

WEEKLY BULLETIN

Communicable Disease Threats Report

Week 45, 6–12 November 2022

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1. Monitoring of the FIFA World Cup 2022 Qatar

Overview:

The 2022 FIFA World Cup will take place between 20 November and 18 December 2022 in Qatar. The ECDC Epidemic Intelligence team will monitor the event in collaboration with global partners between 14 November to 22 December 2022 – starting one week before and continuing until one week after the event. Thirty-two countries will participate in this event, including 10 EU Member States: Belgium, France, Spain, Portugal, Netherlands, Denmark, Germany, Croatia, Serbia, and Poland. A total of 64 matches will take place in eight stadiums and spread across five Qatari cities. It is expected that, approximately [1.5 million](#) football fans from around the world will travel to Qatar during this event, some of them staying outside of Qatar. The [FIFA Fan Festival](#) will take place at Al Bidda Park in Doha and will be open every day of the tournament from 19 November to 18 December. Potential threats during the World Cup include COVID-19, MERS-CoV and monkeypox. Since the beginning of the **COVID-19** pandemic and as of 09 November 2022, the [Qatar Ministry of Public Health](#) has reported 472 587 SARS-CoV-2 positive cases including 684 deaths. Qatar has a relatively high vaccination rate for COVID-19 with 98.86% of eligible individuals being fully vaccinated with the primary series ([Qatar MoPH](#), [WHO](#)), and there is a decreasing trend in the number of COVID-19 cases in Qatar since late September 2022. The country recently reviewed its COVID-19 related [travel measures](#) and since 01 November 2022, visitors are no longer required to present a negative COVID-19 PCR or Rapid Antigen Test result before traveling to Qatar. The country recently

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In the past five years, Qatar reported between one and three cases of Middle East respiratory syndrome coronavirus (**MERS-CoV**) annually (2 cases in 2022, overall, 25 from 2003). Five cases of [monkeypox](#) were reported, the first case was imported and the last case was reported in September.

As is often the case with mass gathering events, during the 2022 FIFA World Cup in Qatar visitors may be most at risk of gastrointestinal illness and vaccine-preventable infections. Thus, travellers from the EU/EEA going to the event are advised to be vaccinated according to their national immunization program and to ensure they are vaccinated against seasonal influenza and with updated boosters for COVID-19, as recommended by national authorities. It is recommended to employ standard hygiene measures including regular hand washing with soap, drinking safe water (bottled, chlorinated or boiled before consumption); eating thoroughly cooked food and carefully washing fruit and vegetables with safe drinking water before consumption; and stay at home or a hotel room when sick.

ECDC will provide the 2022 FIFA World Cup, Qatar monitoring reports in the weekly Communicable Disease Threats Report (CDTR).

2. Measles - Multi-country (World) - Monitoring European outbreaks

Overview:

Since the previous monthly measles update in ECDC's Communicable Disease Threats Report (CDTR) on 18 October 2022 and as of 9 November, two new cases were reported by one country in the EU/EEA: Poland (2) and two countries updated data for the previous months and confirmed less cases: Germany (-2) and Ireland (-1). Other countries did not report new cases of measles or updates for previous periods.

No measles-related deaths have been reported in the EU/EEA in 2022 to date.

Relevant updates outside the EU/EEA are available for WHO Regional Office for Africa (WHO AFRO) and WHO Western Pacific Regional Office (WPRO). No updates were available for WHO Regional Office for Europe (EURO), WHO Regional Office for Eastern Mediterranean (EMRO), WHO Pan American Health Organization (PAHO), WHO Regional Office for South-East Asia (SEARO), and WHO Western Pacific Regional Office (WPRO).

Disclaimer: the [monthly measles report published in the CDTR](#) provides the most recent data on cases and outbreaks from information made publicly available by national public health authorities or the media. This report is a supplement to [ECDC's monthly measles and rubella monitoring report](#), based on data routinely submitted by 29 EU/EEA countries to The European Surveillance System (TESSy). Data presented in the two monthly reports may differ.

Epidemiological summary for EU/EEA countries with updates since last month

[Germany](#) reported 65 confirmed and suspected cases in weeks 1 to 44 (ending 6 November 2022).

[Ireland](#) reported five cases in 2022 as of week 43 (ending 29 October 2022).

[Poland](#) reported 24 cases in the period from [January to 31 October 2022](#), an increase of two cases since the previous update for January-15 October 2022.

Relevant epidemiological summary for countries outside the EU/EEA

A global provisional monthly measles and rubella overview by month and country is available from [WHO's website](#). According to a [statement](#) from the Ministry of Health and Family Welfare on 9 November 2022, India reported an outbreak of measles in Mumbai city. A high level multi-disciplinary team will assist the state health authorities in instituting public health measures and facilitating operationalisation of the requisite control and containment measures.

According to a report by WHO Regional Office for Africa ([AFRO](#)), as of 9 November 2022 (week 45), cases and outbreaks of measles in 2022 were reported in the following countries: Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo (DRC), Ethiopia, Guinea, Kenya, Liberia, Mali, Niger, Senegal, Sierra Leone, South Africa, South Sudan, Tanzania, Zambia, Zimbabwe. Due to varying reporting periods by the countries please visit the latest weekly bulletin available [here](#).

Notable outbreaks have been reported in the Democratic Republic of the Congo (DRC) (115 905 suspected cases, including 1 411 deaths (CFR:1.2%)), Guinea (23 183 suspected cases, 33 deaths), Niger (13 421 suspected cases and 32 deaths), Ethiopia (9 850 suspected cases, 5 806 confirmed, including 56 deaths (CFR: 0.6%) in January – September 2022) and Zimbabwe (7 504 cases, including 744 deaths).

As of 3 November, the measles outbreak in [Limpopo province](#), South Africa, has increased to 23 cases.

According to the WHO Western Pacific Region ([WPRO](#)) report for October 2022 (Vol 16, Issue 10), overall there were 1 100 confirmed and clinically compatible cases, including ten deaths (CFR: 0.91%). The cases were reported by seven countries: China (447), the Philippines (413), Malaysia (197), Vietnam (25), Cambodia (6), Japan (5), Australia (3), Singapore (3) and Hong Kong (1).

ECDC assessment:

The substantial decline in measles cases reported by EU/EEA countries after March 2020, and continuing through 2022, contrasts with the usual annual and seasonal pattern for measles, which peaks during the spring in temperate climates. A similar decrease has been observed in other countries worldwide during the same period. Under-reporting, under-diagnosis, or a real decrease due to the direct or indirect effects of COVID-19 pandemic measures could explain the observed decline in cases. The lifting of non-pharmaceutical interventions related to the COVID-19 pandemic could lead to measles outbreaks in the EU/EEA. Active measles surveillance and public health measures, including high vaccination uptake, provide the foundation for a proper response to possible increases in the number of cases/outbreaks.

Actions:

ECDC monitors the measles situation through its epidemic intelligence activities, which supplement monthly outputs with measles surveillance data from The European Surveillance System (TESSy) routinely submitted by 29 EU/EEA countries. ECDC published a risk assessment entitled '[Who is at risk of measles in the EU/EEA?](#)' on 28 May 2019.

3. Middle East respiratory syndrome coronavirus (MERS-CoV) - Multi-country

Overview:

Update: Since the previous update published on 3 October 2022, and as of 10 November 2022, no new MERS-CoV cases have been reported by health authorities or the World Health Organization (WHO).

Summary: Since the beginning of 2022, and as of 10 November 2022, three MERS-CoV cases have been reported in Qatar (2) and Oman (1), including one death. All three cases were primary cases, having reported contact with camels. The most recent cases reported in Qatar prior to these were in February 2020 and February 2019. Since April 2012, and as of 10 November 2022, 2 603 cases of MERS-CoV, including 944 deaths, have been reported by health authorities worldwide.

Sources: [ECDC MERS-CoV page](#) | [WHO MERS-CoV](#) | [ECDC factsheet for professionals](#) | [Qatar MoPH Case #1](#) | [Qatar MoPH Case #2](#) | [FAO MERS-CoV situation update](#) | [WHO DON Oman](#)

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 ECDC's [rapid risk assessment](#) published on 29 August 2018, which also provides details on the last case reported in Europe.

