This week’s topics

- Cholera – Multi-country (World) – Monitoring global outbreaks - Monthly update
- Middle East respiratory syndrome coronavirus (MERS-CoV) – Multi-country – Monthly update
- SARS-CoV-2 variant classification
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- Cholera – Comoros and Mayotte – 2024 - weekly monitoring
- Highly pathogenic avian influenza A(H5N1) in cattle and a related human case – United States – 2024
- Crimean-Congo haemorrhagic fever - Spain - 2024
- Imported case of Lassa fever - France - 2024

Executive summary

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

- In March 2024, 30,808 new cholera cases, including 289 new deaths, were reported worldwide.
- New cases were reported from Afghanistan, Burundi, Comoros, Democratic Republic of the Congo, Ethiopia, India, Kenya, Malawi, Mozambique, Nigeria, Pakistan, Somalia, Thailand, Uganda, United Republic of Tanzania, Zambia, and Zimbabwe.
- Cholera cases have continued to be reported in western, eastern and southern Africa, some parts of the Middle East, Asia, and the Americas. The risk of cholera infection in travellers visiting these countries remains low, even though sporadic importation of cases to the EU/EEA remains possible.

Middle East respiratory syndrome coronavirus (MERS-CoV) – Multi-country – Monthly update

- Since the beginning of 2024, and as of 29 April 2024, one MERS fatality has been reported in Saudi Arabia. The case is a primary case retrospectively reported for January 2024.
- Since April 2012, and as of 29 April 2024, a total of 2,622 cases of MERS, including 950 deaths, have been reported by health authorities worldwide.

SARS-CoV-2 variant classification

Since the last update on 12 April 2024, and as of 26 April, no changes have been made to ECDC’s variant classifications for variants of concern (VOCs), variants of interest (VOIs), variants under monitoring (VUMs), and de-escalated variants.
Overview of respiratory virus epidemiology in the EU/EEA - weekly monitoring

- Syndromic surveillance in primary and secondary care indicates that respiratory activity continues to decrease and has returned to baseline levels in most EU/EEA countries.
- Seasonal influenza activity at the EU/EEA level continues to decrease.
- For six consecutive weeks, the primary care pooled test positivity at the EU/EEA level has remained below 10%, with only two countries reporting test positivity above the epidemic threshold. Similarly, the pooled test positivity in secondary care was below 10% and has been so for eight weeks.
- Most countries report baseline or low levels of influenza intensity and baseline rates of influenza-like illness (ILI). Countries continue to report a mix of geographical spread, indicating continued heterogeneity of influenza activity at country level.
- In week 17, influenza type B accounted for 86% of the primary care sentinel influenza virus detections in the EU/EEA. For five consecutive weeks, more Influenza B than Influenza A was detected, although the detections remain low and continue to decrease overall.
- Respiratory syncytial virus (RSV) activity remained low in all reporting EU/EEA countries.
- SARS-CoV-2 activity remained low in all reporting EU/EEA countries.
- The number of reporting countries may be lower this week due to the 1 May holiday in many countries, but the epidemiological situation remains consistent with last week.

Cholera – Comoros and Mayotte – 2024 - weekly monitoring

- Since the last available update on 26 April, and as of 1 May, health authorities reported 22 new cholera cases. Since the first case detected on 18 March, and as of 1 May, 35 cholera cases and no deaths have been reported in Mayotte.
- Given the identification of several autochthonous cases in Mayotte, the ongoing outbreak in Comoros, and the frequent movement of people from Comoros to Mayotte, the likelihood of further community transmission, and therefore the overall risk of cholera for the population in Mayotte, remains high.
- In the Comoros, since the last available update on 24 April, and as of 2 May, 1527 new cholera cases and 24 new deaths have been reported. As of 2 May 2024, 4111 confirmed cholera cases and 85 deaths have been reported in the country.

Highly pathogenic avian influenza A(H5N1) in cattle and a related human case – United States – 2024

- Highly pathogenic avian influenza (HPAI) A(H5N1) has been detected in cattle in several farms (36 as of 2 May 2024) across nine states in the United States.
- Genetic material of HPAI A(H5N1) has been detected in milk samples in the United States. Studies by the US Food and Drug Administration have shown that pasteurisation inactivates HPAI in milk and dairy products, with no viable virus being detected following pasteurisation.
- The US Department of Agriculture highlights that commercially produced, pasteurised milk is safe for consumers.
- One human case of HPAI A(H5N1) was reported on 1 April 2024 in an individual who had prior exposure to dairy cattle presumed to be infected with HPAI A(H5N1) in Texas, USA. The patient has since recovered. No additional human cases have been reported.
- The virus isolated from the human belonged to the HA clade 2.3.4.4b HPAI A(H5N1) and was closely related to the virus detected in dairy cattle in Texas.

