WEEKLY BULLETIN

Communicable Disease Threats Report

Week 22, 28 - 3 June 2023

Today's disease topics

1. COVID-19 associated with SARS-CoV-2 – Multi-country (EU/EEA) – 2019 - 2023
2. West Nile virus One Health seasonal surveillance - 2023
3. Legionnaires' disease – Lithuania - 2023
4. Detection of avian or animal influenza (H5) in poultry workers - United Kingdom - 2023
5. Avian influenza A(H9N2) - Multi-country (World) - Monitoring human cases
6. Marburg virus disease - Equatorial Guinea - 2023
7. Marburg virus disease - Tanzania - 2023
8. Cholera – Multi-country (World) – Monitoring global outbreaks
9. Suspected fungal meningitis - Mexico and the U.S. - 2023

Executive Summary

COVID-19 associated with SARS-CoV-2 – Multi-country (EU/EEA) – 2019 - 2023

- In week 21, 2023 (ending 28 May 2023), decreasing or stable trends were observed in EU/EEA indicators in all age groups. This pattern is consistent with the one observed in recent weeks. There were 368 deaths reported from 19 countries in week 21.
- The estimated distribution of variants of concern (VOC) or of interest (VOI) was 89.5% (47.4–100.0% from 18 countries) for XBB.1.5, 3.8% (0.3–25.0% from 17 countries) for BA.2.75, 1.7% (0.3–6.2% from 10 countries) for BQ.1, 1.6% (0.5–34.1% from nine countries) for XBB, 1.4% (0.3–4.7% from four countries) for BA.5, and 0.4% (0.3–3.3%, 10 detections from four countries) for BA.2.

West Nile virus One Health seasonal surveillance - 2023

- This is the first weekly update of the 2023 WNV monitoring season.
- To date, no human cases have been reported.
- One outbreak in birds was reported in Italy.

Legionnaires' disease – Lithuania - 2023

- An outbreak of Legionnaires' disease was reported in the Kaunas district of Lithuania.

- To date, 24 cases have been detected, of which seven have died.
- According to public health authorities, the most likely sources of infection are the water systems in the buildings where cases resided.
- Outbreaks of Legionnaires' disease are caused by aerosolised water carrying *Legionella* bacteria. Infection risk is limited to a localised geographical area around the outbreak source.

Detection of avian or animal influenza (H5) in poultry workers - United Kingdom - 2023

- On 30 May 2023, WHO published confirmation of avian influenza A(H5N1) from two poultry farm workers in Disease Outbreak News (DON). The persons were tested as part of an enhanced surveillance study of asymptomatic individuals exposed to poultry infected with avian influenza.
- Both individuals remained asymptomatic and both tested negative on repeated testing during the period of isolation.
- On 16 May 2023, the United Kingdom Health Security Agency (UKHSA) reported that influenza A(H5) virus has been detected in two poultry workers in the country.
- The risk has been assessed as low for the general population, based on the low likelihood of exposure to infected birds and the lack of clinical symptoms observed for this event.

Avian influenza A(H9N2) - Multi-country (World) - Monitoring human cases

- One new case of avian influenza A(H9N2) has been reported in China, bringing the overall number of human cases to 124, including two deaths, since 1998.
- Most of the cases reported to date have been in China (111).
- No human cases have been reported in the EU/EEA and related A(H9N2) viruses are not present in poultry populations in the EU/EEA.
- The risk of zoonotic influenza A(H9N2) transmission to the general public in EU/EEA countries is considered to be very low.

Marburg virus disease - Equatorial Guinea - 2023

- As of 1 June 2023, and since the previous update, there are no relevant epidemiological updates.
- On 8 May 2023, WHO reported that no new Marburg virus disease (MVD) cases have been reported since 20 April 2023. As of 25 May 2023, over 21 days have passed since the last reported case.
- The total number of confirmed MVD cases since the beginning of the outbreak is 17, with 12 deaths.
- Epidemiological surveillance and contact tracing efforts are ongoing.
- WHO and partners are supporting Equatorial Guinea and neighbouring countries.

Marburg virus disease - Tanzania - 2023

- On 2 June 2023, the Ministry of Health of Tanzania is expected to declare the end of the Marburg virus disease (MVD) outbreak.
- Overall, during the outbreak, there were eight confirmed cases and one probable case, including six deaths (case-fatality rate (CFR) 66.7%). All cases were reported from the Kagera region.

Cholera – Multi-country (World) – Monitoring global outbreaks

- Since the last update on 24 April 2023 and as of 30 May 2023, 74 171 new cholera cases, including 309 new deaths, have been reported worldwide.
- New cases have been reported from Afghanistan, Bangladesh, Burundi, Cameroon, Democratic Republic of the Congo, Eswatini, Ethiopia, Haiti, India, Kenya, Lebanon, Malawi, Mozambique, Nigeria, Somalia, Philippines, South Africa, South Sudan, Syria, Thailand, Zambia, and Zimbabwe.
- Cholera cases have continued to be reported in western, eastern and southern parts of Africa, some parts of the Middle East, South-East Asia, and two countries in the Americas in recent months. The risk of cholera infection in travellers visiting these countries remains low, even though sporadic importation of cases to the EU/EEA remains possible.

Suspected fungal meningitis - Mexico and the U.S. - 2023

- On 1 June 2023, the US CDC confirmed the presence of the fungus *Fusarium solani* in two US cases and updated the number of fatalities from two to three.
- On 29 May 2023, the WHO reported a total of 547 exposed patients, mostly from Mexico and the US. Five cases in Mexico had confirmed infection with the fungus *Fusarium solani*.
- Cases underwent cosmetic surgeries with epidural anaesthesia procedures in two private medical clinics, Clínica K-3 and River Side Surgical Center, in the city of Matamoros, Mexico.
- Both Mexican and US health authorities are trying to identify and test possibly exposed patients. Investigations are still ongoing to identify the source of the infection.

