

WEEKLY BULLETIN

Communicable Disease Threats Report

Week 48, 27 November – 3 December 2022

Today's disease topics

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

Overview

Summary:

At the end of week 47, 2022 (week ending 27 November), the pooled EU/EEA COVID-19 case rate in people aged 65 years and older continued to decrease, while the overall (all ages) COVID-19 case rate started to increase, up 5% compared to the previous week. Seven of the 28 countries with available data reported increases compared with the previous week in at least one of these indicators of transmission. These increases were recent (of 1–2 weeks duration), starting from relatively low levels.

Pooled hospital or ICU admissions/occupancy remained stable at the EU/EEA level. However, increases were reported by seven of the 21 countries with data on these indicators. Increases were recent (of 1–3 weeks duration) and reported values relatively low, ranging from 16–33% of the pandemic maximum in these countries. None of

the 26 countries with available data reported increases in weekly COVID-19 deaths. The pooled EU/EEA COVID-19 death rate fell by 21% compared to the previous week, with 1 386 deaths reported.

Forecasts of cases, hospital admissions and deaths from the European COVID-19 Forecast Hub provide predictions for weeks 48 and 49. Compared with the previous week, increasing trends in cases, increasing trends in hospital admissions, and stable trends in deaths are forecast for the EU/EEA overall by the end of week 49. Increases in cases are forecast for nine countries, and in deaths for four countries.

BQ.1 has become the dominant variant in seven EU/EEA countries, but high prevalence of BQ.1 does not appear to be associated with a deterioration of the epidemiological situation. Some of the countries in which BQ.1 is dominant are among those showing recent increases in transmission and/or severity indicators, but to date the countries with the highest reported proportions of BQ.1 have not reported any concerning epidemiological changes.

Among the nine countries with an adequate volume of sequencing or genotyping for weeks 45–46 (7 November to 20 November 2022), the estimated distribution of variants of concern (VOC) or of interest (VOI) was 52.7% (38.6–97.5% from nine countries) for BA.5, 37.0% (8.5–53.9% from seven countries) for BQ.1, 4.3% (0.7–25.9% from nine countries) for BA.2.75, 1.4% (0.3–3.7% from nine countries) for BA.4, and 1.3% (0.5–5.1% from nine 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 28 November 2022, the European Commission (EC) published a [press release](#) recommending Member States of the European Union (EU) to recognise COVID-19 as an occupational disease if it is contracted by workers in the fields of disease prevention, health and social care, domiciliary assistance, or in the event of a pandemic in other sectors where there is an outbreak and risk of infection has been proven. The EC also emphasised the importance of supporting workers infected by COVID-19 and families who have lost members due to occupational exposure to the disease. This new recommendation aims to strengthen the protection of workers and encourage a unified approach across the EU.

On 30 November 2022, the United States' Food and Drug Administration (FDA) [announced](#) that the COVID-19 drug bebtelovimab developed by the pharmaceutical company Eli Lilly is no longer authorised for emergency use in the United States. The FDA made this decision based on new data that suggest that this drug is not expected to neutralise Omicron subvariants BQ.1 and BQ.1.1., which are currently dominant in the country. According to the [European Medicines Agency \(EMA\)](#), bebtelovimab does not have an emergency use authorisation for the EU and EEA countries.

Weekly update on SARS-CoV-2 variants:

Since the last update on 24 November 2022, and as of 1 December 2022, no changes have been made to ECDC's 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 spread and potential impact of the SARS-CoV-2 Omicron variant of concern in the EU/EEA, 19th update](#)'.

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

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 it becomes available. Of particular interest is information on virus characterisation and evidence regarding changes in disease severity, virus transmissibility, immune evasion, and effects on diagnostics and therapeutics. Case reporting should continue through TESSy.

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

Overview

According to the Ugandan Ministry of Health (MoH), as of 28 November 2022, there have been 142 confirmed cases of Ebola virus disease (EVD), including 56 deaths (CFR: 39%). In addition, 22 deaths among probable cases have been [reported](#) in individuals who died before a sample was taken. At least 19 healthcare workers have been infected and seven of them died. There have been 86 recoveries [reported](#).

On 28 November 2022, a new case has been [reported](#) for the first time since week 46. The case was a stillborn baby born to a woman who survived Ebola late in her pregnancy. The mother, a resident of Kassanda district, is in good condition.

Currently, there are currently seven Ugandan districts affected by this outbreak: Jinja, Kampala, Kassanda, Kyegegwa, Masaka, Mubende, and Wakiso. Bunyangabu and Kagadi have not reported any cases since 21 and 24 September 2022, respectively, and as two incubation cycles of the virus have been completed, the districts have been removed from the list. Although data are incomplete, the last reported cases appear to be epidemiologically linked to known cases.

According to the MoH, 4 691 contacts of cases have been identified across 15 districts, of which 3 803 contacts have completed 21 days of follow-up.

Other news:

On [1 December 2022](#), health officials reported that four of the remaining patients in Mubende's Ebola treatment unit (ETU) have been discharged and the unit is empty. The ETU had a total of 111 patients, of which 62 recovered and 49 died.

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 the Mubende and Kassanda districts to contain the outbreak of EVD. Measures included an overnight curfew, closing places of worship and entertainment, and restricting movement in and out of the two districts. On [5 November 2022](#), these measures were extended for a further 21 days. Additionally, 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. On [26 November 2022](#), the president of Uganda extended the lockdown in Mubende and Kassanda districts for another 21 days, until 17 December 2022.

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 **16 November 2022**, all travellers leaving or arriving at Entebbe International Airport in Uganda are required to complete a health declaration form.

As of **5 November 2022**, there were five 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 transmission 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 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 EU/EEA citizens living and travelling in affected areas of Uganda is considered low. Overall, the current risk for EU/EEA citizens living in 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 Transport Association (IATA), 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 the deployment of hundreds of EU/EEA humanitarian and military personnel 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 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 cared for an evacuated EVD patient. The impact of EVD for EU/EEA citizens living in the EU/EEA is considered low, and overall the current risk of EVD 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 for 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 2022, ECDC deployed an expert to 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 observe 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 the 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 effectively identify 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/with Uganda based on available information for the current outbreak.

The licensed vaccines available protect against EVD resulting from Zaire ebolavirus. There are no licensed vaccines against EVD resulting from 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.

