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Global updates on COVID-19 and other diseases
Sarawak Infectious Disease Centre (SIDC)

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Summary

- The rapidly spreading mpox in Africa is declared a public health emergency of international concern (PHEIC) by the WHO.
- Sweden detected the world's first case of clade I MPXV outside the African region.
- Several countries in Asia have issued a travel advisory for people returning from countries affected by mpox.
- China has included goods in their mpox surveillance.
- COVID-19 has been declared endemic in the US, with some disagreement.
- Results from Waste Water Surveillance (WWS) must be interpreted with caution.
- Bluetongue virus (BTV) outbreak was reported in the Netherlands.
- An individual who has been vaccinated against measles can still be infected and pass the infection on.

1.0 Situational summary: cases and related issues

1.1 Update from the WHO

The WHO's monthly update on COVID-19 is as follows.[1]

From 24 June to 21 July 2024, the percentage positivity of the SARS-CoV-2 virus detected in integrated sentinel surveillance as part of the Global Influenza Surveillance and Response System (GISRS) and reported to FluNet increased from 7.4% to 13% from 85 countries per week.

Omicron KP.3 and LB.1, both descendent lineages of JN.1 and variants under monitoring (VUMs) continue to show increasing prevalence globally. They accounted for 18.6% and 9.3% of sequences in epidemiology week 29 (EW/2024, week ending on 27 July 2024) compared to 9.4% and 7.6% in EW26/2024, respectively. Globally, JN.1 is the most reported variant of interest (VOI). It has been reported in 135

countries and accounted for 25.7% of sequences in EW29/2024, declining from a prevalence of 30.2% in EW26/2024.

Globally, the number of new cases increased by 30% during the past 28-day period of 24 June to 21 July 2024 compared to the previous 28-day period (27 May to 23 June 2024), with > 186,000 new cases reported. During the same period, new hospitalisations and admissions to an intensive care unit (ICU) both recorded an overall increase of 11% and 3% with > 23,000 and > 600 admissions, respectively, from countries consistently reporting.

1.2 The Americas

The US

US officials have now considered COVID-19 an endemic even though it is still spreading widely. Daily life has returned to normal for most people, despite this summer's wave of infections. The classification does not change any official recommendations or guidelines for how people should respond to the virus.[2]

Some epidemiologists disagree. The disease may be on the way to becoming endemic, however, the SARS-CoV-2 virus remains too unpredictable to reach that conclusion yet. The summer's surge, for example, started surprisingly early and has turned out to be significantly bigger than expected.

For those who agreed with the official statement, it was argued that though the virus remains unpredictable, it has become sufficiently predictable to be considered endemic. The current situation is endemic with episodes of epidemics that can vary in terms of their timing and magnitude. Ongoing vigilance and surveillance including the virus' evolution are critical at this juncture.

According to the latest CDC report, though COVID-19 is currently the 10th leading cause of death in the US—it was the third in 2020—it is projected to kill an estimated 50,000 people annually. [3] It remains a significant risk for those who are older and those who have underlying conditions, though not so for most younger and healthier people. Irrespective of it officially being endemic, people will still need to protect themselves with timely COVID-19 vaccinations (or boosters) and use public health tools to prevent the spread of the virus.

Drugs and pharmaceuticals, and non-pharmaceuticals

Wastewater surveillance caution, the US

Current COVID-19 wastewater surveillance (WWS) may not be as reliable to track infections.

In early 2022, the relationship or ratio between COVID-19 wastewater and hospitalisations was fairly stable for a long time. This changed after May 2024 when hospitals were no longer required to report COVID-19 admissions to the CDC. As a result, many places stopped testing everyone getting hospitalised while only a handful continued to do so. Meanwhile, wastewater reporting remained unchanged leading to a dramatic increase in the ratio of wastewater to hospitalisations (**Figure 1**).

