

This weekly bulletin provides updates on threats monitored by ECDC.

## I. Executive summary

### EU Threats

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#### West Nile virus – Multistate (Europe) – Monitoring season 2017

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Opening date: 30 May 2017

During the June-to-November West Nile virus transmission season, ECDC monitors the occurrence of cases of West Nile fever in the EU Member States and the neighbouring countries in order to inform the blood safety authorities about areas with ongoing transmission. In 2016, 214 human cases of West Nile fever were reported in the EU Member States and 267 cases in the neighbouring countries.

→ Update of the week

No cases have been reported so far in 2017.

#### Measles – Multistate (EU) – Monitoring European outbreaks

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Opening date: 9 February 2011

Latest update: 9 June 2017

Romania is experiencing a large outbreak of measles since February 2016. Cases continue to be reported despite ongoing response measures that have been implemented at national level through reinforced vaccination activities. Between 1 January 2016 and 6 June 2017, Romania has reported 6 619 measles cases, including 29 deaths. In 2016, several additional EU/EEA countries reported measles outbreaks, and an increase in the number of cases continues to be observed in 2017. Some previous and ongoing measles outbreaks in other EU/EEA countries have been epidemiologically linked to the current outbreak in Romania.

→ Update of the week

In addition to Romania, the following EU/EEA countries have reported measles cases in 2017: Austria, Belgium, Bulgaria, the Czech Republic, Denmark, France, Germany, Hungary, Iceland, Italy, Norway, Portugal, Slovakia, Spain, Sweden and the United Kingdom.

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

Opening date: 12 December 2016

EU/EEA Member States are reporting an increase of hepatitis A virus infection cases in 2017. Among the cases, adult men who have sex with men (MSM) are indicated as an affected population. Since June 2016 and as of 17 May 2017, 1 173 confirmed hepatitis A cases infected with three distinct strains of sub-genotype IA virus have been reported by 15 EU/EEA countries. Most cases are reported among MSM. Of the 1 173 cases, 80 are women.

→Update of the week

On 7 June 2017, [ECDC](#) published a news item "Vaccination: main prevention measure to address hepatitis A outbreaks among men who have sex with men".

On 7 June 2017, [WHO](#) reported that between June 2016 and mid-May 2017, an unusual increase in cases of hepatitis A affecting mainly MSM has been reported by low endemicity countries in the European Region and in the Americas (Chile and the United States). In the European Region, 15 countries (Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Slovenia, Spain, Sweden and the United Kingdom) reported 1 173 cases related to the three distinct multi-country hepatitis A outbreaks as of 16 May 2017. In Chile, 706 hepatitis A cases were reported at national level as of 5 May 2017. In the United States, the New York City Health Department has noted an increase in hepatitis A cases among MSM who did not report international travel.

## Non EU Threats

### Influenza A(H7N9) – China – Monitoring human cases

Opening date: 31 March 2013

Latest update: 9 June 2017

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then and up to 3 June 2017, 1 521 cases have been reported to the World Health Organization (WHO), including at least 562 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. Since week 2016-41, 723 cases have been reported, representing a significant increase compared to previous seasons.

→Update of the week

During the past week, China reported nine additional human cases of avian influenza A (H7N9) in Shandong (2), Anhui (1), Guangxi (1), Hebei (1), Hubei (1), Inner Mongolia (1), Shaanxi (1) and Sichuan (1).

### Travel-associated Legionnaires' disease – Dubai, UAE – 2016/2017

Opening date: 10 November 2016

The ECDC ELDSNet surveillance scheme on travel-associated [Legionnaires' disease](#) (TALD) has observed an increase in the number of cases of Legionnaires' disease associated with travel to Dubai, United Arab Emirates (UAE) since October 2016.

→Update of the week

On 2 June 2017, Germany reported two additional cases of TALD with travel history to Dubai. The two males, aged 54 and 80 years old, stayed around six days of their incubation period in Dubai, one in an accommodation site previously reported to ELDSNet and the other in a new accommodation site. The most recent date of onset of symptoms is 17 May 2017 in a case from the United Kingdom.

### Yellow fever – South America – 2016/2017

Opening date: 16 January 2017

Latest update: 9 June 2017

[Yellow fever](#) is a mosquito-borne viral infection present in some tropical areas of Africa and South America. On 6 January 2017, Brazil reported an outbreak of yellow fever that started in December 2016 and is still ongoing. Bolivia, Colombia, Ecuador, Peru and Suriname have also reported cases of yellow fever in 2017.

→Update of the week

Between 18 and 31 May 2017, Brazil has reported 34 additional confirmed cases of yellow fever in the states of Espírito Santo (24), Minas Gerais (5), Rio de Janeiro (3), Distrito Federal (1) and Mato Grosso (1). These are the first confirmed cases of locally-acquired yellow fever in Distrito Federal and Mato Grosso since the beginning of the outbreak.

## Outbreak of Ebola virus disease – Democratic Republic of the Congo – 2017

Opening date: 15 May 2017

Latest update: 9 June 2017

On 9 May 2017, the Democratic Republic of the Congo (DRC) notified the World Health Organization (WHO) of an outbreak of [Ebola virus disease](#) (EVD) in Likati Health Zone, Bas Uele Province, close to the border with the Central African Republic. Investigations and laboratory results confirmed an Ebola outbreak of subtype Zaire on 11 May.

### →Update of the week

Between 2 and 5 June 2017, WHO reported three additional serologically-confirmed cases of EVD in DRC. These cases were previously reported as suspected. Two of the cases were from Nambwa and had onset of symptoms on 24 April and 11 May, respectively. One case was from Mabongo and had onset on 29 April. These three cases are part of known transmission chains. Their contacts have been followed up. So far, the outbreak remains confined to Likati Health Zone.

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

Opening date: 24 September 2012

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 connection with 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 of MERS-CoV on 4 May 2017, 42 additional cases of MERS-CoV have been reported from Saudi Arabia (39), United Arab Emirates (2) and Qatar (1).

The two cases of MERS-CoV infection in the United Arab Emirates are reported from Al Ain. Both have reported direct links to dromedary camels. The first case identified, a 69-year-old male farmer, is hospitalised in critical condition. The second case, a 45-year-old male butcher, is asymptomatic and was identified during contact tracing of the first case. Contact tracing and dromedary investigations are ongoing.

The case in Qatar is a 29-year-old male from Doha who has frequent contact with dromedary camels.

