



COMMUNICABLE DISEASE THREATS REPORT

# CDTR Week 9, 24 February-2 March 2019

## All users

This weekly bulletin provides updates on threats monitored by ECDC.

#### **NEWS**

#### Zoonoses: antimicrobial resistance shows no signs of slowing down

Data released this week by the European Centre for Disease Prevention and Control and European Food Safety Authority reveal that antimicrobials used to treat diseases that can be transmitted between animals and humans, such as campylobacteriosis and salmonellosis, are becoming less effective.

According to the <u>report</u>, which refers to 2017 data, resistance to fluoroquinolones (such as ciprofloxacin) is so high in *Campylobacter* bacteria in some countries that these antimicrobials no longer work for the treatment of severe campylobacteriosis cases.

Most countries reported that *Salmonella* in humans is increasingly resistant to fluoroquinolones. Multidrug resistance (resistance to three or more antimicrobials) is high in *Salmonella* found in humans (28.3%) and animals, particularly in *S.* Typhimurium. In *Campylobacter*, high to extremely high proportions of bacteria were found to be resistant to ciprofloxacin and tetracyclines. However, combined resistance to critically important antimicrobials was very low to low in *Salmonella* and *Campylobacter* from humans and animals and in indicator *E. coli* from animals.

The joint report, which presents the data collected from 28 EU Member States from humans, pigs and calves under one year of age, confirms the rise in antibiotic resistance already identified in previous years.

# I. Executive summary

# **EU Threats**

## Influenza – Multistate (Europe) – Monitoring season 2018 – 2019

Opening date: 8 October 2018

Latest update: 1 March 2019

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

→Update of the weekFrom 18–24 February 2019, influenza activity was widespread in the European Region.

# Rift Valley fever (RVF) – France (Mayotte) – 2019

Opening date: 31 January 2019

Latest update: 1 March 2019

In December 2018 and January 2019, authorities reported an increase of Rift Valley fever cases in human and animals on Mayotte. These are the first human cases reported on Mayotte for several years.

#### →Update of the week

According to <u>Santé publique France</u> and as of 21 February 2019, 42 new human cases have been reported in Mayotte since the last CDTR published on 1 February 2019. From 22 November 2018 to 21 February 2019, 63 human cases were confirmed in Mayotte, with no deaths reported to date. The majority (79%) of cases are male and with a median age of 38 years and age range of 10–74 years.

Since the beginning of the outbreak, 36 cases have been investigated and declared having direct or indirect contact with animals (26), consuming raw or curdled milk (15) and not having had contact with animals nor living close to farms (5).

Human cases are concentrated mainly in the Centre-West and North areas of Mayotte. The investigations of 36 confirmed human cases showed a possible direct or indirect link with the Ourovéni area, which is an agricultural area between the villages of Combani and Kahani, with residents owning fields and livestock. This area is well known for hiking activities.

Information on environment and type of accommodation was available for 29 cases who declared living in rural (10), semiurban (14) and urban areas (5). Results from captures of mosquitos in living areas was available for eight confirmed human cases, showing different mosquito species present in the domicile, with a predominance of *Culex* spp.

In addition, samples taken by veterinarians between 22 November 2018 and 21 February 2019 from sick animals or from abortions have identified 33 animal foci of Rift Valley fever in Mayotte, comprising one to six animals, including bovines (25) and small ruminants (8).

## Dengue – France, Réunion – 2019

Opening date: 13 March 2018

Latest update: 1 March 2019

Since the beginning of 2019, the island of Réunion, a French department in the Indian Ocean, has seen a significant increase in dengue cases.

→ Update of the week

According to regional health authorities, Réunion has reported 929 cases of dengue since the beginning of 2019 and as of 17 February 2019.

According to Santé publique France, the epidemic is expanding and reaching areas that have not previously been affected.