Crimean-Congo haemorrhagic fever - Spain - 2024

Regional Spanish health authorities have confirmed a case of Crimean-Congo haemorrhagic fever (CCHF) in Salamanca Province.

Imported case of Lassa fever - France - 2024

On 3rd May, France reported a case of Lassa fever in a soldier returning from abroad, who is currently hospitalized in Ile-de-France. All possible contacts are being monitored for the onset of compatible symptoms.
1. Cholera – Multi-country (World) – Monitoring global outbreaks - Monthly update

Overview:
Data presented in this report originate from several sources, both official public health authorities and non-official sources, such as the media. Case definitions, testing strategies, and surveillance systems vary between countries. In addition, data completeness and levels of under-reporting vary between countries. All data should therefore be interpreted with caution. Refer to the original sources for more information regarding the case definitions in use and for details on the epidemiological situation.

Summary
Since 1 March 2024 and as of 31 March 2024, 30,808 new cholera cases, including 289 new deaths, were reported worldwide. In addition, 27,302 new cases were reported or collected retrospectively from before 1 March 2024.

The five countries reporting most cases are Afghanistan (8,987), Ethiopia (5,172), Democratic Republic of the Congo (4,086), Zimbabwe (3,835) and Mozambique (2,092).

The five countries reporting the most new deaths are Zimbabwe (74), Democratic Republic of the Congo (66), Zambia (37), Ethiopia (36) and Somalia (34).

New cases have been reported from Afghanistan, Burundi, Comoros, Democratic Republic of the Congo, Ethiopia, India, Kenya, Malawi, Mozambique, Nigeria, Pakistan, Somalia, Thailand, Uganda, United Republic of Tanzania, Zambia, and Zimbabwe.

Since 1 January 2024 and as of 30 March 2024, 97,336 cholera cases, including 1,246 deaths, have been reported worldwide. In comparison, since 1 January 2023 and as of 30 March 2023, 169,971 cholera cases, including 1,562 deaths, were reported worldwide.

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

Asia:
**Afghanistan:** Since 24 February 2024 and as of 30 March 2024, 8,987 new cases, including three new deaths have been reported. Since 1 January 2024 and as of 30 March 2024, 24,553 cases, including 13 deaths have been reported. In comparison, in 2023 and as of 20 March 2023, 22,848 cases, including seven deaths were reported.

**Pakistan:** Since 25 February 2024 and as of 17 March 2024, 1,431 new cases have been reported. Since 1 January 2024 and as of 17 March 2024, 4,876 cases have been reported. In comparison, in 2023 and as of 30 March 2023, no cases were reported.

**Thailand:** Since 25 February 2024 and as of 31 March 2024, four new cases have been reported. Since 1 January 2024 and as of 31 March 2024, six cases have been reported. In comparison, in 2023 and as of 26 March 2023, one case were reported.

Africa:
**Burundi:** Since 29 February 2024 and as of 29 March 2024, 49 new cases have been reported. Since 1 January 2024 and as of 29 March 2024, 107 cases have been reported. In comparison, in 2023 and as of 13 March 2023, 176 cases, including one death was reported.

**Comoros:** Since 29 February 2024 and as of 29 March 2024, 287 new cases, including six new deaths have been reported. Since 1 January 2024 and as of 29 March 2024, 419 cases, including 12 deaths have been reported. In comparison, in 2023 and as of 30 March 2023, no cases were reported.

**Democratic Republic of the Congo:** Since 29 February 2024 and as of 29 March 2024, 4,086 new cases, including 66 new deaths have been reported. Since 1 January 2024 and as of 29 March 2024, 9,699 cases, including 195 deaths have been reported. In comparison, in 2023 and as of 19 March 2023, 7,243 cases, including 47 deaths were reported.

**Ethiopia:** Since 29 February 2024 and as of 29 March 2024, 5,172 new cases, including 36 new deaths have been reported. Since 01 January 2024 and as of 29 March 2024, 7,460 cases, including 54 deaths have been reported. In comparison, in 2023 and as of 12 March 2023, 955 cases, including 12 deaths were reported.
**Kenya:** Since 29 February 2024 and as of 29 March 2024, 21 new cases, including one new death has been reported. Since 1 January 2024 and as of 29 March 2024, 186 cases, including one death has been reported. In comparison, in 2023 and as of 06 March 2023, 2,721 cases, including 32 deaths were reported.