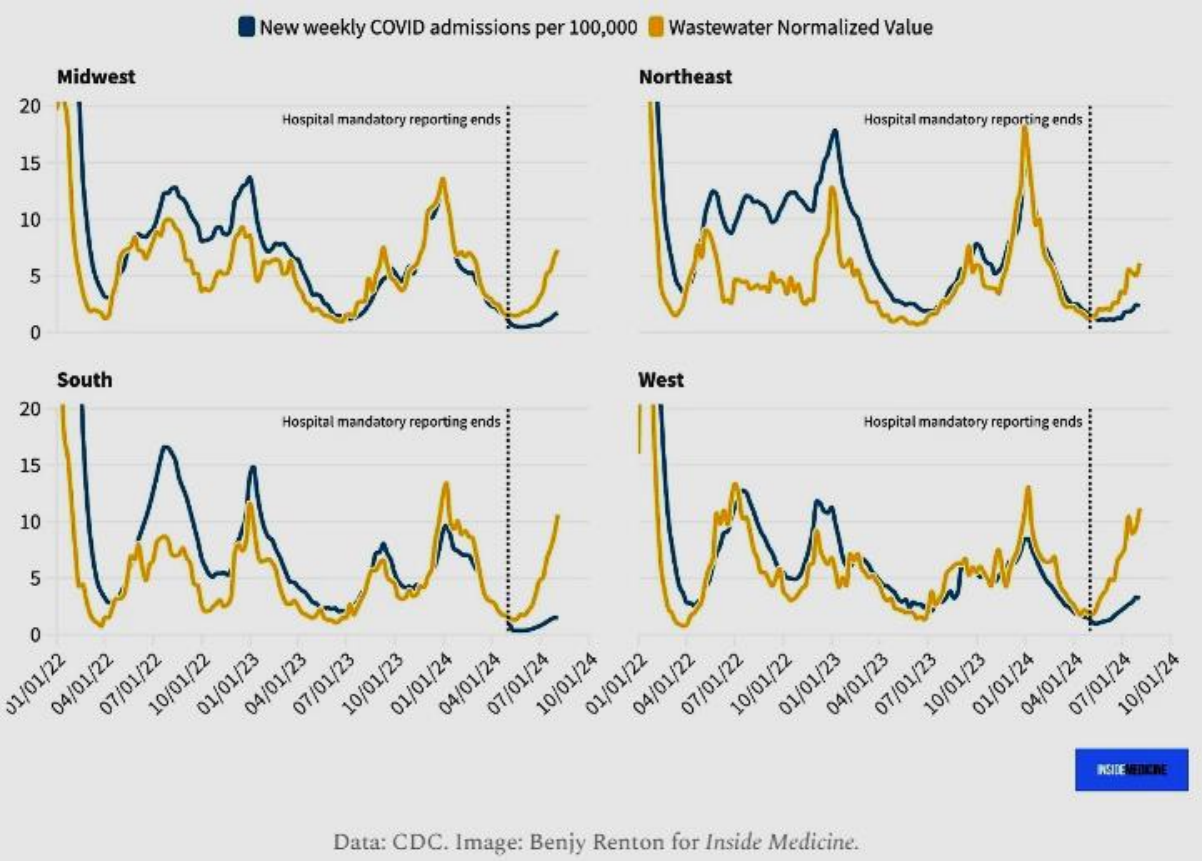

Figure 1. Average wastewater normalised value and weekly hospitalisations according to US regions. The chart was obtained from *Inside Medicine* (Covid wastewater doesn't mean what it used to. (substack.com)).

The scenario is important for US healthcare providers because:

- what is seen now with WWS is considered an artefact of previous cases before May 2024 (end of reporting mandate), and
- the arrival of the US's respiratory season without the mandated COVID-19 reporting by hospitals meant that these metrics need to be tracked and contextualised differently.

2.0 Mpox, a Public Health Emergency of International Concern

The WHO has declared the mpox outbreak a public health emergency of international concern (PHEIC) following a surge in mpox cases in Africa. The decision comes after the advice of the International Health Regulations (2005) IHR. The trigger was a situation that was first observed in September 2023 in the Democratic Republic of the Congo (DRC), one of the countries where mpox is endemic. The version of the virus that transmits in the DRC is known as clade I MPXV. It has been seen to cause more severe disease than clade II and clade IIb viruses. [4–6]

The potential for further spread of the MPXV in Africa is worrying. The clade I MPXV that has been circulating for years in the Central African Region flared in 2023 amid the slowing down (though not diminishing) of the clade II reports. Stopping the outbreaks in affected areas will require a tailored and comprehensive response, with communities at the centre.