1. COVID-19 associated with SARS-CoV-2 – Multi-country (EU/EEA) – 2019 - 2023

Overview:

Summary:
By the end of week 21 (ending 28 May 2023), decreasing or stable trends were observed in EU/EEA indicators based on pooled country data in all age groups, a continuation of the pattern observed in recent weeks. There were 368 deaths reported from 19 countries.

There is some variation in country-level trends across the EU/EEA. Increasing trends of 1–3 weeks' duration were reported by very few countries, but overall values of reported indicators remain low relative to the pandemic maximum.

Among people aged 60 years and older, the cumulative uptake of a first booster was 84.9% (country range: 13.3–100.0%) and 35.6% of a second booster (country range: 0.4–86.9%).

Among the 18 countries reporting at least 10 results from SARS-CoV-2 sequencing or genotyping for weeks 19–20 (8 May to 21 May 2023), the estimated distribution of variants of concern (VOC) or of interest (VOI) was 89.5% (47.4–100.0% from 18 countries) for XBB.1.5, 3.8% (0.3–25.0% from 17 countries) for BA.2.75, 1.7% (0.3–6.2% from 10 countries) for BQ.1, 1.6% (0.5–34.1% from nine countries) for XBB, 1.4% (0.3–4.7% from four countries) for BA.5, and 0.4% (0.3–3.3%, 10 detections from four countries) for BA.2.

For the latest COVID-19 country overviews, please see the dedicated web page.

Weekly update on SARS-CoV-2 variants:
Since the last update on 17 May 2023 and as of 1 June 2023, FE.1 (sub-lineage of XBB) was added to ECDC's variants under monitoring. The variant is mainly circulating in Brazil where it is the dominant variant, comprising 72% of sequences from samples collected in week 18 deposited in GISAID EpiCoV as of 2023-05-29.

For the latest information about variants, please see ECDC's webpage on variants.

Other News
Recent epidemiological data on respiratory infections in Brazil, reported by the Oswaldo Cruz Foundation (FioCruz) from 1 January 2023 until 20 May showed an increase in respiratory infections among children below four years old. According to the report, the increase in children might be driven by Respiratory Syncytial Virus (RSV), while the majority of cases among adults were Influenza A(H1N1). In the last four weeks, most of cases were confirmed as RSV (45,7%), COVID-19 (23,5%), Influenza A (17,8%), and Influenza B (6,9%).

On 21 May 2023, the media reported on a lack of oxygen in hospitals in Amapa State which was managed with the support of other governmental agencies.

Public Health Emergency of International Concern (PHEIC):
On 30 January 2020, the World Health Organization (WHO) declared that the outbreak of COVID-19 constituted a PHEIC. On 11 March 2020, the Director-General of WHO declared the COVID-19 outbreak a pandemic.

The third, fourth, fifth, sixth, seventh, eighth, ninth, tenth, eleventh, twelfth, thirteenth, and fourteenth International Health Regulations (IHR) Emergency Committee meetings for COVID-19 were held in Geneva on 30 April 2020, 31 July 2020, 29 October 2020, 14 January 2021, 15 April 2021, 14 July 2021, 22 October 2021, 13 January 2022, 11 April 2022, 8 July 2022, 13 October 2022, and 27 January 2023 respectively. The Committee concluded during these meetings that the COVID-19 pandemic continues to constitute a PHEIC.

In the fifteenth IHR Emergency Committee meeting held in Geneva on 4 May 2023, the WHO Director-General agreed with the advice offered by the Committee and determined that COVID-19 is no longer a public health emergency of international concern (PHEIC).

For the latest COVID-19 country overviews, please see the dedicated web page.

Please refer to the data reported by the World Health Organization (WHO) on COVID-19 and WHO's Weekly Epidemiological Updates and Monthly Operational Updates page for non-EU/EEA countries.

ECDC assessment:

SARS-CoV-2 continues to circulate in the EU/EEA with varying intensity. The epidemiological picture in the EU/EEA over the past 12 months has been characterised by periodic waves of infection, approximately every two to three months, with an overall downward trend in the height of the associated peaks in reported cases, hospitalisations, ICU admissions, and deaths in this period. The emergence of new variants of concern or the population immunity waning over time may impact the epidemiological situation in the future.

For the most recent risk assessment, please visit ECDC's dedicated webpage.

Actions:

Detailed country-specific COVID-19 updates are available on ECDC's website. For the latest update on SARS-CoV-2 variants of concern, please see ECDC's webpage on variants.

For EU/EEA- and country-specific epidemiological trends and forecasts, visit ECDC's Country Overview Report (updated on Fridays). In addition to actions described in the latest COVID-19 risk assessments, on 5 April 2023 ECDC published a guidance, Interim public health considerations for COVID-19 vaccination roll-out during 2023 to support countries with vaccination strategy decision-making. This guidance aims to offer advice on the optimal timing and targeting of vaccination campaigns in order to limit the continued burden of disease experienced by the elderly and those with comorbidities. It complements the guidance, Long-term qualitative scenarios and considerations of their implications for preparedness and response to the COVID-19 pandemic in the EU/EEA published in August 2022 to support country preparedness activities in the post-acute phase of the COVID-19 pandemic.

2. West Nile virus One Health seasonal surveillance - 2023

Overview:

This is the first weekly update of the 2023 WNV monitoring season.

Since the beginning of the 2023 transmission season and as of 31 May 2023, EU/EEA countries have reported no human cases of WNV infection. EU-neighbouring countries also have reported no human cases of WNV infection.

Since the beginning of the 2023 transmission season, one outbreak among birds has been reported by Italy (on 12 May 2023, in Varese).

Please refer to the **West Nile virus infection webpage** for maps and a dashboard.

Sources: TESSy, Animal Disease Information System

ECDC assessment:

In accordance with **Commission Directive 2014/110/EU**, prospective blood donors should be deferred for 28 days after leaving a risk area for locally-acquired WNV infection, unless the result of an individual nucleic acid test is negative.

Actions:

During transmission seasons ECDC publishes a dashboard and an epidemiological summary every Friday.