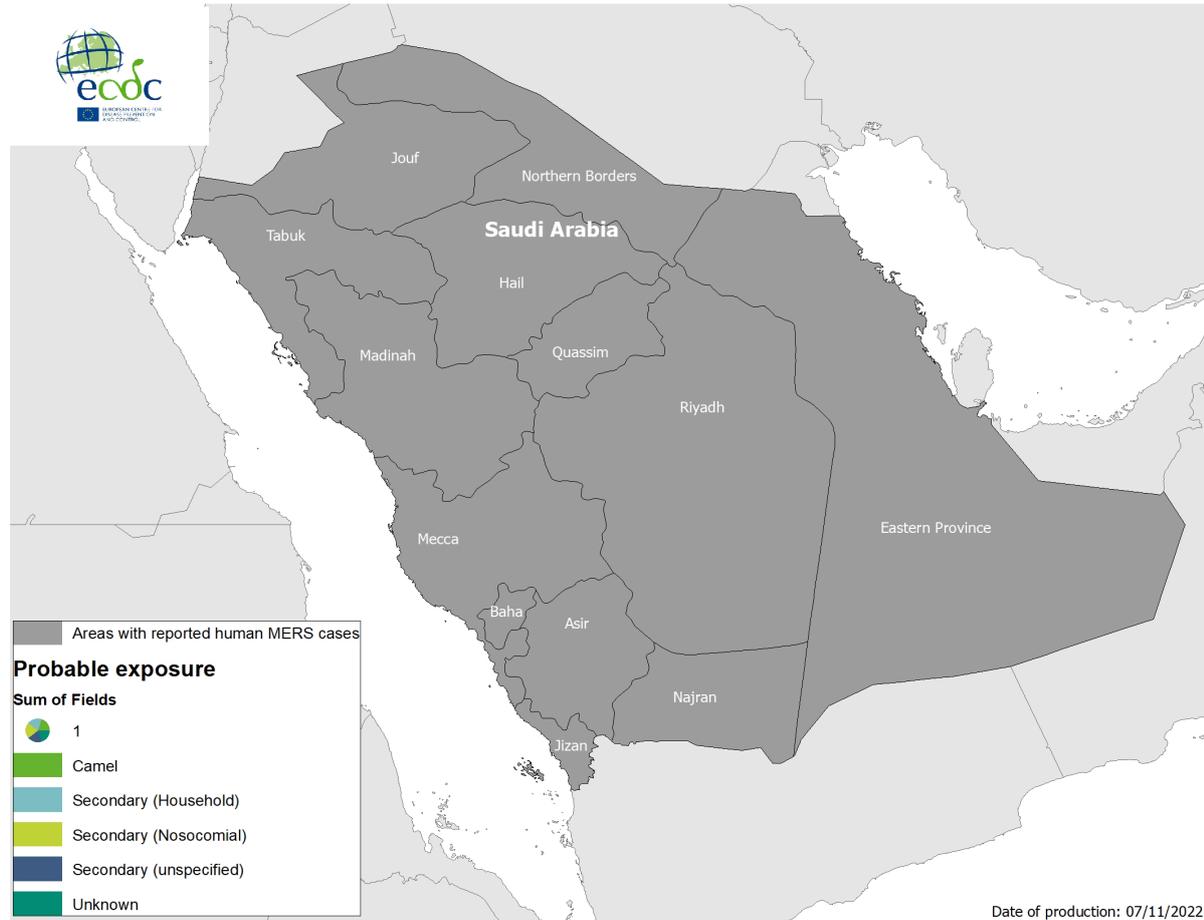
ECDC published a technical report [Health emergency preparedness for imported cases of high-consequence infectious diseases](#) in October 2019, which will be useful for EU Member States wanting to assess their level of preparedness for a disease such as MERS. ECDC also published [Risk assessment guidelines for infectious diseases transmitted on aircraft \(RAGIDA\) – Middle East Respiratory Syndrome Coronavirus \(MERS-CoV\)](#) on 22 January 2020.

Actions:

ECDC is monitoring this threat through its epidemic intelligence activities and reports on a monthly basis.

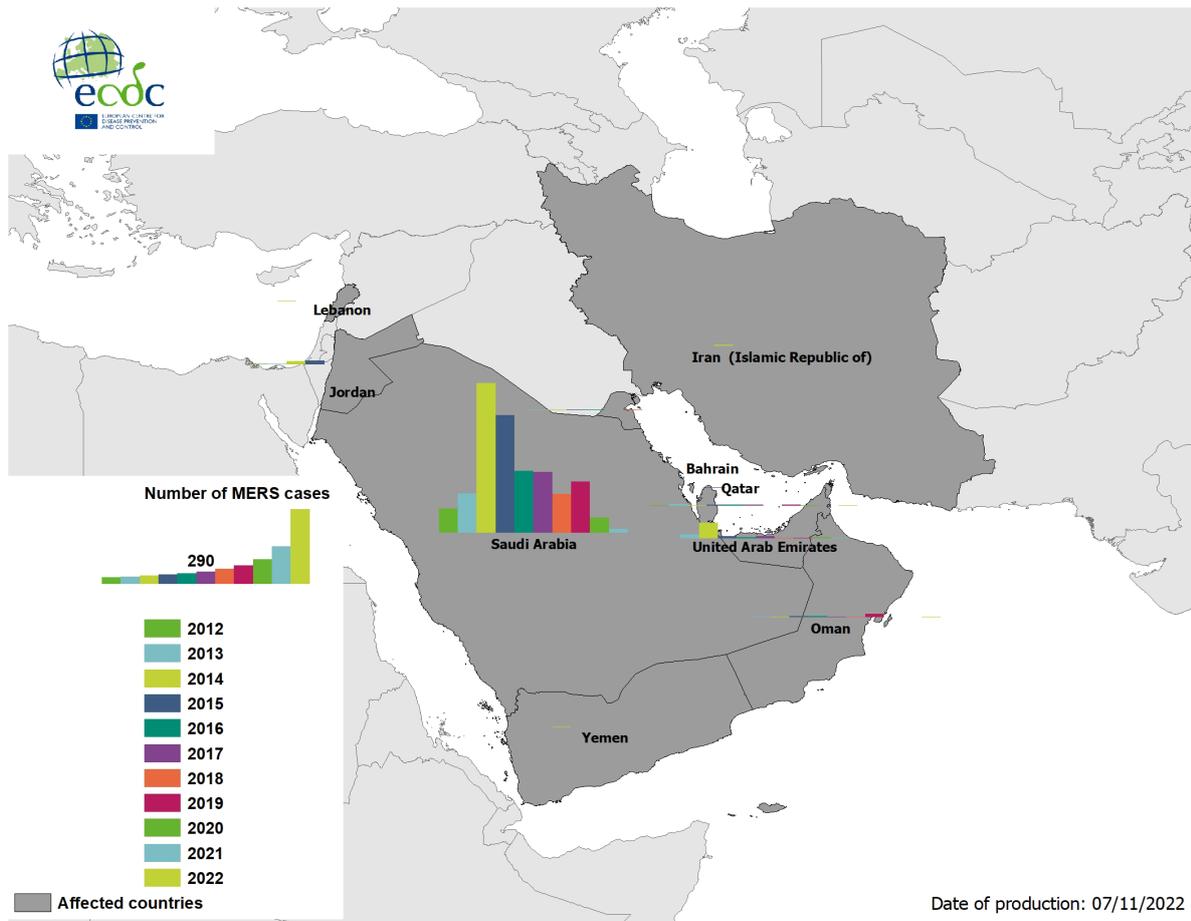
Maps and graphs

Figure 1. Geographical distribution of confirmed MERS-CoV cases by probable region of infection and exposure, from 1 January to 7 November 2022



