



COMMUNICABLE DISEASE THREATS REPORT

CDTR

Week 21, 21-27 May 2017

All users

This weekly bulletin provides updates on threats monitored by ECDC.

I. Executive summary

EU Threats

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

Opening date: 12 December 2016

Latest update: 26 May 2017

European Union 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 countries. Most cases are reported among MSM. Of the 1 173 cases 80 are women.

→Update of the week

Hepatitis A vaccine availability in the EU is currently limited with Austria, Italy, Portugal and Spain facing hepatitis A vaccine shortages. The Czech Republic, Denmark, Estonia, Finland, Ireland, Luxembourg, Slovenia and Sweden have reported no shortages.

In the United Kingdom, Public Health England (PHE) reported 17 cases of hepatitis A in people who handle food. Consequently, PHE is considering wider vaccination strategies. Other countries are also reporting suspected cases in food handlers.

Non EU Threats

Chikungunya, dengue and Zika – Multistate (World) – Monitoring global outbreaks

Opening date: 27 January 2017

Latest update: 26 May 2017

Chikungunya, dengue and Zika virus infections are vector-borne diseases that affect 50 to 100 million people each year. In the past decade, all three diseases have been reported across an increasing number of countries. Chikungunya virus infection is being reported in Asia, Africa and, since 2013/2014, in the Caribbean, the Americas and the Pacific. Dengue fever is present in Asia, the Pacific, the Caribbean, the Americas and Africa. Zika virus circulation is reported in Asia, the Pacific, the Caribbean, the Americas and Africa. No autochthonous chikungunya, dengue or Zika cases related to vector-borne transmission were detected in EU/EEA Member States in 2016. 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 23 May 2017, 72 countries and territories have reported evidence of mosquito-borne transmission of the virus.

→Update of the week

This month, the significant events for dengue, chikungunya and zika are:

Dengue

-Peru reported more than 28 000 confirmed and probable dengue cases including 34 deaths in 2017. This is an increase compared with the same period in 2016.

-Between 22 April and 8 May 2017, Ivory Coast reported 34 dengue cases from eight districts of Abidjan. No deaths have been reported. Six out of 14 blood samples tested positive for DEN-3.

Zika

Since the last update of the country classification on ECDC's website on 13 April 2017, the changes in the Zika map are:

- In Brazil, the states of Rio de Janeiro and Maranhão changed to "WHO cat. 2 areas with new documented intense transmission"

- Vanuatu changed to "areas with interrupted transmission (WHO cat. 3)"

- Philippines changed to "areas with virus transmission following previous virus circulation (WHO cat. 2)"

- In the French Antilles, Saint Barthélemy changed to "areas with interrupted transmission (WHO cat. 3)".

On 11 May 2017, [Brazil](#) declared the end of the state of emergency related to Zika virus that has been ongoing in the country since November 2015. Since the beginning of 2017 and as of 15 April, Brazil reported 7 911 cases of Zika virus infection. This represents a decrease of 95% compared with the same period in 2016, during which 170 535 cases were reported.

Since 1 April 2017 and as of 18 May, [Ecuador](#) and the [United States Virgin Islands](#) have reported microcephaly and other central nervous system malformations potentially associated with Zika virus infection for the first time.

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

Opening date: 10 November 2016

Latest update: 23 May 2017

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 22 May 2017, the UK reported an additional case of Legionnaires' disease with travel to Dubai. The case is a 70-year-old male who fell ill on 11 May 2017 having stayed seven days of his incubation period in Dubai. He stayed at an accommodation flat in a hotel complex and no other commercial accommodation sites are reported during this incubation period. However, he did a day trip to Abu Dhabi.

Yellow fever – South America – 2016/2017

Opening date: 16 January 2017

Latest update: 26 May 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 4 and 18 May 2017, Brazil has reported 31 confirmed cases in the states of Espírito Santo (24), Rio de Janeiro (3), São Paulo (3) and Goiás (1). This is the first confirmed case of locally-acquired yellow fever in Goiás since the beginning of the outbreak.

Influenza A(H7N9) – China – Monitoring human cases

Opening date: 31 March 2013

Latest update: 24 May 2017

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then and up to 23 May 2017, 1 503 cases have been reported to WHO, including at least 561 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. From week 2016-41, 705 cases have been reported, representing a significant increase compared to previous seasons.

→Update of the week

Since the last update, 17 additional cases, including two deaths, have been detected in [China](#) according to the health authorities in Hong Kong.

Ebola - Republic Democratic of Congo - 2017

Opening date: 15 May 2017

Latest update: 26 May 2017

Since 22 April 2017 and as of 21 May, authorities in the Democratic Republic of Congo (DRC) have reported 43 cases of Ebola virus disease in Bas Uele Province. Among these cases, two are confirmed, three are probable and 38 are suspected. Four deaths are reported among the cases. Investigations and laboratory results confirmed an Ebola outbreak of subtype Zaire on 11 May.

→Update of the week

Since last week, 23 new cases are reported of which three are probable and 20 suspect. One additional death in a probable case was reported this week.

