



Update 148 FHP-Update 19 Juni 2024



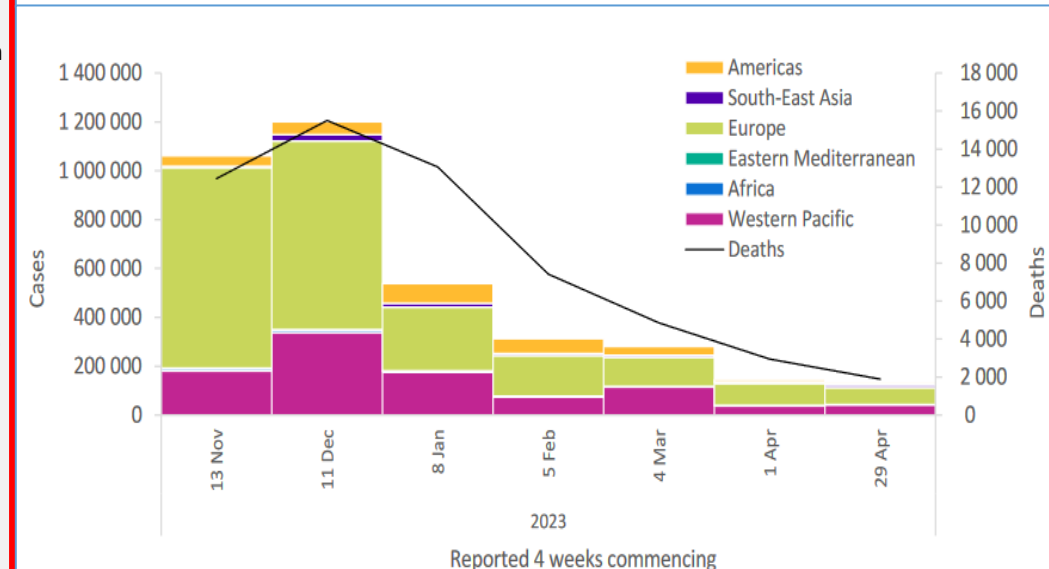
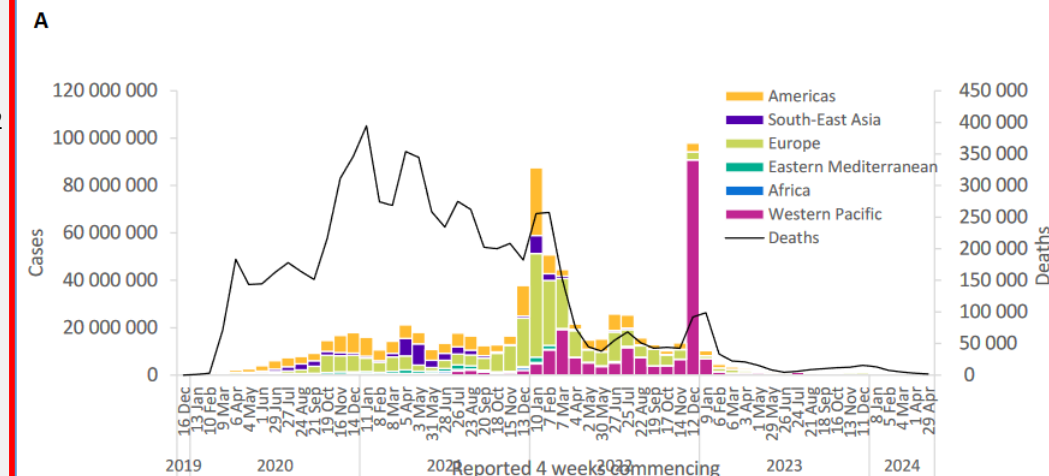
News:

- **ECDC:** The [latest EU/EEA figures show a continuing upward trend](#) in the number of cases of dengue imported from dengue-endemic regions, as well as an increasing number of local outbreaks of West Nile virus infections and dengue within the EU/EEA.
- **African WHO:** migrate from [Epi Info database to District Health Information Software 2](#) for vaccine-preventable disease surveillance platform. The mitigation started in 2019 from Epi Info, a statistical software package developed by the US CDC, with limited capability to integrate with other information systems, affecting reporting timeliness and data use, to the District Health Information Software 2 (DHIS2), a free, open-source software platform for electronic aggregate Integrated Disease Surveillance and Response (IDSR) and case-based surveillance reporting.
- **PHAO/WHO/Mexico IHR NFP:** reported the [first laboratory-confirmed human case of infection with an influenza A\(H5N2\) virus](#) globally, and the first A(H5) virus infection in a person reported in Mexico on 23 May 2024. The case is a 59-year-old resident of the State of Mexico who was hospitalized in Mexico City and had no history of exposure to poultry or other animals. No further cases were reported during the epidemiological investigation. Additionally on 22 May 2024 the first confirmed human infection caused by [avian influenza A\(H5N1\) virus](#) was detected and reported by Australia. The exposure likely occurred in India, where the case had travelled, and where this clade of A(H5N1) viruses has been detected in birds in the past. WHO assesses the **current risk to the general population** posed by this virus, for both countries, to be **low**.
- **WHO/DRC:** described a [new variant of clade I MPXV Mpox Virus in South Kivu, Democratic Republic of the Congo](#). The continuing development of the mpox outbreak in the Democratic Republic of the Congo remains concerning due to the continuing high incidence of mpox reported in endemic areas of the country in recent years with high case fatality, the geographic expansion to previously unaffected areas, the appearance of a novel strain of clade I MPXV, the observed sustained community transmission driven by sexual transmission and other forms of close physical contact in the eastern part of the country, resource constraints to respond over such a wide geographic area, limited public awareness of mpox, the insufficient availability of treatment kits and lack of vaccines to date, multiple competing public health priorities, and insecurity. Based on the situation, WHO assesses that the risk associated with mpox in the Democratic Republic of the Congo remains high.
- **WHO:** To strengthen global surveillance, and monitor temporal trends and disease incidence, WHO has established a global dengue surveillance system with monthly reporting across all WHO regions with a new dashboard now live (https://worldhealthorg.shinyapps.io/dengue_global/). This has so far captured 103 countries including 28 zero reporting countries.
- **WHO:** published a new [Coronavirus disease \(COVID-19\) Epidemiological Update](#) on 17 June 2024. The Epidemiological Update provides an overview of the global, regional and country-level COVID-19 cases and deaths, highlighting key data and trends; as well as other pertinent epidemiological information concerning the COVID-19 pandemic.

Disclaimer:

This update provided by the NATO Centre of Excellence (NATO MILMED COE) on its website is for general information purposes only and cannot be considered as official recommendation. All national and international laws, regulations, and guidelines as well as military orders supersede this information.
All information is provided in good faith, however, the NATO MILMED COE makes no representation or warranty of any kind, express or implied, regarding the accuracy, adequacy, validity, reliability, availability or completeness of any information.
The information published on this website is not intended to substitute professional medical advice, diagnosis or treatment.
The NATO MILMED COE disclaim any liability in connection with the use of this information.

Figure 1. COVID-19 cases and global deaths by 28-day intervals reported by WHO Region, as of 26 May 2024 (A); 13 November 2023 to 26 May 2024 (B)**



ECDC Mass Gathering Monitoring

UEFA - European Football Championship - 2024

Background

This year, the UEFA European Football Championship 2024 will take place in Germany between 14 June and 14 July. Around 2.8 million people are expected to follow the 51 scheduled matches of the 24 qualified national teams, which will take place in 10 stadiums in 10 German cities: Berlin, Dortmund, Düsseldorf, Frankfurt (Main), Gelsenkirchen, Hamburg, Cologne, Leipzig, Munich, Stuttgart.

National teams from the following 24 countries, including host country Germany, have qualified for EURO 2024: Albania, Belgium, Denmark, England, France, Georgia, Italy, Croatia, the Netherlands, Austria, Poland, Portugal, Romania, Scotland, Switzerland, Serbia, Slovakia, Slovenia, Spain, Czech Republic, Turkey, Ukraine and Hungary.

In addition to the matches in the stadiums, a large number of public viewing events, such as the transmission of football matches shown on television outside the home environment, are planned in Germany with a wide variety of sizes.

Summary

Since the start of the monitoring period and as of 13 June, no relevant public health events associated to the UEFA EURO 2024 have been detected.

ECDC assessment:

Mass gathering events involve a large number of visitors in an area at the same time. This may increase the risk of communicable disease outbreaks and non-communicable health risks, including heat stroke, crowd injury and drug- and alcohol-related conditions.

The probability of infection to the EU/EEA citizens with communicable diseases during the UEFA EURO 2024 is considered to be low if preventive measures are applied, e.g. being fully vaccinated according to the national immunisation schedule, following hand and food hygiene, respiratory etiquette, refraining from any activities and contacts if any symptoms occur, and seeking prompt testing and medical advice as needed. This specially applies to immediate vaccine preventable diseases that might be experiencing a recent increase in the EU/EEA, such as measles and whooping cough.

Hajj - Kingdom of Saudi Arabia - 2024

Background

This year, the annual Islamic Hajj pilgrimage will take place in the Kingdom of Saudi Arabia (KSA) between 14 and 19 June. Pilgrims aged 12 years and above are allowed to attend the pilgrimage. Over two million pilgrims are expected to attend Hajj from all over the world, including from 24 EU/EEA countries.

The [Ministry of Health of Saudi Arabia](#) issued a list of requirements for 2024 Hajj and Umrah pilgrims, which includes vaccination requirement with quadrivalent meningococcal vaccine (ACYW) polysaccharide vaccine 10 days prior to arrival and should not exceed three years. Quadrivalent (ACYW) conjugated vaccine within the last five years, and at least 10 days prior to arrival).

Overview

No relevant public health events associated to Hajj have been detected.

On 13 June 2024, the Netherlands reported one case of invasive meningococcal disease (IMD) serogroup W. The case was unvaccinated with onset of symptoms on 16 May. The case is a close contact of travellers to the Kingdom of Saudi Arabia (KSA) who returned to the Netherlands on 8 May. The case itself did not join on the travellers and it is not possible to rule out other potential exposures.

