



**GLOBAL**

→  
**527 763 331**  
confirmed cases  
512 500 000  
recovered  
6 284 729 deaths

**USA**

(7-days incidence 230)  
↗  
**82 775 815**  
confirmed cases  
80 346 120 recovered  
997 871 death

**IND**

(7-days incidence 1,1)  
↘  
**43 142 192**  
confirmed cases  
42 577 061 recovered  
524 507 deaths

**BRA**

(7-days incidence 48,0)  
↘  
**30 836 815**  
confirmed cases  
29 907 901 recovered  
666 129 deaths

News:

- **WHO:** published a [guide to strengthen basic psychosocial skills and effective communication](#)
- **ECDC:** published [Rapid outbreak assessment – first update: Multi-country Salmonella outbreak linked to chocolate products](#)
- **ECDC:** published a rapid risk assessment – [Monkeypox multi-country outbreak](#)
- **UNHCR:** Ukraine Emergency – [Cash assistance factsheet](#)
- **CDC:** Recommendations and expands eligibility for [COVID-19 booster shots](#)
- **CDC:** Food safety alert regarding a multistate [outbreak of Salmonella Senftenberg infections](#)

• **Topics:**

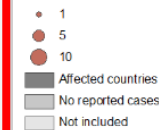
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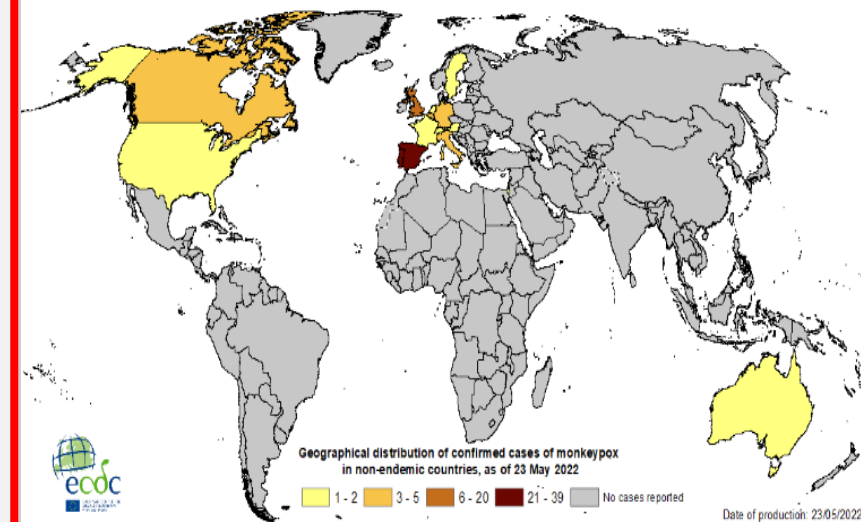
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Geographical distribution of confirmed cases of monkeypox in EU/EEA countries, as of 23 May 2022



Countries not visible in the main map extent  
Liechtenstein  
Malta



Geographical distribution of confirmed cases of monkeypox in non-endemic countries, as of 23 May 2022

Date of production: 23/05/2022

**EUROPE**

↘  
**212 871 911**  
confirmed cases  
207 800 000  
recovered  
1 939 358 deaths

**FRA**

(7-days incidence 245,0)  
↘  
**29 583 616**  
confirmed cases  
28 987 938 recovered  
149 044 deaths

**DEU**

(7-days incidence 282,0)  
↘  
**26 159 325**  
confirmed cases  
24 931 200 recovered  
138 653 deaths

**GBR**

(7-days incidence 88,0)  
↘  
**22 271 122**  
confirmed cases  
21 951 219 recovered  
178 221 deaths

# Global Situation

## Environmental surveillance for SARS-CoV-2 to complement public health surveillance

The management of the COVID-19 pandemic continues to be challenging, for a number of reasons, including the evolution of the virus and the impact of VOCs on control measures.

The primary source of evidence about the incidence of SARS-CoV-2 infection in any geographic location is the testing of upper respiratory tract samples. However, in an increasing number of settings around the world, routine COVID-19 surveillance programmes have supplemented diagnostic testing with community-scale environmental surveillance (ES) of SARS-CoV-2 in wastewater samples.

Prior to the COVID-19 pandemic, ES to detect circulating pathogens in wastewater had been used extensively in public health, particularly for poliovirus, typhoid and more recently antimicrobial resistance (AMR).

On 14 April 2022, WHO released interim guidance on [Environmental surveillance for SARS-COV-2 to complement public health surveillance](#) in order to provide Member States with advice on how to establish an effective ES programme for SARS-CoV-2. This includes the minimum requirements for planning and coordinating ES in different resource settings and good practice for data collection, analysis, interpretation and communication.

### Applications of environmental surveillance for SARS-CoV-2

Leadership by the public health agencies responsible for the overall COVID-19 response is critical for SARS-COV-2 ES programmes. Health authorities in charge of infectious disease surveillance should have the responsibility to design ES for SARS-CoV-2, coordinate interpretation and communicate findings.

At their most basic, SARS-CoV-2 ES programmes indicate whether, at the level of the community, the virus is above (present) or below (absent) the limits of detection of the testing methods used. This is particularly relevant in zero- or low-prevalence settings to confirm the absence of virus circulation or warn about the (re)emergence of the virus. Most ES programmes in high prevalence settings involve quantification of results to identify trends in SARS-CoV-2 infection in the community. In the most advanced settings, SARS-COV-2 ES programmes can detect emerging variants and monitor circulating variants. These findings can then help target SARS-CoV-2 responses and interventions.

SARS-CoV-2 ES programmes add value by:

- Early warning signalling of SARS-CoV-2 (re)emergence approximately seven days in advance of clinical case detection, including in areas thought to be free of SARS-CoV-2.
- Supporting risk communication to help promote good behaviours – detection of SARS-COV-2 in wastewater can be used to remind the community that the virus is circulating, encourage people to seek diagnostic testing, and reduce complacency about control interventions, such as masking, distancing and vaccination.
- Enabling cost-effective targeting of public health surveillance – hotspot areas with higher SARS-CoV-2 ES signals can be prioritized for the deployment of scarce diagnostic testing resources and implementation of localized restrictions.
- Allowing targeted surveillance for early warning of circulation in vulnerable or high-risk settings, isolated communities, transport vessels, and multi-day events and gatherings.
- Identifying known variants of interest or concern and detecting the emergence of novel variants (albeit challenging in sewage samples).
- Enabling retrospective analysis through banking of samples.

### Key considerations for planning and coordination

The components of a wastewater surveillance programme and the requirements for establishing one that is credible and effective include:

- Public health agencies and policymakers who frame the questions that the programme needs to answer and use the information generated to guide decisions.
- Epidemiologists and data managers who collect, manage and interpret data.
- Water, sanitation and environment agencies and municipal authorities responsible for wastewater management and (usually) for sampling who understand wastewater flows and how they relate to residential locations of populations and to public health districts.
- Laboratories which perform the testing, report the results, and undertake quality management, and which have expertise in handling wastewater samples and molecular biology.
- Information technology and communications personnel who undertake spatial mapping and data interpretation, prepare reports and maintain dashboards on behalf of all parties.

The objective of the SARS-CoV-2 ES programme is to inform decision-making processes for SARS-CoV-2 monitoring and management as part of the broader COVID-19 response strategy. This requires linking the SARS-CoV-2 ES programme with other pillars of the response.

### Conclusions

There is no universal standard method or approach to ES for SARS-CoV-2. However, there are several communities of practice at the national, regional and global scales, and several proficiency programs, along with many published protocols. The [guidance](#) has more information on the key considerations for data collection, analysis and interpretation.

A range of research projects and innovations are in progress to improve ES for SARS-CoV-2 and other pathogens. ES has the potential to detect novel variants, as well as to increase understanding of the ecology and zoonotic potential (e.g., from sampling of animal rearing operations) of SARS-CoV-2 that has not been identified in human clinical samples, and to monitor wastewater from transport hubs, to support global pandemic intelligence.

