

This weekly bulletin provides updates on threats monitored by ECDC.

NEWS

Leptospirosis post floods

Over the last few weeks, there have been several reports of an increased incidence of leptospirosis in [India](#) (Kerala), [the Philippines](#) (Iloilo and central Luzon) and [Thailand](#), all in areas affected by flooding.

Leptospirosis outbreaks are often linked to flooding, especially during the monsoon season in the Indian Ocean, the typhoon season in the West Pacific, and the hurricane season in the West Atlantic. Public health authorities should give particular attention to leptospirosis surveillance in these and other regions affected by floods.

In 2017, after Hurricane Irma hit several [French Overseas Countries and Territories](#), an increase of leptospirosis cases was reported.

The number of leptospirosis-related deaths reported by EU/EEA countries have ranged between 8 and 18 deaths per year since 2008, while the total number of reported leptospirosis cases over the same time period was between 436 and 966 per year. A substantial number of these cases was linked to flooding.

Europeans should be aware that the leptospirosis risk is increased in flooded areas.

Travellers can be exposed to leptospirosis through activities such as swimming, wading, rafting, and kayaking in contaminated freshwater lakes and rivers. Humanitarian aid workers and adventure travellers are at an increased risk for leptospirosis.

Travellers to flooded areas should try to avoid contact with water or soil and refrain from swimming or drinking water from lakes or rivers that may be contaminated. They should also cover cuts or abrasions and wear waterproof clothing when in contact with contaminated water.

Before travelling to affected areas, European travellers should consult their healthcare provider about risks and preventive measures. Europeans who experience symptoms as described in the [ECDC leptospirosis fact sheet](#) should seek immediate medical attention. Leptospirosis can be treated with antibiotics, which are most effective when given early during illness.

Up-to-date information on floods is available on the [ECHO website](#) run by the Directorate-General for European Civil Protection and Humanitarian Aid Operations.

I. Executive summary

West Nile virus - Multistate (Europe) - Monitoring season 2018

Opening date: 30 May 2018

Latest update: 21 September 2018

During the West Nile virus transmission season (expected to be between June and November), ECDC monitors the occurrence of West Nile virus infections in EU/EEA Member States and EU neighbouring countries and publishes weekly epidemiological updates to inform blood safety authorities of areas at NUTS 3 (Nomenclature of Territorial Units for Statistics 3) or GAUL 2 (Global Administrative Unit Layers 2) level where there is ongoing virus transmission.

→Update of the week

Between 14 and 20 September 2018, EU Member States reported 186 human West Nile virus infections: Italy (92), Greece (32), Romania (33), Hungary (12), Croatia (11), Austria (2), Slovenia (2) and Bulgaria (2). This week, no human cases were reported by EU neighbouring countries.

In six areas, human cases were reported for the first time: Croatia (2), Slovenia (2), Italy (1) and Greece (1). All other human cases were reported from areas that have been affected during previous transmission seasons.

This week, 25 deaths were reported by Italy (14), Romania (6) and Greece (5).

In the same week, 12 outbreaks among equids were reported by Italy (6), Hungary (5) and Austria (1).

Monkeypox - the United Kingdom ex Nigeria - 2018

Opening date: 12 September 2018

Latest update: 21 September 2018

In September 2018, the United Kingdom reported two imported cases of monkeypox virus.

→Update of the week

No additional cases have been detected in the UK as of 21 September 2018. On 20 September, [Eurosurveillance](#) published an article on the cases.

Legionnaires' disease – Lombardy, Italy – 2018

Opening date: 12 September 2018

Latest update: 21 September 2018

On 11 September 2018, Italy notified an outbreak of pneumonia in the area of Brescia, Lombardy region, through EWRS. According to regional health authorities, 405 pneumonia cases have been reported as of 17 September 2018, 42 of which tested positive for *Legionella*. The identification of *Legionella*-positive cooling towers in the affected area suggests a possible source.

→Update of the week

According to regional health authorities, 405 pneumonia cases have been reported as of 17 September 2018, 42 of which tested positive for *Legionella*. Of the 405 cases, 66% are male, and the average age is 65 years.

According to [media](#) reports and as of 20 September 2018, the number of pneumonia cases is 450, including 43 confirmed cases of *Legionella* infection.

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

Opening date: 1 August 2018

Latest update: 21 September 2018

On 1 August 2018, the Ministry of Health of the Democratic Republic of the Congo (DRC) 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.

→Update of the week

Over the past week, the Ministry of Health of the Democratic Republic of the Congo has reported six additional cases in Beni (4) and Butembo (2).