Summary

In recent weeks, 14 cases of invasive meningococcal disease (IMD) serogroup W have been reported in France (4), the United Kingdom (3), the United States (5), Norway (1), and the Netherlands (1), all among travellers or contacts of travellers returning from Umrah pilgrimage in KSA. Travellers eligible for vaccination should be counselled to receive the quadrivalent (ACWY) meningococcal vaccine at least 10 days before departure.

On 29 April 2024, the first MERS-CoV fatality was reported in the Kingdom of Saudi Arabia. Since April 2012, overall, 2 610 laboratory-confirmed cases of MERS-CoV have been reported, including 940 deaths (CFR: 40%) in 12 countries.

ECDC assessment:

ECDC assesses the risk of IMD to the general public in the EU/EEA in connection with these imported cases as very low due to the very low probability of exposure and potential infection. For pilgrims visiting the Hajj and Umrah zones in KSA who are already vaccinated with the quadrivalent meningococcal vaccine, the likelihood of infection is low, as they are protected from the vaccine-induced immunity. For unvaccinated pilgrims, the likelihood of infection is higher, reaching the moderate level of risk.

The probability of infection to the EU/EEA citizens with communicable diseases during the 2024 Hajj is considered to be low, due to the vaccination requirements for travelling to Mecca and Medina and the preparedness plans by Saudi Arabia that address the management of health hazards before, during, and after Hajj. The risk of infection is considered to be moderate for people with underlying conditions, the elderly, and pregnant women, with a moderate probability of infection and moderate impact. As with other mass gathering events, the risk of communicable disease outbreaks is highest for respiratory, food-, waterborne, and vector-borne diseases.

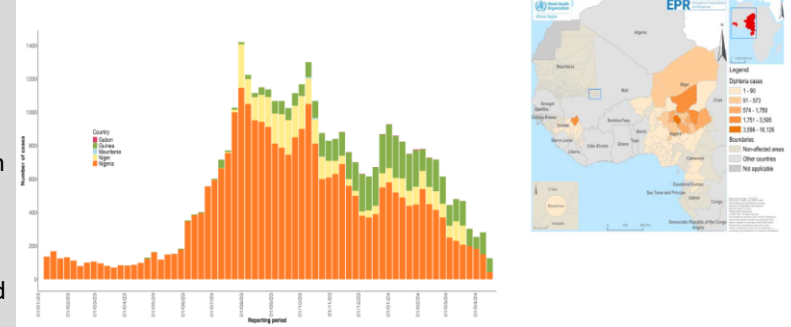
The risk of vaccine-preventable and vector-borne diseases is considered low if preventive measures are applied. A risk of infection and importation of cases to Europe after Hajj remains.

Multi-country Outbreak of Diphtheria Gabon, Guinea, Niger, and Nigeria

Consolidated Regional Situation Report # 008 – As of May 26, 2024



Figure 1. Epidemiological curves and Map of weekly cases of Diphtheria reported by countries within the WHO Africa Region, as of 15 May 2024



Epidemiological update

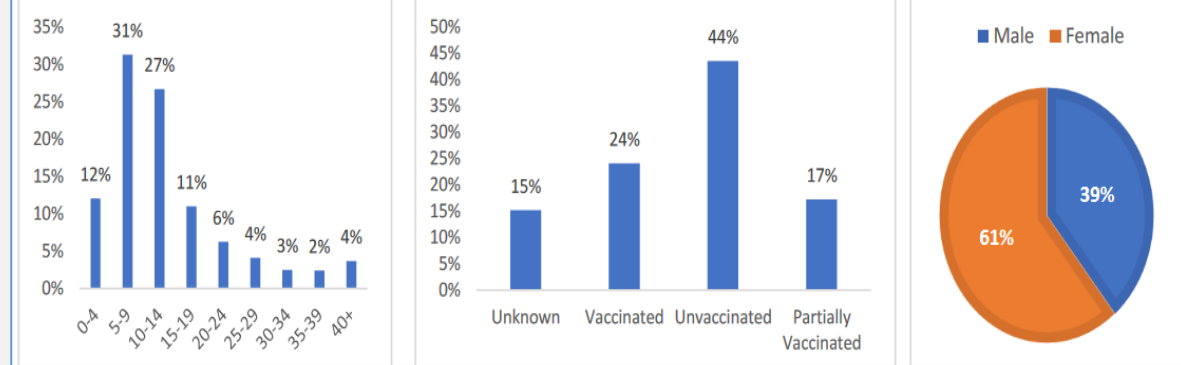
As of 26 May 2024, a total of 40,929 suspected diphtheria cases have been reported from **Nigeria, Guinea, Niger, Mauritania, South Africa, Cameroon, and Gabon** since 2023. Of these suspected cases, 27,511 (67.2%) were confirmed, with 1,174 deaths reported. Among the confirmed cases, 623 (2.2%) were confirmed through laboratory testing, 726 (2.6%) through epidemiological linkage, and 26,162 (95.0%) by clinical compatibility.

In 2024, **Nigeria, Niger, Guinea, and Gabon** reported 11,527 cumulative suspected cases, of which 8,515 (73.8%) were confirmed, with 152 fatalities (CFR = 1.3%). A total of 70% of the suspected cases were among children aged 1–14; 61% were female, and only 24% were fully vaccinated. These findings underscore the multifaceted nature of the diphtheria outbreak, highlighting the need for targeted interventions.

- In **Nigeria**, from EW19 2022 to EW19 2024 (2 years), 31,129 suspected diphtheria cases were reported across 36 states, including 318 local government areas (LGAs). Of these, 18,250 (59%) were confirmed, with 863 deaths. Among confirmed cases, 369 (2%) were by laboratory testing, 515 (3%) by epidemiological linkage, and 17,366 (95%) by clinical compatibility. **The national trend is decreasing.** The case fatality ratio (CFR) for suspected cases was 8%. Between EW1 and EW19 2024, there Almost 99% of confirmed cases were from Kano, Yobe, Borno, Bauchi, and Katsina; 60% of confirmed cases are female, and 26% are fully vaccinated.
- From 4 July 2023, to 17 May 2024, **Guinea** reported 5,397 suspected cases, with 5,027 confirmed and 109 deaths. The CFR among suspected cases was 1.9%. Among confirmed cases, 52 (1%) were confirmed by laboratory tests, 109 (2%) by epidemiological linkage, and 4,866 (97%) by clinical compatibility. Siguiri district remains the epicenter, accounting for 96% of reported cases. After a two-week decline, EW19 saw a 37% increase in cases compared to EW18. However, the trend is plateauing and remains under close monitoring. A total of 54% of cases are female, and 64% are under 15 years old.
- Gabon** reported 29 suspected cases (20 in 2024), with three deaths, including two lab-confirmed cases. **No active cases have been reported in the past six weeks**, but regular monitoring and active case-finding are necessary.
- In **Niger**, the national trend is plateauing. As of 31 March 2024, Niger reported 4,273 suspected cases and 196 deaths, with a CFR of 6%. Of the confirmed cases, 191 (5%) were laboratory confirmed, 102 (2%) by epidemiological linkage, and 3,900 (93%) by clinical compatibility. A total of 59% of confirmed cases are female, 31% are vaccinated, and 64% are under 15 years old.
- Mauritania** were 7,086 suspected cases, with 4,185 (59%) confirmed and 76 deaths. reported 20 suspected cases, all confirmed by clinical compatibility, resulting in six deaths, with a CFR of 0% among suspected cases. An active case search is planned to ensure there are no cases in the community.

- As of 26 May, 2024, 40,929 suspected cases of diphtheria have been reported since 2023 across seven countries: **Cameroon, Gabon, Guinea, Nigeria, Niger, Mauritania, and South Africa.**
- Mauritania** has not reported cases since epidemiological week 44 of 2023, and the outbreak in Pollsmoor Prison, Western Cape Province, South Africa, has been successfully contained. Similarly, **Cameroon** has not reported cases since 7 January 2024.
- The diphtheria outbreak is no longer active in **Cameroon, Mauritania, and South Africa.**
- Nigeria** was the most severely affected, accounting for 78% of cases and 70% of deaths.
- Recent epidemiological trends indicate a slight increase in weekly cases in **Guinea and Niger** over the past two weeks. Overall, a declining trend is observed in the other affected countries.
- Guinea** remains a priority country, still classified as Grade 2. The grade has been removed for the other countries, but close monitoring continues.

Figure 3. Characteristics of Diphtheria cases reported by affected countries within the WHO Africa Region



Country	Since January 1, 2023 – Present				Since January 1, 2024 – present				Last update			
	Total suspected cases	Total deaths	CFR (%)	Total Confirmed cases				Total Suspected Cases		Total Confirmed Cases	Total Deaths	CFR (%)
				Lab. Confirmed	Epi-Linked	Clinically compatible	Total confirmed					
Nigeria	31 129	863	2.8	369	515	17 366	18 250	7 086	4 185	76	1.1	12/05/2024
Guinea	5 397	104	1.9	52	109	4 866	5 027	3 144	3 047	24	0.8	17/05/2024
Niger	4 273	196	4.6	191	102	3 900	4 193	1 277	1 277	52	4.1	31/03/2024
Mauritania	20	6	30.0	-	-	20	20					26/11/2023
South Africa	79	1	1.3	9	-	-	9					07/01/2024
Cameroon	2	1	50.0	-	-	2	2					07/01/2024
Gabon	29	3	10.3	2	-	8	10	20	6	-		12/05/2024
TOTAL	40 929	1 174	2.9	623	726	26 162	27 511	11 527	8 515	152	1.3	