# Non EU Threats

# New! Legionnaires' disease- Goa, India - 2019

Opening date: 27 February 2019

Latest update: 1 March 2019

According to the UK's National Travel Health Network and Centre (NaTHNaC), seven cases of Legionnaires' disease have been reported among British travellers returning from Goa, India as of November 2018, representing a small increase of cases compared with previous years.

# Ebola virus disease - tenth outbreak - Democratic Republic of the Congo - 2018-2019

Opening date: 1 August 2018

Latest update: 1 March 2019

On 1 August 2018, the Ministry of Health of the Democratic Republic of the Congo declared the 10th outbreak of Ebola virus disease in the country. The outbreak affects North Kivu and Ituri Provinces in the northeast of the country close to the border with Uganda. On 17 October 2018, the International Health Regulations Emergency Committee concluded that the epidemic does not at this stage constitute a public health emergency of international concern.

#### →Update of the week

Since the previous CDTR, the <u>Ministry of Health</u> of the Democratic Republic of the Congo has reported 32 additional cases, including 24 additional deaths, among confirmed cases.

During this period, one case has been notified in Mandima health zone, where the last confirmed case was reported in early December 2018. On 22 February 2019, the Ministry of Health of the Democratic Republic of the Congo reported a confirmed case in Beni health zone after 23 days without confirmation of cases in the area. The case was the partner of a recovered case and likely exposed to his body fluids. According to the Ministry of Health update released on 26 February 2019, one confirmed case listed in Katwa fled to Lubero health zone and died in Lubero General Hospital. Up until then, the health zone had never reported a confirmed case. Furthermore, Katwa has surpassed Beni as the health zone reporting the largest number of cases and deaths since the last CDTR update.

According to <u>media sources</u>, a strike of healthcare workers in Vuhovi health zone began after a violent incident that lead to the death of the chief nurse in the area.

On 25 February 2019, the Ministry of Health of the Democratic Republic of the Congo confirmed a major violent incident in Katwa health zone that lead to the total destruction of the Ebola treatment centre (ETC) in the area. The attack took place on the night of 24 February 2019. One death related to this event was reported and all patients, including four confirmed and six suspected cases, were transferred to other ETCs and transit centres. On 27 February 2019, an additional violent attack took place at the ETC in Butembo health zone. According to the Ministry of Health, 38 suspected and 12 confirmed cases were being treated at the centre during the time of the incident. Among these cases, 36 cases, including 4 confirmed, fled the area and have not yet been found. The other 14 cases, including 8 confirmed, were transferred to the transit centre in Butembo. Both ETCs were run by Doctors Without Borders and had to disrupt their activities due to destruction of the facilities.

According to <u>WHO Regional Office for Africa External Situation Report 30</u>, one additional healthcare worker has been infected, bringing the total number of affected healthcare workers to 69 as of 24 February 2019.

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

Opening date: 24 September 2012

Latest update: 1 March 2019

Since the disease was first identified in Saudi Arabia in April 2012, more than 2 300 Middle East respiratory syndrome coronavirus (MERS-CoV) cases have been detected in 27 countries. In Europe, eight countries have reported confirmed cases, all with direct or indirect connections to the Middle East. The majority of MERS-CoV cases continue to be reported from the Middle East. The source of the virus remains unknown, but the pattern of transmission and virological studies point toward dromedary camels in the Middle East as 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

In 2019 and as of 27 February 2019, 89 MERS-CoV cases have been reported in <u>Saudi Arabia</u> (79) and <u>Oman</u> (10). There were also 19 deaths in Saudi Arabia (15) and Oman (4). In Saudi Arabia, 30 cases were primary (15 of whom reported contact with camels), 31 were healthcare-acquired and 18 were household contacts. The majority of the cases in Saudi Arabia (81%) were reported in Wadi Aldwasir (50) and Riyadh (14).