As of 19 September 2018, there have been 143 Ebola virus disease cases (112 confirmed, 31 probable), including 97 deaths (66 confirmed, 31 probable) since the beginning of the outbreak.

Cholera – Multistate (World) – Monitoring global outbreaks

Opening date: 20 April 2006

Latest update: 21 September 2018

Several countries in Africa, Asia and the Americas are reporting [cholera](#) outbreaks. Major outbreaks are currently being reported in Yemen, Nigeria, the Democratic Republic of the Congo (DRC), Haiti and Somalia.

→Update of the week

Since the last CDTR update on 24 August 2018, the countries reporting the most cases are Yemen (38 269 cases, 63 deaths), Nigeria (7 966 cases, 224 deaths), the Democratic Republic of the Congo (2 918 cases, 65 deaths), Niger (1 592 cases, 36 deaths) and Ethiopia (1 103 cases).

Since the previous CDTR update, WHO has declared under control the cholera outbreaks in Kenya and Uganda. Two countries are reporting new cholera outbreaks within their territories: Algeria and Zimbabwe.

II. Detailed reports

West Nile virus - Multistate (Europe) - Monitoring season 2018

Opening date: 30 May 2018

Latest update: 21 September 2018

Epidemiological summary

Between 14 and 20 September 2018, EU Member States reported 186 human West Nile virus infections: Italy (92), Greece (32), Romania (33), Hungary (12), Croatia (11), Austria (2), Slovenia (2) and Bulgaria (2). This week, no human cases were reported by EU neighbouring countries.

In six areas, human cases were reported for the first time: Croatia (2), Slovenia (2), Italy (1) and Greece (1). All other human cases were reported from areas that have been affected during previous transmission seasons. This week, 25 deaths were reported by Italy (14), Romania (6) and Greece (5).

In the same week, 12 outbreaks among equids were reported by Italy (6), Hungary (5) and Austria (1).

In 2018, as of 20 September 2018, EU Member States have reported 1 134 human cases: Italy (453), Greece (224), Romania (216), Hungary (167), Croatia (36), France (16), Austria (15), Bulgaria (4) and Slovenia (3). EU neighbouring countries reported 370 human cases: Serbia (286), Israel (81) and Kosovo* (3). To date, 115 deaths due to West Nile virus infection have been reported by Italy (35), Serbia (29), Romania (25), Greece (24), Hungary (1) and Kosovo* (1).

During the current transmission season, 175 outbreaks among equids have been reported by Italy (98), Hungary (63), Greece (9), France (2), Romania (2) and Austria (1).

In accordance with [European Commission Directive 2014/110/EU](#), prospective blood donors should defer for 28 days after leaving an area with evidence of West Nile virus circulation among humans unless the results of an individual nucleic acid test are negative.

*This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the International Court of Justice Opinion on the Kosovo Declaration of Independence.

Publications: [An early start of West Nile virus seasonal transmission: the added value of One Health surveillance in detecting early circulation and triggering timely response in Italy, June to July 2018](#)

[Early start of the West Nile fever transmission season 2018 in Europe](#)

ECDC links: [West Nile fever](#) | [Atlas](#)

Sources: [TESSy](#) | [ADNS](#)

