015), and 121 were reported in wave four (weeks 41/2015–40/2016). A fifth wave started in October 2016 (week 41/2016), with 120 cases as of 24 January 2017.

According to the health [authorities in Hong Kong](#), the 1 107 human cases of influenza A(H7N9) reported since March 2013 have the following geographical distribution: Zhejiang (272), Guangdong (231), Jiangsu (209), Fujian (87), Anhui (69), Shanghai (55), Hunan (55), Jiangxi (33), Shandong (12), Xinjiang Uygur (10), Beijing (9), Guizhou (6), Hebei (4), Henan (5), Guangxi (4), Hubei (8), Jilin (2), Tianjin (2), Liaoning (3), Sichuan (1), Hong Kong (20), and two cases in Macau and five 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](#) | [Hong Kong CHP](#)

ECDC assessment

This is the fifth northern hemisphere winter season with human cases due to A(H7N9) infections. During this wave, the number of human cases is already higher than during the whole last wave in 2015–16, with a significantly higher number than in the last two waves during the same time period. A steep increase of human cases has been reported since the beginning of December 2016 from China; the epidemiology, however, does not seem to have changed during this season.

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. The age of the infected humans is comparable with previous waves. Influenza A(H7N9) viruses continue to be detected in poultry (and environments where poultry are present) in the areas where human cases are occurring; however, more human cases are detected in rural areas. The upsurge of human cases is most likely due to a higher environmental contamination related to live bird markets.

At present, the most immediate threat to EU citizens is to those living or visiting influenza A(H7N9)-affected areas in China. It is advisable to avoid live bird markets or backyard farms as well as contact with live poultry or their droppings. Food should be only consumed if properly cooked. Since environmental contamination leads to a higher risk of exposure to A(H7N9), it is also possible that travel-related cases could be detected in Europe, especially after Chinese New Year (28 January). The recent upsurge of human cases due to a higher risk of exposure indicates the possibility of sporadic cases getting imported to Europe. However, the risk of the disease spreading in Europe through humans is still considered low, as the virus does not appear to transmit easily from human-to-human. Also, current investigations do not support sustained human-to-human transmission.