The agency has already initiated the Emergency Use Listing (EUL) last week to allow immediate vaccine access in countries that have not yet issued their own national regulatory approval.[7] A total of USD 1.45 million was released from the WHO Contingency Fund for Emergencies to fund the needs of mpox response with more expected shortly. Immediate funding is expected to support surveillance, preparedness and response activities.

In August 2023, standing recommendations under the International Health Regulation (IHR) were issued to monitor mpox cases. These recommendations, set to expire on 20 August 2024, will be extended for another year to “support countries to respond to the chronic risk of mpox”.

In the WHO’s latest issue on mpox, based on data as of 30 June 2024, there have been 99,179 confirmed cases globally from 116 countries. Two hundred and eight (208) deaths were reported.

In June 2024, 934 new laboratory-confirmed cases of mpox and four deaths were reported to the WHO from 26 countries—illustrating the continued transmission of mpox across the world. The African Region (567 cases) is most affected, with 96% of cases from the DRC, 60% of which in individuals < 18 years old. Next are the Region of the Americas (175 cases), the European Region (100 cases), the Western Pacific Region (81 cases) and the Southeast Asia Region (11 cases). The Eastern Mediterranean region did not report cases in June 2024.

The WHO’s long-term risk assessment as of August 2024 is summarised in **Table 1.**

The WHO has appealed for countries not to restrict international travellers.

Table 1. The WHO's Long-term risk assessment of mpox for August 2024 adapted from the Emergency Situation Updates at Multi-country outbreak of mpox, External situation report#35- 12 August 2024 (who.int).

Area	Description of situation		Assessment
	Groups affected	MPXV clade involvement	
Eastern DRC and neighbouring countries	Affecting mostly adults, spreading predominantly through sexual contact.	Linked to clade Ib	High
Areas of the DRC where mpox is endemic	Affecting mostly children, spreading through multiple modes of transmission.	Linked to clade Ia	High
Nigeria and countries of West, Central and East Africa where mpox is endemic	Affecting children and adults, spreading through multiple modes of transmission.	Linked to clades I and II	Moderate
All countries in Africa and the rest of the world	Where outbreaks affect mainly men who have sex with men, spread predominantly through sexual contact.	Linked to clade IIb	Moderate

2.1 Vaccines and therapeutics, access and update

The declaration would bring more help for surveillance and support access to vaccines to the DRC and its neighbouring countries. However, in reality, it may take months to do so. Many obstacles remain to curb the escalation, including limited vaccine supply as well as funding, stigma, and competing disease outbreaks (for example, cholera and malaria) in a region stretched by conflict.[8]

An estimated 65,000 doses were likely to be available in the short term to the DRC. (Vaccination) Campaigns were unlikely to begin before October 2024 at the earliest. There have been > 15,000 suspected cases of mpox in Africa so far in 2024 and 461 deaths, mainly among children in the DRC.

Regulators in the country approved the use of the vaccines domestically in June 2024 and USD10.4 million in emergency funding for its mpox response has been granted from the African Union (AU) with a plan to secure 3 million doses of vaccine this year. However, the government has yet to officially request any from either the manufacturers or other governments looking to make donations through The Vaccine Alliance, GAVI. The Alliance has up to USD500 million in funds (from the First Response funds) for getting the vaccines to countries affected by an escalating mpox outbreak in Africa. [9]

According to the WHO, there are an estimated 500,000 doses of Bavarian Nordic's Jynneos vaccine available, with another 2.4 million doses that could be produced by the end of the year if there are orders. Another 10 million doses will be produced in 2025. Separately, the company will donate 40,000 doses of its mpox vaccine to Africa CDC in addition to the 175,420 doses procured and donated by the European Health Emergency Preparedness and Response Authority.[10]

Several issues regarding therapeutics arose. Treatment for the disease, using antivirals (TPOXX [tecovirimat], Siga Technologies, US) would be easier to deploy compared to vaccinations. A vaccine would require people to come forward, potentially admitting they belong to the high-risk group. As the disease concerns sexual stigma, it could hamper uptake and the prevention of the disease's spread. Homosexuality, while not illegal in some Central African countries, is not widely accepted.[11]

In the latest update, the antiviral, tecovirimat, did not achieve its primary end-point of reducing lesion duration in both children and adults—the majority of patients in the trial did not recover more quickly than those given a placebo. However, the overall mortality rate among participants was 1.7%, lower than the DRC's reported mpox mortality rate of 3.6%. The results were based on the analysis of data from a randomised, placebo-controlled PALM 007 trial co-conducted by Kinsasha's (DRC) National Institute for Biomedical Research (INRB) and the National Institutes of Health's National Institute of Allergy and Infectious Diseases (NIAID). [12–15]

The study included 295 patients who received a 14-day course of tecovirimat, and 302 who received a placebo. Approximately 75% of the participants were children; they are known to be at higher risk of complications from mpox. Patients were hospitalised throughout the study to ensure access to food and accurate data collection, receiving a level of care typically unavailable to most monkeypox patients in real-world scenarios.