Cholera – Multistate (World) – Monitoring global outbreaks

Opening date: 20 April 2006

Latest update: 26 May 2017

Several countries in Africa, Asia and the Americas are reporting [cholera](#) outbreaks. The current situation in Yemen, Somalia and Ethiopia is of particular concern as cholera outbreaks are occurring during major humanitarian crises.

→Update of the week

On 16 May, the Czech Republic posted an EWRS message about two imported case of *vibrio cholera*, one confirmed and one probable. The confirmed case is a 30-year-old woman who returned from Zanzibar via Dar Es Salaam and Dubai to Prague on 12 May. She resided for seven months in Zanzibar for business. She developed symptoms on 9 May and was diagnosed on 15 May for *Vibrio cholerae* O1, serotype Ogawa. She was isolated the same day. The probable case is a 29-year-old man, partner of the confirmed case. He had the same travel history. He developed symptoms on 5 May and was isolated on 15 May. Czech authorities have implemented control measures.

On 22 May, the Czech Republic posted an EWRS message, stating that the second case has been laboratory confirmed with infection caused by *Vibrio cholerae* non O1/non O139.

The Gulf of Aden and the Horn of Africa region are the main affected areas with Somalia, Yemen and Ethiopia reporting major cholera outbreaks since the beginning of 2017. These outbreaks are expected to intensify and spread with the start of the rainy season.

Following the two imported cases, ECDC published a [rapid risk assessment](#) on 23 May 2017, concluding that the risk of cholera infection in travellers visiting the countries with cholera circulation remains low even though the likelihood of sporadic importation of cases may increase in the EU/EEA.

II. Detailed reports

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

Opening date: 12 December 2016

Latest update: 26 May 2017

Epidemiological summary

Between 1 June 2016 and 17 May 2017, 15 EU 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 Member States have reported 676 cases associated with this cluster initially reported by the UK 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 Member States have reported 388 cases through the Early Warning and Response System (EWRS) on 14 October 2016 by the Netherlands and through EPIS-FWD on 31 January 2017. 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 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), 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 an MSM. This strain was only identified in the UK (one case, MSM) and Italy (one case, MSM unknown status).

Between July 2016 and 2 April 2017, the UK 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 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 explain the multinational dimension of these clusters. In at least two EU 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. Countries with limited vaccine availability are encouraged to bring that topic to the Health Security Committee in order to identify possible solutions.

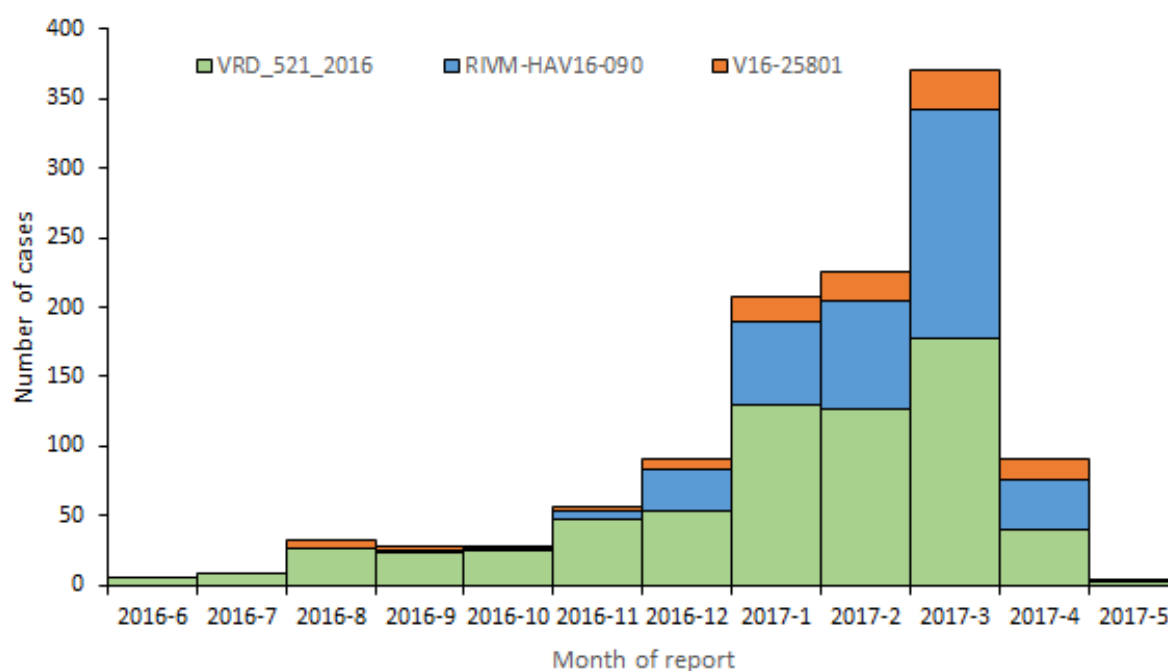
Actions

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 [RRA](#) 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



Chikungunya, dengue and Zika – Multistate (World) – Monitoring global outbreaks

Opening date: 27 January 2017

Latest update: 26 May 2017

Epidemiological summary

Europe:

Chikungunya and dengue:

No autochthonous cases of chikungunya and dengue virus infection have been reported in EU/EEA Member States in 2016 and 2017.