ECDC assessment

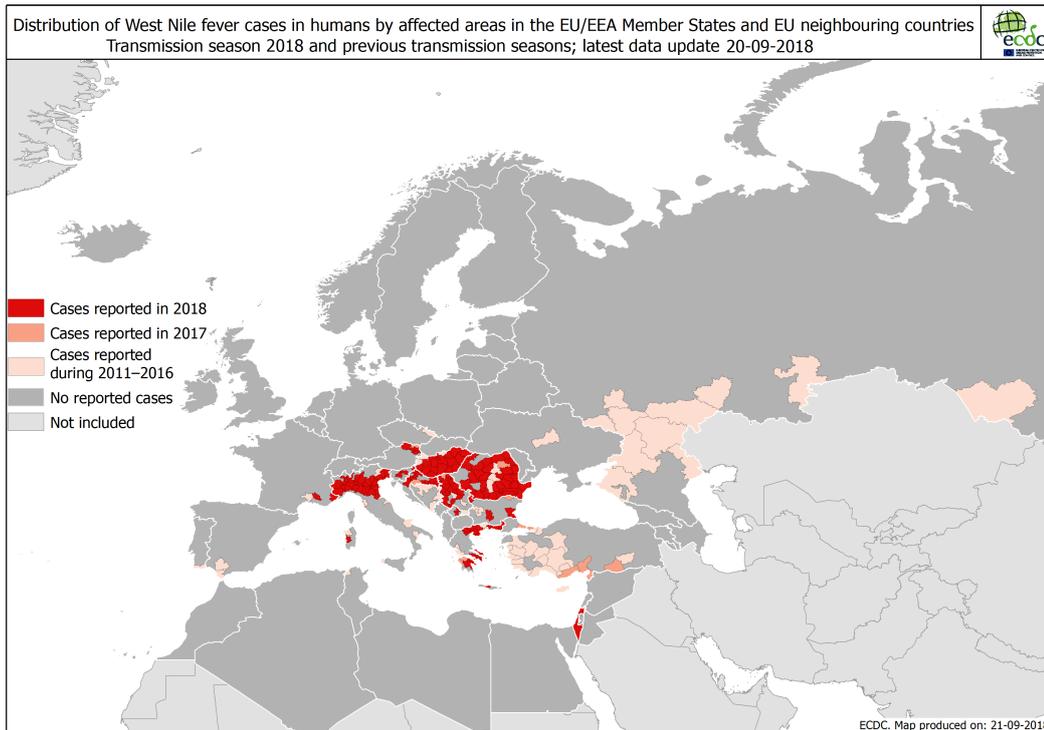
The 2018 transmission season started earlier than usual and higher case numbers have been reported than in the same period in previous years. All human cases reported during the current transmission season were reported in previously affected countries. Since it is currently a particularly intense transmission season for West Nile virus, precautionary measures for travellers and residents, mainly elderly and immunocompromised individuals, to affected areas must be highlighted.

Actions

During the transmission season, ECDC publishes [West Nile fever maps](#) together with an epidemiological summary every Friday. ECDC published a rapid risk assessment on the ['Early large increase in West Nile virus infections in the EU/EEA and EU neighbouring countries'](#) on 13 August 2018 and an [epidemiological update on 31 August 2018](#).

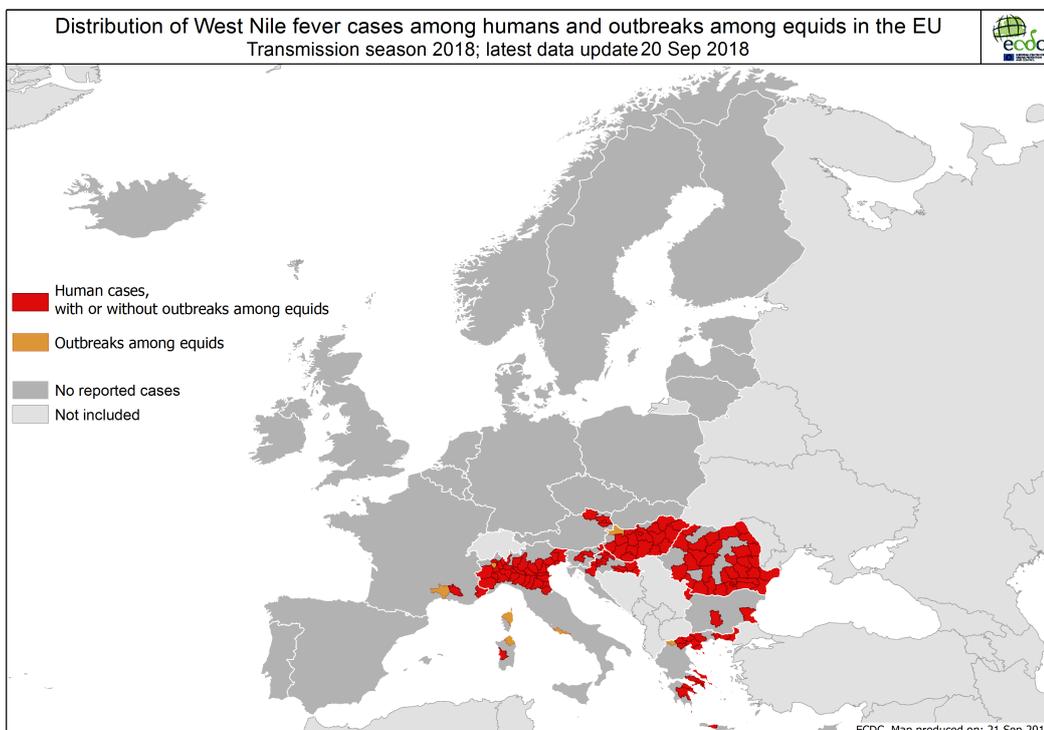
Distribution of human West Nile fever cases by affected areas as of 20 September 2018

ECDC



Distribution of West Nile fever cases among humans and outbreaks among equids in the EU as of 20 September 2018

TESSy and ADNS



Monkeypox - the United Kingdom ex Nigeria - 2018

Opening date: 12 September 2018

Latest update: 21 September 2018

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Epidemiological summary

On 8 September 2018, the UK reported the first-ever case of [monkeypox](#) detected in the UK. The case is a resident of Nigeria, which is where the individual is believed to have contracted the infection before travelling to the UK.

