



ASEAN BIOLOGICAL THREATS SURVEILLANCE CENTRE

MPOX In the ASEAN Region FOCUS REPORT

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ASEAN BIOLOGICAL THREATS SURVEILLANCE CENTRE

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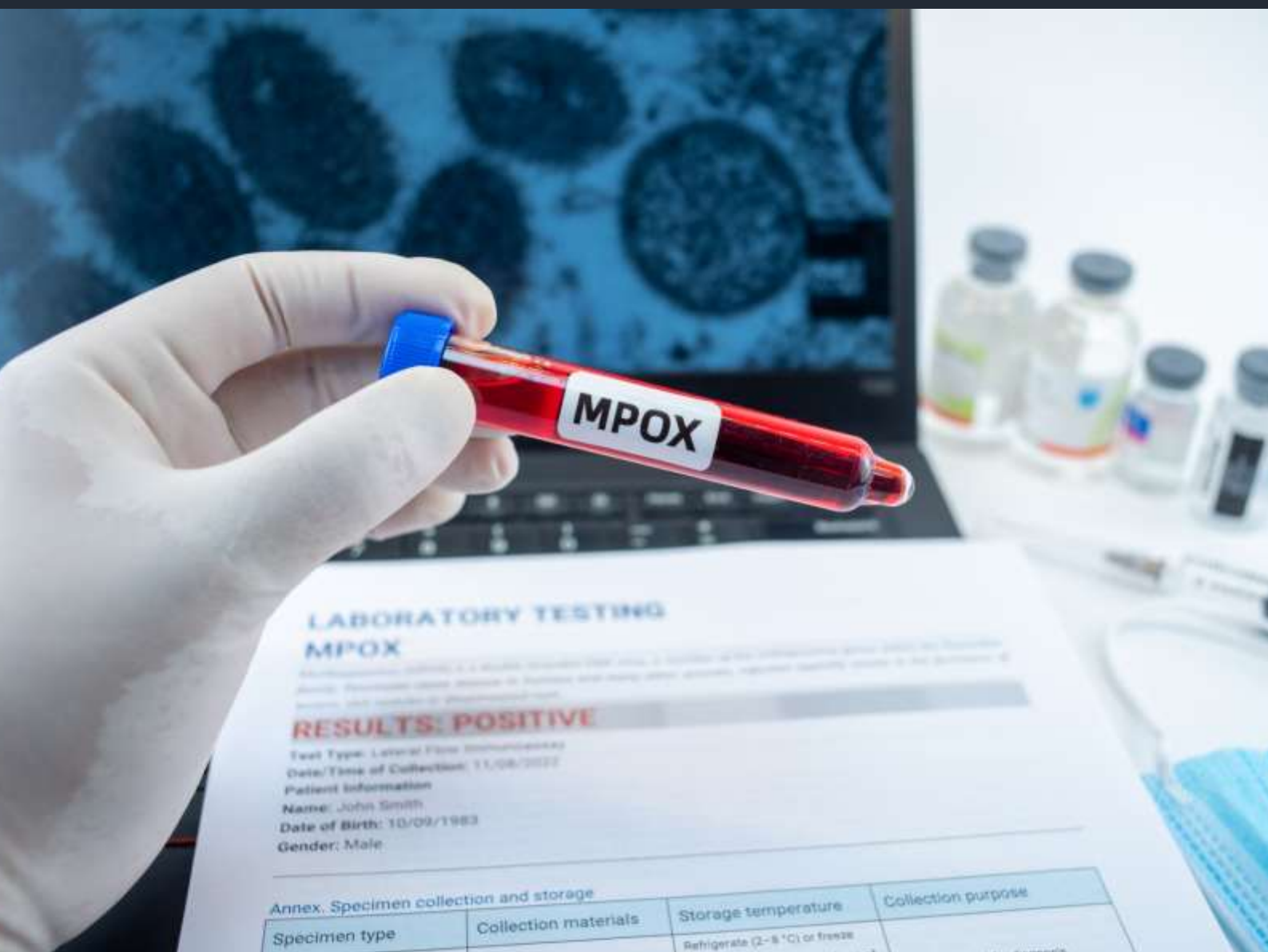
**ASEAN
BIOLOGICAL THREATS
SURVEILLANCE CENTRE**

Acronyms and Abbreviations

AAM	: Access and Allocation Mechanism	MPABD	: Maritime and Port Authority of Brunei Darussalam
ART	: Antiretroviral Therapy	MPX	: Mpox
ASEAN	: Association of South-East Asian Nations	MPXV	: Monkeypox Virus
BOQ	: Bureau of Quarantine	MSF	: Médecins Sans Frontières
CHW	: Community Health Worker	MSM	: Men Sex Men
DDC	: Department of Disease Control	NAAT	: Nucleic Acid Amplification Testing
DMSC	: Department of Medical Sciences	PCR	: Polymerase Chain Reaction
DNA	: Deoxyribonucleic Acid	PHEIC	: Public Health Emergency of International Concern
DOH	: Department of Health	PoE	: Point of Entry
DVS	: Department of Veterinary Services	PPE	: Personal Protective Equipment
EWARS	: Early Warning and Response System	RCCE	: Risk Communication and Community Engagement
FAQ	: Frequently Asked Questions	RITM	: Research Institute for Tropical Medicine
GSD	: Genetic Sequence Data	SEARN	: South-East Asia Regulatory Network
HPER	: Health Emergency Preparedness, Response and Resilience	SPRP	: Strategic Preparedness and Response Plan
ICG	: International Coordinating Group	SSCEC	: Ship Sanitation Control Exemption Certificate
IFRC	: International Coordinating Group	WGS	: Whole Genome Sequencing
IPC	: Infection Prevention and Control	WHO	: World Health Organization
ITAGI	: Indonesian Technical Advisory Group on Immunization		
MOFA	: Ministry of Foreign Affairs		
MOH	: Ministry of Health		
MOTAC	: Ministry of Tourism, Art and Culture		

Mpox

Introduction & Methods



LABORATORY TESTING MPOX

RESULTS: POSITIVE

Test Type: Lateral Flow Immunoassay
Date/Time of Collection: 11/08/2022
Patient Information
Name: John Smith
Date of Birth: 10/09/1983
Gender: Male

Annex. Specimen collection and storage

Specimen type	Collection materials	Storage temperature	Collection purpose
		Refrigerate (2–8 °C) or freeze	

Introduction

Mpox is a viral infectious disease caused by the monkeypox virus (MPXV), a member of the *Orthopoxvirus* genus in the *Poxviridae* family (WHO, 2024a). The virus has two distinct clades: clade I (subclades Ia and Ib) and clade II (subclades IIa and IIb). The 2022–2023 global outbreak was caused by clade IIb and spread across all six World Health Organization (WHO) regions. Subsequently, an increase in cases caused by clades Ia and Ib in the Democratic Republic of the Congo and other countries raised global public health concerns. On 14 August 2024, the WHO declared mpox a Public Health Emergency of International Concern (PHEIC) for the second time. This emergency status was lifted on 5 September 2025 (WHO, 2026a).

Despite the lifting of the PHEIC, different MPXV clades continue to circulate globally, requiring continued surveillance and public health preparedness (WHO, 2026a). Following the second PHEIC declaration, surveillance was strengthened in most African countries, with epidemiological updates provided weekly, while global updates continued monthly. From 2022 to late 2026, more than 140 countries

reported over 18,000 confirmed cases and more than 500 deaths.

The global response is guided by the Strategic Framework for Enhancing Prevention and Control of Mpox (2024–2027) and the WHO Global Strategic Preparedness and Response Plan (SPRP) (WHO, 2026b). Under the health emergency prevention, preparedness, response and resilience (HEPR) framework, WHO focuses on five core components: emergency coordination, collaborative surveillance, community protection, safe and scalable care, and access to and delivery of countermeasures. These efforts include epidemiological monitoring, diagnostic research, risk communication and community engagement (RCCE), infection prevention and control (IPC), clinical data collection, vaccination strategies, and access to vaccines and diagnostic test.

Within ASEAN, this report reviews documented mpox prevention and control strategies across ASEAN Member States, focusing on national guidelines, surveillance, case management, IPC, vaccination, and RCCE, where applicable.

Methods

This report utilizes a comprehensive literature review to examine the global epidemiology of mpox, with emphasis on the ASEAN region. Information on disease occurrence, surveillance, diagnosis, prevention, case management, and national response measures was obtained from WHO publications, official government documents, reports from ASEAN Member States (AMS), and other reliable sources. The review aims to provide an overview of the epidemiological situation, response strategies, and ongoing challenges related to mpox prevention and control in ASEAN.

A descriptive analytical approach was also applied to assess prevention and control measures implemented by AMS. The analysis focused on surveillance and reporting systems, case management, infection prevention and control (IPC), vaccination policies, and risk communication and community engagement (RCCE), based on available national guidelines and policy documents. This assessment highlights similarities and differences in national approaches to mpox preparedness and response across the region.



Case Definition and Clinical Features



Case Definition

Mpox is a zoonotic viral disease caused by MPXV, a member of the Orthopoxvirus genus in the same family as the smallpox virus, although it is unrelated to chickenpox (CDC, 2026a). The virus was first identified in 1958 during outbreaks of a pox-like illness among research monkeys in Denmark (WHO, n.d; CDC, 2026a). Despite its name, monkeys are not considered the primary reservoir of MPXV.

Although the natural reservoir has not been definitively identified, rodents are regarded as the most likely reservoir hosts, while non-human primates may contribute to transmission (Falendysz, et al, 2023). Historically, mpox has been associated with tropical rainforest regions of Central and West Africa, where the virus circulates among wildlife and occasionally spills over to humans (FAO, 2024).

The first confirmed human mpox case was identified in September 1970 in a 9-month-old boy from Basankusu Territory, Zaire (now the Democratic Republic of the Congo) during intensified surveillance for smallpox-like illness (Ladnyj, 1772, Sun, et al, 2024). For several decades, the disease was largely confined to endemic areas of Central and West Africa, with sporadic outbreaks and occasional cases associated with international travel or imported animals.

Since 2023, the Democratic Republic of the

Congo has experienced a sustained increase in mpox cases in both endemic and newly affected areas, accompanied by the emergence of the MPXV subclade Ib in early 2024 (WHO, 2024b). The subsequent spread of the virus within the country and to neighbouring countries led the WHO Director-General to declare mpox a PHEIC on August 14, 2024 (WHO, 2024c).

At the same time, a multinational outbreak caused by MPXV clade IIb has continued since 2022, with ongoing transmission reported across all WHO regions. In this context, effective surveillance and rapid case identification have become essential components of outbreak detection and response. The primary objectives of mpox surveillance, case investigation, and contact tracing are to detect and contain outbreaks, interrupt transmission chains, monitor epidemiological trends, and guide public health interventions while working toward the elimination of human-to-human transmission.

Standardized case definitions are critical for the surveillance, investigation, and reporting of mpox cases. The following WHO surveillance case definitions provide a standardized framework for classifying suspected, probable, confirmed, and discarded mpox cases (WHO, 2024b).

Table 1. Mpox case classification (WHO, 2024b)

Case Classification	Definition
Suspected case	<p>A person presenting with an acute skin rash, mucosal lesions, or lymphadenopathy (swollen lymph nodes) that cannot be fully explained by other common causes such as varicella-zoster, scabies, herpes simplex, measles, bacterial skin infections, syphilis, chancroid, lymphogranuloma venereum, granuloma inguinale, molluscum contagiosum, allergic reactions, or other locally relevant causes of papular or vesicular rash. Skin lesions may involve the face, palms, soles, genital, perianal, oral, or other body sites. Mucosal lesions may involve oral, conjunctival, urethral, penile, vaginal, or anorectal sites.</p> <p>OR</p> <p>A person who had contact with a probable or confirmed mpox case within the previous 21 days and develops any of the following symptoms without lesions: fever ($>38.5^{\circ}\text{C}$), headache, myalgia, back pain, profound weakness, or fatigue.</p>
Probable case	A person presenting with an acute skin rash, mucosal lesions, or lymphadenopathy and who has had an epidemiological link to a probable or confirmed mpox case during the 21 days before symptom onset.
Confirmed case	A person with laboratory evidence of infection through: (1) Detection of MPXV DNA by real-time PCR and/or sequencing, or (2) Detection of Orthopoxvirus DNA by PCR in a setting where an mpox outbreak has already been confirmed through MPXV-specific testing and no other orthopoxviruses are known to circulate in humans.
Discarded case	A suspected or probable case for which laboratory testing of lesion fluid, skin specimens, or crusts by PCR and/or sequencing is negative for MPXV or Orthopoxvirus in an mpox outbreak setting. A case should not be discarded solely based on negative blood, oropharyngeal, anal, or rectal swab results.

MPXV is classified into two genetic clades: Clade I (formerly known as Congo Basin clade) and Clade II (formerly known as West African clade) (WHO, 2025a). Under the revised nomenclature adopted by the WHO, Clade I replaced the former Congo Basin clade, while Clade II replaced the former West African clade (WHO, 2022a Otieno, 2024). The revision aligns with WHO's best practices for naming diseases and related pathogens, which aim to avoid stigmatization and unnecessary negative impacts on countries, regions, cultures, or other groups (Ulaeto, et al, 2023).

