



Update 150 FHP-Update 07 August 2024



News:

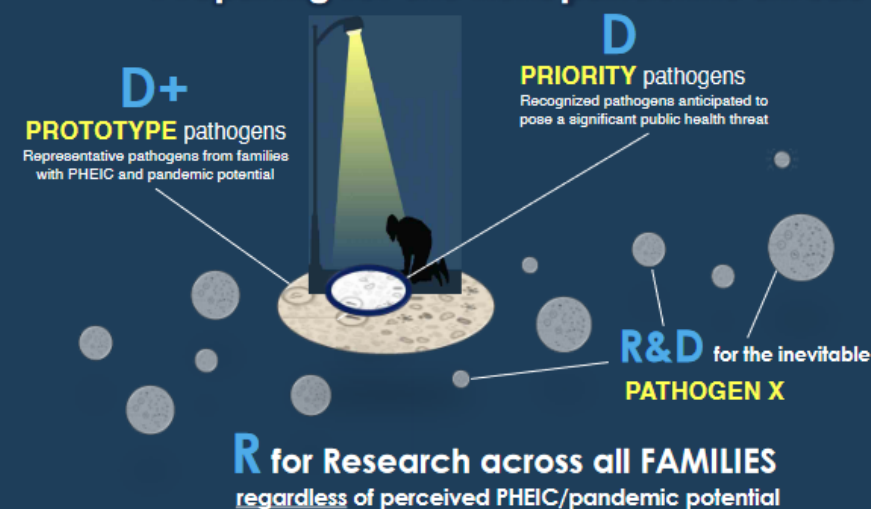
- WHO:** During June 2024, [6 DON reports were published](#), covering 5 events (Avian Influenza, Mpox and Oropouche virus), across 4 WHO regions. This is not an exhaustive list of events that WHO is responding to globally but includes those that meet the criteria for information to be made available to the public, according to Article 11.4 of the IHR 2005 recommendations. Additionally, epidemiological updates on two graded events involving multiple countries are regularly posted in situation reports: Cholera and emergency situation in Sudan.
- WHO:** [reported about the progress towards achieving and sustaining maternal and neonatal tetanus elimination worldwide](#). By December 2022, 47 (80%) of 59 priority countries were validated as having achieved MNTE. Of the 50 countries that reported coverage with ≥ 2 doses of TTCV (TTCV2+) among pregnant women, 16 (32%) reported coverage of $\geq 80\%$; and, of the 47 validated countries, 26 (55%) reported that $\geq 70\%$ of births were assisted by SBAs. The number of NT cases reported worldwide decreased by 89%, from 17 935 in 2000 to 1995 in 2021, and the estimated number of deaths due to NT decreased by 84%, from 46 898 to 7719.
- UN:** Aid groups say they're preparing for a ["worst-case scenario" polio outbreak in Gaza](#). Polio spreads quickly amid poor sanitation, and Israel's actions – destroying water and waste systems, and squeezing aid to a trickle among them – have provided fertile ground for disease to thrive.
- MSF:** warned that NGOs must begin a "paradigm shift" to respond to the increasing threat of antimicrobial resistance (AMR) in humanitarian emergencies. Writing in the [Lancet, MSF said humanitarianism is the international community's "first responders"](#) on the front line of AMR and called for more dedicated funding.
- WHO:** [Mpox outbreaks continue to rise](#). The Democratic Republic of the Congo (DRC) is experiencing its biggest outbreak with over 11,000 cases and 445 deaths with imported cases in a lot of neighboring countries. There is a fear of widespread human-to-human transmission beyond DRC and South Africa. The confirmed cases may only represent a small fraction of total infections. A possible new, more virulent strain is under investigation.
- WHO/UAE:** On July 30, 85 sick and [severely injured patients from Gaza were evacuated to Abu Dhabi](#), United Arab Emirates (UAE), for specialized care. This extremely complex joint evacuation was supported by the WHO in partnership with the Government of the UAE and other partners. This is the largest medical evacuation outside Gaza since October 2023.
- WHO:** released a [scientific framework for epidemic and pandemic research preparedness](#). The document outlines the findings of a global pathogen prioritization process involving over 200 scientists from more than 50 countries who evaluated the evidence related to 28 Viral Families and one core group of Bacteria, encompassing 1,652 pathogens. This process emphasized the imperative nature of collaborative efforts to attain global resilience against epidemics and pandemics.
- ECDC:** estimated the [risk to the EU/EEA population from the new mpox variant identified in DRC remains very low](#). Despite concerns about the new clade I variant, current vaccines and treatments are expected to remain effective. There is no evidence that the clade I variant is circulating outside central Africa.

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Preparing for the next pandemic threat



Preventable early deaths from the 5 leading causes* are more common among people living in rural communities†

Clinicians can help prevent premature deaths:



*Heart disease, cancer, unintentional injury, chronic lower respiratory disease, and stroke
†Compared to Americans who live in urban areas, National Vital Statistics System mortality data, 2010–2022



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MAY 2, 2024



Emergence of poliovirus in the Gaza Strip I.

Sources: [MoH of Israel](#), [Polioeradication Org](#), [UN](#), [TimesOfIsrael1](#), [TimesOfIsrael2](#), [Humanitarian Org](#), [UN](#), [UNDP](#), [CARE](#), [NewsMedia](#)

Current news

Vaccine-derived poliovirus type 2 (VDPV2) has been confirmed in the Gaza Strip in July/2024. The virus was isolated from six environmental (sewage) samples, collected from two different collection/surveillance sites in two sub-regions within Gaza, in *Khan Younis* and *Deir al Balah*. Genomic sequencing of poliovirus isolates has identified that these strains have close genetic links with each other and are also closely related to the poliovirus variant that was circulating in Egypt during the second half of 2023. Based on the analysis of genetic changes in the isolates, the variant poliovirus could have been introduced in Gaza as early as September 2023.

Assessment

Aid groups say they're preparing for a "worst-case scenario" polio outbreak in Gaza. Polio spreads quickly amid poor sanitation, and Israel's actions – destroying water and waste systems, and squeezing aid to a trickle among them – have provided fertile ground for disease to thrive. Israeli troops blew up a water treatment plant in southern Gaza's Rafah. Since October 7, over 70% of the water and sanitation facilities in Gaza have been significantly damaged with the UN Water, Sanitation and Hygiene Cluster estimating about 340,000 tons of solid waste to have accumulated inside or near populated areas.

The UN Development Programme says Gaza's waste management system has "collapsed", with zero access to landfills, and temporary dumpsites proliferating. There have been more than 575,000 cases of acute watery diarrhoea – an undercount that still adds up to more than a quarter of the Gaza Strip's estimated population.

The World Health Organization said it will send one million polio vaccines, after poliovirus strains were found in mid-July. But a full vaccine campaign is untenable amid blocked roads and bombs, aid groups say. And Israeli authorities continue to constrict aid groups say.

There is not treatment for polio, and paralysis cannot be cured once it appears, however, the disease can be easily and effectively prevented by vaccination.



Children living with polio. Source: CBS News

Global situation of polio

After issuing the Global Polio Eradication Initiative (GPEI) in 1988, of the 3 strains of wild poliovirus (type 1, type 2 and type 3), *wild poliovirus type 2* was eradicated in 1999 and *wild poliovirus type 3* was eradicated in 2020. Since 2022, endemic *wild poliovirus type 1* has only been present in two countries: Pakistan and Afghanistan.

Polio outbreaks in Israel

Wild poliovirus was eradicated more than 25 years ago from Gaza thanks to a comprehensive inoculation campaign.

- **In 1988**, Israel experienced 16 cases of paralysis.
- **In 2013**, wild poliovirus (type 1) was discovered in the sewer in southern Israel, which spread to other areas. A nationwide vaccination campaign with bOPV (live, attenuated vaccine in drops) prevented any infections and this spread was concluded without any paralysis cases.
- **In February 2022**, a case of paralysis was detected in *Jerusalem*, caused by a vaccine-derived poliovirus type 3 (VDPV3) that has many mutations that occurred over time. Sewage findings demonstrated extensive spread of this variant. The nationwide vaccination campaign with both the inactivated vaccine (IPV) and the live attenuated vaccine (bOPV) stopped the spread of the virus, and it was concluded with no additional cases of paralysis.
- **In June 2022**, a vaccine-derived poliovirus type 2 (VDPV2) was detected in the sewage in *Jerusalem* area. This strain has spread to many areas in Israel, from *Ramat HaGolan*, in the north, to *Be'er Sheva*, in the south.



'Iron lungs' – people living with polio decades ago.
Source: Polioeradication

In the current situation, no one has been treated in Gaza for paralysis or other symptoms caused by polio virus infection. The virus has been isolated from the environment only at this time; no associated paralytic cases have been detected so far.