**Source:** <https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---18-may-2022>

# Global Situation

## Omicron BA.4 and BA.5 Sublineage Follow-up



On May 12, 2022, the European Centre of Disease Prevention and Control (ECDC) **reclassified Omicron sub-lineages BA.4 and BA.5 from variants of interest to variants of concern**. This decision was made primarily due to early studies which point to large differences in the antigenic properties of BA.4 and BA.5 when compared to BA.1 and BA.2 and the strong increasing trend in variant proportions occurring in multiple countries. (1, 2) Both BA.4 and BA.5 were first detected in South Africa in early 2022. According to GISAID, as of May 16, there have been approximately **2,089 positive sequences detected worldwide in at least 24 countries** (3, 4). Of note, samples submitted to GISAID are a selective sample of the total number of cases, as such the sequences detected above do not represent the true prevalence of the sub-lineages in the population. The numbers reported on May 16, however, represent a **161% increase** from the positive sequences GISAID reported approximately two weeks ago on May 4. **This suggests a globally increasing prevalence of the BA.4 and BA.5 sub-lineages.**

### Antigenic properties

It is believed that **the growth advantage of BA.4 and BA.5 is primarily a result of their ability to evade immune protection provided by prior infection and/or vaccination**. In a non-peer reviewed study, researchers showed that within the South African population, for individuals who received a booster vaccine, median BA.4 and BA.5 neutralizing antibody titers were **3.3-fold lower** than median BA.1 neutralizing antibody titers. Among individuals who were fully vaccinated (two doses) and had a prior BA.1 or BA.2 infection, median BA.4 and BA.5 neutralizing antibody titers were **2.9-fold lower** than median BA.1 neutralizing antibody titers. **Having lower neutralizing antibody titers indicates that BA.4 and BA.5 have a greater ability to evade neutralization by the immune system in vaccinated individuals with and without a history of previous infection.** (5)

In another study which has not been peer-reviewed, researchers highlight the key role of the **L452R mutation**, which is present in sub-lineages BA.4, BA.5, and the Delta variant. This study specifically showed that when using the sera of mRNA-vaccinated and boosted healthcare workers and patients with a prior BA.1 infection, the BA.4, BA.5, and BA.2.12.1 sub-lineages were **more resistant to neutralization** when compared with the BA.1 and BA.2 sub-lineages. However, when investigating the sera of Delta wave patients, BA.4, BA.5, and BA.2.12.1 sub-lineages were **effectively neutralized**. **This emphasizes the importance of booster vaccinations and the fact that prior infection with BA.1 does not appear to induce strong immunity against infection with the BA.4 and BA.5 sub-lineages.** (6)

### The situation in Portugal

Based on the BlueDot Data Suite, as of May 13, Portugal's **14-day test positivity rate was 28%** and **the seven-day rolling average number of daily new cases was 3,147 cases**. From March 2022 until May 10, Portugal's rate of hospital and intensive care unit (ICU) admissions have seen little fluctuation and remained relatively stable. (7) As of May 8, the Portuguese National Institute for Health estimated that **approximately 37% of positive cases were BA.5** and the **daily growth advantage of BA.5 over BA.2 was 13%**. Assuming the daily growth rate stays consistent, Portugal estimates that **BA.5 will become the dominant variant by May 22, 2022**. Comparatively, **South Africa had previously estimated a similar growth rate of BA.5 over BA.2 of 12%**. (1) In April 2022, BA.4 and BA.5 made up 64% of positive sequences, and have **since risen to 96%, as of May 13**. (8). On May 19, South Africa's National Institute for Communicable Diseases reported that **increasing trends** in hospitalizations and excess mortality are occurring, however, in comparison to the rates seen during the first four waves, these increases are minor and **large increases are not expected**. (9, 10)

Overall, the ECDC states that although the current proportion of BA.4 and BA.5 is low in the European Union and European Economic Area it is **estimated that these will become the dominant variants within the next few months**. Even though there is currently **no apparent increase in disease severity** when compared to the BA.1 and BA.2 lineages, with increased infections it is **expected that there will be some degree of increase in hospital and ICU admissions**. (1)

Source: <https://www.ecdc.europa.eu/en/news-events/epidemiological-update-sars-cov-2-omicron-sub-lineages-ba4-and-ba5>

# Notable Update: COVID-19 and Underestimated Infection Rates in Children



Since the spread of the Omicron variant in late November 2021, the number of people infected by COVID-19 has grown exponentially. Of the population infected, children accounted for a substantial proportion of infections, although this has not been fully represented in official statistics. The true number of infected children may have been greater than reported case data suggest for a number of reasons: 1) children ages 0-4 years are ineligible for vaccines, 2) they have the lowest level of vaccine protection among all eligible age groups (5-11 years old), and 3) children have high risk of exposure. Additionally, due to a lack of testing during the last Omicron wave, changes in testing criteria, and because most of the cases at this age may present as asymptomatic or with very mild symptoms the true number of infected children may not be fully represented. This has been supported by recent serological studies from the United States and Canada as follows:

## United States

- In a nationwide seroprevalence study, **infection rates of children ages 1-4 have doubled from 30% (September 2021) to 68% (February 2022)**. This jump is the largest change across all the age groups (including adults). Additionally, out of all age groups, **children ages 5 to 11 show the highest rate of infection at 77% (February 2022)**. For comparison, the group aged between 50-60 years old showed an increased rate of 50%. One thing to note is the pediatric samples used may include children with frequent health monitoring needs and require bloodwork. There may be a bias towards children with illness or pre-existing conditions hence there may be an overestimation in the rate of infection for younger age groups. (1)
- **Hospitalization rates in children also reflect high infection rates during the Omicron wave**. A report on April 22, 2022, from the U.S. Centre for Disease Control (C.D.C), showed that the hospitalization rate of children ages 5-11 years old during the Omicron-predominant peak (2.8 per 100,000 children) is **2.3 times higher** than the rate of child hospitalization during the Delta-predominant peak (1.2 per 100,000 children). **Peak ICU admission rates** in the same age group show ICU admittance in children were **1.7 times higher** during the Omicron-predominant peak (1.2 per 100,000 children) compared to the Delta-predominant peak (0.7 per 100,000 children). (2)

## Canada

- Results from the March 2022 Canadian Blood Services & Hema-Quebec report for COVID-19 seroprevalence over time (i.e., the percentage of individuals in a population who have antibodies due to infection with SARS-CoV-2 and not related to vaccination), show all provinces with an increase in seropositivity except in Newfoundland, which showed a decline in seropositivity. Of the population samples (excluding Quebec and the Northern Territories), the youngest age group available (17-24) showed the **highest seropositivity rate at 44.8%**. (3) In the same report, the 25-39 age group showed 34.2% seropositivity, ages 40-59 27.7% and ages 70 and above 14.2%. There is no availability of data for seropositivity under 17 years old which is a significant limitation.
- In a serosurvey conducted by Hema-Quebec released in March 2022, the 17-24 age group showed the **highest seroprevalence rate at 40.3%**. (4)
- Previous seroprevalence reports from April to December 2021, by the COVID-19 Immunity Task Force & Canadian Blood Services, show that the **17-24 age group consistently have the highest seroprevalence rate out of all age groups**, with the highest rate being 11.37% in December 2021. (5) The most recent seropositivity rate of the same age group was reported to be 44.8%, which demonstrates the large increase in seropositivity rates that occurred between December 2021 and March 2022.

## Vaccination in Child Populations

- In Canada as of April 24, 2022, **41.43% of the 5 to 11 age group has been fully vaccinated (two doses)** against the SARS-CoV-2 virus, compared to all other age groups having >80% of the group receiving at least two doses of the vaccine. (6)
- In the U.S. as of May 4, 2022, **28% of 5- to 11-year-olds and 58% of 12- to 17-year-olds have received their second dose**. (7)

## OUTLOOK

- There is still low vaccination coverage in the eligible child population between 5-11 years, while the youngest ages remain ineligible for vaccination. Vaccine effectiveness against infection with the Omicron BA.1 variant was estimated to be very low for children, although protection against severe disease remained high (8). Previous infections with Omicron BA.1 may not protect well against infection with new variants, particularly Omicron [BA.4](#), [BA.5](#) and [BA.2.12.1](#) As a result, COVID-19 infection rates, and re-infections, are expected to continue to rise in these groups.
- The findings presented are relevant as reported cases in children and adults have grossly under-represented the true rate of infection when based on PCR and antigen testing results.

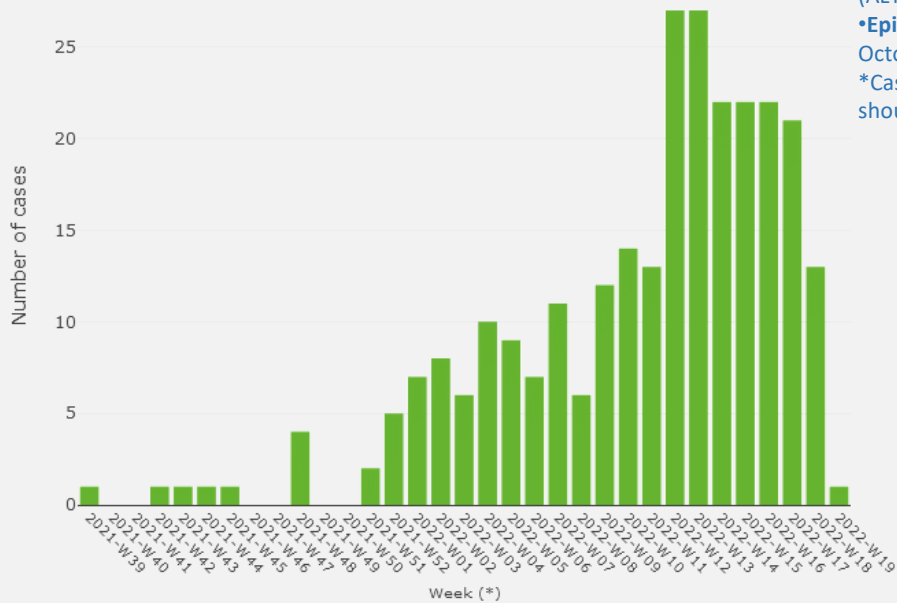
Testing across all age groups, regardless of clinical presentation, may lead to a better understanding of the epidemiology of a disease. In children, symptoms of COVID-19 have mostly been described as mild or asymptomatic and can overlap with many other respiratory viruses such as Influenza. Although laboratory findings may not change the short-term treatment of a COVID-19 infection, the confirmed diagnosis could provide insight into long-term consequences. This can be true for any emerging disease or diseases that may be not yet known or fully described. One recent example is the ongoing unknown acute hepatitis in children reported globally.