Zika:

5/17

No mosquito-borne Zika virus transmission has been reported in EU/EEA Member States in 2016 and 2017.

Since June 2015 (week 26) and as of 24 May 2017, 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 2 171 travel-associated Zika virus infections through [The European Surveillance System](#) (TESSy). Over the same period, 10 EU/EEA Member States reported 133 cases of Zika virus infection among pregnant women.

Americas and the Caribbean:

Chikungunya:

Since the beginning of 2017 and as of 19 May, the Pan-American Health Organization ([PAHO](#)) has reported 48 141 suspected and confirmed cases in the Americas and Caribbean region. This is an increase of 35 172 since the last monthly update on 31 March. Most cases are reported by Brazil (43 010), Bolivia (1 289), Peru (797), Paraguay (743) and Panama (724).

Dengue:

Since the beginning of 2017 and as of 19 May, [PAHO](#) has reported 202 669 suspected and confirmed cases, including 99 deaths, in the Americas and Caribbean region.

Peru reported 28 352 confirmed and probable dengue cases in 2017, including 34 deaths. This is an increase compared with the same period in 2016.

[Brazil](#) reported 113 381 probable cases of dengue as of 15 April 2017. The most affected region is the Southeast (37 281 cases, 32.9%), followed by the Northeast (31 142 cases; 27.5%), Central West (25 065 cases, 22.1%), North (15 823 cases, 14.0%) and South (4 070 cases; 3.6%) In 2016, Brazil reported 1 500 535 cases of dengue.

Zika:

On 17 May 2017, [Florida](#) reported two additional locally-acquired cases of Zika virus infection. This brings the total to four locally-acquired cases reported in 2017, all in Miami-Dade County. Although tested in 2017, these four cases are considered to have been exposed in 2016. Since the beginning of 2017 and as of 27 April, none of the mosquitoes collected in [Florida](#) have tested positive for the presence of Zika virus.

Since 13 April 2017 and as of 15 May, [Argentina](#) has reported 55 additional locally-acquired cases of Zika virus infection in Chaco Province (33) and Salta Province (22). This brings the total to 68 locally-acquired cases reported in 2017 in Chaco Province (38), Salta Province (24) and Formosa Province (6).

According to media reports, [Cuba](#) reported around 1 850 cases of Zika virus infection since the first case in March 2016.

Asia:

Chikungunya:

Chikungunya cases are reported from India (New Delhi) and Pakistan.

In [India](#), media, quoting authorities, reported 89 chikungunya cases in Delhi from the beginning of year to 15 May, which corresponds to the low transmission season.

Since 19 December 2016 and as of 19 May, 3 108 cases of chikungunya have been reported in Karachi ([Pakistan](#)). This is an increase of 2 223 cases since last update on 12 March. Additionally, since the beginning of 2017 and as of 17 March, 472 cases of Chikungunya were reported in [Gwadar](#) district.

Dengue:

In 2017, the most affected countries in Asia are Malaysia, Sri Lanka and Thailand. Laos is reporting an increase of dengue cases compare to 2016 during the same period, while Malaysia, Cambodia, Singapore and Viet Nam reported less cases than in 2016.

As of 18 April, [Cambodia](#) reported 206 suspected dengue cases in 2017, which was lower than the number of cases during the same period from 2014 to 2016.

As of 31 March, 67 cases of dengue were reported in [China](#) in 2017, which is comparable to the same period in 2016

(91 cases reported).

As of 1 May, India reported 32 dengue cases in [Delhi](#) and 280 cases in the state of [Kerala](#), in the south of India. As of 14 April [Laos](#) has reported 561 cases in 2017. The number of cases is higher than in the same period in 2016 (260 cases).

Since the beginning of 2017 and as of 29 April, [Malaysia](#) reported 31 319 dengue cases, which is lower than in 2016 in the same period (44 202 cases).

As of May 2017, [Myanmar](#) reported 1 068 dengue cases (including five deaths), in Yangon, which was about four times higher than in 2016.

On 8 May 2017, media quoting public health authorities, [Saudi Arabia](#) reported 36 confirmed and 60 suspected dengue cases in Makkah region (western SA).

As of 19 May, [Singapore](#) reported 1 024 cases in 2017, which is lower than during the same period in 2013–2016.

[Preliminary results](#) of positive dengue samples serotyped in January to March 2017 indicate that DEN-2 accounted for majority of the typed samples, followed by DEN-3, DEN-1 and DEN-4.

Since the beginning of 2017 and as of 12 May, [Sri Lanka](#) reported 44 623 dengue cases, including 90 deaths, from all districts. This is an increase of 18 623 since last update on 1 April. The highest number of dengue cases (18 513) was reported from the Western Province.

As of 16 May 2017 [Taiwan](#) has recorded 80 imported cases of dengue fever, mostly from Malaysia, Indonesia and Vietnam.