Maps and graphs

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

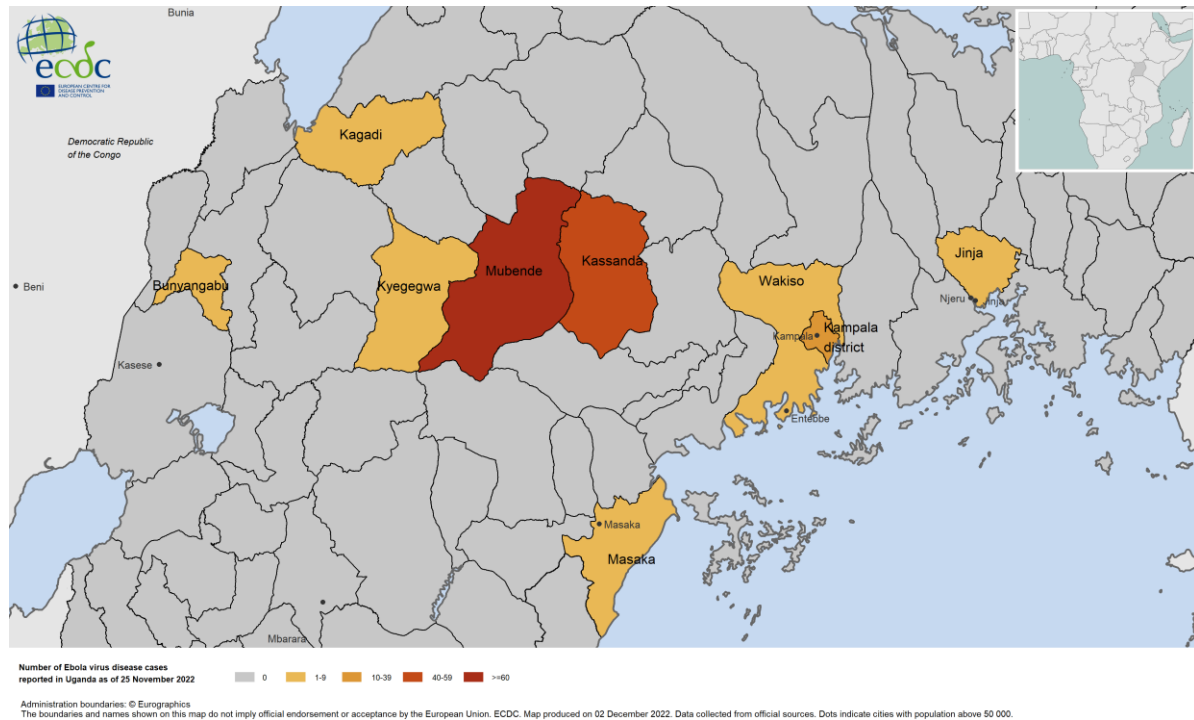
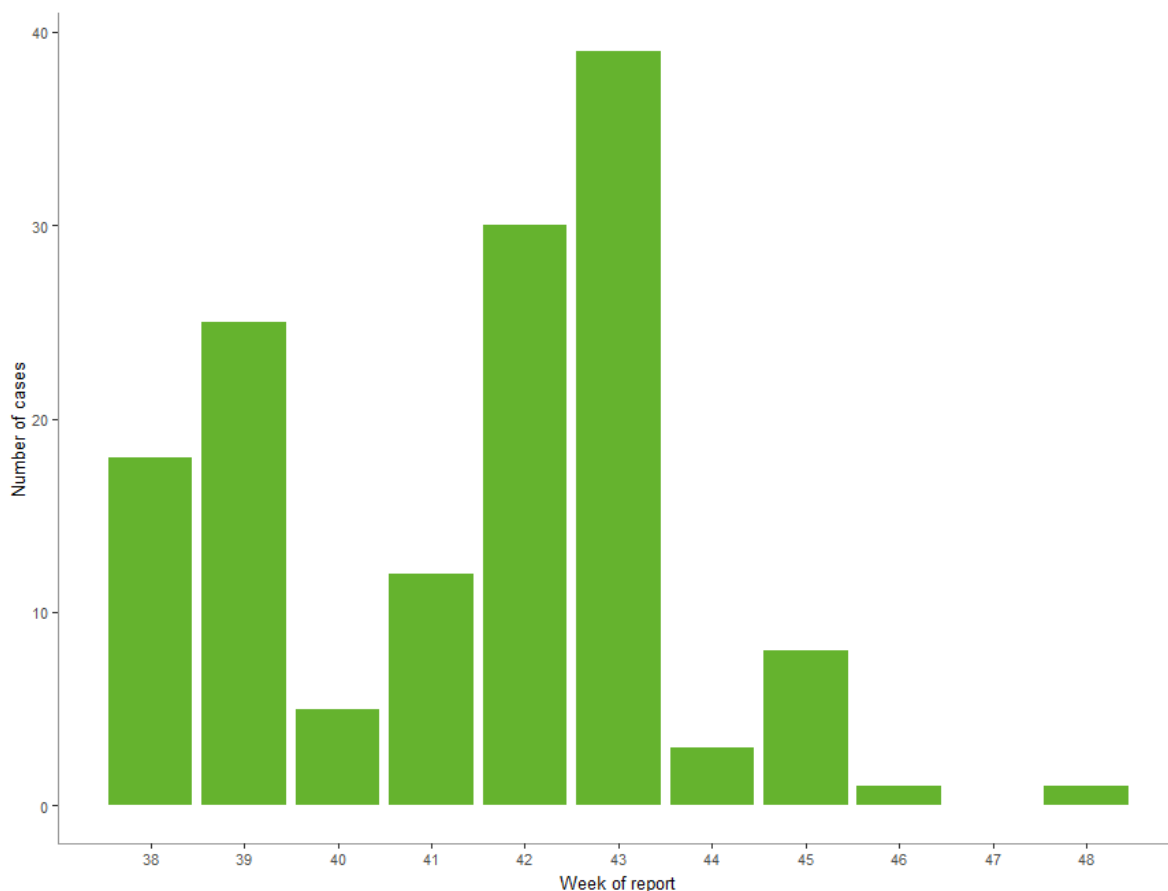


Figure 2. Ebola disease cases reported in Uganda in 2022, by week of reporting

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

Overview

Summary: As of 30 November 2022, and since the last update on 22 November 2022, 16 new cases were reported by Belgium (3) and the United Kingdom (13).

Background: Since the beginning of 2022, and as of 30 November 2022, there have been 153 cases of diphtheria among migrants reported by eight EU/EEA countries: Austria (42), Belgium (18), France (14), Germany (64), Italy (3), the Netherlands (4), Norway (7) and Spain (1). Cases have also been reported in Switzerland (25) and the United Kingdom (53), bringing the overall number for Europe to 231.

Among these cases, the majority presented with the cutaneous form of the disease (n=160), 33 cases had respiratory diphtheria, six cases had both respiratory and cutaneous presentations, 19 cases were asymptomatic, and information was missing for 13 cases. All cases were caused by toxigenic *C. diphtheriae*, and the majority were detected in male migrants aged 8 to 49 years.

On 11 November 2022, the UKHSA published updated guidelines on the [control and management of diphtheria in England](#) as well as a [supplementary guidance](#) document for cases and outbreaks in asylum-seeker accommodation settings.

ECDC assessment:

Diphtheria is a rare disease in EU/EEA countries. According to [WHO/UNICEF](#), the immunisation coverage estimates for DTP3 in 2021 in the EU/EEA varied across Member States, ranging from 85% (Austria) to 99%

(Greece, Hungary, Luxembourg, Malta and Portugal). Universal immunisation is the only effective method for preventing the toxin-mediated disease. This includes the administration of a booster dose of diphtheria toxoid if more than 10 years have passed since the last dose. The occurrence of the disease in fully vaccinated individuals is very rare.

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 the occurrence of more cases and further spread.

In this context, the probability of developing the disease is very low for individuals residing in the community, 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 migrant 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 vaccines. Options for responses recommended in this RRA included:

- 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 have 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 for diphtheria.
- 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 its epidemic intelligence activities, and will provide weekly updates. The latest information can be found on EpiPulse.

4. Increasing trend of infection with Respiratory Syncytial Virus (RSV) – Multi-country – 2022

Overview:

In October 2022, signals were detected in some EU/EEA countries reporting increasing numbers of paediatric hospitalisations and increasing pressure in healthcare facilities due to respiratory syncytial virus (RSV) cocirculating with other respiratory viruses e.g. influenza and SARS-CoV-2.

As of week 47/2022, 23 EU/EEA countries have reported RSV data to The European Surveillance System (TESSy) since week 40/2022, which is considered the start of the reporting period for respiratory viruses. Overall, 16 EU/EEA Member States (Bulgaria, Croatia, Czechia, Denmark, France, Germany, Iceland, Ireland, Latvia, Lithuania, the Netherlands, Norway, Poland, Slovenia, Spain, and Sweden) have reported RSV positivity rates above 3% for three or more consecutive weeks from their surveillance systems (sentinel and non-sentinel).