On 11 September 2018, the UK reported an additional case of monkeypox. The patient is currently being treated in a high consequence infectious disease facility at the Royal Liverpool Hospital. On 4 September 2018, the case arrived in the UK after recent travel to Nigeria for holidays.

Since the re-emergence of monkeypox in Nigeria in September 2017, the [Nigeria Centre for Disease Control](#) continues to receive reports and responds to cases across the country. Between September 2017, when the outbreak started, and 31 August 2018, 262 suspected cases were reported from 26 states. Of these, 113 were confirmed in 16 states, with seven deaths. The highest number of cases was reported from states in the South Region of Nigeria.

Sources: [Public Health England \(PHE\)](#) | [WHO](#) | [Nigeria CDC](#)

ECDC assessment

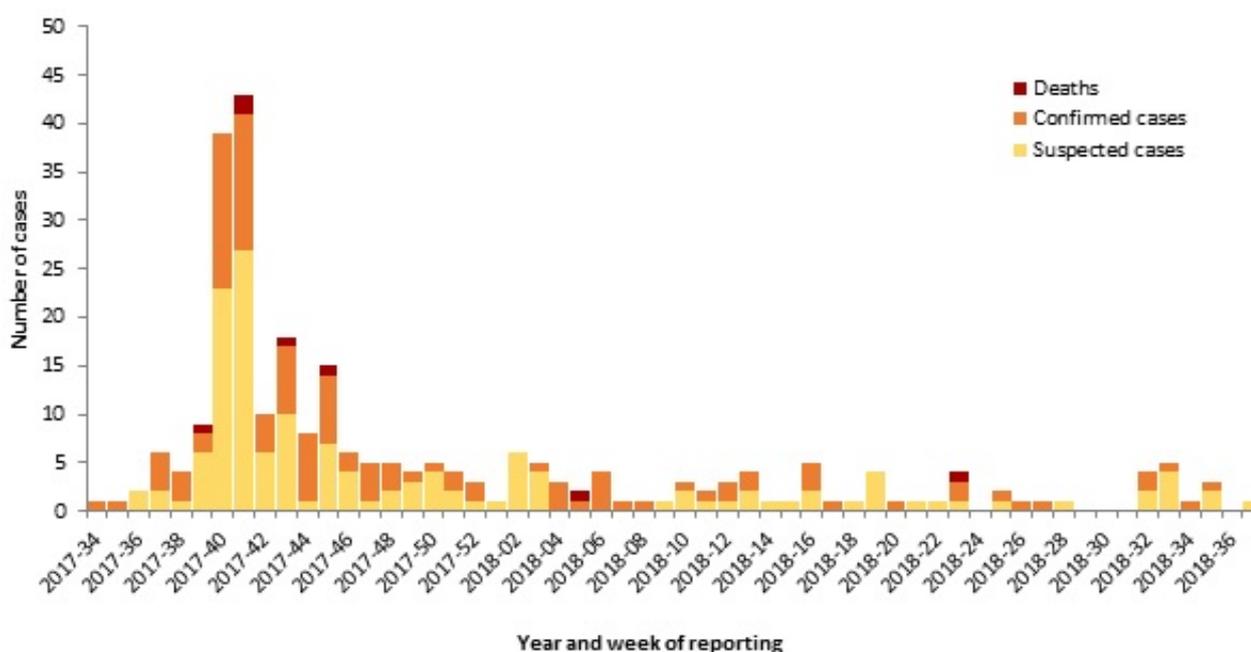
Two imported cases of monkeypox within a short timeframe are unusual. Additional details on the travel and exposure history of these two cases is necessary in order to assess the situation. The risk for further spread and to the general population is very low because monkeypox does not spread easily between people.

Actions

ECDC is in daily contact with PHE and monitors this event through epidemic intelligence. ECDC will publish a rapid risk assessment.

Number of monkeypox cases in Nigeria by year and week of reporting, from September 2017 and as of 15 September 2018

Nigeria CDC



Legionnaires' disease – Lombardy, Italy – 2018

Opening date: 12 September 2018

Latest update: 21 September 2018

Epidemiological summary

On 11 September 2018, Italy notified an outbreak of pneumonia in the area of Brescia through EWRS. The most affected municipalities (i.e. reporting at least five cases) are Carpenedolo, Montichiari, Asola, Remedello, Calvisano, Acquafredda, Desenzano del Garda, Isorella and Visano.