**Malawi:** Since 29 February 2024 and as of 29 March 2024, 29 new cases have been reported. Since 1 January 2024 and as of 29 March 2024, 216 cases, including three deaths have been reported. In comparison, in 2023 and as of 28 March 2023, 38,642 cases, including 1,136 deaths were reported.

**Mozambique:** Since 29 February 2024 and as of 29 March 2024, 2,092 new cases, including four new deaths have been reported. Since 1 January 2024 and as of 29 March 2024, 6,127 cases, including four deaths have been reported. In comparison, in 2023 and as of 12 March 2023, 8,259 cases, including 47 deaths were reported.

**Nigeria:** Since 29 February 2024 and as of 29 March 2024, 149 new cases, including two new deaths have been reported. Since 1 January 2024 and as of 29 March 2024, 318 cases, including four deaths have been reported. In comparison, in 2023 and as of 28 February 2023, 672 cases, including 25 deaths were reported.

**Somalia:** Since 29 February 2024 and as of 29 March 2024, 2,013 new cases, including 34 new deaths have been reported. Since 1 January 2024 and as of 29 March 2024, 4,956 cases, including 60 deaths have been reported. In comparison, in 2023 and as of 12 February 2023, 1,307 cases, including one death was reported.

**Uganda:** Since 29 January 2024 and as of 29 February 2024, 25 new cases, including one new death has been reported. Since 1 January 2024 and as of 29 February 2024, 38 cases, including one death has been reported. In comparison, in 2023 and as of 30 March 2023, no cases were reported.

**United Republic of Tanzania:** Since 29 February 2024 and as of 28 March 2024, 572 new cases, including 26 new deaths have been reported. Since 1 January 2024 and as of 24 March 2024, 1,846 cases, including 32 deaths have been reported. In comparison, in 2023 and as of 13 March 2023, 72 cases, including three deaths were reported.

**Zambia:** Since 29 February 2024 and as of 29 March 2024, 2,081 new cases, including 37 new deaths have been reported. Since 1 January 2024 and as of 29 March 2024, 18,938 cases, including 591 deaths have been reported. In comparison, in 2023 and as of 12 March 2023, 225 cases, including five deaths were reported.

**Zimbabwe:** Since 29 February 2024 and as of 29 March 2024, 3,835 new cases, including 74 new deaths have been reported. Since 1 January 2024 and as of 29 March 2024, 15,046 cases, including 231 deaths have been reported. In 2024, no updates have been reported by: Cameroon and South Africa.

**ECDC assessment:**

Cholera cases have continued to be reported on the African continent and in Asia in recent months. Cholera outbreaks have also been reported in parts of the Middle East and in the Americas. Despite the number of cholera outbreaks reported worldwide, few cases are reported each year among travellers returning to the EU/EEA.

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 2022, 29 cases were reported by nine EU/EEA countries, while two were reported in 2021 and none in 2020. In 2019, 25 cases were reported in EU/EEA countries. All cases had a 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. Such measures 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 continues to monitor cholera outbreaks globally through its epidemic intelligence activities in order to identify significant changes in epidemiology and provide 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.

**Last time this event was included in the Weekly CDTR:** 27 March 2024
Maps and graphs

Figure 1. Geographical distribution of cholera cases reported worldwide from April 2023 to March 2024

Source: ECDC

Figure 2. Geographical distribution of cholera cases reported worldwide from January to March 2024

Source: ECDC
2. Middle East respiratory syndrome coronavirus (MERS-CoV) – Multi-country – Monthly update

Overview:

Update: Since the previous update on 5 April 2024, and as of 29 April 2024, one MERS fatality has been reported in Saudi Arabia retrospectively for January 2024.

Summary: Since the beginning of 2024, and as of 29 April 2024, one MERS fatality has been reported in Saudi Arabia.

Since April 2012 and as of 29 April 2024, a total of 2,622 cases of MERS, including 950 deaths, have been reported by health authorities worldwide.

Sources: ECDC MERS-CoV page | WHO MERS-CoV | ECDC factsheet for professionals | WHO updated global summary and assessment of risk (November 2022) | Qatar MoPH Case #1 | Qatar MoPH Case #2 | FAO MERS-CoV situation update | WHO DON Oman | WHO DON Saudi Arabia | WHO DON UAE | WHO DON Saudi Arabia | WHO IHR | WHO EMRO MERS Situation report

ECDC assessment:

Human cases of MERS-CoV continue to be reported in the Arabian Peninsula. However, the number of new cases detected and reported through surveillance has dropped to the lowest levels since 2014. The risk of sustained human-to-human transmission in Europe remains very low. The current MERS-CoV situation poses a low risk to the EU, as stated in the Rapid Risk Assessment published by ECDC on 29 August 2018, which also provides details on the last case reported in Europe.