In weeks 40-47/2022, 25 838 RSV detections out of 244 325 specimens tested (10.6%) have been reported to TESSy from the primary care sentinel and non-sentinel (such as hospitals, schools, primary care facilities not involved in sentinel surveillance, or nursing homes and other institutions) sources. Of those, 1 498 detections were from the sentinel and 24 340 from the non-sentinel sources. In the sentinel system 12 546 specimens have been tested since week 40 for RSV and 231 779 in the non-sentinel surveillance system. In addition, Malta reported 182 records of RSV case-based data, including three cases from intensive care unit, based on their hospital surveillance data. Age was reported to all these 182 cases: 117 were 0-4years old (64%), of these 64 under one year old.

ECDC assessment:

RSV is a common respiratory virus that generally leads to mild respiratory symptoms. It can, however, lead to severe illness among infants and the elderly and is a main cause of bronchiolitis and pneumonia in infants. Therapeutics against severe RSV infection have been approved by European Medicines Agency (EMA) and researchers are in the process of developing vaccines.

A number of countries have reported an increase in RSV detections very early during the season, with reports of increasing paediatric hospital admissions in France, Ireland, Spain, Sweden and the United States. The RSV season also started earlier than in pre-pandemic seasons, likely due to a combination of increased contact among children in day-care centres and schools following the full relaxation of pandemic-related non-pharmaceutical interventions, and competition of a number of respiratory viruses (RSV, SARS-CoV-2 and influenza) for circulation this season. The early increase in cases is not fully unexpected although requires further monitoring and raised awareness among clinicians. Such large numbers of paediatric hospitalisation are putting stress on the paediatric healthcare sectors in several countries.

While RSV is not a mandatory reportable disease at the EU level, many EU/EEA Member States have strong laboratory and sentinel surveillance systems in place. There are limitations to the RSV data that ECDC collects through The European Surveillance System (TESSy). ECDC collects numbers of detections of laboratory-confirmed RSV cases from sentinel and non-sentinel surveillance systems based on voluntary reporting. The data do not include age or hospitalisation information. ECDC has started a new integrated respiratory surveillance system, where more details can be collected from this season onwards. Countries can also share available data or assessments through EpiPulse.

Actions:

ECDC monitors and collects available data on RSV through TESSy and reports on it regularly in the [Surveillance Atlas of Infectious Diseases](#) and on [FluNewsEurope](#). ECDC published [a news item](#) on the current situation on 23 November 2022 and continues monitoring the situation through its epidemic intelligence activities. A rapid risk assessment is in production.

Additional sources:

Media reports from Spain and France mention increased burden of paediatric patients in the emergency departments, and even shortages of [paracetamol](#) and [amoxicillin](#) in the market.

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

Overview:

Week 47, 2022 (21 November–27 November 2022)

The percentage of all sentinel primary care specimens from patients presenting with ILI or ARI symptoms that tested positive for an influenza virus increased to 14% from 13% in the previous week.

The epidemic threshold is set at 10% and week 47/2022 was the third consecutive week above this level with the start of the epidemic in the European Region being declared based on week 46/2022 data.

Germany, Kazakhstan, Kyrgyzstan, Malta, Portugal, Romania, the Russian Federation, Türkiye, and the United Kingdom (Scotland) reported widespread influenza activity and/or at least medium intensity.

Germany, Spain, France, Israel, Italy, Kyrgyzstan, Kazakhstan, Luxembourg, the Republic of Moldova, Portugal, and Uzbekistan reported seasonal influenza activity above 10% positivity in sentinel primary care.

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

Hospitalised cases with confirmed influenza virus infection were reported from ICU wards (2 type A viruses), other wards (64 type A viruses and 2 type B viruses), and SARI surveillance (60 type B viruses and 39 type A viruses). When comparing the different influenza type distributions by system, it is important to consider that different sets of countries report to each system.

Source: [Flu News Europe](#)

ECDC assessment:

Influenza activity, based on patients in sentinel primary care settings testing positive for influenza virus infection, first crossed the epidemic threshold of 10% set for the Region in week 45/2022.

Overall, influenza A(H3) viruses have dominated across most surveillance systems.

Germany, Spain, France, Italy, Luxembourg, and Portugal are the European countries experiencing seasonal influenza activity above 10% positivity in sentinel primary care, 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.

6. Monkeypox (mpox) – Multi-country – 2022

Overview

Other news:

On 28 November 2022, the World Health Organization (WHO) published a [press release](#) recommending the usage of the term 'mpox' as a synonym for 'monkeypox' going forward. 'Mpox' will be the preferred term to refer to the disease, and after a transition period of a year, the term 'monkeypox' will be discontinued entirely. This change has been effected after extensive consultations with global experts, to put an end to the discriminative use of 'monkeypox' in certain contexts, and at the same time, to address concerns raised by experts about the possible confusion that a name change could cause during a global outbreak.

The transition period will also allow time to update WHO publications and the International Statistical Classification of Diseases and Related Health Problems (ICD). The synonym 'mpox' will be included in the [ICD-10](#) in the coming days. Moreover, it will be a part of the official 2023 release of the 11th revision of the ICD (ICD-11). However, the term 'monkeypox' will remain a searchable term in ICD, to match historic information.

Summary:**EU/EEA**

Since the start of the mpox outbreak, and as of 22 November 2022, 20 887 confirmed cases of mpox have been reported from 29 EU/EEA countries: Spain (7 405), France (4 104), Germany (3 671), the Netherlands (1 248), Portugal (942), Italy (917), Belgium (789), Austria (326), Sweden (220), Ireland (217), Poland (213), Denmark (191), Norway (93), Greece (85), Hungary (80), Czechia (70), Luxembourg (57), Slovenia (47), Romania (45), 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 (3), Belgium (1) and Czechia (1).

Western Balkans and Türkiye

Since the start of the mpox outbreak and as of 22 November 2022, the following Western Balkan countries have reported confirmed cases of mpox: 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 mpox outbreak a Public Health Emergency of International Concern (PHEIC). On 1 November 2022, [WHO](#) advised that the multi-country outbreak of mpox still met the criteria included in the definition of a PHEIC set out in Article 1 of the International Health Regulations (2005) (IHR).

ECDC assessment:

The weekly number of mpox 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 behavioural 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.

Mpox continues to primarily affect young men who have sex with men (MSM), between 18 and 50 years (87%). Mass gatherings in summer and specific sexual practices facilitated the transmission of mpox among MSM groups. 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 differ from what has been described in past outbreaks of mpox in endemic countries, where symptoms were mainly mild. 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 mpox infection is assessed as moderate for MSM and low for the broader population.

Response options for 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. ECDC provided guidance to countries hosting events during the summer as well. 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.

7. Mass gathering monitoring – the FIFA World Cup 2022 Qatar

Overview:

The 2022 FIFA World Cup is taking place between 20 November and 18 December 2022 in Qatar. Thirty-two countries are participating in this event, including nine EU Member States: Belgium, Croatia, Denmark, France, Germany, the Netherlands, Poland, Portugal, and Spain. A total of 64 matches will take place in eight stadiums 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 the country. The [FIFA Fan Festival](#) will take place at the Al Bidda Park in Doha, and will be open every day of the tournament from 19 November to 18 December.

As of 1 December 2022, ECDC and networking partners, through epidemiological surveillance, have detected one potential event of public health concern in Qatar, its neighbouring countries and the countries participating in the 2022 FIFA World Cup. The event involves at least three Brazilian players in Qatar, who according to a [media report](#) on 28 November 2022, have symptoms compatible with respiratory infection. An unknown number of family members and other close contacts of the Brazilian players also had respiratory symptoms.