Emergence of poliovirus in the Gaza Strip II.

Curren situation

Due to the decimation of the health system, constant population displacement, shortages of medical supplies and poor quality of water and weakened sanitation, there is a high risk of appearance and spread of communicable diseases. The heat, accumulating garbage, sewage and lack of clean water are accelerating the spread of diseases, and have led to outbreaks of various infections. It has impacted the whole population – vulnerable groups, health workers, hostages, as well as the well-being of the Israel Defense Forces (IDF) troops fighting there.

Currently in Gaza, only 16 out of 36 hospitals are partially functional and 45 out of 105 primary health care facilities are operational. The impact on health system have contributed to reduced routine immunization rates and an increased risk of vaccine-preventable diseases, including polio. Routine immunization rates in the occupied Palestinian territory were optimal before the start of conflict in Oct/2023. Polio vaccination coverage, primarily conducted through routine immunization, was estimated at 99% in 2022. **This has declined close to 89% in 2023.**



Garbage and open sewage in northern Gaza.
Source: Times of Israel

Ministry of Health is aware of about 150.000 children who have not been vaccinated at all with the inactivated vaccine (IPV) and therefore they are not protected from paediatric paralysis.

WHO considers there to be a high risk of spread of this strain within Gaza, and internationally, particularly given the impact the current situation continues to have on public health services.

Reaction from Israel Defense Forces

The IDF announced on 21/July, that it had begun a campaign to offer polio vaccination boosters to all soldiers serving in the Gaza Strip. The wide-scale vaccination campaign is for all forces in regular service as well as reserves and is not compulsory. IDF soldiers were also instructed to perform preventive actions and maintain personal hygiene. IDF will work in coordination with the Health Ministry, with the aim of ensuring the health of IDF soldiers and the public in Gaza.

Prevention of polio – vaccine and personal hygiene

In Israel there are two types of vaccines against polio that constitute part of the routine pediatric vaccination program:

IPV - Inactivated Polio Vaccine

- Inactivated vaccine, administered by injection into the muscle;
- Administered in 4 doses over the first year of life, followed by a booster dose in the 2nd grade.
- This vaccine is tasked with protecting the vaccinated person themselves against pediatric paralysis.

bOPV – bivalent Oral Polio Vaccine

- A live attenuated vaccine administered by oral drops in two doses over the first 18 months of life;
- The live attenuated vaccine only provides protection against types 1 and 3 (and not against type 2);
- This vaccine is tasked with creating a local protective layer in the intestine, thereby preventing the excretion of poliovirus through the stool and its continued transmission to others.

The polio vaccine is thought to give lifetime immunity, but the Centers for Disease Control and Prevention (CDC) recommends that adults who are at increased risk of exposure receive a one-time booster dose of IPV to maintain immunity. IDF stated that it facilitated the delivery of hundreds of thousands of polio, tuberculosis, rotavirus and MMR vaccines to the Strip, among other aid.

Beyond vaccination, further preventive measure is handwash, which is most essential in preventing the spread of the virus. Hygiene practices should be maintained, especially washing hands with water and soap for about 20 seconds after going to the bathroom, before touching food and after changing baby diapers.

Monitoring the situation in Israel

The Ministry of Health in Israel is monitoring the poliovirus situation, by monitoring the **sewage** system (collect samples in 14 sampling sites in Israel once a month), and monitoring the **clinical** signs/appearance of polio (cases of flaccid paralysis in children are regularly reported to the Ministry of Health).



Avian Influenza A(H5N1) in USA - CDC Response Update July 26, 2024

Michigan H5N1 seroprevalence investigation preliminary findings:

The US CDC analyzed 35 blood samples collected from individuals who were exposed to dairy cattle infected with HPAI A(H5N1) clade 2.3.4.4b viruses causing outbreaks among animals in the United States. Study participants were from multiple counties and had different roles on affected farms, but most worked with sick cows directly and fewer than half reported using PPE (i.e. masks or goggles). These samples were tested for antibodies against avian influenza A(H5N1) clade 2.3.4.4b virus and a seasonal influenza virus (control virus) to measure antibodies.

None of the 35 tested individuals showed neutralizing antibodies (a sign of prior infection) specific to the avian influenza A(H5N1) virus, while many had neutralizing antibodies to seasonal flu (expected given the recent flu season and influenza vaccine).

Colorado Laboratory Update:

Posting the sequence of the influenza virus genome from a positive specimen collected from one patient in Colorado participating in an A(H5N1) infected poultry farm depopulation (A/Colorado/109/2024) to GISAID (EPI_ISL_19263923) and GenBank (PQ032835). CDC sequenced the influenza virus genome, confirming the neuraminidase (the N in the subtype) is an N1 and the virus is a HPAI A(H5N1) virus from clade 2.3.4.4b. An analysis of the sequence indicates:

- This virus is genotype B3.13 clade 2.3.4.4b HPAI A(H5N1) with each individual gene segment closely related to viruses detected in recent poultry outbreaks and infected dairy cattle herds made available from USDA. Among human virus sequences, A/Colorado/109/2024 is most similar to the genome of the human case in Michigan.
- The sequence maintains primarily avian genetic characteristics and lacks changes that would make the virus better adapted to infect or spread among humans.
- The genome does NOT have the PB2 E627K change that was seen in the virus from the case in Texas, but not subsequent human viruses.
- Furthermore, there are no markers known to be associated with influenza antiviral resistance found in the virus sequences from the patient's specimen.

In the update on August 26 the CDC reported, that the CDC sequencing of the virus from the sixth human case reported from Colorado confirms the neuraminidase (the N in the subtype) is an N1 and the virus is a HPAI A(H5N1) virus from clade 2.3.4.4b. Six of the eight influenza virus gene segments (the majority of the flu genome) were successfully sequenced. The sequences are closely related to the virus sequence described above, A/Colorado/109/2024, as well as viruses detected in recent poultry outbreaks and infected dairy cattle herds made available from USDA.

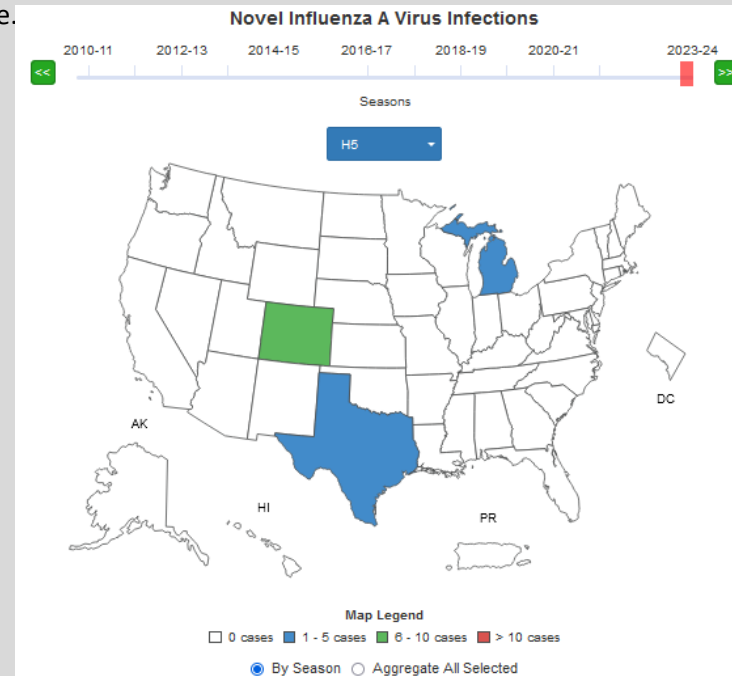
The sequence maintains primarily avian genetic characteristics and lacks changes that would make the virus better adapted to infect or spread among humans.

Clinical update

On July 19, 2024, CDC issued Emergency Use Instructions (EUI) for the flu antiviral drug, oseltamivir (generic for brand name drug Tamiflu®), for treatment or post-exposure prophylaxis (PEP) of pandemic influenza A viruses and novel influenza A viruses with pandemic potential. CDC-issued oseltamivir EUI fact sheets for health care providers and recipients and caregivers are available on CDC's website: [Emergency Use Instructions \(EUI\) for Oseltamivir](#).