Since the beginning of 2017 and as of 15 May, [Thailand](#) reported 5 269 dengue cases from 77 provinces, which is an increase of 1 584 dengue cases since last update on 3 April.

As of 23 April, [Viet Nam](#) reported 26 205 dengue cases including seven deaths in 2017, compared to 31 870 cases including nine deaths in the same period in 2016. Majority of reported cases (74.8%) are from the South (74.8%).

Zika:

Since the beginning of 2017 and as of 14 May, [Singapore](#) has reported 33 cases of Zika virus infection. This represents an increase by 22 cases since 7 April.

Since the beginning of 2017 and as of 5 May, media in [Vietnam](#) have reported 19 cases of Zika virus infection in Ho Chi Minh City. This represents an increase by six cases since 17 February in the capital city.

On 13 April 2017, Taiwan reported a travel-associated case in a traveller returning from Angola.

Australia and the Pacific:

Chikungunya:

No outbreak detected this month.

Dengue:

As of 24 April, [Australia](#) reported 411 laboratory-confirmed dengue cases in 2017. The number of cases reported is lower than that reported during the same time period in the previous years (2012–2016).

As of 2 May, [Fiji](#) reported 913 dengue cases in 2017, including one death. The majority (80%) of these cases are from the Western and Central health division. Over 105 of the cases required hospitalisation. During the same period last year, 278 dengue cases were notified.

Since September 2016 and as of 19 May 2017, [New Caledonia](#) reported 3 682 cases, including [eight](#) deaths. Thirty-two of 33 communes of New Caledonia are affected by dengue fever.

Since 15 August 2016 and as of 16 April 2017, [Solomon Islands](#) reported 12 250 dengue cases (DEN-2). The weekly number of reported cases is decreasing. Since the beginning of the outbreak 851 cases were hospitalised and 15 deaths were reported.

From November 2016 to 4 May 2017, [Vanuatu](#) reported 2 838 DEN-2 cases including 147 hospitalisations. The weekly number of reported cases is decreasing.

Zika:

No major outbreaks detected.

Africa:

Chikungunya:

No major outbreak detected this month.

Dengue:

Between 22 April and 8 May 2017, [Ivory Coast](#) reported 34 cases from eight districts of Abidjan. No deaths have been reported. The average age of cases recorded is 25.7 years, with a range of 1 to 67 years. Six out of 14 blood samples obtained from these acute cases tested positive for DEN-3.

As of 7 May 2017, [Kenya](#) reported 119 dengue cases in Mombasa, located on the Eastern coastline. The disease has spread to all six sub counties in the county. Kisauni recorded the highest number of cases at 37, followed by Mvita at 25. Both Changamwe and Likoni recorded 21 cases respectively.

As of 12 May, [La Reunion](#) reported 24 locally-acquired dengue cases in 2017. Three communes are affected: Saint-Paul (Crève-cœur), Saint-Louis (Palissade) and Saint-Pierre (Basse-Terre - Ligne Paradis).

Assessment:

Chikungunya: Outbreaks are still ongoing in the Americas and the Pacific.

Dengue: 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.

Zika: Despite the decrease in intensity of Zika virus transmission after the 2016 wave, cases are still reported in the Americas and Asia where the vectors, *Aedes* mosquitoes, are widely distributed. 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.

Europe is vulnerable to the autochthonous transmission of arboviruses. 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 case is possible during the summer season in the EU/EEA and continued vigilance is needed to detect imported cases in tourists returning to the EU from affected regions.

Action: ECDC monitors these threats on a monthly basis. ECDC published the [tenth update of its RRA](#) on Zika virus disease epidemic on 4 April.

ECDC assessment

Chikungunya: outbreaks are still ongoing in the Americas and the Pacific.

Dengue: 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.

Zika: despite the decrease in intensity of zika virus transmission after the 2016 wave, cases are still reported in the Americas and Asia where the vectors, *Aedes* mosquitoes, are widely distributed. 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.

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Actions

ECDC monitors these threats on a monthly basis. ECDC published the tenth update of its [rapid risk assessment](#) on Zika virus disease epidemic on 4 April.

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

Opening date: 10 November 2016

Latest update: 23 May 2017

Epidemiological summary

As of 22 May 2017, 12 EU Member States as well as Switzerland have reported 60 TALD cases with onset of symptoms since 1

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October 2016 and with travel history to Dubai within two to ten days prior to illness. Cases were reported by the United Kingdom (29), Sweden (8), the Netherlands (6), Denmark (4), France (3), Germany (3), Austria (1), Belgium (1), the Czech Republic (1), Hungary (1), Ireland (1), Spain (1) and Switzerland (1). Fifty-two cases are associated with commercial accommodation sites and six with private accommodation sites. For two cases, the information was not available. Eleven cases spent time in another location in UAE or in a country other than their home country during their incubation period. One case was reported as fatal.

All cases but one are laboratory confirmed. Three cases had their infection further characterised as *Legionella pneumophila* serogroup 1, sequence base type 616, and one as *Legionella pneumophila* serogroup 1, sequence base type 2382. 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. One case has been characterised with *Legionella pneumophila* serogroup 13, sequence base type 1327. UAE authorities have informed ECDC that no increase in cases of statutory notifiable pneumonia was observed in Dubai between October and December 2016.