According to [regional authorities](#), 405 pneumonia cases have been reported as of 17 September 2018, 42 of which have tested positive for *Legionella*. Of the 405 cases, 66% are male, and the average age is 65 years.

According to regional authorities, water samples were taken from 202 private homes, 77 cooling towers, 62 public water sources and 13 from the river Chiese.

As of 17 September 2018, nine of ten samples taken at the cooling towers of three companies in the municipalities of Montichiari, Carpenedolo and Calvisano were positive for *Legionella*.

According to [media](#) reports and as of 20 September 2018, the number of pneumonia cases is 450, including 43 confirmed cases of *Legionella* infection.

Sources: [ECDC factsheet Legionnaires' disease](#)

ECDC assessment

The increasing number of pneumonia cases reported as being *Legionella* positive indicate this is an outbreak of Legionnaires' disease. The identification of *Legionella*-positive cooling towers in the affected area suggests a possible source. At this point in time, it is not known if the environmental strains from these sources match the *Legionella* strain isolated in the cases from the area. This outbreak is considered a regional community outbreak with no international travel-related cases identified to date.

Actions

ECDC is monitoring this event through epidemic intelligence and liaises with national focal points to gather additional information on this event.

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

Opening date: 1 August 2018

Latest update: 21 September 2018

Epidemiological summary

As of 19 September 2018, there have been 143 Ebola virus disease cases (112 confirmed, 31 probable), including 97 deaths (66 confirmed, 31 probable), since the beginning of the outbreak.

Eight health zones in two provinces have reported confirmed and probable Ebola virus disease cases: Mabalako, Beni, Butembo, Oicha, Masereka, Kalungata and Musienene health zones in North Kivu Province and Mangina health zone in Ituri Province.

Response activities: According to the European Civil Protection and Humanitarian Aid Operations (ECHO), as of 18 September 2018, 1 983 contacts have been identified (420 in Mabalako, 849 in Beni, 46 in Komanda, 111 in Mandima, 322 in Butembo, 195 in Masereka and 40 in Museniene), and 97.3% of these contacts were followed up.

According to the Directorate-General for European Civil Protection and Humanitarian Aid Operations (ECHO), 10 352 people were vaccinated (3 935 in Mabalako, 3 350 in Beni, 1 542 in Mandima, 314 in Katwa, 121 in Oicha, 65 in Kinshasa, 220 in Masereka, 754 in Butembo and 51 in Komanda), and 1 990 Ebola vaccines are still available.

Travel: According to the WHO disease outbreak news (DON) released on 14 August 2018, Burundi, Central African Republic, Rwanda, South Sudan, Uganda and Zambia are implementing [entry screening](#).

[Belgium](#), [Germany](#), [Italy](#) and [Spain](#) have issued advice against traveling to the North Kivu region due to the Ebola outbreak. Additionally, the [US CDC](#) and [WHO](#) have issued travel recommendations.

Sources: [Ministry of Health of the Democratic Republic of the Congo](#) | [WHO](#)

ECDC assessment

Several cases have been confirmed in the city of Butembo. These cases are of concern as this city of more than one million inhabitants is a commercial and travel hub between the DRC and Uganda. The situation has the potential for new chains of transmission if not rapidly controlled.

Due to the security situation and humanitarian crisis in North Kivu Province, the implementation of outbreak control measures may be challenging. The risk of introduction of the virus by an infected traveller to the EU/EEA is considered very low at this stage.