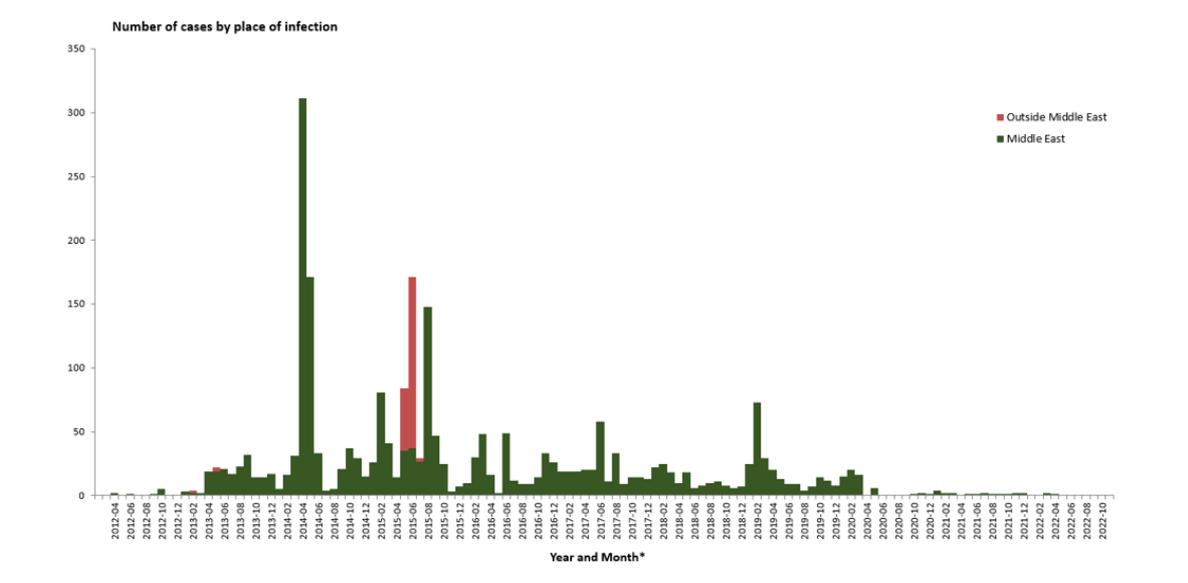
Source: ECDC

Figure 2. Geographical distribution of confirmed MERS-CoV cases by country of infection and year, from April 2012 to 7 November 2022



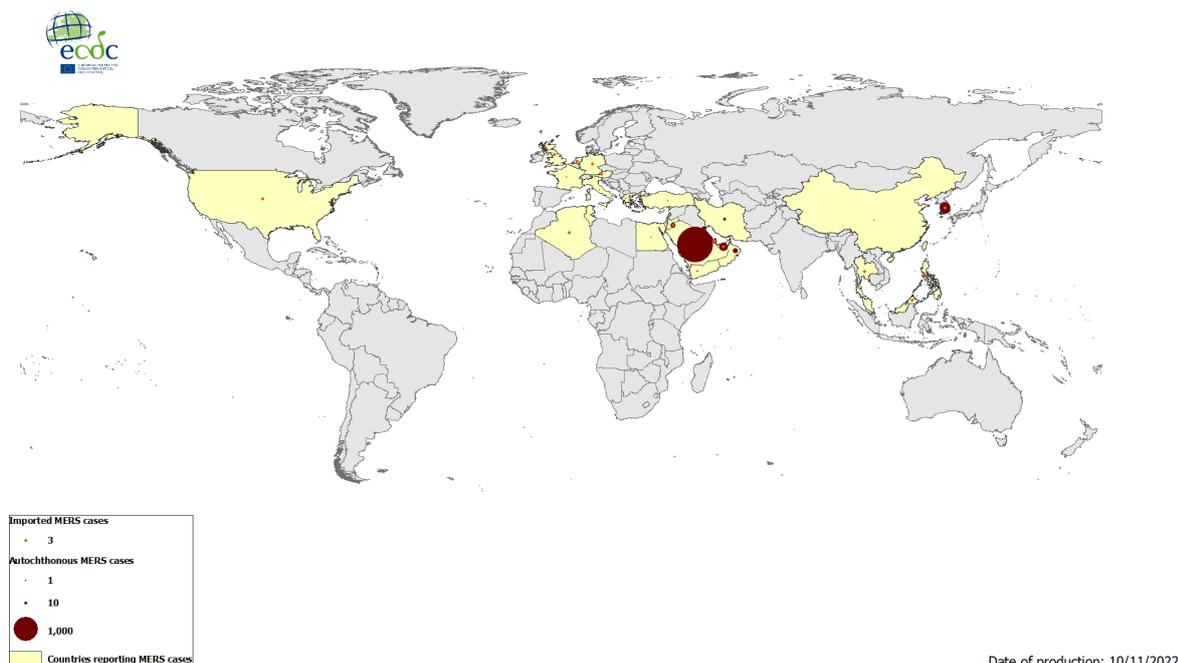
Source: ECDC

Figure 3. Distribution of confirmed cases of MERS-CoV by place of infection and month of onset, March 2012– November 2022



Source: ECDC

Figure 4. Geographical distribution of confirmed cases of MERS-CoV by reporting country, April 2012 - November 2022



Source: ECDC

4. COVID-19 associated with SARS-CoV-2 - Multi-country (EU/EEA) - 2019 - 2022

Overview:

Summary:

At the end of week 44, 2022 (week ending 6 November), decreasing trends in EU/EEA-level COVID-19 case rates were observed, including in people aged 65 years and older, and in death rates. Hospital and ICU indicators have remained stable or are decreasing across the region compared to the previous week. Uptake of the second booster dose continues to be relatively low in target groups. It remains important to continue monitoring the epidemiological situation, especially given the increase in the BQ.1 variant of interest.

The pooled EU/EEA notification rate of COVID-19 cases among people aged 65 years and older decreased by 23% compared to the previous week, with three of the 23 countries reporting data on this indicator seeing increases over the past one-to-two weeks. Overall notification rates (all-age) decreased by 31%, albeit three of the 30 reporting countries reporting recent increases.

All pooled EU/EEA hospital and ICU indicators have remained stable or decreased compared to the previous week, with only three of 24 countries reporting an increasing trend in one of these indicators during the previous week. The pooled EU/EEA COVID-19 death rate continues to decrease, remaining low at 8% of the pandemic maximum. Forecasts of cases, hospital admissions and deaths from the [European COVID-19 Forecast Hub](#) provide predictions for weeks 45 and 46. Compared with the previous week, decreasing trends in cases, stable trends in hospital admissions, and decreasing trends in deaths are forecast for the EU/EEA overall by the end of week 46. Forecasts for individual countries may differ from those for the EU/EEA as a whole. It should be noted that forecasts of cases are considered to be increasingly unreliable due to changes in testing criteria and reporting procedures. All current forecasts, in particular case forecasts, should be treated with caution.

The cumulative uptake of a first booster was 65.0% (country range: 11.2–86.7%) among adults aged 18 years and older, 84.4% (country range: 13.3–100.0%) among individuals aged 60 years and older, and 53.9% (country range: 9.2–72.0%) in the total population. The cumulative uptake of a second booster was 9.2% (country range: 0.1–33.1%) among adults aged 18 years and older, 19.3% (country range: 0.3–70.0%) among individuals aged 60 years and older, and 7.6% (country range: 0.1–26.5%) in the total population.

Among the nine countries with an adequate volume of sequencing or genotyping for weeks 42–43 (17 October to 30 October 2022), the estimated distribution of variants of concern (VOC) or of interest (VOI) was 79.5% (56.2–98.4% from nine countries) for BA.5, 18.1% (8.5–36.8% from five countries) for BQ.1, 2.6% (0.8–4.4% from nine countries) for BA.4, 1.9% (0.5–4.3% from seven countries) for BA.2.75 and 0.5% (0.2–2.8%, 262 detections from eight countries) for BA.2.

As of 20 June 2022, ECDC discontinued the data collection and publication of the number of COVID-19 cases and deaths worldwide. Please refer to [World Health Organization \(WHO\) data](#) on COVID-19 and [WHO's Weekly Epidemiological and Weekly Operational Updates](#) page for non-EU/EEA countries.

For the latest COVID-19 country overviews, please see the [dedicated web page](#).