One signal that may be of interest was detected in Kuwait, but does not pose a threat in relation to this event: on 25 November 2022, [media](#) reported one imported case of cholera in Kuwait in a returning traveller from cholera affected country.

Here we provide a short epidemiological summary related to global or regional public health threats from infectious diseases:

COVID-19: Since the beginning of the pandemic, and as of 30 November 2022, the [Qatar Ministry of Public Health](#) (Qatar MoPH) has reported 478 848 SARS-CoV-2 positive cases including 685 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 has been a decreasing trend in the number of COVID-19 cases in Qatar since late September 2022. From 1 November 2022, visitors have no longer been required to present a negative [COVID-19](#) PCR or rapid antigen test result before travelling to Qatar.

MERS-CoV: No new cases have been reported in Qatar during the monitoring week 28 November–01 December 2022. In 2022 overall, there were two cases of MERS-CoV reported in Qatar, and 25 cases since 2012. Overall, globally over 2 600 cases of MERS-CoV have been reported since 2012, with most of the cases reported in Saudi Arabia.

Mpox: No new cases have been reported in Qatar since September 2022. Overall, five cases of [mpox](#) were reported in Qatar in 2022, and the first case was imported.

ECDC assessment:

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 illnesses and vaccine-preventable infections. Thus, travellers from the EU/EEA going to the event are advised to be vaccinated according to their national immunisation programme, and to ensure that they are vaccinated against seasonal influenza and have taken updated boosters for COVID-19, as recommended by respective national authorities. The following are recommended: employing standard hygiene measures, including regular handwashing with soap; drinking safe water (bottled, chlorinated or boiled before consumption); eating thoroughly cooked food and carefully washing fruits and vegetables with safe drinking water before consumption; and staying at home or in a hotel room when sick. The risk for EU/EEA citizens becoming infected with

communicable diseases during the 2022 FIFA World Cup in Qatar is considered low if travellers observe the suggested measures before, during, and after the event.

Actions:

ECDC's epidemic intelligence team is monitoring this event in collaboration with global partners between 14 November and 22 December 2022.

8. Chikungunya and dengue – Multi-country (World) – Monitoring global outbreaks

Overview:

Chikungunya virus disease: In 2022, and as of 23 November, 362 021 cases and 77 deaths have been reported. The majority of cases have been reported from Brazil (247 537), India (108 957), Guatemala (1 615), Thailand (842) and Malaysia (688). Deaths have been reported from Brazil (75) and Kenya (1). Since the previous CDTR published in week 44 2022, 23 429 new cases have been reported. The five countries reporting most new cases are India (15 844), Brazil (7 193), Guatemala (180), Thailand (67) and Colombia (40). The only country reporting new deaths is Brazil (7).

Dengue: In 2022, and as of 23 November, 3 643 763 cases and 3 380 deaths have been reported. The majority of cases have been reported from Brazil (2 182 229), Vietnam (303 637), Philippines (187 560), India (110 473) and Indonesia (94 355). The majority of deaths have been reported from Brazil (929), Indonesia (853), Philippines (613), Bangladesh (258) and Vietnam (112). Since the previous CDTR published on week 44 2022, 310 307 new cases and 396 new deaths have been reported. The five countries reporting most new cases are Vietnam (78 866), Brazil (50 614), India (47 193), Pakistan (23 021) and Bangladesh (21 354). The five countries reporting most new deaths are Bangladesh (140), Philippines (105), India (42), Vietnam (20), and Brazil (31). In the EU and as of 23 November 2022, 65 autochthonous dengue cases have been reported in France.

Chikungunya virus disease

Europe

No autochthonous cases of chikungunya virus disease have been reported in Europe in 2022.

Americas and the Caribbean

Bolivia: In 2022 and as of 24 September, 175 cases, including 11 confirmed cases and no deaths, have been reported.

Brazil: In 2022 and as of 8 October, 247 537 cases, including 124 803 confirmed cases and 75 deaths, have been reported. This is an increase of 7 193 cases and seven deaths since 17 September 2022.

Colombia: In 2022 and as of 5 November, 95 cases and no deaths have been reported. This is an increase of 40 cases since 8 October 2022.

Costa Rica: In 2022 and as of 29 October, 20 cases and no deaths have been reported. This is an increase of seven cases since 8 October 2022.

El Salvador: In 2022 and as of 5 November, 150 cases and no deaths have been reported. This is an increase of three cases since 15 October 2022.

Guatemala: In 2022 and as of 22 October, 1 615 cases, including 16 confirmed cases and no deaths, have been reported. This is an increase of 180 cases since 1 October 2022.

Honduras: In 2022 and as of 5 November, 43 cases and no deaths have been reported.

Mexico: In 2022 and as of 5 November, one case and no deaths have been reported.

Nicaragua: In 2022 and as of 12 November, four cases and no deaths have been reported.

Panama: In 2022 and as of 8 October, two confirmed cases and no deaths have been reported.

Paraguay: In 2022 and as of 5 November, 384 cases, including 190 confirmed cases and no deaths, have been reported. This is an increase of three cases since 15 October 2022.

Peru: In 2022 and as of 12 November, 304 cases, including 285 confirmed cases and no deaths, have been reported. This is an increase of 31 cases since 15 October 2022.

Venezuela: In 2022 and as of 29 October, 47 cases, including one confirmed case and no deaths, have been reported. This is an increase of one confirmed case since 24 September 2022.

Asia

India: In 2022 and as of 31 October, 108 957 cases, including 5 320 confirmed cases and no deaths, have been reported. This is an increase of 15 844 cases, including 1001 confirmed cases, since 30 September 2022.

Malaysia: In 2022 and as of 12 November, 688 cases and no deaths have been reported. This is an increase of 26 cases since 15 October 2022.

Philippines: In 2022 and as of 29 October, 547 confirmed cases and no deaths have been officially reported by the Department of Health's periodic Surveillance Report. This corrects previous media [reports](#) about a chikungunya-related death in the country. This is an increase of 34 cases since 8 October 2022.

Thailand: In 2022 and as of 10 November, 842 cases and no deaths have been reported. This is an increase of 67 cases since 22 October 2022.

Africa

Ethiopia: In 2022 and as of 8 May, 311 cases, including three confirmed cases and no deaths, have been reported.

Kenya: In 2022 and as of 6 November, 291 cases, including five confirmed cases and one death, have been reported.

Sudan: In 2022 and as of 6 October, eight cases and no deaths have been reported.

Australia and the Pacific

No autochthonous cases have been reported in 2022.

Dengue

Europe

France: Since the last update, no new autochthonous dengue cases have been reported in France. In 2022, and as of 23 November, France has reported nine outbreaks with a total of 65 locally acquired cases of dengue. According to [French authorities](#), all nine outbreaks are now considered over, following the implementation of control measures.

Americas and the Caribbean

In 2022, and as of 23 November, the WHO Pan American Health Organization (PAHO) reported 2 551 093 dengue cases and 1 169 associated deaths, in the Americas. The five countries reporting most cases are: Brazil (2 182 229), Nicaragua (82 861), Peru (64 846), Colombia (56 352), and Mexico (48 187). This is an increase of 88 316 cases and 57 deaths since 27 October 2022.

All four dengue virus serotypes (DENV 1, DENV 2, DENV 3, and DENV 4) are currently circulating in the Americas. The figures for each country of the Americas region can be found on the [PAHO Health Information Platform](#). Dengue fever [surveillance indicators](#) are at low levels in the French Antilles (Guadeloupe, Martinique, Saint-Martin, and Saint-Barthélemy).