Multi-country outbreak of cholera

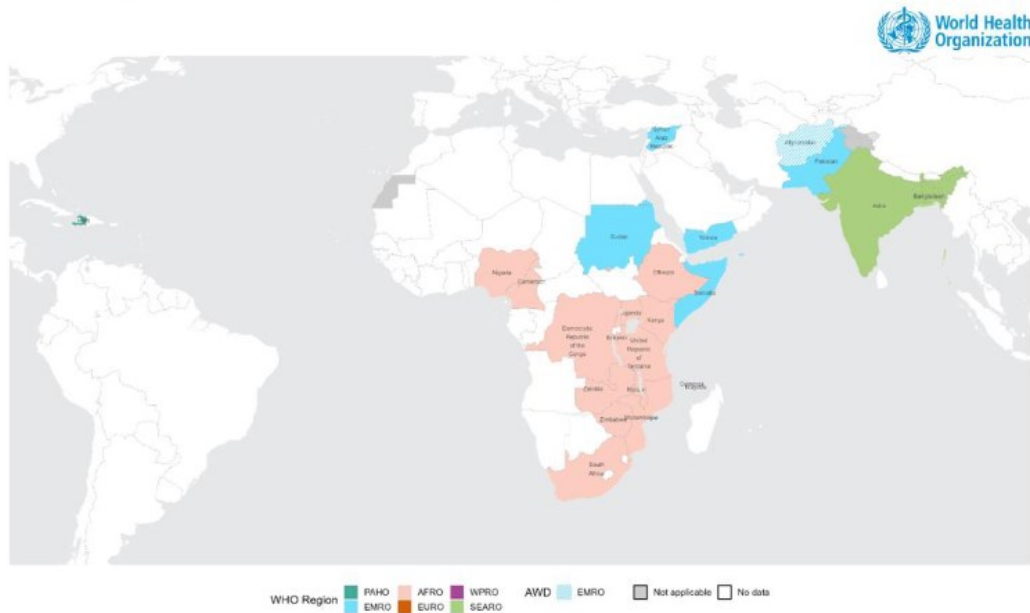
WHO Monthly External Situation Report n. 14, published 16 May 2024

Multi-country outbreak of cholera, External situation report #14 - 16 May 2024 (data of 31 March 2024)

In April 2024 (epidemiological weeks 14 to 17), a total of 27 696 new cholera cases were reported from 19 countries, territories, and areas (hereafter countries) across four WHO regions, showing no significant changes (1% increase) from the past month. The Eastern Mediterranean Region registered the highest number of cases, followed by the African Region, the European Region, and the South-East Asia Region. The period also saw 281 cholera-related deaths globally, highlighting a 31% increase from the past month.

On 26 April 2024, the French overseas department of Mayotte in the Indian Ocean confirmed a new cholera outbreak, including several individuals who arrived in Mayotte via boats from the neighbouring cholera-affected countries of Comoros and the United Republic of Tanzania. As of 11 June overall, 166 confirmed cases, including 21 imported cases from Comoros and 145 indigenous cases, were reported including two death. Among the total cases reported, 15 were hospitalised.

Figure 1. Reported epidemics of cholera and acute watery diarrhoea (AWD), 1 January 2024 to 28 April 2024



The designation employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

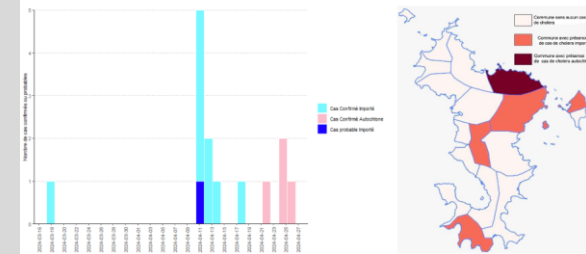
Data Source: World Health Organization, Map Production: WHO Health Emergencies Programme, ©WHO 2024. All rights reserved.

Mayotte (France)

On 18 March 2024, Mayotte announced the detection of the first imported cases of cholera. As of 26 April 2024, a total of 26 cases have been reported, including locally acquired cases confirmed via polymerase chain reaction (PCR).

Among these cases, 10 were imported from Comoros or East Africa, while the remaining 16 were locally acquired cases reported in the commune of Koungou. As of 11 June overall, 166 confirmed cases, including 21 imported cases from Comoros and 145 indigenous cases, were reported including two death. Among the total cases reported, 15 were hospitalised.

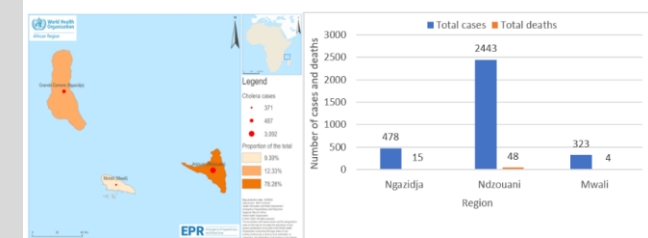
Figure 2. Mayotte: Daily evolution of cholera cases detected in Mayotte from 16 March to 27 April 2024 (left) and distribution of the cholera cases by commune as of 26 April 2024 (right)



Comoros

In Comoros, since the declaration of the outbreak in early February, the number of cholera cases and deaths has continued to rise, with the disease spreading across all three islands (Ngazidja, Ndzuwani, and Mwali). As of 28 April 2024, Comoros reported a total of 3244 cases and 67 deaths with a CFR of 2.1%. In April 2024, Comoros reported 2566 new cholera cases and 50 associated deaths with a CFR of 1.9%, marking a 379% increase in cases and a 355% increase in deaths compared with the numbers reported in the previous month. As of 13 June, a total of 9 165 cases and 137 deaths have been reported in the three islands. In all, 8 957 cases have recovered.

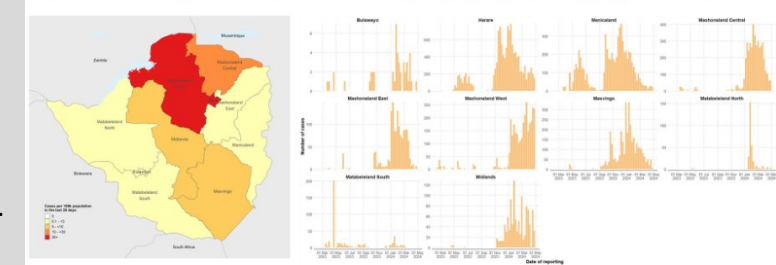
Figure 3. Comoros: number of confirmed cholera cases and deaths in the last 28 days (left) and total cholera cases and deaths in Comoros (right), as of 28 April 2024



Zimbabwe

In April 2024, Zimbabwe reported 2480 new cholera cases and 60 associated deaths with a CFR of 2.4%, marking a 31% decrease in cases and a 15% decrease in deaths compared with the numbers reported in the previous month. Since January 2024, Zimbabwe reported a total of 18 606 cases and 383 deaths with a CFR of 2.1%

Figure 6. Zimbabwe: number of cases in the last 28 days (left) and by province (right), as of 28 April 2024



The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city, or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization, Ministry of Health and Child Care, Zimbabwe Map Production: World Health Organization Map Date: 28 April 2024

Dengue - Global situation

As of 30 April 2024, over 7.6 million dengue cases have been reported to WHO in 2024, including 3.4 million confirmed cases, over 16 000 severe cases, and over 3000 deaths. While a substantial increase in dengue cases has been reported globally in the last five years, this increase has been particularly pronounced in the Region of the Americas, where the number of cases has already exceeded seven million by the end of April 2024, surpassing the annual high of 4.6 million cases in 2023. Currently, 90 countries have known active dengue transmission in 2024, not all of which have been captured in formal reporting.

Situation Summary

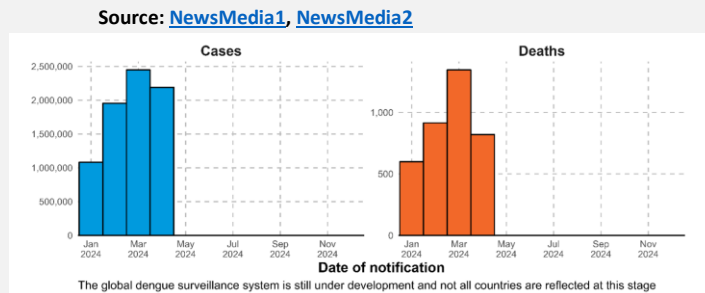
While a substantial increase in dengue cases has been reported globally in the last five years, this increase has been particularly pronounced in the Region of the Americas, where the number of cases has already exceeded seven million by the end of April 2024, surpassing the annual high of 4.6 million cases in 2023. Furthermore, this is three times what was reported during the same period in 2023, highlighting the acceleration of this health problem. Dengue virus is transmitted to humans through the bite of infected mosquitoes. Cases are most commonly asymptomatic or result in mild febrile illness. However, some cases will develop severe dengue, which may involve shock, severe bleeding or severe organ impairment.

The risk of dengue is similar across regions, countries, and within countries. Factors associated with an increasing risk of dengue epidemics and spread to new countries include:

- early start and longer duration of dengue transmission seasons in endemic areas;
- changing distribution and increasing abundance of the vectors (*Aedes aegypti* and *Aedes albopictus*);
- consequences of climate change and periodic weather phenomena (El Niño and La Niña events) leading to heavy precipitation, humidity, and rising temperatures favouring vector reproduction and virus transmission;
- changes in the circulating serotypes within a country affecting population immunity;
- fragile health systems amid political and financial instability in countries facing complex humanitarian crises and large-scale population movements impairing the public health response;
- movement of people who are infected and goods that could carry the mosquito vectors.

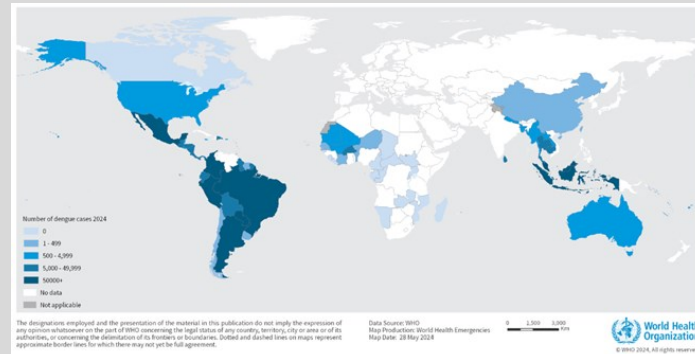
No autochthonous or locally transmitted dengue cases have been reported in Europe so far in 2024 but these data will be added when autochthonous cases occur, which can occur when seasonal conditions permit vector activity from June to November.

Given the current scale of the dengue outbreaks, the **potential risk of further international spread** and the complexity of factors impacting transmission, the **overall risk at the global level is still assessed as High** and thus dengue remains a global threat to public health.