Of the 39 cases reported in Saudi Arabia, 26 were reported from Riyadh. Ten of these cases were in healthcare workers, six in patients, and two in household contacts. Seventeen of the 26 cases were asymptomatic. According to the [local health officials](#) there are number of cases recorded in the King Saud Medical Centre in Riyadh. Nosocomial transmission was also indicated in two other cities: in Bisha, one patient and one asymptomatic healthcare worker, and in Jeddah, a visitor to a hospital.

WHO has published information on [three clusters in Saudi Arabia](#): the above-mentioned Bisha cluster which occurred in mid-May, Wadi Alwaser cluster that occurred in April with four cases and the ongoing Riyadh cluster with information about five cases from 14 to 17 May.

## II. Detailed reports

### West Nile virus – Multistate (Europe) – Monitoring season 2017

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Opening date: 30 May 2017

#### Epidemiological summary

Since the beginning of the 2017 transmission season and as of 8 June 2017, no cases of West Nile fever in humans have been reported in the EU Member States and the neighbouring countries.

**Source:** [ECDC WNF page](#)

#### ECDC assessment

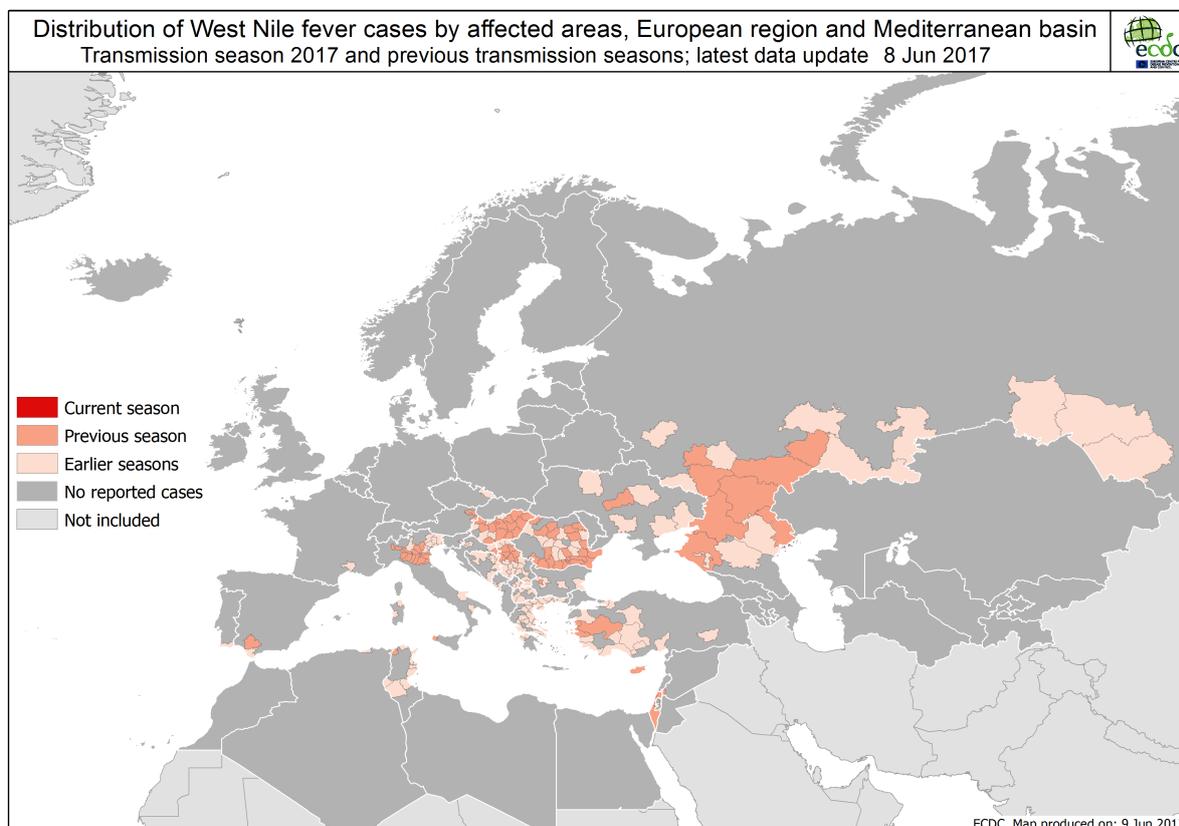
As expected at this early time of the West Nile fever transmission season, no human cases in EU Member States have been yet notified.

#### Actions

Since 2011, ECDC produces weekly West Nile fever maps during the transmission season to inform blood safety authorities of West Nile fever affected areas.

## Reported cases of West Nile fever, transmission season 2017 and previous transmission season: updated 9 June 2017

ECDC



## Measles – Multistate (EU) – Monitoring European outbreaks

Opening date: 9 February 2011

Latest update: 9 June 2017

### Epidemiological summary

#### ***EU/EEA countries with updates since last week:***

**Czech Republic:** As of 1 June 2017, the Moravian-Silesian region reported 125 measles cases, of which 118 were laboratory-confirmed and 7 clinical cases.

**Germany:** Since the beginning of 2017 and as of 31 May, Germany has reported 668 cases. This is an increase of 34 cases since the previous update. In the same period in 2016, Germany reported 70 cases.

**Italy:** Since the beginning of 2017 and as of 4 June, Italy has reported 2 851 cases in 18 of the 21 regions. Among these, 224 are healthcare workers. The median age is 27 years, 89% of the cases were not vaccinated, and 6% received only one dose of vaccine. The weekly number of cases is decreasing.

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**Norway:** Between 3 and 7 June 2017, media reported two cases in Norway, a six-year-old girl from Hadeland (north of Oslo) and a 15-month-old baby from Oslo.

**Portugal:** Since the beginning of 2017 and as of 5 June, Portugal has reported 31 confirmed cases, of which 20 (65%) are older than 18 years of age, 19 (61%) were unvaccinated, 13 (42%) are health professionals, and 14 (45%) were hospitalised. Twenty-two cases have been confirmed in the regions of Lisbon and Vale do Tejo, followed by seven cases in the Algarve, one in the North and one in Alentejo. One death has been reported.

