



Update 145 FHP-Update 21 February 2024



News:

- CDC:** [New data from CDC show](#) that the updated (2023-2024) COVID-19 vaccines were effective against COVID-19 during September 2023 – January 2024, including against variants from the XBB lineage, which is included in the updated vaccine, and JN.1, a new variant that has become dominant in recent weeks. To estimate [vaccine effectiveness](#) of the updated COVID-19 vaccine, CDC analyzed data from the [Increasing Community Access to Testing \(ICATT\)](#) COVID-19 pharmacy testing program. The protection provided by the updated vaccine was compared to not receiving an updated vaccine, regardless of a person's infection history or the number of previous COVID-19 vaccines received.
- CDC:** a [new variant of the virus that causes COVID-19](#), was detected in South Africa by the country's National Institute for Communicable Diseases. At this time, BA.2.87.1 has not been identified in clinical specimens outside South Africa. Because this is a newly emerging variant, there is not as much additional data about its potential impact. So far, the public health risk for this new variant appears low.
- Copernicus Climate Change Service:** reported that the [1.5C temperature threshold](#) – to which the world has agreed to limit global warming – was breached for 12 consecutive months for the first time between February 2023 and January 2024. 2023 was, again, the hottest year on record, but the highly symbolic temperature breach must be repeated for many years until the 1.5C limit is officially broken.
- WHO:** On 27 January 2024, the National Health Commission of the People's Republic of China [notified the World Health Organization \(WHO\)](#) of one confirmed case of human coinfection with avian influenza A(H10N5) virus and seasonal influenza A(H3N2) virus. This is the first case of human infection with avian influenza A(H10N5) virus reported globally.
- WHO/UCN:** Announced some of the health progresses done for Africa last year [in their new newsletter](#), like the elimination of Malaria in. Furthermore, by the end of 2023, there were 18 million fewer people requiring interventions against neglected tropical diseases. Togo achieved a world first by eliminating four NTDs; Guinea worm disease is on the verge of eradication; and sleeping sickness has been eliminated as a public health problem in seven countries. Africa has sustained its wild polio free status. Deaths attributable to tuberculosis (TB) continue to fall; and the fight against drug-resistant TB is being scaled up, with all country programmes now using technology for diagnosis of TB that diagnoses drug resistance at the molecular level.
- WHO:** [pointed out, that the persistence of cholera is evident](#) as 2024 begins, with 40 900 cases and 775 deaths reported in January alone from 17 countries across four regions: the African Region, the Eastern Mediterranean Region, the Region of the Americas, and the South-East Asia Region. Zambia and Zimbabwe have experienced the highest surges, underscoring the ongoing challenge of controlling cholera and the importance of sustained public health efforts. In 2023, cases were reported in 30 countries across five WHO regions, including nine countries that recorded more than 10 000 cases.
- WHO:** had an [information meeting on the composition of Influenza virus vaccines](#) for use in the 2024-2025 northern hemisphere influenza season.

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oPt Emergency Situation Update

Issue 22



As of 30 January 2024 at 13:00



World Health Organization
occupied Palestinian territory

Gaza Strip

Overview

Source: Ministry of Health



26,901 Fatalities
70% are said to be women and children



65,949 Injuries



7,780 reported missing or under the rubble



1.7M People (75% of population) displaced

Health Care Functioning, Access and Risks

Hospitals functionality



36%
13/36 Hospitals partially functioning
Estimated average bed occupancy: 388%



100%
3/3 field Hospitals fully functional
UAE Field Hospital
Jordanian Military Hospital
IMC Field Hospital



17%
13/77 Primary health care facilities are functional



Referrals abroad through Rafah since start of war
1,243 including **790** wounded and **445** ill, accompanied by **1025** companions

Communicable Diseases

Ongoing outbreaks of diarrheal illness and hepatitis A. Cases recorded since mid-October:



245,858 Cases of acute respiratory infections



161,285 Cases of diarrheal <5 years: **85,410***



69,962 Cases of scabies and lice



44,550 Cases of skin rashes



6,625 Cases of chickenpox



7,737 Cases of jaundice†

* 28 fold increase from baseline 2022

† Presumed Hepatitis A after samples tested positive

Health Attacks



342 Health attacks



627 People killed in attacks



783 People injured in attacks



61 Health workers detained/arrested



95 Health facilities affected



27 Hospitals damaged



86 Ambulances affected



47 That sustained damaged

Multi-country outbreak of cholera

Risk assessment: **Global risk – Very high**

Countries / areas / territories affected: **30**

Overview (data as of 31 January 2024)

- From 1 January to 31 December 2023, over 708 200 cases of cholera or acute watery diarrhoea (AWD) and more than 4300 deaths were reported worldwide. While data from 2023 cannot be directly compared to the more detailed official reports submitted to WHO for 20221–when there were 472 697 cases and 2349 deaths–the marked increase in preliminary figures for 2023 suggests a concerning escalation in global cases and deaths associated with cholera. For the latest data, please refer to the new [WHO Global Cholera and AWD Dashboard](#).
- In 2023, cases were reported in 30 countries across five WHO regions, including nine countries that recorded more than 10 000 cases. No outbreaks were reported in the European Region. The WHO African Region was the most affected region, with 17 countries reporting cholera cases during the year. The highest numbers of cases in the Region were reported in the Democratic Republic of the Congo (DRC), Malawi, and Mozambique. Countries like Ethiopia, Zimbabwe, and Kenya also faced significant outbreaks.
- The persistence of cholera is evident as 2024 begins, with 40 900 cases and 775 deaths reported in January alone from 17 countries across four regions: the African Region, the Eastern Mediterranean Region, the Region of the Americas, and the South-East Asia Region. Zambia and Zimbabwe have experienced the highest surges, underscoring the ongoing challenge of controlling cholera and the importance of sustained public health efforts.
- The global cholera response continues to be affected by a critical shortage of Oral Cholera Vaccines (OCV). From January 2023 to January 2024, urgent requests for OCV surged, with 76 million OCV doses requested by 14 countries while only 38 million doses were available during that time period. The global stockpile of vaccines is awaiting replenishment and all production up to 8 March will be allocated to requests already approved.
- 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 continues to assess the risk at global level as very high and the event remains classified as a grade 3 emergency.**

Figure 1. Reported global epidemics of cholera and AWD, 1 January 2023 to 31 January 2024