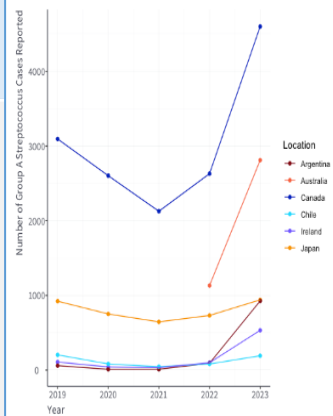
CDC Recommendations

- People should avoid exposures to sick or dead animals, including wild birds, poultry, other domesticated birds, and other wild or domesticated animals (including cows), if possible.
- People should also avoid exposures to animal poop, bedding (litter), unpasteurized ("raw") milk, or materials that have been touched by, or close to, birds or other animals with suspected or confirmed avian influenza A(H5N1) virus, if possible.
- People should not drink raw milk. Pasteurization kills avian influenza A(H5N1) viruses, and pasteurized milk is safe to drink.
- People who have job-related contact with infected or potentially infected birds or other animals should be aware of the risk of exposure to avian influenza viruses and should take proper precautions. People should wear appropriate and recommended personal protective equipment when exposed to an infected or potentially infected animal(s).



Invasive Group A *Streptococcus* (iGAS)

Annual iGAS Cases Reported By Country / 2019 to 2023



Observations:

1. In Australia, iGAS only became a notifiable disease in mid-2021 and complete data are only available for 2022 and 2023.
2. iGAS activity between countries is not comparable due to difference in reporting methodology and frequency. Visualizations are strictly for observing trends over time within countries.
3. For data sources, see Appendix Table A1.

Invasive group A *Streptococcus* (iGAS) cases have been reported in several countries worldwide since late-2022, with pediatric populations particularly affected.

A new lineage of group A *streptococcus*, known as **M1UK**, may be contributing to increasing cases of GAS/iGAS. This lineage was first reported in the UK but has since **been identified across multiple geographies**.

Early-stage clinical trials are underway to develop GAS vaccines to prevent serious invasive disease and post-infectious complications (such as rheumatic fever).

Improving surveillance and clinical awareness can aid in diagnoses and prompt treatment.

Policies and efforts that address indoor air quality could lead to a reduction in secondary infections including those caused by GAS by mitigating viruses that spread through air.

[GAS infections affect approximately](#) 750 million people and kills more than 500,000 globally each year.

An upward trend was reported in, but not limited to, the below locations:

Increasing trends in group A *Streptococcus* (GAS) and • Denmark • France • Norway

• United Kingdom (UK) • Canada • Australia

• Japan • Argentina • Chile

Factors That May Be Contributing to Increasing Trends

1. **Reduced exposure** to streptococcus infections, thus an increased pool of susceptible individuals.
2. GAS infection can **occur simultaneously or subsequently** to another infection. Coincidentally, high trends of RSV, influenza, COVID-19 and varicella have been reported following the relaxation of COVID-19 restrictions. Viral infections can predispose to further bacterial infections.
3. **New lineage** of group A *Streptococcus*

Current State of Surveillance

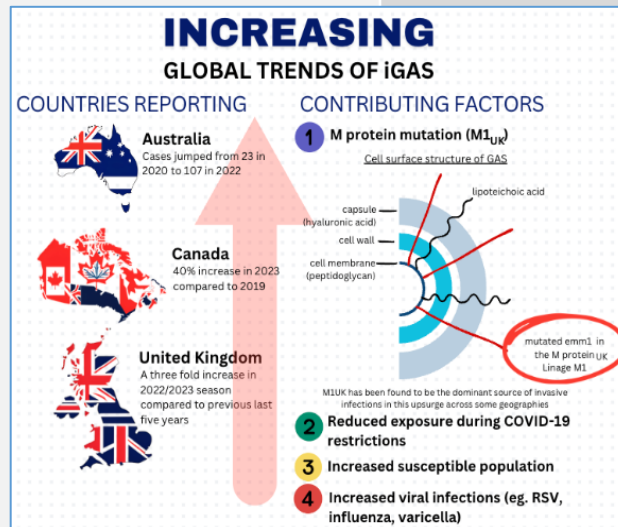
Surveillance is an important public health measure to identify cases and close contacts needing prophylactic treatment promptly.

• Timely antibiotic treatment is important to limit complications and further transmission.

• However, **many countries do not require mandatory reporting** of GAS/iGAS infections and **surveillance remains challenging**.

Vaccine candidates currently in development globally

Vaccine Name	Company/Research Group	Clinical Phase	Results
Peptide-based vaccine J8-K4S2 P*17-K4S2	University of Alberta (Canada) & Griffith University (Australia)	Phase I human clinical trials	Results pending ^{32,33}
mRNA vaccine candidate	University of Queensland (Australia) & Moderna	Preclinical studies in animal models	Five vaccine antigen combination with experimental adjuvant provides protective immunity in preclinical animal models. Next step: confirm pre-clinical efficacy with an mRNA formulation. ¹⁵
StreptAnova 30-valent vaccine	University of Tennessee (USA) & Vaxent	Phase 1 human clinical trials	Results demonstrated significant immunogenicity towards most of the targeted antigens (completed 2020). ³⁴ A phase II efficacy study is planned, pending funding.
StreptInCor Peptide vaccine	University of Sao Paulo (Brazil)	Preclinical studies in animal models	Results demonstrate immune protection in mice. ³⁵ Submitted to ANVISA (Brazilian regulator) in early 2023 to begin clinical trials.
Recombinant glycoconjugate vaccine	University of Dundee (Scotland), London School of Hygiene & Tropical Medicine (England), International Vaccine Institute (South Korea), & Gyeongbuk Institute for Bio-Industry (South Korea)	Preclinical studies	Results demonstrate a novel opportunity to construct promising Strep A glycoconjugate vaccines recombinantly. ^{36,37}



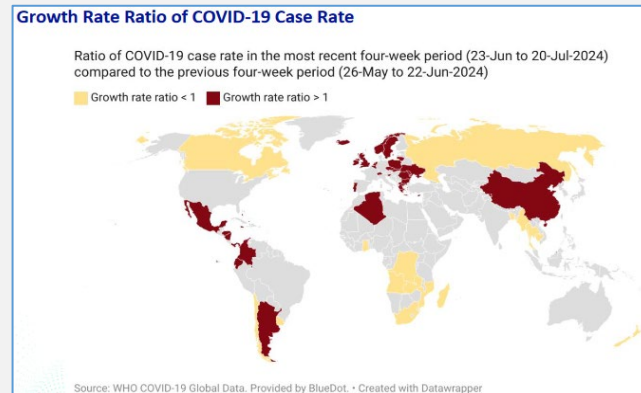
Recent Updates in global SARS-CoV-2 activity I

Many regions are experiencing increases in COVID-19 activity, in the northern and southern hemispheres. A coordinated surge of COVID-19 activity across regions and countries is currently being observed, corresponding with the growth of new variants with increased immune evasiveness. This demonstrates that COVID-19 is not a seasonal disease.

Global Indicator Based Surveillance (IBS)

Observations

- 35 countries are observing a growth rate ratio (GRR) higher than 1.0 in the most recent four weeks, among 52 countries included in the global map that had data available to calculate a growth rate ratio, indicating an increase in their COVID-19 case rate compared to the previous four weeks.
- Overall, 25 countries have reported the highest level of case rates observed throughout this calendar year (above 80th percentile) at some point in the most recent four weeks.
- In the northern and southern hemispheres, other countries across all geographical regions are observing an increase in cases, further supporting that COVID-19 is not behaving as a seasonal disease.
- Though case rate values cannot be compared due to differences in testing and reporting policy, comparisons in trends can be made across regions. Overall, several countries were in the middle of an epidemic wave earlier in the year, after which they experienced periods of low activity during the months of March to May. Since June, many countries have been seeing an increase in COVID activity again.
- While some countries have already experienced peaks of their current epidemic waves, especially those in Europe and the Americas, many others are continuing to observe increases in their COVID-19 case rates.



Peak Activity Comparison (IBS)

- Among countries that have already reported peaks in their summer waves, **Ireland reported a peak that was comparable to the country's winter wave**, while the UK and Canada reported peak activity that was less than half of their winter waves.
- Among countries that are currently observing increasing COVID-19 activity, **Iceland** is already reporting **disease activity higher** than what the country experienced during its **winter wave**. Other countries are reporting lower disease activity (so far), however, these countries have yet to peak.

