المركز الخليجي للوقاية من الأمراض ومكافحتها
Gulf Center for Disease Prevention and Control

مجلس الصحة
لدول مجلس التعاون
Gulf Health Council

Monthly Epidemic Intelligence Report

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Definitions

The below is a list of commonly referred to terms and keywords in the monthly reports.

Gulf Public Health Emergency Network (PHEN)

A group of technical individuals within GCC health authorities, nominated to represent each GCC country. The composition typically includes International Health Regulations Focal Point, Ministry of Health Communicable Disease Directors and National Public Health Laboratory Directors or appointed representatives on their behalf. The Gulf CDC serves as the Network's secretariat with the PHE Department Director chairing the network meetings.

Hazard

A source/incident that has the potential to cause morbidity (including injury) or mortality in an exposed human population.

Signal

An incident/situation involving a hazard that has occurred. Signals are typically news/updates identified through Event-Based Surveillance and Indicator-Based Surveillance, utilizing both official and non-official sources. Signals can be of a disease origin or a CRNE (Chemical, Radiological, Nuclear, or Environmental) origin.

Potential Threat

Any threat that has been confirmed by the PHEN to have the potential to pose a near-future risk to the GCC countries' populations and could be monitored closely by Gulf CDC for 2 weeks.

Event of Regional Interest

Any threat, inside or outside the GCC, that has been identified by the Public Health Emergency Network to pose a certain type of risk for the GCC countries' public health. For these threats, Gulf CDC produces regular risk assessments and recommendations for their control, as well as enhances daily monitoring of it to provide regular situational updates to the GCC countries.

Rapid Risk Assessment

A prompt evaluation of the level of health risk in relation to a verified acute event within a short time frame, mainly for situation update, risk level determination and recommendation to support the GCC countries in risk communication and management.

GULF CDC Risk Scale					
Negligible	Very Low	Low	Moderate	High	Critical

Country names in this report are as per the UN list

Summary of the Month

This monthly report provides an overview of the signals, potential threats, and specifically Events of Regional Interest detected and identified through the Gulf CDC Epidemic Intelligence system during the month of **August 2024** (July 24, 2024 – August 23, 2024).*

97	4	3	2
Disease Signals	CRNE Signals	Potential Threats	Events of Regional Interest

Executive Summary

Disease Signals This month, the epidemic intelligence team at Gulf CDC detected 97 infectious disease signals. Of these, 3% were in GCC countries, and breaking down the signals by the most signaled hazard, 14% were on West Nile Virus, 18% were on Mpox, and 5% were on Oropouche virus disease.

CRNE Signals 4 CRNE signals with potential public health consequences were identified, including 2 earthquakes (one in Jordan and one in the Syrian Arab Republic), 1 environmental sample of Japanese Encephalitis in the Republic of Korea, and 1 environmental sample of West Nile virus in Ireland.

Potential Threats The Gulf CDC continued to monitor 2 potential threats in August: Zika virus in India, and Whooping cough (Pertussis) globally, and identified 1 new potential threat this month: West Nile virus in Israel.

Events of Regional Interest The Gulf CDC identified 2 Events of Regional Interest in the month of August: the global situation of the Highly Pathogenic Avian Influenza H5N1 and the global situation of Mpox.