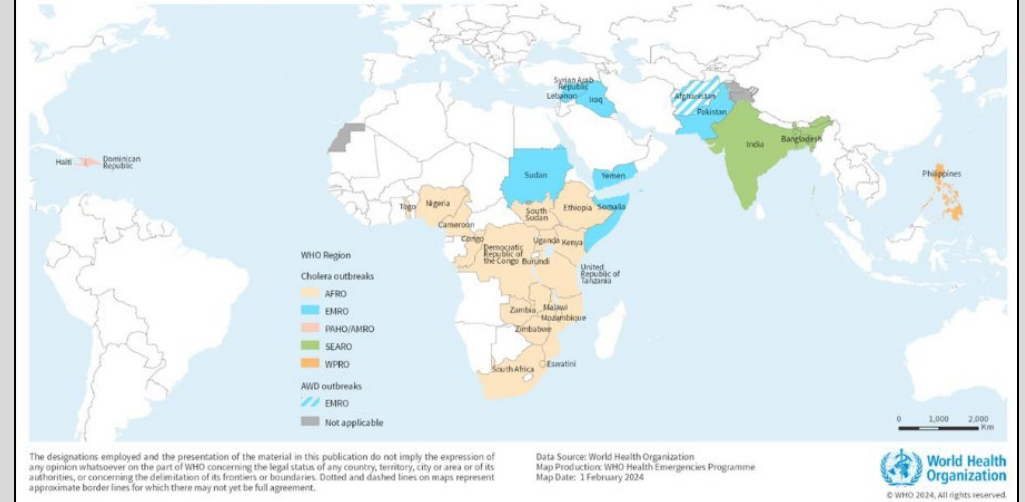


Table 1. Cholera cases and deaths reported from WHO regions, as of 31 January 2024¹

WHO Region	Country	Suspected/Confirmed cases	Total deaths	Cases per 100 000	CFR (%)	Reporting start	Reporting end
Africa	Burundi	1 417	9	11	<1	08/12/2022	22/01/2024
	Cameroon	21 332	508	77	2.4	01/10/2021	29/01/2024
	Congo	21	5	<1	23.8	17/07/2023	12/08/2023
	Democratic Republic of the Congo	51 847	436	55	<1	01/01/2023	01/10/2024
	Eswatini	2	0	<1	0	27/03/2023	18/04/2023
	Ethiopia	32 548	488	29	1.5	01/08/2022	29/01/2024
	Kenya	12 432	206	24	1.7	05/10/2022	15/01/2024
	Malawi	59 126	1 771	296	3	28/02/2022	15/01/2024
	Mozambique	43 074	166	135	<1	01/09/2022	22/01/2024
	Nigeria	3 441	108	2	3.1	01/01/2023	11/11/2023
	South Africa	1 422	47	3	3.3	29/01/2023	29/01/2024
	South Sudan ²	348	1	2	<1	22/02/2023	18/03/2023
	Togo	1	0	<1	0	07/07/2023	19/12/2023
	Uganda	80	10	<1	12.5	05/09/2023	14/09/2023
	United Republic of Tanzania	1 878	38	3	2	11/10/2023	29/01/2024
	Zambia	16 907	608	89	3.6	12/15/2023	29/01/2024
	Zimbabwe	21 230	476	122	2.2	12/02/2023	22/01/2024
Americas	Dominican Republic	84	0	1	0	17/10/2022	15/09/2023
	Haiti	79 347	1 172	685	1.5	02/10/2022	26/01/2024
Eastern Mediterranean	Afghanistan**	232 498	109	709	0	01/01/2023	29/01/2024
	Iraq	1 371	7	3	<1	01/01/2023	18/12/2023
South-East Asia	Lebanon	2 197	0	40	0	01/01/2023	02/06/2023
	Pakistan***	145	0	<1	0	01/01/2023	19/11/2023
	Somalia	20 096	66	123	<1	01/01/2023	22/01/2024
	Sudan	10 273	281	21	2.7	15/04/2023	22/01/2024
	Syrian Arab Republic	161 620	7	884	0	01/01/2023	15/10/2023
	Yemen	8 426	21	27	<1	01/01/2023	15/12/2023
Western Pacific	Bangladesh (Cox's Bazar)	240	0	27	0	01/01/2023	15/01/2024
	India ³	2 044	3	<1	<1	22/06/2023	19/11/2023
Western Pacific	Philippines	3 756	19	3	<1	01/01/2023	02/12/2023

¹ Case and death numbers presented are not directly comparable due to differences in case definitions, reporting systems, and general underreporting. All data are subject to verification and change due to data availability and accessibility. Respective figures and numbers will be updated as more information becomes available. The data in Table 1 includes suspected, rapid diagnostic test (RDT) positive, and culture-confirmed cholera cases. No cholera cases of local transmission have been reported in the European Region.

² Afghanistan reports AWD through the sentinel site surveillance system.

³ Refers to the laboratory-confirmed cases only.

Cholera in the WHO African Region

Regional Cholera Update

Grade 3

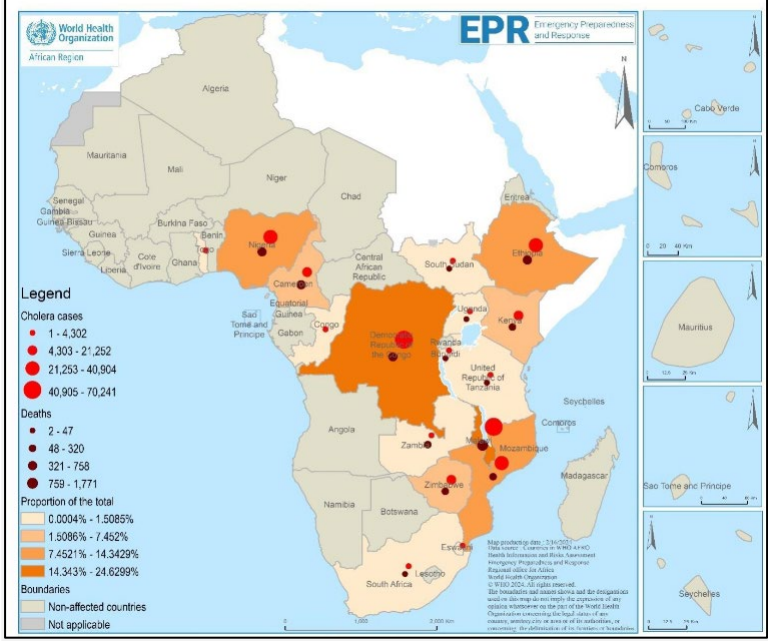
Cumulative Cases	Cumulative Deaths	CFR
321 286	5 969	1.9%

Overview

The cholera outbreak in the WHO African Region has affected 18 countries over the last two years. The Ministry of Health of Comoros declared an outbreak on 2 February 2024 making it the latest country. Six countries are categorized as being in acute crisis (Democratic Republic of the Congo, Ethiopia, Mozambique, United Republic of Tanzania, Zambia, and Zimbabwe).

The southern region of the continent, now in the rainy season, is seeing resurging outbreaks. The increase in rainfall levels is causing floods in communities and landslides, with a heightened risk of outbreaks in countries not reporting new confirmed cases.