While the outcome of the studies was disappointing, the findings showed that better outcomes among people with mpox can be achieved when they are hospitalised and provided high-quality supportive care.

Continued assessment of the antiviral is ongoing. The international Study of Tecovirimat for Mpox (STOMP) trial is currently investigating the safety and efficacy of tecovirimat against clade II MPXV. The UNITY study, sponsored by ANRS Emerging Infectious Disease[footnote1], is assessing tecovirimat using a similar design to STOMP in Argentina, Brazil, and Switzerland. Both studies will continue to enroll participants and work in close collaboration.

Tecovirimat is an orthopoxvirus-specific antiviral drug developed for smallpox. It was approved for use in adults and children ≥ 13 kg by the US Food and Drug Administration (USFDA) in 2018 for the treatment of smallpox and has been stockpiled by the US government for use in an outbreak (biosecurity). Its use was subsequently expanded for mpox in the US, the UK and Europe in 2022. [16,17]

2.2 Sweden, clade Ib case

Sweden's public health agency has recorded the first case of clade Ib MPXV—the first in the world outside the African continent. The WHO has confirmed it. [18,19]

The person became infected during a stay in an area of Africa with a major clade Ib MPXV outbreak. The individual has received the necessary (health/medical) care in Stockholm, Sweden; therefore, the person does not affect the risk to the general population in Sweden, which is currently very low.

The mortality rate from the clade Ib MPXV in Sweden is expected not to be as high as that seen in parts of Africa, because of the high quality of healthcare in Europe. A new assessment is expected soon. The occasional imported cases are expected in Sweden.

In 2022 and 2023, Sweden saw an outbreak of clade II cases linked primarily to sexual transmission among men who have sex with men, eventually recording approximately 300 cases.

[1] ANRS | Emerging Infectious Diseases was founded on January 1, 2021 and is an independent agency of Inserm, the French national institute of health and medical research. The Agency's objectives are to facilitate, evaluate, coordinate, and fund research into HIV/AIDS, viral hepatitis, sexually transmitted infections, tuberculosis, and emerging and re-emerging infectious diseases.

With almost 90% of the ANRS | Emerging Infectious Diseases budget dedicated to research, its work focuses on innovation and strengthening international partnerships through global networks of researchers and health professionals, research organisations, universities, hospitals and associations.

Health experts however have warned that the emergence of a case on the European continent could spur the rapid international spread of mpox. The case in Sweden most likely means there are dozens more undetected in Europe.[20]

2.3 Updates, multicountry

2.3.1 Malaysia, under control

The situation is "under control" in Malaysia. [21]

The Kementerian Kesihatan Malaysia (KKM) has confirmed that there have not been any additional cases of mpox in the country since 2023. The total number of confirmed cases stands at 9, with the first reported on 26 July 2023 and the last in November of the same year. No deaths linked to the virus were reported. All cases had a history of activities that increased the risk of infection ("*aktiviti berisiko*"). [22]

Individuals who plan to visit countries reporting cases of mpox are advised to adhere to a healthy lifestyle. They were also advised to avoid behaviour that would place them at higher risk of the disease. Persons with high-risk sexual behaviour should take precautions. Returning travellers from countries where mpox has been reported were urged to monitor for signs and symptoms of the disease for 21 days upon arrival in Malaysia. The disease has an incubation period of between 5 to 21 days after initial exposure.[21,23]

Malaysia has not planned to implement a vaccination programme for mpox for the people of this country.[24] The country will instead increase surveillance and advocacy activities. Healthcare personnel at public and private facilities are required to notify their nearest district health office of suspected and confirmed cases, to ensure that prevention and control measures can be implemented.