**Romania:** Between 1 January 2016 and 26 May 2017, Romania has reported 6 619 cases, including 29 deaths. Cases are either laboratory-confirmed or have an epidemiological link to a laboratory-confirmed case. Infants and young children are the most affected group. Forty-one of the 42 districts have reported cases, Timis (West part of the country, at the border with Serbia) is the most affected district with 1 068 cases. Vaccination activities are ongoing in order to cover communities with suboptimal vaccination coverage.

**United Kingdom:** On 6 June, [Public Health Wales](#) reported four cases in a high school in Newport, Wales. During the first three months of 2017, England reported 17 confirmed cases, compared with 37 between October and December 2016. Northern Ireland has reported one case and Scotland has reported no cases so far this year.

***EU/EEA countries with no updates since last week:***

**Austria:** Since the beginning of 2017 and as of 1 June, Austria has reported 78 cases. This exceeds the cumulative number of cases reported in 2016.

**Belgium:** Since 20 December 2016 and as of 8 May 2017, Wallonia has reported 293 cases, of which 115 were hospitalised. The outbreak affects all provinces of Wallonia, with the exception of the province of Luxembourg. No deaths are reported. The index case of the outbreak in Wallonia travelled to Romania during the incubation period. After a peak of 40 cases per week in the beginning of March, the epidemic is gradually decreasing.

In Flanders, one isolated imported case was reported in January and another in March, with possible links to a cluster in Wallonia. In the Brussels Capital Region, one isolated imported case was reported in February and two cases were notified in March without known links to the outbreak in Wallonia. Both imported cases had a travel history to Romania during the incubation period, and the national reference centre for measles, mumps and rubella (WIV-ISP) identified genotype B3 as identified in Romania, Italy and Austria at the end of 2016.

**Bulgaria:** Since mid-March 2017 and as of 27 May, Bulgaria has reported 116 cases in [Plovdiv](#), an increase of 45 cases since the previous monthly update. Bulgaria also reported also cases in [Pazardzhik](#) (5) and in [Montana](#) (2).

**Denmark:** On 15 March 2017, Denmark reported an imported case in an unvaccinated adult who was infected during a holiday in Asia.

**France:** Since 1 January 2017 and as of 30 April, France has reported 189 cases, an increase of 55 cases since the previous monthly update and nearly four times the number of reported cases in 2016 over the same period (47 cases). The cases are mainly linked with an outbreak in Lorraine (60 cases between February and April 2017). Two cases of encephalitis and 18 cases of severe pneumonia have been recorded since the beginning of the year. On 31 May, media reported 22 additional cases in Perpignan since the beginning of May.

**Hungary:** Between 21 February and 22 March 2017, Hungary has reported 54 cases. Health authorities have lifted the quarantine from the hospital in Mako, Southeast Hungary, as no new cases were detected in two weeks.

**Iceland:** On 31 March 2017, Iceland reported two cases in two 10-month-old unvaccinated twin siblings. The first case was diagnosed 10 days before the second case. This is the first time in a quarter of a century that measles infection has occurred in Iceland.

**Slovakia:** On 24 April 2017, Slovakia reported an imported case in a 25-year-old, unvaccinated Italian who studies in Kosice, Slovakia. In Slovakia, the last endemic cases were reported in 1998 and the last imported cases in 2011 and 2012.

**Spain:** An outbreak started in the first week of January in Barcelona metropolitan area, related to an imported case from China. As of 7 April, 46 cases have been confirmed. Most of the cases are unvaccinated or incompletely-vaccinated adults. Four of the cases are children, and ten cases were hospitalised.

**Sweden:** Since mid-April and as of 31 May, Sweden has reported four cases in the south-western part of the country. Earlier in 2017, Sweden reported 15 cases in the Stockholm area, including three imported cases.

## ECDC assessment

Measles outbreaks continue to occur in EU/EEA countries. There is a risk of spread and sustained transmission in areas with susceptible populations. The national vaccination coverage remains less than 95% for the second dose of MMR in the majority of EU/EEA countries. The progress towards elimination of measles in the WHO European Region is assessed by the European Regional Verification Commission for Measles and Rubella Elimination (RVC). Member States of the WHO European Region are making steady progress towards the elimination of measles. At the fifth meeting of the RVC for Measles and Rubella in October 2016, of 53 countries in the WHO European Region, 24 (15 of which are in the EU/EEA) were declared to have reached the elimination goal for measles, and 13 countries (nine in the EU/EEA) were concluded to have interrupted endemic transmission for between 12 and 36 months, meaning they are on their way to achieving the elimination goal. However, six EU/EEA countries were judged to still have endemic transmission: Belgium, France, Germany, Italy, Poland and Romania.

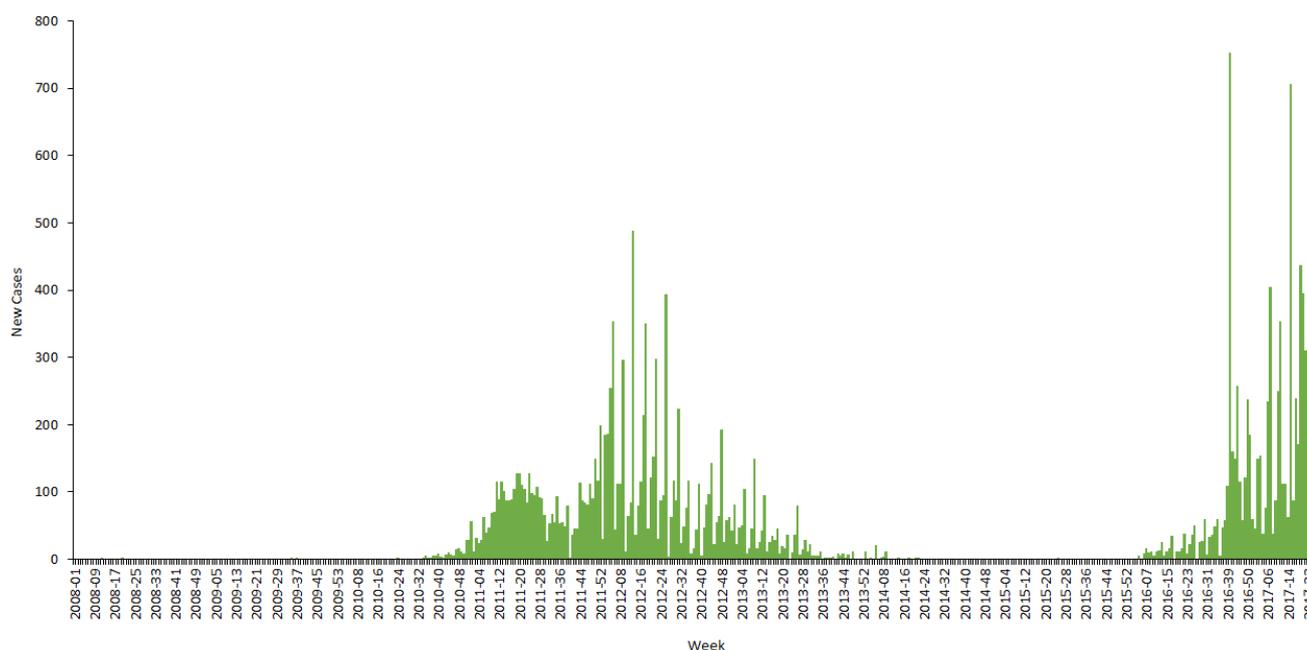
More information on strain sequences would allow further insight into the epidemiological investigation. All EU/EEA countries report measles cases on a monthly basis to ECDC and these data are published every month. Since 10 March 2017, ECDC has been reporting on measles outbreaks in Europe on a weekly basis through epidemic intelligence activities.