Public health programmes adopt different strategies and targets to reduce the impact of infectious diseases, including controlling transmission or achieving elimination. Because these objectives vary by disease, the WHO has established standardized definitions to guide planning and implementation at regional, national, and subnational levels, as shown in Table 2 (WHO, 2024d). The use of these definitions promotes consistent communication, coordinated surveillance, and effective monitoring of progress.

Table 2. WHO Definitions of Mpox Outbreaks, Community Transmission, Control, and Elimination (WHO, 2024d)

Term	Definition
Suspected Mpox Outbreak	The occurrence of one or more suspected or probable cases of mpox in a nationally or locally defined geographic area, regardless of the origin of the case or cases. <i>A suspected outbreak requires detailed case investigation and active case finding for additional cases.</i>
Confirmed Mpox Outbreak	The occurrence of two or more laboratory-confirmed cases of mpox (or one laboratory-confirmed case and one or more epidemiologically linked cases) in a nationally or locally defined geographic area, regardless of the origin and timing of emergence of subsequent cases. ^{a,b} Investigation is necessary to identify additional cases and contacts before an outbreak can be ruled out.
Community Transmission of Mpox	The ongoing occurrence of new mpox cases spread through human-to-human direct or indirect (fomite) contact for ≥ 6 weeks following the first reported (index) case. ^{b,c}
Control of Mpox	The absence of new mpox cases beyond six weeks (two maximum incubation periods) after the last reported case in an outbreak, with adequate surveillance in place.
Elimination of Human-to-Human Transmission	The absence of new locally acquired mpox cases (i.e., cases without travel history or zoonotic exposure) for ≥ 3 months in the presence of adequate surveillance.
Outbreak Interruption	An outbreak that is stopped within six weeks (no new cases for six weeks in a defined geographic area). This does not jeopardize elimination status, provided adequate surveillance demonstrates the capacity to detect and stop further transmission.

a. In endemic areas, a single laboratory confirmed or clinically compatible case (meeting national clinical case definitions) may be considered an outbreak, particularly in the absence of border access to laboratory services. This definition of an outbreak in the context of an elimination strategy applies in endemic areas with regular occurrence of cases and emphasizes the need to take public health measures around every case to achieve elimination.

b. In any context, emergence of additional cases without an epidemiological link may be indicative of undetected chains of transmission or new importations or spillover events.

c. In the context of attendance at a gathering multiple separate cases occurring with or without additional spread would be considered epidemiologically linked and constitute an outbreak.

Transmission

MPXV is primarily transmitted through close physical contact with an infected person, including sexual contact and other direct skin-to-skin contact, such as transmission from parent to child (WHO, 2025a). Other transmission routes include contact with contaminated materials, exposure to infectious respiratory particles through inhalation or direct deposition onto the mucous membranes of the mouth, nose, or eyes, and vertical transmission from mother to child during pregnancy or childbirth (WHO, 2024b; WHO, 2025a).

Transmission through contaminated needles has also been documented in healthcare and tattooing settings, while zoonotic transmission may occur in

historically endemic areas through contact with infected animals or consumption of contaminated bushmeat (WHO, 2024b; WHO, 2025a). Emerging evidence suggests that transmission may also occur following subclinical infection, with viral shedding in genital and anal secretions potentially contributing to transmission during sexual contact. Although MPXV DNA has been detected in environmental samples, fewer than 1% of cases in global surveillance data were attributed to transmission through contaminated objects. Possible transmission before symptom onset has also been reported, but the evidence remains inconclusive (WHO, 2025a; WHO, 2026c).

Risk Factors and Risk Groups

The risk of mpox depends on local epidemiology and drivers of transmission, including specific behaviours (WHO, 2024d). Most cases reported during the multi-country outbreak in 2022/2023 were identified among gay, bisexual and other men who have sex with men, and people with multiple or new sexual partners are currently most at risk. Given that the virus moves from person to person in social and sexual networks in many countries, gay, bisexual and other men who have sex with men may be at higher risk of exposure if they have sex or other forms of close contact with someone who is infectious. Sex workers and their clients are also at risk (WHO, 2024e). Trans and gender-

diverse communities linked to the same or related sexual networks are also likely to be disproportionately affected (WHO, 2024d).

People who have close contact with someone who has mpox are at risk of infection (WHO, 2024e). Close contact includes skin-to-skin contact, such as touching or sex, mouth-to-mouth or mouth-to-skin contact, such as kissing, and face-to-face contact, such as talking or breathing close to one another, which can generate infectious respiratory particles. People can also contract mpox through contact with contaminated objects such as clothing, bedding, towels, objects, electronics and other surfaces that have

been touched by someone with mpox. Animal-to-human transmission can occur through bites or scratches from infected animals or during activities such as hunting, skinning, trapping, cooking, playing with carcasses or eating animals.

During pregnancy or birth, the virus may be passed to the baby, and contracting mpox during pregnancy can be dangerous for the fetus or newborn infant (WHO, 2024e).

Clinical Presentation

Signs and symptoms

The initial phase of mpox typically lasts 1–5 days and features systemic symptoms that may occur before the development of skin lesions and can vary in severity among individuals. Symptoms include (WHO, 2026c);

- Fever,
- Headache,
- Back pain,
- Muscle aches,
- Fatigue, and
- Lymphadenopathy (swollen lymph nodes).

Patients may also develop oral ulcers and inflammation of the mucous membranes, affecting the throat, eyes, and genital areas.

Disease progression

Following the initial phase, a characteristic skin rash typically appears as the fever subsides. The rash progresses through several stages: macules (flat lesions), papules (raised lesions), vesicles (fluid-filled blisters), pustules (pus-filled lesions), umbilication (central depression), and finally crusting and desquamation (peeling of the skin). This process generally occurs over 2–3 weeks (WHO, 2026c)

The lesions range from approximately 0.5 to 1 cm in diameter and may vary in

number from a few to several thousand. The rash typically follows a centrifugal distribution, beginning on the face and spreading towards the extremities, including the palms of the hands and soles of the feet. Lesions may also affect the oral mucosa, conjunctiva, cornea, and genital areas.

Oral ulcers may cause pain and difficulty eating or drinking, increasing the risk of dehydration and malnutrition. Inflammation of the pharyngeal, conjunctival, and genital mucosae may also occur during the illness (WHO, 2026c)

Complications

Although most cases do not progress to severe illness, mpox can cause serious and potentially life-threatening complications. Extensive or coalescing skin lesions may become susceptible to secondary bacterial infections, including cellulitis, abscesses, and necrotizing soft tissue infections, which may require intensive wound care and, in severe cases, surgical intervention. Extensive skin damage and fluid loss may also contribute to intravascular volume depletion and shock, while severe skin exfoliation may necessitate surgical debridement and skin grafting.

Other complications include severe pneumonia and respiratory distress, corneal infection that may result in vision loss, and gastrointestinal symptoms such as loss of appetite, vomiting, and diarrhoea, which can lead to severe dehydration, electrolyte imbalances, and shock. Significant cervical lymphadenopathy may occasionally result in retropharyngeal abscesses or respiratory compromise. In severe cases, patients may develop systemic complications, including sepsis, septic shock, and encephalitis. In rare instances, mpox may result in death (WHO, 2026c).

Additional complications include severe pain, proctitis, urethritis, and rectal bleeding. A systematic review of studies published up to September 2024, predominantly involving clade IIb infections, found that complications were generally reported in fewer than 10% of patients overall, although rates varied between non-severe and severe cases (WHO, 2026c). Among patients with severe mpox, reported complications included severe pain (27%), proctitis (24%), secondary bacterial infections (21%), urethritis (17%), rectal bleeding (16%), cellulitis (15%), and gastroenteritis (13%).

Mpox-associated eye disease may manifest as conjunctivitis, keratitis, or other ocular pathology (WHO, 2026c). Severe cases can result in corneal scarring, corneal perforation, corneal staphyloma, or hypopyon uveitis, potentially leading to vision loss. These complications have been reported in infections caused by both clade I and clade II. Early detection and appropriate management are

essential to reduce the risk of vision-threatening outcomes.

Differences between Clade I and Clade II infections

Mpox typically presents with symptoms developing within 3–7 days after exposure, although the incubation period ranges from 1 to 21 days (WHO, 2025a). Symptoms generally last 2–4 weeks but may persist longer in individuals with weakened immune systems, particularly those with advanced untreated HIV infection. Clinical manifestations include fever, muscle aches, sore throat, skin rash, mucosal lesions, and lymphadenopathy. Skin or mucosal lesions may appear before systemic symptoms or occur exclusively in the genital area following sexual transmission. Children, pregnant women, and immunocompromised individuals, particularly those with advanced HIV infection, are at increased risk of severe disease and death.

MPXV is classified into two clades, clade I (subclades Ia and Ib) and clade II (subclades IIa and IIb), which are associated with distinct geographical distributions and epidemiological patterns (WHO, 2026c). Clade Ia is primarily associated with zoonotic transmission in the Democratic Republic of the Congo (DRC), although sustained sexual transmission has been reported in Kinshasa since 2024. Clade Ib, first identified in the DRC in 2023, has spread to neighbouring countries and all WHO regions, with transmission occurring through sexual, household, and community contact. Clade IIa has historically been associated with zoonotic

transmission and limited secondary human-to-human spread, whereas clade IIb was responsible for the 2022 global outbreak and has circulated predominantly through human-to-human transmission, particularly through sexual contact among men who have sex with men outside Africa. Despite these differences in observed epidemiological patterns, inherent differences in transmissibility between the subclades have not been demonstrated.

Differential diagnosis

The rash caused by mpox can look similar to those of many other diseases, including chickenpox, herpes, syphilis, measles, scabies, dengue, and other skin infections (WHO, 2026c). Because these conditions may have similar symptoms, careful clinical assessment is important to distinguish mpox from other illnesses.

Chickenpox is one of the conditions most confused with mpox. However, chickenpox rashes usually develop more quickly, appear mainly on the central parts of the body, and consist of lesions at different stages of development (WHO, 2026c). In contrast, mpox lesions generally develop at the same stage in a particular area and may appear on the palms of the hands and soles of the feet. Swollen lymph nodes are also more commonly associated with mpox than chickenpox.

However, the two infections can occur at the same time (WHO, 2026c). A study in the Democratic Republic of the Congo reported mpox and chickenpox co-infection in approximately 10-13% of cases. Patients with both infections commonly experienced fatigue, chills,

headache, and muscle aches. They were less likely to report oral sores, swollen lymph nodes in the armpits, cough, or sore throat. These patients had more skin lesions than those with chickenpox alone, but fewer than those with mpox alone. This suggests that co-infection may influence disease severity, although further research is needed to understand this relationship.

Laboratory confirmation, Molecular testing and genomic surveillance

Laboratory testing is essential for confirming mpox, particularly in the first cases of an outbreak or in a newly affected geographic area. Testing should be conducted in appropriately equipped laboratories by trained personnel following relevant technical, safety, and quality standards (WHO, 2024i). WHO recommends nucleic acid amplification testing (NAAT), including real-time or conventional polymerase chain reaction (PCR), using lesion material such as lesion fluid or crusts (WHO, 2025a). If skin or mucosal lesions are absent, oropharyngeal, anal or rectal swabs may be considered, although a negative result from these specimens does not exclude MPXV infection. Blood testing is not recommended because viraemia is typically brief, while serology is generally restricted to reference laboratories for retrospective case classification or research due to cross-reactivity with other orthopoxviruses. The selection of testing methods depends on the epidemiological context and public health objectives, including the need for clade differentiation (WHO, 2024i). Assays

should target conserved genomic regions to reduce the risk of false-negative results caused by viral genetic variation. Genomic sequencing complements diagnostic testing by supporting viral genetic