Figure 1: Distribution of cholera cases and deaths in WHO African Region, 1 January 2022 – 11 February 2024



Current numbers

In Epidemiologic week 06 of 2024, eight countries- Burundi, Comoros, Ethiopia, Mozambique, South Africa, United Republic of Tanzania, Zambia, and Zimbabwe- reported a total of 4 122 new cases. Transmission is currently active in 15 countries with no recent report of new cases from Eswatini (last case reported April 18), Republic of the Congo (last case reported 26 July), and South Sudan (last case reported May 16).

Since the beginning of the year, as of 11 February 2024, the number of cholera cases and deaths reported to the WHO Regional Office for Africa (AFRO) was 34 511 and 869 deaths, respectively, with a case fatality ratio of 2.5%.

As of 11 February 2024, since 1 January 2022, a cumulative total of 321 286 cholera cases, including 5 969 deaths with a case fatality ratio (CFR) of 1.9% had been reported (Table 1). The Democratic Republic of the Congo, Ethiopia, Malawi, Mozambique, and Nigeria account for 74.5% (239 366) of the cumulative cases and 67.0% (3 998) of all cumulative deaths reported.

Conclusion

The cholera outbreaks in the African Region have occurred in the context of natural disasters such as flooding (Mozambique, Malawi), drought (Kenya and Ethiopia), conflict (Cameroon, Democratic Republic of the Congo, Nigeria, Ethiopia) and multiple disease outbreaks including Mpox, wild polio, measles, COVID-19, etc. Many countries have limited and strained resources, shortage of medical commodities, including cholera kits and Oral Cholera Vaccine (OCV). Poor sanitation and unreliable water supplies with increased cross-border movements continue to serve as driving factors for the outbreak across the region. The new year 2024 poses another challenge with El nino and the cyclone season commencing.

Figure 2: Epi Curve of cholera cases and deaths in WHO African Region, 1 January 2022 – 11 February 2024

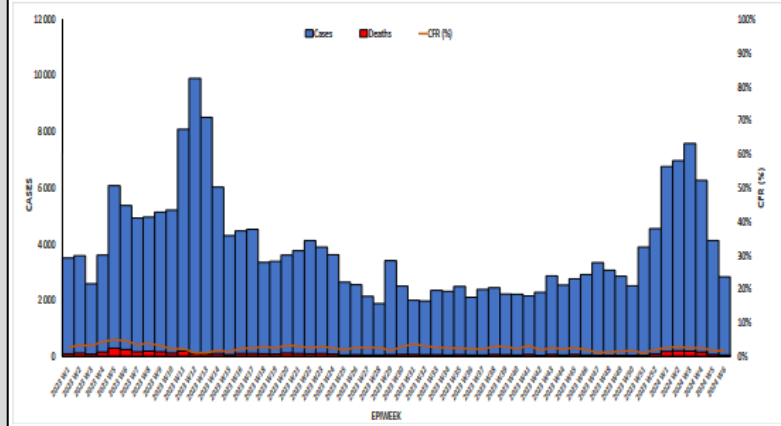


Figure 3: Trends of cholera cases in WHO African Region, 1 January 2022 – 11 February 2024

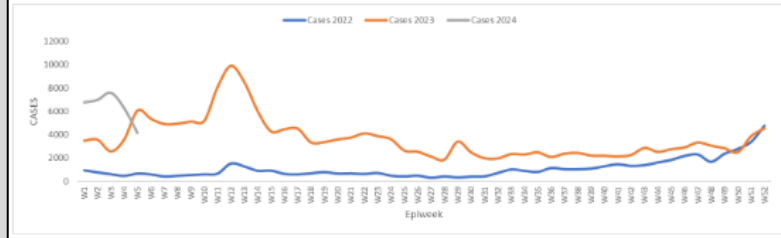
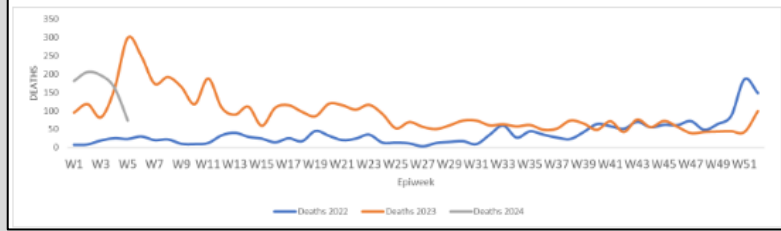


Figure 4: Trends of cholera deaths in WHO African Region, 1 January 2022 – 11 February 2024



Populationsdichtegraduierung Vektormonitoring		
bis 0,99		sehr geringe Dichte
1-4,99		geringe Dichte
5-9,99		mittlere Dichte
10-19,99		erhöhte Dichte
20-23,99		hohe Dichte
24-29,99		hohe Dichte; oberhalb der Seuchenschwelle (nach CDC)
ab 30		sehr hohe Dichte; oberhalb der Seuchenschwelle (nach CDC)

Legend:

The population density assessment is based on the following values:
max. temporary, local peak values as well as average camp area:
 Σ per Σ \varnothing total nights of trapping

Vector monitoring in MINUSMA

Source: German Armed Forces, Department of Microbiology and Hygiene, part of the Military Hospital in Koblenz.

The German Armed Forces Preventive Medicine team is undertaking routine surveillance and prevention for West Nile vector control on their mission in Niamey, Niger.

The catch results from 4 trap sites (light traps and scent traps) were sent for further investigation.

They identified a total of 418 mosquitoes (*Culex spp.*, *Culiseta spp.*, *Sergentomyia spp.*, *Phlebotomus spp.*, *Culicoides spp.*) in Camp Vie Allemand in MINUSMA in four samplings of three days each between 25 Dec and 28 Dec, 08 Jan and 11 Jan, 22 Jan and 25 Jan, and 29 Jan and 1 Feb 2024 with following result:

Population density of relevant female vectors (selection) during the monitoring period, related to the trap sites:

Monitoringzeitraum	weibliche Stechmücken	Fangort	Anzahl	max. temporäre, lokale Spitzenwerte: Anzahl \varnothing Falle/Fangnacht	Bewertung des Spitzenwertes	Durchschnitt Campbereich: Σ \varnothing pro Σ Fallenfangnächte gesamt	Gesamt-bewertung
vom: 25.12.2023	<i>Culex spp.</i> \varnothing	Sportzelt DF	8	4,00	geringe Dichte	1,08	geringe Dichte
bis: 28.12.2023		DFAC DF	5	3,00	geringe Dichte		
Beobachtungszeitraum in Tagen: 3							

Assessment of the available catch results or the vector pressure in the areas of monitoring carried out:

- Detection of *Culex spp.* and *Culicoides spp.*. In the monitoring period 25 Dec to 28 Dec.
- Detection of female *Culex spp.* in **low density**. During the monitoring period, a **low risk of transmission** of corresponding infectious agents (e.g. West Nile virus, *Wuchereria bancrofti*) can be assumed.