Country	Magnitude of wave peaks (COVID-19 rate per 100K population)		Comparison of magnitude
	Current wave (Summer 2024) *	Previous wave (Winter 2024)	
Canada	4.5 Peak date: 19-May-2024	16.1 Peak date: 26-Nov-2023	28%
Ireland	22.0 Peak date: 30-Jun-2024	24.1 Peak date: 07-Jan-2024	91%
United Kingdom	7.2 Peak date: 23-Jun-2024	16.0 Peak date: 24-Dec-2024	45%

Event-Based Surveillance (EBS)

Increasing Hospitalizations

- New Zealand and Australia** are currently experiencing a surge in COVID-19 cases during their winter respiratory illness season. Hospitalizations are rising and healthcare systems are reported to be overwhelmed as of 31-May-2024, indicated by the reopening of dedicated COVID-19 wards in some hospitals in New Zealand.^{1,2}
- Colombia is reporting impacted pediatric services due to surges in respiratory illnesses, including both RSV and COVID-19.³
- France, Ireland, Greece, and the UK are experiencing rises in hospitalizations and emergency visits, with large proportion of cases attributed to FLiRT variants.^{4,5,6,7}
- Similarly, Scotland experienced a surge in COVID infections with hospitalizations exceeding levels experienced during the 2023-24 winter. However, experts suspect that the surge has peaked as of July 21st, with new cases starting to decrease.⁸
- While the Netherlands are also experiencing COVID-19 infection surges, hospital admissions remain stable.⁹

Comorbidity Burden

Both **Spain** and **Taiwan** are experiencing COVID-19 activity that is disproportionately affecting seniors aged 65-79 and/or those with comorbidities, increased hospitalization rates and reportedly straining healthcare facilities^{10,11}

Climate and Environmental Influences ▲

Seasonal factors including climate and weather are speculated to be factors contributing to COVID-19 surges in the **Bahamas**, the **Dominican Republic (DR)**, **Thailand**, and **Luxembourg**.

These seasonal factors include:

- Sahara dust and increased rain in the DR.¹²
- The rainy season in Thailand, resulting in increased humidity and colder temperatures leading to prolonged aerosol viral persistence and gatherings indoors.¹³
- An unseasonably rainy and cold summer in Luxembourg, drawing people indoors and promoting transmission.¹⁴

Gathering Driven Infections ▲

- Summer activities, including summer-related travel, in the US have led to increases in mass gatherings, promoting transmission and growing infection rates.¹⁵ Additionally, there may be increases in indoor gatherings due to heat waves in some parts of the country.
- Festivities in Granada following Corpus Christi celebrations, wedding, baptism, and communion season have led to increases in mass gatherings and may be associated with an increase in infection rates.¹⁶
- Senegal reports several imported COVID-19 cases following the mass gatherings during Hajj and returns from Mecca mid-June.¹⁷

▲ Many factors, including waning immunity and newer variants that are more immune evasive are likely contributing to increasing COVID-19 burden globally. These are some additional country-specific factors that may influence individual behaviours and have been speculated and/or described by news media to be contributing to increasing COVID-19 activity.

Recent Updates in global SARS-CoV-2 activity II

Key Variant Details and Characteristics (Global Level)				
Variant	Key Mutational Changes (From JN.1)	Prevalence Week of 14-Jul-2024 (95% CI)	Estimated Growth Advantage (in the past month)	Notable sublineages
KP.3 (JN.1.11.1.3)	F456L ^a Q493E ^b V1104L	55.0% (47.9 to 59.36%)	15% (11 to 18%)	KP.3.1 KP.3.1.1 (S31del) ^c KP.3.2 KP.3.3
KP.2 (JN.1.11.1.2)	R346T ^a F456L ^a V1104L	14.4% (10.1 to 20.2%)	-10% (-14 to -6%)	KP.2.3 (S31del) ^c
LB.1 (JN.1.9.2.1)	S31del ^c Q183H R346T ^a F456L ^a	14.1% (7.9 to 23.8%)	10% (5 to 16%)	LB.1.3 LB.1.7
JN.1.16	F456L	2.9% (1.3 to 6.4%)	-10% (-17 to -3%)	N/a

^a FLuRT mutation are highlighted in green. KP.2 and LB.1 are examples of FLuRT variants, as they have both the F456L and R346T mutations.

^b FLuQE mutations are highlighted in blue. KP.3 is an example of a FLuQE variant, which has the Q493E mutation along with the F456L mutation.

^c Key mutation explained in the observations below.

Data sources: GISAID. Provided by cov-spectrum and outbreak.info

SARS-CoV-2 Variant Update [18](#), [19](#)

- **KP.3*** is the globally dominant variant and is one of the two currently circulating variants with an increasing growth advantage over others.
- According to preliminary research, **KP.3 was found to have higher ACE-2 receptor binding affinity** compared to KP.2.
- **LB.1 is the other variant that is currently increasing in prevalence**, primarily in North America. It accounts for 12% of all circulating variants in the United States, as of the week of 07-Jul-2024. It also appears to be increasing in Asia more recently.
- The S31 deletion, a mutation found in several currently circulating variants, is **associated with increased immune evasiveness, increased infectivity, and an increased effective reproductive number (Re)**, according to early findings. It is currently found in the spike protein of the following variants:
 - o KP.3.1.1
 - o KP.2.3
 - o LB.1

Changes to Vaccine Formulation

- The WHO recommended vaccine manufacturers to update vaccines to target the JN.1 variant for the 2024-2025 vaccination campaign.[20](#)
- According to pre-clinical data, Pfizer-BioNTech's JN.1-targeted monovalent vaccine has a substantially improved response against currently circulating lineages, including JN.1, KP.2, and KP.3, compared with the currently available XBB.1.5-targeted monovalent COVID-19 vaccine.[21](#)
- Novavax's JN.1-targeted vaccine has also demonstrated high neutralizing antibodies for several JN.1 sublineages and is also expected to be made available in the fall.[22](#)

Conclusion

- Regardless of the season or region, several countries worldwide are currently experiencing a COVID-19 wave, with some countries reporting the highest burden observed in over a year.
- JN.1 sublineages are dominant globally, with KP.3 and its sublineages making up the highest proportion among all circulating variants. LB.1, a new sublineage of JN.1, is also increasing in prevalence in some regions.
- It is likely that the JN.1-targeted vaccine(s) will be available in some regions by the fall. These updated vaccines are expected to provide substantially higher protection against currently circulating variants compared to previously available vaccines.

Key Takeaways

Global COVID-19 Activity

A coordinated surge of COVID-19 activity across regions and countries is currently being observed, corresponding with the growth of new variants with increased immune evasiveness. This demonstrates that COVID-19 is not a seasonal disease.

Healthcare Burden

In countries with concurrent seasonal influenza, RSV, and other seasonal respiratory illnesses, there are media reports that healthcare systems are strained.

Variants

JN.1 sublineages are dominant globally. Sublineages such as KP.3 and LB.1 are increasing in prevalence, while other lineages such as KP.2 are decreasing globally.

Vaccines

Newer vaccine formulations for COVID-19, targeting the JN.1 lineage, are expected to be available ahead of the northern hemisphere's winter season. These vaccines are anticipated to provide greater protection against the new lineages of SARS-CoV-2 variants, but this protection will depend on uptake and the degree of mutational changes that occur in the virus in the upcoming months.

Outlook for Fall 2024

Healthcare systems in the northern hemisphere should anticipate capacity constraints given the unpredictable evolution of SARS-CoV-2, particularly when seasonal influenza, RSV, and other seasonal respiratory pathogens co-circulate.

Risk Mitigation

Efforts to minimize transmission of all airborne respiratory pathogens, particularly in public settings such as schools and healthcare, should be prioritized.

Antimicrobial Resistance, Hypervirulent *Klebsiella pneumoniae* - Global situation -



Over several years an increased identification of isolates of hypervirulent *Klebsiella pneumoniae* (hvKp) sequence type (ST) 23 carrying resistant genes to the carbapenem antibiotics – carbapenemase genes – reported in several countries. The documented sustained transmission of this lineage has been observed over several years and the genes associated with the antimicrobial resistance were detected in hvKp strains in recent years in multiple countries.

WHO African Region

In the WHO African region, cases of hvKp might be present but the extent of the problem is **not yet known**. Detection of hvKp ST23 carrying carbapenem resistance genes or any other virulence or resistance marker requires the use of molecular methods which may not be routinely monitored in many microbiology laboratories across the region.

WHO Region of the Americas

In the Region of the Americas, there is consolidated AMR surveillance, which has made it possible to widely document the detection of *Klebsiella pneumoniae* (Kp) strains carrying carbapenem resistance genes. However, there is **no systematic surveillance** that allows the routine identification of hvKp strains and allows the collection of information on these strains.

The lack of clinical suspicion, detection, and implementation of infection control measures indicated for the cases (standard and contact precautions, including isolation), as well as the detection and management of people who are colonized by the bacteria, are some of the challenges.

WHO Eastern Mediterranean Region

The **available data** on the prevalence of hvKp is **scarce** in the and is documented only through laboratory surveillance for AMR within healthcare facilities or retrospective epidemiological studies in a few countries. Although two countries in the region (**Iran and Oman**) **have reported the presence** of hvKp since 2018, little is known about the extent of its dissemination or the situation in most of the countries in the region.