ECDC published a technical report, Health emergency preparedness for imported cases of high-consequence infectious diseases, in October 2019, which is still useful for EU Member States wanting to assess their level of preparedness for a disease such as MERS-CoV. ECDC also published Risk assessment guidelines for infectious diseases transmitted on aircraft (RAGIDA) – Middle East respiratory syndrome coronavirus (MERS-CoV) in 22 January 2020.

Actions:

ECDC is monitoring this situation through its epidemic intelligence activities and reports on a monthly basis or when new epidemiological information is available.

Last time this event was included in the Weekly CDTR: 05 April 2024
Maps and graphs

Figure 1. Distribution of confirmed cases of MERS by place of infection and month of onset, April 2012–April 2024

Number of cases by place of infection

Source: ECDC

Figure 2. Geographical distribution of confirmed MERS cases by country of infection and year, from January 2014 to April 2024

Source: ECDC
3. SARS-CoV-2 variant classification

Overview:

Weekly update on SARS-CoV-2 variants:

Since the last update on 12 April 2024, and as of 26 April, no changes have been made to ECDC's variant classifications for variants of concern (VOCs), variants of interest (VOIs), variants under monitoring (VUMs), and de-escalated variants.

For the latest update on SARS-CoV-2 variant classifications, please see ECDC's webpage on variants.

Variant surveillance data, including the distribution of VOC and VOI variant proportions in the EU/EEA and detailed country-specific COVID-19 updates, are available as part of the European Respiratory Virus Surveillance Summary (ERVISS).

Actions:

For the latest update on SARS-CoV-2 variant classifications, please see ECDC's webpage on variants. Variant surveillance data, including the distribution of VOC and VOI variant proportions in the EU/EEA and detailed country-specific COVID-19 updates, are available as part of the European Respiratory Virus Surveillance Summary (ERVISS).

From now on, routine updates on the SARS-CoV-2 variant classification through the Communicable Diseases Threats Report will be provided on a monthly basis.

Last time this event was included in the Weekly CDTR: 26 April 2024

4. Overview of respiratory virus epidemiology in the EU/EEA - weekly monitoring

Overview:

Respiratory virus activity

- ILI and acute respiratory infection (ARI) consultation rates are continuing to decrease or remaining stable at low levels (15 reporting countries). Moving Epidemic Method (MEM) thresholds were available for 14 countries, two of which observed consultation rates above baseline levels. Short-term forecasts of ILI and ARI rates in EU/EEA countries are published on ECDC's RespiCast.
- In primary care sentinel settings, the median test positivity at the EU/EEA level was highest for influenza, at 5% (pooled country data: 5%; interquartile range (IQR) of country values: 0–14%), with most countries reporting a decrease in test positivity. In week 17, two out of 11 countries reported a test positivity above 10%. Qualitative assessments of seasonal influenza activity from 17 countries indicate decreasing intensity in recent weeks (five baseline, nine low, three medium). Of 16 countries reporting geographical spread of seasonal influenza, one reported no activity, eight reported sporadic spread, one local, five regional, and one widespread.
- Among the 49 sentinel primary care detections of seasonal influenza, 42 (86%) were typed as influenza virus type B and 7 (14%) were typed as influenza virus type A. Of the influenza type B detections, 35 were further defined as B/Victoria lineage, while the remaining seven were of unknown lineage. Of the influenza type A detections that were further subtyped, two were A(H1)pdm09 and four were A(H3). The remaining influenza type A detection was of unknown subtype. It is worth noting that one country continues to account for most of the total number of reported influenza B detections (57% in week 17)
- The median sentinel primary care RSV positivity was 0% (pooled: 0.5%; IQR: 0–0%). Decreasing or stable trends were observed at the country level in both sentinel positivity and non-sentinel detections.
- The median sentinel primary care positivity for SARS-CoV-2 remained low at 0% (pooled: 2%; IQR: 0–2%). Decreasing or stable trends were observed at the country level in both sentinel positivity and non-sentinel detections.