Asia

Afghanistan: In 2022 and as of 5 November, 747 cases and one death have been reported. This is an increase of 434 cases and one death since 15 October 2022.

Bangladesh: In 2022 and as of 22 November, 66 054 cases and 258 deaths have been reported. This is an increase of 21 354 cases and 140 deaths since 25 October 2022.

Cambodia: In 2022 and as of 3 November, 9 067 cases and 16 deaths have been reported. This is an increase of 1 838 cases and three deaths since 6 October 2022.

China: In 2022 and as of 5 November, nine cases and no deaths have been reported. This is an increase of one case since 31 July 2022.

India: In 2022 and as of 31 October, 110 473 cases and 86 deaths have been reported. This is an increase of 47 193 cases and 42 deaths since 30 September 2022.

Indonesia: In 2022 and as of 1 October, 94 355 cases and 853 deaths have been reported.

Laos: In 2022 and as of 8 November, 30 029 cases and 22 deaths have been reported. This is an increase of 1 664 cases and one death since 15 October 2022.

Malaysia: In 2022 and as of 5 November, 51 262 cases and 35 deaths have been reported. This is an increase of 4 767 cases and seven deaths since 15 October 2022.

Maldives: In 2022 and as of 11 September, 590 cases and no deaths have been reported.

Nepal: In 2022 and as of 20 November, 52 557 cases and 60 deaths have been reported. This is an increase of 8 872 cases and eight deaths since 21 October 2022.

Oman: In 2022 and as of 7 April, 76 cases and no deaths have been reported.

Pakistan: In 2022 and as of 8 November, 64 767 cases and 84 deaths have been reported. This is an increase of 23 021 cases since 11 October 2022.

The Philippines: In 2022 and as of 22 October, 187 560 cases and 613 deaths have been reported. This is an increase of 14 327 cases and 105 deaths since 1 October 2022.

Singapore: In 2022 and as of 21 November, 30 499 cases and no deaths have been reported. This is an increase of 1 194 cases since 25 October 2022.

Sri Lanka: In 2022 and as of 22 November, 55 500 cases and no deaths have been reported. This is an increase of 4 908 cases since 25 October 2022.

Taiwan: In 2022 and as of 16 October, 20 cases and no deaths have been reported.

Thailand: In 2022 and as of 12 November, 26 812 cases and no deaths have been reported. This is an increase of 3 954 cases since 17 October 2022.

Timor-Leste: In 2022 and as of 21 October, 5 480 cases and 57 deaths have been reported.

Vietnam: In 2022 and as of 15 November, 303 637 cases and 112 deaths have been reported. This is an increase of 78 866 cases and 20 deaths since 6 October 2022.

Africa

Côte d'Ivoire: In 2022 and as of 19 March, 12 cases, including 12 confirmed cases and one death, have been reported.

Kenya: In 2022 and as of 28 April, 33 cases and no deaths have been reported.

Réunion: In 2022 and as of 10 November, 1 189 cases and two deaths have been reported. This is an increase of 26 cases since 13 October 2022.

São Tomé and Príncipe: In 2022 and as of 31 October, 1 019 cases and six deaths have been reported. This is an increase of eight cases and three deaths since 10 October 2022.

Senegal: In 2022 and as of 10 November, 99 cases and no deaths have been reported. This is the first time the country is reporting cases in 2022.

Sudan: In 2022 and as of 20 November, 1 076 cases and eight deaths have been reported. This is an increase of 1 075 cases and eight deaths since 19 March 2022.

Australia and the Pacific

Australia: In 2022 and as of 16 October, 205 cases and no deaths have been reported. This is an increase of 17 cases since 6 October 2022.

Cook Islands: In 2022 and as of 28 May, three cases and no deaths have been reported.

Fiji: In 2022 and as of 16 May, 1 960 cases and no deaths have been reported.

Micronesia (Federated States of): In 2022 and as of 17 November, 22 cases and no deaths have been reported. This is an increase of six cases since 4 June 2022.

New Caledonia: In 2022 and as of 17 November, 14 cases and no deaths have been reported. This is an increase of 13 cases since 30 June 2022.

Palau: In 2022 and as of 6 October, 38 cases and no deaths have been reported. This is an increase of 16 cases since 14 July 2022.

Samoa: In 2022 and as of 17 November, 107 cases and no deaths have been reported. This is an increase of three cases since 6 October 2022.

Solomon Islands: In 2022 and as of 6 October, 34 cases and no deaths have been reported.

Vanuatu: In 2022 and as of 17 November, 134 cases and no deaths have been reported. This is an increase of 22 cases since 6 October 2022.

Wallis and Futuna: In 2022 and as of 17 November, 66 cases and no deaths have been reported. This is an increase of 12 cases since 6 October 2022.

N.B: The data presented in this report originate from several sources, both official public health authorities and non-official sources such as news media. Data completeness depends on the availability of reports from surveillance systems and their accuracy, which varies between countries. All data should be interpreted with caution as there may be areas of under-reporting; reported figures may not reflect the actual epidemiological situation. Please note that case definitions may differ between countries and comparisons should be made with caution.

ECDC assessment:

Chikungunya virus disease and dengue affect people in most countries of the tropics and sub-tropics. EU/EEA citizens travelling to the affected areas should apply personal protective measures against mosquito bites.

The likelihood for onward transmission of dengue and chikungunya virus disease in mainland EU/EEA is, among other things, linked to importation of the virus by viraemic travellers into receptive areas with established and active competent vectors (i.e. *Aedes albopictus*). *Aedes albopictus* is [established](#) in a large part of Europe. The current likelihood of the occurrence of local transmission events of chikungunya virus and dengue virus in mainland EU/EEA is moderate, as the environmental conditions are less favourable to vector activity and virus replication. All autochthonous outbreaks of [chikungunya virus disease](#) and [dengue](#) in mainland EU/EEA have so far occurred between June and November.

The occurrence of the nine clusters in France, including a cluster of over 30 cases, has been unusual. All dengue clusters in Europe were of limited size (up to 10 cases). According to French authorities, all nine outbreaks are now considered over, following the implementation of control measures.

To date, no other EU country reported cases associated to any of these clusters. Travellers returning from areas where dengue fever transmission occurs should be advised to seek medical care if they develop symptoms consistent with dengue fever, in particular if they return to areas where *Ae. albopictus* is established, in order to reduce the risk of the virus being introduced into the local mosquito population and prevent further local transmission.