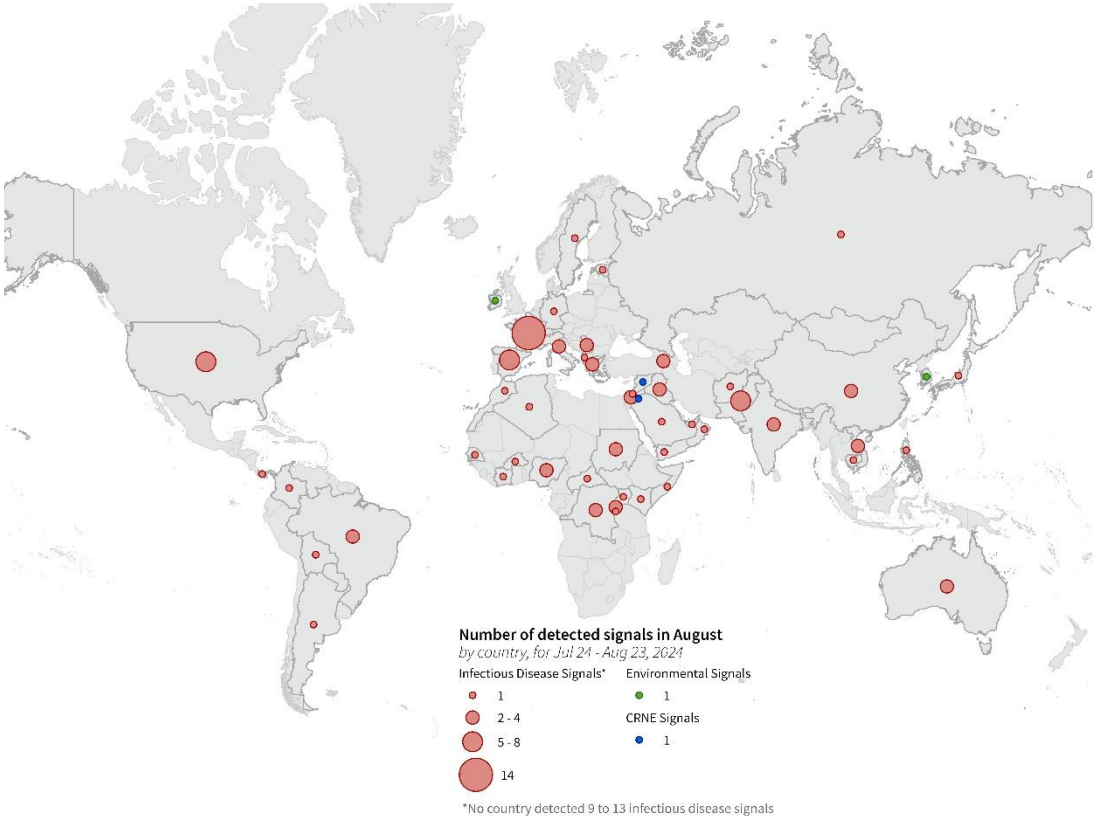
* Monthly reports cover data from the 24th of the previous month to the 23rd of the reported month, ensuring there is no gap in reported data.

The details of the detected signals and identified threats are shared weekly with the GCC Member States' technical representatives in the Gulf Public Health Emergency Network (PHEN) (available on this link) and are presented and discussed in weekly roundtable discussions. These are often verified through secondary research or communication with regional and international partners. In consultation with the PHEN members, a potential threat is escalated to an Event of Regional Interest based on its anticipated potential for causing a public health emergency in the GCC region.

Signals of Interest

The Gulf CDC monitors the globe for daily, weekly, and monthly disease signals. Based on Gulf CDC analysis, certain signals may be designated as threats and/or events of regional concern, depending on their risk level, impact, and likelihood. As outbreaks evolve, new diseases may be added to this list. Some diseases may also be removed if the risk they pose reduces below our threshold.

Potential threats are identified based on several considerations such as high connectivity between reporting country and the GCC countries, level of transmissibility of pathogens, vulnerability degree of GCC populations to the identified hazard, capacity levels of GCC health systems to respond to the identified hazard.



● Number of detected signals and potential threats by the Gulf CDC from July 24 to August 23, 2024

** Some signals included in this map are not from official sources and are in the process of being verified with health authorities*

Highlights of Signals Identified in August 2024

Poliovirus (WPV1): During the month of August four signals were detected for Poliovirus (WPV1); three signals in Pakistant and one signal in Afghanistan

- In Pakistan, a total of 16 cases of Poliovirus (WPV1) have been reported in Pakistan since the beginning of 2024; more than double the number of cases that were reported in 2023. Of the 16 cases, 12 cases were reported from the southwestern Balochistan province, three from Sindh, and one from the eastern Punjab province.[1]
- In Afghanistan, two new cases of Poliovirus (WPV1) have been reported in Afghanistan during the month of August, 1 in Kandahar and the other in Hilmand, putting its total at 11 for the year. Additionally, 11 positive environmental samples were reported[2]. Similar to Pakistan, Afganistan has now reported double the amount of cases that were reported in 2023.

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Poliovirus, (VPD): During the month of August two signals were detected for Poliovirus (VPD); one in India and one in Palestine.

- **India:** On 13 August 2024, a human case of poliomyelitis[3], was detected in India. On 15 August 2024, an official from the Ministry of Health and Family Welfare, confirmed that the strain linked to this case is vaccine-derived poliomyelitis (VDP)[4], pending sub-type (VDP 1-3. .
- On 17 August 2024, the Palestinian Ministry of Health reported the first confirmed human case of vaccine-derived poliomyelitis (VDP) in the Gaza-Strip , after a 25-year hiatus. Previous to this reported case, multiple official sources (including the WHO and GPEI) and news media articles reported on the confirmation of vaccine-derived poliomyelitis type 2 (VDPV2) environmental samples in the Gaza Strip[5].