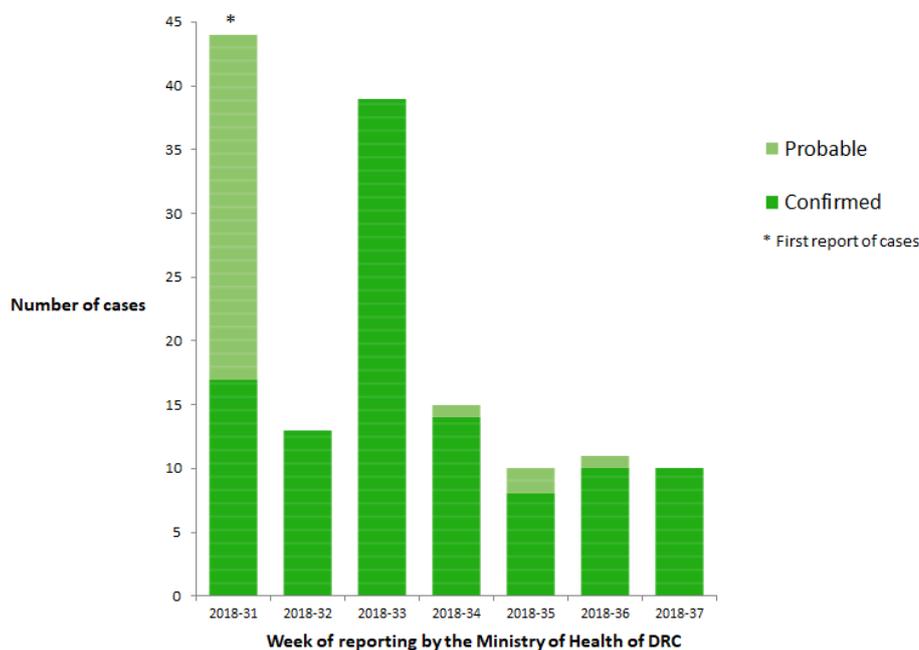
Transport routes linking the affected areas to other regions in the DRC and several neighbouring countries (mainly Rwanda and Uganda) may facilitate the spread of the virus. The situation is aggravated by the displacement of people due to conflict and crisis. According to [WHO](#), the public health risk is considered high at the national and regional levels.

Actions

ECDC is monitoring this threat on a daily basis through epidemic intelligence. ECDC published a [rapid risk assessment](#) on 9 August 2018.

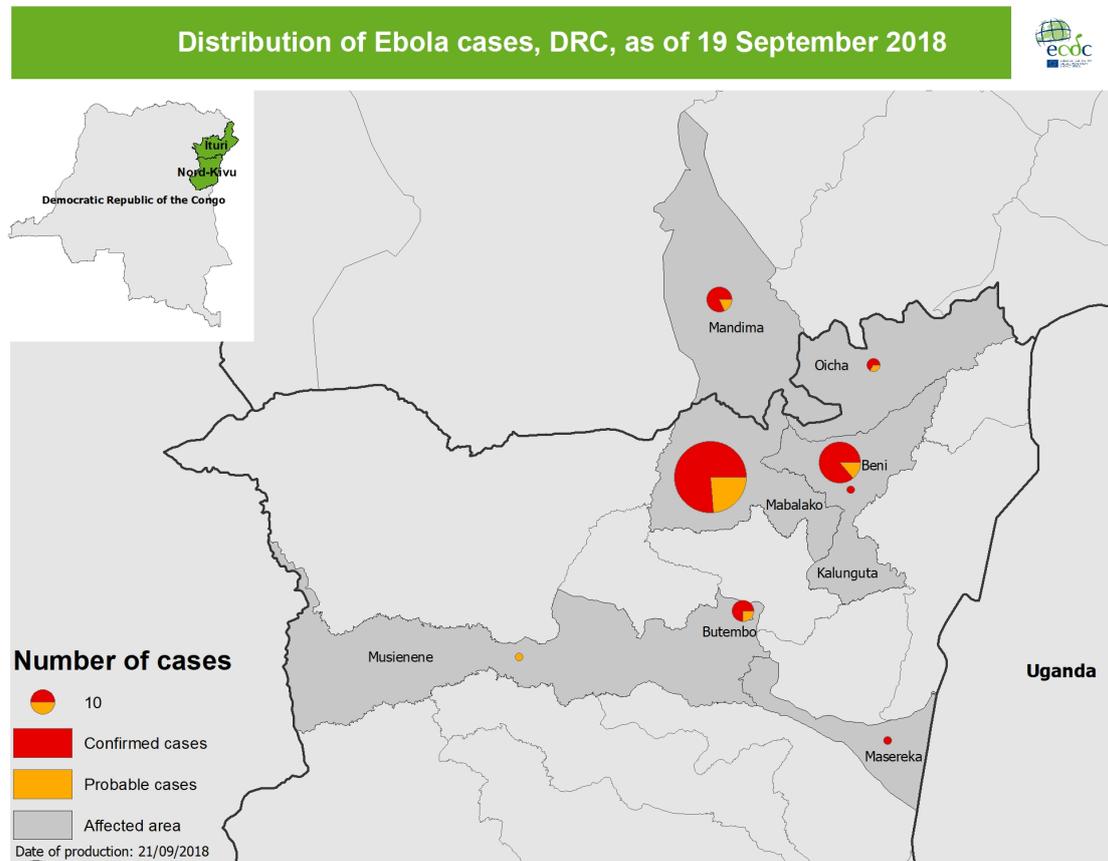
Distribution of confirmed and probable cases of Ebola virus disease, North Kivu and Ituri Provinces, Democratic Republic of the Congo, as of Week 37 September 2018