Population density of relevant female vectors (selection) during the monitoring period, related to the trap sites:

Monitoringzeitraum	weibliche Stechmücken	Fangort	Anzahl	max. temporäre, lokale Spitzenwerte: Anzahl \varnothing Falle/Fangnacht	Bewertung des Spitzenwertes	Durchschnitt Campbereich: Σ \varnothing pro Σ Fallenfangnächte gesamt	Gesamt-bewertung
vom: 22.01.2024	<i>Culex spp.</i> \varnothing	Sportzelt DF	45	27,00	hohe Dichte; oberhalb der Seuchenschwelle (nach CDC)	7,33	mittlere Dichte
bis: 25.01.2024		Sportzelt LF	2	2,00	geringe Dichte		
Beobachtungszeitraum in Tagen: 3							
vom: 29.01.2024	<i>Culicoides spp.</i> \varnothing	DFAC DF	41	24,00	hohe Dichte; oberhalb der Seuchenschwelle (nach CDC)	0,08	sehr geringe Dichte
bis: 31.01.2024		Sportzelt DF	1	1,00	geringe Dichte		
Beobachtungszeitraum in Tagen: 3							

Assessment of the available catch results or the vector pressure in the areas of monitoring carried out:

- Detection of *Culex spp.*, *Culiseta spp.*, *Sergentomyia spp.* and *Phlebotomus spp.* In the monitoring period 22 Jan to 25 Jan.
- Detection of female *Culex spp.* in some cases **high density**. However, in view of negative West Nile virus PCR detections over the last few years, a very low risk of transmission can be assumed even during the monitoring period. However, a **higher risk** must be assumed with regard to *Wuchereria bancrofti* filariae.
- First detection** of a (male) *Phlebotomus dubosqi* in the context of the Bw mission in Niamey. During the monitoring period, a **very low risk** of transmission of *Leishmania* can be assumed.
- Detection of female *Sergentomyia spp.* in **very low density**. Due to the presumed zoophilia of these mosquitoes, a **very low risk** of transmission of *Leishmania* can be assumed during the monitoring period.

Population density of relevant female vectors (selection) during the monitoring period, related to the trap sites:

Monitoringzeitraum	weibliche Stechmücken	Fangort	Anzahl	max. temporäre, lokale Spitzenwerte: Anzahl \varnothing Falle/Fangnacht	Bewertung des Spitzenwertes	Durchschnitt Campbereich: Σ \varnothing pro Σ Fallenfangnächte gesamt	Gesamt-bewertung
vom: 29.01.2024	<i>Culex spp.</i> \varnothing	Sportzelt DF	12	6,00	mittlere Dichte	2,00	geringe Dichte
bis: 01.02.2024		DFAC DF	10	8,00	mittlere Dichte		
Beobachtungszeitraum in Tagen: 3							
vom: 01.02.2024	<i>Culicoides spp.</i> \varnothing	Sportzelt LF	1	1,00	geringe Dichte	0,08	sehr geringe Dichte
Beobachtungszeitraum in Tagen: 3							

Assessment of the available catch results or the vector pressure in the areas of monitoring carried out:

- Detection of *Culex spp.* and *Culicoides spp.*. In the monitoring period 29 Jan to 01 Feb.
- Detection of female *Culex spp.* in some cases **low density**. However, in view of negative West Nile virus PCR detections over the last few years, a very low risk of transmission can be assumed even during the monitoring period. However, a higher risk must be assumed with regard to *Wuchereria bancrofti* filariae.
- Detection of female *Culicoides spp.* (biting midges) in **very low density**. A very low risk of transmission of filariae (e.g. *Mansonella perstans*) can be assumed during the monitoring period.

Population density of relevant female vectors (selection) during the monitoring period, related to the trap sites:

Monitoringzeitraum	weibliche Stechmücken	Fangort	Anzahl	max. temporäre, lokale Spitzenwerte: Anzahl \varnothing Falle/Fangnacht	Bewertung des Spitzenwertes	Durchschnitt Campbereich: Σ \varnothing pro Σ Fallenfangnächte gesamt	Gesamt-bewertung
vom: 08.01.2024	<i>Culex spp.</i> \varnothing	Sportzelt DF	21	9,00	mittlere Dichte	2,33	geringe Dichte
bis: 11.01.2024		DFAC DF	7	6,00	mittlere Dichte		
Beobachtungszeitraum in Tagen: 3							

Assessment of the available catch results or the vector pressure in the areas of monitoring carried out:

- Detection of *Culex spp.*. In the monitoring period 08 to 11 Jan.
- Detection of female *Culex spp.* in **low density**. During the monitoring period, a **low risk of transmission** of corresponding infectious agents (e.g. West Nile virus, *Wuchereria bancrofti*) can be assumed.

Vector results

- Testing of *Culex spp.* by real-time PCR with the alphaCube TBEV/WNV
- No West Nile Virus-RNA detectable
- Risk of transmission of West Nile viruses is very low**

Recommendations:

Continued consistent and optimized application of personal, specified protection and prophylactic measures (use of repellents, field blouses and long trousers from the afternoon onwards, insect protection on windows and doors or impregnated mosquito nets on the sleeping area). Continued continuous vector monitoring as well as identifying and removing (draining) potential mosquito breeding sites; If necessary, vector control measures (e.g. mosquito larvae control) at the OPA Niamey.

Global impact of climate change on neglected tropical diseases (NTDs)

In October 2023 the 36th meeting of the International Task Force for Disease Eradication (ITFDE) discussed the “global impact of climate change and health” and “the impact of climate change on disease eradication and elimination.

Global impact of climate change on health

A rapid increase in atmospheric CO₂ over the past 60 years led to a level of over 400 ppm in 2016 for the first time in millennia. The relation between increased CO₂ and rising temperatures (i.e. climate change) led to a marked increase in extreme weather events and disasters, which are predicted to intensify. The impacts on health due to climate change include heat-related illnesses, infectious diseases (especially those that are vector-, food- and water-borne), pandemics, mental health challenges, respiratory problems due to air pollution and disruption of health-care services during extreme events. Urgently addressing climate change is a top priority in global health.

Global impact of climate change on neglected tropical diseases (NTDs)

As disease vectors such as *Aedes* mosquitoes adapt to the increased temperatures due to climate change, carriage of mosquito-borne viruses like dengue and chikungunya in particular will result in more epidemics. Furthermore, diseases are re-emerging in locations previously considered to have eliminated them, such as the increasing incidence of malaria and leishmaniasis in Central and South America and northern Europe. Mosquito-borne infections and the associated diseases, particularly those transmitted by *Aedes* mosquitoes, are anticipated to continue increasing in temperate zones of the northern and southern latitudes.