According to <u>media reports</u>, the Ministry of Environment Water & Agriculture in Saudi Arabia has closed the camel market in Wadi Aldwasir, a large camel market, following the continued presence of MERS-CoV human cases and positive samples of camels. This measure is expected to reduce the disease's spread among camel owners and market visitors.

## Cholera – Multistate (World) – Monitoring global outbreaks

Opening date: 20 April 2006

Latest update: 1 March 2019

Several countries in Africa, Asia and the Americas have reported <u>cholera</u> outbreaks. Major ongoing outbreaks are reported in the Democratic Republic of the Congo, Haiti and Yemen.

→Update of the week

Since the last CDTR update on 18 January 2019, new cholera cases have been reported worldwide and countries such as Kenya and Zambia have reported new cholera outbreaks.

Countries reporting the majority of new cases since the previous update are Yemen (54 530 cases, 49 deaths), the Democratic Republic of the Congo (3 451 cases, 86 deaths) and Kenya (843 cases, 3 deaths).

Additionally, WHO has closed the events for cholera outbreaks in Angola and Nigeria during this period.

# **II. Detailed reports**

## Influenza – Multistate (Europe) – Monitoring season 2018 – 2019

Opening date: 8 October 2018

Latest update: 1 March 2019

## Epidemiological summary

### Weekly overview

From 18–24 February 2019, influenza activity was widespread in the European Region.

Specimens collected from individuals presenting with influenza-like illness or acute respiratory infection to sentinel primary healthcare sites yielded an influenza virus positivity rate of 49%.

Influenza type A virus detections dominated, with slightly more A(H1N1)pdm09 viruses than A(H3N2) viruses co-circulating. Few influenza B viruses were detected.

Among the specimens from patients hospitalised with severe acute repiratory infection (SARI) collected in week 8 of 2019, 41% were positive for influenza virus and all were type A.

Pooled data from 21 Member States and areas reporting to the <u>EuroMOMO</u> project indicated excess mortality mostly among the elderly aged 65 years and above, but also in adults in the age group of 15–64 years.

### 2018–2019 season overview

Influenza activity in the European region based on sentinel sampling exceeded a positivity rate of 10% in week 49 of 2018 and exceeded 50% between weeks 3–7 of 2019 and peaked in week 5 of 2019.

Both influenza A virus subtypes are circulating widely, with co-circulation in certain countries, while others report dominance of either A(H1N1)pdm09 or A(H3N2) viruses.

Among hospitalized influenza virus-infected patients admitted to ICU wards, 37% of influenza A viruses were subtyped. Oof these 68% were A(H1N1)pdm09 viruses. Among influenza virus-infected patients admitted to other wards, 32% of influenza A viruses were subtyped and 68% were A(H1N1)pdm09 viruses.

Over 90% of influenza A virus-positive cases detected from severe acute respiratory infection surveillance since week 40 of 2018 were subtyped and 81% were A(H1N1)pdm09 virus.

In general, current influenza vaccines tend to work better against influenza A(H1N1)pdm09 and influenza B viruses than against influenza A(H3N2) viruses and preliminary vaccine effectiveness estimates continue to support the use of vaccines. Early data suggests the vaccines are effective and estimates vary depending on the population studied and the proportions of circulating influenza A virus subtypes (higher vaccine effectiveness in children). Refer to data from <u>six European studies</u>, <u>Canada</u>, <u>Finland</u>, <u>Hong Kong</u>, <u>Sweden</u> and the <u>United States</u>.

On 21 February 2019, <u>WHO published the recommendations</u> for influenza vaccine composition to be used in the 2019–2020 northern hemisphere season. The recommendation for B strains remained unchanged, for A(H1N1)pdm09 it was updated, and for A(H3N2) it was postponed to 21 March 2019.

Circulating viruses remain susceptible to neuraminidase inhibitors supporting early initiation of treatment and prophylactic use according to national guidelines.