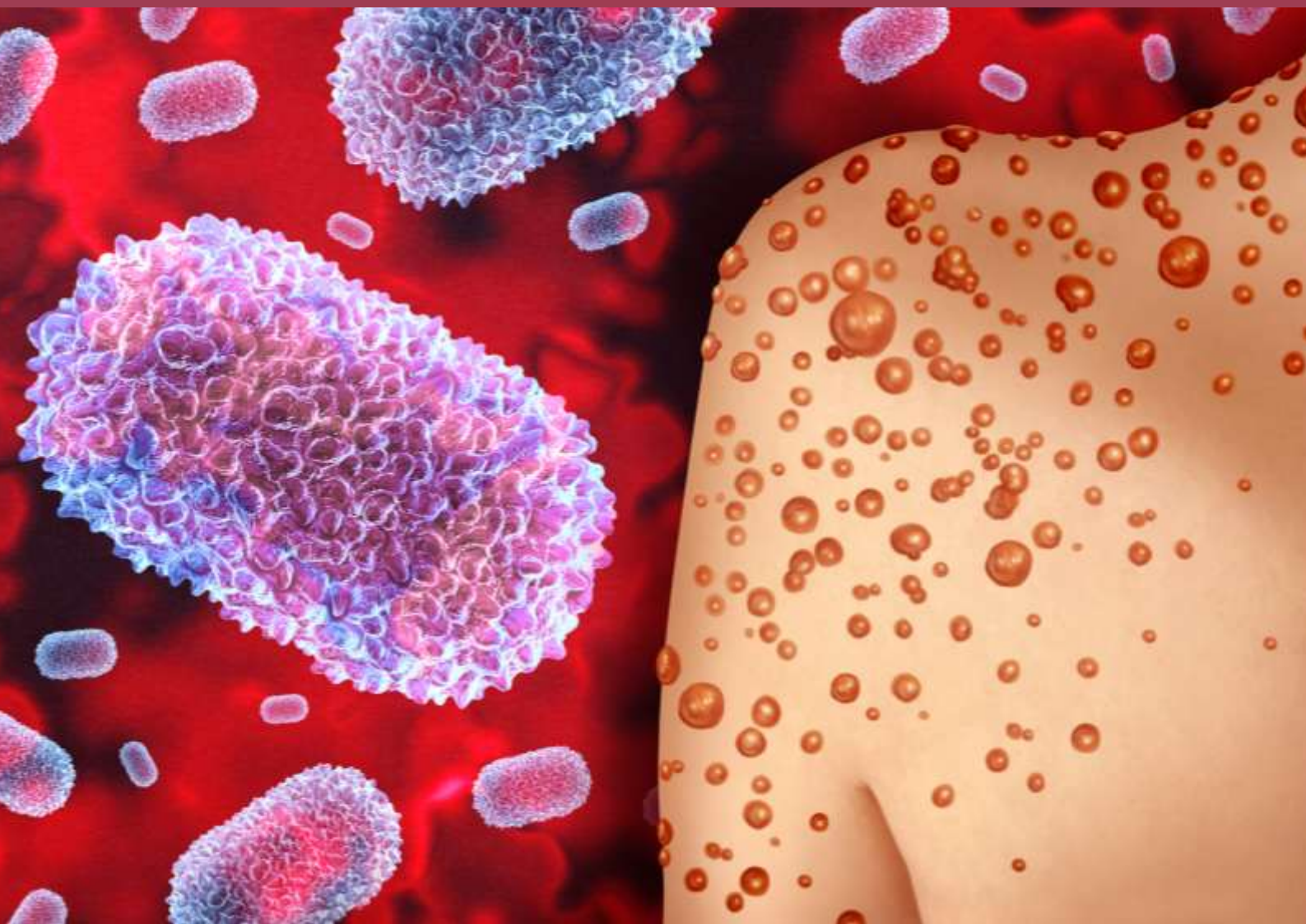
characterization and epidemiological surveillance. The available testing methods, their applications, and limitations are summarized in Table 3 (WHO, 2024i).

Table 3. Overview Of Testing Methods and Use Cases (WHO, 2024i)

Testing method	Use cases
Laboratory-based NAAT	Gold-standard for the detection and confirmation of mpox cases. Can be used to detect and differentiate OPXVs as well-as MPXV clades alone, or in conjunction with genomic sequencing. Single or multi-step NAAT may be implemented depending on testing and public health goals
mPOC Tests	May be used to detect mpox cases more rapidly to influence clinical care and public health interventions. Most appropriate in outbreaks or settings where referral for testing and/or sample transport to centralized laboratory facilities is not feasible. Where clade differentiation may be important for epidemiological monitoring and detection of co-circulation of clades, careful consideration should be given to selection of an mPOC with appropriate target specificity.
Ag-RDTs	Not currently recommended for screening or diagnosis of mpox cases.
Serology	May be used for operational research or retrospective studies. Not currently recommended for diagnosis or confirmation of acute or past mpox.
Ab-RDTs	Not currently recommended for any use case until validation data confirm sufficient accuracy.
Genomic sequencing	Genetic sequence data (GSD) provides critical information to help understand the origins, epidemiology, and characteristics of the virus.
Other	Electron microscopy or viral culture may be used in research settings.



Epidemiology



Global Situation

Mpox is a zoonotic viral disease caused by the MPXV, a member of the Orthopoxvirus genus in the same family as the smallpox virus, although it is unrelated to chickenpox (CDC, 2026a). The virus was first identified in 1958 during outbreaks of a pox-like illness among research monkeys in Denmark (WHO, n.d; CDC, 2026a). Despite its name, monkeys are not considered the primary reservoir of MPXV.

A systematic review of published and grey literature examining mpox epidemiology between 1970 and 2019 showed a steady increase in both the number of cases and the geographic range of the disease (Bunge, et al, 2022). In the DRC, reported confirmed and probable cases increased from 38 cases in the 1970s to 343 cases in the 1980s and 511 cases in the 1990s. By the 2000s and 2010s, mpox had expanded beyond its traditional endemic foci, with cases reported in several additional African countries, including the Central African Republic, Republic of the Congo, South Sudan, Cameroon, Liberia, Nigeria, and Sierra Leone.

In 2003, the United States reported 47 confirmed and probable mpox cases across six Midwestern states (Illinois, Indiana, Kansas, Missouri, Ohio, and Wisconsin), marking the first recognized human mpox outbreak outside Africa (CDC, 2026b). In 2017, Nigeria experienced a large resurgence of mpox after decades of limited reporting, marking the beginning of sustained outbreaks with frequent travel-associated exportations (WHO, 2024a).

In May 2022, an unprecedented multinational outbreak caused by MPXV Clade IIb emerged and rapidly spread across Europe, the Americas, Asia, and eventually all six WHO regions. The outbreak primarily, though not exclusively, affected gay, bisexual, and other men who have sex with men and was sustained through human-to-human transmission within sexual networks. In response to the rapid global spread, the WHO declared mpox a PHEIC on 23 July 2022 (WHO, n.d). As global case numbers declined, the PHEIC was lifted in May 2023.

Meanwhile, mpox cases and deaths continued to increase in the Democratic Republic of the Congo (DRC), where a new Clade I sublineage, Clade Ib, emerged and spread through sustained human-to-human transmission. By mid-2024, Clade Ib had been detected in neighbouring countries, contributing to large outbreaks in Central and Eastern Africa and an increasing number of international cases. These developments culminated in a second WHO declaration of a PHEIC on 14 August 2024, underscoring the continued global public health threat posed by mpox. (WHO, 2024f).

Figure 1 illustrates the global distribution of confirmed mpox cases during the first mpox PHEIC, from 23 July 2022 to 10 May 2023 (WHO, 2026a). The outbreak affected countries across all WHO regions and represented the largest global spread of mpox ever recorded. The United States reported the highest number of confirmed cases (>10,000), while several

countries in the Americas and Western Europe, including Brazil, Spain, France, Germany, the United Kingdom, and Mexico, reported between 1,000 and 9,999 cases. The widespread geographic

distribution reflected the rapid international spread of the Clade IIb outbreak through sustained human-to-human transmission.

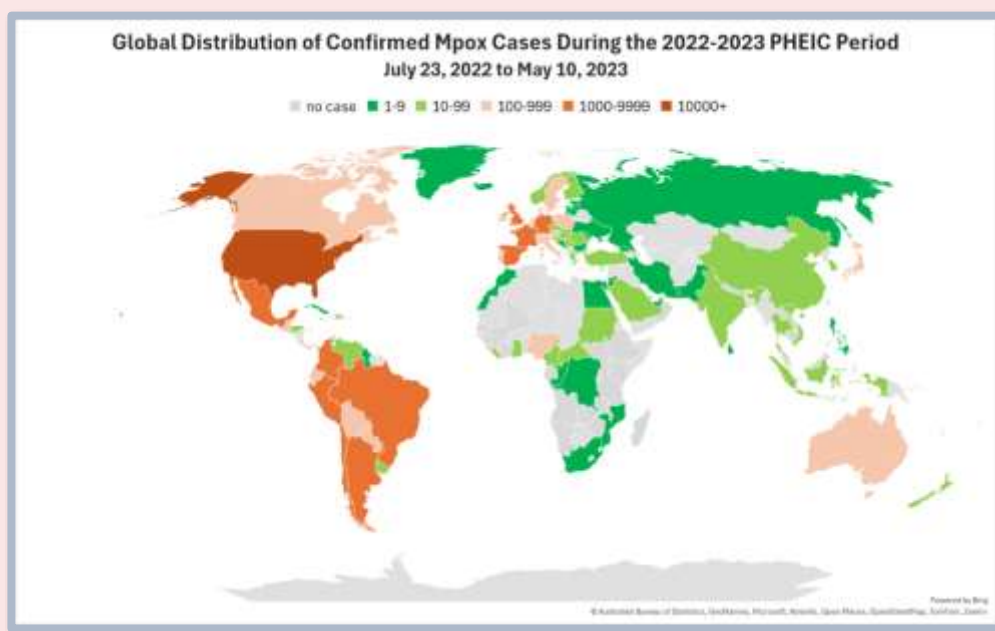


Figure 1. Global Distribution of Confirmed Mpox Cases During the First Mpox PHEIC
(Source: WHO Global Mpox Trends (https://worldhealthorg.shinyapps.io/mpox_global/))

The burden of disease during this period was concentrated primarily in North America, South America, and Western Europe, while most countries in Africa and Asia reported comparatively smaller numbers of confirmed cases. Although mpox had historically been considered endemic to parts of Central and West Africa, the 2022-2023 outbreak demonstrated an unprecedented shift in its epidemiology, with transmission occurring predominantly in non-endemic countries. Cases were reported across multiple countries in the Western Pacific and Southeast Asia, indicating extensive international dissemination through interconnected travel and social networks.

Overall, the geographic pattern observed during the first PHEIC underscored the transformation of mpox from a disease largely confined to endemic African settings into a global public health challenge. Unlike previous outbreaks, which were typically associated with zoonotic exposure or isolated importations, the 2022-2023 outbreak was characterized by sustained human-to-human transmission across multiple continents. This rapid international spread prompted WHO to declare a PHEIC and highlighted the importance of enhanced surveillance, rapid case detection, contact tracing, risk communication, and international cooperation to limit further transmission.

Figure 2 shows the global distribution of confirmed mpox cases during the second mpox PHEIC, from 14 August 2024 to 5 September 2025 (WHO, 2026a). Compared with the first PHEIC period, the geographic distribution of cases shifted markedly, with the highest burden concentrated in Central Africa, particularly

the Democratic Republic of the Congo (DRC), which reported more than 10,000 confirmed cases. Several neighbouring countries in Central and Eastern Africa also reported substantial case numbers, reflecting the regional expansion of outbreaks associated with Clade I, including the emerging subclade Ib.

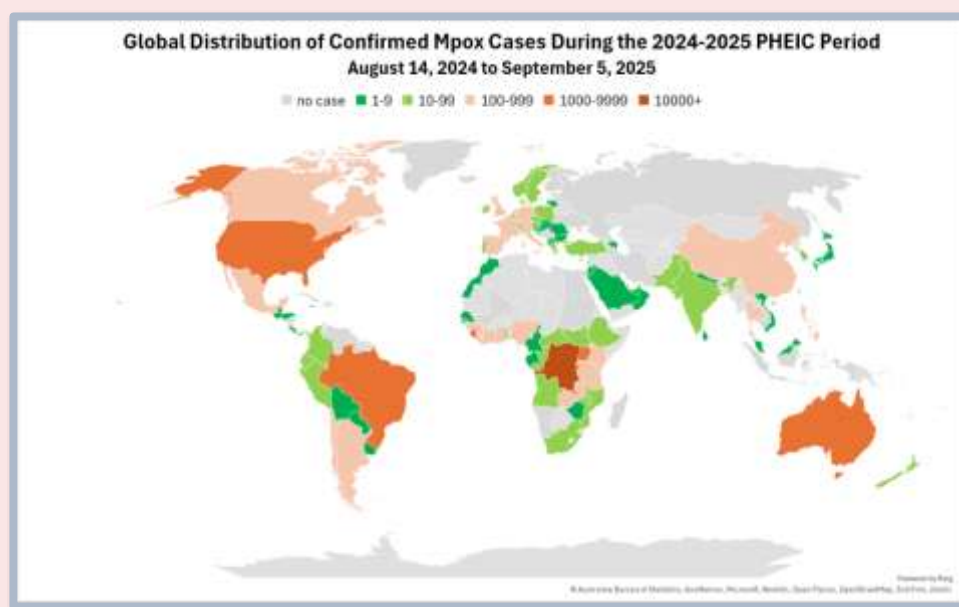


Figure 2. Global Distribution of Confirmed Mpox Cases During the Second Mpox PHEIC (Source: WHO Global Mpox Trends (https://worldhealthorg.shinyapps.io/mpox_global/))

Although Central Africa represented the epicentre of the outbreak, confirmed cases were reported across all WHO regions. Countries including the United States, Brazil, and Australia reported between 1,000 and 9,999 cases, while many countries in Europe, Asia, the Middle East, and Oceania documented lower but widespread levels of transmission. The broad geographic distribution indicates both continued local transmission in some settings and the occurrence of travel-associated cases linked to affected countries.

Overall, the 2024-2025 PHEIC period

demonstrated a different epidemiological pattern from that observed during the 2022-2023 global outbreak. Whereas the first PHEIC was driven primarily by widespread transmission of Clade IIb in non-endemic countries, the second PHEIC was characterized by a major resurgence of mpox in Africa, particularly in the DRC and neighbouring countries. Nevertheless, the persistent detection of cases across multiple continents highlights the continued risk of international spread and underscores the need for sustained surveillance, laboratory capacity, rapid case detection, and coordinated global response efforts.