WHO European Region

Resistance to the third-generation cephalosporin antibiotics in Kp has become **widespread** in the WHO European Region. While many European laboratories regularly perform tests to characterize the bacteria and have the capacity for molecular identification of the most frequent carbapenem resistance genes, the identification of genes that enhance the ability of the bacteria to cause a disease (virulence) is currently not part of standard diagnostics. Since the detection of hypervirulence is not part of routine diagnostic microbiology, hvKp may go unnoticed, unless suspected by clinicians with awareness of the clinical picture and requesting the isolates to be referred for further characterization or sequencing.

WHO Western Pacific Region

In the region, due to widespread antibiotic resistance and insufficient measures to prevent infection in various areas, it is possible that instances of hvKp have occurred but have **not been fully recognized**. Identifying, enhanced diagnostic tests, are **not commonly employed** in standard microbiology laboratories. Several Member States in this region **have the capacity** to conduct antimicrobial susceptibility testing and detect Kp strains with carbapenem resistance.

WHO risk assessment

The risk at the global level is assessed as moderate considering that:

1. Infections caused by hvKp traditionally have **occurred within communities in certain geographical regions** (Asia) and are associated with **high morbidity and mortality** as well as **high pathogenicity** and **limited antibiotic** choices.
2. As with other resistance mechanisms, the **risk of spread could increase due to high movements** of people (within and between countries and regions).
3. There are **very limited antimicrobial treatment options** for the carbapenem-resistant hvKp isolates and these strains have the capacity to generate outbreaks.
4. The high conjugation capacity of the carbapenem-resistant hvKp (CR-hvKp) and the potential for further **dissemination in clinical settings**; hvKp ST23 particularly out-competes other gut bacteria facilitating colonization and spread.
5. Detection of the emergence of multi-resistant or extensively resistant pathogens requires established **resistance laboratory surveillance systems** as well as effective infection prevention and control programs in health-care facilities.
6. **Lack of laboratory capacity** contributes to the restriction of laboratory diagnosis, and this affects the sensitivity of the surveillance. Most affected countries do not have the capacity for diagnosis in the clinical setting as the laboratory diagnosis of hvKp infections depends on the availability of molecular tests.
7. There is **global heterogeneity** in laboratory surveillance capacity for this pathogen; because of this, there is no systematic surveillance (detection, monitoring, and reporting) of hvKp infections in most countries or regions. Outbreaks and cases are documented in a **non-systematic** way through laboratory surveillance for antimicrobial resistance, or retrospective epidemiological studies, making data on the prevalence of hvKp infections scarce.
8. The prevention and control of carbapenem-resistant hvKp poses significant challenges because it has not been possible to establish the extent of its dissemination in the countries of the different regions and information on this subject is currently limited.

WHO advice

1. Awareness and laboratory capacity to identify carbapenem resistance hvKp.
2. Prospective data collection and surveillance.
3. Infection prevention and control (IPC) measures.

Recent research on: Highly Pathogenic Avian Influenza A H5N1 in Dairy Cattle in the US



Influenza virus characterization Summary Europe, May 2024



Experimental reproduction of viral replication and disease in dairy calves and lactating cows inoculated with highly pathogenic avian influenza H5N1 clade 2.3.4.4b - Baker, L. A. et al.
In this pre-print study two lactating cows and four heifer calves (female cattle under one-year of age) were inoculated with HPAI A(H5N1) (a Texas dairy cattle B3.13 genotype strain) via intra-mammary and aerosol routes, respectively.

Major findings

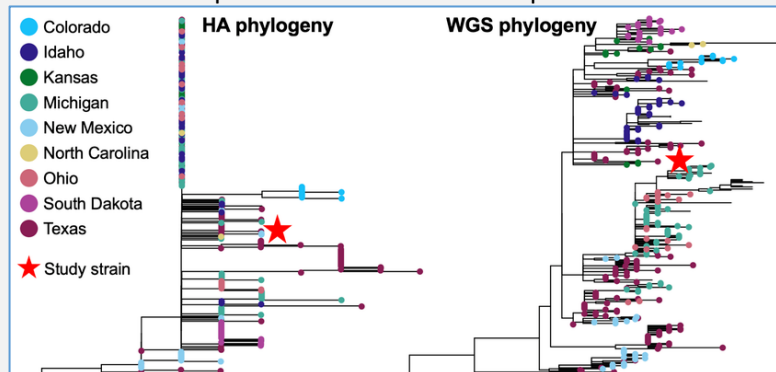
1. All lactating cows and heifer calves inoculated with HPAI A(H5N1) seroconverted in the study, confirming possible infection via both transmission routes.
2. Intra-mammary inoculated cows showed signs of mastitis between days 2 to 14. Other clinical symptoms were similar to field reports in the current outbreak.
3. Lactating cows recovered 14 to 24 days after inoculation; however, virus and genetic material was detected in mammary glands on day 24. No viable virus was detected in pooled milking machine buckets or milk samples after day 12.
4. Aerosol inoculated heifer calves did not present obvious signs of illness other than transient increases in nasal secretion.
5. Virus was detected in the respiratory epithelial in the conducting airways of the heifer calves. All fecal swabs throughout the study were negative.

What does this mean?

This study provides additional support for the plausible respiratory transmission of HPAI A(H5N1) in the dairy cattle outbreak. However, the amount and duration of virus shed in milk supports milk and/or mammary glands as the likely primary source of virus compared to other clinical samples.

The lack of fecal findings continues to suggest that this is not a likely contributing source of infection.

Where a previous study described limited respiratory transmission of HPAI A(H5N1) in cattle, ongoing study is required to assess whether successful onwards respiratory transmission is possible with the B3.13 genotype infected cattle.



Genetic and antigenic characterization data generated at the Worldwide Influenza Centre for viruses with collection dates after 31 August 2023 until 31 January 2024 informed the WHO influenza vaccine composition meeting (VCM) in February 2024 when recommendations were made for the Northern hemisphere (NH) 2024–2025 influenza season. At the February 2024 VCM it was recommended to change the A(H3N2) vaccine components for the 2024–2025 NH season. Previously, at the September 2023 VCM, which focused on data from viruses collected after 31 January 2023 until 31 August 2023, it was recommended to change the A(H1N1)pdm09 and A(H3N2) vaccine components for the 2024 SH season.

It is recommended that vaccines for use in the 2024-2025 NH influenza season contain the following:

Trivalent: Egg-based Vaccines

- an A/Victoria/4897/2022 (H1N1)pdm09-like virus;
- an A/Thailand/8/2022 (H3N2)-like virus; and
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus.

Trivalent: Cell- or recombinant-based Vaccines

- an A/Wisconsin/67/2022 (H1N1)pdm09-like virus;
- an A/Massachusetts/18/2022 (H3N2)-like virus; and
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus.

Quadrivalent (egg- or cell culture- or recombinant-based vaccines): Above 3 components; and a B/Phuket/3073/2013 (B/Yamagata lineage)-like virus.

Influenza B/Yamagata-lineage

No B/Yamagata-lineage viruses with collection dates after March 2020 have been detected or sequences released in GISAID as of 31st May 2024.

The absence of confirmed detection of naturally occurring B/Yamagata lineage viruses is indicative of very low risk of infection by B/Yamagata lineage viruses. Therefore, it is the opinion of the WHO influenza vaccine composition advisory committee that inclusion of a B/Yamagata lineage antigen in quadrivalent influenza vaccines is no longer warranted, and every effort should be made to exclude this component as soon as possible. A continued effort by all NICs of GISRS is required to identify B/Yamagata-lineage viruses for detailed characterization to determine if there are any in circulation.

Other Infectious Disease Outbreaks and disasters – Asia/Oceania



Nipha - India

On 21-Jul-2024, the Government of India's Ministry of Health and Family Welfare confirmed the death of the 14-year-old boy from Kerala, who was laboratory-confirmed to be infected with Nipah virus (NiV) infection on 20-Jul-2024. Health authorities in Kerala continue to activate emergency protocols while investigations are ongoing to determine the source and contain the virus. 330 individuals are under observation with 101 are considered to be in a high-risk category (unverified via news media).

Official sources described that the child had shown symptoms of acute encephalitis syndrome (AES) when first presenting to healthcare facilities and that the request for monoclonal antibodies following the confirmation of NiV had been fulfilled, however, it could not be provided to the child due to his poor condition. The Kerala government has released a detailed route map outlining the educational and health facilities that the child had visited between 11-Jul-2024 and 15-Jul-2024. Individuals who were present at these locations during the listed dates/times are advised to contact the emergency operations control room.