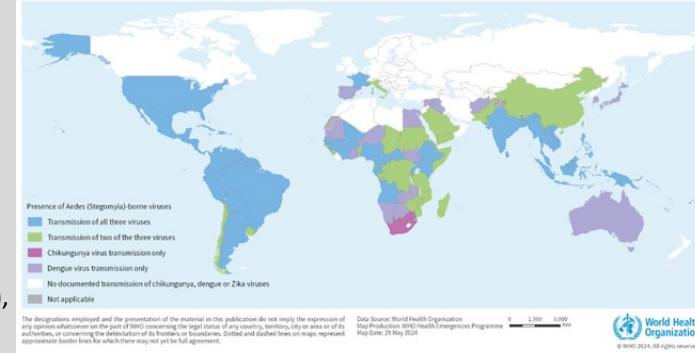


Currently, 90 countries have known active dengue transmission in 2024, not all of which have been captured in formal reporting. In addition, many endemic countries do not have strong detection and reporting mechanisms, so the true burden of dengue globally is underestimated. In order to control transmission more effectively, real-time robust dengue surveillance is needed to address concerns about potential undetected cases, co-circulation and misdiagnosis as other arboviruses, and unrecorded travel movements. These factors could contribute to unrecognized disease spread and establish a potential risk for local transmission in non-endemic countries.

Geographical distribution of dengue cases as reported to WHO from January to April 2024



Countries, territories or areas with previous or current local mosquito-borne transmission of more than one *Aedes*-borne virus (dengue, chikungunya and Zika) as of 30 April 2024



Co-circulation of dengue, chikungunya and Zika viruses

There is considerable overlap in the geographic distribution of dengue, chikungunya, and Zika viruses, which are all transmitted by *Aedes* mosquitoes and share some clinical features that can result in misdiagnoses and misreporting in the absence of differential laboratory testing. Surveillance data during large outbreaks of ‘suspected dengue’ may erroneously include cases of one or both of the other diseases. For instance, in one study in Brazil (Ribas Freitas AR, et al., 2024), in the state of Minas Gerais in 2023, ‘suspected dengue’ accounted for 84.4% of cases of the 828 654 cases of ‘suspected arboviruses’, and ‘suspected chikungunya’ only accounted for 15.6%. The true proportion of the two diseases amongst laboratory-confirmed cases was 65.9% chikungunya and only 34.1% dengue.

Surveillance systems specifically targeting endemic transmission of chikungunya or Zika are weak or non-existent in many countries.

So far in 2024, more than 250 000 cases of chikungunya have been reported to WHO and almost 7000 cases of Zika virus disease.

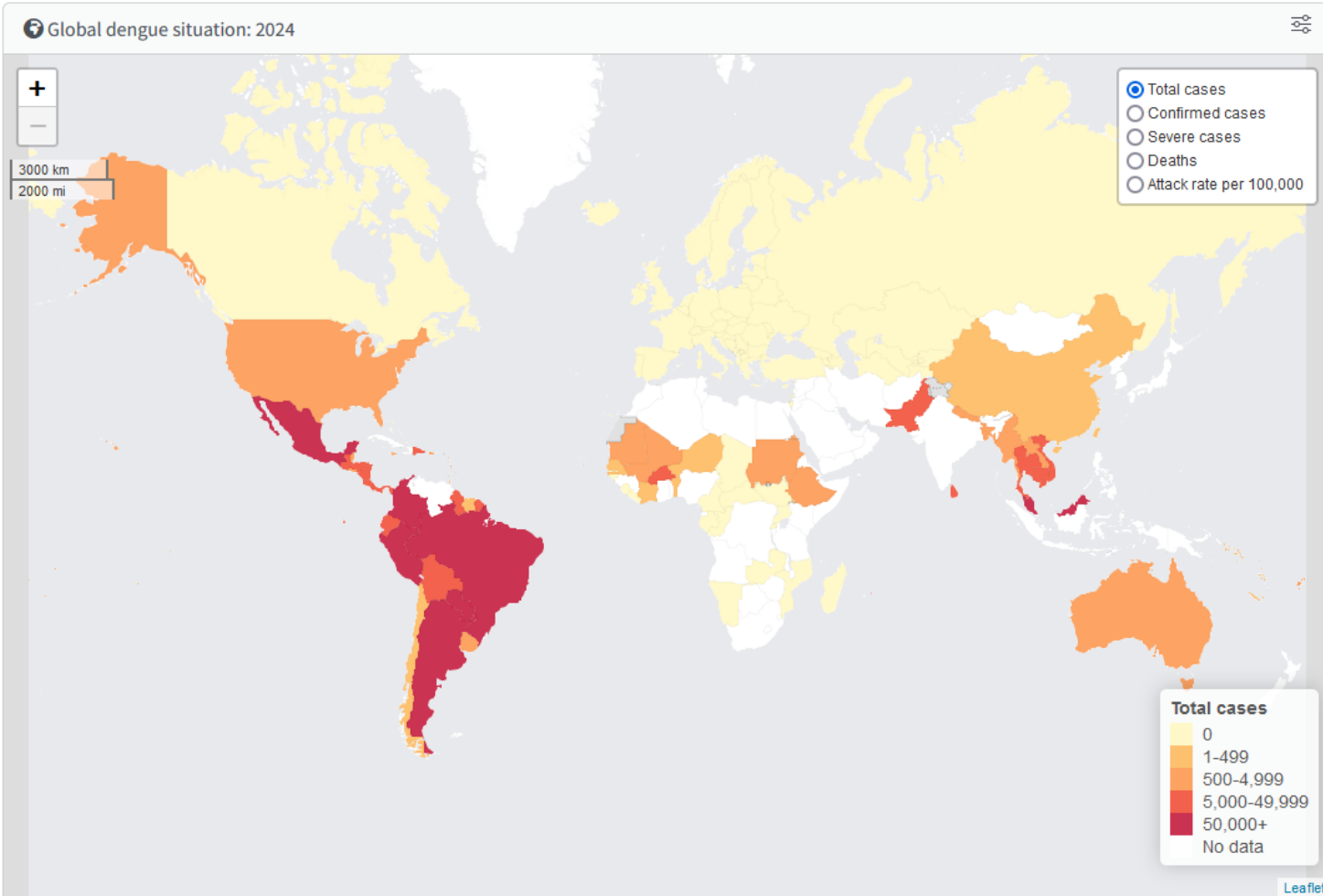
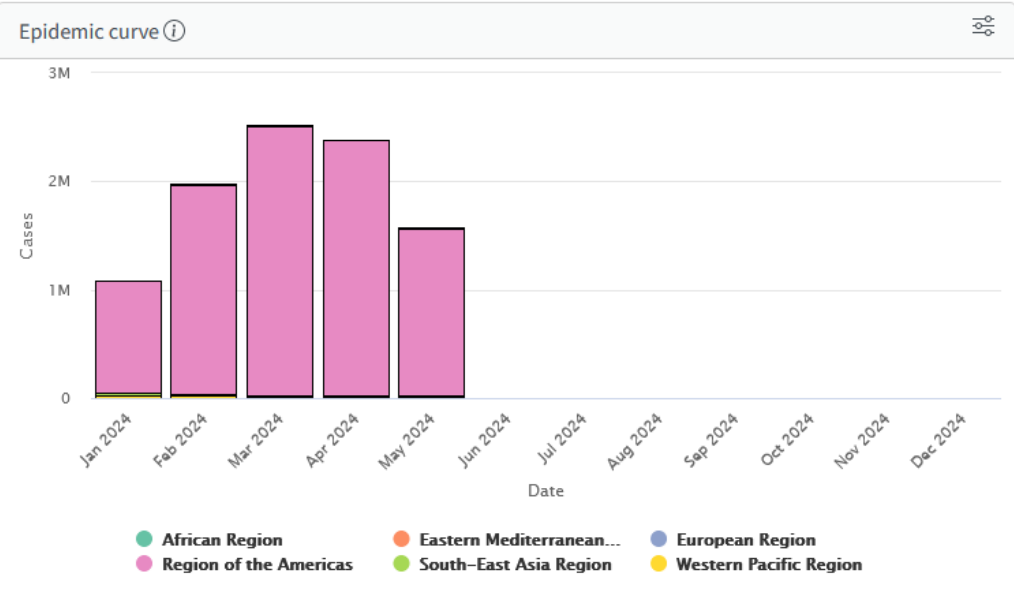
Information:
• WHO has established a global dengue surveillance system with monthly reporting across all WHO regions with a new dashboard now live (https://worldhealthorg.shinyapps.io/dengue_global/).

Source: WHO

Dengue - Global situation



Trend [Table by region](#) [Table by country](#)



The global dengue surveillance system is still under development, and not all countries with dengue transmission are reflected at this stage; further data will be added as they become available. No autochthonous dengue cases have been reported in the European region in 2024 and these data will be added when autochthonous cases occur. Case definitions and case ascertainment and reporting requirements vary by country, so data are not directly comparable between countries.

Update on elimination of human deaths from dog-mediated rabies

Overview

The most recent estimate of the global number of deaths from dog-mediated rabies is 59 000 per year. Rabies is associated with a 99.9% fatality rate and severe trauma in families in which a rabies death occurs and remains a major public health concern in most of Africa and Asia and some parts of South America. In the Americas, dog-mediated rabies is still a public health issue in specific regions in some countries. Robust data on rabies are lacking for many countries.

Ending human deaths from dog-mediated rabies by 2030 (“Zero by 30”) is the goal of a global strategy agreed in 2015 by a cross-sectoral partnership.