Cholera: During the month of August two signals were detected for Cholera, one in Sudan and one in Yemen.

- **Sudan:** As of 21 August 2024, there have been 11,316 cases of Cholera with 316 deaths reported in Sudan[6]. Officials stated that the influx of people due to the ongoing war is straining the city's resources, aiding in the spread of diseases.[7]
- **Yemen:** As of the beginning of August, the suspected number of Cholera cases was estimated to be 147`000[8].

Potential Threats

Zika

India

This potential threat is being monitored closely by Gulf CDC.

Key Stats

3 states
In India reporting Zika cases in 2024

122
Laboratory-confirmed cases in 2024

Key Factors of Concern for Zika virus	
Disease severity	Zika virus is a mosquito-borne virus that is considered to have mild severity in most cases. However, Zika virus infection has been associated with complications including microcephaly and other severe fetal brain defects when the infection occurs during pregnancy. Neurologic complications are related to infection in adult populations, such as Guillain-Barré Syndrome. With proper supportive management, the case fatality rate for Zika virus is extremely low. Common clinical features include a headache, myalgias, arthralgias, a diffuse pruritic erythematous maculopapular rash, and conjunctivitis
Trends from previous outbreaks	The first ZIKV outbreaks in India were reported in the states of Gujarat (2016–2017) and Tamil Nadu (2017). Following this, outbreaks of ZIKV were detected in Rajasthan and Madhya Pradesh in 2018. In 2021, ZIKV outbreaks[9] were reported for the first time in the states of Kerala (May–July), Maharashtra (July), and Uttar Pradesh (October). Retrospective scientific research has also revealed the circulation of ZIKV in the states of Delhi, Jharkhand, Rajasthan, Punjab, and Telangana in 2021.
Healthcare capacity	For ZIKV clinical testing in India, all states currently rely upon the National Institute of Virology (NIV), Pune, which has very limited capacity and resources to scale. In addition, there is the National Centre for Disease Control (NCDC), in Delhi, and a few selected virus research and diagnostic

	laboratories of the Indian Council of Medical Research (ICMR) that test for ZIKV.
Connectivity to the Gulf Region	India is a highly connected country to the Gulf region and given the known vector presence of Zika-carrying vectors, the GCC states may be vulnerable in the longer-term. Given the suspected underreporting, the importation likelihood is low. However, there is connectivity by air travel between the most affected state (Maharashtra) and the GCC countries. To get an estimate of the volume of air travel passengers arriving in each of the GCC countries, from Maharashtra state, during August 2024, historical passenger volumes **including both direct and indirect passengers** for August 2023 are presented below: Maharashtra, India to UAE – 97,707 Maharashtra, India to Saudi Arabia – 42,861 Maharashtra, India to Oman – 10,503 Maharashtra, India to Kuwait – 9,986 Maharashtra, India to Qatar – 8,325 Maharashtra, India to Bahrain – 5,858 **Connections between the above-mentioned countries and the region is primarily counted based on airline data. Other routes of entry and illegal migration might contribute to the importation likelihood*

Situational Highlights for Zika in India

- There are concerns over a growing multi-state outbreak of Zika virus (ZIKV) infection in India.
- This year cases have been reported from the states of Karnataka, Kerala, and Maharashtra, with Maharashtra reporting over 50 new cases during August.[10] It is highly plausible that the actual number of cases is higher and that other affected states remain unknown as there is no official public tracker.
- Maharashtra ZIKV state outbreak details:
    - The first case was reported on 20 June 2024. Since then, and as of 16 August 2024, 113 cases have been reported.[13]
        - Most of the cases (100 cases) have been reported from Pune district.
    - Of the total cases in the state, 45 pregnant women have tested positive for the infection[11].

Whooping Cough (Pertussis)

Globally

This potential threat is being monitored closely by Gulf CDC.