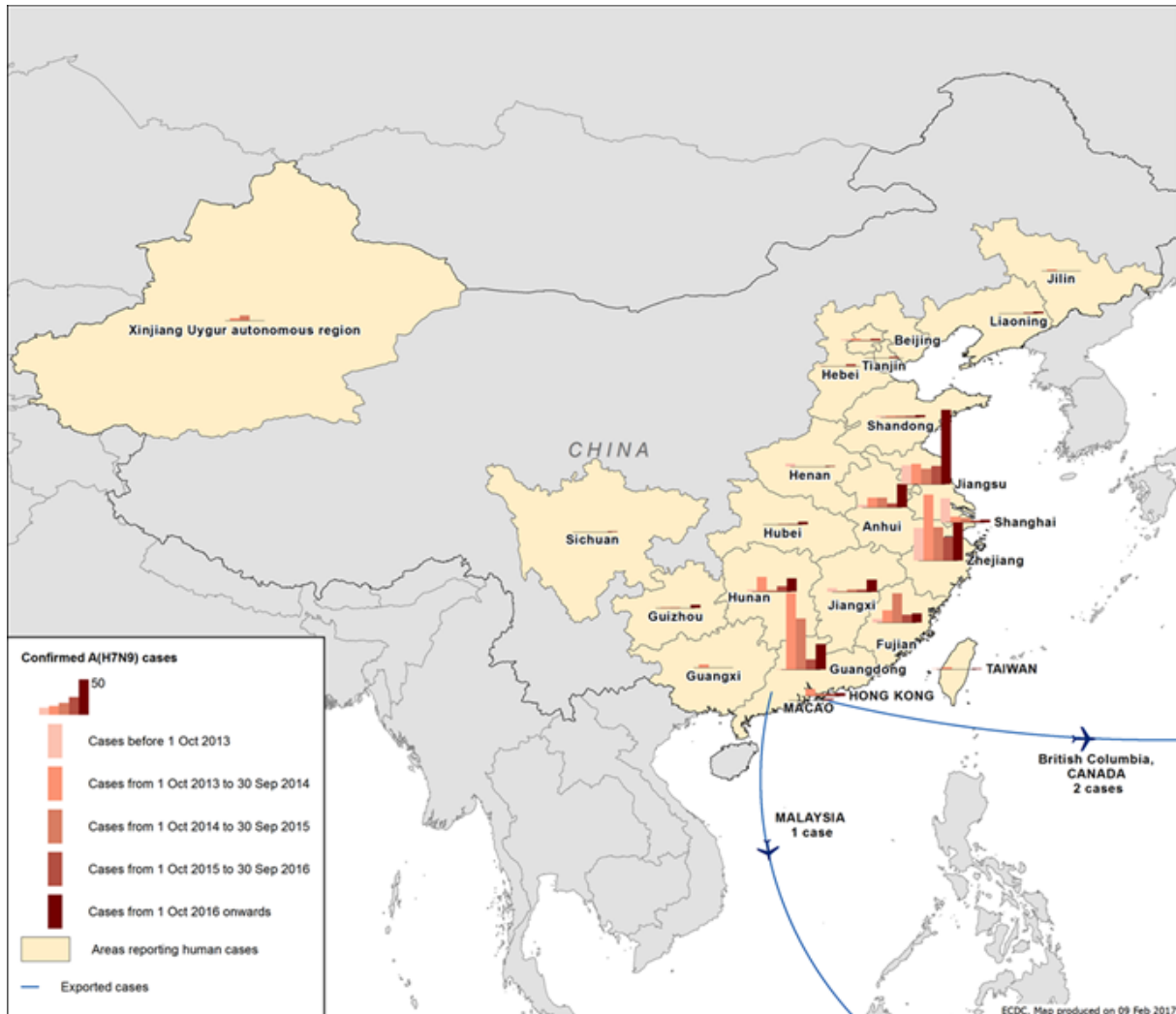
Actions

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.

ECDC published an updated [Rapid Risk Assessment](#) on 27 January 2017.

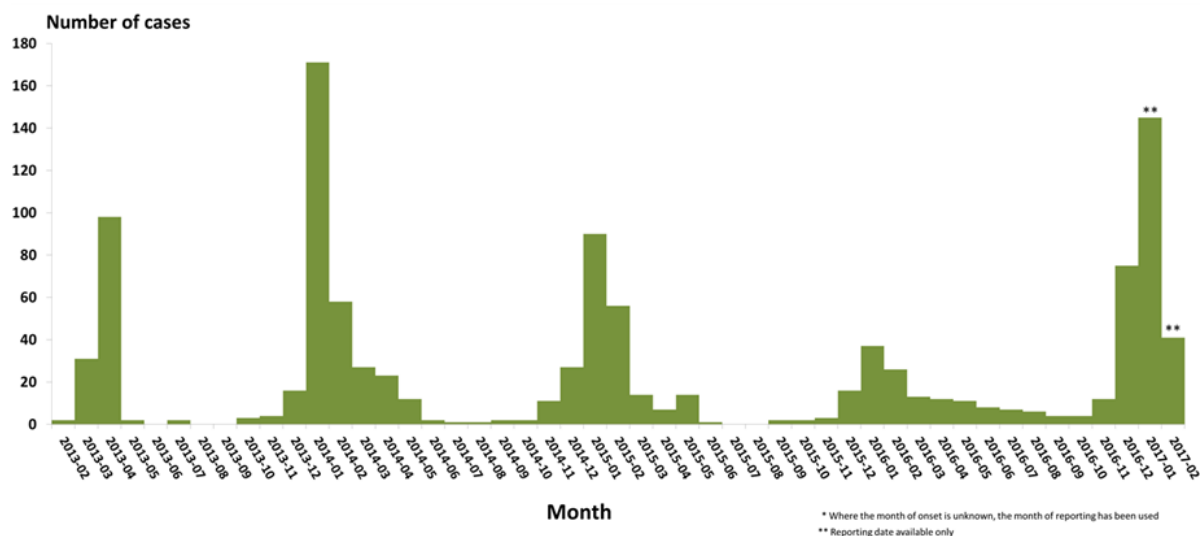
Distribution of confirmed cases of A(H7N9) by five periods(weeks 07/2013 to 6/2017)