Environmental shifts impact the intricate ecological chain, affecting free-living parasite life stages, intermediate hosts and vectors. Alterations in temperature, water quality, vegetation and the broader ecosystem can influence pathogen transmission, as climate change permeates every level of the ecosystem, impacting all organisms, from parasites to vectors and the entire food chain through drought, flooding or both. Parasites and vectors are susceptible to climate change, and extreme weather can temporarily disrupt pathogen transmission while also causing displacement of people and animals to new habitats. Climate change also impacts biodiversity, as natural habitats are destroyed by population pressures from climate-induced migration and increased agricultural use, resulting in natural habitat destruction. The exact impact of climate change on transmission of NTDs is uncertain, because of the inherent unpredictability of disease dynamics and, in some systems, limited understanding of climate–pathogen–disease relations. Changing environmental conditions can shift disease transmission, making previously suitable areas more favourable and others less so. The challenges of climate change, especially to NTDs, are multifaceted; uncertainty in modelling future climate impacts, the complexity of anthropogenic influences and the lack of localizing global climate change models require further study.

Global impact of climate change on vector-borne diseases

A high-level review of global trends in and drivers of the emergence of vector-borne disease calls attention to 3 related concerns that are strongly influenced by climate change: environmental change, global migration and urbanization. Effective disease prevention and control will probably be complicated by increasing environmental and social change, concentrated in urban and peri-urban centres in sub-Saharan Africa, South Asia and Latin America, where the most severe effects of climate change on human population centres will probably be experienced.

Additional technical challenges for preventing and controlling vector-borne infections include the possibility that the available interventions may become less effective. For example, the anticipated increase in populations of vector species in some areas may result in a requirement for more insecticide use, with potential risk for resistance of the organisms. Some products for integrated vector control may become less effective due to increases in temperature and ultraviolet radiation and decreases in humidity.

Climate change drives global migration, as heat waves and sustained droughts lead to uninhabitable conditions. A recent report stated that, by 2050 in regions of sub-Saharan Africa, South Asia and Latin America, climate change could result in forced displacement of over 143 million people within their countries. Many displaced people are likely to move into already crowded urban and peri-urban areas in their countries, where vector-borne diseases such as malaria and dengue can thrive. A model developed by Messina et al. predicts that 2.25 billion more people will be at risk of dengue in 2080 than in 2015, the key drivers being urbanization, disproportionate population growth and climate change. While significant progress has been made in the past 20 years in reducing the prevalence of malaria by successful global interventions, the current establishment of *Anopheles stephensi* in at least 7 African countries threatens that success.⁸ A recent comparison of *An. stephensi* with *An. gambiae* indicated that larger portions of Africa might be more suitable for malaria transmission by *An. stephensi* than by *An. gambiae*. Some of the characteristics of *An. stephensi*, which WHO has identified as a cause for heightened concern, include its capacity to survive and transmit disease at higher temperatures than other African malaria vectors, the observation in this species of resistance to many insecticides, and its adaptation to urban settings. Similarly, climate-induced loss of biodiversity of vector populations allows more efficient, more adaptable vectors to dominant vector populations (e.g. *An. darlingi* in the Amazon). This situation is exacerbated by climate-induced migration, which increases deforestation and potential changes in reservoir animal ecology, increasing the risks of emergence of diseases and infections.

Quantifying the impacts of climate change on disease eradication and elimination

Climate change is reshaping the global burden of infectious disease. Future risks are better understood than present-day impacts, however, and the best contemporary estimate of mortality due to climate change is now 20 years out of date.

In sub-Saharan Africa and southern China, climate change-driven increases in malaria risk have been non-trivial but effectively suppressed by vector control and mass drug administration. For other infections – notably, cholera, LF, schistosomiasis, onchocerciasis, leishmaniasis, trypanosomiasis and trachoma – the relation of risk to climate change is poorly known, and most interventions are conducted in the absence of quantitative evidence. New research should be conducted to quantify the impact of climate change according to indicators relevant to elimination and control programmes.

Climate change will be the “new normal” for disease elimination and eradication in the 21st century. Collaboration between practitioners and climate and epidemiological modellers could help to make the case for climate action, including reducing greenhouse gas emissions, loss and damage financing, and targeted support for climate-resilient disease control programmes.

Other Infectious Disease Outbreaks and disasters – Asia



Unknown Illness – Bangladesh

Local news media has raised concerns over two recent deaths from an unknown illness in the city of Rajshahi, a major urban, commercial, and educational centre in Bangladesh. There is limited information, however, the local media has highlighted that the two deceased were siblings, who were provided unwashed plums on 13-Feb-2024. Laboratory samples, from both ELISA and PCR tests, resulted negative for Nipah virus infection.

Source: [NewsMedia](#)

Dengue – Bangladesh

During week 1 in 2024 (1 to 7 January 2024), a total of 378 new dengue cases were reported in Bangladesh, a 47.4% decrease compared to week 52 (25 to 31 December 2023) (n=719). The number of new deaths also decreased by 62.5% from 8 in week 52 to 3 in week 1 (2024).

Between 1 and 31 December 2023 a total of 9 288 cases including 83 deaths have been reported. This compares to 5 024 cases including 27 deaths during the entirety of December 2022.

In the year 2023, a total of 321 179 dengue cases, including 1 705 deaths, were reported. This represents a case fatality rate (CFR) of 0.53%. Comparatively, in the previous year, 2022, there were 62 382 reported cases, with 281 associated deaths and CFR at 0.45%. This marks a significant increase of approximately 416% in the number of cases and a 506% increase in deaths compared to 2022.

Source: [MediaNews](#)

Avian Influenza – China

On 13-Feb-2024, the source of infection of the fatal case of H10N5 in Xuancheng, Anhui Province was reported, with poultry samples from their residence testing positive.

This is the first case of human infection with avian influenza A(H10N5) virus reported globally.

A co-infection of seasonal influenza A(H3N2) and avian influenza A(H10N5) was confirmed in a 63-year-old female from Xuancheng, in Anhui Province in a retrospective study. The affected individual later died following hospitalization in December 2023.

The individual was a farmer, and was exposed and in close contact to live poultry. A live duck purchased on 26-Nov-2023 was confirmed as the possible source of infection. Several samples of the stored duck meat had tested positive for H10N5.

Environmental samples collected from their home all tested negative. No further cases were identified after a retrospective case search and testing of close contacts.

Currently available epidemiologic information suggests that avian influenza A(H10Nx) viruses have not acquired the capacity for sustained transmission among humans. Thus, the likelihood of human-to-human spread is considered low.

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

Highly Pathogenic Avian Influenza H5N1 - Cambodia

Cambodia has reported four recent human infections with highly pathogenic avian influenza (HPAI) A(H5N1) (bird flu) virus. These are the first human infections with HPAI A(H5N1) virus identified in Cambodia in 2024.