## Source: <u>Flu News Europe</u> | <u>EuroMOMO</u>

## ECDC assessment

Influenza activity and geographic spread remain at seasonally expected levels. Influenza A(H3N2) and A(H1N1)pdm09 cocirculate in Europe. Influenza vaccine coverage among the elderly, chronic disease risk groups and healthcare workers was suboptimal in most EU Member States, according to the <u>VENICE report</u>. Influenza vaccination efforts should continue in the EU.

## Actions

ECDC monitors influenza activity in Europe during the winter season and publishes its weekly report on the <u>Flu News Europe</u> website.

Recommendations on the composition of the 2018–2019 influenza virus vaccine are available from the WHO website.

## Rift Valley fever (RVF) – France (Mayotte) – 2019

Opening date: 31 January 2019 Latest update: 1 March 2019

# Epidemiological summary

According to Santé publique France, from 22 November 2018 to 21 February 2019, 63 human cases were confirmed in Mayotte and no fatality has been reported to date. All cases were locally acquired. Among these cases, 50 are male and 13 are female, with an age range of 10–74 years.

Most of the cases are concentrated mainly in the Centre-West and North area of Mayotte.

Further investigations identified 33 animal foci of Rift Valley fever in the western and central parts of the island.

According to the French Agricultural Research Centre for International Development, Rift Valley fever seroprevalence among ruminants has decreased from 2008–2017, but increased significantly in 2017 and 2018 (3.6%, IC95% [2.3%–5.6%]) and 2018 and 2019 (10.1%, IC95% [6.5%–15.3%]).

Sources: <u>Santé publique France</u> | <u>Emerging Infectious Diseases</u> | <u>Emerging Infectious Diseases</u> | <u>Université de la Réunion</u> | <u>OIE</u> | <u>WAHIS</u>

## ECDC assessment

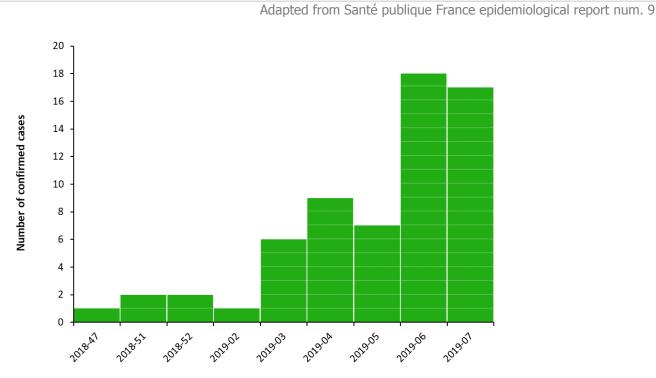
The detection of autochthonous cases in Mayotte is not unexpected, but the occurrence of 63 cases within a short time period is of concern as the current weather conditions (rainy season from November to March) are favourable for the vectors.

The risk of cases being imported into the EU is not new as Rift Valley fever is endemic in many African countries. Sporadic importation of cases into the EU has occurred in the past years. To date, no autochthonous cases have been reported in the continental EU/EEA countries.

The EU Member States should maintain awareness of the situation in Africa and continue to include Rift Valley fever in their differential diagnosis for sick returning travellers, as importation of cases from Mayotte cannot be excluded.