## Actions

ECDC published a [rapid risk assessment](#) on 6 March. ECDC monitors measles transmission and outbreaks in the EU/EEA on weekly basis through enhanced surveillance and epidemic intelligence activities.

## New measles cases per week of reporting, week 2008-1 to 2017-23, Romania

Data source: National Institute of Public Health Romania and TESSy (ECDC)



\*From 2008 to 2016-39 data from TESSy, from 2016-40 onwards data from Romanian MoH

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

Opening date: 12 December 2016

### Epidemiological summary

Between 1 June 2016 and 17 May 2017, 15 EU/EEA countries, Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Slovenia, Spain, Sweden and the United Kingdom have reported 1 173 HAV genotype IA confirmed cases. The investigations of these events have identified three separate clusters based on genetic sequencing of the hepatitis A virus (HAV).

**Event 1, cluster VRD\_521\_2016.**

As of May 2017, 15 EU/EEA Member States have reported 676 cases associated with this cluster initially reported by the United Kingdom on 6 December 2016 through an EPIS FWD urgent inquiry. Most cases have been reported by Spain (223), Portugal (144), Italy (114), France (70) and the United Kingdom (56). Of the 588 cases with documented gender, 541 (92%) are male and 189 of 221 documented cases (86%) identify themselves as MSM. Twenty-two of the 51 cases with a travel history travelled to Spain.

**Event 2, cluster RIVM-HAV16-090.**

As of 16 May 2017, 12 EU/EEA Member States have reported 388 cases associated with this cluster initially reported by the Netherlands on 14 October 2016 through the Early Warning and Response System (EWRS). The first two Dutch cases reported visiting the EuroPride festival in Amsterdam between 23 July and 7 August 2016. Most cases have been reported by the United Kingdom (168), France (51) and Italy (35). Of the 375 cases with documented gender, 347 (93%) are in males and 198 of 239 documented cases identify themselves as MSM. Of the 76 cases with a travel history during the incubation period, 28 travelled to Spain and nine to Germany.

**Event 3, cluster V16-25801.**

As of 17 May 2017, ten EU/EEA Member States have reported 109 cases associated with this cluster, which was first reported through EPIS FWD on 11 January 2017 by Germany. Cases were reported by Germany (40), the United Kingdom (39), Spain (12), Italy (5), the Netherlands (5), France (4), Austria (1), Belgium (1), Denmark (1) and Finland (1). Of the 109 documented cases, 104 are in males and 38 of 42 documented cases identify themselves as MSM. Six of 20 cases with information on travel visited Spain during the incubation period.

## Additional outbreaks of hepatitis A in EU Member States affecting MSM

In addition to the previous clusters described, the Netherlands reported one case of HAV of another strain (RIVM-HAV-16-069) in a MSM. This strain was only identified in the United Kingdom (one case, MSM) and Italy (one case, MSM unknown status).

Between July 2016 and 2 April 2017, the United Kingdom reported 266 cases belonging to the three above-mentioned circulating strains. Most cases (74%) were among MSM and geographically clustered (63%) in London.

Between 1 January and 8 May 2017, Portugal reported 242 HAV cases of which 93% are men and 79% are from Lisbon and Vale do Tejo region. Infection through sexual transmission was indicated by 57% of the cases. Hepatitis A vaccine is recommended to people at risk.

## Other EU Member States reporting cases

Between January and May 2017, six EU/EEA Member States have notified an increase in the number of HAV infection cases compared with the same period in 2016; Belgium has reported 203 cases in 2017 compared with 37 cases in the same period for 2016, Estonia has reported ten cases in 2017 compared with two in 2016, Finland has reported 14 in 2017 compared with two in 2016, Italy has reported 20 cases in 2017 compared with 11 in 2016, Spain has reported 1 539 cases in 2017 compared with 236 in 2016, and Sweden has reported 45 cases in 2017 compared with 33 in 2016.

Furthermore, between August 2016 and April 2017, Italy reported, 1 247 cases of hepatitis A, which is a five-fold increase compared with 2015.

**ECDC assessment**

The highly interconnected sexual networks among MSM in Europe may contribute to the multinational dimension of these clusters. In at least two EU/EEA Member States, the United Kingdom and Germany, secondary cases have been linked to travel-associated index cases. The circulation of three different HAV genotype IA strains in the MSM population is likely to be the result of several introductions into these networks.

Further transmission resulting from these clusters may be prevented by vaccination of MSM and post-exposure prophylaxis in the contacts of cases. However, limited vaccine availability in some countries may have an impact on the implementation of control measures. In addition, since many of the risk group contacts are anonymous, their timely vaccination is challenging. National authorities should consider interacting directly with marketing authorisation holders (MAH) to enquire about supply at a national level as early as possible to plan for vaccination arrangements.