Severe disease
• Rates of severe acute respiratory infection (SARI) from sentinel secondary sites were stable or decreasing and at levels comparable to the same time last year in all five countries reporting data up to week 17.
• The median SARI test positivity for seasonal influenza was 1% (pooled: 2%; IQR: 0.5–6%), with decreasing or stable trends observed in most countries reporting this indicator. All countries reporting non-sentinel hospital or ICU data observed decreasing or stable trends.
• The median SARI test positivity for RSV was 1% (pooled: 1%; IQR: 1–1%), with decreasing or stable trends observed in all countries reporting this indicator.
• The median SARI test positivity for SARS-CoV-2 was 1% (pooled: 2%; IQR: 0–3%). Both SARI positivity and non-sentinel indicators of severity remained at low levels in all countries.
• EuroMOMO pooled estimates of weekly excess all-cause mortality for the participating European countries were within expected levels.

Virus characterisation

Influenza

• WHO recommendations that trivalent vaccines for use during the 2023–2024 influenza season in the northern hemisphere contain the following (egg-based and cell culture or recombinant-based vaccines respectively): an A/Victoria/4897/2022 or A/Wisconsin/67/2022 (H1N1)pdm09-like virus (subclade 5a.2a.1); an A/Darwin/9/2021 or A/Darwin/6/2021 (H3N2)-like virus (clade 2a); and a B/Austria/1539417/2021 (B/Victoria lineage)-like virus (subclade V1A.3a.2).
• From week 40, 2023 to week 17, 2024, 3 088 A(H1)pdm09, 1 220 A(H3) and 180 B/Victoria viruses from sentinel and non-sentinel sources were genetically characterised. Of the A(H1)pdm09 viruses that have been assigned to a clade, 2 076 were reported as clade 5a.2a and 1 005 were subclade 5a.2a.1. Of the A(H3) viruses that have been assigned to a clade, 30 were reported as subclade 2a, 10 were subclade 2a.3a, 1 176 were subclade 2a.3a.1 and one was subclade 2a.3b. All B/Victoria viruses were reported as subclade V1A.3a.2.
• Antigenic characterisation data presented in WHO 2024–2025 northern hemisphere vaccine composition report indicate current northern hemisphere vaccine components are well matched to circulating 5a.2a and 5a.2a.1 A(H1N1)pdm09 subclades and V1A.3a.2 B/Victoria subclades. While components also appear well matched for 2a.3a A(H3) clade viruses, 2a.3a.1 clade viruses are less well matched. Based on human post-vaccination serology studies, haemagglutination inhibition and virus neutralisation against some recent 2a.3a.1 viruses were significantly reduced for some serum panels.
• ECDC has published interim influenza vaccine effectiveness (VE) estimates for the 2023–2024 season. Analysis of data submitted from multi-country primary care and hospital study sites between September 2023 and January 2024 indicated that up to 53% and 44% of vaccinated individuals in primary care or hospital settings, respectively, were protected against mild and severe influenza.

SARS-CoV-2 variants for weeks 15–16 (8 April to 21 April 2024)

• The estimated distribution (median and IQR of proportions from two countries) of variants of concern (VOCs) or variants of interest (VOIs) was 94% (90–97%) for BA.2.86 (which includes JN.1 isolates) and 2% (1–3%) for XBB.1.5-like (which now includes XBB.1.5+F456L). These estimates should be interpreted with caution as they are based on data from only three countries, a result of the very low number of sequences deposited in recent weeks during a period of low SARS-CoV-2 transmission.

Period overview (week 25, 2023 to week 17, 2024)

• Following relatively low respiratory illness transmission over the summer period, consultation rates increased in primary care settings from September 2023. Consultation rates were highest at different timepoints in each country during the winter period, with peak rates reached between week 50, 2023 and week 7, 2024. As of week 17, 2024, consultation rates continued to decrease and have returned to baseline levels in most EU/EEA countries. Transmission of SARS-CoV-2 began increasing in late summer, with clear increases observed at the EU/EEA level up to week 49 and decreases in activity thereafter. Activity is currently low in most EU/EEA countries. Similarly, a steady decrease in severe disease has been observed since week 50. COVID-19 has predominantly affected individuals aged 65 years and above. Week 50 marked the start of the seasonal influenza epidemic. A decreasing trend in influenza activity has been observed since week 4, 2024, with a mixed picture at the country level. Compared to trends observed in previous influenza epidemics, seasonal influenza activity decreased earlier this season. Severe disease due to influenza has affected all age groups. Since week 6, 2024, a decrease in the severe disease indicators for seasonal influenza has been observed in most EU/EEA countries. Both influenza type A and type B viruses have been detected, with a dominance of A(H1)pdm09 viruses during the first part of the season. As of week 13, B/Victoria lineage was the most detected virus, although the number of detections was low. RSV activity began increasing around week 41, reaching a peak in week 50, followed by a decreasing trend. RSV has had the greatest impact among children aged 0–4 years.
ECDC assessment:

After marking the start of the seasonal influenza epidemic in the EU/EEA in week 50, 2023, seasonal influenza continued to circulate at higher levels than SARS-CoV-2 and RSV in primary care sentinel systems during week 17, 2024. Influenza activity at the EU/EEA level continues to decrease, and pooled positivity in primary care has been below the 10% positivity threshold for six consecutive weeks. Even if respiratory virus circulation is decreasing, it is still essential to continue closely monitoring the impact of influenza and other respiratory viruses on hospital and ICU admissions.