## Actions

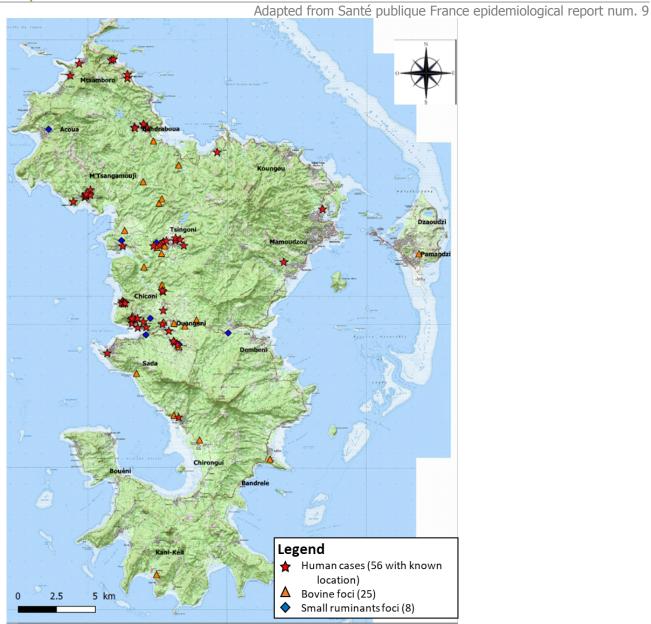
ECDC is preparing a rapid risk assessment on Rift Valley fever in Mayotte (France) that will be distributed on 6 March 2019. ECDC will continue monitoring this event through epidemic intelligence activities and report again if there is a relevant epidemiological update.



# Distribution of RVF confirmed human cases, Mayotte, 22 November 2018 to 21 February 2019

Week of laboratory analysis request

Geographic distribution of human cases (stars) and animal outbreaks in cattle (triangles) and small ruminants (diamonds) of RVF in Mayotte, from 22 November 2018 to 21 February 2019.



Dengue – France, Réunion – 2019

Opening date: 13 March 2018

Latest update: 1 March 2019

# Epidemiological summary

According to <u>Agence de Santé Océan Indien</u>, Réunion has reported 929 cases of dengue since the beginning of 2019 and as of 17 February 2019. Réunion reported 7 803 cases since the begining of the outbreak in 2018. Of these, 178 were hospitalised, and six patients died, of which three were considered, after investigation, as directly related to dengue. The circulating serotype in 2018 and 2019 is DENV-2.

Source: Agence de Santé Océan Indien | Santé publique France

## ECDC assessment

An increased number of dengue cases has been observed in Réunion in the first weeks of 2019 that will likely continue in the

coming weeks. The risk for onward transmission of dengue fever in Europe is linked to importation of the virus by viraemic travellers into receptive areas with established and active competent vectors (i.e. *Aedes albopictus* in mainland Europe, mainly around the Mediterranean Sea and *Aedes aegypti* on the island of Madeira). Environmental conditions in Europe are currently unfavourable for the growth of mosquito populations, so the likelihood of sustained autochthonous dengue virus transmission in continental Europe associated with introduction by a returning traveller is very low.

## Actions

ECDC monitors this outbreak through epidemic intelligence. ECDC published a rapid risk assessment, '<u>Dengue outbreak in</u> <u>Réunion, France – First update</u>', on 6 July 2018.

## **New!** Legionnaires' disease- Goa, India - 2019

Opening date: 27 February 2019 Latest update: 1 March 2019

## Epidemiological summary

According to NaTHNaC, seven cases of Legionnaires' disease have been reported among British travellers returning from Goa, India as of November 2018, representing a small increase of cases compared with previous years. In the same period, the European Legionnaires' Disease Surveillance Network (ELDSNet) received six reports of travel-associated Legionnaires' disease cases in travellers returning from Goa, all from the UK.

### SOURCE: NathNac

## ECDC assessment

According to the <u>Government of Goa's Department of Tourism</u>, approximately 130 000 British nationals visited Goa in 2016, accounting for 19% of total visitors. Considering that Goa is a popular tourist destination among EU/EEA nationals, additional cases among returning travellers cannot be excluded.

## Ebola virus disease - tenth outbreak - Democratic Republic of the Congo - 2018 -2019

Opening date: 1 August 2018

Latest update: 1 March 2019

# Epidemiological summary

Since the beginning of the outbreak and as of 27 February 2019, there have been 885 Ebola virus disease cases (820 confirmed, 65 probable), including 555 deaths (490 confirmed, 65 probable), according to the Ministry of Health of the Democratic Republic of the Congo.