ECDC



Distribution of confirmed cases of A(H7N9) by month February 2013 to February 2017

ECDC



Yellow fever - Brazil - 2016-2017

Opening date: 16 January 2017

Latest update: 10 February 2017

Epidemiological summary

On 6 January 2017, Brazil reported an outbreak of yellow fever. The index case had onset of symptoms on 18 December 2016. The first laboratory confirmation was notified on 19 January 2017.

As of 9 February 2017, Brazil has reported 1 038 cases (818 suspected and 220 confirmed), including 180 deaths (103 suspected and 77 confirmed), in six states. The case fatality rate is 17.3% among all cases and 35.0% among confirmed cases.

States reporting suspected and confirmed cases:

- Minas Gerais has reported 900 cases (705 suspected and 195 confirmed), including 161 deaths (93 suspected and 68 confirmed).
- Espírito Santo has reported 113 cases (92 suspected and 21 confirmed), including 14 deaths (eight suspected and six confirmed).
- São Paulo has reported nine cases (five suspected and four confirmed), including three confirmed deaths.

States reporting suspected cases:

- Bahia has reported nine suspected cases, including one fatal case.
- Tocantins has reported one suspected case, which was fatal.
- Rio Grande do Norte has reported one suspected case, which was not fatal.

Investigations are ongoing to determine the probable infection site of five further suspected cases.

The Ministry of Health of Brazil has launched mass vaccination campaigns. As of 9 February 2017, 9.9 million extra doses of yellow fever vaccine have been sent to five states: Minas Gerais (4.5 million), Espírito Santo (2.5 million), São Paulo (1.2 million), Bahia (900 000) and Rio de Janeiro (850 000).

The 2017 Rio Carnival will take place from 24 to 28 February, with around one million tourists expected. According to the International Air Transport Association, 45 317 people (mainly from France, the United Kingdom and Portugal) travelled by air from the EU/EEA to the state of Rio de Janeiro during February 2015, when the 2015 Rio Carnival took place. As of 9 February 2017, no locally-acquired confirmed or suspected cases of yellow fever have been reported in this state since the beginning of the outbreak.

Sources: [Brazil MoH for the epidemic](#) | [Brazil MoH for epizootics](#) | [Minas Gerais MoH](#)

ECDC assessment

The risk of yellow fever transmission in the EU/EEA is currently very low as it depends on the virus being introduced by viraemic travellers to an area with an established, competent and active mosquito vector population.

In Brazil, authorities have reported only sylvatic cases in 2016 and 2017. This outbreak should be carefully monitored because the establishment of an urban yellow fever cycle would have the potential to quickly affect a large number of people.

EU/EEA Member States should consider a range of options for response. EU/EEA citizens who travel to, or live in, areas where there is evidence of yellow fever virus transmission, particularly in the states of Brazil reporting confirmed local transmission, should take into account the risk of yellow fever, check their vaccination status, and get medical advice about getting vaccinated against yellow fever.