Malaysia has a sufficient number of laboratories capable of testing and providing diagnostic services for mpox— with a total of 10, including two private laboratories, with the capability to conduct PCR (polymerase chain reaction) tests to confirm diagnosis.[25]

Meanwhile, the Education Ministry intends to use KKM's advice to prevent the spread of mpox in schools.[26]

2.3.2 Indonesia, cases

The Health Ministry announced that as of 17 August 2024, there have been a total of 88 confirmed cases of mpox in the country since 2022. The peak of cases was reported in October 2023. The 88 cases were distributed across several regions: 59 in Jakarta, 13 in West Java, 9 in Banten, 3 each in East Java and the Special Region of Yogyakarta (DIY), and 1 in Riau Islands.

Of this total, 87 recovered fully, including 54, which belonged to the clade IIb variant. The latter "qualified for whole genome sequencing (WGS)" to identify the virus variants. The Health Ministry has implemented various preventive measures, including surveillance across healthcare facilities, and epidemiological investigations with community and HIV/AIDS partners. It has established 12 national reference laboratories for mpox testing, and for conducting WGS.[27]

The ministry has intensified health checks for foreign nationals entering Indonesia, including state guests, as a precautionary measure to prevent. Questionnaires, which include medical history and travel destination, enable the necessary data for a "better preparation if something happens".

Visitors with illnesses are advised not to continue their trip (in Indonesia). No priority vaccinations for foreign tourist visits are considered by the Health Ministry. [25,28]

2.3.4 Singapore, monitoring

The immediate risk of mpox to Singapore is low. However, even as Singapore does not have any direct flights to and from the affected areas in Africa, given the country's global flight connections, the virus will likely make its way there soon.

Singapore's healthcare system can effectively diagnose and manage mpox infections. The Ministry of Health (MOH) has informed all medical practitioners and healthcare institutions to be vigilant in detecting and reporting all mpox cases, including those suspected of clade I infections.[29]

All travellers have also been required to report mpox-related symptoms such as fever or rash, as well as their travel history, through the SG Arrival Card to facilitate the early detection of cases at Singapore's borders. Suspected clade I cases will be isolated in hospitals. Close contacts of confirmed cases will be quarantined and monitored for up to 21 days from the date of last exposure.[30]

2.3.5 Pakistan, case

Pakistan's health ministry has confirmed one case of the clade II MPXV in a patient who had returned from Saudi Arabia. The current location of the patient, from Mardan in the Khyber Pakhtunkhwa province, is unknown. [31,32]

He had initially received tests and advice at a hospital in Peshawar and returned to his home in Mardan where he allegedly left for another district, Dir. Contact tracing is being carried out with airport surveillance boosted and monitored with extra health personnel.

An earlier statement made by the same health department about three cases of mpox linked to travel to the United Arab Emirates (UAE) was withdrawn.

2.3.6 The Philippines, case

The Philippines confirmed a new case of mpox in the country on 19 August 2024, the first since December 2023, bringing the total laboratory-confirmed cases in the country to 10. The country's first case was confirmed in July 2022.[33]

The patient was a 33-year-old Filipino male who had no travel history outside the Philippines. His symptoms began with a fever, > 7 days before the confirmation, followed by findings of a distinct rash on the face, back, nape, trunk, groin, as well as palms and soles, four days later.

Sequencing is being conducted to determine the strain of the MPXV.

2.3.7 Japan, precautions

Following the declaration, the Japanese Government have reviewed strategies for response, including methods for gathering and sharing information and preparing the medical care system. Those agreed upon are (paraphrased): [34,35]

- Relevant agencies are to collect data on infection situations in countries where mpox outbreaks have been confirmed.
- Increase the awareness for travellers entering and leaving Japan about mpox.
- Continued inspection (monitoring) and medical measures established during the 2022 global mpox outbreak will be used.

The Foreign Ministry issued a Level 1 infectious disease alert[footnote2] for 7 African countries—DRC, Burundi, Kenya, Rwanda, Uganda, the Republic of Congo and the Central African Republic—advising travellers to take precautions against mpox when visiting (travelling or staying) these nations.

The government is preparing to supply Japanese-made vaccines and other products to Congo in response to a request from that country.

2.3.8 China, monitoring

Humans and goods entering the country will be monitored for mpox for the next 6 months.[36]

According to a statement from the customs administration, "Personnel from countries with monkeypox outbreaks who have been in contact with monkeypox cases or display symptoms ... should take the initiative to declare themselves to Customs". Vehicles, containers and goods from areas with mpox cases would be sanitised.