Mpox in the ASEAN Region

Since the emergence of mpox in 2022, the virus has spread across multiple countries worldwide. During the initial phase of the global outbreak, several ASEAN Member States (AMS) reported confirmed cases, resulting in a total of 38 cases in the region in 2022. Cases were reported in Singapore (19 cases), Thailand (12 cases), the Philippines (4 cases), Viet Nam (2 cases), and Indonesia (1 case) (WHO, 2026a). Although the overall burden in ASEAN has remained substantially lower than that observed in the Americas and Europe during the 2022–2023 outbreak, mpox continues to pose a public health concern due to its potential for sustained human-to-human transmission and cross-border dissemination.

Figure 3 illustrates the geographic distribution of reported mpox cases in AMSs between January 2022 and October 2026. Countries are shaded according to their cumulative number of reported cases, ranging from green (no reported cases) to brown (>1,000 cases). The map highlights the uneven distribution of mpox across the region, with the highest cumulative burden concentrated in Thailand, while the Philippines, Indonesia, Viet Nam, and Singapore reported moderate numbers of cases. In contrast, several AMS reported only sporadic cases or no cases throughout the reporting period.

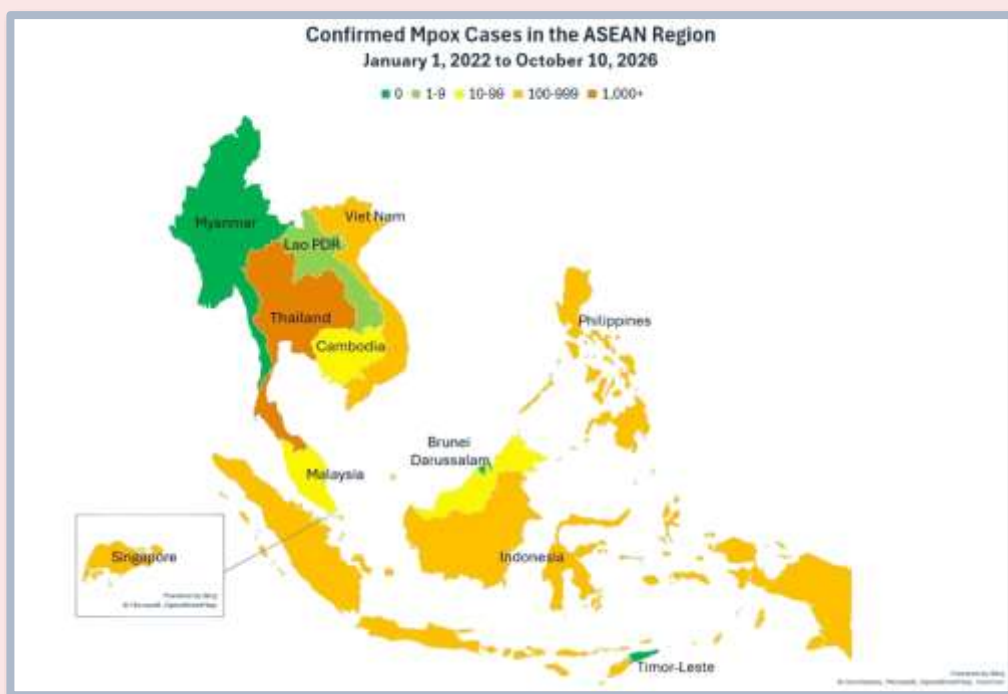


Figure 3. Mpox cases in the ASEAN Region, January 1, 2022 to October 10, 2026
(Source: WHO; Ministry of Health Cambodia; Ministry of Health Republic of Indonesia; Communicable Disease Agency, Ministry of Health Singapore)

According to WHO and ABVC surveillance data, ASEAN Member States (AMS) reported a total of 2,333 confirmed mpox cases during the reporting period. The largest cumulative burdens were reported by Thailand (1,189 cases), Philippines (439 cases), and Indonesia (290 cases), which together accounted for more than 80% of all reported cases. Additional cases were reported by Viet Nam (211 cases), Singapore (135 cases), Malaysia (55 cases), Cambodia (13 cases), and Lao PDR (1

case), while Brunei Darussalam, Myanmar, and Timor-Leste did not report any confirmed cases during the period. The distribution of cases indicates that mpox transmission in ASEAN has been concentrated in a limited number of countries, particularly Thailand and the Philippines, while most Member States have reported relatively few cases. Further details on annual cases confirmed are shown in Figure 4.

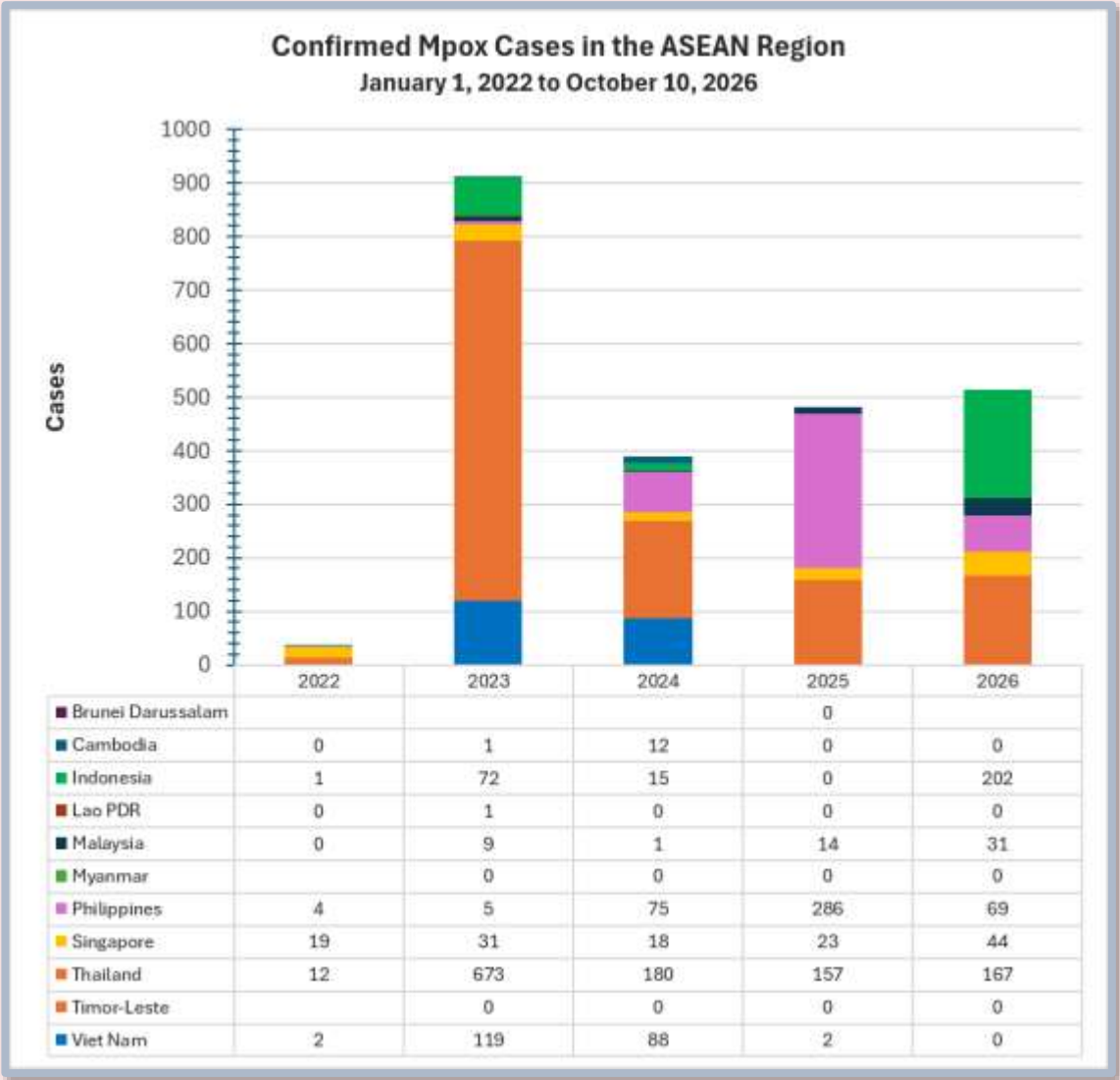


Figure 4. Mpox cases in the ASEAN Region, January 1, 2022 to October 10, 2026
 (Source: WHO; Ministry of Health Cambodia; Ministry of Health Republic of Indonesia; Communicable Disease Agency, Ministry of Health Singapore)

The following section examines mpox trends across ASEAN Member States (AMS) from 2022 to 2026, using data from the WHO and national health authorities. Differences may exist due to variations in data sources, reporting timelines, surveillance systems, and case definitions among countries.

Brunei Darussalam, Myanmar, and Timor-Leste

Since the disease recorded in 2022, three Member States, namely Brunei Darussalam, Myanmar, and Timor-Leste, had not reported any confirmed cases.

Cambodia

Cambodia reported 13 confirmed mpox cases between 2022 and 2026, with one case detected in 2023 and 12 cases in 2024. No deaths have been reported, and no additional confirmed cases have been identified since 2025 (Figure 5).

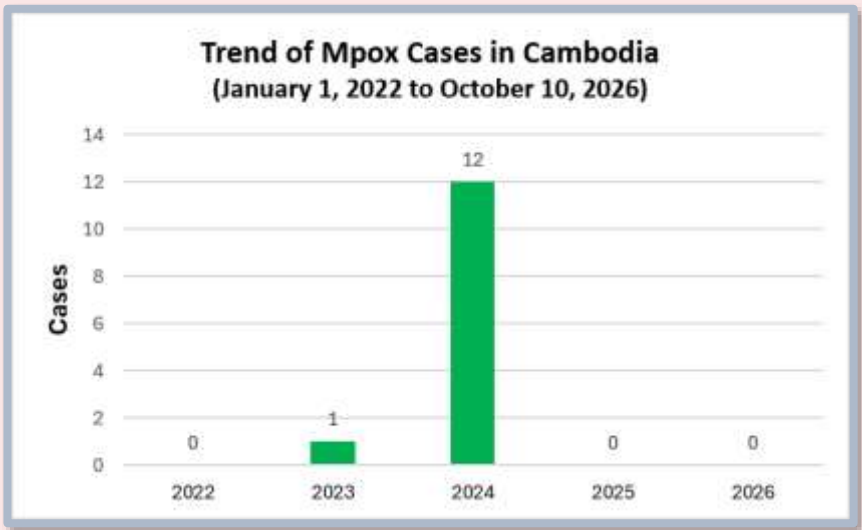


Figure 5. Trend of Mpox cases in Cambodia, January 1, 2022 to October 10, 2026
(Source: WHO; Ministry of Health Cambodia)

Indonesia

Since 2022, Indonesia has reported a cumulative 290 confirmed mpox cases, with transmission largely concentrated in 2026. Annual case counts increased from a single case in 2022 to 72 cases in 2023 before declining to 15 cases in 2024, and no cases were reported in 2025 (Figure 6). However, the country experienced a sharp resurgence in 2026, reporting 202 cases as of October, which accounted for nearly 70% of its cumulative burden. To date, no mpox-related deaths have been reported in Indonesia.

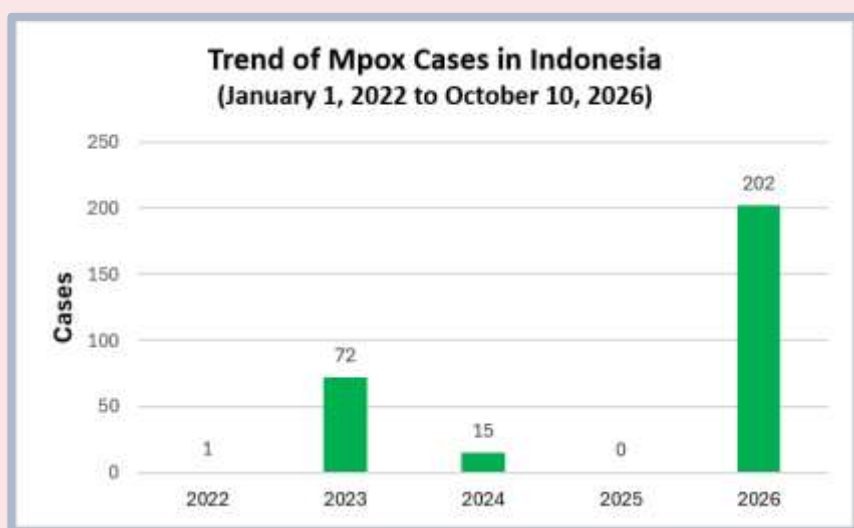


Figure 6. Trend of Mpox cases in Indonesia, January 1, 2022 to October 10, 2026
(Source: WHO; Ministry of Health Indonesia)

Lao PDR

Lao PDR reported one confirmed mpox case in 2023, with no deaths recorded (Figure 7). The country has not reported any further confirmed cases through 2026.