# Joint ECDC-WHO Regional Office for Europe Hepatitis of Unknown Origin in Children Surveillance Bulletin

## Surveillance summary

This report provides an overview of the cases of hepatitis of unknown origin in children aged 16 years and below reported to ECDC and the WHO Regional Office for Europe through The European Surveillance System (TESSy) hosted at ECDC. As of 20 May 2022, 276 cases of acute hepatitis of unknown aetiology in children aged 16 years and below have been reported from the European region, of which 276 were classified as probable and none as epidemiologically linked, by 16 countries (Austria (two), Belgium (14), Cyprus (two), Denmark (seven), Greece (three), Ireland (six), Italy (27), the Netherlands (14), Norway (five), Poland (one), Portugal (11), Republic of Moldova (one), Serbia (one), Spain (29), Sweden (nine), and the United Kingdom (144)). Of the 276 probable cases, 162 had reported information on outcome. Of these, 138 have recovered, while 23 remain under medical care. The epicurve shows cases by the date of onset of first symptoms of disease when available, and the date of hospitalisation or date used for statistics when the former are not available. A sustained increase in the number of reported cases has occurred from week 51 2021, followed by a sharp rise corresponding with an observed maximum on weeks 12 and 13 2022. As severe hepatitis can take some time to develop after the onset of the first symptoms and as investigations take time, there may be a delay in the reporting of cases. The recent decrease in cases is therefore challenging to interpret. The majority (75.4%) of cases are <5 years of age. Of 156 cases with information, 22 (14.1%) were admitted to an intensive care unit. Of the 117 cases for which this information was available, 14 (12%) have received a liver transplant. There has been one death associated with this disease. Overall, 181 cases were tested for adenovirus by any specimen type, of which 110 (60.8%) tested positive. The positivity rate was the highest in whole blood specimens (69.5%). Typing data were only available for four cases: type 40 (n = 1), type 41 (n = 2), and type other (n = 1). Of the 188 cases PCR tested for SARS-CoV-2, 23 (12.2%) tested positive. Serology results for SARS-CoV-2 were only available for 26 cases, of which 19 (73.1%) had a positive finding. Of the 63 cases with data on COVID-19 vaccination, 53 (84.1%) were unvaccinated.

Number of cases per week by date of onset of illness



## Case definition used in EU/EEA

•**Confirmed:** N/A

•**Probable:** a person presenting with an acute hepatitis (non-hepatitis viruses A, B, C, D and E\*) with aspartate transaminase (AST) or alanine transaminase (ALT) over 500 IU/L, who is 16 years or younger, since 1 October 2021.

•**Epi-linked:** a person presenting with an acute hepatitis (non-hepatitis viruses A, B, C, D and E\*) of any age who is a close contact of a probable case, since 1 October 2021.

\*Cases of hepatitis with known aetiology, such those due to specific infectious diseases, drug toxicity, and metabolic hereditary, or autoimmune disorders, should not be reported under this protocol.

Number of identified cases by country, EU/EEA, 19 May 2022

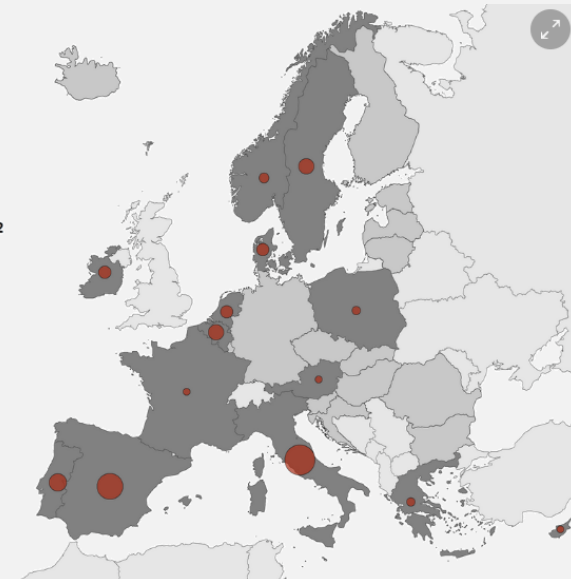
Country	Number of cases
Austria	2
Belgium	9
Cyprus	2
Denmark	6
France	2
Greece	3
Ireland	6
Italy	35
Netherlands	6
Norway	4
Poland	3
Portugal	12
Spain	26
Sweden	9
<b>Total</b>	<b>125</b>



Geographical distribution of acute hepatitis cases of unknown aetiology in children aged 16 years or younger in EU/EEA countries, as of 19 May 2022



Countries not visible in the main map extent  
 Liechtenstein  
 Malta



# The Long-Term Impact of Long COVID



With over 517 million reported cases of SARS-CoV-2 globally, the burden of the pandemic extends far beyond the acute infections, hospitalizations, and deaths. Beyond links to increased risk of other metabolic (e.g., diabetes<sup>1</sup>) and cardiovascular diseases<sup>2</sup>, survivors of COVID-19 can experience unpleasant and oftentimes debilitating symptoms that last much longer than the initial course of illness. At this time, the post-acute COVID-19 syndrome – otherwise known as “long COVID” – can be challenging to recognize and quantify. Actions can be taken on the individual, organizational, and institutional levels to mitigate its disruptive consequences as our understanding of long COVID continues to improve. In this report, we define long COVID, describe its clinical characteristics and known epidemiology, discuss our concerns, and highlight actions that can help mitigate the consequences of long COVID from a population health and societal perspective.

## Executive Summary

**What is long COVID?** - Post-acute COVID-19 syndrome – otherwise known as “long COVID” – presents as symptoms that exist months beyond the initial acute SARS-CoV-2 infection. Commonly observed symptoms, which include shortness of breath, fatigue, and cognitive issues like “brain fog” (Figure 1), can be disruptive. Long COVID may affect multiple systems through various proposed mechanisms. While the World Health Organization defines long COVID as persistent or newly onset symptoms around three months after initial acute infection – that last for at least two months – the lived experience and biological effects of long COVID can extend much longer.

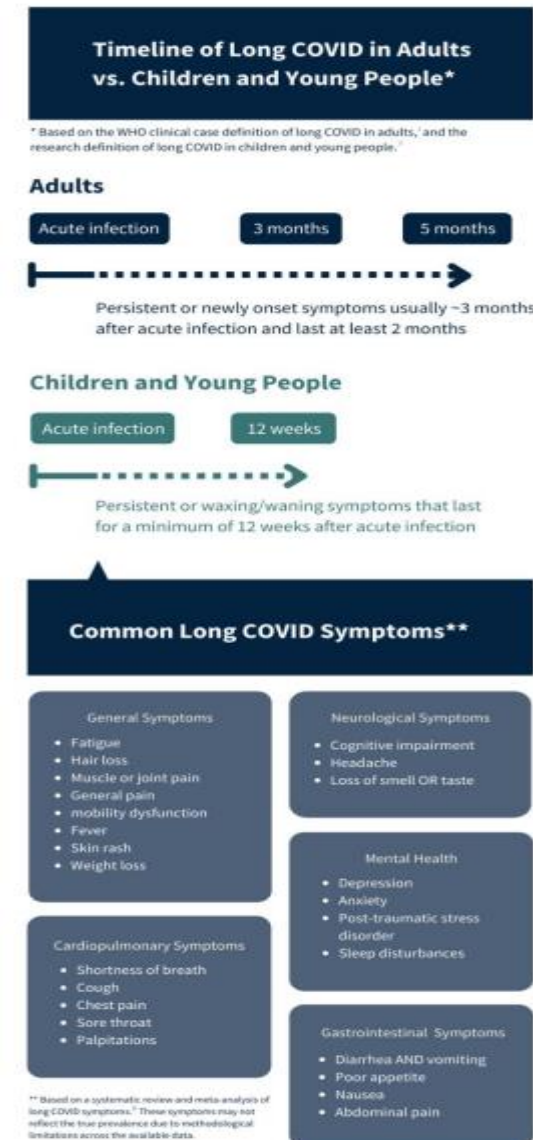
Who is affected by long COVID? All individuals infected with SARS-CoV-2 have the possibility of developing long COVID. A systematic review of recent studies showed that 10% to 35% of people infected with mild SARS-CoV-2 are estimated to have remaining symptoms after three weeks. The U.K. is the only country actively tracking the prevalence and incidence of long COVID across its population. As of April 7, 2022, it is estimated that 1.7 million people in the U.K. are living with long COVID. Early data from the U.K. suggests that the odds of self-reported long COVID symptoms four to eight weeks after are higher for those who are triple-vaccinated with a first infection compatible with Omicron BA.1 compared to BA.2, but no difference among those infected with Omicron BA.1 compared to Delta.