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Geographical distribution of confirmed and probable cases of Ebola virus disease, North Kivu and Ituri Provinces, Democratic Republic of the Congo, as of 19 September 2018

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Cholera – Multistate (World) – Monitoring global outbreaks

Opening date: 20 April 2006

Latest update: 21 September 2018

Epidemiological summary

Americas

Dominican Republic: In 2018 and as of 1 September, the Dominican Republic reports 47 cholera cases and no fatalities. This represents an increase of six cases since the previous CDTR update on 24 August 2018. During the same period in 2017, the Dominican Republic reported 103 cholera cases.

Haiti: In 2018 and as of 8 September, Haiti reported 3 111 cases, including 37 deaths (CFR: 1.2%). This represents an increase of 155 cases and three deaths since the previous CDTR update on 24 August 2018. In 2017, Haiti reported 13 681 cholera cases, including 159 deaths (CFR: 1.2%). Since the beginning of the outbreak in 2010 and as of 8 September 2018, Haiti has reported 819 111 suspected cholera cases, including 9 785 deaths (CFR: 1.2%).

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Africa

Algeria: On 23 August 2018, the Ministry of Health declared a cholera outbreak in the country. Since the beginning of the outbreak on 7 August and as of 6 September, 217 cases including two deaths (CFR: 0.9%) have been reported in the northern part of the country, including the capital city of Algiers. According to Institut Pasteur Algiers, 83 cases tested positive for *vibrio cholerae* serogroup O1 Ogawa. ECDC has been monitoring the ongoing situation and published an [RRA](#) on 7 September 2018.

Cameroon: As of 29 August 2018, Cameroon is reporting 237 cholera cases including 17 deaths (CFR: 7.2%) since the beginning of the outbreak in May 2018. Only northern and central regions of Cameroon have reported cases. This represents an increase of 69 cases and five deaths since the previous CDTR update on 24 August 2018.

DR Congo: Since January 2017 and as of 2 September 2018, the Democratic Republic of the Congo reported 80 460 suspected cholera cases, including 1 950 deaths (CFR: 2.4%). This represents an increase of 2 918 cases and 65 deaths since the previous CDTR report on 24 August 2018.

Ethiopia: Since January 2017 and as of 26 August 2018, Ethiopia has reported 51 151 acute watery diarrhoea (AWD) cases, including 898 deaths (CFR: 1.8%). This represents an increase of 1 103 cases since the previous CDTR update on 24 August 2018.

Kenya: On September 2018, WHO said that the cholera outbreak was under control by the Ministry of Health. No new cases have been reported in the country since 19 August 2018. As of 3 September 2018 and since January 2017, Kenya has reported 9 835 cases. In 2018, 78 deaths were reported related to this outbreak.

Niger: As of 13 September, Niger is reporting 3 081 suspected cases, including 62 deaths (CRF: 2%) since the beginning of the outbreak on July 2018. This represents an increase of 1 592 cases and 36 deaths since the previous CDTR update on 24 August 2018. The outbreak is localised in four regions: Maradi, Dosso, Tahoua and Zinder, all bordering Nigeria and Benin.

Nigeria: In 2018 and as of 9 September, Nigeria is reporting 27 927 suspected cholera cases, including 517 deaths (CFR: 1.9%). This represents an increase of 7 966 cases and 224 deaths since the previous CDTR update on 24 August 2018. The outbreak has spread in different areas, affecting nineteen states, including the Federal Capital Territory. According to WHO, there is an increasing trend in the overall national cholera cases reported.

Somalia: In 2018, as of 6 September, WHO is reporting 6 245 suspected cholera cases, including 42 deaths (CFR: 0.7%) since December 2017. This represents an increase of 115 cases and one death since the previous CDTR update on 24 August 2018. According to WHO, cases have been localised in Banadir and Lower Jubba regions for the past five weeks.

Tanzania: In 2018, as of 9 September, Tanzania reported 3 739 cholera cases including 68 deaths (CFR: 1.8%). This is an increase of 317 cases and two deaths since the previous CDTR update on 24 August 2018. The last case reported in Zanzibar was on 11 July 2017. According to WHO, the number of cases reported in 2018 has increased compared to the same time period in 2017, when 2 466 cases were reported.