**Actions**

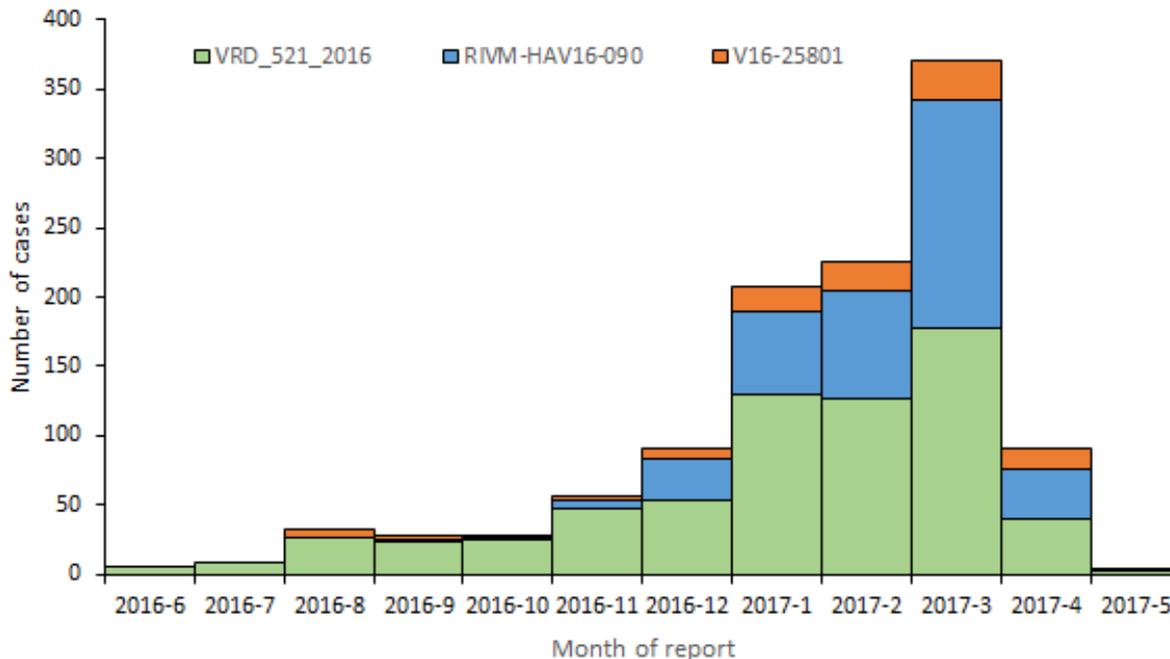
The main prevention measure in the context of the current outbreaks is hepatitis A vaccination of MSM. The ECDC guidance for '[HIV and STI prevention among men who have sex with men](#)' encourages Member States to offer and promote vaccination of MSM against hepatitis A. Information on vaccine availability should be included in health promotion programmes targeting MSM, particularly at sex venues.

ECDC is supporting a European study to describe the extent of the outbreak and identify possible risk factors and characteristics

independently associated with the three currently ongoing clusters. ECDC published the second update of the [rapid risk assessment](#) on 19 May 2017.

## Distribution of hepatitis A cases, by month of report and genetic sequence, June 2016, as of 15 May 2017, EU/EEA (n=1 148)

ECDC



## Influenza A(H7N9) – China – Monitoring human cases

Opening date: 31 March 2013

Latest update: 9 June 2017

### Epidemiological summary

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then and up to 3 June 2017, 1 521 cases have been reported to the WHO, including 562 deaths. The outbreak shows a seasonal pattern. The first wave in spring 2013 (weeks 2013-7 to 2013-40) included 135 cases, the second wave (weeks 2013-41 to 2014-40) 320 cases, the third wave (weeks 2014-41 to 2015-40) 223 cases, and the fourth wave (weeks 2015-41 to 2016-40) 120 cases. A fifth wave started in October 2016 (week 2016-41), with 723 cases as of 3 June 2017.

The 1 521 cases were reported from Zhejiang (309), Guangdong (258), Jiangsu (249), Fujian (107), Anhui (98), Hunan (92), Shanghai (56), Jiangxi (50), Sichuan (36), Guangxi (31), Hubei (31), Beijing (29), Hebei (28), Henan (26), Shandong (26), Hong Kong (21), Guizhou (17), Xinjiang (10), Chongqing (7), Gansu (5), Shaanxi (6), Taiwan (5), Liaoning (4), Tianjin (4), Jilin (3), Tibet (3), Macau (2), Yunnan (2), Shanxi (2), Inner Mongolia (1) and three imported cases were reported in Canada (2) and Malaysia (1).

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

### ECDC assessment

This is the fifth winter season in the northern hemisphere with human cases caused by A(H7N9) infections. During this wave, the number of human cases has been higher than in previous waves. This is most likely due to greater environmental contamination in live bird markets and increased circulation of the virus among poultry.

In February 2017, a new A(H7N9) virus with mutations in the haemagglutinin gene – indicating high pathogenicity in poultry – was detected in three cases related to Guangdong, as well as in environmental and poultry samples. It is unclear at the moment if the newly emerged, highly-pathogenic avian influenza virus A(H7N9) will replace the low-pathogenic virus or if both will co-

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circulate in the bird population. Although the genetic changes in A(H7N9) may have implications for poultry in terms of pathogenicity, surveillance and control strategies, there is no evidence to date of increased transmissibility to humans or sustainable human-to-human transmission.

The continued transmission of A(H7N9) to humans in China poses the risk that sporadic imported cases may be detected in Europe. The following options for prevention and control of the infection should be considered:

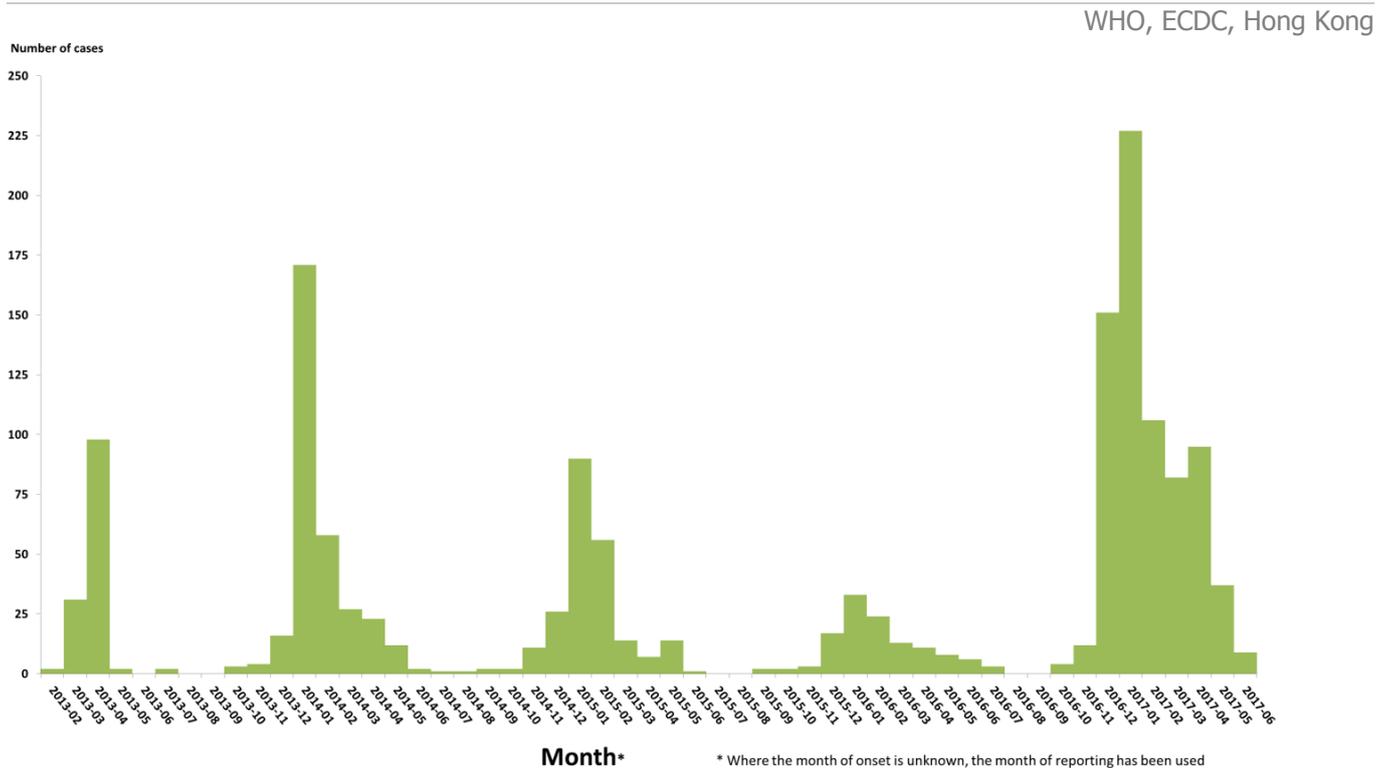
- people travelling to China should avoid direct exposure to poultry and refrain from visiting live poultry markets or backyard farms;
- travellers who have visited affected areas and develop respiratory symptoms and fever upon their return should consult a physician and mention their recent travel history to enable early diagnosis and treatment;
- travellers who have visited affected areas should avoid entering farms for the entire duration of the 10-day incubation period (and during the symptomatic period in the event that they develop symptoms) in order to prevent a possible virus introduction to poultry in the EU.

The possibility of humans infected with A(H7N9) returning to the EU/EEA cannot be excluded. However, the risk of the disease spreading within Europe via humans is still considered low, as there is no evidence of sustained human-to-human transmission.

### Actions

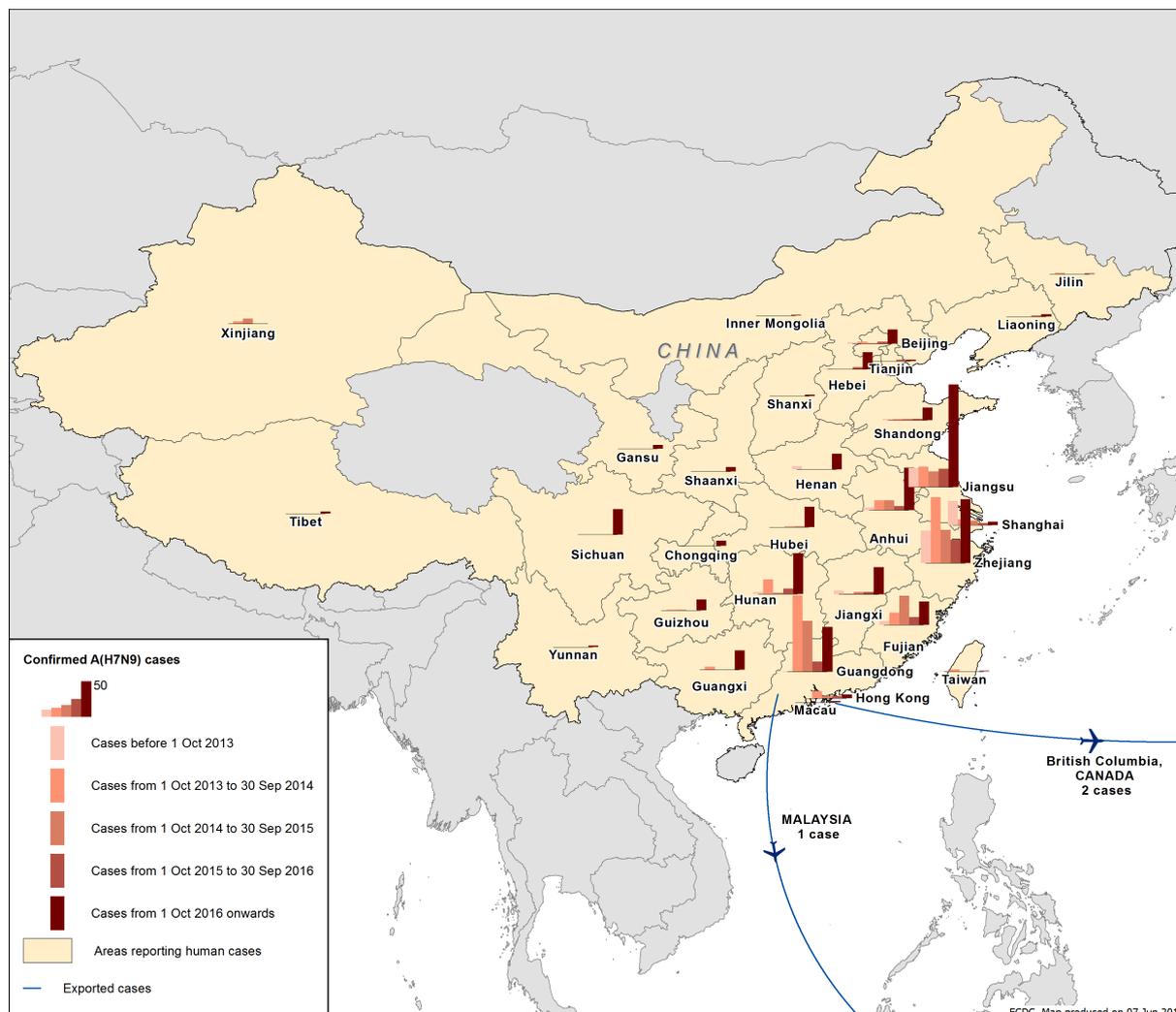
ECDC published the sixth update of its [rapid risk assessment](#) on 9 March, addressing the genetic evolution of influenza A(H7N9) virus in China and the implications for public health.