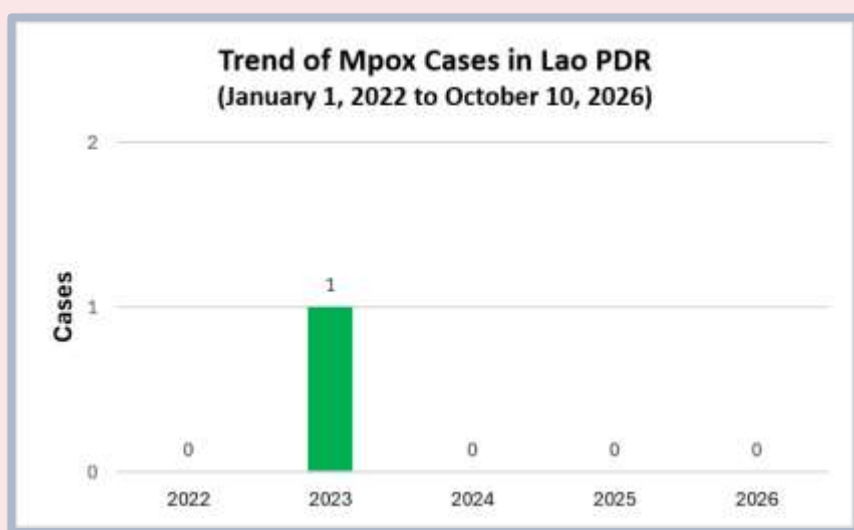


Figure 7. Trend of Mpox cases in Lao PDR, January 1, 2022 to October 10, 2026
(Source: WHO)

Malaysia

Since 2022, Malaysia has reported 55 confirmed mpox cases, with relatively low levels of transmission in 2023 (9 cases) and 2024 (1 case), followed by a gradual increase to 14 cases in 2025 and 31 cases in 2026 (Figure 8). To date, no mpox-related deaths have been reported in the country.

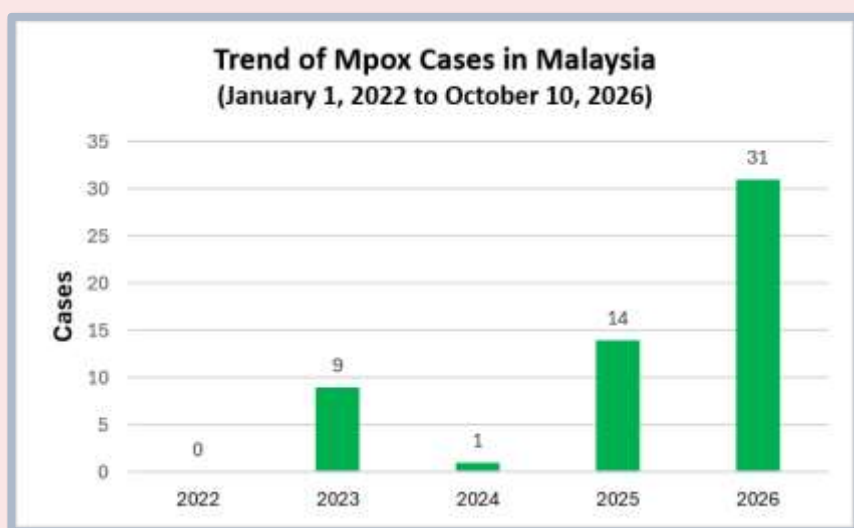


Figure 8. Trend of Mpox cases in Malaysia, January 1, 2022 to October 10, 2026
(Source: WHO)

Philippines

The Philippines reported the second-highest cumulative mpox burden in ASEAN, with 439 confirmed cases and six deaths (Figure 9). Following sporadic transmission in 2022 (four cases) and 2023 (five cases), the country experienced a marked increase in cases in 2024 (75 cases with four deaths, CFR=5.3%) and a major surge in 2025, when 286 cases reported. Transmission continued in 2026, with an additional 69 cases and two deaths reported as of October (CFR=2.9%).

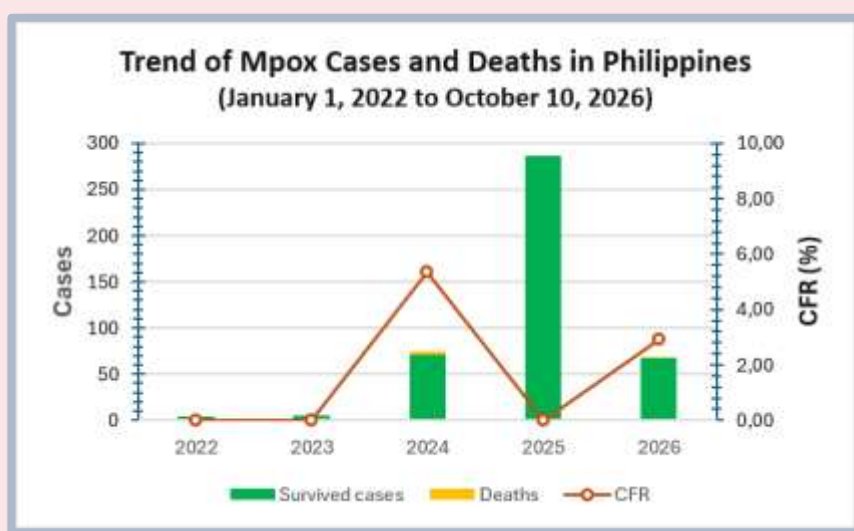


Figure 9. Trend of Mpox cases and deaths in Philippines, January 1, 2022 to October 10, 2026
(Source: WHO)

Singapore

Since 2022, Singapore has reported 135 confirmed mpox cases, with annual case counts fluctuating from 19 cases in 2022 to 31 in 2023, before declining to 18 in 2024 and increasing again to 23 cases in 2025 and 44 cases in 2026 (Figure 10). No mpox-related deaths have been recorded during the reporting period.

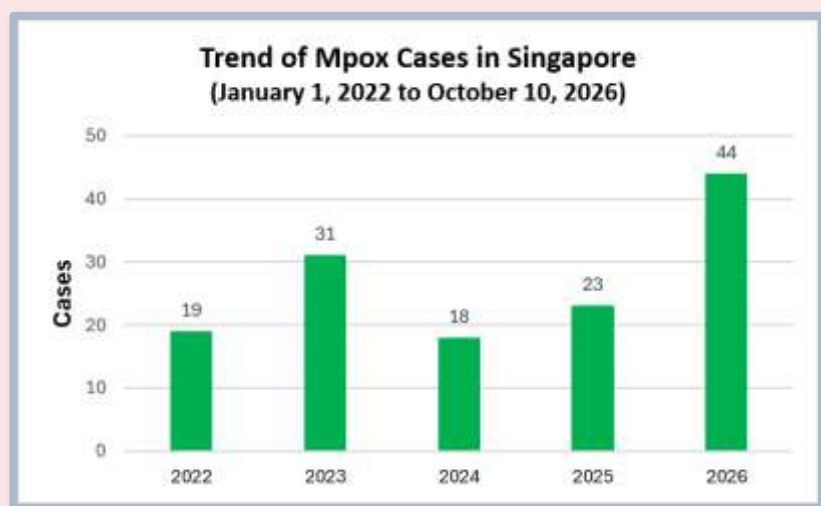


Figure 10. Trend of Mpox cases in Singapore, January 1, 2022 to October 10, 2026
(Source: WHO)

Thailand

Thailand reported the highest cumulative mpox burden in ASEAN, with 1,189 cases and 15 deaths, accounting for more than half of all reported cases in the region (Figure 11). The country was most heavily affected in 2023, recording 673 cases and one death (CFR: 0.15%). Although annual case counts declined thereafter, transmission persisted, with 180 cases and nine deaths reported in 2024 (CFR: 5.0%), 157 cases and three deaths in 2025 (CFR: 1.9%), and 167 cases and two deaths in 2026 (CFR: 1.2%).

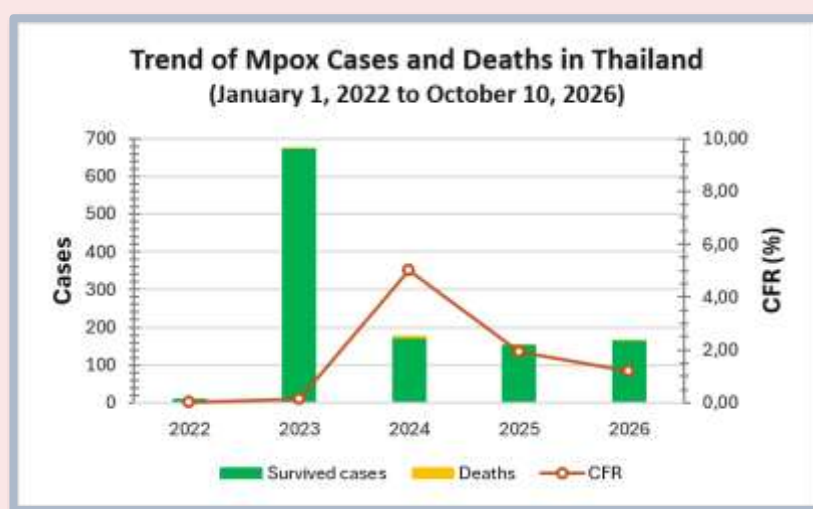


Figure 11. Trend of Mpox cases and deaths in Thailand, January 1, 2022 to October 10, 2026
(Source: WHO)

Viet Nam

Viet Nam reported a cumulative 211 mpox cases and nine deaths between 2022 and 2026 (Figure 12). Following the detection of two cases in 2022, the country experienced a substantial increase in transmission in 2023, reporting 119 cases and six deaths (CFR: 5.0%), followed by 88 cases and three deaths (CFR: 3.4%) in 2024. Case numbers subsequently declined, with two cases reported in 2025 and no cases reported in 2026.

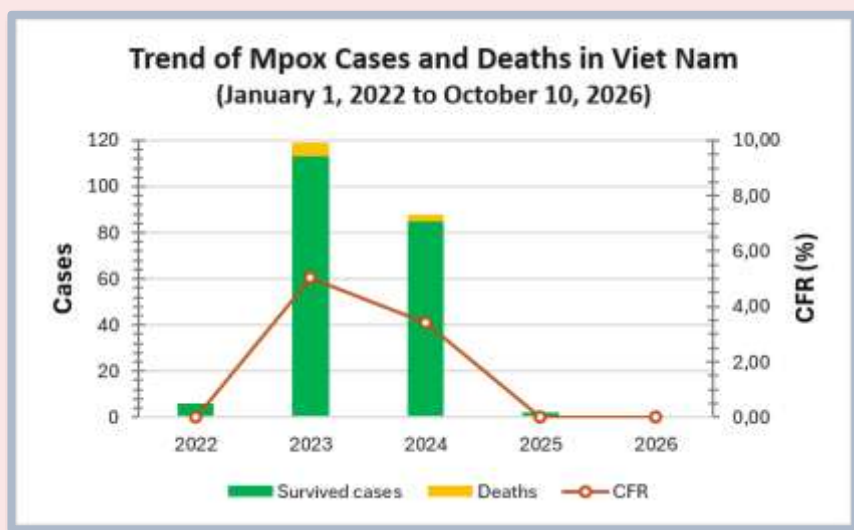


Figure 12. Trend of Mpox cases and deaths in Viet Nam, January 1, 2022 to October 10, 2026
(Source: WHO)



Case *Management and Prevention*



Case Management

Treatment of mpox primarily focuses on symptomatic management, including skin and eye care, pain relief, and the prevention and management of secondary bacterial infections and other complications (WHO, 2025a). Specific antiviral medications may also be used where available through clinical trials or emergency access protocols, particularly in patients with severe disease or those at increased risk of complications.

In 2022, the WHO published the *Interim*

Guidance for Clinical Management and Infection Prevention and Control for Mpox following the emergence of a global outbreak of clade IIb, which affected numerous countries (WHO, 2022b). The guidance included the *Monkeypox (MPX) Clinical Care Pathway – Decision-Making Algorithm to Be Used at Any Health Care Point*, as shown in Figure X, and provided nine recommendations for the management of patients with mild or uncomplicated mpox who were not at high risk of complications.