Key Stats

65 Countries

Reporting cases in 2024

3x whooping cough cases reported

In the first 8 months of 2024 compared to all of 2023

Key Factors of Concern for Whooping Cough (Pertussis)

Disease severity	Pertussis is a bacterial disease considered to have a moderate pathogen severity level. Pertussis is a disease that affects primarily children and can lead to severe complications such as pneumonia, encephalopathy, and seizures. Case fatality rates are less than 2%
Trends from previous outbreaks	Pertussis is endemic worldwide with peaks every 3-5 years even in the presence of high-vaccination coverage. Due to the challenges with the surveillance of pertussis, data on reported cases likely does not capture the true extent of the burden.
Healthcare capacity	While global vaccination rates of pertussis-containing vaccines tend to be high, waning immunity due to the primary acellular vaccine used and disruptions in vaccination schedules (both childhood and boosters through adolescence and adulthood) due to the COVID-19 pandemic is leading to an increase in reported cases. Prophylaxis and specific antibiotic treatments tend to be widely available globally.

Situational Highlights for Whooping Cough (Pertussis)

- Cases of Whooping Cough (Pertussis) continue to rise globally throughout the month of August 2024
- Australia reported 21,336 notifications of pertussis to the National Notifiable Diseases Surveillance System in 2024 so far, significantly less than the 2,451 cases recorded for the whole of 2023.[12]
- According to data from the National Reference Centre (CNR) in France for pertussis, there have been at least 15,000 pertussis cases in 2024 so far. This is a steep rise from 495 in 2023, 67 in 2022, and 34 in 2021, according to CNR.[13] While the increase in cases is due to multiple factors, researchers at the

Pasteur Institute have recently found mutations in Bordetella pertussis (the causative bacteria of pertussis).

- **Global Surveillance data:**
  - Between 1 January 2024 and 24 August 2024, there have been over 340,000 indicator-based surveillance reported cases of them, 41,164 were confirmed, reported across 65 different countries, with the top 5 countries reporting:
    - China: 150,000 reported cases
    - Czechia: 25,560 reported cases (6,006 confirmed)
    - Australia: 21,336 reported cases
    - Spain: 19,816 reported cases (8,034 confirmed)
    - France: 15,000 reported cases
    -
  - This has surpassed the total number of event-based surveillance reported cases in 2023 (98,083).
  - Data from the European Centre for Disease Control[14] shows a tenfold increase in pertussis cases in 2023 and 2024 compared to 2022 and 2021.
- Please see the July 2024 report page 9 for Pertussis Vaccines

West Nile Virus

Israel

This potential threat is being monitored closely by Gulf CDC.

Key Stats

870 cases
Since the beginning of 2024

62 Deaths
Since the beginning of June 2024

Key Factors of Concern for WNV	
Disease severity	West Nile virus is most commonly spread through the bite of an infected mosquito. Most infections with WNV are asymptomatic (80%). About 1 in 5 (20%) people who are infected develop a fever with other symptoms such as headache, body aches, joint pains, vomiting, diarrhea, or rash. About 1 in 150 people who are infected develop a severe illness affecting the central nervous system such as encephalitis (inflammation of the brain) or meningitis (inflammation of the membranes that surround the brain and spinal cord). Older adults and immunocompromised individuals are more susceptible to severe illness.[15]
Trends from previous outbreaks	The WNV was first identified in Uganda in 1937 and the first recognized epidemic of WNV in the Palestine and Israel region was in 1951 [16,17], where a total of 123 cases with no fatalities occurred among 303 inhabitants; young children represented the majority of cases. Official data indicates that the largest documented WNV outbreak in Israel was in 2000 when 439 cases were confirmed, with 29 deaths. Since then, cases have significantly declined. During the years 2021, 2022, and 2023 there were 38 cases, 35 cases, and 43 cases reported, respectively.[18]
Healthcare capacity	The current conflicts in the region may strain the healthcare system and waste management capabilities, leading to areas of stagnant water that facilitate vector breeding sites which could potentially affect neighboring countries. There is currently no specific treatment for West Nile Fever. In severe cases and when complications appear, the treatment is symptomatic

	only (such as treatment to bring down fever, infusion of fluids, respiratory support, etc.). There is currently no vaccine against West Nile Fever.
Connectivity to the Gulf Region	○ Israel is a moderately connected country to the Gulf region.* To get an estimate of the volume of air travel passengers arriving in each of the GCC countries, from all airports in Israel, during August 2024, historical passenger volumes **including both direct and indirect passengers** for August 2023 are presented below: ○ Israel to UAE – 27,228 ○ Israel to Saudi Arabia – 731 ○ Israel to Oman – 265 ○ Israel to Kuwait – 45 ○ Israel to Qatar – 284 ○ Israel to Bahrain – 647 **Connections between the above-mentioned countries and the region is primarily counted based on airline data. Other routes of entry and illegal migration might contribute to the importation likelihood*