### Distribution of confirmed cases of A(H7N9) by first available month, February 2013 to 7 June 2017



## Distribution of confirmed cases of A(H7N9) by five seasons February 2013-June 2017

ECDC



## Travel-associated Legionnaires' disease – Dubai, UAE – 2016/2017

Opening date: 10 November 2016

## Epidemiological summary

As of 2 June 2017, 13 EU Member States have reported 63 TALD cases with onset of symptoms since 1 October 2016 and with travel history to Dubai within two to ten days prior to illness. Cases were reported by the United Kingdom (30), Sweden (8), the Netherlands (6), Germany (5), Denmark (4), France (3), Austria (1), Belgium (1), the Czech Republic (1), Hungary (1), Ireland (1), Spain (1) and Switzerland (1). Fifty-seven cases are associated with commercial accommodation sites and six with private accommodation sites. Twelve cases spent time in another location in the UAE or in a country other than their home country during their incubation period. One case was reported as fatal.

All cases are laboratory confirmed. Three cases had their infection further characterised as *Legionella pneumophila* serogroup 1, sequence base type 616, one as *Legionella pneumophila* serogroup 1, sequence base type 2382, and one as *Legionella pneumophila* serogroup 13, sequence base type 1327. Sequence base type 616 is uncommon in Europe and has been associated with other cases of Legionnaires' disease returning from Dubai in previous years. Sequence base type 2382 is the first such identification worldwide and appears to be closely-related to type 616. UAE authorities have informed ECDC that no increase in

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cases of statutory notifiable pneumonia was observed in Dubai between October and December 2016.

### ECDC assessment

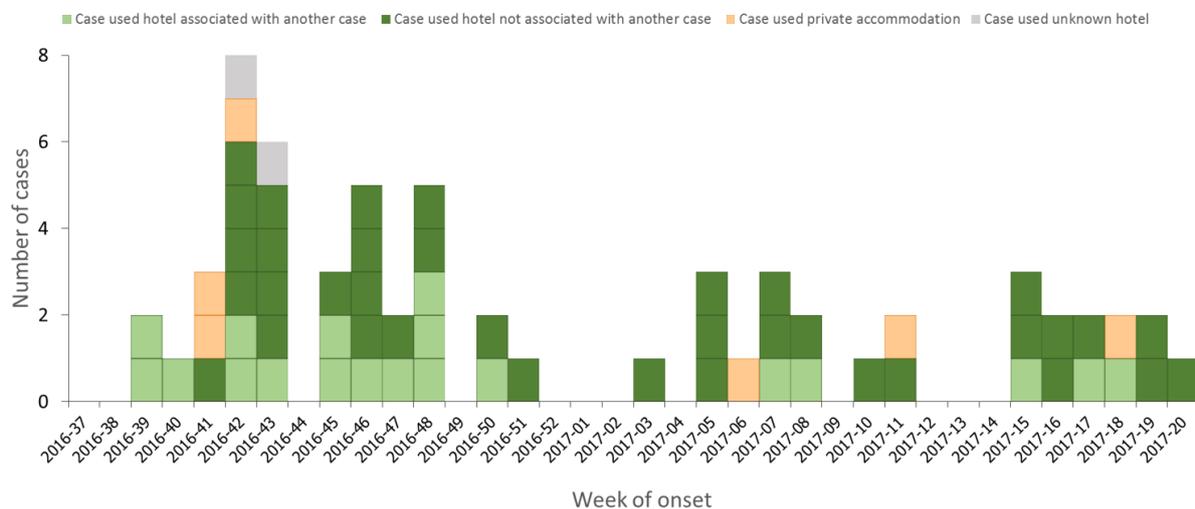
Cases continue to be reported with onset of symptoms in recent weeks, indicating that there is a persistent source of *Legionella* exposure common to travellers with travel history to Dubai. However, it cannot be ruled out that some travellers may have acquired their infection elsewhere if their travel stay in Dubai was shorter than the range of the incubation period. The increase in cases observed between October 2016 and May 2017 is above that observed in previous years.

### Actions

ECDC monitors this event through ELDSNet. ECDC is in contact with EU Member States, the ELDSNet network, the World Health Organization and UAE for information sharing. ECDC published a [rapid risk assessment](#) on its website on 23 December 2016 and shared an updated rapid risk assessment with the European Commission and EU Member States on 13 January 2017. The conclusions of the rapid risk assessment remain valid. ECDC also posted an [epidemiological update](#) on 24 May.

## Distribution of travel-associated Legionnaires' disease cases with history of stay in Dubai, United Arab Emirates, by week of onset from 37-2016 and 20-2017, as reported to ELDSNet by 2 June 2017 (n=63 cases)

ECDC



## Yellow fever – South America – 2016/2017

Opening date: 16 January 2017

Latest update: 9 June 2017

### Epidemiological summary

**Brazil:** Between 6 January and 31 May 2017, Brazil has reported 1 311 cases of yellow fever (519 suspected and 792 confirmed), including 311 deaths (37 suspected and 274 confirmed). The case-fatality rate is 23.7% overall and 34.6% among confirmed cases. Nine states have reported confirmed autochthonous transmission: Distrito Federal, Espírito Santo, Goiás, Mato Grosso, Minas Gerais, Pará, Rio de Janeiro, São Paulo and Tocantins. Eight states have reported suspected autochthonous transmission: Amapá, Bahia, Maranhão, Mato Grosso do Sul, Paraná, Rio Grande do Sul, Rondônia and Santa Catarina.

**Other countries in South America:** From the beginning of 2017 to 28 May, five other countries have reported suspected and/or confirmed cases of yellow fever: [Peru](#) (17), [Colombia](#) (6), [Bolivia](#) (1), [Ecuador](#) (1) and [Suriname](#) (1).