At this time, long COVID is not reflected in the daily statistics presented or used to make policy decisions presented in most locations. As with any new condition, long COVID can often be misunderstood, dismissed, and underreported. Challenges due to varying definitions of persistent symptoms, misclassifying cases, and limitations to research methodologies are common. Despite these challenges, a greater consensus towards the foundational understanding of long COVID continues to build.

**Why is long COVID concerning?** **(1)** A continual risk of developing long COVID occurs with each SARS-CoV-2 re-infection. **(3)** Underreporting of long COVID is likely due to challenges in surveillance arising from both individual-level factors (e.g., idiosyncratic, syndromic nature of COVID-19) and systematic challenges (e.g., lack of large-scale, confirmatory testing). **(4)** Growing proportions of populations affected may lead to increased healthcare needs and disruptions to the labour force and supply chains.

What can be done to mitigate the effects of long COVID? **(1)** Reduce SARS-CoV-2 transmission through layering safety measures (e.g., self-isolating when infected/a close contact, improving ventilation in indoor settings, and masking in indoor settings). **(2)** Although there are no known therapeutics to treat long COVID currently, hypothesized treatments are in its early research stages. In the meantime, designated clinics in several countries aim to take a multidisciplinary, clinical approach to managing long COVID symptoms. **(3)** Recognition of long COVID as a physical or mental impairment to reduce stigmatization and provide support to those suffering. **(4)** Accommodations and/or protections against legal discrimination in the workplace.

Please find the full focus report from BlueDot [here](#)



**Figure 1:** Timeline of the standardized definition of long COVID in adults and research definition of long COVID in children and young people, and commonly observed long COVID symptoms.

# War in Ukraine

Russian forces appear to be consolidating their positions in the east of the country after using heavy firepower to weaken Ukraine's defences.

Here are the latest developments:

- Bombardment of **Donbas** region by Russia forces is intensifying
- Russian reinforcements expected to hold positions north of **Kharkiv**
- Russia preparing to surround the key city of **Severodonetsk**

Source: [Ukraine war in maps: Tracking the Russian invasion - BBC News](#)



## UNHCR RESPONSE IN UKRAINE Protection

- 170,761 people have received targeted protection assistance at border crossing points, online and in locations where people have fled.
- This includes protection counselling and services, including psychosocial support and legal aid. The overall figure includes some 72,250 people who received protection information, support or counselling; over 56,550 people who received information and counselling through hotlines; over 17,550 people who received legal counselling or assistance; over 15,350 people who received psychosocial support or psychological first aid; more than 5,350 who received social support. This is in addition to some 2,075 protection monitoring missions.
- UNHCR also provides protection information and counselling and replies to individual inquiries by email and telephone, responding to approximately 250 emails and 100 calls a day.
- On 12 May, UNHCR conducted monitoring visits to four accommodation centres in Poltava Oblast as well as a telerehabilitation centre accommodating persons with impaired mobility. UNHCR carried out needs assessments focusing on shelter and long-term solutions for IDP housing. On the same day, UNHCR with the Government Commissioner of the Rights of Persons with Disabilities carried out visits and assessments in Solotvyno and Tiachiv (Zakarpattia Oblast). Efforts will be made to support the facilities to provide appropriate care, medical supplies and domestic items.
- UNHCR Partner NEHEMIA began classes for displaced children and youth in seven temporary accommodation centres in Uzhhorod, with some 140 to 320 displaced children and youth participating each week.

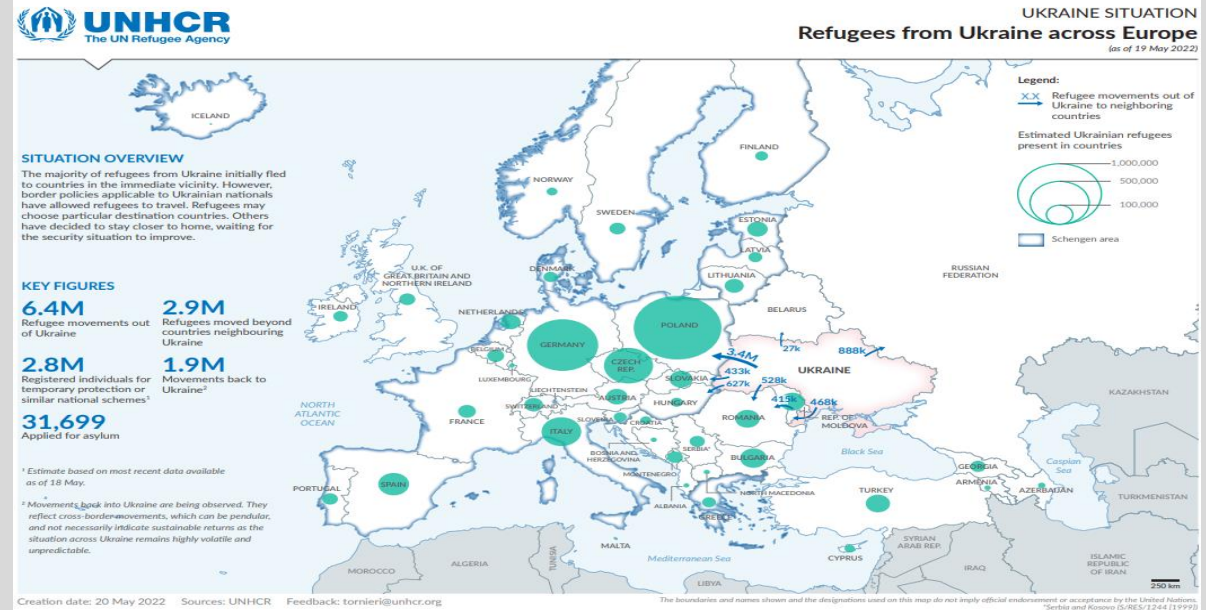
## Core Relief Items

- To date, 422,130 people have benefitted from core relief items and food assistance across eastern, central and western Ukraine. This includes some 82,500 people who received food assistance and 24,000 who received emergency shelter assistance; the remaining 315,500 people received core relief items or winter clothes.

UNHCR, as part of interagency humanitarian convoys, has reached some 68,200 people in the hardest hit areas with life-saving assistance since the beginning of the war. Access to the hardest hit areas remains extremely challenging with continuing security risks, both for affected civilians as well as humanitarian actors.

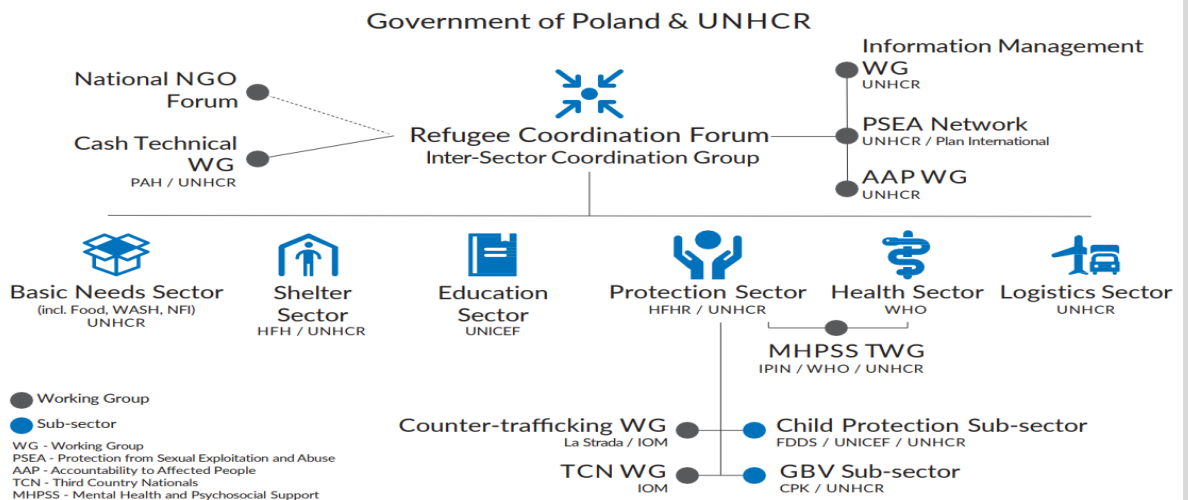
- Last week, UNHCR delivered 1,000 mattresses, blankets and solar lamps as well as 455 hygiene kits for people in bomb shelters in Kharkiv. UNHCR and partner Proliska also distributed hundreds of blankets, solar lamps, mattresses, towels and hygiene kits for people in both Avdiivka, Donetsk Oblast as well as in the Lviv area.
- So far, UNHCR has supported 163 reception centres and collective centres run by the Government to increase their capacity to host IDPs. A total of 46,488 additional sleeping spaces at these centres have so far been created.