Further information:

Data on human cases are collected via The European Surveillance System (TESSy) managed by ECDC. Imported case are not included in this report. The following EU-neighbouring countries report human cases of WNV infection to ECDC: Albania, Kosovo*, Montenegro, North Macedonia, Serbia and Türkiye.

Animal data (i.e. outbreaks among equids and birds) are collected through the Animal Disease Information System (ADIS) of the European Commission. Reporting of WNV in equids and birds is mandatory at the EU/EEA level.

The distribution of human infections covers EU/EEA and EU-neighbouring countries, whereas the distribution of outbreaks among equids and birds only relates to EU/EEA countries.

* This designation is without prejudice to positions on status and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

3. Legionnaires' disease – Lithuania - 2023

Overview:

Update
On 26 May 2023, the Lithuanian National Public Health Center reported one new case and two new fatalities related to the Legionnaires' disease outbreak in the Kaunas district of Lithuania.
As of 26 May 2023, a total of 24 cases have been detected, including seven fatalities. No travel-related cases associated with accommodation sites in Lithuania have been reported to ECDC since the beginning of 2023.
Summary
On 9 May 2023, the Lithuanian National Public Health Center reported that it was investigating an unexpected number of cases of Legionnaires' disease in the Kaunas district of Lithuania. *Legionella* bacteria was found in water samples from the buildings where cases reside, and the authorities advised a thermal shock of the water systems at the buildings.
Background
Between 2016 and 2021, Lithuania reported between 11 and 21 Legionnaires' disease cases annually to the European Surveillance System.
Sources: Lithuanian National Public Health Center, ECDC Surveillance Atlas of Infectious Diseases

ECDC assessment:

Outbreaks of Legionnaires' disease are caused by aerosolised water carrying *Legionella* bacteria. Infection risk is limited to a localised geographical area around the outbreak source.

Actions:

ECDC is in contact with the Lithuanian authorities and will continue to monitor this event through epidemic intelligence activities.

4. Detection of avian or animal influenza (H5) in poultry workers - United Kingdom - 2023

Overview:

Update: on 30 May 2023, WHO confirmed in Disease Outbreak News (DON) that two detections in poultry farm workers are avian influenza A(H5N1). Both individuals remained asymptomatic and both tested negative on repeated testing following isolation. Overall, 24 farm workers were identified and tested. Apart from the two positive detections no new cases were detected among other farm workers and their contacts, and none have reported symptoms. No human-to-human transmission has been reported.

Laboratory investigation is ongoing to identify if these positive detections were due to transient mucosal contamination or if they are infections. These cases are considered sporadic.

Summary: On 16 May 2023, the **UK Health Security Agency (UKHSA)** reported that influenza A(H5) virus has been detected in two poultry workers in the country, following the implementation of an asymptomatic testing programme for individuals who were in contact with infected birds by the UKHSA Rapid Investigation Team.

Of the 24 persons, eligible for the testing, one tested positive for influenza A (with no detection of human seasonal subtypes H1 or H3) on the first sample self-taken at the premises. Two further nasopharyngeal samples collected from the same person tested negative for influenza A by a UKHSA regional laboratory and by the UKHSA national influenza reference laboratory. The participant remained clinically asymptomatic throughout.

In mid-May 2023, an additional case was reported from the same farm as influenza A(H5) positive on two separate samples. This second person was a poultry culler exposed to infected birds at the same farm. The poultry culler worked on the farm in early May using personal protective equipment (PPE). The case was clinically assessed and remains asymptomatic. The case was treated with oseltamivir and was negative on respiratory sampling taken on the last day of isolation.

According to the **report**, due to the overall timeline of exposure and testing, one of the workers is likely to have experienced contamination of the nose and/or throat from material that was inhaled on the farm. Investigations are being conducted to understand more about the second worker.

The **UKHSA** has not found any evidence of human-to-human transmission of influenza A(H5) virus. As part of the asymptomatic surveillance programme, poultry workers are tested in the 10 days following exposure.

Globally, as of 2 June 2023, there have been 876 human cases*, including 458 deaths (case-fatality rate: 52.2%), of human infection with avian influenza A(H5N1) reported in 23 countries since 2004. To date, no human-to-human transmission has been detected.

***Note:** This includes two detections reported in 2022 from Spain and one from the United States due to suspected environmental contamination and no evidence of infection.

Sources: UKHSA report 1, UKHSA report 2, WHO DON

ECDC assessment:

The risk has been assessed as low for the general population, based on the low likelihood of exposure to infected birds and the lack of clinical symptoms observed in this event. For those who are occupationally exposed, the risk is enhanced due to their potential contact with infected animals, and is assessed to be low-to-medium.

With ongoing outbreaks in wild birds, at poultry farms and in other settings, exposed individuals are encouraged to wear appropriate personal protective equipment. Health authorities should continue to follow up on those exposed and test people with respiratory symptoms or other atypically severe symptoms following exposure to potentially infected animals.

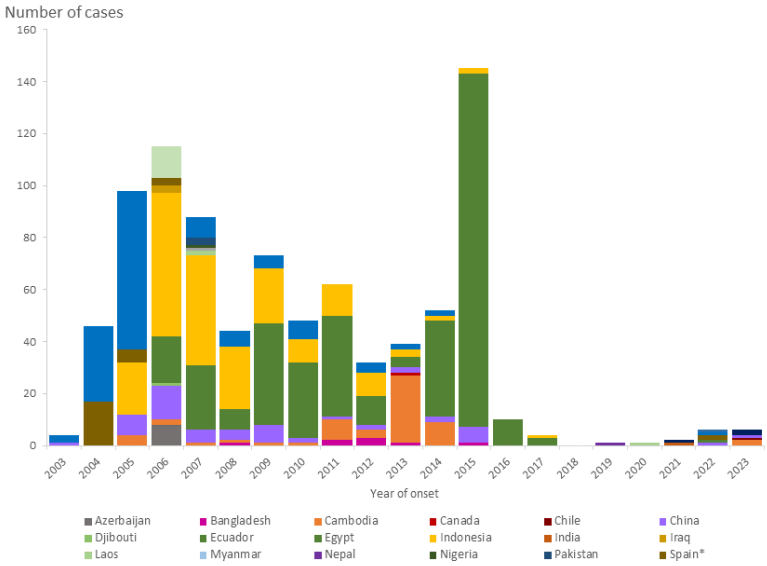
More data, such as results from serological investigations, are needed to better understand if these were real infections or contaminations related to exposure to highly contaminated environments where culling takes place.