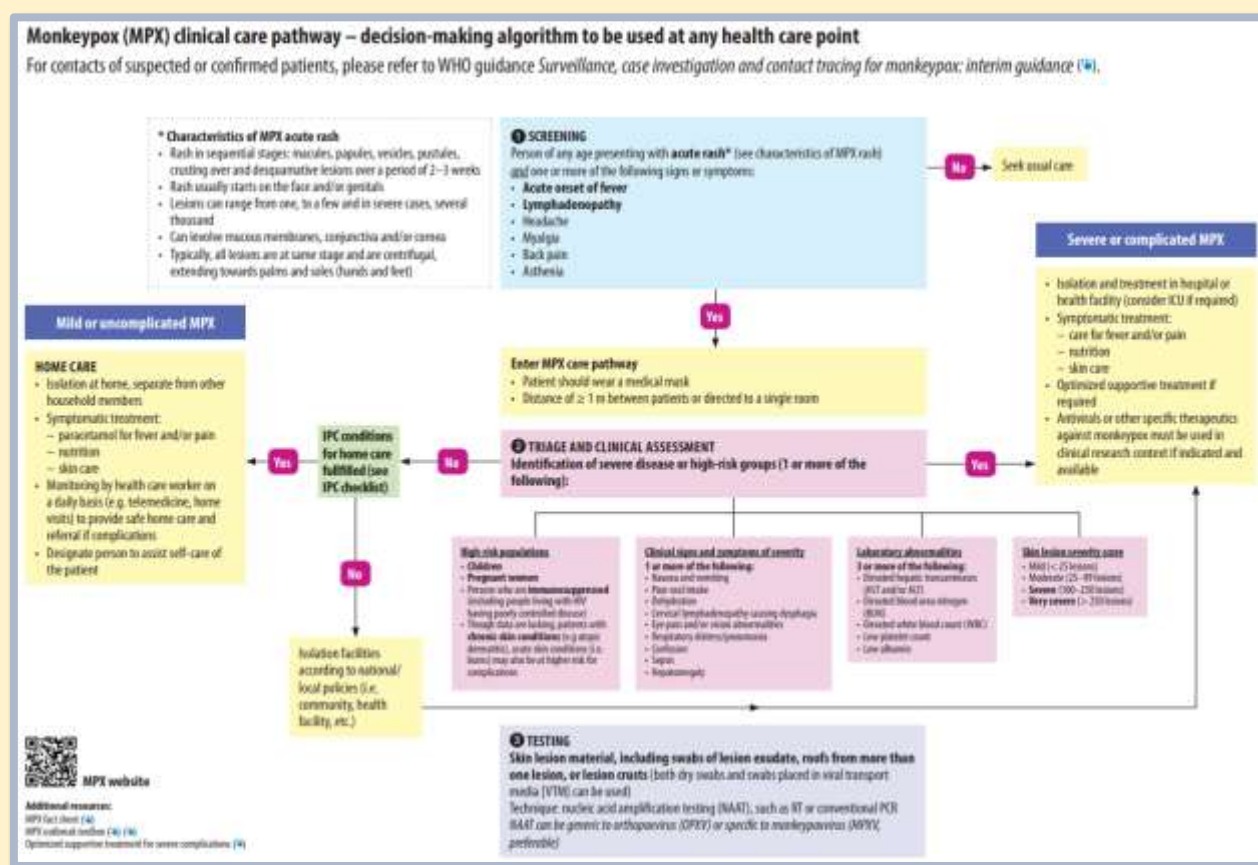


Figure 13. Monkeypox (MPX) Clinical Care Pathway–Decision-Making Algorithm
(Source: WHO (<https://www.who.int/publications/i/item/WHO-MPX-Clinical-and-IPC-2022.1>))

WHO recommendations for the management of mild or uncomplicated mpox (WHO, 2022b):

1. Patients with suspected or confirmed MPX with mild, uncomplicated disease and not at high risk for complications can be isolated at home, for the duration of the infectious period, as long as a home assessment determines IPC conditions are fulfilled at home setting.
2. Home assessment should be conducted when deciding to isolate and care for a person with suspected MPX or confirmed MPX with mild uncomplicated disease in a home setting.
3. Patient with mild, uncomplicated MPX cared for at home should be isolated in an area separate from other household members and away from shared areas of the home (i.e. a separate room, or area with a curtain or screen).
4. Caution should be taken when handling and cleaning linens, household surfaces and during waste disposal.
5. Patients with MPX be given symptomatic treatment such as antipyretics for fever and analgesia for pain.
6. Patients with MPX be assessed for their nutritional status and given adequate nutrition and appropriate rehydration.
7. Counsel patients with mild MPX about signs and symptoms of complications that should prompt urgent care.
8. Conservative treatment of rash lesions dependent of their stage with aims to

relieve discomfort, speed healing and prevention of complications, such as secondary infections or exfoliation.

9. Antibiotic therapy or prophylaxis not be used in patients with uncomplicated MPX. However, lesions should be monitored for secondary bacterial infection (i.e. cellulitis, abscess) and if present be treated with antibiotics with activity against normal skin flora, including *Streptococcus pyogenes* and methicillin-sensitive *Staphylococcus aureus* (MSSA).

Since August 2024, increasing numbers of mpox cases in Africa and a second declaration of a PHEIC by the WHO Director-General on 14 August 2024. Subsequently, WHO published update the *Clinical Management and Infection Prevention and Control for Mpox: Living Guideline, May 2025*, which included three additional clinical management recommendations (WHO, 2025b).

1. **Antiretroviral therapy (ART)** in people with mpox infection and HIV who are ART naïve or have had a prolonged interruption of ART.
2. **Breastfeeding during maternal mpox infection:** Mothers with mpox continue breastfeeding whilst limiting direct contact with their non-infected infant.
3. **Resumption of breastfeeding and direct contact:** Mothers who recover from mpox infection and who had withheld breastfeeding and direct contact, to resume breastfeeding and direct contact with the infant as soon as lesions are healed. (Conditional recommendation, very low certainty evidence).

Prevention

Effective mpox prevention and control require integrated, context-specific public health measures to interrupt transmission, protect at-risk populations, and reduce morbidity and mortality (WHO, 2024g). WHO's mpox strategy combines surveillance and early detection, case isolation and contact tracing, risk communication and community engagement, infection prevention and control, targeted vaccination, clinical care, and measures to reduce zoonotic exposure.

In addition to health system and outbreak response measures, the World Health Organization (WHO) has developed a series of public advisories to support individuals, communities, and specific population groups in preventing mpox transmission and reducing the risk of severe disease (WHO, 2022c). These recommendations provide practical guidance on recognizing symptoms, accessing vaccination, reducing exposure risks, caring for suspected or confirmed cases, and protecting vulnerable populations. The advice is tailored to different audiences, including the public, people recovering from mpox at home, healthcare workers, and populations at increased risk of exposure, with the aim of promoting informed decision-making, early care-seeking behaviour, and adherence to infection prevention and control measures. Collectively, these public health recommendations complement broader surveillance, vaccination, and response strategies to

limit transmission and mitigate the impact of mpox outbreaks.

1. Public advice on recovering from mpox at home

WHO advises individuals suspected of having mpox to self-isolate and contact a healthcare professional promptly (WHO, 2022c). Those isolating at home should remain in contact with their healthcare provider and seek immediate medical advice if symptoms worsen or complications develop.

Home care includes avoiding scratching lesions, washing hands before and after touching them, keeping the rash clean, dry and uncovered, rinsing oral lesions with salt water, and using paracetamol for pain relief. Warm baths with baking soda or Epsom salts may also help relieve discomfort.

To support recovery, individuals should maintain hydration and nutrition, get adequate sleep, manage pain and fever, stay socially connected, engage in relaxing activities, exercise if able, and seek support when needed

2. Public advice on mpox vaccination

WHO recommends targeted mpox vaccination with MVA-BN (non-replicating) or LC16m8 (minimally replicating) vaccines for individuals at increased risk of exposure. ACAM2000 (replicating) may be considered when the other vaccines are unavailable, following an individual risk-benefit assessment (WHO, 2024h). Priority

groups include close contacts of mpox cases, sex workers and their clients, gay, bisexual and other men who have sex with men, people with multiple sexual partners, at-risk healthcare and frontline workers, outbreak response personnel, and populations in affected geographical areas, based on local epidemiology (WHO, 2022c).

Vaccination may be administered before or after exposure, preferably within four days of exposure or within 14 days if symptoms have not developed (WHO, 2022c). Pregnant women, young children, and immunocompromised individuals may

also be prioritized because of their increased risk of severe disease, according to vaccine availability and national guidelines. Although vaccination provides protection against mpox, infection may still occur. Maximum immunity is expected approximately two weeks after the second dose of MVA-BN or within four weeks after a single dose of LC16m8. Mass vaccination and booster doses are not currently recommended.

The table 4 below shows which vaccines are recommended for people in these groups.

Table 4. Mpox Vaccine Recommendation (WHO, 2022c).

Vaccines	Recommended	Not Currently Recommended
MVA-BN	<ul style="list-style-type: none"> Children aged 12 years and older. Children under 12 years, for “off-label” use*. Pregnant and breastfeeding women. Immunocompromised people or those on medical treatment that results in immune suppression. 	
LC16m8	Children from 1 year of age	Pregnant and breastfeeding women. Immunocompromised people, except those with well-controlled HIV

** MVA-BN is not currently licensed for use in children under 12 years of age, however, available data about children show it is safe. Based on the safety data and the advice from WHO SAGE, MVA-BN may be used “off-label” for infants and children. This means the vaccine is recommended in emergency situations where the benefits of vaccination outweigh any potential risk. Its use must also be in alignment with national guidelines and approvals.*

3. Public advice for men who have sex with men on preventing mpox

WHO recommends that men who have sex with men (MSM), particularly those with multiple or new sexual partners, monitor for mpox symptoms and seek medical advice and testing if symptoms develop (WHO, 2022d). Individuals

should avoid close contact with suspected or confirmed cases, self-isolate while awaiting test results, and get vaccinated when eligible and vaccines are available. Risk reduction measures include limiting sexual partners, temporarily avoiding new sexual partners, and communicating with partners about symptoms.

Condoms may reduce exposure but do not eliminate the risk of mpox transmission through close physical contact. WHO also emphasizes sharing reliable, evidence-based information to prevent misinformation and stigma.

4. Public advice on protecting yourself and others from mpox

WHO recommends avoiding close contact with individuals suspected or confirmed to have mpox, monitoring for symptoms, seeking medical advice and self-isolating if symptoms develop, and getting vaccinated when eligible (WHO, 2022e). Preventive measures also include cleaning and disinfecting

potentially contaminated surfaces, staying informed about local transmission, and communicating openly about symptoms with close contacts.

Individuals recovering from mpox at home should isolate in a separate room, use a separate bathroom where possible, practise hand hygiene, disinfect frequently touched surfaces, avoid sharing personal items, handle laundry separately, avoid sweeping or vacuuming, and ensure adequate ventilation by opening windows (WHO, 2022e).



Control Measures Strategy



Global Control Measures Strategy

In May 2024, the World Health Organization (WHO) published the *Strategic Framework for Enhancing Prevention and Control of Mpox: 2024–2027* to guide the next phase of the global mpox response and support countries in transitioning from emergency response towards sustained prevention, control, and eventual elimination of human-to-human transmission (WHO, 2024d). The framework sets out a global approach to mpox prevention and control across different epidemiological and operational contexts, with an overarching goal of achieving and sustaining the elimination of human-to-human transmission. It addresses outbreak control, research and access to medical countermeasures, and the prevention of zoonotic transmission. The framework also emphasizes the

integration of mpox prevention and control into existing health programmes and services, including epidemiological surveillance, primary health care, sexual health services, immunization, clinical care, RCCE, and One Health initiatives.

The framework identifies three overarching strategic objectives: **(1) achieving control of mpox outbreaks in every context; (2) advancing mpox research and access to countermeasures; and (3) minimizing zoonotic transmission of mpox** (WHO, 2024d). These objectives encompass measures addressing human-to-human transmission, the development and availability of medical countermeasures, and transmission at the human–animal interface.

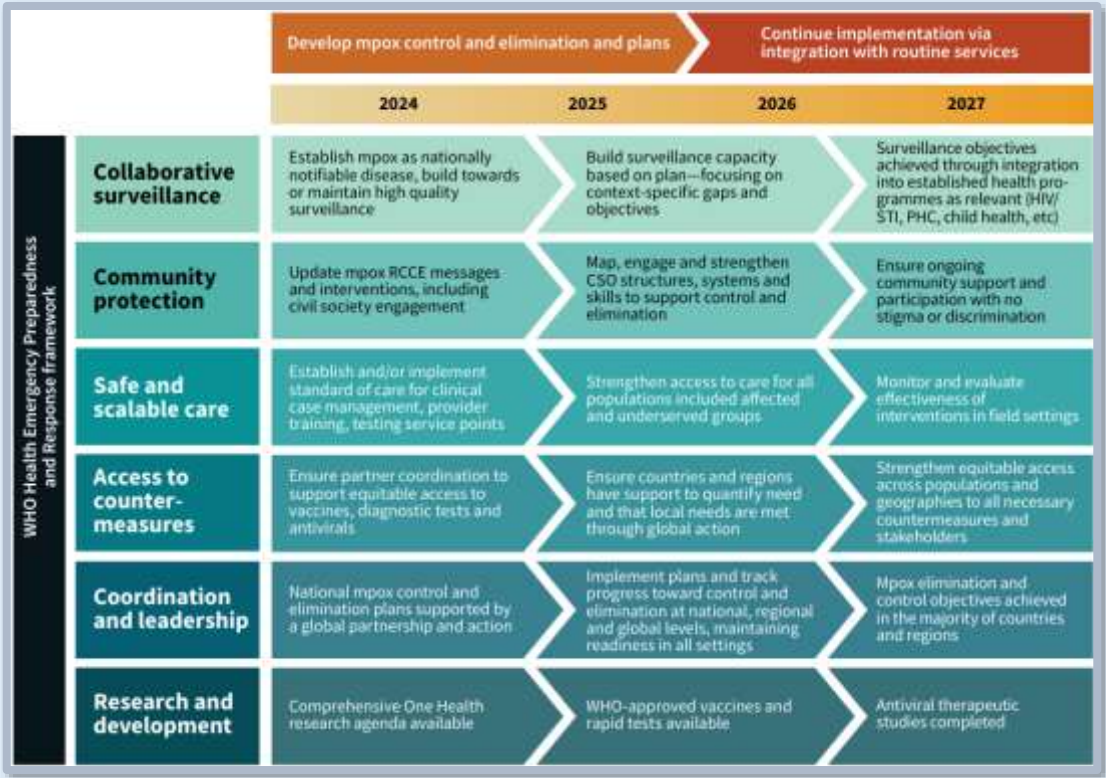


Figure 14. Illustrative timeline for progress towards mpox control and elimination, 2024–2027

The framework identifies five interconnected components of the WHO Health Emergency Preparedness, Response and Resilience (HEPR) framework to guide mpox preparedness,

readiness and response, including **collaborative surveillance; community protection; safe and scalable care; access to counter-measure; coordination and leadership; and**



Figure 15. Core components of mpox preparedness, readiness, and response: 2024–2027
Source: WHO (<https://www.who.int/publications/i/item/9789240092907>)

The Strategic Framework is guided by four principles (WHO, 2024d):

- 1. Community leadership:** Mpox programmes and services are guided by well-resourced and robust community engagement and leadership.
- 2. Equity and human rights:** All people at risk of exposure to mpox have equitable access to stigma-free, non-discriminatory, safe and confidential services, within a continuing global effort to expand access to WHO-recommended tests, treatments and vaccines.