Source: [UNHCR Ukraine situation Flash Update 13](#)



## Regional Refugee Response Plan For the Ukraine Situation

## REFUGEE COORDINATION FORUM - POLAND





# Other Infectious Disease Outbreaks/ Conflicts



## Poliomyelitis

**Mozambique** - On May 18, 2022, health authorities in Mozambique confirmed a wild poliovirus type-1 (WPV-1) case through the Global Polio Laboratory Network in Tete province, Mozambique. The affected individual is a child from the Changara district who experienced the onset of paralysis on March 25. This is the second case of WPV1 to be detected in the southeast African region in the last five years, with the first one detected in Malawi earlier in 2022. Genome sequencing of the virus has indicated that the detected WPV-1 strain in Mozambique is related to the imported case of WPV1 discovered in Malawi in February. The last recorded case of wild poliovirus in Mozambique was in 1992. Wild poliovirus remains only endemic in Afghanistan and Pakistan, and globally there were only five cases in 2021. While the detection of another WPV-1 case in the region is concerning, Mozambique proactively took preventative measures after the first case was detected in Malawi. According to the Global Polio Eradication Initiative (GPEI), Mozambique participated in a multi-country coordinated vaccination campaign and has already completed two vaccination rounds. Approximately 4.2 million children across Mozambique have been vaccinated against polio during the most recent vaccination campaign. The WHO and GPEI are supporting the Mozambique health authorities in carrying out a risk assessment, increased surveillance, and outbreak response. According to the WHO, Mozambique and four neighbouring countries of Malawi, Tanzania, Zambia, and Zimbabwe plan to immunize 23 million children under five years against polio by August 2022.

This event is noteworthy as the re-emergence of wild poliovirus has been highlighted as a potential threat amid all mass vaccination disruptions since the beginning of the COVID-19 pandemic. Additionally, the detection of a wild polio case re-emphasizes that as long as wild polio remains endemic anywhere in the world, the risk of international spread of poliovirus remains a Public Health Emergency of International Concern (PHEIC), despite apparent progress made in the two remaining countries with endemic wild poliovirus. Therefore, it is critical that all countries strengthen surveillance for acute flaccid paralysis cases to rapidly detect any new virus importation and facilitate a rapid response, particularly those with relatively low vaccination coverage and high connectivity to polio-affected regions.

**Source:** Insights by BlueDot - [ProMed](#)

## Crimean-Congo Hemorrhagic Fever (CCHF)

**Iraq** - The Kurdistan Region has recorded a second infection with "hemorrhagic fever" in a citizen of Sinjar district in Nineveh Governorate. It is noteworthy that this is the 2nd case of hemorrhagic fever in the Kurdistan region, and the 1st was recorded in Erbil a few days ago.

**Source:** Insights by BlueDot - [ProMed](#)

**Kazakhstan** - A case under-investigation of Crimean-Congo Hemorrhagic Fever (CCHF) has been reported in the city of Shymkent, south central Kazakhstan in 2022. The 46-year-old patient was in severe condition when admitted to a local infectious disease hospital. A total of 15 close contacts have been identified including nine health care workers. CCHF is endemic to the southern region of the country with disease activity reported yearly. In 2021, the Turkestan region reported two cases of CCHF. Health authorities continue to implement disease management activities such as vector control and educational campaigns.

**Source:** Insights by BlueDot - [News](#)

## Unknown Hepatitis

**Mexico** - Cases of severe acute hepatitis of unknown origin have been reported in children in Nuevo Leon, Mexico. The State Secretary of Health of Nuevo Leon reported a least four affected children. Health officials have released limited information on the condition of these cases or test results; however, note that the children are of different ages, and all are stable and undergoing evaluation. Since the first alert from the United Kingdom, probable cases of hepatitis of unknown aetiology in

children continue to be reported from an expanding list of countries worldwide, and investigations on the cause are still underway. BlueDot intelligence team continues to monitor the topic closely for evidence of the most likely cause.

**Source:** Insights by BlueDot - [News Media](#)

**Moldova** - The first case of acute hepatitis of unknown cause has been reported in a child in Moldova. The five-year-old was admitted to an infectious disease hospital on May 7 after experiencing unspecified symptoms. Comprehensive testing has ruled out known causes of liver damage, including viral hepatitis. The patient remains in a stable but serious condition. Worldwide, investigations are ongoing to identify possible causes driving activity related to cases of unknown acute hepatitis.

**Source:** Insights by BlueDot - [ProMed](#)

## Lyme Disease

**Czechia**- Cases of Lyme disease have been reported in the South Bohemian Region, Czechia in 2022. The number of cases reported in this region to-date exceeded the number of cases reported in 2021 (32 cases) with a 59% increase. Media sources are attributing the increase to rising temperatures and humid weather. In Czechia, risk of infection occurs across all regions with tick activity usually peaking between May to July. Health authorities continue to raise awareness among the population to protect against tick bites.

**Source:** Insights by BlueDot – [News Media](#)

**Romania** - A case of Lyme disease has been confirmed in Dâmbovița County, one of the 21 counties in Romania. There is limited information on the affected individual and their condition, but a media report indicates that the case was found in a rural area. Despite the increasingly recognized eco-epidemiological importance of ticks as vectors for numerous zoonotic pathogens in urban areas, data regarding the pathogen diversity and co-infection rates in ticks and wildlife hosts in urban and peri-urban Romania are scanty. Official information indicates that there were a total of 532 human Lyme disease cases confirmed by serology in Romania in 2018. Romania is known to have one of the lowest incidence of Lyme disease in the European continent, however, this might be an under-representation of the true burden of the disease. The upcoming warmer months resulting in increased outdoor activities also increases the risk of tick bites; hence, health authorities are warning the population to protect themselves against tick bites.

**Source:** Insights by BlueDot – [News Media](#)

## Lassa Fever

**South Africa** - On May 12, an imported and fatal case of Lassa fever was reported in South Africa. This is the first case after 15 years, with the last detected case in the country also being an imported case reported in 2007. The National Institute for Communicable Diseases noted that the most recent affected individual is a male from the southeastern province of KwaZulu-Natal who had recently travelled to Nigeria. Upon arrival back to South Africa, they were hospitalized at the Pietermaritzburg hospital, where the individual succumbed to the disease. Health officials are currently conducting contact tracing and are monitoring all potential contacts of the affected individual. There are no confirmed secondary cases of Lassa fever reported to date. Lassa fever is endemic to West Africa and can cause up to 300,000 cases and kill about 5,000 people per year in endemic nations.

**Source:** Insights by BlueDot – [News Media](#)



# International Spread of Monkeypox



## Situation overview (20 May 2022)

**Monkeypox** is a rare **zoonotic disease** caused by the monkeypox virus, which belongs to the same group of viruses as the eradicated smallpox virus. The disease occurs in the rainforest areas of West and Central Africa and sporadically in travellers to endemic countries.

Monkeypox is considered to **spread primarily through contact with animals** harbouring the virus in endemic regions, or through **close contact with infected individuals** (most likely via contact with skin lesions or contaminated material (fomites), and/or through respiratory droplets). A single outbreak related to the importation of animals sold as exotic pets in the U.S. from Ghana, where the disease is endemic, occurred in 2003.

Monkeypox has a **fairly long incubation** (asymptomatic) period **of usually 7 to 14 days but can range from 5 to 21 days**. Individuals may be infectious during the prodromal stage (fever, non-specific clinical signs) before skin lesions develop but this is poorly understood.

Monkeypox is usually a mild self-limiting illness and most people recover within a few weeks. The clinical differential diagnoses to consider include other rash illnesses, such as chickenpox, measles, bacterial skin infections, scabies, syphilis, and medication-associated allergies. Lymphadenopathy during the prodromal stage of illness can be a clinical feature to distinguish monkeypox from chickenpox or smallpox.

**Ongoing monkeypox outbreaks in 2022 have been documented in Nigeria, Democratic Republic of the Congo (DRC), and Cameroon.** Although the surveillance of monkeypox comes with challenges and the true extent of the burden is poorly understood, historically the DRC has the largest proportion of cases and deaths documented.

On **May 7, 2022**, the **United Kingdom Health Security Agency (UKHSA)** **confirmed a monkeypox** case in England. According to officially available data, the affected individual has a recent history of travel to Nigeria, where monkeypox is endemic and cases are detected regularly in recent years.

On May 14, 2022, two additional **monkeypox cases were confirmed in London**. The two new cases are from the same household but are unconnected to the previously confirmed index case reported on May 7, and are not related to a history of travel to any known endemic countries.

Since then, and for the first time, additional cases without a history of travel to an endemic region have been reported in the **United Kingdom** as well as **Portugal, Spain, Canada (Montreal, Quebec), Italy, Sweden, United States (Massachusetts and New York), France, Belgium, Australia, Germany, Netherlands, and Israel** (Table 1).

The likely source(s) of all cases are being investigated. The case in the United States had a recent travel history to Canada and may be linked to some cases in Canada, while the Italian case had recently travelled to the Canary Islands, and the case in Australia had a recent history of travel to the U.K..

On May 16, the U.K. made available genomic sequencing information from the first cases, and preliminary phylogenetic analysis of the genome of one case in Portugal indicates that all the samples from both countries belong to the West African clade of monkeypox. The sample from Portugal is closely related to previous virus samples (from past exportation events) from Nigeria.

The West African clade is considered to be less severe than the Congo Basin clade, with deaths occurring in about one percent of infections in the endemic region. The Congo Basin clade (also named Central African clade) can cause death in as

Country	Reported cases of monkeypox	Confirmed cases of monkeypox
United Kingdom	20	20
Spain	23	7
Portugal	34	14
United States	1	1
Canada	17	2
Italy	3	1
Sweden	1	1
Belgium	2	2
Germany	1	1
Australia	1	1
Netherlands	Unknown	1
Israel	1	1

many as 1 in 10 people who contract the disease in that region.