ECDC assessment

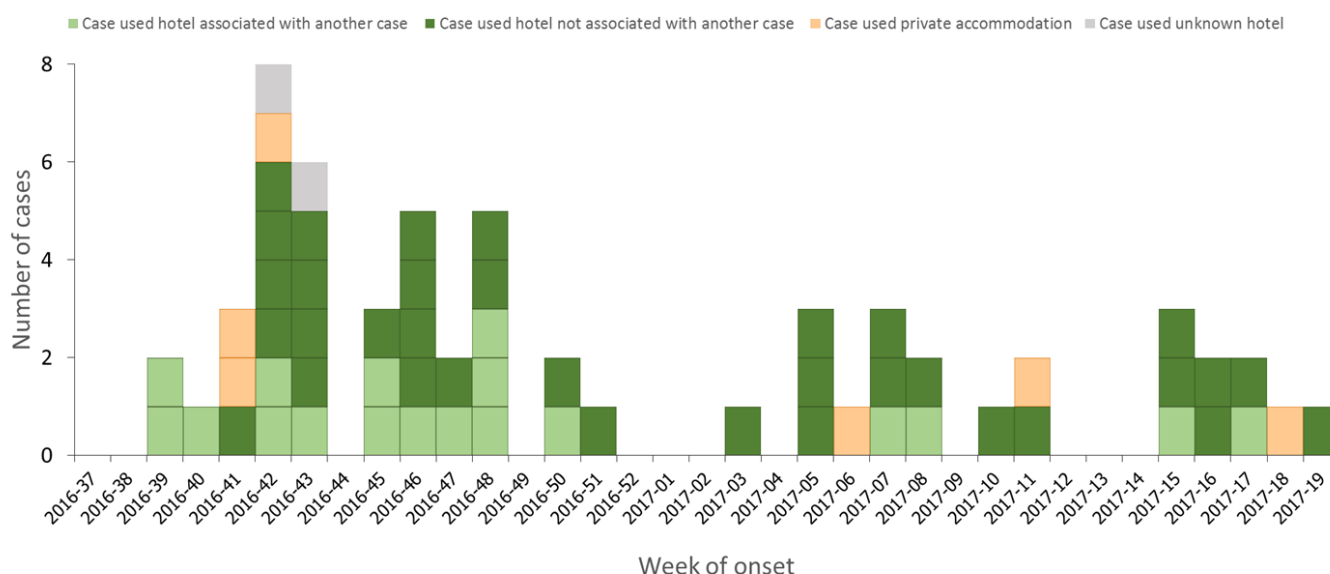
Cases continue to be reported with onset of symptoms in recent weeks, indicating that there is a persistent source of *Legionella* exposure common to travellers with travel history to Dubai. However, it cannot be ruled-out that some travellers may have acquired their infection elsewhere if their travel 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 7 April.

Distribution of travel-associated Legionnaires' disease cases with history of stay in Dubai, United Arab Emirates, by week of onset from 37-2016 and 19-2017, as reported to ELDSNet by 22 May 2017 (n=60 cases)

ECDC



Yellow fever – South America – 2016/2017

Opening date: 16 January 2017

Latest update: 26 May 2017

Epidemiological summary

Brazil:

Between 4 and 18 May 2017, Brazil has reported 31 confirmed cases in the states of Espírito Santo (24), Rio de Janeiro (3), São Paulo (3) and Goiás (1). This is the first confirmed case of locally-acquired yellow fever in Goiás since the beginning of the outbreak. Between 6 January and 18 May 2017, Brazil has reported 1 380 cases of yellow fever (622 suspected and 758 confirmed), including 306 deaths (42 suspected and 264 confirmed). The case-fatality rate is 22.2% overall and 34.8% among confirmed cases.

Seven states have reported confirmed autochthonous cases: Minas Gerais, Espírito Santo, São Paulo, Rio de Janeiro, Pará, Goiás and Tocantins.

Nine states have reported suspected autochthonous cases: Paraná, Bahia, Rondônia, Distrito Federal, Rio Grande do Sul, Amapá, Maranhão, Mato Grosso do Sul and Santa Catarina

Other countries in South America:

From the beginning of 2017 to 8 May, five other countries have reported suspected and/or confirmed cases of yellow fever: [Peru](#) (14), [Colombia](#) (5), [Bolivia](#) (1), [Ecuador](#) (1) and [Suriname](#) (1).

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.