The four infections occurred in three children, one of whom died, and an adult, all of which were identified in late January and early February. All patients reportedly had a history of recent exposure to sick or dead poultry prior to their illness. Currently, there is no indication of person-to-person spread associated with these four cases of H5N1 virus infection in Cambodia. These cases were reported from Kampong Trabek district, Prey Veng province, and Puok district, Siem Reap province, Cambodia.

Six sporadic human infections with HPAI A(H5N1) bird flu virus occurred in Cambodia last year (February, October, and November 2023).

Globally almost all cases of human infection with avian influenza A(H5N1) were sporadic infections and have been linked to close contact with infected live or dead birds, or influenza A(H5N1) contaminated environments. These animal influenza viruses do not easily infect humans, and human-to-human transmission appears to be unusual. However, severe disease with high mortality rates can occur as a result of human infection. Given that the virus continues to circulate in poultry, particularly in rural areas in Cambodia and other countries where the virus is endemic in poultry, the potential for further sporadic human cases can be expected.

Available epidemiological and virological evidence suggests that A(H5N1) viruses have not acquired the ability to sustain transmission among humans. Therefore, the likelihood of human-to-human spread is considered **low**. Based on available information, WHO assesses the risk to the general population posed by this virus to be **low**.

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

Circulating vaccine-derived poliovirus type 2 (cVDPV2) – Indonesia

Indonesia reported four cases of circulating vaccine-derived poliovirus type 2 (cVDPV2) from October 2022 to February 2023, with three cases occurring in Aceh province and one case in West Java province. On 20 and 27 December 2023, the Indonesian Ministry of Health notified WHO of two new confirmed cases of cVDPV2. One case, from Klaten District, Central Java Province, is a 6-year-old female, with a history of recent travel to Madura Island (Sampang district, East Java Province). The second case, a one-year-old male, is from the neighbouring district of Pamekasan on Madura Island, East Java. Sub-optimal vaccination coverage increases the risk of further transmission and impact on human health. In Klaten district, where the current case is reported, the coverage for four doses of bivalent oral polio vaccine (bOPV) and inactivated polio vaccine 1 (IPV1) was at 89.8% and 88.6% respectively in 2022. In the Pamekasan District, where the second case was reported the coverages for bOPV and IPV1 were 88.1% and 74.1%, respectively in 2022.

The overall risk is assessed as **high** at the national level. At the regional level the overall risk is assessed to be **moderate**.

Source: [WHO SEA](#)

Other Infectious Disease Outbreaks - Americas



Oropouche (OROV) - Peru

On 17-Feb-2024, local media in Peru highlighted that there while there were nine laboratory-confirmed cases of Oropouche virus (OROV) disease, over 600 samples that have resulted negative for dengue virus remain under investigation for OROV. According to a recent epidemiological alert on the OROV in the Region of the Americas on 2-Feb-2024, PAHO indicated that in Peru, at least 94 cases of OROV were laboratory-confirmed between 2016-2022 (eight). Peru is currently experiencing high levels of dengue disease activity, which can lead to under-diagnosed cases of OROV as these diseases share some overlapping clinical features. Historically, confirmed OROV have been reported across six departments of the country: Madre de Dios, Cusco, San Martín, Cajamarca, Loreto, and Ayacucho.

Although, OROV is an emerging pathogen, it appears to be less severe when compared to other high-burden arboviruses such as dengue. With the ongoing changes in climate and its resulting effects on environmental conditions, there is an expected increase in OROV disease burden and geographic spread in the long term.

Source: [PAHO](#)

Influenza A (H1N1) variant virus (swine flu) - Brazil

On 16 January 2024, Brazil notified the WHO of a laboratory-confirmed human infection with swine-origin influenza A(H1N1) variant (v) virus, in the municipality of Toledo, State of Paraná. The patient had no history of exposure to pigs and has fully recovered. This is the first human infection caused by an influenza A(H1N1)v virus reported in Brazil in 2024, and the ninth case of a human infection with a swine variant virus reported in the state of Paraná, Brazil, since 2015.

Based on the information currently available, WHO considers this a sporadic case. The likelihood of community-level spread among humans and/or international disease spread through humans is considered low. WHO continues to stress the importance of global surveillance to detect virological, epidemiological and clinical changes associated with circulating influenza viruses that may affect human (or animal) health, and timely virus sharing for risk assessment.

Source: [WHO](#)

Dengue – Brazil - update

Brazil is experiencing upward trends in dengue fever cases in 2024. Official information from the Pan American Health Organization (PAHO) for 2013 to 2021 indicates that roughly 74,000 to 105,000 dengue cases are reported in the month of January each year. However, for January 2024, the country has reported at least 450,000 cases, which is more than double the historical seasonal baseline. In response to the rising case counts, the states of Rio de Janeiro, Acre, Minas Gerais, Goiás, and the Federal District have declared a public health emergency. Until now, no deaths have been reported in the Rio but there have been 362 hospitalizations in January, the highest number recorded since 1974.

Rio City Hall announced the opening of 10 care centers, the creation of an emergency operations center, and the allocation of hospital beds for dengue patients. “Smoke cars” which diffuse insecticide in the air will also be used in regions with the highest incidence of cases. Authorities are asking residents to eliminate sources of standing water for mosquito control. The Brazilian Air Force set up a 60-bed field hospital in the Federal District in Ceilandia to treat dengue patients.

Source: [PAHO](#)

Bubonic Plague in United States

On 07-Feb-2024 health authorities confirmed the first case of bubonic plague after a period of quiescence of at least nine years in the state of Oregon (last human known confirmed case was in 2015).

Official information indicates that the affected individual lives in Deschutes County, central Oregon, and that the likely source of the infection was their pet (a cat) that developed symptoms a couple of weeks ago.

According to the Center for Disease Control and Prevention, between one and 17 cases of the plague are reported in the US every year, and it is more common in the western US (across the states of Colorado, New Mexico, Arizona, and Utah). Human plague is rare in Oregon but there are historical precedents.

Source: [NewsMedia](#)

Alaskapox Virus Infection - United States

On 09-Feb-2024, Alaska state health officials released an epidemiological bulletin with details on the first historical death associated with laboratory-confirmed Alaskapox virus infection. In mid-September 2023, an elderly man from the Kenai Peninsula, in the coast of South-central Alaska, with a history of drug-induced immunosuppression secondary to cancer treatment noted a tender red papule in his right axilla. He was diagnosed with Alaskapox virus. The man began to improve about a week after treatment with intravenous medications but died in late January 2024 after experiencing kidney failure and other systemic failures. The direct cause of the death remains under investigation. Epidemiological investigations have determined that the man lived in a remote location and had not travelled anywhere. He may have contracted the virus from a stray cat that hunted small mammals and scratched him near the area where his first symptoms started. While the cat tested negative for the virus, health officials highlighted that it could have carried the virus on its claws.