Of the available case descriptions, the majority of cases have been in adult men, many self-identifying as men who have sex with men (MSM). Most cases have also presented to specialized clinics for sexually-transmitted infections (STIs), with lesions on the genitalia or peri-genital area, indicating that transmission has most likely occurred during close physical contact during sexual activities.

In recent years, countries with endemic monkeypox have reported growing numbers and sizes of outbreaks. Contributing factors likely include waning immunity at the population level since the discontinuation of smallpox vaccination, expanding human encroachment and degradation of wildlife habitats, and increasing bush-meat consumption due to issues of poverty.

## Reasons for concern

Multiple cases in the U.K. with no known epidemiological links, and a recent case in Australia with travel history to the U.K., suggest that the outbreak in the U.K. is larger than the currently reported cases indicate. It is unclear whether all cases among the countries identified are linked.

Monkeypox is an under-reported neglected tropical disease endemic to a number of African countries. The importation of a single known case in the U.K. with travel history to Nigeria suggests that the true extent of the ongoing outbreak in Nigeria is also likely greater than what is officially reported.

Early reports on whole genome sequencing (WGS) suggest that the outbreak is caused by the milder West African viral clade. However, full information on WGS could help determine if each of the cases trace back to a single origin. WGS will also help to explain whether the sudden uptick in cases stems from a mutation that allows this monkeypox virus to transmit more readily than those of the past, or whether these cases can be explained by close contact among a social network.

## Outlook

The likelihood of expansion of the outbreak is considered to be moderate/high due to active surveillance/case finding and potential for further transmission of the virus via close contact, for example, during sexual activities. However, the likelihood of more widespread transmission between individuals without close contact with a case is considered to be low. The likelihood of containment of outbreaks in the countries reporting cases is considered high due to the relatively low transmissibility of the virus and public health capacity among these countries.

Neighbouring countries to Nigeria (such as Benin, Niger, Chad, Cameroon) may also be at risk of importation. Additionally, the cities that are predicted to receive the highest volume of passengers from both Nigeria and London, UK may also be at risk of further importation (Tables 2 and 3). Notably, London, UK represents a large share of the total travel from Nigeria in May, 2022. Several cities that are highly connected to London have already confirmed cases, and more cases could be expected in these locations. • Vaccination with existing smallpox vaccines as a precautionary measure on a large scale is likely unnecessary. It is recommended among close contacts of confirmed cases to contain the spread, ideally within 4 days of exposure. Identification and isolation of cases and their close contacts is important to contain these outbreaks.

The likelihood of further importation of cases from endemic countries in the future is considered to be growing, due to the increasing frequency and sizes of outbreaks.

# Latest country reports

## -Monkeypox-



**Argentina** - The first suspected case of monkeypox is under investigation in Buenos Aires, Argentina since May 22. This is the first known probable case reported in the Latin American region. Available information indicates that the affected individual has a recent history of travel to an unspecified location in Spain between April 28 and May 16 where an outbreak of monkeypox has been reported in several cities. Information on the demographics and clinical symptoms is unavailable. Monkeypox is a neglected tropical disease endemic to west and central African countries. It is considered to spread primarily through animal contact in endemic regions but can also spread between people through direct contact with skin lesions and/or exposure to infectious respiratory droplets. This event is noteworthy not only because of the number of cases reported in a short timeframe across multiple countries, but also because some cases are associated with travel to the UK and Spain, indicating community transmission of monkeypox may be occurring in these locations.

Source: [NEWS MEDIA](#).

**Belgium** - As of May 23, 2022, available information indicates that health authorities in Belgium are requesting a 21-day isolation period for all positive confirmed monkeypox cases. However, this measure is not yet specific to those classified as close contacts of a confirmed case. Close contacts are encouraged to remain vigilant, especially if in contact with vulnerable people. Belgium became the first country to set up isolation measures to avoid the further spread of monkeypox as cases continue to emerge globally. However, the UK, indicated in a statement that those classified as close contact who have a high risk of developing the disease should self-isolate for 21 days. That includes household contacts or medical professionals who may have come into contact with an infected patient.

**Denmark** - The Ministry of Health of Denmark has confirmed its first case of monkeypox in the country. According to preliminary information, the case is an adult male who had recently returned from Spain and is currently in isolation. Further information about the case is limited. Health authorities added that they do not expect widespread infection in Denmark, but we are following the situation closely, including tracing close contacts. Monkeypox is a neglected tropical disease endemic to west and central African countries. It is considered to spread primarily through animal contact in endemic regions but can also spread between people through direct contact with skin lesions and/or exposure to infectious respiratory droplets. This event is noteworthy not only because of the number of cases reported in a short timeframe across multiple countries, but also because some cases in the current outbreak have been associated with travel to the UK or Spain, where community transmission of monkeypox is suspected.

Source: [Reuters](#)

**Pakistan** - The first cases of monkeypox under investigation have been reported in Lahore, Pakistan. There is limited information about the demographics of the two individuals and any history of recent travel to any of the countries with ongoing reported outbreaks. Information indicates that both affected individuals have been placed in the isolation ward at a local hospital in Lahore while awaiting laboratory results. Monkeypox is a neglected tropical disease endemic to west and central African countries. It is considered to spread primarily through animal contact in endemic regions but can also spread between people through direct contact with skin lesions and/or exposure to infectious respiratory droplets. This event is noteworthy not only because of the number of cases reported in a short timeframe across multiple countries but also because some cases have been associated with travel to either the UK or Spain where community transmission of monkeypox may be taking place.

Source: <https://propakistani.pk/2022/05/23/first-2-cases-of-monkeypox-detected-in-pakistan/>

**Austria** - The first case of monkeypox remains under investigation in Austria. According to officially available information, the affected individual is a 35-year-old man from Vienna who sought medical attention at a local hospital with a low-grade fever and a rash on his face. There is no available information on the individual's recent travel history to any of the countries that have reported monkeypox cases and no information of a known close contact. Laboratory sample results are expected on Monday, May 23. Monkeypox is a neglected tropical disease endemic to west and central African countries. It is considered to spread primarily through animal contact in endemic regions but can also spread between people through direct contact with skin lesions and/or exposure to infectious respiratory droplets. This event is noteworthy not only because of the number of cases reported in a short timeframe across multiple countries, but also because some cases in the current outbreak may have been associated with travel to the UK where community transmission of monkeypox is suspected.

Source: <https://www.iefimerida.gr/kosmos/aystria-proto-ypto-to-kroysma-eylogias-pithikon>

**Canada** - On May 22, Toronto Public Health Unit indicated that the first suspected case of monkeypox is under investigation in Ontario. Officially available information indicates that the affected individual is a man in his 40s who had close contact with someone who has a recent history of travel to Montreal, Quebec where at least 17 cases have been reported of which five have received laboratory confirmation. As the unprecedented multicountry monkeypox outbreak continues to expand, available information suggests that human-to-human transmission is occurring among people in close physical contact with cases who are symptomatic. The BlueDot intelligence team is closely monitoring the situation and will provide updates and a risk assessment report as they become available.

Source: <https://infotel.ca/newsitem/cda-monkeypox/cp1028288817>

**Norway** - The first case of monkeypox has been announced in Norway. According to the country's National Institute of Public Health (FHI), a foreigner who visited the city of Oslo, Norway's capital, between May 6-10, has received laboratory confirmation of monkeypox after returning to their country of origin. There is limited information on the demographics of the affected individual and their country of origin has not been disclosed. Monkeypox is a neglected tropical disease endemic to west and central African countries. It is considered to spread primarily through animal contact in endemic regions but can also spread between people through direct contact with skin lesions and/or exposure to infectious respiratory droplets. This event is noteworthy not only because of the number of cases reported in a short timeframe across multiple countries, but also because some cases in the current outbreak may have been associated with travel to the UK where community transmission of monkeypox is suspected.

Source: <https://whbl.com/2022/05/21/norway-warns-of-possible-monkeypox-infections-in-oslo/>

**United Arab Emirates** - The Ministry of Health and Community Protection in the United Arab Emirates (UAE) has confirmed the country's first case of monkeypox. The Ministry reports that the case is a woman visiting the UAE from a country in West Africa and is currently receiving treatment. News media quotes the Ministry stating that necessary measures are being implemented to investigate and monitor all close contacts of the case. Monkeypox is a neglected tropical disease endemic to west and central African countries. It is considered to spread primarily through animal contact in endemic regions but can also spread between people through direct contact with skin lesions and/or exposure to infectious respiratory droplets. This event is noteworthy as it appears to have been acquired in an endemic region, and suggests a larger outbreak is taking place in the (unspecified) origin location. This case does not appear to be directly linked to the ongoing global outbreak in non-endemic countries.

Source: [NEWS MEDIA](#)

# ECDC risk assessment for the EU/EEA

## -Monkeypox-

This assessment is based on evidence available to ECDC at the time of publication. It follows the ECDC rapid risk assessment methodology, where the overall risk is determined by a combination of the probability of infection and the impact of the disease on the affected population. ECDC will keep monitoring the event and will reassess the risk depending on its evolution and the implemented response measures.