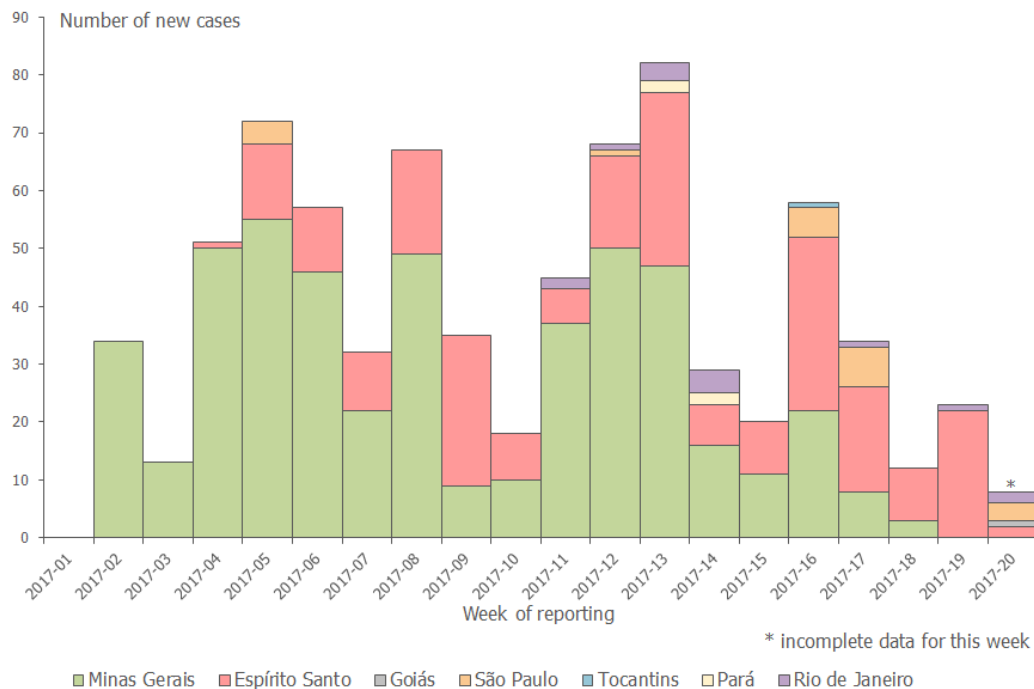
In Europe, *Aedes aegypti*, the primary vector of yellow fever in urban settings, is present in Madeira. Recent studies have shown that *Aedes albopictus* can potentially transmit the yellow fever virus. However, the risk of the virus being introduced into local competent vector populations in the EU through viraemic travellers from Brazil is considered to be very low, as the current weather conditions in Europe are not favourable for vector activity.

Actions

ECDC closely monitors this event in collaboration with the World Health Organization. ECDC updated its [rapid risk assessment](#) on 14 April 2017. ECDC is also producing [epidemiological updates](#) and a [map for travel advice](#).

Distribution of confirmed human cases of yellow fever in Brazil by week of reporting from 6 January to 18 May 2017

ECDC



Distribution of confirmed cases of locally acquired yellow fever, Brazil, as of 18 May 2017

ECDC



Confirmed cases of locally-acquired yellow fever, as of 18 May 2017

States 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: 23 May 2017
 ECDC map maker: <https://emma.ecdc.europa.eu>

Influenza A(H7N9) – China – Monitoring human cases

Opening date: 31 March 2013

Latest update: 24 May 2017

Epidemiological summary

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then and up to 23 May 2017, 1 503 cases have been reported to WHO, including 561 deaths. The A(H7N9) 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 705 cases as of 17 May 2017.

The 1 503 cases were reported from Zhejiang (308), Guangdong (258), Jiangsu (248), Fujian (107), Anhui (97), Hunan (92), Shanghai (56), Jiangxi (50), Sichuan (32), Guangxi (30), Hubei (30), Beijing (28), Hebei (26), Henan (26), Shandong (23), Hong Kong (21), Guizhou (17), Xinjiang (10), Chongqing (7), Gansu (5), Shaanxi (5), Taiwan (5), Liaoning (4), Tianjin (4), Jilin (3), Tibet (3), Macau (2), Yunnan (2), Shanxi (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 (HPAI) virus A(H7N9) will replace the low-pathogenic virus or if both will co-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.