Situational Highlights for West Nile Virus in Isreal

- Most cases have been found in Tel Aviv and nearby cities such as Petah Tikva and Kiryat One, all within 80 km of the Gaza border.
- There is potential for further spread to neighbouring countries given recent conflicts. On 29 July 2024, the Ministry of Health in Jordan reported the first recorded case of West Nile virus.[19]
- As a result of the West Nile virus outbreak in Israel, the Egyptian Ministry of Health announced proactive steps to protect against an outbreak.[20] These included thorough screenings of passengers and goods arriving from Israel and referring individuals with suspected symptoms to hospitals for evaluation, and mandating disinfection of all aircraft and ships arriving from Israel.
- While humans are dead-end hosts for WNV, the spread of the disease to neighboring regions is primarily through birds, a natural host for WNV, then to competent mosquitoes in the area. Epidemics in humans signal that there is a large amount of transmission occurring between birds and mosquitos in the region.

Events of Regional Interest

Highly Pathogenic Avian Influenza H5N1

Globally

Negligible	Very Low	Low	Moderate	High	Critical

Gulf CDC Risk Assessment of this Event

- **Risk Question:** What is the likelihood of HPAI H5N1 human-to-human transmission occurring in the GCC countries and what is the impact of that transmission?
- **Impact:** Moderate. Despite the global unavailability of specific antiviral drugs for HPAI H5N1, case
- management capacities of the GCC countries for influenza infections are generally high.
- **Likelihood:** Unlikely. The likelihood of HPAI H5N1 importation to the GCC countries from the United States is unlikely given the low number of cases. Further, there is no evidence of human-to-human transmission at this time.

Please refer to the Gulf CDC Rapid Risk Assessment: Highly Pathogenic Avian Influenza H5N1 updated on 6 August 2024 for further details.

Why is this Notable?

The Gulf CDC EI team escalated the Avian Influenza H5N1 outbreaks in the United States to an event of regional interest on 3 August 2024. The Gulf CDC has detected new signals of Highly Pathogenic Avian Influenza H5N1 (HPAI H5N1) infections caused by contact with infected cattle in multiple states within the United States of America.

Key Stats

13 states
Reporting HPAI H5N1 in affected herds in United States

13 Cases
Human cases of HPAI H5N1 in the United States in 2024

Key Factors of Concern for HPAI H5N1	
Disease severity	HPAI H5N1 with a severe pathogen severity level. The mortality rate for this infection can be as high as 60%. Infection is mainly through contact with infected poultry, however there are growing concerns that this virus could mutate and cause more efficient person-to-person transmission.
Trends from previous outbreaks	In 2023, there were 12 reported human infection cases of HPAI H5N1[21] across 4 countries (Cambodia, China, Chile, United Kingdom). ○ Cambodia – 6 cases, all cases Clade 2.3.2.1c ○ United Kingdom – 4 cases, all cases Clade 2.3.4.4b ○ Chile – 1 case, Clade 2.3.4.4b ○ China – 1 case, Clade 2.3.4.4 In years prior, there have been small numbers of sporadic reported human infection cases of HPAI H5N1 across several countries.
Healthcare capacity	All GCC countries have set up infectious disease programs or services for zoonosis, but lack strategic plans or programs needed to control and prevent the spread of HPAI H5N1. For example, there are limited systems in place developed for ensuring regular collaboration and coordination between the Health and Agricultural sectors. This detection delay may lead to the infected individual seeking healthcare at a later stage of the infection, risking further complications and severe symptoms. While recent clades of the HPAI H5N1 virus have not been detected in Gulf countries, the connectivity to other countries through agricultural trade and bird migration increases the likelihood of importation of the virus, and the possibility of spillover to humans (particularly those in close contact with poultry). *Please refer to the GULF CDC Rapid Risk Assessment on HPAI H5N1 (6 August 2024) for further details.*
Connectivity to the Gulf Region	While the United States is highly connected via air travel to the Gulf Region, the low number of cases in humans and the lack of evidence thus far regarding human-to-human transmission makes the likelihood of importation 0%.

Situational Highlights for Avian Influenza H5N1

- **Human cases:**
  - United States: there have been a total of 13 reported human cases[22] of HPAI H5N1 in the United States since 1 April 2024. 10 in Colorado, 2 in Michigan, and 1 in Texas.[22] Of the total human cases to date, four are linked to exposure to infected dairy cattle, while nine are linked to an infected poultry farm.
  - Cambodia: as of 20 August 2024, there have been a total of 10 reported human cases[23] of HPAI H5N1.