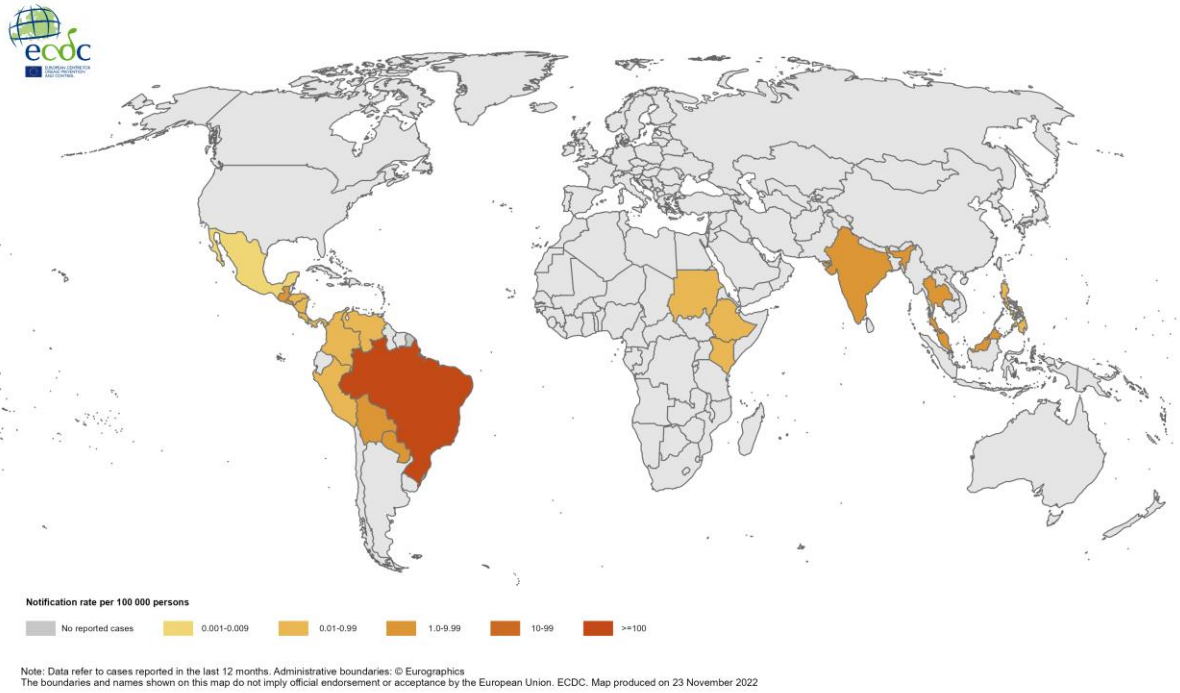
More information is available on ECDC's webpages on autochthonous transmission of [chikungunya](#) and [dengue](#) virus in the EU/EEA, as well as on ECDC's [dengue](#) and [chikungunya](#) factsheets.

Actions:

ECDC monitors these threats through its epidemic intelligence activities, and reports on a monthly basis. A summary of the worldwide overview of [dengue](#) and [chikungunya virus disease](#) is available on ECDC's website.

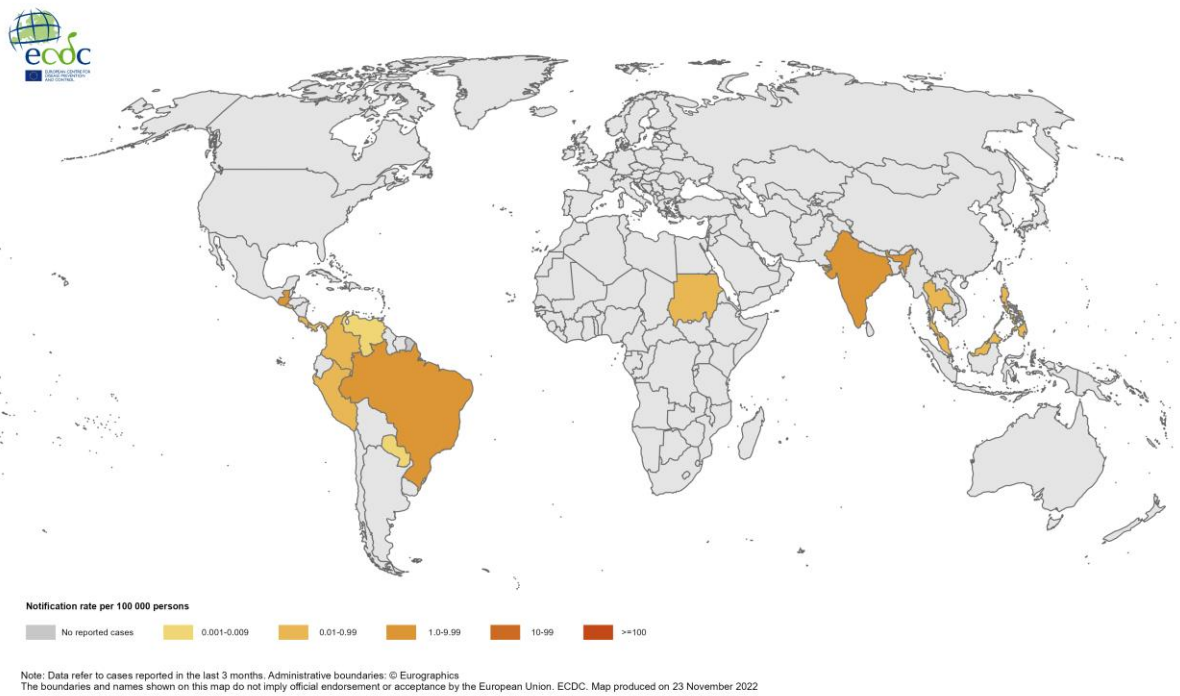
Maps and graphs

Figure 1. Twelve-month chikungunya virus disease case notification rate per 100 000, December 2021–November 2022



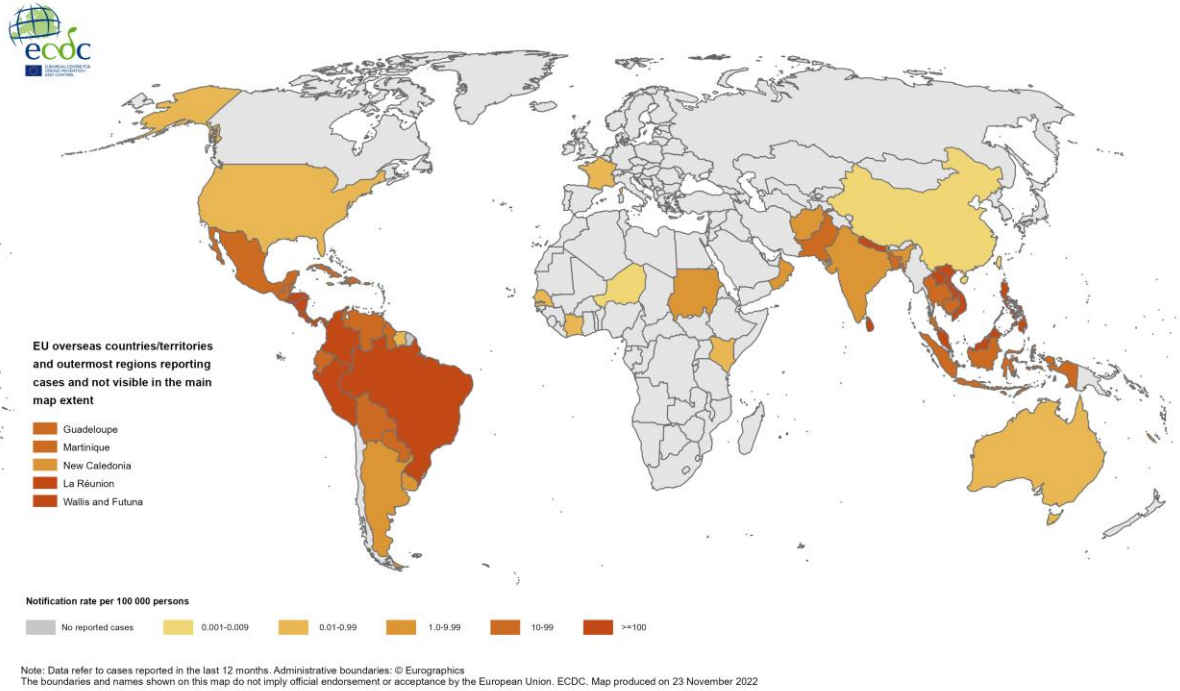
Source: ECDC

Figure 2. Three-month chikungunya virus disease case notification rate per 100 000, September 2022–November 2022