Source: [HealthAlaska](#)

Measles – United States

A cluster of measles cases have been confirmed at an elementary school in Broward County, Florida as of 17-Feb-2024. According to news media, the first case was reported on 16-Feb-2024 in a third-grade student, with no travel history, at Manatee Bay Elementary School. A total of four cases have since been reported at the same school. Currently there is limited official information on the demographics, vaccination statuses, and relation of the additional cases. According to historical data, the last confirmed measles case in Broward County was acquired outside of the country in 2019, in an individual between the ages of 40 and 44.

Clusters of measles cases within school settings provide additional risk for larger outbreaks and community transmission due to prolonged close contact and falling vaccination rates in these settings.

California (Los Angeles County, San Diego County), Delaware, District of Columbia, Florida (Broward County), Georgia, Maryland (Montgomery County), New Jersey (Camden County), Ohio (Montgomery County), Pennsylvania (Philadelphia), Washington.

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

Western Equine Encephalitis – Uruguay

On 30 January 2024, the International Health Regulations National Focal Point (IHR NFP) of Uruguay notified the World Health Organization (WHO) of a human case of western equine encephalitis (WEE) virus infection. The patient is a 42-year-old from a rural area in the Department of San Jose, in southern Uruguay. This is the first confirmed human case reported in Uruguay in more than a decade, since the last reported human cases of WEE occurred in 2009.

Between 5 December 2023 and 30 January 2024, Uruguay’s Ministry of Livestock, Agriculture and Fisheries confirmed 76 equine WEE cases in 16 departments of the country: Artigas, Canelones, Cerro Largo, Durazno, Flores, Lavalleja, Montevideo, Paysandú, Río Negro, Rivera, Rocha, Salto, San José, Soriano, Tacuarembó, and Treinta y Tres. The Department of San Jose recorded the highest proportion of equine cases, accounting for 30% of the confirmed equine cases in the country.

In humans, the WEE virus can cause manifestations ranging from subclinical or moderate symptoms to severe forms of aseptic meningitis and encephalitis. Passerine birds are the main reservoir hosts for EEE and WEE viruses; however, in South America, other mammals, such as rodents and bats, may play a role as significant reservoirs of the virus, while equines and humans serve as terminal hosts. The transmission of the WEE virus primarily occurs through the bite of infected mosquitoes acting as vectors. The main vectors are mosquitoes of the genera *Culex*, *Culiseta* and *Aedes*.

Outbreaks of WEE in humans generally present as isolated cases with moderate symptoms; most infections are asymptomatic. It has been documented that mortality in humans ranges from 3% to 4% (6). There is no specific antiviral treatment, and care measures are supportive.

Source: [WHO](#)

Other Infectious Disease Outbreaks - Africa



Source: [WHO](#)

Diphtheria - Guinea

Guinea has been experiencing a diphtheria outbreak with a significant number of reported cases. From weeks 1 to 5 of 2024 (ending 4 February), there were 1 184 suspected cases and five deaths, averaging 237 suspected cases per week during this period. Initially, the outbreak was localized in the Kankan region. As of week 3 of 2024, seven of Guinea's eight regions have been affected, including the capital, Conakry. Kankan region accounts for most reported cases, with 96.7% (3 332 cases) attributed to this region. Boké region is the only one that has not reported any cases.

The worsening diphtheria situation affecting nearly all regions in Guinea poses considerable challenges. The increasing number of cases, coupled with their spread across regions, is compounded by various factors, including low vaccination coverage, overcrowded living conditions, delayed healthcare seeking and diagnosis, deficiencies in case management, and limited public information dissemination.

Since the outbreak began on 4 July 2023, until 4 February 2024, Guinea has recorded 3 445 suspected cases of diphtheria, including 3 207 confirmed cases and 83 deaths, resulting in a case fatality rate (CFR) of 2.4% among suspected cases. Despite reaching

Measles - Ethiopia

g the 77.0% of the National Measles Immunization Coverage Rate achieved in 2023, Ethiopia still faces critical challenges in containing ongoing measles outbreaks. A total of 556 new measles cases and five deaths were reported from January 1 to 29, 2024 in seven woredas, namely; Aboker, Berbere, Hoko, Janamora, Jinella, Saba Boru and Tembaro Woredas. However, measles outbreaks have been under control since January 29, 2024 in Abeshege, Bero, Bule Hora, Hamer, Lare and Surma Woredas.

From February 2023 to January 2024, a total of 35 474 cases and 258 deaths were reported. As of 1 February 2024, there were 2 725 active measles cases in the region. The response to Ethiopia's measles outbreak since 2023 has been met with sub optimal vaccination for the required three dose especially among pregnant women, and operational cost shortage for reactive vaccination despite in some affected woredas or districts. The current security problem in Amhara Region is also impacting the optimal response activities and getting progress reports.

Despite this, Ethiopia has made progress in responding to measles since the outbreak has been under control in some woredas since January 2024.

Cholera - Comoros

On 2 February 2024, the Ministry of Health of Comoros officially declared an outbreak of cholera. Six cases were initially confirmed between 2 and 3 February 2024 among 25 suspected cases (14 crew members and 11 passengers) who travelled from Tanzania to Comoros in the same boat. Between 2 and 4 February 2024, a total of 10 cases (8 men and 2 women) were confirmed positive for *Vibrio cholerae* by RDT, including 2 healthcare workers. Ten cases are currently admitted at the cholera treatment unit in Samba hospital in Grande Comore. Drinking water samples collected from the boat for laboratory analyses returned negative for *Vibrio cholerae*. Investigations to determine the source of infection as well as five missing passengers are ongoing.

Lassa fever - Guinea

On 03 February 2024, WHO was notified of a confirmed case of Lassa fever in a 40-year-old driver of N'Zérékoré prefecture, Guinée forestière region of southeastern Guinea. The case-patient is under care at the N'Zérékoré regional hospital. A total of 19 contacts were initially identified. Investigations are ongoing.

Source: [WHO](#)

Lassa fever - Nigeria

The Lassa fever outbreak in Nigeria has seen a significant development in the first epidemiological week of 2024, (1 to 7 January). Comparing the data with the previous year, 2023, there has been an evident increase in both suspected and confirmed cases. In week 4, there were 190 suspected cases and 53 confirmed cases of Lassa Fever, a notable rise from the 143 suspected and 29 confirmed cases in the same period of the previous year. The majority of the confirmed cases, about 71% (n=38), are concentrated in three states: Ondo, Edo, and Bauchi.