### What is the risk of further spread of monkeypox in EU/EEA countries?

#### Risk in persons with multiple sexual partners, including some MSM

Human-to-human transmission of MPX occurs through close contact with infectious material from skin lesions of an infected person, and also through respiratory droplets in prolonged face-to-face contact and through fomites. The predominance, in the current outbreak, of diagnosed human MPX cases among MSM, and the nature of the presenting lesions in some cases, suggest that transmission occurred during sexual intercourse. Transmission through intact skin contact is less likely but cannot be excluded. Although sequencing data are not yet available to indicate that the outbreak is the result of one introduction, the cases of MPX within parts of the MSM community whose sexual networks are inter-connected could be considered a possible source of introduction. Particular sexual practices (e.g. having multiple casual sexual contacts and/or multiple sexual partners, attending chemsex parties) that may be present within some parts of the MSM community could further facilitate the transmission of monkeypox. Outbreaks of other sexually transmitted infections among MSM can be linked to travel abroad and to social and mass gathering events (e.g., pride events). Several such events are taking place in Europe over the spring and summer months, which can contribute to further accelerate the transmission of MPXV. In addition, smallpox vaccination, which confers cross-protection, has been discontinued since the 1980s and only a small percentage of military and frontline health professionals have been vaccinated in recent years. Therefore, a large part of the population is vulnerable to MPXV. **The probability of further spread of MPXV among persons with multiple sexual partners in interconnected sexual networks (including some groups of MSM) in EU/EEA countries and globally, in the coming months, is therefore assessed as high.**

While most MPX cases reported thus far in this outbreak have been described as mild, the number of reported cases is too low to reliably estimate rates of severe morbidity and mortality, and a clear overview of the clinical presentations in the reported cases is currently lacking. Severity estimates in the literature exist from endemic countries and the 2003 USA outbreak. In Nigeria, the CFR is estimated at 3.3% for cases diagnosed between 2017–2022, however, it is a different health care and population setting, where the disease is endemic and is probably transmitted through different routes (e.g., more frequent contact with animals). In the 2003 outbreak in the USA, which was exclusively driven by contact with infected pets (rodents), five out of 34 confirmed cases (15%) were defined as severely ill, and no deaths were reported. Patients under 18 years of age did not develop severe illness more frequently, compared to older patients. These severity estimates are probably biased upwards. Immunocompromised patients are believed to be more at risk for severe disease and the prevalence of HIV among MSM is higher than in the broader population. However, most people living with human immunodeficiency virus (PLWHIV) in EU/EEA (range 67–87%) are receiving antiretroviral treatment, and are not severely immunocompromised. Moreover, some treatment options are available for severe MPX cases. Therefore, the impact of MPX is assessed as low, which combined with the high probability of infection leads to an overall moderate risk for persons with multiple sexual partners. **It should be noted that the above-mentioned moderate risk may be higher for older people who have multiple sexual partners or people with untreated HIV infection. ECDC will reassess the risk as more information (including clinical presentation and outcomes) becomes available.**

#### Risk for the broader population

Based on the evidence from the cases in this outbreak detected to date, overall, the probability of further spread of MPXV among the broader population in EU/EEA countries and globally in the coming months, is assessed as very low leading to an overall low risk for the general population. However, the individual risk for very young children,

pregnant women, elderly or immunocompromised individuals among close contacts of MPX cases may be high due to the higher impact of the disease in these groups.

#### Risk for health professionals Healthcare workers

Transmission to HCWs exposed to patients with MPX is possible, given the risk of transmission of other orthopoxviruses, such as smallpox, and has been reported in outbreaks in endemic countries. In a study of 57 HCWs exposed to patients with MPX, including nursing staff, radiology technicians, emergency department staff and physicians, no case of infection was documented. One HCW in this study had evidence of recent orthopoxvirus seroconversion but had also received smallpox vaccination four months before being exposed. In another outbreak report, monkeypox was transmitted to a HCW, whose only identified exposure was the changing of potentially contaminated bedding of a hospitalised patient with MPX.

**The probability of MPX transmission to HCWs wearing appropriate personal protective equipment (a disposable gown, disposable gloves, disposable shoe or boots covers, respiratory protection (Filtering Face Piece (FFP) 2 respirator), and eye splash protection (goggles or visor) is very low, with the disease having an estimated low impact, leading to an overall low risk.**

**The risk to HCWs with unprotected close contact with MPX cases** (e.g. contact face-to-face for prolonged time, contact with open lesions without gloves, intubation or other invasive medical procedure) **is assessed as moderate**, equivalent to that of a close contact.

#### Laboratory personnel

Occupational exposure and infection from orthopoxviruses have been occasionally reported among laboratory personnel handling virus-containing specimens. **The risk of occupational exposure is estimated to be low for trained laboratory personnel following appropriate biosafety procedures.**

**Unprotected occupational exposure in a laboratory**, particularly involving spillage or aerosolisation with exposure of mucosa, **carries high probability of infection and moderate risk of the disease** (due to the direct exposure of mucosae to potentially significant quantity of virus). **The risk for unprotected laboratory personnel is assessed as high.**

Due to an expected higher impact, the risk may be higher for exposed HCWs and laboratory personnel who are older or immunocompromised.

**Table 1. Summary of risk assessed for the different population categories**

	Persons with multiple sexual partners, including some MSM	Broader population	Health professionals			
			HCWs		Laboratory personnel	
			Proper PPE	Unprotected exposure	Proper procedure and PPE	Unprotected exposure
Probability	High	Very low	Very low	High	Very low	High
Impact	Low	Low	Low	Low	Low	Moderate
<b>Overall risk</b>	<b>Moderate</b>	<b>Low</b>	<b>Low</b>	<b>Moderate</b>	<b>Low</b>	<b>High</b>

Source: <https://www.ecdc.europa.eu/sites/default/files/documents/Monkeypox-multi-country-outbreak.pdf>

# ECDC risk assessment for the EU/EEA

## -Monkeypox-

The following interim case definition is proposed:

### Confirmed case

A person with a laboratory-confirmed monkeypox infection monkeypox virus specific PCR assay positive result **or** orthopoxvirus specific PCR assay positive result which is then confirmed by nucleotide sequence determination of the detected virus as MPXV) with symptom onset since 1st March 2022

### Probable case

A person with an unexplained rash\* on any part of their body **AND** one or more other symptom(s) of monkeypox infection\*\* with symptom onset since 1st March 2022 **AND** one of the following:

- has a positive laboratory test result on orthopoxvirus infection (e.g. orthopoxvirus specific positive PCR without sequencing, electron microscopy, serology);
- has an epidemiological link to a confirmed or probable case of monkeypox in the 21 days before symptom onset;
- reports travel to MPX endemic countries in the 21 days before symptom onset;
- is a person (of any sexual orientation) who had multiple or anonymous sexual partners in the 21 days before symptom onset;
- is a man who has sex with men.

### OR

A person with an unexplained generalised or localised maculopapular or vesiculopustular rash with centrifugal spread, with lesions showing umbilication or scabbing, lymphadenopathy and one or more other MPX-compatible symptoms\*\*.

Patients who fulfil the criteria for probable cases should be tested with a monkeypox virus specific PCR assay or an orthopoxvirus specific PCR assay which is then confirmed through sequencing. If negative, these patients should be excluded.

### Management of cases

Newly identified cases of MPX should undergo a medical assessment for severity and risk factors (e.g. underlying conditions or medications affecting immune competence, untreated HIV infection etc.). Those at increased risk of severe disease from MPX may require hospitalisation and/or treatment with antivirals (see Overall preparedness and response section). People at increased risk for severe disease include infants and young children, pregnant women, elderly and severely immunocompromised persons. A common treatment protocol should be considered for patients treated in EU/EEA countries in order to provide much needed efficacy data. Tecovirimat also has the potential to cause resistance to pox viruses, therefore, careful monitoring of treated patients should be undertaken, particularly the immunosuppressed. Potential combination with brincidofovir can also be explored. The majority of MPX cases reported so far in this outbreak have been mild with localised disease and self-limiting symptoms. Therefore, hospitalisation is not necessary, unless the patient's clinical condition requires it. Patients can remain isolated at home with supportive care (analgesia, hydration). If isolation is not possible at home, then hospitalisation or other arrangement can be considered.

MPXV can be transmitted to anyone, regardless of sexual orientation or gender identity, through contact with body fluids, monkeypox sores, or shared items. Therefore, cases should be instructed to isolate until the rash scabs fall off, which indicates the end of infectiousness. Cases should remain in their own room, when at home, and use designated household items

(clothes, bed linen, towels, eating utensils, plates, glasses), which should not be shared with other members of the household (see the next section for information on cleaning and disinfection of such materials). Cases should also avoid contact with immunocompromised persons until their rash heals. A MPX case should be monitored daily by public health authorities (e.g. via telephone calls) and can temporarily leave their home (e.g. for medical appointments and necessary exercise for their mental health stability), provided they wear a medical face mask and their rash is covered (e.g. long sleeves and pants). They should also be instructed to avoid close or intimate contact (hugging, kissing, prolonged face-to-face contact in closed spaces) with other people until their rash heals completely.