Other news:

On 8 November 2022, the United States Food and Drug Authority (FDA) [issued an emergency use authorisation \(EUA\)](#) for Kineret (anakinra) to treat hospitalised adults with pneumonia due to COVID-19 requiring supplemental oxygen, who are at risk of progressing to severe respiratory failure and likely to have an elevated plasma-soluble urokinase plasminogen activator receptor (suPAR). Kineret is an interleukin-1 (IL-1) receptor antagonist which is already approved by the FDA for treating rheumatoid arthritis, cryopyrin-associated periodic syndromes, and deficiency of IL-1 receptor antagonist. This drug is developed by the biopharmaceutical company, Swedish Orphan Biovitrum AB and has been [approved](#) for the treatment of COVID-19 in the European Union since December 2021.

Weekly update on SARS-CoV-2 variants:

Since the last update on 26 October 2022 and as of 10 November 2022, **no changes** have been made to ECDC variant classifications for variants of concern (VOC), variants of interest (VOI), variants under monitoring and De-escalated variants.

For the latest information on variants, please see [ECDC's webpage on variants](#).

Public Health Emergency of International Concern (PHEIC):

On 30 January 2020, the World Health Organization (WHO) declared that the outbreak of COVID-19 constitutes 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](#), and [thirteenth](#) 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, and 13 October 2022 respectively. The Committee concluded during these meetings that the COVID-19 pandemic continues to constitute a PHEIC.

ECDC assessment:

For the most recent risk assessment, please visit [ECDC's dedicated webpage](#).

Actions:

On 27 January 2022, ECDC published its Rapid Risk Assessment, '[Assessment of the further emergence and potential impact of the SARS-CoV-2 Omicron variant of concern in the EU/EEA, 19th update](#)'.

Detailed country-specific COVID-19 update is available on ECDC's [website](#). For the latest update on SARS-CoV-2 variants of concern, please see [ECDC's webpage on variants](#).

ECDC invites countries to use the EpiPulse event ([2022-IRV-00008](#)) on BQ.1 and sub-lineages to discuss and share information on this variant as they become available. Of particular interest is information on virus characterisation and evidence on changes in disease severity, virus transmissibility, immune evasion and effects on diagnostics and therapeutics. Case reporting should continue through TESSy.

5. Monkeypox - Multi-country - 2022

Overview:

Update:

Since the last update on 25 October 2022, and as of 8 November 2022, 47 monkeypox cases have been reported from 11 EU/EEA countries: Italy (21), Poland (5), Germany (4), Ireland (4), Netherlands (4), Austria (2), France (2), Romania (2), Luxembourg (1), Norway (1) and Sweden (1).

Disclaimer: due to reporting delays, new cases in Spain and Denmark from the last week are not included in this epidemiological update.

Global update

According to the 2022 [MPX WHO Outbreak report](#) there is decreasing trend in the number of new MPX cases reported globally. However, there was an increase in the number of new reported cases in week 44 (31/10-6/11) of 2.4% compared to week 43 (24-30/10). According to the same report, the majority of cases (91%) were reported in the region of the Americas.

Summary:

EU/EEA

Since the start of the monkeypox outbreak and as of 8 November 2022, 20 744 confirmed cases of monkeypox (MPX) have been reported from 29 EU/EEA countries: Spain (7 317), France (4 097), Germany (3 668), Netherlands (1 240), Portugal (932), Italy (914), Belgium (785), Austria (325), Poland (212), Sweden (212), Ireland (210), Denmark (191), Norway (93), Greece (84), Hungary (80), Czechia (70), Luxembourg (56), Slovenia (47), Romania (44), Finland (42), Malta (33), Croatia (29), Iceland (16), Slovakia (14), Estonia (11), Bulgaria (6), Latvia (6), Cyprus (5) and Lithuania (5).

Deaths have been reported from: Spain (2), Belgium (1), and Czechia (1).

Western Balkans and Türkiye:

Since the start of the monkeypox outbreak and as of 25 October 2022, the following Western Balkan countries have reported confirmed cases of monkeypox: Serbia (40), Bosnia and Herzegovina (9) and Montenegro (2). In addition, 11 cases have been reported from Türkiye.

Disclaimer: Data presented in this update are compiled from TESSy.

A detailed summary and analysis of data reported to TESSy can be found in the Joint ECDC-WHO Regional Office for Europe Surveillance Bulletin published weekly.

Public Health Emergency of International Concern (PHEIC): on 23 July 2022, the Director-General of the World Health Organization [declared](#) the global monkeypox outbreak a Public Health Emergency of International Concern (PHEIC). On 1 November 2022, WHO advised that the multi-country outbreak of monkeypox still met the criteria included in the definition of a PHEIC set out in Article 1 of the IHR.

ECDC assessment:

The weekly number of MPX cases reported in the EU/EEA peaked in July 2022 and a steady declining trend has been observed since then. Multiple factors have probably contributed to the decline of this outbreak, including efforts in risk communication and community engagement resulting in behaviour changes, increasing immunity in the most affected population due to natural immunity and vaccination, and a decrease in the number of large cultural and social events after the summer, frequented by the main risk groups for this outbreak.

MPX continues to primarily affect young men who have sex with men (MSM), between 18 and 50 years (87%). Summer mass gatherings and specific sexual practices have facilitated the transmission of MPX among MSM groups until now. Sporadic cases in women and children have also been reported.

Cases in the current outbreak continue to present with a spectrum of symptoms and signs that differs from what has been described in past outbreaks of MPX in endemic countries, with mainly mild symptoms. Only a few severe cases (including encephalitis) leading to hospitalisations and four deaths have been reported by Spain (2), Belgium (1), and Czechia (1).

Based on evidence in the current outbreak and the declining number of new infections, the overall risk of MPX infection is assessed as moderate for MSM and low for the broader population.

Response options for the EU/EEA countries include creating awareness among health professionals and supporting sexual health services to continue case detection, contact tracing, and management of cases; continuing to offer testing for orthopoxvirus; vaccination strategy; and continuing risk communication and community engagement, despite the decreasing number of cases.

Given the limitations in vaccine supplies, primary preventive vaccination (PPV) and post-exposure preventive vaccination (PEPV), strategies may be combined to focus on individuals at substantially higher risk of exposure and close contacts of cases, respectively. PPV strategies should prioritise gay, bisexual, or other men or transgender people who have sex with men who are at higher risk of exposure and individuals at risk of occupational exposure, based on epidemiological or behavioural criteria. Health promotion interventions and community engagement are also critical to ensure effective outreach and high vaccine acceptance, and uptake among those most at risk of exposure.

Actions:

ECDC continues to monitor this event through its epidemic intelligence activities and reports relevant news on an ad-hoc basis. Multilateral meetings between affected countries, the WHO Regional Office for Europe, and ECDC have taken place to share information and coordinate responses. A process in [EpiPulse](#) has been created to allow countries to share information with one another, WHO and ECDC.

A [rapid risk assessment](#), 'Monkeypox Multi-country outbreak', was published on 23 May 2022, the [first update](#) was published on 8 July 2022 and a [second update](#) was published on 18 October 2022. For the latest updates, visit [ECDC's monkeypox page](#).

ECDC is also offering laboratory support to Member States and collaborating with stakeholders on risk communication activities, such as targeted messaging for the general public and MSM communities. It has also provided guidance to countries hosting events during the summer. ECDC is also providing guidance on clinical sample storage and transport, case and contact management and contact tracing, IPC guidance, cleaning and disinfection in healthcare settings and households, and vaccination approaches.

6. West Nile virus - Multi-country (World) - Monitoring season 2022

Overview:

Since last week's update, and as of 9 November 2022, European Union (EU) and European Economic Area (EEA) countries reported no human cases of West Nile virus (WNV) infection. EU-neighbouring countries reported no human cases of WNV infection.

Since the beginning of the 2022 transmission season and as of 9 November 2022, EU/EEA countries have reported 962 human cases of WNV infection in Italy (586), Greece (283), Romania (46), Hungary (14), Germany (9), Croatia (8), Austria (6), Spain (5), France (4) and Slovakia (1). EU/EEA countries have reported 72 deaths in Italy (37), Greece (30) and Romania (5). EU-neighbouring countries have reported 226 human cases of WNV infection in Serbia (226) and 12 deaths in Serbia (12).