Actions:

ECDC is closely following this event through epidemic intelligence activities and has been in contact with the Directorate-General of Health and Food Safety (DG SANTE) and other partners.

Maps and graphs

Figure 1. Distribution of confirmed human cases of avian influenza A(H5N1) virus infection by year of onset and country, 2003–2023 (updated on 02 June 2023, n=876*)



*Note: includes two detections reported in 2022 from Spain and one from the United States due to suspected environmental contamination and no evidence of infection.

Source: ECDC

5. Avian influenza A(H9N2) - Multi-country (World) - Monitoring human cases

Overview:

Update: As of 29 May 2023, and since the previous cases reported on 27 April 2023, one new case of human infection with avian influenza A(H9N2) was reported in Jiangxi province, China.

Summary: As of 29 May 2023, and since 1998, a total of 124 laboratory-confirmed cases, including two deaths, of human infection with avian influenza A(H9N2) viruses have been reported in eight countries: China (111), Egypt (4), Bangladesh (3), Cambodia (2), Oman (1), Pakistan (1), India (1), and Senegal (1). Most of the cases were children with mild disease.

Source: China CDC Inluenza weekly report (w19 2023)

ECDC assessment:

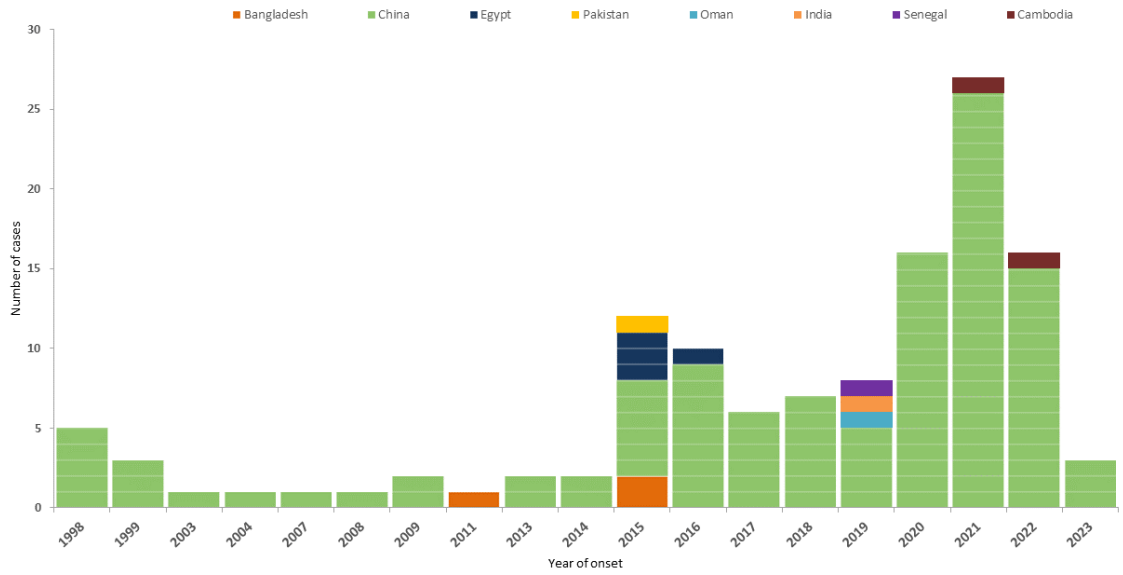
Sporadic human cases of avian influenza A(H9N2) have been observed outside the EU/EEA mainly in young children. Influenza A(H9N2) is not present in the poultry population in Europe and therefore does not represent a risk for human health in the EU/EEA.

Actions:

ECDC monitors avian influenza strains through its epidemic intelligence activities, disease experts and in collaboration with the European Food Safety Authority (EFSA) and the EU reference laboratory for avian influenza, in order to identify significant changes in the epidemiology of the virus. ECDC, together with EFSA and the EU reference laboratory for avian influenza, produces a quarterly updated report on the avian influenza situation. The most recent report was published in May 2023.

Maps and graphs

Figure 1. Distribution of confirmed human cases of avian influenza A(H9N2) virus infection by year of onset and country, 1998–2023 (n=124, updated 29 May 2023)



Source: ECDC

6. Marburg virus disease - Equatorial Guinea - 2023

Overview:

Update:
As of 1 June 2023, and since the previous update, there are no relevant epidemiological updates. According to the latest **Disease Outbreak News Item** from WHO, as of 8 May, the last confirmed case was reported on 20 April 2023. According to the **Ministry of Health of Equatorial Guinea**, of 10 May, the Nsok district in the Wele-Nzas province has concluded follow-up after not reporting any new cases or contacts for 42 days. Bata district in the Litoral province, has completed 21 days of follow-up, with 21 days remaining to complete. Since the beginning of the outbreak, and as of 10 May 2023, 17 confirmed cases – including 12 deaths, four recoveries, and one case with an unknown outcome – have been **reported**.

Summary: On 8 February 2023, the **Ministry of Health of Equatorial Guinea** published an epidemiological alert regarding an unknown disease causing haemorrhagic fever in two neighbouring communities in the district Nsok-Nsomo, in the province of Kié-Ntem. On 13 February 2023, **Equatorial Guinea** confirmed the first MVD outbreak in the country. The **index case** died in **early January 2023** and the Ministry of Health of Equatorial Guinea was notified on 7 February 2023.