News media reports that a 68-year-old man from the same panchayat (Pandikkad) as the deceased child has been admitted to ICU with symptoms of Nipah, but was not on the contact list. Bodily samples have been collected and sent to the National Institute of Virology in Pune for testing.

Health authorities continue to activate emergency NiV protocols. Most recently this includes an active case search and survey of affected neighbourhoods, active contact tracing, implementation of strict quarantine protocols, and the collection/transportation of samples for lab testing. A mobile BSL-3 laboratory has arrived in Kozhikode to support testing.

Source: [GovernmetofIndia](#), [NewsMedia](#), [NewsMedia2](#)

Vaccine-derived Poliomyelitis - Nepal

On 19-Jul-2024, news media reports highlighted the detection of vaccine-derived poliomyelitis type 3 (VDPV3) in environmental samples in Bagmati Province, Nepal. The positive samples were collected 26-May-2024 from the confluence (joining) of the Tukucha and Bagmati Rivers in Kathmandu, Nepal's capital city. Samples returned positive 13-Jul-2024. So far, no associated human paralytic cases have been reported.

There is limited context surrounding the event including the number of positive samples and whether there have been more recent detections.

Nepal was declared polio-free in 2014, four years after the country's last imported case (in the Rautahat District). However, the last locally detected wild polio virus case was reported in 2000.

Source: [WUENIC](#), [NewsMedia](#), [CDC](#)

Flooding – North Korea

NORTH KOREA: North Korean leader Kim Jong Un has declared an emergency after record rainfall led to widespread flooding in and around the city of Sinuiju and the town of Uiju. There is no word on whether Kim will accept an offer of assistance from South Korea

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

Highly Pathogenic Avian Influenza A H5N1 – Cambodia

On 04-Aug-2024, the Ministry of Health of Cambodia confirmed another human case of highly pathogenic avian influenza A H5N1 (HPAI A(H5N1)) in the southeast province of Svay Rieng. Including this case, there are currently nine confirmed cases in 2024. The affected individual is a 16-year-old female with known exposure history to nine poultry and ducks via consumption four days before falling ill.

Source: [NewsMedia](#), [Ministry of Health](#)

Mpox – Australia

On 28-Jul-2024, multiple news media outlets reported rising concerns over increasing mpox activity in Australia in 2024. Health authorities are emphasizing the importance of vaccination and engaging in responsible sexual health practices to limit the spread of the virus.

National incidence: Reported cases as of 29-Jul-2024 have surpassed the total number of cases reported between July 2022 and May 2023 when the multi-country outbreak was considered a public health emergency of international concern (14% increase in 2024 with 168 cases compared to 148 cases in 2022/2023). Notably, in 2023, only 26 cases were reported.

Most affected location: Victoria state 88 cases (26% increase); New South Wales: 51 cases (12% decrease); Queensland: 17 cases (183% increase).

Source: [NewsMedia](#)

Bubonic plague – Mongolia

A suspected bubonic plague case has been reported in the western Mongolian province of Govi-Altai, according to local media on July 30. The individual from the Taishir soum (administrative subdivision) in the province has been recently hospitalized after consuming marmot meat. In response, at least 13 people who were in close contact with the patient are being isolated, and the soum has been placed under quarantine.

Although hunting marmots is illegal in Mongolia, many Mongolians regard the rodent as a delicacy and ignore the law.

The National Center for Zoonotic Diseases has indicated that 17 out of Mongolia's 21 provinces are at risk of bubonic plague infection.

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

Mass gathering monitoring - Olympic and Paralympic Games - France – 2024

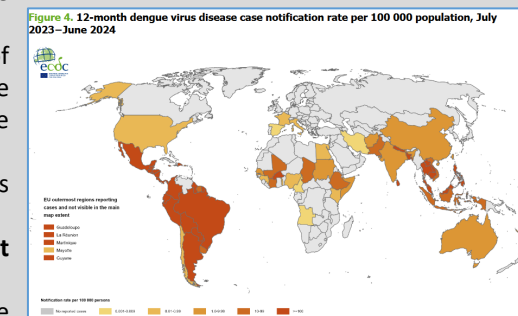
Since the previous ECDC update on 26 July and as of 1 August, no major public health events related to communicable diseases have been detected in the context of the Paris 2024 Olympic Games.

On 31 July, French authorities reported an autochthonous case of chikungunya in France. The case was reported in Ile-de-France region, with symptom onset 18 July. So far, no further cases have been reported.

Since week 30, **COVID-19** cases have been reported among athletes at the Olympic villa from the **Australian Polo Women's Team, the United States Swimming Team, and the Great Britain Swimming Team.**

Other events outside of the 2024 Paris Olympic Games included the first autochthonous case of dengue in 2024, which was reported in week 28 in Occitania. There are no Olympic venues in Occitania.

Source: [ECDC](#)



Other Infectious Disease Outbreaks - Americas



Highly Pathogenic Avian Influenza A H5N1 in United States – Follow up -

Please note that this event is about highly pathogenic avian influenza (HPAI) A(H5N1) in animals, mostly in cattle (cows), and does not provide data on humans. This alert will provide an update on the situation in dairy cattle including a summary of detections and recent research.

As of 26-Jul-2024, HPAI A(H5N1) was reported in 13 states with over 172 affected livestock. Colorado state reports the largest number of affected livestock herds.

Dairy Cattle: Since the last assessment on 10-Jul-2024, one newly reported state has been identified. On 12-Jul-2024, Oklahoma reported the states first confirmed positive herd; however, samples were collected in April. The affected herd has since recovered. States reporting new detections in the last 30 days include Colorado (+30), Iowa (+3), Minnesota (+3), Idaho (+2), Texas (+1), and Michigan (+1).

Poultry: Colorado (Weld county) and Minnesota (Kandiyohi and Renville counties) have also reported HPAI outbreaks among commercial poultry flocks in the last 30 days. USDA reports that since April 2024, there have been A(H5) detections in 35 commercial flocks and 19 backyard flocks, for a total of 18.37 million birds affected.

Source: Information includes data from official sources from [CDC](#), [WAOAH](#), [USDAI](#), [APHIS](#), [local state resources](#), and [scientific literature I](#), [scientific literature II](#).

Update on human cases

On 19-Jul-2024, the Colorado Department of Public Health and Environment (CDPHE) and the US CDC confirmed a total of six human cases of avian influenza H5N1 infections among poultry workers associated with the infected poultry at a commercial egg layer operation in Weld County. On July 26 CDC confirmed three additional cases of H5 bird flu in poultry farm workers at a second poultry farm in Colorado. The infected poultry workers experienced mild symptoms, and all received antiviral medication and have recovered. This adds up to a total of 13 reported cases across the USA including the following human cases previously reported: Texas (1), Michigan (2), and Colorado (7). Of the total human cases to date, four are linked to exposure to infected dairy cattle, while nine are linked to infected poultry. Of the 160 people working on the infected poultry farm, 60 developed symptoms, and six are confirmed positive. The remaining 54 workers tested negative for H5N1 at the Colorado State Health Lab, and some of them were diagnosed with other respiratory illnesses. Only symptomatic workers were tested.

The US CDC has sequenced the influenza virus genome from the most recent cluster of cases in Colorado, confirming the virus is A(H5N1) from clade 2.3.4.4b. An analysis of one of the sequences further indicates: The virus is genotype B3.13 clade 2.3.4.4b HPAI A(H5N1) with each gene segment closely related to viruses detected in recent poultry outbreaks and infected dairy cattle herds made available from USDA. Among human virus sequences, A/Colorado/109/2024 is most similar to the genome of the human case reported earlier in Michigan. The sequence maintains primarily avian genetic characteristics and lacks changes that would make the virus better adapted to infect or spread among humans. The findings are reassuring, showing it is closely related to the first human case from Colorado and that it does not have changes in the

neuraminidase associated with antiviral resistance. There are no changes to the virus that would suggest the risk to human health has increased.

CDC's current assessment is that the **risk to the general public** from H5 bird flu remains **low**.

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

Chikungunya - Brazil

Brazil has experienced higher-than-expected chikungunya virus activity since 2022. Total cases reported to date in the current year is greater than cases reported over a similar period in the past 5-years (2017-2021) and similar to the total cases reported in 2023.

Surveillance data since 01-Jan-2024 and as of 13-July-2024:

Overall reported (confirmed and probable): 350,258 cases (including 138 deaths).

Total confirmed cases: 224,746 cases (64% out of the overall reported cases).

This represents a *one-fold increase in the number of reported cases and double the number of deaths* compared to the same reporting period last year (17-July-2023: 199,822 reported cases and 60 deaths).