[2] The level-one alert is the lowest on Japan's four-tier scale.[35]

Mpox will be managed as a Category B infectious disease, as announced by the National Health Commission in 2023. It will enable officials to take emergency measures such as restricting gatherings, suspending work and school or sealing off areas when there is an outbreak of a disease. Other Category B infectious diseases currently include COVID-19, AIDS and SARS.

3.0 Others

3.1 Influenza, H5N1

3.1.1 France

The first case of highly pathogenic avian influenza (HPAI) for the 2024-2025 season was identified at a farm in Ille-et-Vilaine. France remains at a negligible risk level. However, in this case, the country loses its status as a disease-free country for at least 28 days.[37]

During the 2023-2024 season, following the introduction of mandatory duck vaccination, France reported 10 outbreaks in livestock and 33 in wildlife, a significant decrease from nearly 400 outbreaks in 2022-2023 and 1,400 in 2021-2022. A new vaccination campaign is scheduled for October 2024.

3.1.2 The US

The US Department of Agriculture (USDA) will be expanding bird flu testing of beef in the food supply as part of the ongoing response to the outbreak among dairy cattle. It is aimed to ensure the continued safety of US beef and dairy products for consumption. Testing is scheduled to begin in mid-September as livestock workers are urged to remain vigilant. In May 2024, the USDA tested 109 beef samples and detected bird flu virus particles in one sample. The expanded testing will focus on beef from dairy cows and will continue through the end of the year. [38]

3.2 Parvovirus, the US

The CDC has noticed an increased parvovirus B19 activity in the US. The agency has received reports of higher test positivity rates recently, as well as clusters of complications among people at high risk of severe illness. The proportion of people with antibodies (indicating recent infection), which fell < 3% during 2022-2024, reached 10% in June 2024, with the highest increase among children aged 5 - 9 years old. An analysis of donated plasma revealed the prevalence of parvovirus B19 DNA >104 IU/mL increased from 1.5% at the end of 2023 to almost 20% in June 2024. [39,40]

Parvovirus B19 is a seasonal respiratory virus transmitted through respiratory droplets by people with symptomatic or asymptomatic infection. There is no vaccine

for parvovirus and no specific treatment. Though most infections are self-limiting, complications can occur among certain groups of individuals.

In its health advisory, the CDC has recommended that the public follow general precautions for preventing the spread of respiratory illness (for example, frequent hand washing, good sneezing etiquette and keeping common surfaces clean). Symptomatic individuals are to isolate themselves until their condition improves and remain fever-free for at least 24 hours without medication.

The US does not have routine surveillance for parvovirus B19, and it is not a notifiable condition.

Fourteen European countries have noticed an unusually high number of cases in the first quarter of 2024. [41]

Note:

Parvovirus B19 or B19 virus, is a virus that only infects humans. It is known to cause the fifth disease, *erythema infectiosum* or slapped cheek syndrome, which occurs mostly in young children, though can occur in adults.[39,40,42]

Symptomatic illness occurs in two phases. The first phase begins approximately a week after infection, with people presenting symptoms such as fever, muscle aches and malaise. It lasts for about 5 days. This is when people are most contagious. The second phase involves rashes. Children usually develop a hallmark facial rash called a slapped cheek rash, followed by a body rash or joint pain. Adults generally have a rash on the trunk and joint pain.

Antibodies from prior infections are thought to protect against reinfection. Approximately 50% of adults have detectable antibodies by 20 years old. Over 70% of adults have detectable antibodies by the time they are 40 years old.

When outbreaks occur in school, up to 50% of susceptible students and staff can be infected. Historically, teachers, daycare workers, and other people working in close contact with children are at high risk of infection.

Though rare, the infection can cause complications for certain groups of people such as those with chronic blood conditions, immunocompromised individuals and pregnant mothers.

3.3 Diphtheria, Viet Nam

A diphtheria outbreak in Muong Lat town was confirmed through three positive cases, which involved a total of 34 close contacts. The first case, a 17-year-old pregnant woman, was reported on 5 August 2024 followed by two cases (a 10 year old boy and an elderly woman) who were close relatives of the first case, three days

later. They are currently in stable condition and have shown signs of recovery. All close contacts have been quarantined and are being monitored at home. Urgent epidemic prevention measures, including emergency treatment, medical isolation, and disinfection of affected areas, are being implemented. Medical facilities at all levels have been instructed to promptly admit, isolate, and treat patients.