Actions:

ECDC monitors rates of respiratory illness presentation and respiratory virus activity in the EU/EEA, presenting findings in the European Respiratory Virus Surveillance Summary (ERVISS.org). Updated weekly, ERVISS describes the epidemiological and virological situation for respiratory virus infections across the EU/EEA and follows the principles of integrated respiratory virus surveillance outlined in ‘Operational considerations for respiratory virus surveillance in Europe’.

Sources: ERVISS

Last time this event was included in the Weekly CDTR: 26 April 2024

5. Cholera – Comoros and Mayotte – 2024 - weekly monitoring

Overview:

Update
Since the previous update on 26 April, and as of 1 May, French health authorities reported 22 new cholera cases. Furthermore, French authorities informed about adequate cholera vaccines capacity in Mayotte, as well as new stocks arriving to the island. Recently, Mayotte’s healthcare workforce was reinforced with 18 healthcare workers and it is expected that 49 more will arrive soon.

Since 18 March, and as of 1 May, 35 cholera cases have been reported in Mayotte. So far, no deaths have been reported in the island. According to the ARS Mayotte's bulletin published on 29 April, a total of 220 contacts of the cases have received antibiotic chemoprophylaxis and 2 601 contacts have been vaccinated.

Since the last available update on 24 April, and as of 2 May, Comoros health authorities have reported 1 527 new cholera cases and 24 new deaths. Since the outbreak was declared on 2 February in the Union of the Comoros, a total of 4 111 cases and 85 deaths have been reported on the three islands. In all, 3 746 cases have recovered.

Summary
On 31 January 2024, a boat from Tanzania carrying 25 people arrived in Moroni, the capital of the Comoros archipelago. One person on board died of suspected cholera and several others were symptomatic. The Comoros Ministry of Health declared a cholera outbreak on 2 February. The first locally transmitted cases in Comoros were reported on 5 February in Moroni. Cholera cases were also detected in Moheli and Anjouan by the end of February and the first week of March.

Following the increase in cholera cases in Comoros during February, the Mayotte Regional Health Agency (ARS Mayotte) announced that health surveillance capacities would be strengthened on the island, including risk communication for health professionals and passengers. The first imported cholera case was detected in Mayotte on 18 March.

Background
There is frequent undocumented population movement between the Comoros archipelago and the French territory of Mayotte. No cholera cases had been reported in Mayotte since 2000.

Cholera is a bacterial disease caused by the bacterium Vibrio cholerae. The main risk factors are associated with poor water, sanitation and hygiene practices. Several countries in eastern and southern Africa are currently responding to cholera outbreaks. Response efforts are constrained by global shortages of cholera vaccines.
ECDC assessment:
Considering the detection of several autochthonous cases of cholera in Mayotte, ECDC assesses the likelihood of further community transmission of cholera in Mayotte as high. The impact of the cholera outbreak in Mayotte is considered to be high. The overall risk of cholera for the population in Mayotte is therefore assessed to be high.

Early detection and response activities are essential and have been reinforced in the French territory of Mayotte, as well as increasing awareness among healthcare workers and at points of entry.

Actions:
ECDC is in contact with French authorities and relevant partners and is monitoring the situation through its epidemic intelligence activities.

Last time this event was included in the Weekly CDTR: 26 April 2024

6. Highly pathogenic avian influenza A(H5N1) in cattle and a related human case – United States – 2024

Overview:
Recently, highly pathogenic avian influenza (HPAI) A(H5N1) virus has been detected in cattle in several states in the United States. As of 2 May 2024, the USDA reports detection of HPAI A(H5N1) in nine states, affecting 36 dairy farms/herds: Texas (12), New Mexico (8), Michigan (6), Kansas (4), Idaho (2), Ohio (1), North Carolina (1), South Dakota (1), and Colorado (1). The most recently reported detection was on 25 April 2024 in Colorado. Markers of influenza A(H5) have also been detected in wastewater in Texas, United States (Wolfe et al., 2024). Furthermore, cats fed unpasteurised milk and colostrum from affected cows developed systemic, fatal infection (Burrough et al., 2024).