According to the **Ministry of Health of Equatorial Guinea**, and as of 1 May 2023, 17 confirmed MVD cases, including 12 deaths, had been reported from four districts in four provinces: Ebibeyin, Kié-Ntem province (three cases, including two deaths); Evinayong, Centro Sur province (two cases, including two deaths); Nsok, Wele-Nzas province (one case, including one death); Bata, Litoral province (11 cases, including seven deaths). Of the **16 confirmed cases** for which information is available, 10 are female and six are male, and 35% are between 30 and 44 years old. Five of the confirmed cases are healthcare workers, two of whom have died.

The last confirmed case was **reported** on 20 April in Bata district, Litoral province. According to the latest **Disease Outbreak News item,** published on 8 May 2023 by WHO, there are currently no confirmed cases receiving care at the Marburg treatment centre since the last case was discharged on 26 April 2023.

On 14 February 2023, during an **emergency meeting of the Marburg virus vaccine consortium (MARVAC)**, the **WHO** representative for Equatorial Guinea reported that epidemiological surveillance in the country was increasing, including intensified contact tracing. A 30-day response plan was also being developed to assess the needs and impact of the current situation.

The National Technical Committee of Health Emergencies is **working** closely with the Ministry of Health and Social Welfare to coordinate and strengthen disease control and prevention. **WHO** and its **partners** are supporting Equatorial Guinea and **neighbouring countries.**

Marburg virus disease is a severe disease in humans caused by *Marburg marburgvirus* (MARV), with a case-**fatality ratio of up to 88%**. Although MVD is uncommon, the virus has the potential to cause epidemics with significant case fatality rates. All recorded MVD outbreaks have originated in Africa.

Since 1967, when MVD was first detected, approximately **600 MVD cases** have been reported as a result of outbreaks in Angola, the Democratic Republic of the Congo, Ghana, Guinea, Equatorial Guinea, Kenya, South Africa, Tanzania and Uganda.

Please refer to ECDC's **factsheet** on MVD for additional information.

ECDC assessment:

This is the first MVD outbreak to occur in Equatorial Guinea.

Although the disease is severe with a high fatality rate, the likelihood of exposure and infection by MARV for EU/EEA citizens travelling to or residing in the affected areas of Equatorial Guinea is currently very low. As a result, the risk of MVD for EU/EEA citizens travelling to or residing in Equatorial Guinea is currently very low.

The most likely route of introduction for MARV into the EU/EEA would be via infected travellers. While importation of the virus cannot be excluded, it is currently very unlikely to occur. Nevertheless, if a case were to be imported, the likelihood of the virus spreading within the EU/EEA is considered to be very low.

Direct contact with blood and other body fluids of infected people or indirect contact with contaminated surfaces and materials such as clothing, bedding, and medical equipment should be avoided. Furthermore, habitats that may be populated by bats, such as caves or mines in areas where MVD has been reported, should be avoided. Similarly, any form of close contact with wild animals, including monkeys, forest antelopes, rodents, and bats, alive or dead, and the manipulation or consumption of any type of bushmeat should be avoided.

Actions:

ECDC is monitoring this event through its epidemic intelligence activities and will report when relevant information is available. ECDC is in contact with partners.

7. Marburg virus disease - Tanzania - 2023

Overview:

Update: On 2 June 2023, the Ministry of Health of Tanzania announced on **social media** that a press conference will be held on the same day to declare the Marburg virus disease (MVD) outbreak over. The last confirmed MVD case was **reported** on 11 April 2023. Overall, nine cases, including six deaths, were reported in this outbreak.

Summary: On 17 March 2023, the **Ministry of Health of Tanzania** reported seven people affected by an undiagnosed disease in Kagera, northern Tanzania, including five deaths and two people treated at hospitals. The affected individuals presented with symptoms of fever, vomiting, bleeding from various parts of their body, and kidney failure. An investigation was initiated to determine the cause of the outbreak.

On 21 March 2023, according to the **Africa Centres for Disease Control and Prevention (Africa CDC)**, the Ministry of Health confirmed an outbreak of MVD in the Bukoba rural district of the Kagera region, northwest Tanzania. On 8 May 2023, WHO reported in a **Disease Outbreak News** item that overall, eight confirmed and

one probable MVD case have been reported in the Bukoba district of the Kagera region. Since the beginning of the outbreak, six deaths have been reported (five among the confirmed cases and the one probable case) (case-fatality ratio: 66.7%). The last confirmed case was **reported** on 11 April 2023. As of 30 April 2023 there were no further cases in treatment. Among the 212 contacts identified, all have concluded their monitoring period. On 2 June 2023, the Ministry of Health of Tanzania announced on **social media** that a press conference will be held on the same day to declare the MVD outbreak over.

This is the first reported outbreak of **MVD** in Tanzania. The Kagera region borders Uganda, Rwanda, and Burundi. The **population** in this region is highly mobile, creating the risk of cross-border spread. MVD outbreaks have been previously reported in Uganda in regions neighbouring the currently affected area in Tanzania, which is remote, not densely populated, and not often frequented by tourists.

The Ministry of Health of Tanzania deployed a rapid response team to the affected area and implemented contact tracing, case management, and risk communication activities. **Africa CDC** and **WHO** assisted the Ministry of Health with the deployment of teams of experts. During a **press conference** on 21 March 2023, a WHO representative emphasised the internal capacity and preparedness of Tanzania for managing the situation and stated the committment of WHO in supporting the Tanzanian government in their response.

Marburg virus disease is a severe disease in humans caused by *Marburg marburgvirus* (MARV), with a case-**fatality ratio of up to 88%**. Although MVD is uncommon, the virus has the potential to cause epidemics with significant case-fatality rates. All recorded MVD outbreaks have originated in Africa.

Since 1967, when MVD was first detected, approximately **600 MVD cases** have been reported as a result of outbreaks in Angola, the Democratic Republic of the Congo, Ghana, Guinea, Equatorial Guinea, Kenya, South Africa, Tanzania, and Uganda.