The heterogeneity of the outbreaks in Brazil has been attributed to several factors varying range of chikungunya immunity, location-specific climates, differences in mosquito vectors present, and exposure of people in different sociodemographic conditions. Although serosurveys across Brazil remain scarce, 40.5% of municipalities have reported no chikungunya cases since 2014, suggesting that a significant proportion of the country's population remains susceptible or was infected but not captured by the national surveillance system.

Source: [NewsMedia](#), [NewsMedia1](#), [TheLancet](#)

Cholera – multi-country – worldwide

In June 2024, 45 787 new cholera cases, including 164 new deaths, were reported worldwide.

Since 1 January 2024 and as of 30 June 2024, 247 071 cholera cases, including 2 121 deaths, have been reported worldwide.

New cases have been reported from **Afghanistan, Bangladesh, Burundi, Cameroon, Comoros, Democratic Republic of the Congo, Ethiopia, Haiti, India, Kenya, Malawi, Mayotte, Mozambique, Nigeria, Pakistan, Somalia, Syria, Uganda, United Republic of Tanzania, Yemen, Zambia, and Zimbabwe**.

Cholera cases have continued to be reported in **western, eastern and southern Africa and the Americas**.

Cases have also been reported from the outermost regions of the EU.

The **risk of cholera infection in travellers** visiting these countries remains **low**, even though **sporadic importation of cases to the EU/EEA is possible**.

Source: [ECDC](#)

Other Infectious Disease Outbreaks - Africa



Mpox – Burundi

On 22-Jul-2024, the Burundian Ministry of Public Health and Fight Against AIDS identified the first three laboratory-confirmed cases of mpox virus (MPXV) in western Burundi.

Three affected adults presented with fever, joint pains, and generalized skin eruptions. The cases were reported in three separate health facilities. Laboratory analysis and confirmation was conducted by the National Reference Laboratory in collaboration with the WHO. However, to date, there is no information on the identified MPXV Clade in the current cluster of cases. The infected individuals are currently receiving treatment in health facilities, and their contact cases are being closely monitored. An unconfirmed case was announced on 16-Jul-2024, where a child with MPXV symptoms died in a health facility in Mugamba, Bururi province.

Local Impact: Identifying multiple MPXV cases within a short period in different health facilities suggests the potential of a larger outbreak, requiring immediate local containment measures.

Regional Implications: Given the proximity to the Democratic Republic of the Congo (DRC), where MPXV cases Clade I (not related to Clade II, global multi-country) have been reported, there is a risk of cross-border transmission.

Health System Readiness: While the Burundian health authorities have acted promptly by deploying a multidisciplinary team and ensuring treatment for the affected individuals, the capacity to manage a larger outbreak remains uncertain.

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

Diphtheria – Guinea

The diphtheria outbreak in Guinea is ongoing, with a general decreasing trend in the number of new cases reported. In epidemiological week 27 (week ending 6 July 2024), a total of 80 suspected cases, including five deaths (CFR 7.0%), were reported across seven districts: Siguiri 76.3% (n=61), Kankan 7.5% (n=6), Mandiana 6.3% (n=5), Dinguiraye 3.8% (n=3), Conakry 2.5% (n=2), Dalaba 2.5% (n=2) and Forecariah 1.3% (n=1). Of the 80 suspected cases, 71 were confirmed positive, including 67 clinically compatible cases and four laboratory-confirmed cases.

Cumulatively, from epidemiological week 12 to 27, a total of 5 986 suspected cases, including 133 deaths (CFR 2.2%), were reported across seven regions: Kankan 95% (n= 5 734), Mamou 2.0% (n=122), Conakry 1.0% (n=60), Faranah 0.5% (n=33), Kindia 0.3% (n=23), Labé 0.1%(n=13), and N’Nzérékoré 0.01% (n=1).

Although the diphtheria outbreak situation in Guinea is improving, additional efforts are required to reinforce the surveillance system in the affected and neighbouring regions to ensure no cases are missed. Furthermore, it is essential to accelerate vaccination campaigns in the most affected areas to halt the transmission chain of the current outbreak.

Source: [WHO](#)

Mpox - Uganda

On 02-Aug-2024, news media outlets report two confirmed imported cases of mpox by the Ugandan Ministry of Health (MOH) in Kasese District located in western Uganda. Both cases are imported from the neighbouring country of the Democratic Republic of the Congo (DRC). The MOH states that no cases of secondary transmission have been found in Uganda to date. However, nine individuals continue to be monitored for signs and symptoms. Furthermore, these two confirmed cases were among six previously suspected cases from the towns of Mpondwe and Bwera in the Kasese District, which is located in close proximity to the border of the DRC. A rapid response team has been deployed to assist in containing the virus.

Source: [CDC Africa](#), [NewsMedia](#)

Mpox- Kenya

On 31-Jul-2024, several news outlets reported the first confirmed case of mpox at the Taita Taveta border between Kenya and Tanzania. The virus was identified in a person, reportedly a long-distance truck driver, traveling from Uganda to Rwanda via Kenya. The Ministry of Health has not disclosed any further information about the individual. The strain has been confirmed by the WHO to be mpox clade I.

Source: [Ministry of Health](#), [NewsMedia](#), [NewsMedia2](#)

Mpox – Ivory Coast

On 30-Jul-2024, the Ministry of Health of Côte d'Ivoire announced two confirmed non-fatal cases of Monkeypox recorded in July 2024 in the districts of Tabou and Koumassi in Abidjan. Although mpox is considered endemic in Côte d'Ivoire, these have been the most recent evidence of disease activity reported officially in the past years.

Source: [Ministry of Health and Public Hygiene](#), [NewsMedia](#)

Mpox – Rwanda

On 27-Jul-2024, the Rwandan Ministry of Health confirmed the first historical two cases of mpox virus in the country. Cases were reported in the Gasabo and Rusizi districts, and both individuals have a recent history of travel to the Democratic Republic of the Congo (DRC), where a historical clade I outbreak is ongoing. Genome sequencing results revealed mpox Clade Ia sublineage.

Source: [NewsMedia](#), [African CDC](#)

Mpox – Central African Republic

On 30-Jul-2024, the Central African Republic (CAR) Ministry of Health declared an mpox virus outbreak, noting that the virus which previously was only found in rural areas of the country has now spread to Bangui, the densely populated capital city. According to news media, the Ministry of Health and the Pasteur Institute in Bangui have reported 166 suspected cases of mpox, including 35 confirmed cases between January and July 2024 across CAR. Health authorities highlight that nine mpox cases were reported in Bangui within a week.

Source: [NewsMedia](#), [NewsMedia](#); Case counts have not been verified against official sources

Other Infectious Disease Outbreaks - Africa

Cholera – Comoros and Mayotte

According to French authorities, no further cholera cases have been reported in Mayotte since 12 July. Since 18 March, there have been 221 confirmed cases, five probable and two possible deaths.

In the Union of Comoros, since the previous update on 24 July, and as of 31 July, local authorities have reported four new cholera cases, but no new deaths. As of 31 July 2024, 10 342 confirmed cholera cases and 149 deaths have been reported in the country.

Given the decline in the number of autochthonous cholera cases in Mayotte, and in neighbouring Comoros, ECDC has lowered the **overall risk from high to moderate**.

Source: [ECDC](#)

Measles – Benin; Côte d'Ivoire; Guinea

Measles outbreak in ongoing in ***Benin***, from week 1 through week 25, 2024 (ending 23 June), a total of 728 suspected cases of measles, including 288 confirmed IgM+ cases, 33 clinical compatible are reported with the incidence rate of 24.9 per 1 million population.

Measles outbreak in ongoing in ***Cote d'Ivoire***, from week 1 through week 25, 2024 (ending 23 June) , a total of 5 617 suspected cases of measles were reported, including 678 confirmed IgM+ cases and 4 080 clinically compatible . The incidence rate is 146 per 1 million population.

Measles outbreak in ongoing in ***Guinea***, from week 1 through week 25, 2024 (ending 23 June), a total of 1 076 suspected measles cases were recorded including 247 confirmed cases. Seven deaths recorded in the regions of Conakry (1), Kindia (1) and N' Zérékoré (5) . The incidence rate per 1 million population is 31.1.

Source: [WHO](#)

Malaria – Rwanda

Since the epi week 21 , 2024 (ending 26 May) , malaria cases have increased compared to the same period of 2023, and the analysis results revealed that they surpassed the epidemic thresholds in some health facilities. As of epi week 24 , 2024 (ending 23 June) , the epidemic thresholds were crossed in 18 district hospitals.