Genetic material of HPAI A(H5N1) has been detected in milk samples. Studies performed by US FDA have shown that pasteurisation inactivates HPAI in milk and dairy products, with no viable virus being detected following pasteurisation. For further information, please refer to the US FDA update. Samples of ground beef from states with affected dairy herds tested negative for HPAI A(H5N1) (USDA).

On 1 April 2024, a human case of HPAI A(H5N1) was reported in an individual who had prior exposure to dairy cattle presumed to be infected with HPAI A(H5N1) in Texas, USA (US CDC). The virus isolated from this case belonged to the HA clade 2.3.4.4b HPAI A(H5N1) and was closely related to the virus detected in dairy cattle in Texas. The individual displayed symptoms of conjunctivitis but has since recovered. For measures and treatment, the patient was asked to isolate and received an antiviral drug for influenza. As of 2 May 2024, no additional human cases have been reported in connection to this event.

Genetic analysis revealed some changes in the virus sequence from the patient specimen compared to the viral sequences found in the cattle. The human genome displayed the PB2 E627K mutation, which is associated with viral adaptation to mammalian hosts. However, both the cattle and human sequences remain avian-like (i.e. retain their strong preference for avian and not mammalian receptors). Importantly, there were no markers identified that are known to be associated with resistance to influenza antiviral medications.

ECDC assessment:
Based on available information, World Health Organization together with the Food and Agriculture Organization of the United Nations and the World Organisation for Animal Health assessed the overall public health risk posed by A(H5N1) to be low, and for those exposed to infected animals or contaminated environments, the risk of infection is considered low-to-moderate. The US CDC has also stated that the overall threat of HPAI A(H5N1) clade 2.3.4.4b to the general public in the US remains low. The USDA and US FDA highlight that commercially produced milk is safe for consumers and that milk from cattle with clinical signs of infection is removed from the human food chain.

In the latest joint ECDC/EFSA/EURL monitoring report, ECDC assessed the risk of infection from the circulating HPAI A(H5N1) clade 2.3.4.4b viruses as low for the general population and low-to-moderate for those with activities that expose them to infected animals or a contaminated environment (e.g. occupationally exposed to infected animals). So far, there have been no confirmed cases of A(H5N1) infection in humans in the EU/EEA. To
date, there have been no reports of A(H5N1) infection in cattle in the EU/EEA. The genotype B3.13 identified in cattle and the human case in the US has currently not been detected in Europe. At the present time, the current available evidence does not change the overall assessment of the risk for the EU/EEA population. ECDC is monitoring the situation together with partner organisations in Europe and will continue to update its assessment of the risk for humans in the EU/EEA accordingly as new information becomes available.

Active monitoring and testing of exposed persons is recommended for early detection of human cases and to assess the possibility of human-to-human transmission, in addition to enhanced surveillance according to the relevant ECDC guidance documents (Testing and detection of zoonotic influenza virus infections in humans; Investigation protocol of human cases of avian influenza virus; Enhanced surveillance of severe avian influenza virus infections in hospital settings). Given the current uncertainties related to the event in the US, a low threshold for testing could be considered for clusters of symptomatic farmers (e.g. conjunctivitis) who have been in contact with cattle. Due to the higher risk of infection for individuals exposed to infected animals and contaminated environments, appropriate personal protective measures and other precautionary measures should always be taken to reduce the risk of infection.

ECDC relevant publications:

- Testing and detection of zoonotic influenza virus infections in humans in the EU/EEA, and occupational safety and health measures for those exposed at work
- Enhanced surveillance of severe avian influenza virus infections in hospital settings in the EU/EEA.
- Investigation protocol of human cases of avian influenza virus infections in the EU/EEA
- Joint ECDC-EFSA Drivers for a pandemic due to avian influenza and options for One Health mitigation measures

Actions:

ECDC is in contact with US Centers for Disease Control and Prevention for further information and closely follows any updates on the event. ECDC monitors avian influenza strains through its influenza surveillance programme and epidemic intelligence activities 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 virological characteristics and epidemiology of the virus. Together with EFSA and the EU Reference Laboratory for Avian Influenza, ECDC produces a quarterly updated report of the avian influenza situation.