Please refer to the ECDC **factsheet** on MVD for additional information.

ECDC assessment:

This is the first MVD outbreak to occur in Tanzania.

Although the disease is severe, with a high fatality rate, the likelihood of exposure and infection with MARV for EU/EEA citizens travelling to or residing in the Kagera region of Tanzania is currently very low. As a result, the risk of MARV infection for EU/EEA citizens travelling to or residing in the affected region is currently very low, provided they adhere to the recommended precautionary measures.

The most likely route of introduction for MARV into the EU/EEA would be via infected travellers. While importation of the virus cannot be excluded, it is currently very unlikely. Nevertheless, if a case were to be imported, the likelihood of the virus spreading within the EU/EEA is considered to be very low.

Direct contact with blood and other body fluids from infected people, or indirect contact with contaminated surfaces and materials such as clothing, bedding, and medical equipment should be avoided. It is advisable to avoid habitats that may be populated by bats, such as caves or mines in areas/countries where MVD has been reported, as well as any form of close contact with wild animals, including monkeys, forest antelopes, rodents, and bats, alive or dead, and the manipulation or consumption of any type of bushmeat.

Actions:

ECDC is closely monitoring this event through its epidemic intelligence activities.

8. Cholera – Multi-country (World) – Monitoring global outbreaks

Overview:

Summary

Since the last update on 24 April 2023 and as of 30 May 2023, 74 171 new cholera cases, including 309 new deaths, have been reported worldwide. The five countries reporting the greatest number of new cases are Afghanistan (32 060), the Democratic Republic of the Congo (11 551), Mozambique (6 959), Syria (5 125), and

Malawi (4 301). The five countries reporting the greatest number of new deaths are the Democratic Republic of the Congo (57), Nigeria (54), Cameroon (33), Kenya (31), and Malawi (20).

New cases have been reported from Afghanistan, Bangladesh, Burundi, Cameroon, Democratic Republic of the Congo, Eswatini, Ethiopia, Haiti, India, Kenya, Lebanon, Malawi, Mozambique, Nigeria, Somalia, Philippines, South Africa, South Sudan, Syria, Thailand, Zambia, and Zimbabwe.

New deaths have been reported from Burundi, Cameroon, Democratic Republic of the Congo, Ethiopia, Haiti, Kenya, Malawi, Mozambique, Nigeria, Philippines, Somalia, South Africa, South Sudan, Syria, Zambia and Zimbabwe.

Since 1 January 2023 and as of 30 May 2023, 295 039 cholera cases, including 1 806 deaths, have been reported worldwide.

Since the last update, new cases and new deaths have been reported from:

Asia:

Afghanistan: Since 20 March 2023 and as of 21 May 2023, 32 060 new cases have been reported. Since 1 January 2023 and as of 21 May 2023, 54 908 cases, including 20 deaths have been reported. In comparison, in 2022 and as of 14 May 2022, 5 305 cases, including eight deaths were reported.

Bangladesh: Since 8 April 2023 and as of 24 May 2023, 549 new cases have been reported. Since 1 January 2023 and as of 24 May 2023, 34 609 cases have been reported. In comparison, in 2022 and as of 12 April 2022, 495 433 cases, including 29 deaths were reported.

India: As of 31 March 2023, 241 new cases have been reported. Since 1 January 2023 and as of 31 March 2023, 241 cases have been reported. In comparison, in 2022 and as of 09 March 2022, 100 cases were reported.

Lebanon: Since 17 April 2023 and as of 25 May 2023, 507 new cases have been reported. Since 1 January 2023 and as of 25 May 2023, 2 081 cases have been reported.

Pakistan: Since 1 January 2023 and as of 20 March 2023, 77 714 cases have been reported. In comparison, in 2022 and as of 15 May 2022, 2 577 cases were reported.

Philippines: Since 20 January 2023 and as of 18 March 2023, one new case, including six new deaths have been reported. Since 1 January 2023 and as of 18 March 2023, 1 006 cases, including seven deaths have been reported. In comparison, in 2022 and as of 8 February 2022, 491 cases, including six deaths were reported.

Syria: Since 19 March 2023 and as of 8 April 2023, 5 125 new cases have been reported. Since 1 January 2023 and as of 8 April 2023, 58 205 cases, including seven deaths have been reported.

Thailand: Since 1 January 2023 and as of 26 March 2023, one case has been reported.

Yemen: Since 1 January 2023 and as of 9 April 2023, 2 335 cases, including three deaths have been reported.

Africa:

Burundi:
Since 08 April 2023 and as of 14 May 2023, 162 new cases, including two new deaths have been reported. Since 1 January 2023 and as of 14 May 2023, 409 cases, including three deaths have been reported.

Cameroon:
Since 30 March 2023 and as of 07 May 2023, 506 new cases, including 33 new deaths have been reported. Since 1 January 2023 and as of 7 May 2023, 720 cases, including 43 deaths have been reported. In comparison, in 2022 and as of 22 May 2022, 7 199 cases, including 130 deaths were reported.

Democratic Republic of the Congo: Since 19 March 2023 and as of 07 May 2023, 11 551 new cases, including 57 new deaths have been reported. Since 1 January 2023 and as of 7 May 2023, 18 794 cases, including 104 deaths have been reported. In comparison, in 2022 and as of 22 May 2022, 6166 cases, including 89 deaths were reported.

Eswatini: As of 18 April 2023, one new case has been reported. Since 1 January 2023 and as of 18 April 2023, one case has been reported.

Ethiopia: Since 3 April 2023 and as of 13 May 2023, 3 835 new cases, including 47 new deaths have been reported. Since 1 January 2023 and as of 13 May 2023, 5 451 cases, including 77 deaths have been reported. In comparison, in 2022 and as of 31 January 2022, 674 cases, including seven deaths were reported.

Kenya: Since 4 April 2023 and as of 7 May 2023, 2 095 new cases, including 31 new deaths have been reported. Since 1 January 2023 and as of 7 May 2023, 7 338 cases, including 109 deaths have been reported. In comparison, in 2022, no cases were reported.