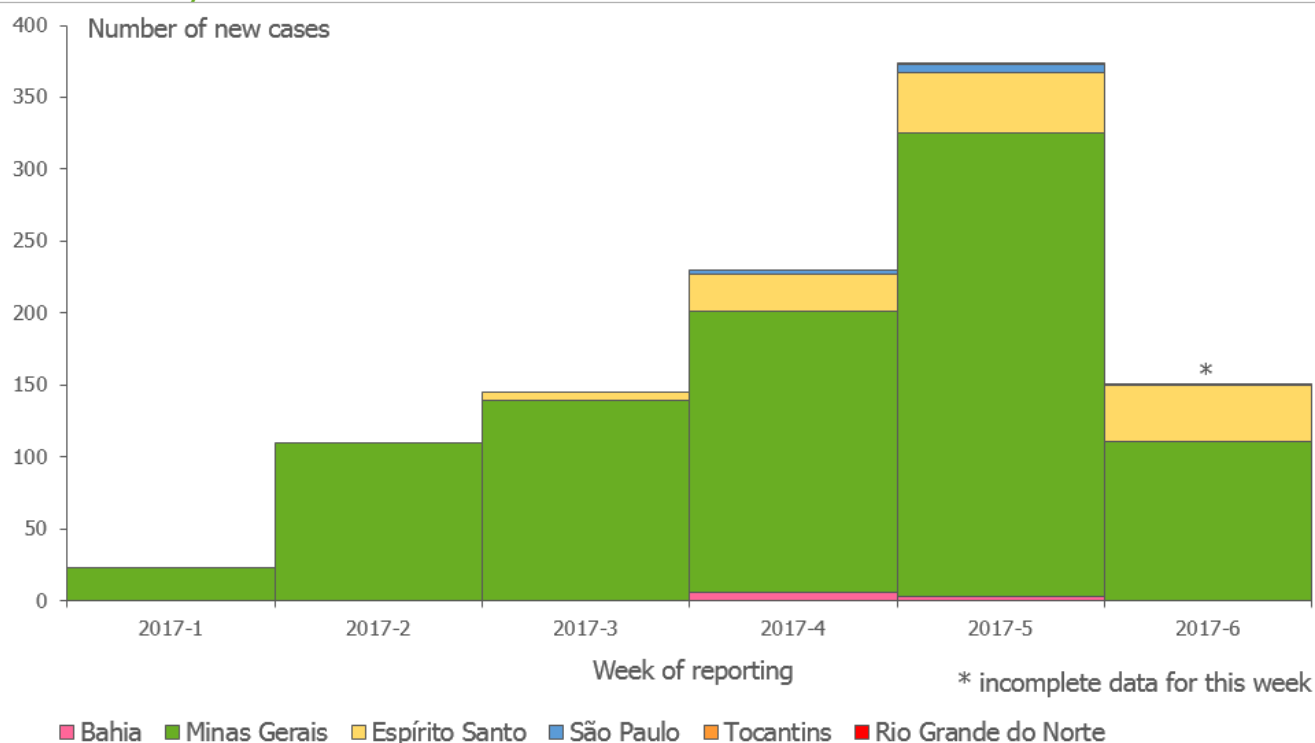
Actions

ECDC monitors closely this event in collaboration with the World Health Organization. ECDC published a [rapid risk assessment](#) on 26 January 2017. ECDC also produced [epidemiological updates](#) and a [map for travel advice](#).

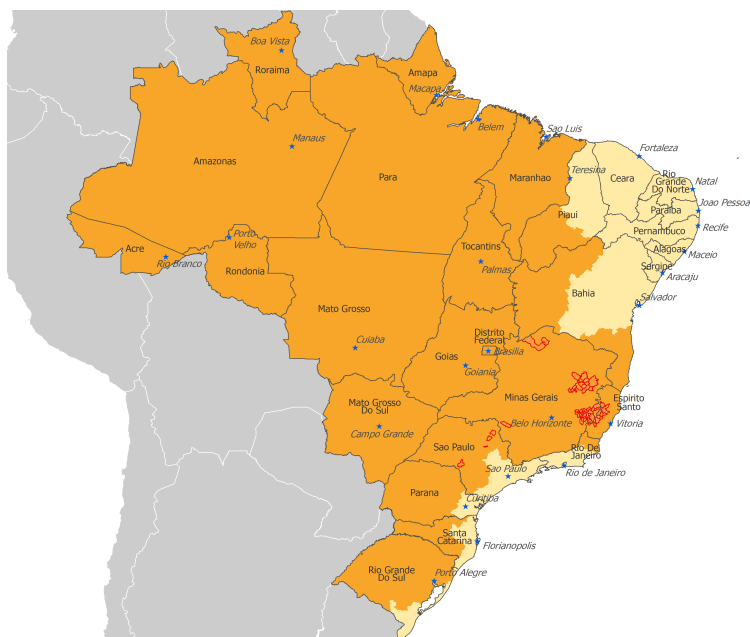
Distribution of human cases of yellow fever by state, Brazil, as of 9 February 2017