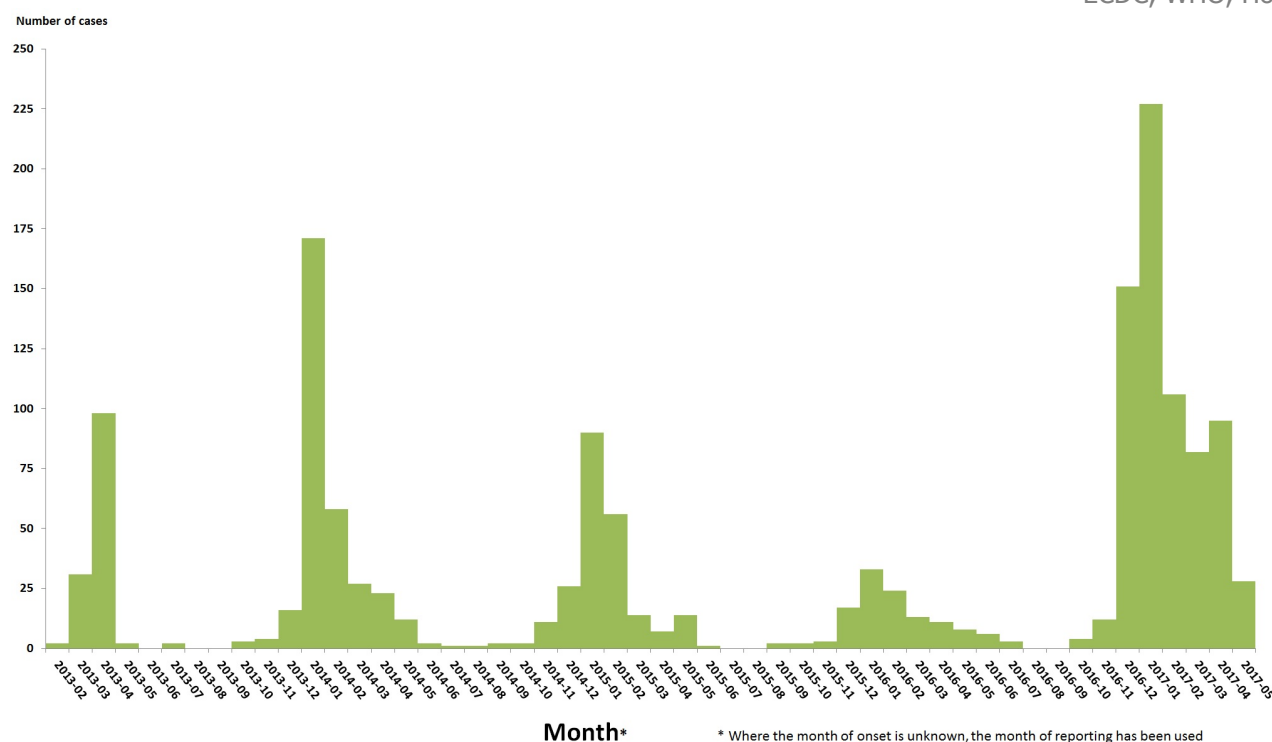
The possibility of humans infected with A(H7N9) returning to the EU/EEA cannot be excluded. However, the risk of the disease spreading within Europe via humans is still considered low, as there is no evidence of sustained human-to-human transmission.

Actions

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

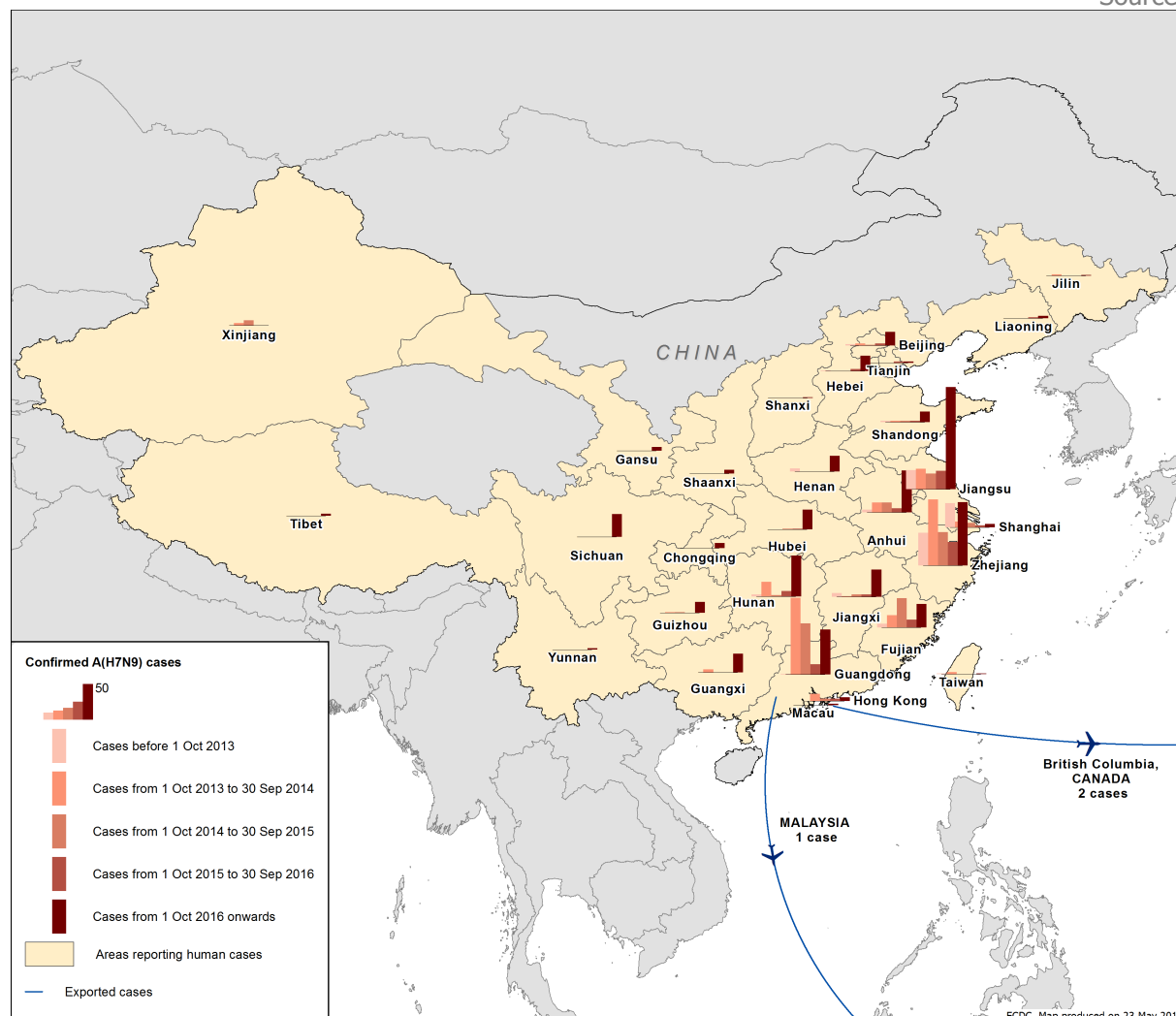
Distribution of confirmed cases of A(H7N9) by first available month, February 2013 to 23 May 2017