Nationwide, five diphtheria cases have been recorded in 2024 so far, including one fatality. Concerns about vaccination coverage have arisen due to the impact of the COVID-19 pandemic and the scarcity of diphtheria vaccines.[43]

3.4 Measles, low measles transmission rates in secondary vaccination failure persons

A review, based on secondary vaccination failure (SVF) cases from both high-income and low-income countries, found that measles is far less contagious when spread by someone who has suffered SVF compared to an unvaccinated person.[44]

While primary vaccination failure (PVF) results from a person's failure to produce any humoral response to viral antigen and occurs in about 5% of vaccinees, SVF occurs 6 to 26 years after the last vaccine dose and is a result of waning or incomplete immunity. It occurs in 2% to 10% of vaccinated people. SVF infections are generally milder than infections in unvaccinated people, with lower fever, less cough, and overall lower viral loads.

The results are simplified as follows (paraphrased): [44,45]

- A total of 109 measles cases linked to SVF from 14 studies were included from the overall of 180 from 3,030 people.
- Of those cases, 11 involved patients who transmitted the virus.
- Those 11 case patients (10.09%) resulted in a total of 23 further measles cases (1:8 onward measles infections per case-patient).
- SVF has an effective reproduction number of 0.063 (compared to the reproduction number of 12 to 18 for measles overall.
- SVF cases have a low attack rate of (0%-6.35%).

As of 2023, 82 countries have achieved measles elimination by high vaccination rates. Despite the effectiveness of measles-containing vaccines, infection remains possible in immunised persons. The potential for onward transmission of measles from SVF individuals is present though at very low rates. Therefore, issues with unvaccinated pupils must be managed before prioritising SVF cases.

3.5 Respiratory syncytial virus vaccine, promising findings in at-risk younger adults

Pfizer announced positive results from phase III trials of the respiratory syncytial virus (RSV) vaccine, Abrysvo, in immunocompromised young adults ≥ 18 years old. The study aimed to evaluate the effects of 2 doses. However, results revealed that one dose of vaccine (120 µg) was able to induce a strong neutralising antibody response against both RSV subtypes (RSV-A and RSV-B). [46]

The vaccine is currently the only approved vaccine for RSV in the US for both older adults and infants through maternal immunisation.

3.6 Bluetongue virus (BTV) surge, Europe

As of 15 August 2024, there have been 2,909 recorded cases of bluetongue virus (BTV) in the Netherlands (other sources reported 1,100). The strain involved in the surge was BTV-3. It is more severe than BTV-8 which caused the previous epidemic in northern Europe. [47–49]

Unlike BTV-8, the origin of BT-3 is unknown. The mortality rate for this strain is also unknown; previous strains had a mortality rate of 50%. The virus has spread across the border to Belgium with one positive case. Germany has reported 1,885 clusters on 8 August 2024. France, Luxembourg and Denmark also reported their first case.

Sheep are especially at risk of getting very sick and possibly dying of the virus. The disease is often less severe in goats. Cows generally do not show any symptoms of the disease. There is no treatment available and sick animals must be put down. Vaccines are available only for strains 4 and 8, and they are not sufficient to address the epidemic.

Note:

Bluetongue disease (BT) is an insect-borne viral disease caused by the BTV. The virus belongs to the genus *Orbivirus* and family *Reoviridae*. It is transmitted particularly by *Culicoides* midges after becoming infected by feeding on viraemic animals. Symptoms in animals include excessive salivation, fever, blisters, swelling of lips, tongue and the hallmark blueish tongue and lips. [50,51]

The disease was previously identified in Asia, Europe, Australia and North America. Outbreaks were noted throughout the year in tropical or temperate countries. So far, the disease is non-transmittable to humans; however, it is detrimental to animals.

BT is a World Organisation for Animal Health (WOAH/OIE) listed multispecies disease and causes great socio-economic losses. To date, 28 serotypes of BTV have been reported worldwide. The ability of each strain to cause disease varies considerably. BT is epidemiologically significant in Northern Europe because of the demonstration of clinical signs in cattle.