As of 24 February 2019 and according to the <u>WHO Regional Office for Africa External Situation Report 30</u>, 69 healthcare workers have been infected up to date.

Nineteen health zones in two provinces have reported confirmed or probable Ebola virus disease cases: Beni, Biena, Butembo, Kalunguta, Katwa, Kayna, Kyondo, Mabalako, Mangurujipa, Masereka, Musienene, Mutwanga, Oicha and Vuhovi health zones in North Kivu Province and Bunia, Komanda, Mandima, Nyankunde and Tchomia health zones in Ituri Province.

Source: Ministry of Health of the Democratic Republic of the Congo

## ECDC assessment

**ECDC assessment:** Response measures remain challenging in affected areas because of the prolonged humanitarian crisis, unstable security situation and resistance among the population. The fact that the outbreak is ongoing in areas with cross-border population flow with Rwanda, South Sudan and Uganda remains of particular concern.

A substantial proportion of cases continue to be among individuals not previously identified as contacts, highlighting the need to maintain enhanced surveillance in order to identify chains of transmission.

The overall risk of introduction and further spread of Ebola virus disease within the EU/EEA is very low. However, the risk can

only be eliminated by stopping transmission at the local level.

**WHO assessment:** As of 7 February 2019, the <u>WHO assessment</u> is that the risk of spread is low at the global level, but remains very high at national and regional levels.

## Actions

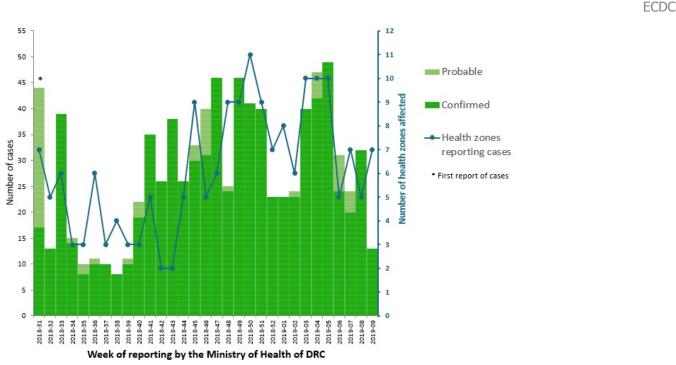
ECDC published an epidemiological update on 25 January 2019 and the third update of a <u>rapid risk assessment</u> on 13 February 2019.

# Geographical distribution of confirmed and probable cases of Ebola virus disease, North Kivu and Ituri Provinces, Democratic Republic of the Congo, as of 27 February 2019

Distribution of Ebola cases, DRC, as of 27 February 2019

ECDC

Distribution of confirmed and probable cases of Ebola Virus Disease and health zones reporting cases, North Kivu and Ituri, Democratic Republic of the Congo, as of 27 February 2019



The MoH of DRC are currently conducting data cleaning. Thus, these figures are likely to change over coming days as cases are being reclassified.

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

Opening date: 24 September 2012

Latest update: 1 March 2019

# Epidemiological summary

In 2019 and as of 27 February 2019, 89 MERS-CoV cases have been reported in Saudi Arabia (79) and Oman (10). There were also 19 deaths in Saudi Arabia (15) and Oman (4). In Saudi Arabia, 30 cases were primary (15 of whom reported contact with camels), 31 were healthcare-acquired and 18 were household contacts. The majority (81%) of the cases in Saudi Arabia were reported in Wadi Aldwasir (50) and Riyadh (14).

Since April 2012 and as of 27 February 2019, 2 389 cases of MERS-CoV, including 868 deaths, have been reported by health authorities worldwide.