During the current transmission season, within the reporting countries human cases of WNV infection were reported from 107 different NUTS 3 or GAUL 1 regions, of which the following regions reported human cases of WNV infection for the first time ever: Bouches-du-Rhône in France, Harz, Vogtlandkreis and Salzlandkreis in Germany, Pistoia, Lucca, Monza e della Brianza, Biella, Cagliari and Catania in Italy, Brasov in Romania, Moravicki in Serbia and Tarragona and Córdoba in Spain.

Since the beginning of the 2022 transmission season, 90 outbreaks among equids and 307 outbreaks among birds have been reported by EU/EEA countries. Outbreaks among equids have been reported by Italy (43), Germany (15), Croatia (8), Greece (7), Spain (6), France (5), Hungary (3), Portugal (2) and Austria (1). Outbreaks among birds have been reported by Italy (244), Germany (50), Spain (8), Austria (2), Croatia (2) and Hungary (1). Please note that for technical reasons no static maps will be published this week. Please refer to the [WNV dashboard](#) instead.

ECDC links: [West Nile virus infection webpage](#)

Sources: TESSy | Animal Disease Information System

ECDC assessment:

During the current transmission season, human cases of WNV infection have been reported from countries that had reported WNV infections in previous years.

Two EU countries and one EU-neighbouring country have reported relatively high numbers of human WNV infection cases. The number of cases in Italy and Greece are comparable with those observed in the peak epidemic year, 2018. The number of cases in Serbia is lower than in the 2018 season, but higher than in other years during the past decade.

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. Only locally acquired cases with known places of infection are 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

Source: [Ministry of Health Uganda](#), [OCHA](#), [Africa CDC](#), [Ministry of Health Kenya](#), [NCDC](#), [WHO](#), media ([1](#), [2](#), [3](#), [4](#))

7. *C. diphtheriae* among migrants – Europe – 2022

Overview:

Summary: As of 9 November 2022, and since the last update on 26 October 2022, 18 new cases have been reported by Austria (nine cases presented with the cutaneous form, four presented with respiratory symptoms and five were asymptomatic).

Background: Since the beginning of 2022, and as of 9 November 2022, there have been 108 cases of diphtheria among migrants reported by eight EU/EEA countries: Austria (42), Germany (31), France (14), Belgium (8), Norway (7), Italy (3), the Netherlands (2), and Spain (1). Cases have also been reported in Switzerland (25) and the United Kingdom (14), bringing the overall number for Europe to 147.

Among these cases, the majority presented with the cutaneous form of the disease (n=100), 23 cases had respiratory diphtheria, eight cases had both respiratory and cutaneous presentations, six cases were asymptomatic and for 10 cases this information was missing. All cases were caused by toxigenic *C. diphtheriae*, and the majority were detected in male migrants aged eight to 44 years.

ECDC assessment:

Diphtheria is a rare disease in the EU/EEA countries. According to [WHO/UNICEF](#), the immunisation coverage estimates for DTP3 in 2021 in the EU/EEA varied across the Member States, ranging from 85% (Austria) to 99% (Greece, Hungary, Luxembourg, Malta and Portugal). Universal immunisation is the only effective method of preventing the toxin-mediated disease and the occurrence of disease in fully vaccinated individuals is very rare. This includes the administration of a booster dose of diphtheria toxoid if more than 10 years have passed since the last dose.

Reports of diphtheria cases among migrants are not unexpected and [similar events](#) have been seen in Europe in recent years. However, the increase in cases reported among this group and the occurrence of similar outbreaks in several EU/EEA countries recently is unusual and needs to be carefully monitored alongside the implementation of necessary public health measures to avoid further spread.

In this context, the probability for individuals residing in the community of developing the disease is very low, provided they have completed a full diphtheria vaccination series and have an up-to-date immunisation status. The impact of this outbreak is therefore expected to be very low for the broader EU/EEA population. Nevertheless, the possibility of secondary infections in the community cannot be excluded and severe clinical diphtheria is possible in unvaccinated or immunosuppressed individuals.

In exposed unvaccinated or immunosuppressed individuals in migrant centres, a severe outcome following a diphtheria infection is possible. The impact of an outbreak in this setting would therefore be higher than in the broader population, especially if vaccination uptake is incomplete among those residing or working within settings

where there is an increased risk of exposure. Nevertheless, the impact of the disease for individuals with a completed course of diphtheria vaccination is considered to be low. Given the moderate probability of exposure and the potential individual impact as described above, the risk is considered to be moderate for unvaccinated or immunosuppressed individuals in reception centres or other similar crowded settings in the EU/EEA, but low for fully vaccinated individuals in those settings.

On 6 October 2022, ECDC published a [Rapid Risk Assessment \(RRA\)](#) on the increase of reported diphtheria cases among migrants in Europe due to *Corynebacterium diphtheriae*, stressing the importance of universal immunisation with diphtheria toxoid-containing vaccine. Options for responses recommended in this RRA, included the following:

- Identification and vaccination of individuals residing in migrant centres who have incomplete vaccination status.
- Provision of information to migrant centres' health service providers for the rapid identification and isolation of possible cases pending diagnostic confirmation.
- Respiratory droplet isolation of all confirmed or suspected cases with respiratory diphtheria.
- Contact precautions, such as avoiding contact with wounds and the dressing of wounds, for confirmed and suspected cases of cutaneous diphtheria.
- Isolation of all confirmed cases (respiratory and cutaneous presentation) until the elimination of the organism is demonstrated by two negative cultures obtained at least 24 hours apart after the completion of antimicrobial treatment.
- Identification of close contacts, including the personnel providing assistance, especially if they performed procedures without appropriate personal protective equipment (PPE).
- Antimicrobial post-exposure prophylaxis and vaccination of incompletely vaccinated or unvaccinated close contacts.
- Alerting clinicians to the possibility of cutaneous and/or respiratory diphtheria among migrants and travellers returning from endemic areas.
- Collection of data on the country of origin and migratory route from all suspected diphtheria cases.
- Up-to-date vaccination status for all personnel working in reception centres for migrants.
- Limiting situations of overcrowding in migrant centres, verification of the availability of laboratory diagnostics in each country.
- Timely reporting to authorities of cases confirmed according to the EU case definition.
- Enhanced surveillance, including molecular typing and whole genome sequencing of patient isolates to improve the understanding and monitoring of transmission patterns.