Malawi: Since 20 April 2023 and as of 28 May 2023, 742 new cases, including 20 new deaths have been reported. Since 1 January 2023 and as of 28 May 2023, 41 357 cases, including 1 185 deaths have been reported. In comparison, in 2022 and as of 08 May 2022, 133 cases, including six deaths were reported.

Mozambique: Since 14 April 2023 and as of 15 May 2023, 6 959 new cases, including 12 new deaths have been reported. Since 1 January 2023 and as of 15 May 2023, 30 064 cases, including 127 deaths have been reported. In comparison, in 2022 and as of 18 March 2022, 265 cases were reported.

Nigeria: Since 28 February 2023 and as of 2 April 2023, 664 new cases, including 54 new deaths have been reported. Since 1 January 2023 and as of 2 April 2023, 1 336 cases, including 79 deaths have been reported. In comparison, in 2022 and as of 1 May 2022, 1 861 cases, including 54 deaths were reported.

Somalia: Since 1 April 2023 and as of 7 May 2023, 3 410 new cases, including nine new deaths have been reported. Since 1 January 2023 and as of 7 May 2023, 7 442 cases, including 24 deaths have been reported.

South Africa: Since 6 April 2023 and as of 22 May 2023, 31 new cases, including 14 new deaths have been reported. Since 1 January 2023 and as of 22 May 2023, 39 cases, including 15 deaths have been reported. In comparison, in 2022, no cases were reported.

South Sudan: Since 30 March 2023 and as of 14 May 2023, 847 new cases have been reported. Since 1 January 2023 and as of 14 May 2023, 1 455 cases, including two deaths have been reported. In comparison, in 2022 and as of 07 May 2022, 31 cases, including one death was reported.

Zambia: Since 9 April 2023 and as of 8 May 2023, 178 new cases, and three new deaths have been reported. Since 1 January 2023 and as of 8 May 2023, 509 cases, including 11 deaths have been reported. In comparison, in 2022 and as of 3 May 2022, 21 cases were reported.

Zimbabwe: Since 27 March 2023 and as of 7 May 2023, 405 new cases, and 13 new deaths have been reported. Since 1 January 2023 and as of 7 May 2023, 722 cases, including 21 deaths have been reported. In comparison, in 2022 and as of 27 January 2022, one case was reported.

No updates have been reported by Benin and United Republic of Tanzania.

Americas:

Haiti: Since 14 April 2023 and as of 20 May 2023, 4 301 new cases, and five new deaths have been reported. Since 1 January 2023 and as of 20 May 2023, 22 727 cases, including 220 deaths have been reported. In comparison, in 2022, no cases were reported.

No updates have been reported by the Dominican Republic.

Disclaimer: *Data presented in this report originate from several sources, both official public health authorities and non-official, such as the media. Data completeness depends on the availability of reports from surveillance systems and their accuracy, which varies between countries. All data should be interpreted with caution as there may be areas of under-reporting and figures may not reflect the actual epidemiological situation.*

ECDC assessment:

Cholera cases have continued to be reported in western Africa, and South-East Asia over the past months. Cholera outbreaks have also been notified in the eastern and southern parts of Africa, parts of the Middle East and two countries in the Americas. 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 to the EU/EEA remains possible. In 2021, two cases were reported in EU/EEA Member States, while three, and 26 cases were reported in 2020 and 2019, respectively. All cases had travel history to cholera-affected areas. According to the World Health Organization (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 fruits 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 continues to monitor cholera outbreaks globally through its epidemic intelligence activities in order to identify significant changes in epidemiology, and to facilitate timely updates to public health authorities. Reports are published on a monthly basis. The worldwide overview of cholera outbreaks is available on ECDC's website.

Maps and graphs

Figure 1. Geographical distribution of cholera cases reported worldwide from March to May 2023