ECDC, WHO, Hong Kong



Distribution of confirmed cases of A(H7N9) by five periods (weeks 2013-7 to 2017-21)

Source: ECDC



Ebola - Republic Democratic of Congo - 2017

Opening date: 15 May 2017

Latest update: 26 May 2017

Epidemiological summary

Since 22 April 2017 and as of 21 May, DRC authorities have reported two confirmed cases, three probable and 38 suspected cases in Bas Uele Province. Investigations and laboratory results confirmed an Ebola outbreak of subtype Zaire on 11 May. The cases are from five areas: Nambwa, Mouma, Azande, Ngabatala and Ngay. WHO acknowledged that at least 419 close contacts have been identified and are being monitored. Among the contacts, 54 have completed the 21 days of follow up.

Response:

- A mobile lab was deployed on 20 May in Likati.
- An Ebola Treatment Centre has been implemented in Likati and a second one is under preparation in Mouma.
- Active case finding and surveillance are ongoing.
- DRC, MSF, WHO and other partners are preparing to offer access to the rVSV EEBOV experimental/investigational vaccine. The vaccine will be offered to contacts and contacts of contacts of a confirmed EVD case, including Health Care Workers and Field Laboratory Workers.

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

ECDC assessment

This is the eighth outbreak of Ebola Virus Disease (EVD) in the Democratic Republic of the Congo (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 GOARN partners are supporting the national health authorities in the response. Although the outbreak is in an extremely remote area, Likati is situated on the migration route of refugees from the Central African Republic, which may pose a risk of spread of the disease in DRC.

For EU/EEA citizens living or travelling through DRC, the risk of exposure is negligible.

For people who are entering the affected area such as healthcare workers supporting the response to the outbreak, the risk of infection remains very low assuming they follow the recommended precautions.

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

Actions

ECDC produced a [Rapid Risk Assessment](#) on Outbreak of Ebola virus disease in Bas Uele province, Democratic Republic of the Congo.

Cholera – Multistate (World) – Monitoring global outbreaks

Opening date: 20 April 2006

Latest update: 26 May 2017

Epidemiological summary

EU

Czech Republic

On 16 May, the Czech Republic posted an EWRS message about two imported cases of cholera. The first confirmed case is a 30-year-old woman who returned from Zanzibar via Dar Es Salaam and Dubai to Prague on 12 May. She resided for seven months in Zanzibar for business. She developed symptoms on 9 May and was diagnosed on 15 May for *Vibrio cholerae* O1, serotype Ogawa. She was isolated the same day. The second confirmed case is a 29-year-old man, partner of the first case. He had the same travel history. He developed symptoms on 5 May and was isolated on 15 May. The case has been laboratory confirmed with infection caused by *Vibrio cholerae* non O1/non O139. Czech authorities have implemented control measures.

Source: [Cholera platform](#) | [WHO EMRO](#) | [Health cluster Yemen](#) | [media](#) | [reliefWeb](#) | [FEWS net](#)

ECDC assessment

There has been an unusual increase in the number of cases of cholera in the Horn of Africa and the Gulf of Aden in recent years. Despite the large number of travellers from the EU/EEA visiting countries in the Horn of Africa and the Gulf of Aden, particularly Ethiopia, Kenya and Tanzania, very few cases are reported each year among returning EU/EEA travellers. In this context, the risk of cholera infection in travellers visiting these countries remains low, even though the likelihood of sporadic importation of cases may increase in the EU/EEA.

According to the World Health Organization, vaccination should be considered for travellers at higher risk such as emergency/relief workers who are likely to be directly exposed. Vaccination is generally not recommended for other travellers.

Travellers to cholera endemic areas should seek advice from travel health clinics to assess their personal risk and apply precautionary sanitary and hygiene measures to prevent infection. These can include drinking bottled water or water treated with chlorine, carefully washing fruits and vegetables with bottled or chlorinated water before consumption, regularly hand washing with soap, eating thoroughly cooked food and avoiding consumption of raw seafood products.

Actions

ECDC monitors cholera outbreaks globally through its epidemic intelligence activities in order to identify significant changes in epidemiology. Reports are published on a monthly basis.

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