Careful hand and respiratory hygiene are recommended for the case and everyone in the household; a medical face mask should be used when in contact with other people. Cases should abstain from sexual activity until scabs fall off. While the use of condoms is consistently encouraged during sex for prevention of HIV and other STIs, cases should be made aware that the use of condoms alone cannot provide full protection against MPXV infection, as contact with skin lesions is involved for its transmission. Because transmission through droplets is possible, avoidance of close, physical contact is recommended until the scabs fall off.

Health authorities and policy makers should consider that sex workers may be disproportionately affected by this outbreak and may need incentives to be able to comply with the full recommendation of isolation until the rash heals completely which may last up to four weeks.

Finally, instructions should be given to MPX cases to avoid contact with any mammal pets, and in particular pet rodents (mice, rats, hamsters, gerbils, guinea pigs, squirrels etc), due to the possibility of human-to-pet transmission. Any recent contact with such pets should be noted and animal health services should be contacted for advice.
















### Summary of management approach for contacts of a MPX case

Type of contact	Description	Management guidance
<b>Close contact</b>	<ul style="list-style-type: none"> <li>• Sexual partner</li> <li>• Person(s) living in same household, or similar setting (e.g. camping, overnight sleeping etc)</li> <li>• Person(s) sharing clothing, bedding, utensils etc, while the patient had a rash</li> <li>• Person(s) sharing the same closed workspace/office for long periods of time</li> <li>• Caregivers of MPX case, while symptomatic</li> <li>• HCW who had contact with MPX case (lesions or prolonged face-to-face contact) without appropriate PPE</li> <li>• HCW or other person who suffered a sharps injury or was exposed to MPX case body fluids or aerosol generating procedure without PPE</li> <li>• Laboratory staff suffering exposure to occupational accident with virus-containing sample (splash, sharp or aerosol exposure etc)</li> <li>• Co-passenger seated one -two seats distance around case while they were symptomatic, in airplane, bus or train ≥ 8 hours duration</li> </ul>	<ul style="list-style-type: none"> <li>• Careful benefit/risk assessment for the need for PEP smallpox vaccination</li> <li>• Self-monitor for fever or other MPX symptoms (headache, back ache etc) or new unexplained rash for 21 days from last exposure. In that case self-isolate and abstain from sexual activity until MPX is excluded.</li> <li>• Careful hand hygiene and respiratory etiquette.</li> <li>• Abstain from sexual activity and avoid close physical contact for 21 days or until MPX is excluded.</li> <li>• Avoid contact with mammal pets for 21 days or until MPX is excluded</li> </ul>
<b>All other contacts</b>	<ul style="list-style-type: none"> <li>• Brief social interactions</li> <li>• Work colleagues not sharing same office</li> <li>• Persons sharing fitness equipment or sharing the same sauna or bath, without sexual contact</li> <li>• Social encounters/ acquaintances</li> <li>• HCW contact with appropriate PPE</li> </ul>	<ul style="list-style-type: none"> <li>• Depending on the certainty of contact, some of these contacts may be asked to self-monitor for fever or other MPX symptoms (headache, back ache etc) or new unexplained rash for 21 days from last exposure.</li> </ul>

Please find the full ECDC risk assessment [here](#).
















# Summary of information on the individual national Corona restrictions

The icons are linked to the respective information. Please click on the icons for information.

NATO Member State (click on country for official COVID-19 information)		Approved vaccines											
		Comirnaty	Spikevax	Janssen	Vaxzevria	Nuvaxovid	Sputnik V	CoronaVac	Covishield	Convidecia	Covilo	Turkovac	
	<a href="#">Albania</a>	X			X		X	X					
	<a href="#">Belgium</a>	X	X	X	X	X							
	<a href="#">Bulgaria</a>	X	X	X	X	X							
	<a href="#">Canada</a>	X	X	X	X				X				
	<a href="#">Croatia</a>	X	X	X	X	X							
	<a href="#">Czech Republic</a>	X	X	X	X	X							
	<a href="#">Denmark</a>	X	X	X		X							
	<a href="#">Estonia</a>	X	X	X	X	X							
	<a href="#">France</a>	X	X	X	X	X							
	<a href="#">Germany</a>	X	X	X	X	X							
	<a href="#">Great Britain</a>	X	X	X	X								
	<a href="#">Greece</a>	X	X	X	X	X							
	<a href="#">Hungary</a>	X	X	X	X	X	X		X	X	X		EMA Authorized
	<a href="#">Italy</a>	X	X	X	X	X							
	<a href="#">Iceland</a>	X	X	X	X	X							EMA & FDA Authorized

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NATO Member State (click on country for official COVID-19 information)		Approved vaccines										
		Comirnaty	Spikevax	Janssen	Vaxzevria	Nuvaxovid	Sputnik V	CoronaVac	Covishield	Convidecia	Covilo	Turkovac
	<a href="#">Latvia</a>	X	X	X	X	X						
	<a href="#">Lithuania</a>	X	X	X	X	X						
	<a href="#">Luxembourg</a>	X	X	X	X	X						
	<a href="#">Montenegro</a>				X		X			X		
	<a href="#">Netherlands</a>	X	X	X	X	X						
	<a href="#">North Macedonia</a>	X			X		X			X		
	<a href="#">Norway</a>	X	X	X		X						
	<a href="#">Poland</a>	X	X	X	X	X						
	<a href="#">Portugal</a>	X	X	X	X	X						
	<a href="#">Romania</a>	X	X	X	X	X						
	<a href="#">Slovakia</a>	X	X	X	X	X						
	<a href="#">Slovenia</a>	X	X	X	X	X						
	<a href="#">Spain</a>	X	X	X	X	X						
	<a href="#">Turkey</a>	X					X	X				X
	<a href="#">USA</a>	X	X	X								

EMA  
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# Travel Recommendations and other Useful Links

## Travel Recommendations

Many countries have halted some or all international travel since the onset of the COVID-19 pandemic but now have re-open travel some already closed public-travel again. This document outlines key considerations for national health authorities when considering or implementing the gradual return to international travel operations.

The decision-making process should be multisectoral and ensure coordination of the measures implemented by national and international transport authorities and other relevant sectors and be aligned with the overall national strategies for adjusting public health and social measures.

Travel has been shown to facilitate the spread of COVID-19 from affected to unaffected areas. Travel and trade restrictions during a public health event of international concern (PHEIC) are regulated under the International Health Regulations (IHR), part III.

The majority of measures taken by WHO Member States relate to the denial of entry of passengers from countries experiencing outbreaks, followed by flight suspensions, visa restrictions, border closures, and quarantine measures. Currently there are exceptions foreseen for travellers with an essential function or need.

**Information on COVID-19 testing and quarantine of air travellers in the EU and the US you can find following the link:**

- [Guidelines for COVID-19 testing and quarantine of air travellers - Addendum to the Aviation Health Safety Protocol \(europa.eu\)](#)
- <https://www.cdc.gov/coronavirus/2019-ncov/travelers/how-level-is-determined.html>

**More information about traveling worldwide:**

- National regulation regarding travel restrictions, flight operation and screening for single countries you will find [here](#) (US) and [here](#) (EU).
- Official IATA travel restrictions. You will find [here](#).

**More information about traveling in the EU**

- by the *European Commission* you will find here:

<https://www.consilium.europa.eu/en/policies/coronavirus/covid-19-travel-and-transport/>

- The *ECDC* publishes a map of EU Member States, broken down by regions, which show the risk levels across the regions in Europe using a traffic light system. Find it [here](#).

As a general rule, information on new measures will be published 24 hours before they come into effect.

All information should also be made available on [Re-open EU](#), which should contain a cross-reference to the map published regularly by the European Centre for Disease Prevention and Control.

## Useful links

**ECDC:**

- [All info about the COVID-19 pandemic](#); (situation updates, latest news and reports, risk assessments etc.)
- [COVID-19 Vaccine tracker](#)
- [SARS-CoV-2 variants dashboard](#) for EU
- [Latest Risk assessment on COVID-19](#), 15 Feb 2021
- All “guidance’s and technical reports” can be found under “All COVID-19 outputs” on this page [here](#)

**WHO:**

- Epi-WIN [webinars and updates](#)
- All information about the COVID-19 pandemic: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>

**CDC:**

- COVID [Data Tracker](#) and [weekly review](#)
- [What’s new and Updated](#)
- [Guidance for COVID-19](#)

**References:**

- European Centre for Disease Prevention and Control <https://www.ecdc.europa.eu/en>
- World Health Organization WHO; [www.who.int](http://www.who.int)
- Centres for Disease Control and Prevention CDC; [www.cdc.gov](http://www.cdc.gov)
- European Commission; [https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response/travel-and-transportation-during-coronavirus-pandemic\\_en](https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response/travel-and-transportation-during-coronavirus-pandemic_en)
- Our World in Data; <https://ourworldindata.org/coronavirus>
- Morgenpost; <https://interaktiv.morgenpost.de/corona-virus-karte-infektionen-deutschland-weltweit/>
- BlueDot; <https://bluedot.global/>