Sources: ECDC MERS-CoV page | WHO MERS-CoV | ECDC factsheet for professionals

## ECDC assessment

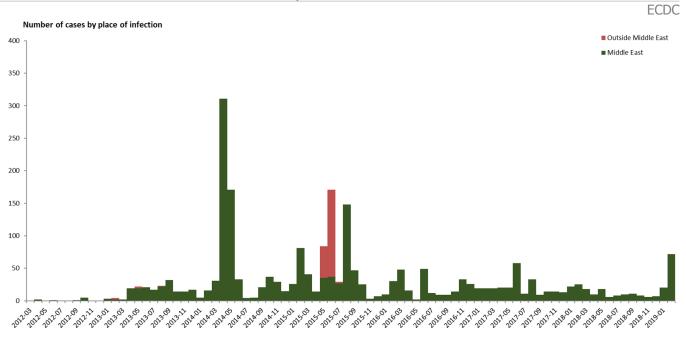
The risk of sustained human-to-human transmission in Europe remains low. ECDC's assessment remains that the MERS-CoV outbreak poses a low risk to the EU, as stated in the <u>rapid risk assessment</u> published on 29 August 2018, which also provides details on the last case reported in Europe.

On 2 August 2018, ECDC published a <u>rapid risk assessment regarding public health risks related to communicable diseases during</u> <u>the 2018 Hajj</u>, Saudi Arabia, 19–24 August 2018 that also addresses MERS-CoV.

# Actions

ECDC monitors this threat through epidemic intelligence and reports on a weekly basis.

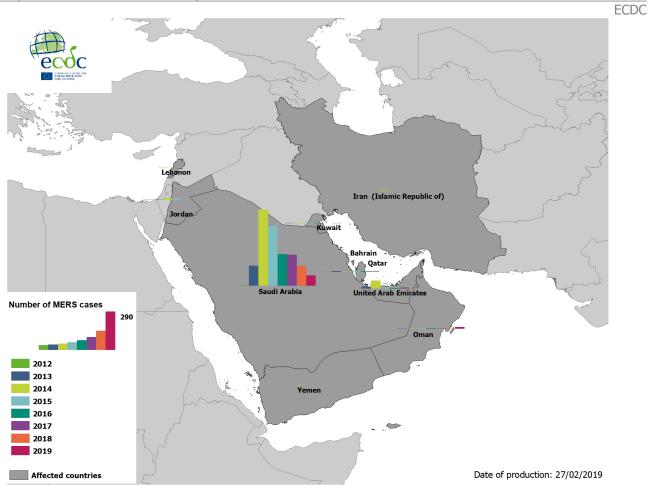
# Distribution of confirmed cases of MERS-CoV by place of infection and month of onset, from March 2012 and as of 27 February 2019



Year and Month\*

\*If month of onset is not available month of reporting has been used

# Geographical distribution of confirmed MERS-CoV cases by country of infection and year, from April 2012 to 27 February 2019



# Cholera – Multistate (World) – Monitoring global outbreaks

Opening date: 20 April 2006

Latest update: 1 March 2019

# Epidemiological summary

### Americas

<u>Dominican Republic</u>: In 2019 and as of 19 January 2019, the Dominican Republic has reported 2 cases and no deaths. During the same period in 2018, the Dominican Republic reported 4 cases.

<u>Haiti</u>: In 2019 and as of 19 January 2019, Haiti has reported 90 cases, including 2 deaths (CFR: 2.2%). In 2018, Haiti reported 3 786 cases, including 41 deaths (CFR: 1.1%). Since the beginning of the outbreak in 2010 and as of 19 January 2019, Haiti has reported 819 876 suspected cases, including 9 791 deaths (CFR: 1.2%).

## Africa

Angola: WHO considers the cholera event in Angola to be closed. Since the beginning of the outbreak in October 2018 and as of 1 February 2019, 139 cases, including 2 deaths (CFR: 1.4%), have been reported.