	All cases	Suspected cases	Confirmed cases
Minas Gerais	900	705	195
Espírito Santo	113	92	21
São Paulo	9	5	4
Bahia	9	9	0
Tocantins	1	1	0
Rio Grande do Norte	1	1	0
Under investigation	5	5	0
Total	1038	818	220


Distribution of suspected and confirmed human cases of yellow fever by week, Brazil, as of 9 February 2017





Distribution of confirmed human cases of locally-acquired yellow fever, Brazil, as of 8 February 2017



Confirmed cases of locally-acquired yellow fever, as of 08 February 2017

 Municipalities with confirmed locally-acquired cases since 6 January 2017

 Area at risk for yellow fever transmission

 Area considered at no risk for yellow fever transmission

 Federal state  State capital city



ECDC. Map produced on: 10 Feb 2017
ECDC map maker: <https://emma.ecdc.europa.eu>

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

Opening date: 24 September 2012

Latest update: 10 February 2017

Epidemiological summary

As of 9 February 2017, 1 913 cases of MERS, including 733 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](#)

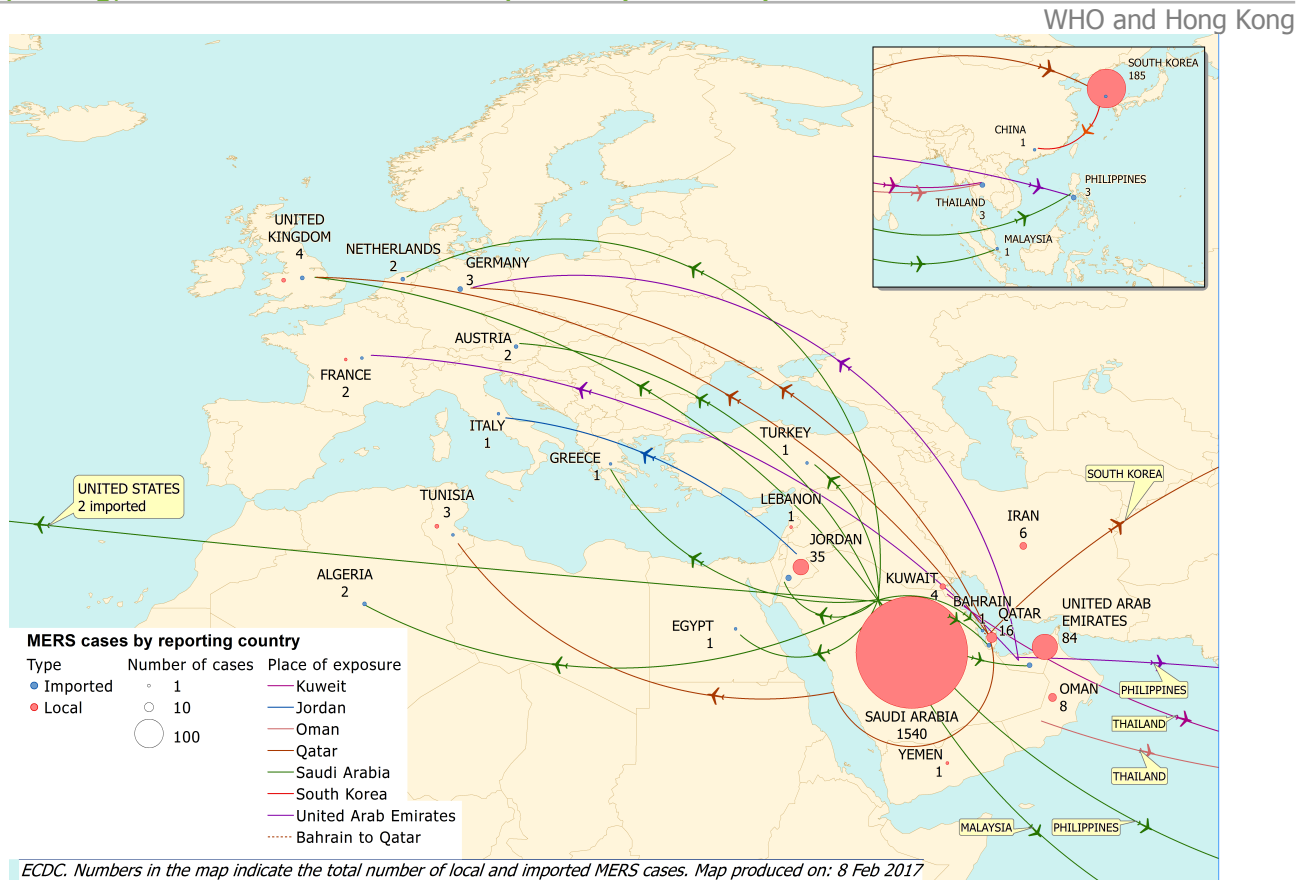
ECDC assessment

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

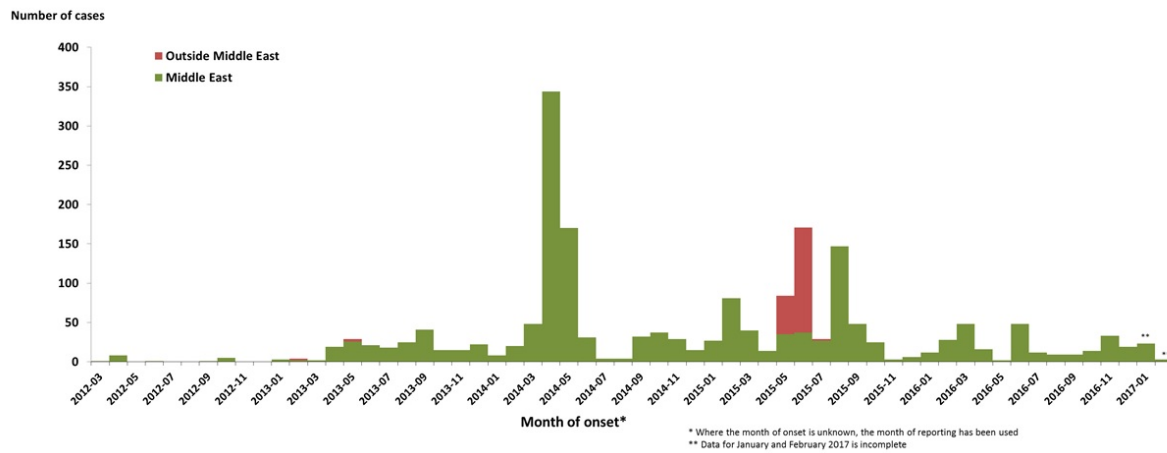
ECDC published the 21st update of its MERS-CoV [rapid risk assessment](#) on 21 October 2015.

Distribution of confirmed cases of MERS-CoV by probable place of infection and country of reporting, March 2012 – 8 February 2017 (n=1 913)



Distribution of confirmed cases of MERS-CoV by probable place of reporting, March 2012 - 8 February 2017 (n=1 913)

WHO and Hong Kong



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