- 3. Context-specific collaboration and integration:** Based on the epidemiology, preferences, needs and capacities of affected communities, mpox surveillance, prevention, diagnosis, treatment and care are integrated with existing programmes and services in health and congregate settings, including community-based services and close coordination with One Health programmes and stakeholders.
- 4. Commitment to continuous learning:** Stakeholders ensure findings from ongoing evaluation and applied research are used to enhance

programmes and improve outcomes for all patients and communities

Sustaining community protection

The community protection component of the 2024–2027 Strategic Framework is further supported by WHO's Framework to Support the Sustainability of Community Protection for Mpox Prevention and Control, published in September 2025 (WHO, 2025c). The framework identifies priorities and actions to sustain and institutionalize community protection for mpox prevention and control at national, subnational and local levels.

The framework identifies five key community protection functions: RCCE; infodemic management; investment in community capacities, including civil society, health workers and local actors; context-sensitive implementation of population and environmental interventions; and consideration of the social and economic determinants that shape vulnerability and responses (WHO, 2025c).

To support these functions, WHO identifies eight priority actions, organized into eight domains (WHO, 2025c):

1. Strengthen and sustain community networks for mpox in endemic areas for information sharing, risk identification, surveillance and access to health services;
2. Support trusted community actors and networks at the community level to provide context-specific, evidence-

based information and to enable community-led action;

3. Promote and enhance health care-seeking behaviours among high-risk populations, such as by improving access to accurate information and services, including testing, care and vaccination;
4. Support and equip CHWs, peer educators and volunteers with the tools, training and supervision needed to deliver and coordinate a timely, localized community response, and ensuring that community protection activities are coordinated through public health and local decision-making structures to maintain continuity and equity in service delivery;
5. Strengthen and institutionalize community-based surveillance within national systems to ensure early detection, timely reporting and an equitable response to mpox;
6. Develop and strengthen systems and mechanisms to produce and use timely, robust and context specific community evidence in mpox prevention and control;
7. Promote and implement community IPC and hygiene measures through routine health promotion, CHW training and local service delivery, and coordinate with WASH actors to ensure the provision of safe water, sanitation and waste management in high-risk settings; and
8. Ensure the core functions of community protection (e.g. community engagement activities, CHW training, community IPC

measures, rapid community protection assessments) are embedded in national public health and preparedness policies and plans, with dedicated budget lines and formal roles for community stakeholders in planning, coordination and implementation.

These eight domains cover community networks, RCCE, health promotion and education, the community and health-care workforce, community-based surveillance, data and evidence, community IPC and WASH, and policy, planning and coordination for sustaining community protection (WHO, 2025c).

Global access to mpox vaccines

Access to vaccines is another component of the global mpox response. On September 2, 2026, WHO and its partners announced the launch of a global initiative

to improve access to mpox vaccines through a longer-term vaccine stockpile (WHO, 2026d). The stockpile was approved by the Gavi Board in 2025, is funded by Gavi, the Vaccine Alliance, and is coordinated through the International Coordinating Group (ICG) on Vaccine Provision. The ICG partners are the International Federation of Red Cross and Red Crescent Societies (IFRC), Médecins Sans Frontières (MSF), UNICEF and WHO. The initiative builds on the Access and Allocation Mechanism (AAM) established in 2024 during the mpox PHEIC (WHO, 2026d). The stockpile is intended to provide countries with access to vaccines for outbreak response, with allocation coordinated through the ICG mechanism according to outbreak-response needs. The announcement of the initiative should be distinguished from subsequent evidence of vaccine allocation, delivery and administration in individual countries.

Regional Control Measures

Control Measures – WHO South-East Asia Region (SEARO)

In September 2024, the WHO Regional Office for South-East Asia published the *Technical Brief (interim) and Priority Actions: Enhancing Readiness for mpox in WHO South-East Asia Region* (WHO SEARO, 2024). The document identifies three priority areas for countries in the South-East Asia (SEA) Region: **collaborative surveillance; safe and scalable clinical care and access to medical countermeasures; and enhanced community protection.**

1. Collaborative surveillance includes surveillance, case investigation, case reporting and contact tracing, together with laboratory testing for MPXV (WHO SEARO, 2024). Regional activities have also addressed laboratory and genomic surveillance capacity. In March 2025, WHO SEARO, in collaboration with Thailand's Department of Medical Sciences (DMSc), Duke-NUS Medical School's Asia Pathogen Genomics Initiative, and

the ARTIC Network, conducted a regional training workshop on mpox genomic surveillance (WHO SEARO, 2025). The workshop provided laboratory experts from Bangladesh, Bhutan, India, Maldives, Sri Lanka, Thailand and Timor-Leste with hands-on training in sequencing technologies, bioinformatics, genomic epidemiology and data analysis.

2. Safe and scalable clinical care and access to medical countermeasures

covers clinical management, IPC, antiviral medicines and vaccination. The approach emphasizes high-quality clinical care, health-care infrastructure, essential medicines and supplies, protection of health-care workers, mental health and psychosocial support, and the continuity of essential health services (WHO SEARO, 2024). An earlier regional activity in this area was a webinar on the diagnostic and clinical approach to mpox conducted by WHO SEARO in November 2022. The webinar addressed symptomatic treatment and clinical considerations for high-risk populations (WHO SEARO, 2022). Regulatory preparedness for medical countermeasures is also addressed through the South-East Asia Regulatory Network (SEARN), which facilitates coordination among National Regulatory Authorities, information sharing and the establishment of dedicated regulatory working groups when required (WHO SEARO, 2024). Following the

declaration of the mpox PHEIC in August 2024, SEARN was activated and established a dedicated working group addressing regulatory matters related to vaccines, medicines and diagnostics, clinical trials, pharmacovigilance, communication and laboratory reagents.

3. Enhanced community protection

includes RCCE, points of entry (PoE), cross-border surveillance and mass gatherings, One Health, and knowledge gaps and research needs (WHO SEARO, 2024). Specific measures include community engagement and participation, targeted risk communication, community-based early detection and service delivery, addressing stigma and discrimination, vaccination of people at risk of infection, public health and social measures, health education and promotion, and community IPC and WASH measures. The WHO SEARO clinical webinar conducted in November 2022 also highlighted concerns regarding stigma and discrimination, as well as the importance of risk communication, infodemic management, community resilience and empowerment (WHO SEARO, 2022). In addition, the 2024 technical brief addresses surveillance and prevention measures at points of entry and across borders, preparedness for mass gatherings, and the One Health approach to animal-to-human transmission (WHO SEARO, 2024).

Control Measures – WHO Western Pacific Region (WPRO)

The World Health Organization (WHO) Regional Office for the Western Pacific has supported mpox preparedness and response through regional health emergency workforce development, technical support for surveillance and early detection, laboratory capacity strengthening, and risk communication and community engagement. The documented activities include regional knowledge-sharing initiatives as well as country-level efforts supported by WHO, reflecting different aspects of mpox preparedness and response across the Region.

1. Regional coordination and health emergency workforce readiness

In August 2024, WHO convened four mpox-focused Community of Practice sessions involving more than 4,000 health emergency workforce members from 28 countries (WHO WPRO, n.d). The sessions covered clinical management, laboratory diagnosis, surveillance, contact tracing, outbreak management and community engagement. Each session included epidemiological updates, surveillance guidance and technical exchanges among regional experts. Representatives from Australia, the Philippines, Japan, China and Viet Nam also shared their respective approaches to mpox management. These sessions provided a platform for peer-to-peer learning and the exchange of technical knowledge among health emergency workforce members across the Region.

2. Surveillance, early detection and laboratory capacity

WHO also supported country-level initiatives to strengthen surveillance and early detection (WHO WPRO, n.d). In November 2024, Solomon Islands conducted a one-day training session, with WHO support, for surveillance officers who also provide clinical services. The training addressed mpox epidemiological updates, case definitions, surveillance activities, specimen collection and laboratory testing, integration of mpox reporting into event-based surveillance, and risk communication. Following the training, participants were reported to be better equipped to report, analyse and interpret surveillance data during an outbreak.

Laboratory capacity development was also documented in Fiji, where the Pathogen Genomics Laboratory at the Fiji Centre for Disease Control was launched on May 2025 (WHO WPRO, 2025a). The facility was established to support the detection and characterization of infectious disease threats, including mpox. WHO had provided whole-genome sequencing equipment in 2023 and supported previous training activities, while mentorship and training programmes planned for 2025 included mpox genomic sequencing. The laboratory launch contributed to progress towards the WHO Western Pacific Region's target of equipping 70% of

Member States with in-country sequencing capacity by 2030, with the reported regional proportion increasing from 48% to 52%.

3. Risk communication and community engagement

Community engagement and risk communication constituted another documented area of WHO-supported activity (WHO WPRO, n.d). In Viet Nam, WHO used findings from pre- and post-campaign surveys to inform a targeted national campaign addressing mpox-related stigma, discrimination and misinformation. WHO also developed communication materials for health-care workers, communities and populations at risk. In addition, the *Mpox Job Aid for Healthcare Workers* translated technical guidance into practical messages on clinical management and infection control for frontline health workers, particularly in settings with limited experience managing mpox.

4. Evaluation and coordination of national mpox responses

The Philippines provides an example of national response evaluation supported within the Western Pacific

Region (WHO WPRO, 2025b). On March 2025, the country conducted the first mpox intra-action review (IAR) reported in the Region, bringing together more than 80 representatives from the health, environment, food and drug administration, border control, civil society and academic sectors. The review assessed the country's response to mpox and identified priorities for the following year.

An overarching recommendation from the review was to improve coordination and partnership mechanisms among agencies, clinicians and communities to facilitate the activation of response systems from preparedness through response (WHO WPRO, 2025b). Following the declaration of mpox as a Public Health Emergency of International Concern in August 2024, the Philippines' Department of Health had established an interim mpox task force to coordinate response efforts. The IAR was also intended to inform the transition from the country's 2024 National Action Plan to the development of its 2025 National Action Plan.

Control Measures in ASEAN Member States

ASEAN has mobilized regional mechanisms to support its response to mpox following the declaration of a Public Health Emergency of International Concern (PHEIC) in 2024 (Rahman-

Shepherd et al., 2025). The response involved three mechanisms: the ASEAN Emergency Operations Centre (EOC) Network, the ASEAN Biodiaspora Virtual Centre (ABVC), and the mobilization of COVID-19 ASEAN Response Fund.

Regional coordination and information sharing

The ASEAN Biological Threats Surveillance Centre (ABVC) conducts routine monitoring of infectious disease events across the region, including the surveillance and reporting of confirmed mpox cases in ASEAN Member States (ABVC, n.d). The Centre was established to strengthen ASEAN preparedness and response to biological threats through enhanced regional capacity in big data analytics, predictive modelling, and data visualization, thereby supporting evidence-based decision-making for epidemic and pandemic preparedness and response.

The ASEAN EOC Network, led by Malaysia's Ministry of Health, monitors the regional mpox situation and facilitates information sharing among Member States (Rahman-Shepherd et al., 2025). Following Thailand's first reported imported mpox clade 1b case on 22 August 2024, the Network convened a regional webinar attended by all Member States on 3 September 2024 to exchange experiences and information on outbreak response, surveillance and risk communication. The Network also disseminated information about Thailand's case within 24 hours of confirmation.

Regional surveillance and risk assessment

The ABVC, led by Indonesia's Ministry of Health, conducts horizon scanning and regional risk assessments and provides regular intelligence reports on mpox cases within and beyond ASEAN (Rahman-

Shepherd et al., 2025). ASEAN Health Cluster 2 also facilitated collaboration with Thailand's Ministry of Public Health and development partners to develop rapid serological and molecular tests capable of distinguishing mpox clades. Data-sharing challenges include privacy concerns and delays in formal notification pathways.