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**Sources:** [Brazil MoH](#) | [PAHO](#) | [WHO vaccination recommendations](#)

## ECDC assessment

The ongoing outbreak should be carefully monitored, as the establishment of an urban cycle of yellow fever would have the potential to quickly affect a large number of people. EU/EEA citizens who travel to or live in areas where there is evidence of yellow fever virus transmission should check their vaccination status and obtain medical advice about getting vaccinated against yellow fever.

In Europe, *Aedes aegypti*, the primary vector of yellow fever in urban settings, is present in Madeira. Recent studies have shown that *Aedes albopictus* can potentially transmit the yellow fever virus. The risk of the virus being introduced into local competent vector populations in the EU through viraemic travellers from Brazil is considered to be low.

## Actions

ECDC closely monitors this event in collaboration with the World Health Organization. ECDC updated its [rapid risk assessment](#) on 13 April 2017. ECDC is also producing a [map for travel advice](#).

## Distribution of confirmed human cases of yellow fever in Brazil by week of reporting from 6 January to 31 May 2017



## Outbreak of Ebola virus disease – Democratic Republic of the Congo – 2017

Opening date: 15 May 2017

Latest update: 9 June 2017

### Epidemiological summary

Between 2 and 5 June 2017, WHO reported three additional serologically-confirmed cases of EVD in DRC. These cases were previously reported as suspected and are part of known transmission chains. As of 5 June, WHO has reported five confirmed and three probable cases, including four deaths (CFR: 50%), from Nambwa (four confirmed and two probable), Ngayi (one probable) and Mabongo (one confirmed). Dates of onset range between 22 April and 11 May. As of 5 June, all contacts but one have completed the 21-day monitoring period. So far, the outbreak remains confined to Likati Health Zone.

**Source:** [WHO](#) | [media](#)

## ECDC assessment

This is the eighth outbreak of EVD in DRC since the discovery of the virus in 1976. DRC national authorities have experience in responding to such outbreaks. However, this is the first time the Likati Health Zone is affected and the local authorities have no or limited experience in managing such an outbreak. Investigations in DRC are ongoing to assess the extent of the outbreak. WHO and the Global Outbreak Alert and Response Network (GOARN) partners are supporting the national health authorities in the response.

The outbreak is occurring in an extremely remote area. For EU/EEA citizens living in or travelling through DRC, the risk of exposure is negligible. For people entering the affected area, such as healthcare workers responding to the outbreak, the risk of infection remains very low, assuming they follow the recommended precautions.

The risk of introduction into the EU/EEA would most probably be related to an infected traveller coming from the affected area. Although unlikely given the remote location of the outbreak, this cannot be excluded. The overall risk of introduction and further spread of Ebola virus within the EU/EEA is therefore currently considered to be extremely low.

## Actions

ECDC published a [rapid risk assessment](#) on this event on 19 May 2017.

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

Opening date: 24 September 2012

### Epidemiological summary

Since April 2012 and as of 8 June 2017, 1 989 cases of MERS, including 761 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 extent to which healthcare facilities in Riyadh are affected is unknown, as is the number of asymptomatic individuals who may be infected with MERS-CoV. The role of hospitals as amplifiers of MERS-CoV infection is now well known, making the strict and timely application of infection prevention and control measures imperative. Sporadic, imported cases can be expected in EU/EEA Member States, and are associated with a risk of nosocomial spread. This highlights the need for awareness among healthcare workers, early detection through functioning testing algorithms, preparedness planning and application of strict infection prevention and control measures.

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 provides details on the last case reported in Europe.

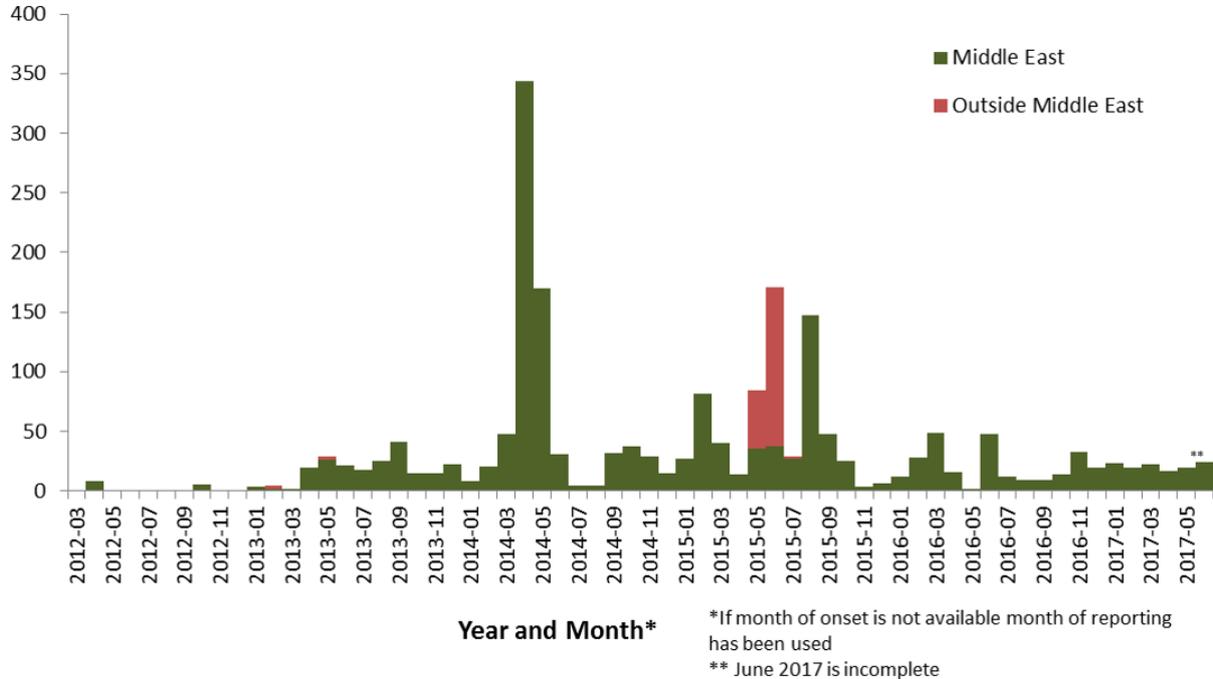
### Actions

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

Distribution of confirmed cases of MERS-CoV by first available month and place of infection, March 2012 - 8 June 2017

ECDC, Saudi Arabia, WHO

Number of cases by place of infection





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