Uganda: WHO considers the cholera outbreak in Uganda under control. As of 24 July and since the beginning of the outbreak on April 2018, 263 cases, including nine deaths (CFR: 3.4%), have been reported.

Zimbabwe: On 6 September 2018, a cholera outbreak was declared in the country by the Ministry of Health. Since the beginning of the outbreak on 1 September and as of 14 September, 3 349 cases – including 32 deaths (CFR: 1%) – have been reported in the country. The majority of the cases (98%) are reported in the capital city of Harare.

Asia

India: According to media sources and since the last CDTR update on 24 August 2018, 86 additional cholera cases, including three deaths, have been reported in India. Cases have been reported in [Ahmedabad](#) (31 cases), [Kalpura](#) (24 cases and two deaths), [Madhya Pradesh](#) (24 cases) and [Baloda Bazaar](#) (four cases and one death).

Yemen: Since the beginning of the outbreak in October 2016 and as of 13 September 2018, Yemen reported 1 182 293 suspected cholera cases and 2 439 deaths (CFR: 0.2%). This represents an increase of 38 269 cases and 63 deaths since the last CDTR update on 24 August 2018.

ECDC assessment

There has been an unusual increase in the number of cholera cases in the southern part of Africa, the Horn of Africa and Gulf of Aden over the past few months. More recently, cholera outbreaks have also been notified in the western part of Africa. Despite the number of cholera outbreaks reported worldwide, 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 WHO, 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 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 its epidemic intelligence activities in order to identify significant changes in epidemiology and inform public health authorities. Reports are published on a monthly basis.

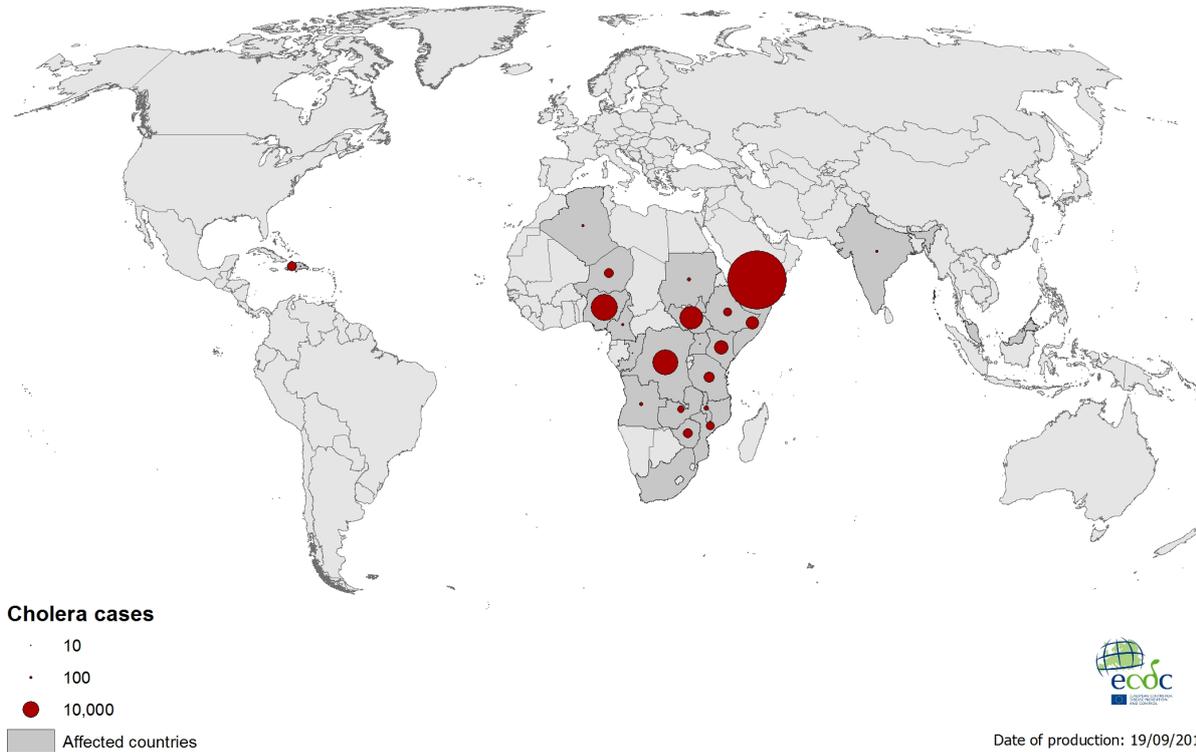
Geographical distribution of new cholera cases reported worldwide between August to September 2018

ECDC



Geographical distribution of cholera cases worldwide between January to September 2018

ECDC



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