- **Status of animal disease outbreak:**
  - United States: As of 24 August 2024, HPAI A(H5N1) was reported in 13 states with over 193 affected herds[24], with the state of Colorado reporting the largest number of affected herds.
  - Iraq: On 12 May 2024, Gulf CDC detected a report of large sums of seagull deaths that occurred in Lake Dukan, Iraq
  - Globally: As per WOAH-World Animal Health Information System (WAHIS), several global HPAI events were reported between 19-30 July 2024 from the following countries: Germany, Belgium, France, UK, Hungary, Latvia, Austria, South Africa, Brazil, Australia, Bhutan, Falkland Islands, USA and Mexico. Most of the events were dominated by HPAI H5N1 and were reported as recurrence of eradicated disease.
- **Recent findings:**
  - An HPAI H5N1 virus isolated from infected cow milk was characterized in mice and ferrets. The virus spread systemically, including to the mammary glands of both species, similar to older HPAI H5N1 virus isolates. The bovine HPAI H5N1 virus bound to sialic acids expressed in human upper airways and inefficiently transmitted to exposed ferrets (one of four exposed ferrets seroconverted without virus detection), suggesting that bovine HPAI H5N1 possesses features that may facilitate infection and transmission in mammals [25], however, these are very preliminary data that require further confirmation.
- **Vaccine Updates**:
  - Regarding cattle vaccines, the US Department of Agriculture is exploring the potential for HPAI H5N1 vaccines to protect cattle from infection, reduce milk production losses, and prevent the virus from mutating and spreading to humans. Several companies are developing candidate vaccines. However, regulatory challenges and concerns about international trade and vaccine efficacy in cattle complicate the situation.[26]
  - As for poultry use vaccines, INNOVAX-ND-H5 has received marketing authorization from the European Commission, marking the first centrally registered vaccine in the EU against the currently circulating HPAI H5 clade 2.3.4.4b avian influenza virus. (17,18) The Netherlands has begun vaccination of poultry, including domestic and wild birds, as a part of its preventive strategy.[27]

Mpox

Globally

Negligible	Very Low	Low	Moderate	High	Critical

Gulf CDC Risk Assessment of this Event

- **Risk Question:** What is the likelihood of importing a mpox clade 1b case into the GCC causing an occurrence of subsequent cases in the GCC in the next 3 months?
- **Impact:** With the low transmission potential of the virus in the Gulf communities, and the high national capacities established for mpox prevention and control, the level of potential impact of mpox has been characterized as moderate.
- **Likelihood:** As there is a large volume of travelers to the Gulf from countries reporting Mpox Clade 1b cases, it is likely that unlinked cases/clusters to be detected within the next 3 months.

Why is this Notable?

The Gulf CDC EI team escalated the global Mpox to an event of regional interest on 14 August 2024 due to an increase in the expected incidence of epidemic activity. Furthermore, On 14-Aug-2024, the World Health Organization (WHO) declared mpox as a public health emergency of international concern (PHEIC).

Key Stats

3,311
Confirmed Cases of Mpox in African Countries in 2024[28]

582
Confirmed Deaths of Mpox in African Countries in 2024[28]

Key Factors of Concern for Mpox

Disease severity

Mpox can be transmitted through close contact with someone who has mpox, with contaminated materials, or with infected animals. During pregnancy, the virus may be passed to the fetus, or to the newborn during or after birth. Common symptoms of mpox are a skin rash or mucosal lesions which can last 2–4 weeks accompanied by fever, headache, muscle aches, back pain, low energy and swollen lymph nodes. Severe complications of mpox may include secondary bacterial infections, pneumonia, sepsis, and encephalitis and immunocompromised individuals are particularly susceptible to severe infections.[28] Mpox is divided into two distinct