Source: [WHO](#)

Anthrax – East and southern Africa

Five countries in East and southern Africa are experiencing anthrax outbreaks, with more than 1100 suspected cases and 20 related deaths reported in 2023. A total of 1166 suspected and 37 confirmed cases have been recorded in Kenya, Malawi, Uganda, Zambia and Zimbabwe – where the disease is endemic, with seasonal outbreaks every year. Of the five countries, Zambia is witnessing its largest outbreak since 2011, with nine of its 10 provinces affected. As of 20 November 2023, Zambia had reported 684 suspected, 25 confirmed cases and four deaths. Only sporadic cases have previously been reported in animals and humans in the country. Local media reports are raising concerns over an outbreak of [gastrointestinal anthrax](#) that has affected at least 300 individuals (unspecified number of hospitalized and deaths) across five communities in Murang'a County, in Kenya's Central Province. The report indicates that the likely source of the outbreak was the consumption of contaminated meat from a cow that had died of an unidentified illness.

Source: [WHO](#)

Rift Valley fever - Kenya

On 24 Jan 2024, the Ministry of Health (MoH) of Kenya issued a Rift Valley fever (RVF) alert following confirmation through RT-PCR at CDC laboratory in Nairobi of a human case of RVF from Marsabit County.

Recent occurrence of animal deaths in Marsabit and Wajir Counties further support that an outbreak was likely occurring in the areas before the confirmation of the human case. Additionally, between December 2023 and 19 January 2024 there have been reports of suspected RVF cases in livestock in the Mandera, Wajir, Garissa, Marsabit, and Tana River counties.

Rift valley fever is endemic in Kenya with recurrent outbreaks in animals and humans reported. For the current outbreak, the increased livestock trade due to festive season or as an adaptation to the climate hazards or flooding may have potential to introduce infections in rather naive or healthy animal herds. Low knowledge and lack of awareness on the causes, transmission, clinical symptoms, and management of RVF at the community level are also reported for the current outbreak. There is a need for additional resources to scale up response activities.

Source: [WHO](#)

Other Infectious Disease Outbreaks – Middle East/Europe



Health care - Afghanistan

Human Rights Watch says the healthcare system in Afghanistan is suffering due to funding cuts and restrictions imposed by the Taliban government. “Donors’ decisions to reduce humanitarian aid have further weakened healthcare access, destabilised the economy, and worsened food insecurity,” the report said. Responding to the HRW report, a government spokesman said healthcare had improved under Taliban rule.

Source: [HumanRightsWatch](#)

Middle Eastern Respiratory Syndrome (MERS) – Saudi Arabia

At the bi-annual update on the Middle East Respiratory Syndrome Coronavirus (MERS-CoV) infections reported by the Kingdom of Saudi Arabia (KSA) to the WHO, four laboratory-confirmed cases of MERS-CoV, including two deaths, were reported from 13 August 2023 to 1 February 2024, with the last case being reported on 26 October 2023. Close contacts of the four cases were followed up by the Ministry of Health, and no secondary cases were identified.

The notification of these four cases does not change the overall risk assessment, with the risk being moderate at both the global and regional level. The reporting of these cases reiterates the need for global awareness of MERS-CoV as the virus continues to pose a threat in countries where MERS-CoV is circulating in dromedary camels, including those in the Middle East.

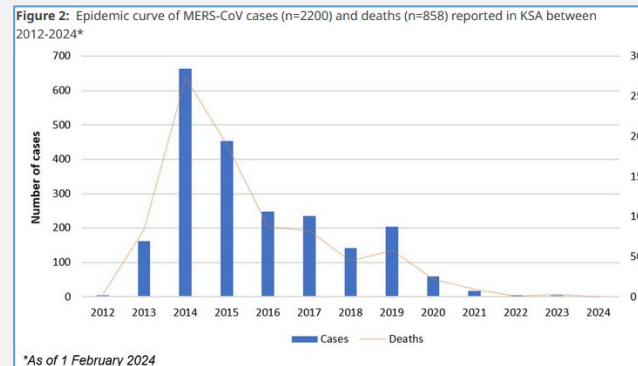
Since the beginning of 2023, and as of 16 February 2024, six MERS-CoV cases, including two fatalities, have been reported with the date of onset in 2023 by Saudi Arabia (5) and the United Arab Emirates (1).

As of 16 February 2024, no MERS-CoV cases have been reported by WHO or national health authorities with date of onset in 2024.

Since April 2012, and as of 16 February 2024, a total of 2 621 cases of MERS-CoV, including 949 deaths, have been reported by health authorities worldwide. In Europe, eight countries have reported confirmed cases, all with direct or indirect connections to the Middle East.

The source of the virus remains unknown, but the pattern of transmission and virological studies point to dromedary camels in the Middle East as a reservoir from which humans sporadically become infected through zoonotic transmission. Secondary human-to-human transmission has occurred, particularly within households and in healthcare settings.

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



Measles - Italy

A new variant of measles (MeV) from the D8 genotype, with at least three mutations and the ability to escape regular laboratory diagnostic testing, has been identified in the city of Milan, and the surrounding areas of Lombardy, in Northern Italy and bordering Switzerland.

Currently, only three of the 24 known MV genotypes are responsible for outbreaks worldwide: H1, which is endemic in China; B3, which had been reported mainly in African countries where it originated and is now endemic globally; and D8, originated in Asia in the 1980s and now spreads globally.

Genotypes D8 and B3 are the genotypes responsible for outbreaks that occurred in the past four years in Europe, Asia, and North America. According to the Measles Nucleotide Surveillance (MeNS) database, many European countries, including Italy, have reported the dominance of B3 and D8 measles strains since 2014.

A new study conducted by the University of Milan and the Istituto Superiore di Sanità (ISS), published on 15-Feb-2024 in Eurosurveillance has indicated:

Since January 2024, five measles cases were all classified as genotype D8 (MeV) and determined to be sporadic since no clear epidemiological links were found among these cases. A recent history of travel was reported among three individuals of the D8 MeV cases. The destinations included Uzbekistan, Thailand, and Southern Italy. Due to the location of the mutations, this new variant from D8 genotype would be more likely to escape regular measles diagnostic tests.

The current measles vaccine (MMR) continues to be effective against this new variant (MeV D8) with mutations, and there are no concerns on the overall measles protection or disease severity changes.

Source: [ECDC](#), [Eurosurveillance](#)

Influenza A(H1N1) variant virus - Spain

On 29 January 2024, the Spanish health authorities notified the World Health Organization (WHO) of a laboratory confirmed human case of infection with swine-origin influenza A(H1N1) variant (v) virus, in the province of Lleida (Cataluña autonomous community), Spain. Including the current case, three cases of human infection with influenza A(H1N1)v virus have been reported in Spain. The first case was reported in 2008 and the second case was reported in January 2023. Based on the currently available information, no ongoing community transmission has been identified in this case. Thus, the risk of international disease spread through humans and/or community-level spread among humans is low. WHO continues to stress the importance of global surveillance to detect virological, epidemiological and clinical changes associated with circulating influenza viruses that may affect human (or animal) health and timely virus sharing for risk assessment.

Source: [WHO](#)