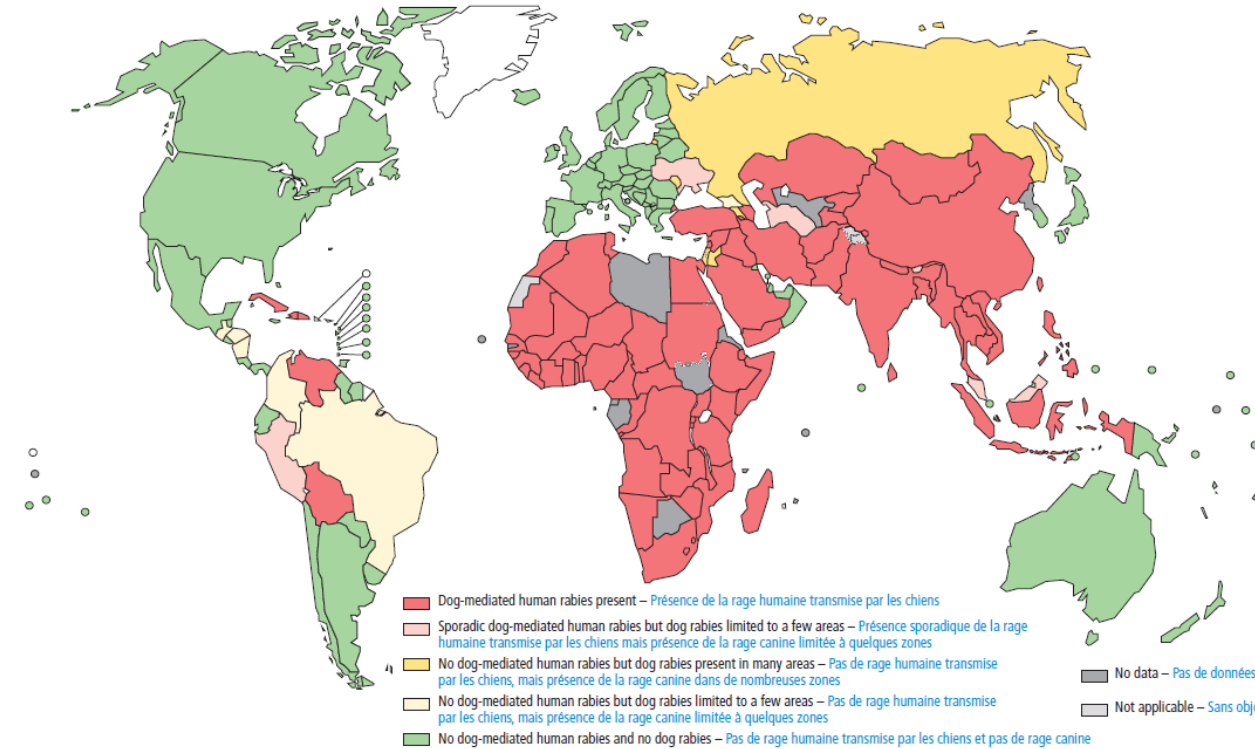
The Zero by 30 strategy is based on a One Health approach that integrates human health, animal health and the environment, indicating the importance of action on several fronts, including ensuring timely access to life-saving post-exposure prophylaxis (PEP) of people exposed to suspected rabid animals, vaccinating dogs to stop the disease at its source and increasing community awareness about preventing bites and scratches and the risk of rabies.

Despite these proven policy approaches, rabies control remains a challenge, especially in low-resource and remote communities. Contributing factors include inadequate coverage of dog vaccination, poor public awareness about rabies prevention and first aid, weak disease surveillance and lack of access to rabies PEP for those who are suspected of having been exposed. All components of rabies control were further disrupted during the coronavirus disease 2019 (COVID-19) pandemic.

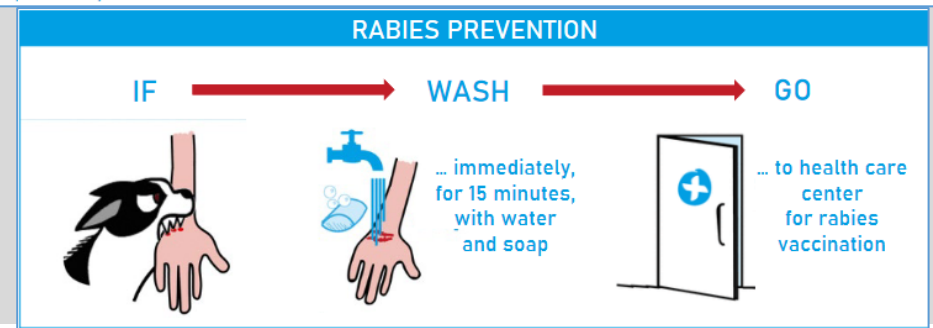
Priorities for action

- **Controlling rabies in dogs;** mass dog vaccination, is the single most effective way of reducing the rabies burden: dogs are the main source of rabies in humans (up to 99% of cases) and other animals.
- **Working with local communities;** Increasing public awareness of the prevention of rabies includes community empowerment and understanding of local contexts in terms of human–dog relationships, religious beliefs and cultural practices, including use of traditional medicine.
- **Reliable data for making decisions;** Strengthening rabies surveillance is essential to provide policy-makers with the necessary information to make informed decisions, such as precisely forecasting requirements for human and animal rabies vaccines and measuring progress towards elimination.

Map 1 Presence of dog-mediated human rabies, by country, 2022
Carte 1 Présence de la rage humaine transmise par les chiens, par pays, 2022



Data source: WHO Global Health Observatory / Neglected tropical diseases: rabies, 2024 update, <https://www.who.int/data/gho/data/themes/topics/rabies>. © WHO 2024, all rights reserved. – Source des données: Observatoire de la santé mondiale de l’OMS / Maladies tropicales négligées : rage, mise à jour pour 2024, <https://www.who.int/data/gho/data/themes/topics/rabies>. © OMS 2024, tous droits réservés.
The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement. – Les limites et appellations figurant sur cette carte ou les designations employées n’impliquent de la part de l’Organisation mondiale de la Santé aucune prise de position quant au statut juridique des pays, territoires, villes ou zones, ou de leurs autorités, ni quant au tracé de leurs frontières ou limites. Les lignes en pointillés sur les cartes représentent des frontières approximatives dont le tracé peut ne pas avoir fait l’objet d’un accord définitif.



Oropouche Virus – An Emerging Vector-borne Pathogen



In 2024, there has been a notable uptick in documented cases of Oropouche virus (OROV), a tri-segmented negative-stranded RNA virus, particularly in Brazil and Bolivia. This has been the first time where several outbreaks of OROV are reported to be occurring at the same time and in new countries or states such as Cuba, indicating potential geographic expansion of OROV to historically non-endemic areas. Encephalitis cases of unknown aetiology have also been recently reported in South America and could be at least partly due to OROV.

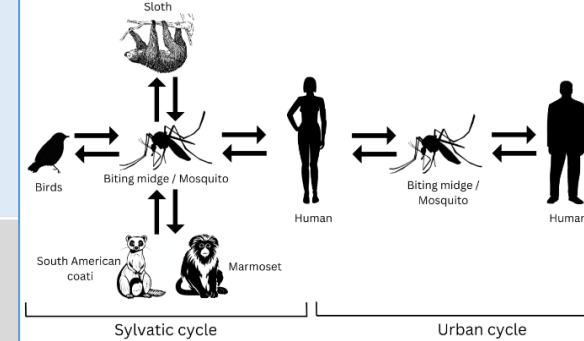
The primary vector for OROV is the biting midge (*Culicoides paraensis*), which has a wide geographical distribution in the Americas. Despite that, OROV cases are mostly reported in relatively low numbers and places, which could reflect a lack of testing capacity and clinical awareness. Vector-borne diseases with similar symptomology such as dengue, malaria, or chikungunya can also lead to misdiagnosis of OROV with other diseases.

Situation Summary

- OROV is a vector-borne virus that is mainly transmitted by the biting midge (*C. paraensis*) through both an urban and sylvatic lifecycle with multiple intermediary species.
- There have been 7,682 reported cases of OROV, but no deaths attributed to OROV since November 2023 to May 2024.
- Most human cases have been reported in Brazil (72%) followed by Bolivia (24%), with cases reported in Colombia, Peru, and Cuba as well from November 2023 to May 2024.
- The biting midge vector is found across South America and the Caribbean with OROV outbreaks reported in many countries throughout the years including Brazil, Trinidad and Tobago, Peru, Panama, and Haiti
- There are currently no MCMs available against OROV, although there are candidates in clinical development
- OROV is likely an underdiagnosed disease due to limited surveillance and overlapping symptoms with more common vector-borne diseases such as dengue or malaria
- Systematic active surveillance is lacking in endemic areas, leading to an unknown true burden of the disease, with a few seroprevalence studies indicating that prevalence is likely much higher than reported cases indicate

Geographical Spread

OROV continues to be a public health concern in South America. Bolivia, Brazil, Colombia, and Peru have recently reported a higher degree of disease activity in 2024 compared to previous years with even Cuba reporting cases for the first time. Historically, evidence of OROV disease activity and outbreaks has been found in several countries across Central America, South America, and the Caribbean since the 1950s. There is evidence supporting that current OROV outbreaks are likely due to a novel reassorted OROV lineage, which may be driving the upward trends in the Amazon Basin in Brazil and expansion to new regions in the country. The presence of *C. paraensis* has been shown in most countries of South America and the Caribbean including in places where disease activity has not been reported. This suggests that, along with the evidence that OROV is undertested, the virus may be more widely distributed in vectors than what is currently understood. Although the main vector for OROV is a biting midge (*C. paraensis*), mosquitoes of the *Culicoides* family such as some species from the *Culex* and *Aedes* genera, can serve as competent vectors. Studies have shown that *C. paraensis* prefers forested areas with the presence of bodies of water.



Medical Countermeasures and Prevention

Management of an OROV infection is currently achieved by providing supportive care as there are no vaccines or specific antiviral treatments available. Since this disease is acquired through vectors, vector control and eradication help prevention. The biting midge is too small however to be impeded by bed nets and may even be resistant to insecticides, making vector control more challenging.