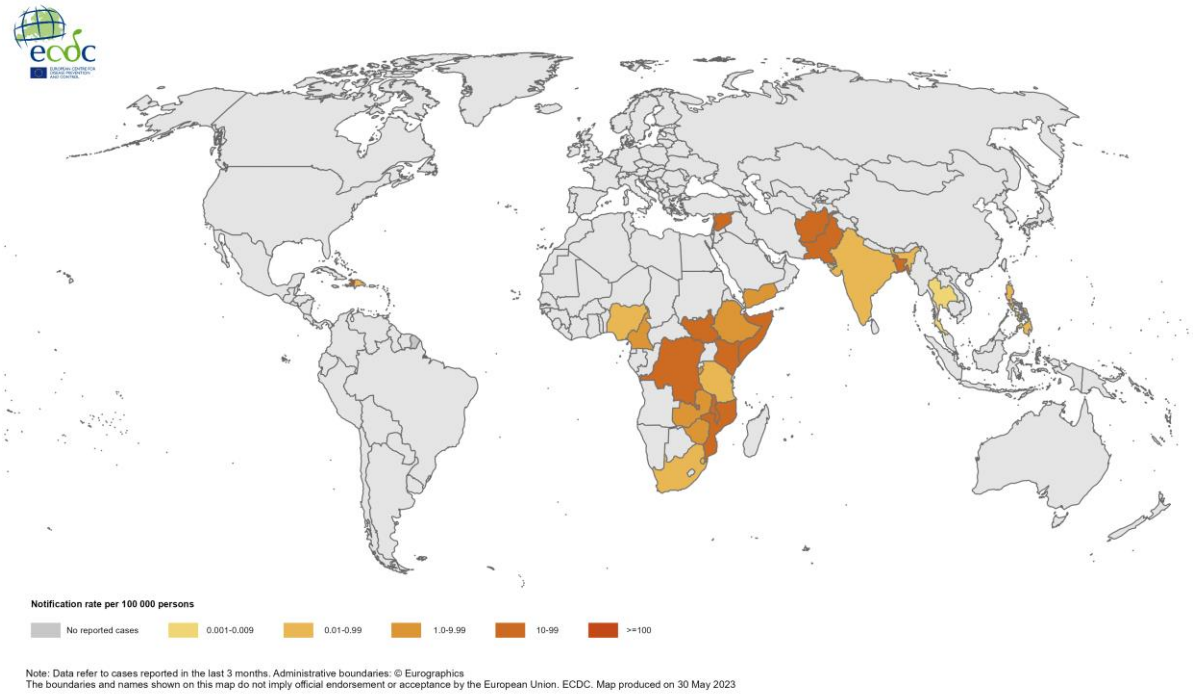
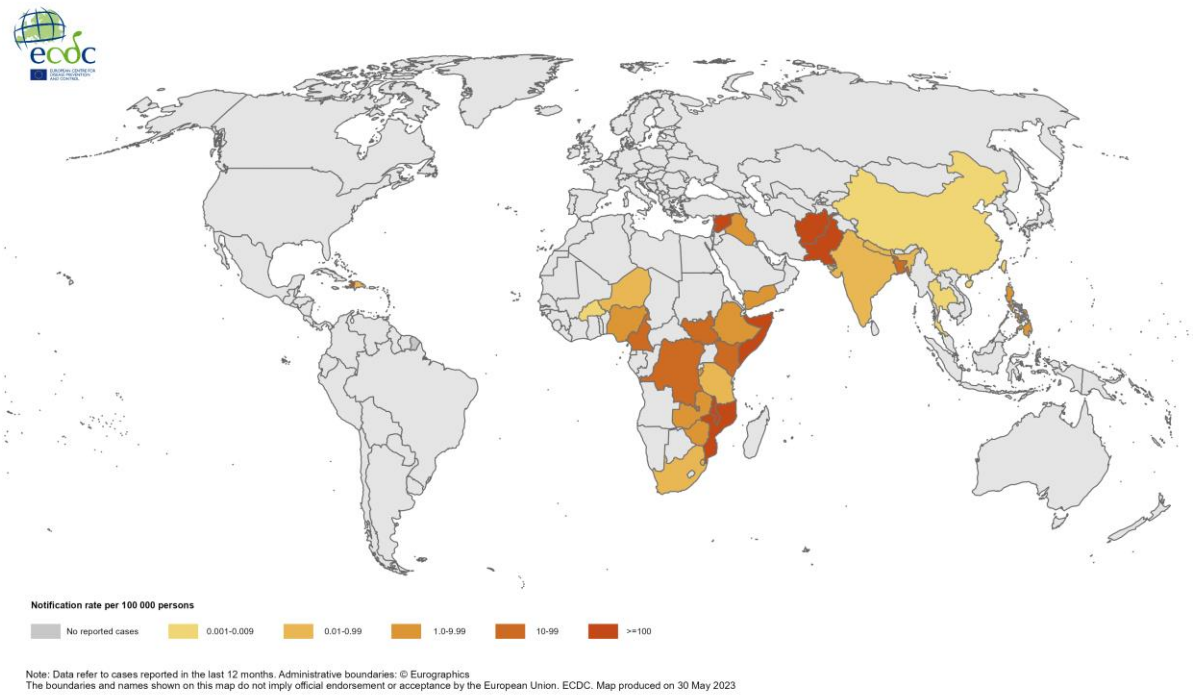


Figure 2. Geographical distribution of cholera cases reported worldwide from June 2022 to May 2023



9. Suspected fungal meningitis - Mexico and the U.S. - 2023

Overview:

Update: On 1 June, the US CDC confirmed the presence of the fungus *Fusarium solani* in two US cases. The CDC also updated the death count from two to three.

As of 1 June 2023, cases (either suspected, probable, or confirmed) have been reported from Mexico (14) and the US (27). Three fatalities among probable cases were reported in the US.

Investigations are still ongoing to determine the source of the infection.

Summary:
On 29 May (update on the 1 June), the WHO, updated the number of exposed patients. Among the 547 people identified to receive epidural anaesthesia between January and April 2023, 304 reside in Mexico, 237 in the US, and one in Canada.

On 26 May 2023, the Mexican health authorities informed that at the time, 14 cases had been reported in Mexico. The cases underwent cosmetic surgeries with epidural anaesthesia procedures in two private medical clinics, Clínica K-3 and River Side Surgical Center, in the city of Matamoros. Among the 14 Mexican cases, four are suspected cases, five probable, and five have been confirmed with *Fusarium solani*.

On 24 May 2023, the United States Centers for Disease Control and Prevention (US CDC) reported an outbreak of suspected fungal meningitis linked with procedures performed in Matamoros, Mexico. According to the same report, the US and Mexican authorities are collaborating on the investigations of this outbreak. Two clinics have been identified to be associated with the outbreak and were closed on 13 May 2023.

The hypothesis of fungal infections is based on elevated cerebrospinal fluid (CSF) and serum levels of the fungal biomarker (1,3)-beta-D-glucan in several patients. Additionally, the Mexican national laboratory (Institute of Epidemiological Diagnosis and Reference - InDRE) has reported that four patients in Mexico have had spinal fluid test positive by a DNA test for the fungus *Fusarium solani*.

The US authorities are aware of at least 224 people from 25 US states who had epidural anaesthesia in the two clinics identified in Matamoros, Mexico, from January 1 to May 13, 2023, and who might therefore be at risk for developing meningitis.

Background: In 2022, an outbreak of meningitis linked to epidural anaesthesia was reported in the state of Durango, Mexico. As of May 2023, a total of 74 cases and 38 fatalities were reported since the start of the outbreak.

ECDC assessment:

Given the confirmation provided by the Mexican authorities that there are no EU citizens exposed, there is currently no risk associated to this specific event for EU citizens. However, as the investigation is still ongoing and the source of the outbreak has not been confirmed, ECDC will continue monitoring the event through the Epidemic Intelligence activities.

Actions:

ECDC will keep monitoring this event through epidemic intelligence activities.