	clades, clade I and clade II Clade I has been shown to cause more severe disease than clade II, with case fatality rates (CFRs) of approximately 10% and 1% respectively.
Trends from previous outbreaks	Although ongoing human-to-human transmission of mpox in the DRC[29] has been documented since the 1970s, there are still gaps in knowledge of all the dynamics involved. Initially, infections happened within minor domestic or local clusters, believed to be predominantly caused by the transmission from animals to humans, as sexual transmission of the MPXV clade I was not officially reported until April 2023. Most cases in the multi-country outbreak (non-endemic) in 2022 were Clade IIb, lineage B.1 and its descendants, while the current outbreaks in several countries in Africa (DRC, Uganda, Kenya, Rwanda, Burundi) are primarily Clade I.
Healthcare capacity	In 2024, the majority (96%) of mpox cases have been reported from the DRC. The current outbreak in the DRC (started in 2023) is due to mpox clade I with at least one new strain of clade I, proposed as clade Ib, and around 70% of cases reported in children. However, within the DRC, testing in rural areas is limited and just 24% of the clinically compatible (reported as suspected) cases in the country have been tested in 2024. Of those tested, the positivity is approximately 65% at the national level.[30] Surveillance and capacity have been strengthened within the DRC by government initiatives with the aid of institutions such as the WHO, particularly in the most affected provinces such as South Kivu. Risk communication has also been updated and increased to inform the population about the risks and precautions to take to avoid acquiring mpox. Further clinical trials against mpox have also begun and the LC-16 and MVA-BN vaccines have been approved for emergency use.[31]
Connectivity to the Gulf Region	Of the 5 African countries reporting cases of Mpox Clade 1b, the GCC has the highest connectivity with Kenya. To get an estimate of the volume of air travel passengers arriving in each of the GCC countries, African Countries reporting cases of Mpox Clade 1b, during the month of August 2024, historical passenger volumes **including both direct and indirect passengers** for August 2023 are presented below:

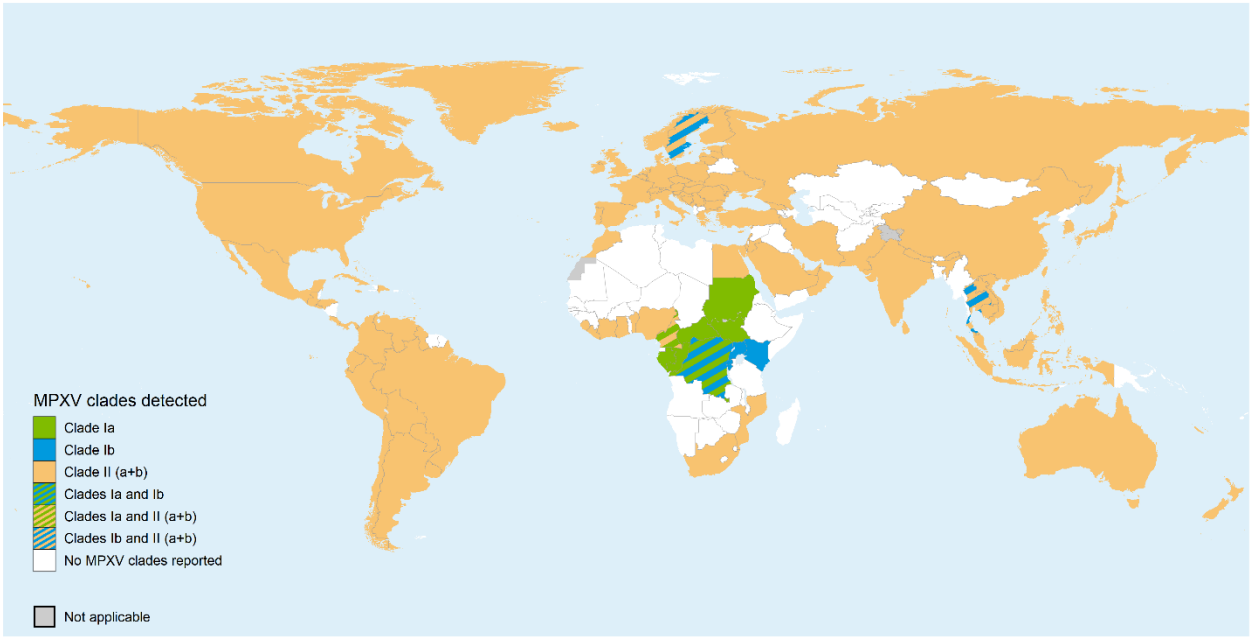
	Burundi	DRC	Kenya	Rwanda	Uganda
Bahrain	2	20	219	6	72
Kuwait	7	111	300	14	135
Oman	38	80	542	126	178
Qatar	19	65	2476	283	1088
Saudi Arabia	281	390	3704	157	1165
UAE	376	3480	14145	2454	13973

**Connections between the above-mentioned countries and the region are primarily counted based on airline data. Other routes of entry and illegal migration might contribute to the importation likelihood*