Last time this event was included in the Weekly CDTR: 05 April 2024

7. Crimean-Congo haemorrhagic fever - Spain - 2024

Overview:

On 27 April 2024, regional Spanish health authorities confirmed a case of Crimean-Congo haemorrhagic fever (CCHF) in Salamanca Province. The case is an elderly man with a clinical picture compatible with CCHF. The man has a tick bite and remains in hospital in stable condition, although with the clinical severity that this pathology implies, with isolation and infection prevention and control measures for health professionals appropriate for this situation. Source: Media/Press release.

ECDC assessment:

This is the fifth case of CCHF with likely exposure to ticks in Salamanca Province, Castile-León, Spain. Previous cases occurred there in 2018, 2020, and 2021. It is the 13th case in Spain since 2013. Although early in the season, the onset of symptoms in April is not unusual (of the previous cases in Spain, one had onset of symptoms in April, two in May, three in June, two in July and four in August).

Although the risk of contracting CCHF for the general population in the areas where the virus is known to be present in Spain is low, this risk drastically increases for people performing activities that expose them to tick bites (e.g. hunting, forestry work, hiking, animal surveillance). As a general precaution against CCHF, but also against other tick-borne diseases, people who may potentially be exposed to ticks should apply personal protective measures against tick bites (ECDC Protective Measures against ticks). Ticks from the *Hyalomma* spp. are considered the principal vectors of the CCHF virus. *Hyalomma marginatum* is widely present in southern and eastern Europe. A further vector is *Hyalomma lusitanicum*, which is present in parts of southern Europe. Additional information on CCHF can be found in ECDC factsheet and information on the occurrence of CCHF cases in the
EU/EEA can be found on the ECDC website. In December 2023, ECDC published a report on the spatial distribution of CCHF based on predicted ecological suitability.

**Actions:**
ECDC is monitoring the ongoing situation through epidemic intelligence activities.

**Last time this event was included in the Weekly CDTR:**

### 8. Imported case of Lassa fever - France - 2024

**Overview:**
On 3 May, France reported a case of Lassa fever in a soldier who, after returning from abroad (there is currently no information available on the possible country of exposure and the date of disease symptoms onset), was hospitalized in Ile-de-France. His state of health is not a cause for concern. Contact tracing was conducted and monitoring of contacts is ongoing.

The virus can be transmitted from human to human through direct contact with the blood, urine, faeces or other bodily secretions of an infected person. The risk of secondary cases is therefore limited to people who have had direct contact with the patient's body fluids, in particular health care workers who have treated the patient.

**ECDC assessment:**
Lassa fever is a reportable zoonotic viral haemorrhagic fever caused by Lassa virus, which is an arenavirus. The disease begins 6 to 21 days after infection with non-specific clinical signs: fever, vomiting, nausea, abdominal pain, headache, myalgia, arthralgia, asthenia. In severe cases, patients can develop haemorrhagic syndrome, respiratory distress and shock.

Lassa fever is known to be endemic in Benin, Ghana, Guinea, Liberia, Mali, Sierra Leone, and Nigeria, but probably exists in other West African countries as well.

In the past 10 years, EU/EEA countries have reported seven Lassa fever cases to The European Surveillance System (TESSy). Two cases were reported by the UK (ex-Nigeria and ex-Mali) in 2009, one by Sweden (ex-Liberia) in 2016, two by Germany (ex-Togo and a secondary case infected in Germany) in 2016 and two by the Netherlands (ex-Sierra Leone) in 2019.

In healthcare settings, when appropriate infection prevention and control precautions and laboratory biosafety measures are in place, the secondary attack rate for Lassa virus transmission is very low. The likelihood for the general population to encounter a Lassa fever case in the EU/EEA is very low and transmission of Lassa virus from travel-associated or air-lifted cases has been rare. ECDC RAGIDA guidelines can be used to assess the possibility of transmission to co-passengers and crew on board an aircraft.

The likelihood of infection for EU/EEA citizens travelling to West Africa is very low, but these travellers should be informed of the risk of exposure to Lassa fever virus, particularly in areas experiencing ongoing outbreaks. Travellers should avoid exposure to rodents, consumption of foods and drinks potentially contaminated by rodent droppings, and exposure to people experiencing haemorrhagic fever symptoms. In order to prevent human-to-human transmission, contacts with patients' blood and body fluids should be avoided, as well as exposure to possible contaminated surfaces or materials. Public health experts should remain vigilant to the possibility of imported Lassa fever cases and ensure an early diagnosis to avoid secondary transmission. ECDC conducted a rapid risk assessment: cases of Lassa fever in the Netherlands ex Sierra Leone in 2019.

**Actions:**
ECDC is in contact with the French health authorities to obtain additional information on the case and will continue to monitor the situation.