<u>Burundi</u>: Since the beginning of the outbreak in late December 2018 and as of 10 February 2019, 185 cases, including 2 deaths, have been reported (CFR: 1.1%). According to WHO, there is a decline in the reported number of cases since the outbreak peaked on 28 January 2019.

<u>Cameroon</u>: As of 23 January 2019, Cameroon has reported 997 cases, including 58 deaths (CFR: 5.8%), since the beginning of the outbreak in May 2018. The outbreak is showing an overall decreasing trend. This represents an increase of two cases since the previous CDTR update.

<u>Democratic Republic of the Congo</u>: In 2019 and as of 3 February 2019, the Democratic Republic of the Congo reported 3 451 suspected cases, including 86 deaths (CFR: 2.5%). Among these cases, 96 cases have been <u>reported</u> in North Kivu Province, which is also affected by an Ebola virus disease outbreak. In 2018, 31 387 cases, including 1 042 deaths, were notified across the country.

Ethiopia: In 2019 and as of 28 January 2019, Ethiopia has reported 8 acute watery diarrhoea (AWD) cases in the Afar region. In 2018, Ethiopia reported 3 357 suspected AWD cases from the Afar, Oromia, Somali and Tigray Regions and the city of Dire Dawa.

<u>Kenya</u>: In 2019, a new cholera outbreak was reported in Kenya. As of 18 February 2019, 843 suspected cases, including 3 deaths (CFR: 0.4%), have been reported in Narok, Kajiado and Nairobi Counties. The last case in Nairobi County was reported in 27 January 2019.

<u>Nigeria</u>: On 15 January 2019, Borno and Yobe States declared the end of the cholera outbreak. In 2018, Nigeria reported 44 201 suspected cases, including 836 deaths (CFR: 1.9%).

Somalia: As of 17 February 2019, WHO reported 6 761 suspected cases, including 46 deaths (CFR: 0.7%), since December 2017. This represents an increase of 92 cases and 1 death since the previous update on 18 January 2019.

Tanzania: In 2019, as of 17 February 2019, Tanzania reported 61 cases, including 1 death (CFR: 1.6%). The last case reported in Zanzibar was on 11 July 2017.

<u>Uganda</u>: In 2019 and as of 4 February 2019, 54 suspected cases, including 3 deaths (CFR: 5.6%), have been reported across four divisions in Kampala and Kira Municipalities.

Zambia: In February 2019, a new cholera outbreak was reported in the capital city of Lusaka. As of 22 February 2019, 7 cases, including 6 confirmed, have been reported.

Zimbabwe: As of 16 January 2019 and since September 2018, 10 680 cases, including 68 deaths (CFR: 0.6%), have been reported in the country. This represents an increase of 16 cases and 3 deaths since the previous update on 18 January 2019.

### Asia

India: On 4 January 2019, health authorities reported 6 confirmed cases in Dadra and Nagar Haveli State.

<u>Yemen</u>: Since the beginning of the outbreak and as of 22 February 2019, Yemen has reported 1 452 674 suspected cases and 2 801 deaths (CFR: 0.2%). This represents an increase of 54 530 cases and 49 deaths since the last CDTR update on 18 January 2019.

## ECDC assessment

Cholera cases continue to be reported in eastern Africa, the Horn of Africa and Gulf of Aden over the past few months. Cholera outbreaks have also been notified in the western part of Africa. Despite the number of cholera outbreaks reported worldwide, 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 sporadic importation of cases in the EU/EEA remains possible. In 2017, 17 cases were reported in the EU/EEA Member States, while 23 and 24 cases were reported in 2016 and 2015 respectively. All cases had travel history to cholera-affected areas.

According to WHO, vaccination should be considered for travellers at higher risk such as emergency and 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 fruit and vegetables with bottled or chlorinated water before consumption, regularly washing hands with soap, eating thoroughly cooked food and avoiding consumption of raw seafood products.

## Actions

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

# Geographical distribution of new cholera cases reported worldwide between December 2018 to February 2019



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