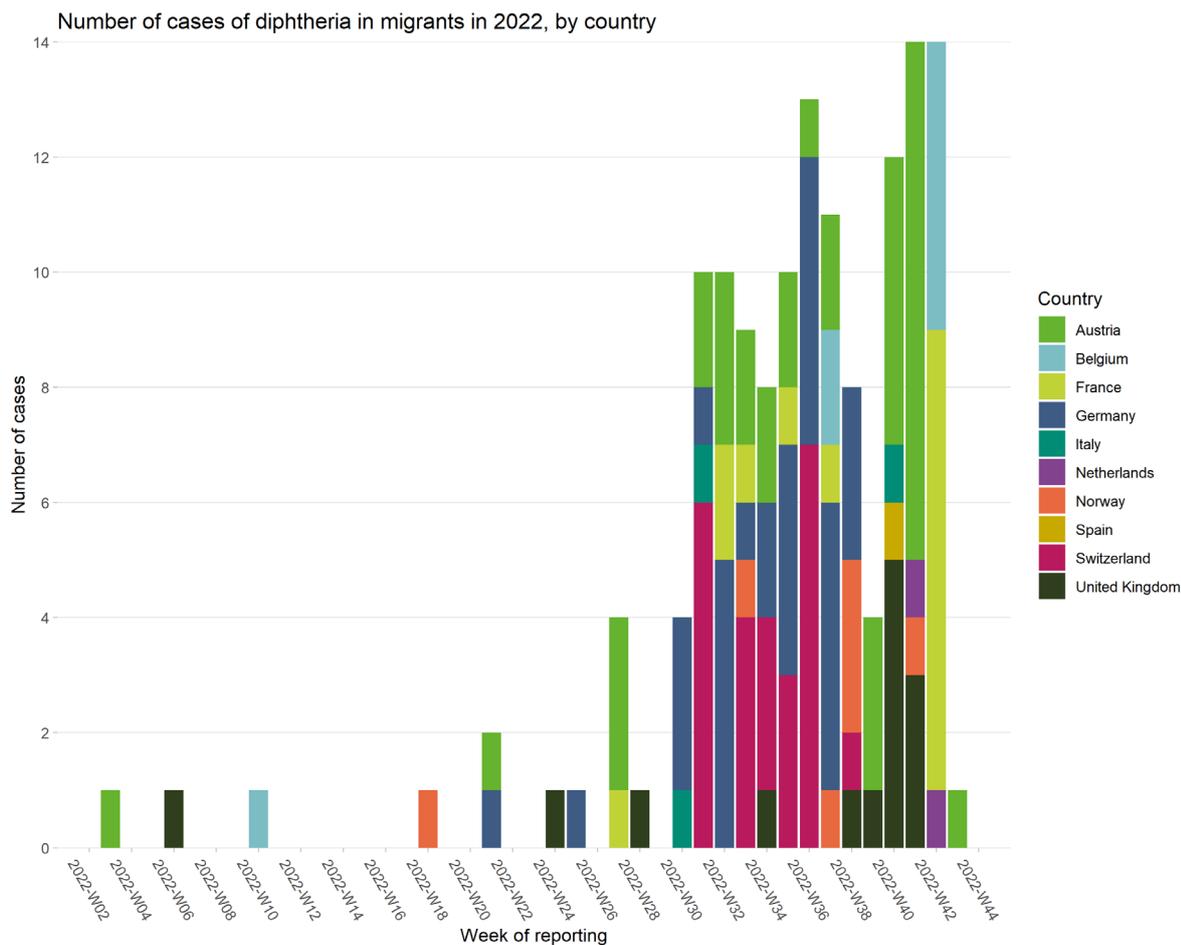
Additional ECDC tools, such as the [Expert Opinion on the public health needs of irregular migrants, refugees or asylum seekers across the EU's southern and south-eastern borders](#), the [Handbook on implementing syndromic surveillance in migrant reception/detention centres and other refugee settings](#) and the [Handbook on using the ECDC preparedness checklist tool to strengthen preparedness against communicable disease outbreaks at migrant reception/detention centres](#) may be of relevance during outbreak investigation activities.

Actions:

ECDC continues to monitor this event through Epidemic Intelligence activities and will report weekly updates. The latest information can be found on EpiPulse.

Maps and graphs

Figure 1. Number of cases of diphtheria in migrants in 2022, by country



8. Ebola virus disease due to Sudan ebolavirus – Uganda – 2022

Overview:

Overview: According to World Health Organization (WHO), as of 7 November 2022, there have been 136 confirmed cases of Ebola virus disease (EVD), including 53 deaths (CFR: 39%). In addition, 21 deaths among probable cases have been **reported** in individuals who died before a sample was taken. At least 18 healthcare workers have been infected and seven of them died. A total of 62 people recovered.

As of 7 November 2022, 1 386 contacts across seven districts are under monitoring, with a follow-up rate of 92%. In week 44, a total of 34 contacts developed symptoms. Since the beginning of the outbreak, 3 867 contacts have been registered, 68% of whom have completed the 21-day follow up.

Currently, there are eight Ugandan districts affected by this outbreak: Bunyangabu, Kagadi, Kampala, Kassanda, Kyegegwa, Masaka, Mubende and Wakiso. Bunyangabu and Kagadi have not reported any cases since 21 and 24 September 2022, respectively. Although data are incomplete, the majority of new cases appear to be epidemiologically linked to known cases.

According to WHO, at least 2 835 alerts have been received since the beginning of the outbreak. In week 44, 657 out of 659 alerts were investigated within 24 hours, 31% of which were validated as suspected cases.

Other news:

On [8 November 2022](#), the Ministry of Education and Sports directed schools across Uganda to finish the school term on 25 November 2022, two weeks earlier than planned. This is the latest measure by the government to curb the spread of Ebola disease, particularly as at least 23 cases have been reported among children in five different schools across Kampala, Wakiso and Mubende districts.

On 5 November 2022, the Ugandan Ministry of Health [announced](#) that the special measures put in place in mid-October to curb the spread of EVD have been extended for another 21 days, this includes restricted movement in and out of Mubende and Kassanda districts, overnight curfew and closing places of worship and entertainment. Schools remain open with enhanced observance of infection control and prevention measures. All private clinics and drug shops in these districts are being inspected, to assess their compliance with IPC measures, and closed down if necessary.

According to the Ugandan Minister of Health, exhumation of bodies is largely contributing to the increasing numbers of cases of EVD in Kassanda district. The work of safe burial teams is being undone by locals exhuming the bodies at night to perform religious rituals on the dead. According to the [statement](#) from the Ministry of Health, 43 cases were confirmed, six of which are now dead, following the exhumation of a confirmed case from Kikandwa sub-county.

According to a situation report from UNICEF, as of [5 November 2022](#), special attention is being paid to children as they are experiencing the highest CFR (55%). To date, 33 cases have been reported among children, 18 of them fatal. As of [5 November 2022](#), 11 school children had been affected in the districts of Kampala, Kassanda, Kyegegwa and Mubende, and 170 students from three different schools in Kampala were in home isolation.

According to the same UNICEF [report](#), three confirmed cases have run away from healthcare authorities and not been traced or followed up. Investigations are ongoing.

On 7 November 2022, the Ugandan Ministry of Health issued a [press release](#) with information on the use of unauthorised rapid diagnostic tests (RDTs) in private clinics. No RDTs for confirmation of Ebola disease have been approved by WHO to date and the only authorised testing method in Uganda is carried out by the government laboratories in Entebbe and Mubende.

On 7 November 2022, the US CDC issued a second [Health Alert Network \(HAN\) update](#). The document states that no suspected or confirmed EVD cases have been reported in the US. However, it stresses the importance of early consideration of EVD in the differential diagnosis and provides updated guidelines for clinical and laboratory biosafety considerations.

Background: On 20 September 2022, the Ministry of Health in Uganda, together with WHO AFRO, confirmed an outbreak of EVD due to Sudan ebolavirus in Mubende District, Uganda, after one fatal case was confirmed. The index case was a 24-year-old man, a resident of Ngabano village of the Madudu sub-county in Mubende District. The patient experienced high fever, diarrhoea, abdominal pain, and began vomiting blood on 11 September 2022. Samples were collected on 17 September 2022 and EVD was laboratory-confirmed on 19 September. The patient died on the same day, five days after hospitalisation.

On 15 October 2022, the [President of Uganda](#) imposed a 21-day lockdown on Mubende and Kassanda districts to contain the outbreak of EVD. Measures include an overnight curfew, closing places of worship and entertainment, and restricting movement in and out of the two districts.

On 28 October 2022, the [Ministry of Health](#) in Uganda implemented measures to restrict travel for contacts of confirmed Ebola cases during the follow-up period (21 days).

The Ugandan government is carrying out community-based surveillance and active case finding. An on-site [mobile laboratory](#) has been established in Mubende and risk communication activities are ongoing in all affected districts. Africa CDC, WHO, GOARN and other partners have teams in Uganda to support the coordination of the response. As of [5 November 2022](#), there are five Ebola treatment units (ETUs) between Mubende, Kampala and Kabarole districts. A new ETU is being established in Kassanda in response to an increase in reported cases from the region.

Previously, EVD was reported in Uganda in 2019 due to Zaire ebolavirus, which was imported from the Democratic Republic of the Congo. EVD outbreaks caused by Sudan ebolavirus have previously occurred in Uganda (four outbreaks) and Sudan (three outbreaks). The last outbreak of EVD due to Sudan ebolavirus in Uganda was reported in 2012.

ECDC assessment:**Risk to EU/EEA citizens living in or travelling to affected areas in Uganda**

Despite the increase in the number of cases and the transmissions reported in the densely populated capital city of Kampala, the current probability that EU/EEA citizens living in or travelling to EVD-affected areas of Uganda will be exposed to the virus is very low, provided they adhere to the recommended precautionary measures (see further information below). Transmission requires direct contact with blood, secretions, organs or other bodily fluids of

dead or living infected people or animals; all unlikely exposures for the general EU/EEA tourists or expatriates in Uganda.