Pathogen	Oropouche virus (OROV)
Pathogen's Properties	<p>Enveloped: Yes, tri-segmented negative-stranded RNA virus</p> <p>Order: Bunyvirales</p> <p>Family: Peribunyaviridae</p> <p>Genus: Orthobunyavirus</p> <p>Serogroup: Simbu serogroup (subclade A)</p> <p>Species: Orthobunyavirus oropoucheense</p> <p>Due to its segmented genome, OROV is prone to genomic rearrangement, a crucial process that fosters viral diversity within the species.¹</p>
Incubation Period	7-10 days. ²
Clinical Features	<p>Initial symptoms: Sudden onset high fever, headache, myalgia, joint, pain, and vomiting</p> <p>Hallmark features: Typically, a biphasic disease - acute phase lasting 2-4 days, followed by a remission and a resurgence of symptoms 7-10 days after onset.</p> <p>Severe disease: Aseptic meningitis or meningoencephalitis.²</p>
Diagnosis	<p>The clinical diagnosis of OROV fever is challenging as the disease manifests with similar symptoms to other vector-borne infections such as dengue, chikungunya, Zika, malaria and yellow fever. Consequently, without a definitive diagnostic test, patients may be misdiagnosed, and outbreaks could go undetected.</p> <p>Diagnosis can be performed using an RT-qPCR test specific for OROV for acute illnesses.</p> <p>Laboratory tests for detection of specific IgG and IgM antibodies to support a diagnosis or for retrospective studies include MAC ELISA (IgM antibody capture enzyme-linked immunosorbent assay), PRNT (plaque reduction neutralization test), complement fixation test, HI test (hemagglutination inhibition assay).³</p> <p>Recent data has demonstrated the potential use of monoclonal antibodies in indirect immunofluorescent (IFA) and immunohistochemistry (IHC) assays for diagnostic applications, serological surveys, and epidemiological surveillance.⁴</p>

Pathogen Transmission

Transmission occurs through two distinct cycles (Figure 1): Sylvatic and urban cycles with the primary vector being the anthropophilic biting midge, *C. paraensis*. Within the sylvatic cycle, evidence suggests that pale-throated sloths, nonhuman primates, and certain wild birds act as vertebrate hosts. In the urban cycle, humans appear to be the sole vertebrates involved. Humans likely serve as the bridge between the sylvatic and urban cycles, as they venture into forests, contract the virus, and then return to urban areas during the viremic phase. Direct human-to-human transmission of OROV has not been observed.

Sources:

- Files MA, Hansen CA, Herrera VC, et al. Baseline mapping of Oropouche virology, epidemiology, therapeutics, and vaccine research and development. NPJ Vaccines. 2022;7(1):38. Published 2022 Mar 17. doi:[10.1038/s41541-022-00456-2](https://doi.org/10.1038/s41541-022-00456-2)
- Walsh CES, Robert MA, Christofferson RC. Observational Characterization of the Ecological and Environmental Features Associated with the Presence of Oropouche Virus and the Primary Vector *Culicoides paraensis*: Data Synthesis and Systematic Review. Trop Med Infect Dis. 2021;6(3):143. Published 2021 Aug 2. doi:[10.3390/tropicalmed6030143](https://doi.org/10.3390/tropicalmed6030143)
- Cardoso BF, Serra OP, Heinen LB, et al. Detection of Oropouche virus segment S in patients and in *Culex quinquefasciatus* in the state of Mato Grosso, Brazil. Mem Inst Oswaldo Cruz. 2015;110(6):745-754. doi:[10.1590/0074-02760150123](https://doi.org/10.1590/0074-02760150123)
- [A little-known virus on the rise in South America could overwhelm health systems](https://www.sciencenews.org/article/a-little-known-virus-on-the-rise-in-south-america-could-overwhelm-health-systems) – Science news. June 2024, Accessed June 5th, 2024

Other Infectious Disease Outbreaks and disasters – Asia/Oceania



Cholera – globally – WHO monthly cholera, external situation report

Since the beginning of 2024, a cumulative total 145 900 cholera cases and 1766 deaths have been reported from 24 countries across 5 WHO regions, as of 28 April 2024, with the African region recording the highest numbers, followed by the Eastern Mediterranean, South-East Asia, Americas, and European regions. No outbreaks have been reported in the Western Pacific region during this period.

The global cholera response continues to be affected by a critical shortage of oral cholera vaccines (OCV). Since January 2023, requests for OCV have surged, with 82 million doses requested by 15 countries, double the 46 million doses available during that period. The global stockpile of vaccines was depleted until the beginning of March. As of 6 May 2024, the stockpile has 3.2 million doses, which is below the global stockpile target of 5 million doses.

WHO classified the global resurgence of cholera as a grade 3 emergency in January 2023, its highest internal level for emergencies. Based on the number of outbreaks and their geographic expansion, alongside the shortage of vaccines and other resources, WHO re-assessed the **risk at the global level as very high** and the event remains classified as a **grade 3 emergency**.

Source: [WHO](#)

Avian Influenza A (H5N1) - Australia

On 22 May 2024, the WHO was notified of a laboratory-confirmed case of human infection with avian influenza A(H5N1) virus (clade 2.3.2.1a) by the National Focal Point (NFP) of Australia.

This is the first confirmed human infection caused by avian influenza A(H5N1) virus detected and reported by Australia. Although the source of exposure to the virus in this case is currently unknown, the exposure likely occurred in India, where the case had travelled, and where this clade of A(H5N1) viruses has been detected in birds in the past.

Additional information provided by the family indicates that the case did not travel outside of Kolkata, India, and did not have any known exposure to sick persons or animals while in India. It is understood that no close family contacts of the case in Australia or India developed symptoms, as of 22 May 2024.

Based on available information, WHO assesses the current **risk to the general population** posed by this virus as **low**.

Source: [WHO](#)

West Nile Virus - India

An outbreak of West Nile virus (WNV) infection is being reported across at least three different districts (i.e., Thrissur, Malappuram, and Kozhikode) all in the state of Kerala, southwestern coastal India.

Although WNV has been known to circulate in India since 1952, it has re-emerged with severe neuro-invasive pathogenic potential in humans recently in Assam, Kerala, West Bengal, and Tamil Nadu states.

As of 21-May-2024, there have been at least 12 confirmed human WNV cases, while two deaths remain under investigation.

The prevalence of Japanese encephalitis infections (JE) in southern states with overlapping symptoms with WNV infections is part of the challenges in the accurate diagnosis of WNV human infections in India.

In India, *Culex* and *Aedes albopictus* mosquitoes are tentatively incriminated as vectors of WNV. Apart from mosquitoes, the role of other arthropods is also considered in the maintenance of WNV in India during inter-zoonotic periods, along with the possible role of ardeid birds. WNV in horses has not been documented in India (uncommon, when compared to epidemiology in other endemic regions).

However, very few clinically overt cases of human encephalitis due to WNV are laboratory-confirmed.

Source: [NewsMedia](#) , [WHO SEAR](#)

Unknown Illness – India

On 13-June-2024, multiple news outlets have reported an unidentified illness in Munuspadar village, located in Odisha's Rayagada district. As of 14-June-2024 10 cases (9 children, 1 adult) and five deaths (all among children aged 6-15) were reported. All cases showed swollen throat and lower limb edema.

Medical experts suspect a throat infection, potentially diphtheria based on symptom consistency. Throat swabs and blood samples from the hospitalized cases have been sent to Bhubaneswar for laboratory testing; results are pending.

Source: [NewsMedia1](#), [NewsMedia2](#)

Avian Influenza A H9N2 – India

On 22-May-2024, the WHO received a report from the International Health Regulations (IHR) National Focal Point (NFP) for India detailing a laboratory confirmed human case of avian influenza A(H9N2) virus. The case was detected in a four-year-old child residing in West Bengal state in India. This is the second human infection of avian influenza A(H9N2) notified to the WHO from India, with the first occurring in 2019. The patient had exposure to poultry at home and in the surroundings. There were no known persons reporting symptoms of respiratory illness in the family.

Most human cases of infection with avian influenza A(H9N2) viruses are exposed to the virus through contact with infected poultry or contaminated environments. Human infection tends to result in mild clinical illness.

Source: [WHO](#)

Other Infectious Disease Outbreaks - Americas



Oropouche - Cuba

On 27 May 2024, the Ministry of Public Health of Cuba reported the first ever outbreak of Oropouche virus disease. A total of 74 confirmed cases were reported from Province of Santiago de Cuba (n=54), and from Province of Cienfuegos (n=20). These cases were detected through strengthened monitoring and surveillance actions following an increase in cases with non-specific febrile illness in the provinces of Santiago de Cuba, with the municipalities of Santiago de Cuba and Songo La Maya reporting 29 and 25 cases each; and in the province of Cienfuegos where eight cases were reported from Cienfuegos, five from Rodas, five from Abreu, and one each from Aguada de Pasajeros and Cumanayagua municipalities. OROV was identified in 74 samples of the 89 samples tested at the national reference laboratory of the Pedro Kourí Institute. All cases showed signs of recovery between the third and fourth day after the onset of symptoms. No severe or fatal cases have been reported as of 5 June.

This is the first detection of the disease in the country; therefore, the population is likely highly susceptible and there is significant risk of additional cases being detected.

In Cuba, out of the two possible vectors, only the *Culex quinquefasciatus* mosquito is present and widespread.

Source: [WHO](#)

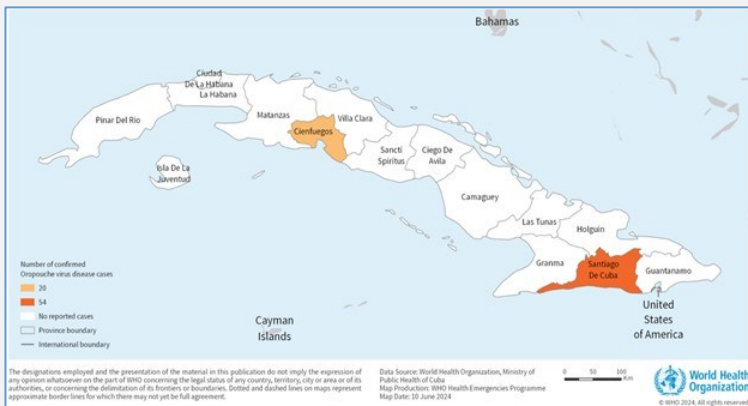
Mayaro Virus Disease in Brazil

A study has confirmed the circulation of the Mayaro virus (MAYV) among humans in the State of Roraima, Brazil. This is the first time MAYV has been detected in humans in the state.

Researchers analyzed serum samples collected from 2018-2021 at the Roraima Central Public Health Laboratory from more than 800 patients who were febrile. Results revealed 3.4% (28/822) of tested patients were positive for the presence of MAYV. Historically, MAYV has only been detected in humans in the states in the North region of Brazil, including Acre, Para, and Amazonas. In Roraima, the virus has only previously been detected in wild animals.