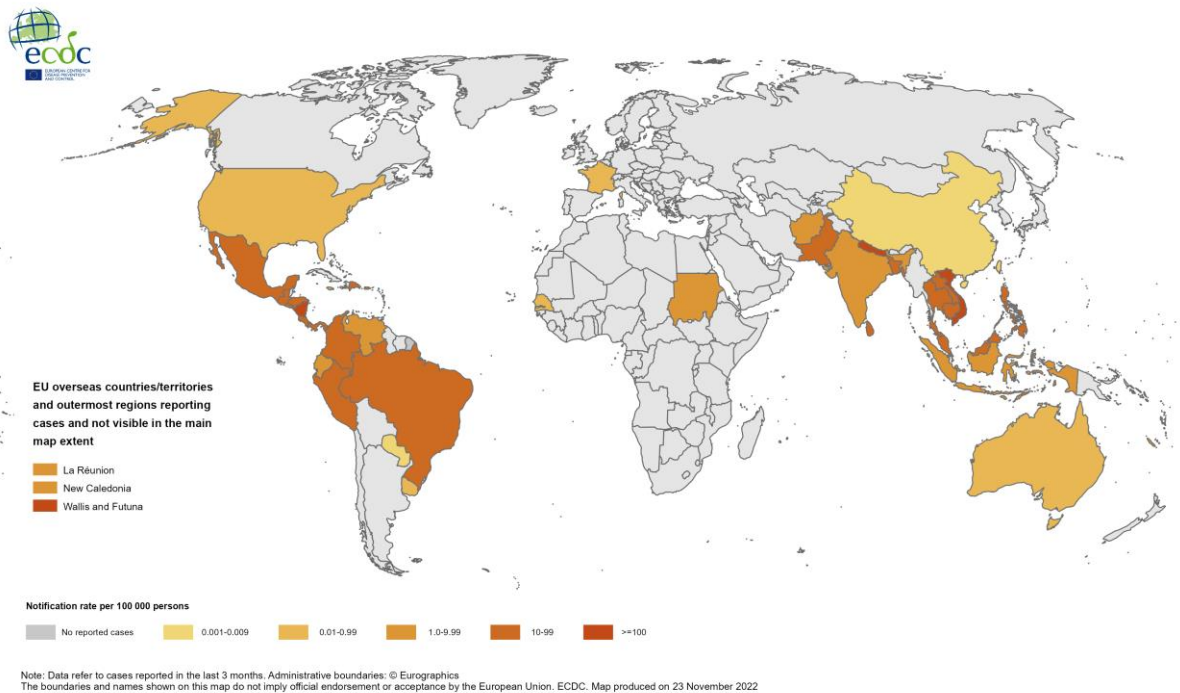
Source: ECDC

Figure 3. Twelve-month dengue case notification rate per 100 000, December 2021–November 2022



Source: ECDC

Figure 4. Three-month dengue case notification rate per 100 000, September–November 2022



Source: ECDC

9. *Shigella sonnei* ST152 multidrug resistant – Multi-country – 2022

Overview:

On 15 November 2022, **France** reported in EpiPulse a rapid and unusual increase of cases of extended-spectrum beta-lactamase (ESBL)-producing *Shigella sonnei* genotype 3.6.3 infection. Since July 2022 and as of 25 November, **152** cases have been reported compared with an annual number of cases ranging from one to nine since 2009. Dates of positive sample detection range from 8 July to 14 October 2022. Cases have a median age of 30 years (range 2 to 79 years) and 64% are female. Forty-two cases (36.5%) report a travel history to Tunisia prior to symptom onset, either as tourists or visiting relatives. Preliminary interviews available for some cases with a travel history to Tunisia do not suggest a common source of contamination (different cities visited, different types of housing, no common restaurant). Preliminary interviews available for a subset of cases with no travel history do not suggest a common exposure in France either. All strains are part of the hierarchical cluster HC10_20662 according to the [Enterobase](#) cgMLST scheme but with different HC5 profiles and belong to genotype 3.6.3 using genotyping nomenclature by [Hawkey et al., \(2021\)](#). Isolates are resistant to 3rd generation cephalosporins (*bla*CTX-M-15), azithromycin (*mphA* gene), and have decreased susceptibility to ciprofloxacin (*gyrA*[D87Y] + *qnrS1*, MIC=0.38mg/L).

On 15 November 2022, **Czechia** reported 53 cases with *S. sonnei* infections between July and October 2022. Among these, 30 cases (56.6%) reported travel history: eight to Tunisia (two of them had infection with ESBL-producing *S. sonnei*), 14 to Egypt, and the rest of the cases to other countries. Of the eight cases with travel history to Tunisia, five were males and the median age was 46 years (range 20-70 years). The regions visited in Tunisia included Mahdia, Nabeul, Djerba, and Port El Kantaoui. The travel destination in Tunisia was not known for one case.

On 16 November 2022, **Norway** reported six *S. sonnei* cases, of which three belonged to a family cluster. Cases reported travel history to Tunisia (one), Pakistan (one), Afghanistan (one) and Germany (one) prior to symptom onset. Isolates were *S. sonnei* sequence type (ST) 152. All isolates had resistance markers *bla*CTX-M-15, *mphA*, *gyrA*[D87Y] and *qnrS1*. In addition, some isolates harboured resistance markers to *dfpA1*, *tet(A)* (five) and *sul2* (five).

On 17 November 2022, **the Netherlands** reported one *S. sonnei* case with travel history to Tunisia. The case had disease onset in October 2022. The *S. sonnei* isolate from this case has two alleles difference (AD) to the French reference strain based on cgMLST.

On 15 November 2022, Scotland's Microbiology Reference Laboratory in **the United Kingdom** reported 13 cases of *S. sonnei* between April 2018 and August 2022, of which five were reported since April 2022. All human isolates are part of HC10_20662 cluster but with different HC5 profiles, similar to France. The most common HC5 profile is HC5_53008. Six Scottish cases reported travel to Pakistan and one to Uganda. A SNP analysis revealed that the cases are, although genetically closely related, distinct from the French cluster. All isolates have resistance markers *bla*CTX-M-15, *mphA*, and *qnrS1* as well as the *gyrA*[D87Y] mutation.

On 24 November 2022, several media sources ([1](#), [2](#)) quoting **the Tunisian Ministry of Health**, reported an increased number of cases with multidrug-resistant *S. sonnei* infections in several regions of the country since July 2022. Symptoms include diarrhoea, stomach pain, fever, and vomiting. As of 28 November 2022, approximately 120 cases have been [notified](#), with ages ranging between six and 80 years. Among these, six children were [hospitalised](#) and required intensive care. One fatality has been [reported](#) in an eight-year-old child.

ECDC assessment:

This is a multi-country outbreak of *Shigella sonnei* including over 100 cases from Czechia, France, the Netherlands, and Norway, either being part of a cluster HC10_20662 with different HC5 sub-clusters (Enterobase cgMLST) and/or cases with travel history to Tunisia in 2022. In addition, the United Kingdom have reported 13 *S. sonnei* cases since April 2018, five of which were reported in 2022, and all being part of the cluster HC10_20662. The isolates are ESBL-producers with resistance markers to third generation cephalosporins (*bla*CTX-M-15), azithromycin (*mphA* gene), and have decreased susceptibility to ciprofloxacin (*gyrA*[D87Y] + *qnrS1*).

S. sonnei circulation in Tunisia has been increasing since July 2022, during which approximately 120 cases have been recorded. Six children have been hospitalised requiring intensive case and one child has died, indicating the potential severity of this outbreak.

Not all French cases report travel history to Tunisia or have a known link to a confirmed case, but investigations are ongoing. The genetic variation of *S. sonnei* strains from returning travellers in the EU/EEA indicate multiple sources of infection and circulation of different strains in Tunisia. There is an elevated risk for *S. sonnei* infection in Tunisia and new infections are likely to be detected in the EU/EEA, particularly among tourists returning from Tunisia.