Considering that infection with Sudan ebolavirus leads to severe disease but that the probability of exposure of EU/EEA citizens is very low, the impact for the EU/EEA citizens living and travelling in affected areas in Uganda is considered low. Overall, the current risk for EU/EEA citizens living or travelling to affected areas in Uganda is considered low.

Risk of introduction and spread within the EU/EEA

The most likely route by which the Ebola virus could be introduced to the EU/EEA is through infected people from affected areas travelling to the EU/EEA or medical evacuation of cases to the EU/EEA. According to the International Air Travel Association, in 2019, there were about 126 000 travellers arriving in the EU/EEA from Uganda. Based on experience from the largest EVD outbreak in West Africa to date (2013–2016), where thousands of cases were reported, with transmission in large urban centres, and hundreds of EU/EEA humanitarian and military personnel deployed to the affected areas, importation of cases by travellers is considered unlikely. The likelihood of secondary transmission of Ebola virus within the EU/EEA and the implementation of sustained chains of transmission within the EU/EEA is very low as cases are likely to be promptly identified and isolated and follow up control measures are likely to be implemented. During the large EVD outbreak in West Africa in 2013–2016, there was only one local transmission in the EU/EEA (in Spain) in a healthcare worker who had attended to an evacuated EVD patient. The impact for the EU/EEA citizens living in the EU/EEA is considered low and overall, the current risk for the citizens in the EU/EEA is considered very low.

Healthcare providers in the EU/EEA should be informed of and sensitised to:

- the possibility of EVD among travellers returning from affected areas;
- the clinical presentation of the disease and the need to enquire about travel history and contacts in people returning from EVD-affected countries;
- the availability of protocols for the ascertainment of possible cases and procedures for referral to healthcare facilities;
- the imperative need for strict implementation of barrier management, use of personal protective measures and equipment and disinfection procedures in accordance with specific guidelines and WHO infection control recommendations when providing care to EVD cases.

Actions:

ECDC is monitoring this situation through its epidemic intelligence activities and will report relevant updates twice a week. On 12 October 2022, ECDC published a [news item](#) on the Ebola outbreak in Uganda. ECDC provides a weekly epidemiological update on the outbreak on its [website](#). On 3 November ECDC employed an expert in Uganda to support the DG ECHO country office and the overall outbreak response.

ECDC published a rapid risk assessment: "[Risk of Sudan virus to EU/EEA citizens considered very low](#)" on 9 November 2022.

Further information:

EU/EEA visitors and residents in affected areas in Uganda should apply the following precautionary measures:

- Avoid contact with symptomatic patients/their bodily fluids, bodies and/or bodily fluids from deceased patients.
- Avoid consumption of bush meat and contact with wild animals, both alive and dead.
- Wash and peel fruits and vegetables before consumption.
- Wash hands regularly using soap or antiseptics.
- Ensure safe sexual practices.

ECDC considers that screening of travellers returning from Uganda would not be an effective measure to prevent introduction of the disease in Europe. Screening incoming travellers is time and resource consuming and will not identify effectively infected cases. Both experience and evidence show that exit screening from affected regions/countries can be an effective measure to support the containment of disease spread.

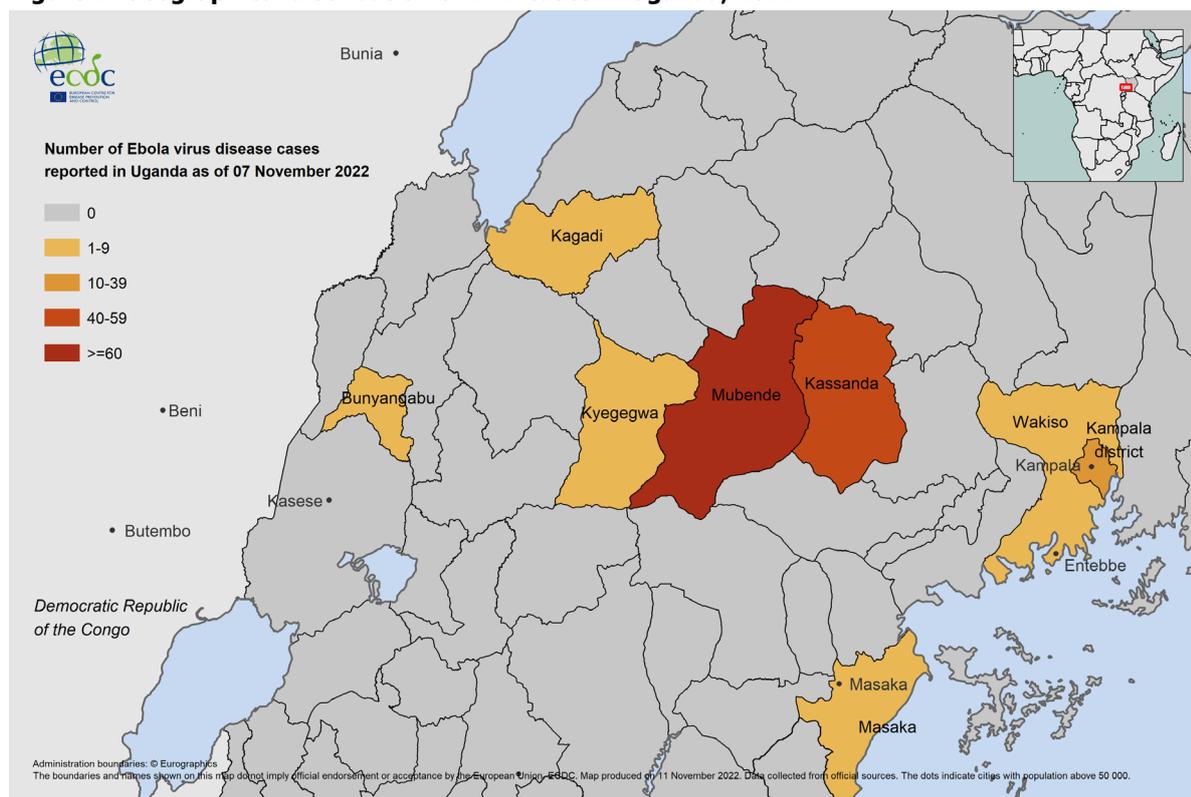
WHO advises against any restrictions on travel and/or trade to Uganda based on available information for the current outbreak.

The licensed vaccines available, protect against EVD due to Zaire ebolavirus. There are no licensed vaccines against EVD due to Sudan ebolavirus, and there are no available data on the level of cross-protections. The availability of a vaccine was proven to be very helpful in the control of the recent outbreaks in the Democratic Republic of the Congo. The unavailability of vaccines will be an additional challenge in the control of this outbreak.

Sources: [Ministry of Health Uganda](#) , [Africa CDC](#), [WHO](#).

Maps and graphs

Figure 1. Geographical distribution of EVD cases in Uganda, 2022.



9. Human case with avian influenza A(H5N1) infection - Spain - 2022

Overview:

Update: On 13 October 2022, a second human sample tested positive for avian influenza A(H5N1) from among those exposed to the affected poultry farm in the province of Guadalajara, Spain. All workers at the farm were tested for a second time following culling of the poultry, and cleaning and disinfection procedures after the outbreak of avian influenza A(H5N1) was confirmed in poultry on 20 September 2022. A second positive sample was detected in an asymptomatic 27-year-old man, who was involved in the control measures, including cleaning and disinfection; he was wearing personal protection equipment. He remained in isolation until 22 October when a second sample tested negative by RT-PCR. Two close contacts tested negative. During the first round of testing on 23 September 2022, this individual tested negative. No human-to-human transmission has been detected.

The outbreak investigation and control measures have been undertaken, including culling of poultry, cleaning and disinfection as instructed by competent authorities in Spain. Further laboratory investigation is ongoing.