Mayaro virus, transmitted by mosquitoes *Haemagogus janthinomys*, causes “Mayaro fever”, a disease with symptoms similar to those of dengue and chikungunya (fever, body aches, fatigue, pain and swelling of the joints).

Source: [NewsMedia, Paper](#)



Highly Pathogenic Avian Influenza A H5N1 - United States –update-

As of 30-May-2024, a second human case of highly pathogenic avian influenza (HPAI) A(H5) virus infection has been identified in the state of Michigan. This is the third human case associated with an ongoing multistate outbreak of A(H5N1) in U.S. dairy cows. None of the three cases are associated with the others. As with the previous two cases (one in Texas, one in Michigan), the person is a dairy farm worker with exposure to infected cows, making this another instance of probable cow-to-person spread. This is the first human case of H5 in the United States to report more typical symptoms of acute respiratory illness associated with influenza virus infection, including A(H5N1) viruses.

Based on the information available at this time, this case does not change CDC’s current A(H5N1) bird flu human health risk assessment for the U.S. general public because all three sporadic cases had direct contact with infected cows. Risk depends on exposure, and in this case, the relevant exposure is to infected animals. The **risk to members of the general public who do not have exposure to infected animals remains low.**

Source: [MDHHS](#), [CDC](#)

Avian Influenza A(H5N2) – Mexico

This is the first laboratory-confirmed human case of infection with an influenza A(H5N2) virus reported globally, and the first A(H5) virus infection in a person reported in Mexico.

On 23 May 2024, the Mexico IHR NFP reported to PAHO/WHO a confirmed case of human infection with avian influenza A(H5N2) virus detected in a 59-year-old resident of the State of Mexico who was hospitalized in Mexico City and had no history of exposure to poultry or other animals. No further cases were reported during the epidemiological investigation.

In March 2024, a high pathogenicity avian influenza A(H5N2) outbreak was detected in a backyard poultry farm in the state of Michoacán, which borders the State of Mexico where the case was residing .

Additionally, in March 2024, an outbreak of low pathogenicity avian influenza (LPAI) A(H5N2) was identified in poultry in Texcoco, State of Mexico, and a second outbreak of LPAI A(H5N2) in April in the municipality of Temascalapa in the same state. On 6 June the genetic analysis performed by the national authorities identified that the virus has a 99% similarity with the strain obtained during 2024 in birds in Texcoco State of Mexico.

WHO assesses the current **risk to the general population** posed by this virus to be **low**.

Source: [WHO](#), [WHO update](#)

Other Infectious Disease Outbreaks - Africa

Dengue - Mauritius

The dengue outbreak, which was declared on 11 December 2023 in Mauritius, continues, however, with some challenges. Risk Communication and community engagement activities need further strengthening, especially locally. Inconsistent data sharing has impacted surveillance and response efforts. Laboratory capacity gaps exist, including shortages of reagents for polymerase chain reaction, serotyping, and genomic sequencing.

Enhancing vector control measures and conducting quality assessments are crucial to effectively managing the outbreak.

During 29 April to 26 May 2024, there has been a decline in reported cases, with 1 477 cases, including one death. Of these, 1 251 cases (85.0%) and one death occurred on Mauritius' main island, while 226 cases (15.0%) with zero deaths were reported on the autonomous island of Rodrigues.

As of 26 May 2024, the cumulative number of confirmed dengue cases stands at 8,660, with nine reported deaths and a case fatality rate of 0.1%. Mauritius reported an additional 20 deaths attributed to comorbidities. Mauritius' main island accounts for 72.4% (6 268) of all reported cases and (100%) all nine deaths. The cumulative attack rate is 4.8 per 1 000 population. The most affected health offices are Rivière du Rempart, Port Louis, and Pamplémousses in the north, with sporadic cases reported across the island, mainly from individuals working in highly affected regions. As of 26 May, Rodrigues Island had recorded 2 392 confirmed cases, representing 27.6% of the cumulative cases, with a cumulative attack rate of 54.4 per 1 000 population.

Cholera – Zimbabwe

Zimbabwe has been experiencing a cholera outbreak since February 2024, with a total of 34 276 suspected cases, 3 964 confirmed cases by culture, and 715 deaths reported as of May 26, 2024. Of the 715 deaths, 87 were confirmed positive by culture, and 628 were among suspected cases.

During the reporting period, the outbreak has spread its reach to 63 districts nationwide, with the highest number of confirmed cases reported in Harare 36%, Manicaland 32%, Mat North 7% and Masvingo 7%.

The risk factors for cholera in Zimbabwe are multifaceted, including contaminated water sources such as boreholes and water with high fluoride levels, inadequate sanitation and hygiene, limited access to healthcare, and migration and movement of people. Additionally, poor knowledge about cholera transmission and prevention and religious objections to vaccination also contribute to the spread of the disease.

The current trajectory of the cholera outbreak in Zimbabwe shows a consistent downward trend since early April 2024. Despite efforts to control the outbreak, challenges persist, including inadequate water, sanitation, and hygiene infrastructure, as well as ongoing religious objections, which continue to hinder the response and put communities at risk.

Rift Valley fever - Ruanda

Three districts are currently experiencing Rift Valley Fever outbreak (RVF). Ntungamo (five cases, four confirmed and one death) since 23 February 2024, Mbarara (10 cases, five confirmed and one death) since 10 March 2024 and Sheema (two confirmed cases) since 27 March 2024. Cumulatively, 17 cases, 11 confirmed and two deaths (CFR12%) are reported as of 12 May 2024.

Source: [WHO Africa](#)

Humanitarian Crisis – Sahel Region

Vaccination coverage is direly suboptimal across the region. [Chad](#), in particular, has suboptimal coverage, and the country is far from meeting the 90.0% target coverage rates for vaccination in children, reaching only 58.0% with the third dose of DTP-containing vaccine and 55.0% with the first dose of measles-containing vaccine in 2021. Mali's coverage, too, has been historically below the 90.0% target rate. After a dip in 2020, vaccination rates recovered in 2021.

WASH indicators are direly suboptimal across the region. In [Chad](#), for example, only 5.6% of the population had access to adequate WASH services, with a significant urban (22.0%) vs rural (1.8%) disparity. Open defecation was estimated at 65.6%. Besides, only 30.0% of healthcare facilities had access to potable water, and 24.0% had adequate sanitation installations. In [Niger](#), access to safe drinking water and basic sanitation is low, as it is hindered by limited financial resources, hydrogeological constraints, weak operation and maintenance mechanisms, and the impacts of climate change. Only 46.0% of the population has access to basic water supply services, and open defecation percentages are still high at 71.0% in 2017. According to a UNICEF 2021 report, it is estimated that 48 million people in [Nigeria](#) still practice open defecation, and only 8.0% apply safe handwashing techniques. Over 23.0% of the population cannot access basic water supply services which make outbreak of infectious diseases more likely.

Source: [WHO Africa](#)

Poliomyelitis (cVDPV2) - Angola

On 3 May 2024, Angolan health authorities announced that polio had been detected in Chitato Municipality, Lunda Norte province, which borders the Democratic Republic of Congo. A person infected with 'circulating vaccine-derived poliovirus type 2 was confirmed. According to the Global Polio Eradication Initiative, this is the only case reported this year in the country as of 15 May 2024.

Source: [WHO Africa](#)

Hepatitis E- Angola

On 5 March 2024, WHO was notified by the Chad IHR NFP of an outbreak of hepatitis E in the eastern Ouaddai province of Chad. From 2 January to 15 February 2024, 113 AJS cases were notified from the Adré health district. Between 1 and 19 March 2024, a total of 40 samples were tested by PCR at the Institute Pasteur of Dakar, Sénégal, for hepatitis E, yellow fever, dengue, West Nile fever, Zika, chikungunya, Rift Valley fever and Crimean-Congo haemorrhagic fever. Of the 40 samples, 36 (90%) were positive for hepatitis E.

Ouaddai province has been heavily affected by an influx of refugees and returnees fleeing the Sudan conflict since April 2023, with a majority being women and children. From 2 January to 28 April 2024, a total of 2092 suspected hepatitis E cases, including seven deaths (case fatality ratio (CFR) 0.3%), were reported from two health districts of the Ouaddai province, namely, Adré and Hadjer-Hadid. Among the 2092 suspected cases, 103 (4.9%) were from the host community and 1989 (95%) were reported from seven refugee camps and transit sites.

The **risk at the national level is assessed as high** due to the continuous population movements between different refugee camps and host communities; poor hygiene conditions, low access to safe drinking water and improved sanitation facilities including wastewater management as well as limited access to essential medical services in the affected camps. At the **global level, the risk is considered low**.

Source: [WHO](#)

Other Infectious Disease Outbreaks - Africa

Mpox - Democratic Republic of the Congo

In December 2022, the Democratic Republic of the Congo declared a national outbreak of mpox and an incident management system has been in place since February 2023, based on the increasing number of reported cases. Since September 2023, an outbreak of mpox in South Kivu province has continued to spread within the province and recently to neighbouring North Kivu, driven by sexual contact transmission. A new variant of clade I MPXV has been described in South Kivu. It carries predominantly APOBEC3-type mutations, indicating adaptation of the virus due to circulation among humans. It was estimated to have emerged around mid-September 2023, and its human-to-human transmission has been ongoing since then.

This is the first documented sustained community transmission of the virus in the country. It is not

known if this variant is more transmissible or leads to more severe disease than other clade I MPXV strains. Additionally, it carries gene deletions that affect diagnostics in the Democratic Republic of the Congo. To date, only clade I MPXV has been detected in the country, which in the WHO African region, reports the highest number of cases.

In 2024, as of 26 May, a total of 7 851 mpox cases were reported in the Democratic Republic of the Congo, including 384 deaths (CFR 4.9%). These cases were reported in 177 of the 519 (34%) health zones across 22 out of the 26 provinces (85%).

Based on the situation, WHO assesses that the **risk** associated with mpox in the Democratic Republic of the Congo remains **high**.