Actions:

ECDC is monitoring this event through its epidemic intelligence activities and EpiPulse. Connection with Tunisia has been established and a meeting with Tunisian public health authorities is in preparation.

10. Detection of poliovirus 3 in environmental sample – the Netherlands – 2022

Overview:

On 25 November 2022, the National Coordination Centre for Communicable Disease Control in the Netherlands (NAC) reported on the presence of poliovirus in a sewage sample from the Utrecht Science Park, Bilthoven, that was found on 15 November 2022. The 2 L20B isolates (17/11-21/11/2022) were sequenced, and results (dd. 25/11/2022) showed the presence of WPV3-Saukett G in the isolates.

The WPV3-Saukett G strain is a component in the inactivated polio vaccine (IPV). IPV is widely used and also part of the Dutch national vaccination program. The NAC has requested poliovirus activity listing from all polio essential facilities at these premises (eg RIVM, BBIO, Intravacc, ARC) from 24 October to 15 November 2022. The results of this inquiry will inform follow-up steps to find the source and possible measures to prevent similar incidents in future.

Sewage samples from poliovirus essential facilities (PEF) are regularly tested for poliovirus every three weeks. Given the finding, regular collected wastewater samples from the community around Utrecht Science Park in the last three weeks will also be tested for poliovirus.

According to the Dutch authorities, in the Netherlands the risk of being exposed to wastewater from the closed sewage system is very small and the risk of contracting polio is even smaller as the vaccination coverage in the community surrounding the incident area is greater than 90%.

Relevant stakeholders have been informed; the NAC published a press release ([Poliovirus gevonden in riool Science Park Bilthoven | Nieuwsbericht | Inspectie Gezondheidszorg en Jeugd \(igj.nl\)](#)) about this finding.

ECDC assessment:

The WHO European Region, including the EU/EEA, has remained polio-free since 2002. Inactivated polio vaccines are used in all EU/EEA countries.

This occurrence of a poliovirus-positive sewage sample is a local environmental contamination from a WPV3 Saukett G strain poliovirus in Utrecht Science Park. The risk for transmission in this area is considered very low as all appropriate measures have been implemented.

To limit the risk of reintroduction and sustained transmission of WPV and cVDPV in the EU/EEA, it is crucial to maintain high vaccine coverage in the general population and increase vaccination uptake in pockets of under-immunised populations. EU/EEA countries should review their polio vaccination coverage data and ensure there are no immunity gaps in the population and that there is capacity to identify virus circulation through well-performing surveillance systems.

ECDC endorses WHO's temporary recommendations for EU/EEA citizens who are residents or long-term visitors (>4 weeks) in countries categorised by [WHO](#) as having the potential risk of the international spread of polio: an additional dose of poliovirus vaccine should be administered between four weeks and 12 months prior to international travel.

Actions:

ECDC is monitoring this event through its epidemic intelligence activities.

11. Meningitis of unknown aetiology – Mexico – 2022

Overview:

On 2 November 2022, the health authorities in Durango, northwest state of Mexico, [reported](#) seven cases of aseptic meningitis of unknown aetiology. Of these cases, three were in critical condition and one died. All cases were female of reproductive age, with previous medical history of obstetric surgical procedures between May and November 2022, who required epidural anaesthesia and experienced an unrelieved severe headache.

As of 2 December, a total of 68 cases have been [reported](#), including 19 deaths (CFR = 27.9%). Most cases are women and one male case who underwent orthopaedic surgery died.

On 24 November 2022, the Mexican [health authorities](#) reported the withdrawal of the following medications:

- bupivacaine /glucose (Buvacaína Pesada) 5 mg/1 ml batches b22m142, b22a263, and b22e87;
- bupivacaine (Buvacaína) 50 mg/10 ml batch b20j500;
- morphine (Graten) 2.5 mg/2.5 ml batch b19e125;
- morphine (Graten) 10 mg/10 ml batches b19n451 and b21v116.

On 1 December, Mexican health authorities [reported](#) that they have identified 482 000 people who underwent surgical procedures in the four private hospitals that are under investigation. These people are under epidemiological and clinical follow up.

ECDC assessment:

More information is required to assess this event, given that the cause of the aseptic meningitis is unknown. The health authorities are working to carry out the investigation of the outbreak, which includes follow-up of the people who underwent a surgical procedure in four private hospitals in Durango.

Actions:

ECDC will continue monitoring this event through its epidemic intelligence activities and will report when relevant epidemiological updates are available. ECDC contacted the European Medicines Agency (EMA) for further assessment as well as the Mexican health authorities through the Global Health Security Initiative (GHSI).

12. Cholera – Lebanon/Syria – 2022

Overview:**Lebanon**

On 6 October 2022, the **Lebanese Ministry of Public Health** [reported](#) one cholera case in the country. According to the [Ministry](#), by 30 November 2022 a total of 4 594 confirmed cases and 20 fatalities had been reported in all eight governorates of Lebanon (Akkar, Baalbeck-Hermel, Beirut, Bekaa, Mount Lebanon, North Lebanon, Nabatiyeh, and South Lebanon). This is the first cholera outbreak in Lebanon since 1993.

On 24 October 2022, the Lebanese Ministry of Public Health issued a [Decision](#) to regulate cholera-related hospital costs. All charges for cholera treatment will be fully covered by the Lebanese Ministry of Public Health.

On 25 October 2022, the [Lebanese Ministry of Public Health](#) reported that a field hospital was deployed in the Al-Iman Medical Center in Bebnîne, Akkar. The hospital is equipped with 20 beds and resource capacities to treat 500 affected people.

Syria

On 10 September 2022, the Syrian Ministry of Health [declared](#) an outbreak of cholera in the Aleppo Governorate.

As of 19 November 2022, the [WHO, UNICEF and OCHA](#) reported 46 409 suspected cholera cases, including 97 cholera-related fatalities (CFR: 0.2%) in all 14 governorates of Syria since the start of the outbreak. The most affected governorates to date are: Deir-ez-Zor (18 026 suspected cases), Ar-Raqqa (10 514 suspected cases), Aleppo (8 070 suspected cases), Idlib (7 349 suspected cases), and Al-Hasakeh (1 834 suspected cases). A total of 2 879 suspected cholera cases and two associated fatalities have been reported from camps for internally displaced people.

ECDC assessment:

Cholera cases have continued to be reported in western Africa and southeast Asia over the past months. Cholera outbreaks have also been notified in the eastern and southern parts of Africa and some parts of the Middle East. Despite the number of cholera outbreaks reported worldwide, few cases are reported annually among returning EU/EEA travellers. In this context, the risk of cholera infection in travellers visiting these countries remains low, even though sporadic importation of cases in the EU/EEA remains possible.

In 2021, three cholera cases were reported in EU/EEA Member States, while zero and 26 cases were reported in 2020 and 2019 respectively. All cases had travel history to cholera-affected areas. According to WHO, vaccination should be considered for travellers at higher risk, such as emergency and relief workers who are likely to be directly exposed. Vaccination is generally not recommended for other travellers. Travellers to cholera-endemic areas should seek advice from travel health clinics to assess their personal risk and apply precautionary sanitary and hygiene measures to prevent infection. These can include drinking bottled water or water treated with chlorin; carefully washing fruits and vegetables with bottled or chlorinated water before consumption; regularly washing hands with soap; eating thoroughly cooked food; and avoiding the consumption of raw seafood products.

Actions:

ECDC continues to monitor cholera outbreaks globally through its epidemic intelligence activities in order to identify significant changes in epidemiology and to facilitate the proper updates to public health authorities. Reports are published on a monthly basis.