Summary: Two asymptomatic people tested positive for avian influenza A(H5N1) on 27 September 2022 and 13 October 2022 at a poultry farm in Guadalajara, in Castilla-La Mancha region, Spain. Both men (19 and 27-year-old) are workers at the farm where an outbreak of avian influenza A(H5N1) was confirmed in poultry on 20 September 2022. They remained in home isolation from the detection of a positive sample on 28 September until the second RT-PCR test was negative on 22 October. Samples from all of the farm workers were taken as part of surveillance procedures following the confirmation of the outbreak in poultry on 23 September and after the culling of poultry, cleaning and disinfection on 13 October. All other farm workers and close contacts of the positive cases were asymptomatic and tested negative.

According to the [report and risk assessment](#) published on 4 October 2022 by Spain's Ministry of Health, microbiological investigation of the sample from the first case, using reverse transcription polymerase chain reaction (RT-PCR) indicated a high Ct value, which corresponds to a low viral load.

This is the first event of avian influenza A(H5N1) detection in human samples in Spain and in the EU/EEA. No human-to-human transmission has been detected to date. An increase in outbreaks of A(H5N1) among farm and wild birds has been observed this season in Spain, as well as in other European countries. In March 2022, Spanish authorities published an updated protocol for prevention, early detection and control of avian influenza leading to an intensified public health action, including the screening of people working in poultry farms in affected areas.

To date and since 2003, 867 cases, including 456 deaths have been reported globally in 21 countries, including one EU/EEA country (Spain). The most recent human cases with detection of circulating avian influenza A(H5N1) were reported in the USA (April 2022) and the UK (December 2021), both of these cases were either asymptomatic or had very mild symptoms and both had exposure to birds that were confirmed as infected with avian influenza A(H5N1).

Sources: [WHO DON, A\(H5N1\) report and risk assessment of the Ministry of Health of Spain](#)

ECDC assessment:

The risk has been assessed to be low for the general population based on the low likelihood of exposure to infected birds and the mild clinical picture observed in this event. For occupationally exposed people the risk is enhanced due to their potential contact with infected animals and assessed to be low to medium. With ongoing outbreaks in wild birds and poultry farms as well as other settings, exposed people are encouraged to wear appropriate personal protective equipment and health authorities should continue to follow up exposed people and test people with respiratory symptoms or other atypical severe symptoms following exposure to likely infected animals.

Actions:

ECDC is closely following this event through epidemic intelligence activities and through influenza network and has been in contact with Spanish health authorities. ECDC just published the latest as well as a guidance document on [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](#)

10. Influenza – Multi-country – Monitoring 2022/2023 season

Overview:

Week 44/2022 (31 October - 06 November 2022)

Malta, Portugal and United Kingdom (Scotland) reported widespread influenza activity and/or high intensity. The percentage of all sentinel primary care specimens from patients presenting with ILI or ARI symptoms that tested positive for an influenza virus was 7%, which is similar to the previous week (8%) and is below the epidemic threshold set at 10%.

Germany, Kazakhstan and United Kingdom (Scotland) reported seasonal influenza activity above 10% positivity in sentinel primary care.

Both influenza type A and type B viruses were detected among all monitoring systems, with influenza A(H3) viruses being dominant in sentinel and non-sentinel surveillance.

Hospitalised cases with confirmed influenza virus infection were reported from other wards (14 type A viruses and 1 type B virus) and SARI surveillance (71 type B viruses, of which 69 were from Kazakhstan, and 10 type A viruses), but none were reported from ICU wards. When comparing the different influenza type distributions by system, it is important to consider that different sets of countries are reporting to each system.

Source: [Flu News Europe](#)

ECDC assessment:

For the Region as a whole, influenza activity remained at inter-seasonal levels but above the levels seen in the 4 previous seasons for the same time of year.

Overall, influenza A(H3) viruses have dominated across the surveillance systems, with the majority of SARI cases tested being type B viruses.

Germany is currently experiencing seasonal influenza activity above 10% positivity, with A(H3) being the dominant virus.

Actions:

ECDC and WHO monitor influenza activity in the WHO European Region. Data are available on the [Flu News Europe](#) website.

11. *S. sonnei* cluster linked to Cape Verde

Overview:

The Netherlands is reporting a cluster of nine confirmed *S. sonnei* (4 AD) cases with a travel history to Cape Verde since August 2022. Altogether 22 *S. sonnei* cases have been reported, mostly (n=18) after 19 September 2022. Cases have a median age of 46 years (range: 24-77 years), 14 females and 4 males. 12/13 cases stayed in different hotels from the same hotel chain on the same island of Cape Verde.

In all isolates genes predicting resistance against trimethoprim (dfrA1), streptomycin (aadA1) and hydrogen peroxide (sitABCD) are detected. One isolate had aph(6)-Id, aph(3'')-Ib (both predicting streptomycin resistance), sul2 (predicting sulfamethoxazole resistance) and dfrA14 (predicting trimethoprim resistance), indicative for the acquirement of the pCERC1 plasmid

Denmark reported **two** cases that match the Dutch reference strain sequenced in a large EIEC/Shigella outbreak in December 2021-February 2022. Cases reported travel to Cape Verde. An additional two cases reported travel exposure to Cape Verde (Jan 2022, April 2022) but they were not sequenced.

France reported nine cases that match the Dutch reference strain during the period February-September 2022; three reported travel to Cape Verde (strain isolated in February) and another one mentioned a trip to Africa (strain isolated in September 2022).

Germany reported **two** cases that cluster with the Dutch reference strain and with travel history to Cape Verde. Females (51 and 62 years) with disease onset September-October 2022. More detailed information on travel (island, hotel) were not available. In the pre-pandemic years (2014-2019) 0-5 *S. sonnei*-cases with travel history to Cape Verde were reported in Germany.

Portugal reported **one** case in October with clustering isolate (6 AD) to the Dutch reference strain and linked to recent travel to Cape Verde. The patient is a 31-year-old female, hospitalised with gastrointestinal infection and possible HUS. Based on WGS data, the Portuguese isolate, belonging to ST152, also has resistance genes for trimethoprim (dfrA1) and streptomycin (aadA1), as evidenced in the Dutch isolates.

United Kingdom reports 48 confirmed *S. sonnei* cases with specimen collection dates between 22 November 2021 and 21 October 2022, with 42/48 (88%) of these cases with sample collection dates since 7 September 2022. In total, **23** cases report travel to Cape Verde and a further nine report travel to the African continent (country unspecified). Overall, 10/11 cases travelling to Cape Verde reported staying at the same hotel chain. Overall, 71% of cases are female and median age is 51 years (range: 2 – 77 years). Furthermore, five cases in this cluster are coinfecting with other gastrointestinal pathogens.

All isolates in September 2022 have genes predicting resistance to trimethoprim (dfrA1) and streptomycin (aadA1b). One isolate from a case notified in February 2022 had blaTEM-1, aadA1b, aph6-Id, dfrA1, dfrA14, tetA1 and sul2), predicting resistance to ampicillin, streptomycin, trimethoprim, tetracycline and sulfamethoxazole. The Enterobase cgMLST hierarchical cluster designation is HC5:181425. SRA numbers for representative sequences from the Shigella sonnei cluster are: SRR22099609; SRR18143656; and SRR22085217.

TESSy case-based data: In the EU/EEA, about 2 000 travel related shigellosis cases were reported annually in 2015-2019. The UK has reported the highest number of travel related cases over the years. In 2020 and 2021, reported travel-related cases decreased by 85% due to Brexit and COVID-19 travel restrictions.

ECDC assessment:

This is a multi-country *S. sonnei* outbreak linked to travel to Cape Verde. There are confirmed cases in the Netherlands (9), Denmark (2), France (3), Germany (2) and Portugal (1) reported in 2022 and clustering through WGS with travel history to Cape Verde. Additional *S. sonnei* cases with travel exposure to Cape Verde that were not sequenced have been reported from the Netherlands (13) and Denmark (2). The United Kingdom reported 23 shigellosis cases linked to travel to Cape Verde from November 2021 with similar AMR pattern. There is no information about the source of infection. Given the increase in travel during the coming holiday season new cases are likely to occur.

Actions:

ECDC is monitoring the event in EpiPulse and sharing information through the CDTR report.