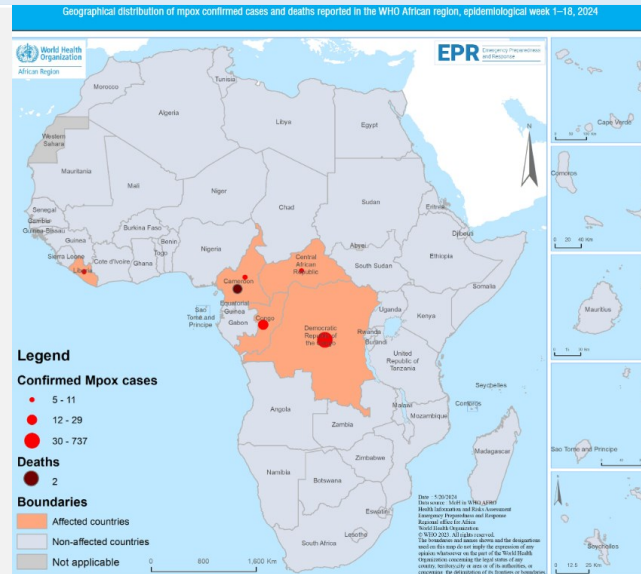
Source: [WHO](#)

Cholera – Comoros - update

The first cholera case was reported in the Union of the Comoros on 2 February 2024, and subsequently, cases were reported from all three regions (Ngazidja, Mwali, and Ndzuwani), spanning across 17 health districts.

During epidemiological week 20 (ending 19 May 2024), there were 99 new cases, including 93 (94.0%) cases in Ndzuwani, four (4.0%) in Mwali and two (2.0%) in Ngazidja. Additionally, one new death was recorded in the Ndzuwani region. A total of 94 cases are still active, including 85 (90.4%) cases in Ndzuwani, seven (7.5%) in Mwali and two (2.1%) in Ngazidja. As of 15 May 2024, a cumulative total of 6 025 cases had been reported, with the majority of cases reported from Ndzuwani (83.2%), followed by Ngazidja (9.1%) and Mwali (7.7%). Over 96.5% (n=5817) of cases recovered, yet a total of 114 deaths were recorded (CFR 1.9%), including 94 (82.5%) in Ndzuwani, 15 (13.2%) in Ngazidja and five (4.3%) in Mwali.

Source: [WHO](#)



Flood related outbreaks - Burundi

Since the beginning of the rainy season in September 2023, Burundi has been affected by torrential rains, floods, and landslides, aggravated by the El Niño phenomenon. These have caused population displacement and significant infrastructure damage. As of mid-April 2024, it was estimated that 19 250 houses and more than 200 classrooms were flooded or destroyed, and at least five healthcare facilities were affected.

The most affected provinces are located in the western and southern parts of the country, including Cibitoke, Bubanza, Bujumbura Rural, Bujumbura Mairie, Rumonge and Makamba.

The floods contribute to the deterioration of the country's water, sanitation, and hygiene (WASH) situation, which is already facing outbreaks of cholera, malaria, and measles, as well as food insecurity.

Since 2022, and as of 18 May 2024, a total of 1 798 **cholera** cases, including 10 deaths (CFR 0.6%), have been reported from Bujumbura Mairie, Cibitoke, Bujumbura rural, Rumonge, and Bubanza.

In week 20 (ending 19 May 2024), 11 out of 49 districts (Isale, Busoni, Kirundo, Mukenke, Vumbi, Kiganda, Muramvya, Gashoho, Giteranyi, Kibumbu, and Ngozi) were experiencing a **malaria** outbreak. From week 1 to Week 20, 2024, a total of 1 551 measles cases, including 93 laboratory- confirmed, 31 clinically compatible, and 1 427 epidemiologically linked to a laboratory-confirmed case or a clinically compatible case, were reported from 17 out of 49 districts.

Source: [WHO](#)

Poliomyelitis update - Global

Summary of new poliovirus week 24, 2024

- [Afghanistan](#): one WPV1 case
- [Pakistan](#): one WPV1 case and 20 positive environmental samples
- [Côte d'Ivoire](#): three cVDPV2-positive environmental samples
- [DR Congo](#): one cVDPV1 case
- [Ghana](#): one cVDPV2-positive environmental sample
- [Liberia](#): four cVDPV2-positive environmental samples
- [Niger](#): one cVDPV2-positive environmental sample
- [Sierra Leone](#): six cVDPV2-positive environmental samples
- [South Sudan](#): one cVDPV2 case
- [Yemen](#): three cVDPV2 cases

Source: [Polio Global Eradication Initiative](#)

Cholera – Mayotte

On 26-May-2024, news media highlighted the second death associated with the cholera outbreak in Mayotte, first reported on 18-Mar-2024. Overall, 138 confirmed cases, including 18 imported cases from Comoros and 87 indigenous cases, were reported. These are the first cholera cases recorded in Mayotte since 2000. Kougou (71 cases) is the most affected, followed by M'tsangamouji (16 cases) and Passamainty (12 cases). All cases have been linked to the use of surface water for drinking, cooking, or hygiene.

Source: [NewsMedia](#), [Crisis24](#)

Other Infectious Disease Outbreaks – Middle East/Europe



Acute flaccid Myelitis – Moldova

On 17-Jun-2024, media reports highlighted a case of acute flaccid myelitis (AFM) involving a child in Chisinau, Moldova's capital and largest city. Health authorities are investigating whether the condition may be linked to poliovirus.

- Case details: A one-year old child from Chisinau exhibiting symptoms of flaccid paralysis and currently admitted to a local hospital. The dates when symptoms first appeared and when admission to the hospital occurred have not been disclosed.
- Investigations are ongoing to understand the cause of the paralysis. AFP is a syndrome characterized by the sudden onset of muscle weakness or paralysis with many infectious and non-infectious causes, including poliovirus.

The global risk of polio re-emergence is driven by declining vaccination rates in various regions and countries and active outbreaks in African countries. These points emphasize the critical need for vigilance and comprehensive public health responses to prevent the spread of polio and related conditions.

Moldova achieved polio-free status in 1996 and has since reported no cases of polio caused by wild or circulating vaccine-derived poliovirus. According to the WHO, Moldova maintained an 88% annual immunization coverage against poliovirus from 2020 to 2022. Although more recent data is unavailable, the recommended herd immunity threshold for polio is at least 80%.

Sources: [NewsMedia](#), [WHO](#)

Oropouche – Italy – imported case -

The first laboratory confirmation of a globally imported Oropouche virus (OROV) case has been reported in Italy. The affected individual is a 26-year-old female who reported visiting friends and relatives in Ciego de Ávila, Cuba, from 12 to 26-May-2024. Upon her return to Italy (unspecified sub-location) on 26-May-2024, she developed diarrhea, general malaise, high-grade fever, intense headache, and nausea during the return flight. She also developed arthralgias (joint pain) and retro-orbital pain without a rash. Dengue was suspected initially, however, rapid tests for dengue (including NS1-antigen, IgM, IgG antibodies) were negative. PCR for dengue, Zika, and chikungunya viruses (in blood and urine) were also negative. The patient reported that her relatives in Cuba experienced similar symptoms; a PCR specific for OROV was conducted, confirming the diagnosis of Oropouche virus infection.

Source: [ProMed Mail](#)

Poliomyelitis – Afghanistan and Pakistan

One WPV1 case was reported in Hilmand Afghanistan in week 24. There are five cases reported this year. The total number of cases in 2023 remains six.

One WPV1 case was reported in Sindh, Pakistan in week 24, making it the fifth case this year. The number of 2023 cases remain six. Additionally, 20 WPV1-positive environmental samples were reported; five in Sindh, 10 in Balochistan, four in Khyber Pakhtunkhwa and one in Punjab.

Source: [Polioeradication.org](#)

Middle East respiratory syndrome coronavirus - Kingdom of Saudi Arabia

Between 10 and 17 April 2024, the Ministry of Health (MoH) of the Kingdom of Saudi Arabia (KSA) reported three cases of Middle East respiratory syndrome coronavirus (MERS-CoV), including one death.

All three cases were reported in Riyadh and linked to the same health-care facility. Two of the cases were identified through contact tracing following identification of the index case. The second and third case are suspected to be secondary health care associated cases due to contact with the index case. The investigations are ongoing to verify this and understand the route of transmission.

The index case is a 56-year-old male schoolteacher, and a Saudi national residing in Riyadh. There was no clear history of exposure to typical MERS-CoV risk factors. Close contacts, including 20 health and care workers and seven household members, were followed up, which promptly identified the two secondary cases.

The second case is a retired 60-year-old male Saudi national, residing in Riyadh. With no history of exposure to camels, the case is suspected to be a secondary healthcare-associated case due to contact with the index case, with investigations ongoing.

The third case is a 60-year-old male, retired military personnel and Saudi national, residing in Riyadh. No history of exposure to camels was identified and, like the second case, he is suspected to be a secondary healthcare-associated case due to contact with the index case.

As of 21 April 2024, the second and third cases remained in the ICU and were intubated on 9 April and 18 April, respectively.

Additionally, one further case has been notified with no epidemiological link to the three cases described above. The case is a 32-year-old male with comorbidities from Taif, KSA who had had direct contact with camels, he had onset of symptoms on 21 January and died on 17 February 2024.

Source: [WHO](#)

Hepatitis E in Spain

About 40 cases of acute hepatitis related to Orthohepevirus C infection (HEV-C), also known as rat hepatitis E virus (RHEV), have been identified in Spain following a research study that investigated the cause of cases of acute hepatitis of unknown origin recorded between 2021 and 2024. The researchers who conducted the study were from the Maimónides Institute for Biomedical Research in Córdoba and the Network Biomedical Research Center for Infectious Diseases. Cases have been among individuals residing in various locations in Spain including Andalusia, Galicia, Navarra, and Catalonia. The hospitals included in the study serve just under 15% of the Spanish population.

More than 1,000 rodents were analyzed throughout Spain, as well as from the Canary and Balearic Islands. Approximately 30% were found to be carriers of the rat hepatitis E virus.

While the human incidence of rat hepatitis E remains unknown, researchers from the current study have stated that initial results suggest that more than 100 cases occur in Spain each year.

Source: [NewsMedia](#)