Source: [WHO](#)

Summary of new poliovirus this week, as of 6 August 2024

- **Pakistan**: 11 WPV1-positive environmental samples
- **Chad**: one cVDPV2 case and one positive environmental sample
- **Guinea**: one cVDPV2 case
- **Liberia**: two cVDPV2 positive environmental samples
- **Niger**: three cVDPV2 positive environmental samples
- **Nigeria**: six cVDPV2 cases and three positive environmental samples
- **Occupied Palestinian Territory** : six cVDPV2 positive environmental samples
- **Sierra Leone**: one cVDPV2 positive environmental sample
- **Yemen**: one cVDPV2 case

Source: [Polio Global Eradication Initiative](#)

Humanitarian crisis - South Sudan

The humanitarian situation in South Sudan remains concerning with increasing needs and the number of people requiring assistance. The influx of refugees and returnees due to the Sudan crisis is still ongoing, and the country now has the most number of people fleeing conflict in Sudan compared to other Sudan's neighbouring countries.

Food insecurity and malnutrition, floods, disease outbreaks, and limited access to health, hygiene, and sanitation services are further complicating the situation of the country's vulnerable people. Furthermore, intercommunal violence and armed attacks continue to be reported in the country, triggering population displacements. This year, South Sudan ranks 161st out of 163 countries on the 2024 Global Peace Index, indicating significant internal conflict and low peace levels.

On the natural disaster side, South Sudan faces ongoing risks from various hazards, including floods, which lead to food insecurity and malnutrition for its population. South Sudan anticipates the most severe flooding in the last 60 years. From June - September 2024, the southern parts of the Country are expected to experience unusually wet conditions, with anticipated floods affecting more people.

The anticipated main health threats include the risk of cholera and other water-borne diseases, malaria, trauma and injury, measles, food insecurity and malnutrition, Hepatitis E, and maternal and child health, among others. Among the people affected by the floods, there are several already vulnerable segments of the population at high risk due to their displacement, notably pregnant women, children under five and the elderly.

Source: [WHO](#)

Humanitarian crisis - Madagascar

Cyclone GAMANE occurred in Madagascar during Week 13 of 2024, bringing severe devastation 19 districts in seven regions: Analanjirofo, Diana, Atsinanana, Sava, Anosy, Atsimo Atsinanana, and Fitovinany. The human toll was substantial, with 19 fatalities, four missing persons, and numerous injuries. Approximately 95 391 individuals were affected, and 27 918 people were displaced from 7 496 households. The cyclone and subsequent floods inundated 20583 houses and destroyed 779 homes,

leaving thousands of families homeless and in urgent need of shelter and reconstruction support.

According to Country reports, from weeks 14 to 26, 2024, nearly 72 000 people sought medical care in the three districts (Sambava, Antalaha, Vohémar) of Sava region. Among them, 56.0% presented with fever, 24.0% with malaria, and 10.0% with respiratory diseases. Additionally, 58 cases of Moderate Acute Malnutrition (MAM) and 41 cases of severe acute malnutrition (SAM) were identified. During the same reporting period, 31 000 new medical consultations were recorded in Ambilobe district in Diana region. Fever and respiratory diseases predominated, affecting 45.0% and 19.0% of cases, respectively. Since week 14, there has been a progressively increasing trend in new consultations up to week 22, with a peak observed, followed by a slight decrease and then a stable evolution over the past three weeks (weeks 24 to 26).

Source: [WHO](#)

Other Infectious Disease Outbreaks – Middle East/Europe



Brucella suis – Germany

On June 2024 *Brucella suis* was isolated in Germany in swine and sheep's in Saxony and Brandenburg. In total 4 outbreaks were confirmed in laboratory testings. This is a recurrence of an eradicated disease with last occurred in 2021.

Sources: [WAHIS](#)

Imported Oropouche human infections – Germany

On 1-Aug-2024, the Robert Koch Institute (RKI) confirmed the first two imported cases of Oropouche virus (OROV) in Germany. The affected individuals are from Saxony and Baden-Württemberg, both having recently returned from Cuba. They developed fever, headaches, and pain in muscles, joints, and limbs, which they experienced during their stay in late June and early July. Both cases are said to have an uncomplicated course of the disease.

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

Dengue – France

On 8 July, France reported an autochthonous case of dengue in the region of Occitania. On 03-Aug-2024, the first locally-acquired (autochthonous/indigenous) case was reported in the commune of Colle-sur-Loup, in the Provence-Alpes-Côte d'Azur in southeastern France.

Also, a lot of imported dengue fever cases in France have been reported since the beginning of 2024. With 76 imported cases Provence-Alpes-Côte d'Azur is the third most affected region in the country (the first being Auvergne-Rhône-Alpes with 94 cases and second Île-de-France with 85 cases). A total of 2,666 imported cases have been reported until August 4. With the majority of cases affecting mainland France are imported from Martinique and Guadeloupe, since 366 of the 601 patients recorded returned from these locations, according to Santé Publique France.

Source: [NewsMedia](#)

Chikungunya – France

On 31-Jul-2024, the National Public Health Agency of France reported the first indigenous case of chikungunya in the Ile-de-France region this year.

Vector control measures have been intensified, including the implementation of two mosquito control treatments within a 300-meter radius. In addition, an active search for additional cases around the outbreak area has been initiated.

Nine imported cases (since 1-May-2024), 8 in departments with *Aedes albopictus* presence. Theroff, 1 in Hauts-de-France, 5 in Ile-de-France, 1 in Nouvelle-Aquitaine, 1 in Occitanie, and 1 in Pays-de-la-Loire. 5 of which come from Côte d'Ivoire.

Source: [Public Health France](#), [NewsMedia](#), [ECDC](#)

West Nile Fever – Albania

On 06-Aug-2024, news outlets reported the reemergence of West Nile virus in Albania after a 13-year hiatus. The Institute of Public Health (IPH) of Albania has indicated that nine individuals over the age of 60 have been hospitalized. IPH also noted that most cases were detected in July and the three fatalities were individuals over 70 years old. Cases have predominantly been reported in the cities of Lushnja, Berat, and Fier (the most populous city), as well as in the municipality of Kurbin.

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

Dengue – Iran (Islamic Republic of)

This represents the **first report of autochthonous dengue cases in Iran**. The confirmation of local dengue virus transmission in 2024 is therefore an unusual although expected event due to the presence of the vector in the country and movement of people from endemic areas to Iran.

On 14 June 2024, the Ministry of Health and Medical Education (MoHME) of Iran reported the first two locally acquired cases of dengue recorded in the country. Local transmission of dengue within the community was confirmed in Bandar-Lengheh, Hormozgan Province, southern Iran. As of 17 July 2024, the total number of locally acquired (autochthonous) dengue cases in the country has risen to 12, all reported in Bandar-Lengheh.

Iran had been reporting an average of 20 imported dengue cases annually between 2017 and 2023. However, there was a significant increase in imported dengue cases in 2024, with 137 reported between 15 May and 10 July.

Based on entomological surveillance, to date, *Aedes aegypti* and some *Aedes albopictus* mosquitoes are established in the provinces of *Sistan and Balouchistan, Hormozgan, Bushehr, Khuzestan, and Gilan*.

Risk Assessment: On 16 May 2024, WHO reassessed the **global risk of dengue as high**, reiterating that dengue remains a global public health threat. The **risk for Iran is also high** due to the presence of the vector in the country, favourable climate conditions for the vector and the movement of people from countries with ongoing dengue outbreaks and endemic areas to Iran.

Source: [WHO](#)

Health Risk – Gaza Strip

UNRWA has warned of “catastrophic” environmental and health risks in the besieged Gaza Strip. Since October 7, 2023, most of Gaza’s thirty-six hospitals and healthcare systems have been bombed or besieged by the apartheid State of Israel, leaving the Gaza Strip in a looming uncertainty of the mass casualties to come and the impending public health crisis. On July 16, 2024 the Ministry of Health of Gaza announced the dreadful news that poliovirus had been detected in the six wastewater samples from late June in Khan Younis and Deir al-Balah. On July 23, 2024, the WHO declared that there was a high risk of the poliovirus spreading across and beyond the Gaza Strip due to the dire state of water sanitation in the region. While no human cases of the virus have yet been identified, what is clear is that the destruction of almost all functioning healthcare systems in Gaza has rendered the existing medical staff resourceless in the upcoming threat of a public health crisis.

The resurgence of the poliovirus is directly related to the genocidal campaign of the state of Israel. Since October 7, over 70% of the water and sanitation facilities in Gaza have been significantly damaged with the UN Water, Sanitation and Hygiene Cluster estimating about 340,000 tons of solid waste to have accumulated inside or near populated areas.

Source: [NewsMedia](#)