Diagnosis of BT is more important for control of disease and to ensure BTV-free trade of animals and their products. Control measures include mass vaccination (the most effective method), serological and entomological surveillance, forming restriction zones and sentinel programs.

3.7 Extreme heat: Impact, Europe

According to the latest report by the Barcelona Institute for Global Health (ISGlobal), > 47,000 people died in Europe due to scorching temperatures in 2023, with countries in the region's south hit the hardest. Last year was the world's hottest on record. The findings were based on death and temperature records from 35 European countries; an estimated 47,690 died from causes related to high temperatures. Adjusted for population, Greece, Bulgaria, Italy and Spain were the countries with the highest mortality rates related to heat. [52–54]

As climate change continues to increase temperatures, Europeans live in the world's fastest-warming continent, facing growing health risks stemming from intense heat. The 2023 death toll, though well below the over 60,000 heat-related deaths estimated for 2022, would have been 80% higher had measures to help people adapt to rising temperatures were not introduced; this included early warning systems and healthcare improvements. Societal adaptation processes to high temperatures during the present century, have dramatically reduced the heat-related vulnerability and mortality burden of recent summers, especially among the elderly.

3.8 Tritium levels in discharged water, Japan

The International Atomic Energy Agency (IAEA) experts have confirmed that tritium concentration in the eighth batch of diluted ALPS treated water, which the Tokyo Electric Power Company (TEPCO) began to discharge on 7 August 2024, is far below Japan's operational limit.[55]

4.0 Implications for Sarawak based on the views of SIDC

News outlets were abuzz with news of the WHO's declaration of a PHEIC—this time for mpox.

A public health emergency of international concern, PHEIC, can be called in response to a disease event in which the risk of cross-border spread is considered high and international cooperation will likely be needed to contain the threat.

Mpox, formerly known as monkeypox, is caused by a virus of the same name and was first discovered in monkeys used for research in 1958. The first human case was reported in 1970.

Cross-border transmission has already occurred multiple times with several countries reporting cases of mpox this year; from the strain that was behind the earlier international outbreak in 2022-2023, clade II and clade I MPXV. Both have evolved further to allow person-to-person spread primarily via sexual transmission.

While Malaysia and Sarawak have not reported any new cases of mpox since November 2023, healthcare providers should consider mpox if patients with compatible symptoms are seen, especially those who have been in the DRC or neighbouring countries in the past 21 days. Samples should also be taken for testing for confirmation.

The case of clade Ib MPXV in Sweden reveals that the rest of Europe and other parts of the world have no mechanisms in place to stop imported cases of mpox from happening. This is concerning, though not surprising, given the severity and spread of the outbreak in Africa.

This PHEIC also tells us that we have not fully learnt the lessons from COVID-19.

Ignoring the signs, responding too slowly while highlighting the role of crises in ensuring equitable access to the tools to control and stop diseases from flaring.

Mpox is a sexually transmitted disease (STD, or sexually transmitted infection, STI). As with all STDs/STIs, it is associated with social stigma. Likely, those with symptoms would not want to come forward to get diagnosed and given the appropriate antivirals/treatment. They would rather self-medicate (get off-the-counter medications for symptoms) than be labelled. This could hamper efforts to control mpox/STDs/STIs as it would likely hamper field investigations and formulation of appropriate responses and mitigation measures.

Based on the last mpox PHEIC in 2022 that was driven by the clade II MPXV, the general public in Malaysia and Sarawak would still remember it as linked to homosexuality, sexual promiscuity and “unclean” people.

Public health advocacy includes the need to be repeatedly reminded and updated that the MPXV can also be transmitted via respiratory droplets or aerosols from prolonged close contact as well as through contaminated surfaces. Public health interventions would be similar to that of STD/STI as well as maintaining good hygiene.

As with other countries, Sarawak should maintain good disease surveillance at all entry points to monitor mpox and other public health and economic diseases. Private healthcare providers, pharmacies, veterinarians and authorities related to agricultural produce would assist in looking for patterns or trends of ailments.

Disease endemicity may or may not be a good thing, as argued by public health experts regarding the declaration of COVID-19’s endemicity in the US.

Endemic does not necessarily mean good. Tuberculosis is endemic in some parts of the world. As with malaria. Neither of those are good things. They highlight inequality and use up resources.

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