Situational Highlights for Mpox

- On 14 August 2024, the World Health Organization (WHO) declared mpox as a public health emergency of international concern (PHEIC) for the second time. This follows the first-ever declaration of a public health emergency of continental security by the Africa Centres for Disease Control and Prevention (CDC) on 13 August 2024.
- According to the Africa CDC, over 20,000 mpox cases have been reported from 13 African Union Member States so far in 2024, including 3,311 confirmed cases and 582 deaths.[28]
    - The Democratic Republic of the Congo reported 19 667 cases including 575 where MPXV subclade Ia and Ib circulate.
    - Burundi reported 190 confirmed and 512 suspected cases of Mpox Clade 1b
    - Rwanda reported four confirmed cases of Mpox Clade 1b
    - Uganda reported three confirmed cases of Mpox Clade 1b
    - Kenya reported 1 confirmed case of Mpox Clade 1b, and another where the clade is still unknown.
- On August 15, 2024, Sweden reported one person with mpox due to MPXV clade Ib,[32] with a travel history to a country in Africa where MPXV is circulating.
- On 22 August, Thailand reported the detection of mpox due to MPXV clade Ib[33] in a returning traveler from an African country where MPXV clade Ib is circulating.
- Clade Ib has a gene deletion that evades detection through molecular assays detecting for a specific clade. It also has a mutation mediated through APOBEC3, a type of host cytosine deaminase, which could potentially aid in its adaptation and circulation through humans. A study also demonstrated that clade Ib may be distinct from the outbreaks caused by clade I in the rest of the country.[34]
- The approach to treating mpox patients mainly involves providing supportive care. However, there are measures to aid prevention and treatment such as vaccines. There are currently four approved mpox vaccines:
    - 3rd generation modified vaccinia Ankara from Bavarian Nordic (MVA-BN);
    - 3rd generation LC-16 from KMB Biologics;
    - 4th generation OrthopoxVac; and
    - 2nd generation ACAM2000 from Emergent BioSolutions.
- According to the WHO, efforts are underway to develop emergency response vaccination strategies and initiate clinical vaccine studies to address gaps in knowledge about mpox vaccines. This includes ongoing research into the immunogenicity, efficacy, and safety of these vaccines[35].

Mpox Clades detected globally (since 2022 – August 2024)



Data is based on a combination of sequencing databanks, literature, and communication to WHO, @ WHO 2024.

Mass Gathering Monitoring

2024 Olympic and Paralympic Games

France

This mass gathering event is being monitored closely by the Gulf CDC.

Key Stats

17 signals

Detected during the Olympic and Paralympic Games

Situational Highlights for 2024 Olympic and Paralympic Mass Gathering Monitoring

- The Gulf CDC implemented an Olympic and Paralympic-focused epidemic intelligence system. This system included scanning over 3,000 open sources, both manually and using an AI engine. Additionally, social media posts on platforms like Twitter, Reddit, and Facebook were screened.
- Daily reports containing Olympic and Paralympic signals were exchanged with international partners, while weekly reports were distributed to other GCC countries.
- The monitoring of the Olympics and Paralympics began on July 24, 2024, and will end on 13 September 2024.
- Since the start of the monitoring and up to the 23rd of August, the Gulf CDC has detected 17 signals from France, none of which pose a threat to the GCC countries:

  Three signals were on the increasing number of Whooping Cough (Pertussis) cases in France in 2024.

  - Two signals were regarding SARS-CoV-2, including cases reported in the Olympic village. [36]
  - Two cases of infectious gastroenteritis were reported in members of the Portugal Olympic team who swam in the triathlon competition in the Seine River. Additionally, there were two reported cases of Escherichia coli infections linked to the Seine River, and two cases of food poisoning linked to *Yersinia enterocolitica* and Salmonella.
  - Other signals of vector-borne illness such as dengue fever, Chikungunya and West Nile virus were detected.

Acknowledgements

The production of this monthly epidemic intelligence report was made possible through the collaboration and contributions of multiple individuals and organizations. Thus, the Gulf CDC is grateful to, and would like to acknowledge, all contributing individuals and organizations for their expertise and dedication to epidemic intelligence that were essential to our collective efforts in detecting, monitoring, and preparing for potential public health threats to the GCC region.

The Gulf CDC is grateful for insights on GCC countries' capacities and national data provided by members of the Public Health Emergency Network members. This provided valuable contextual understanding that enhanced the PHE team's assessment of risk posed by the hazards detected.

In addition, the Gulf CDC acknowledges the insights provided by international and GCC subject matter experts on reviewing risk assessment reports and on sharing best practices and lessons learned to improve preparedness for the hazards detected.

For queries regarding this publication, please contact us at eidetect@gulfcdc.org

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