Access to medical countermeasures

The COVID-19 ASEAN Response Fund was proposed as a mechanism for pooled procurement of mpox vaccines and therapeutics (Rahman-Shepherd et al., 2025). Brunei Darussalam's Ministry of Health submitted the proposal and leads the initiative on behalf of the region. Eight Member States have participated in the pooled procurement strategy. Differences in national regulatory requirements remain a challenge to collective procurement.

Infection prevention and control

In 2026, ASEAN published the *Landscape Assessment of National Infection Prevention and Control Programmes in ASEAN Member States*, an initiative under the 2023–2025 Work Plan of the ASEAN–U.S. Infection Prevention and Control Task Force (ASEAN-US IPC Task Force, 2026). The assessment found that all 10 ASEAN Member States have national IPC programmes. IPC guidelines and multimodal strategies were among the strongest components, while gaps remained in IPC education and training, monitoring and audit of IPC practices, and healthcare-associated infection surveillance.

Regional preparedness and inter-regional cooperation

The ASEAN Centre for Public Health Emergencies and Emerging Diseases was announced in 2020 to strengthen prevention and preparedness (Rahman-Shepherd et al., 2025), detection and risk assessment, and response and risk communication. As of December 2024, its Establishment Agreement had not been signed. ASEAN has also promote knowledge exchange with African public health organizations, including cooperation in diagnostics, epidemiological investigation, contact tracing, risk communication, research and the sharing of medical countermeasures and technical expertise.

Recognizing the unprecedented challenges posed by emerging infectious disease threats, including Mpox, on October 9, 2024, ASEAN leaders committed to strengthening regional biosafety and biosecurity at the 44th and 45th ASEAN Summits in Vientiane, Lao PDR (ASEAN, 2024).

The declaration outlines (ASEAN, 2024):

1. Strengthen national coordination and cooperation on biosafety and biosecurity.
2. Establish the ASEAN Biosafety and Biosecurity Network.
3. Establish or strengthen national legal frameworks and explore minimum standards.
4. Uphold responsible and ethical research involving high-risk pathogens, toxins, and related data.
5. Enhance protocols for the storage and transport of high-risk pathogen and toxin samples.
6. Provide training, education, and certification for relevant personnel.
7. Support sustainable laboratory infrastructure for biosafety and biosecurity.
8. Task ASEAN Health Ministers with coordinating, consulting on, and monitoring the implementation of the declaration's commitment



Brunei Darussalam

In August 2024, the Ministry of Health (MOH) Brunei Darussalam reported that no mpox cases had been reported in the country at that time (Ministry of Health Brunei Darussalam, 2024a). As part of its public health preparedness efforts, the Ministry stated that it would continue monitoring the situation, maintain preparedness to manage potential cases

and contain possible transmission, and provide public updates as necessary.

To support public awareness and risk communication, the MOH disseminated frequently asked questions (FAQs) on mpox through its official social media channels on September 2024, covering prevention, symptoms, and treatment (Ministry of Health Brunei Darussalam, 2024a).

As part of its points-of-entry measures, Brunei Darussalam required all individuals arriving by air, land, or sea to complete an Arrival Declaration Form through the BruHealth application, effective 7 September 2024 (Ministry of Health Brunei Darussalam, 2024b). Arrivals were required to report their travel history for the preceding 21 days and undergo health screening. The requirement was implemented under the Infectious Diseases Act, Chapter 204.

For maritime arrivals, the Maritime and Port Authority of Brunei Darussalam

(MPABD), through Port Notice BC/02/2024, required individuals entering the country by sea to complete the Arrival Declaration Form online before arrival (Maritime and Port Authority of Brunei Darussalam (MPABD), 2024). Shipping agents were required to submit port clearance applications at least 48 hours before vessel arrival, accompanied by the latest Maritime Declaration of Health, a valid Ship Sanitation Control Exemption Certificate (SSCEC), the crew list, and a list of ports of call during the preceding 21 days. The notice referred to a letter from the MoH dated 4 September 2024.



Cambodia

The MoH Cambodia regularly issued public announcements on reported mpox cases to inform the public about the evolving situation (Ministry of Health Cambodia, n.d.a).

As part of public health preparedness and points-of-entry measures, on 27 August 2024, a delegation led by the MoH Secretary of State inspected quarantine facilities at Phnom Penh International Airport to review measures against the importation and spread of mpox, particularly clade 1b (Ministry of Health Cambodia, 2024). The measures included traveller guidance, temperature screening using thermal cameras, traveller monitoring at entry and exit points, and

procedures for managing suspected cases. The working group also agreed to install additional thermal screening equipment and display educational images and videos on mpox prevention. Representatives from relevant agencies, including immigration, customs, civil aviation, and the Communicable Disease Control Department, participated in the inspection.

For RCCE, the MoH disseminated mpox prevention information through educational videos and posters, including materials published on the official website of its Communicable Disease Control Department (Ministry of Health Cambodia, n.d.b).



Indonesia

In December 2022, Indonesia designated mpox as an emerging infectious disease with outbreak potential through Minister of Health Decree No. HK.01.07/MENKES/1977/2022, establishing control measures covering surveillance, therapeutics, vaccination, and risk communication (Ministry of Health Indonesia, 2022). The decree outlined measures covering risk communication, preparedness, early detection, public health response, healthcare and laboratory readiness, case management, medical supplies, and cross-sectoral coordination. In January 2023, the MoH issued the *Guidelines for Mpox Prevention and Control* through Director General of Disease Prevention and Control Decree No. HK.02.02/C/505/2023 to guide implementation by relevant stakeholders (Ministry of Health Indonesia, 2023).

For surveillance and laboratory capacity, Indonesia implemented active case detection, epidemiological investigations, contact tracing, and event-based reporting through the national early warning and response system (EWARS) (Ministry of Health Indonesia, 2024). Laboratory measures included mpox testing and whole-genome sequencing (WGS) for clade identification. Laboratory personnel received training, while challenges with testing reagent availability highlighted the need to strengthen the laboratory network. Confirmed cases were reported to WHO in accordance with the International Health Regulations (2005).

Regarding case management and therapeutics, patients primarily received supportive and symptomatic treatment through hospital care or self-isolation (Ministry of Health Indonesia, 2024). Healthcare workers received training in mpox detection and management. Antivirals were available for eligible patients, and WHO provided 10 courses of tecovirimat, which was used in one patient in Jakarta Special Capital Region.

Regarding vaccination, Indonesia made 1,000 doses of the JYNNEOS vaccine available in 2022. Vaccination began in DKI Jakarta in October 2023, followed by second-dose administration from November 2023 (Ministry of Health Indonesia, 2024). Based on recommendations from the Indonesian Technical Advisory Group on Immunization (ITAGI), vaccination targeted men who have sex with men (MSM) reporting sexual contact in the preceding two weeks and laboratory personnel testing mpox specimens.

For RCCE, the Ministry of Health conducted awareness activities, issued circulars to relevant authorities and healthcare facilities, and disseminated FAQs, videos, infographics, and regular mpox situation updates through official channels (Ministry of Health Indonesia, 2024). Activities also included media briefings, collaboration with HIV/AIDS partners to reach key populations, and efforts to address misinformation and disinformation.



Lao People's Democratic Republic

As part of public health preparedness, the MoH reported that Lao PDR was collaborating with WHO to monitor the mpox situation in May 2022 (Centre of Information and Education for Health Lao PDR, 2022). In September 2023, WHO supported the Ministry in preparing to detect and manage potential cases.

For RCCE, the Ministry of Health communicated information about mpox through public announcements, while the Centre of Information and Education for Health disseminated educational information on mpox symptoms and when to seek medical advice in September 2023 plans (Centre of Information and Education for Health Lao PDR, 2023; Lao Civil Society Organizations Platform, 2023).

Following confirmation of the first mpox case in Lao PDR in September 2023, the Ministry instructed provincial and Vientiane health departments to assess local outbreak risks and prepare response plans (Lao Civil Society Organizations

Platform, 2023). As part of surveillance and case detection, healthcare facilities, including private clinics, were instructed to monitor patients presenting with fever and rash, promptly report suspected cases, and collect specimens for testing at the National Epidemiological Analysis Center. Provincial authorities were also instructed to ensure laboratory readiness and the availability of specimen collection equipment.

For case management and IPC, health authorities were instructed to prepare treatment equipment, personal protective equipment (PPE), and specimen collection kits, particularly in provinces with international checkpoints and areas considered high-risk plans (Lao Civil Society Organizations Platform, 2023). The Ministry also emphasized surveillance among travellers arriving from neighbouring countries reporting mpox cases as part of points-of-entry measures and prioritized public education on mpox symptoms and preventive measures.



Malaysia

As part of points-of-entry measures, in October 2022, the MoH Malaysia issued a travel advisory for travellers visiting countries reporting mpox transmission (Ministry of Health Malaysia, 2023). In 2024, Malaysia strengthened surveillance and preparedness at international points of entry, including daily self-monitoring for mpox symptoms for 21 days among

travellers arriving from countries reporting mpox (Ministry of Health Malaysia, 2024).

For surveillance and laboratory preparedness, healthcare practitioners in government and private facilities are required to promptly notify the nearest District Health Office of suspected and

confirmed cases. Malaysia also maintained PCR testing capacity through 13 laboratories, including five private laboratories (Ministry of Health Malaysia, 2024). As part of RCCE, the MOH disseminated public health advisories and conducted awareness activities targeting at-risk groups and establishments involving skin contact, such as spas and massage centres, to promote personal and environmental hygiene and encourage symptomatic individuals to seek medical assessment

For multisectoral coordination and One Health, Malaysia's mpox prevention and control efforts involve coordination among health authorities, government agencies, transport operators, and other relevant stakeholders (Ministry of Health Malaysia, 2023). The main collaborative activities include:

1. Sharing information on animal mpox surveillance among the MoH, Department of Veterinary Services (DVS) Malaysia, Department of Malaysian Quarantine Inspection Service, and Department of Wildlife

and National Parks of Peninsular Malaysia.

2. Working in close collaboration with other relevant agencies such as National Security Council, Ministry of Foreign Affairs (MOFA), Ministry of Home Affairs, Ministry of Transport, Ministry of Tourism, Art and Culture (MOTAC), The Immigration Department of Malaysia, Royal Malaysian Customs, Royal Malaysian Police Force, Department of Civil Aviation Malaysia, airport/port/ground crossing authorities and agencies, airlines, shipping companies, private health facilities and other agencies/ministries, etc.
3. Reporting to health authority at international point of entry is required by the aircraft/ship/vehicle if there are passengers from mpox affected countries showing signs and symptoms of mpox.
4. To obtain assistance and cooperation as and when needed from all agencies/stake holders in disease prevention and control activities.



Myanmar

In August 2024, Myanmar's Ministry of Health strengthened preparedness following WHO's declaration of mpox as a PHEIC. Although no cases had been reported at the time, surveillance was strengthened at international airports, seaports, and border entry points in collaboration with relevant government

agencies. Preparedness measures also included quarantine facilities and medications to support responses to suspected cases (Ministry of Information Myanmar, 2024).

For case management and IPC, Myanmar's Interim Guideline for Management of Monkeypox 2022 (Version 1.0), published

in June 2022, provides guidance on diagnosis, treatment, and infection prevention and control (Ministry of Health, Myanmar, 2022). Public awareness activities as part of RCCE were also

conducted through health officials and media outlets to promote mpox prevention and encourage compliance with health guidance.



Philippines

In August 2024, the Department of Health (DOH) issued Department Memorandum No. 2024-030 as part of the national preparedness and response policy, providing updated interim guidelines on mpox prevention, detection, and management (Department of Health Philippines, 2024). The guidelines outline measures for healthcare facilities and local government units covering prevention, case detection, isolation, treatment, and reintegration.

For surveillance and points-of-entry measures, the DOH strengthened surveillance and border health measures through the Bureau of Quarantine (BOQ), including symptom-based screening of incoming international travellers, particularly those arriving from countries reporting mpox cases (Department of Health Philippines, 2024). Healthcare providers are required to notify the DOH of suspected, probable, and confirmed cases within 24 hours of detection. Laboratory testing is coordinated initially

through the Research Institute for Tropical Medicine (RITM), while confirmed samples may undergo genomic sequencing to identify viral clades. Close contacts are monitored for symptoms for 21 days after their last exposure.

Regarding case management and IPC, cases are isolated according to clinical severity and IPC requirements cases (Department of Health Philippines, 2024). Mild cases may isolate at home if adequate infection prevention measures can be maintained, while severe cases and individuals at increased risk of complications require hospital assessment and care. The guidelines also emphasize hand hygiene, environmental cleaning and disinfection, appropriate use of PPE, and avoiding close contact with infected individuals and potentially infected animals.

As part of RCCE, the DOH promotes public awareness, stigma prevention, and the safe reintegration of affected individuals into their households and communities.



Singapore

As part of public health preparedness and points-of-entry measures, in August 2024, Singapore's MoH introduced precautionary measures following the WHO's declaration of mpox as a PHEIC. These included temperature and visual screening at international airports and sea checkpoints for travellers arriving from affected areas, as well as declarations of mpox-related symptoms and travel history through the SG Arrival Card (Ministry of Health Singapore, 2024a; Ministry of Health Singapore, 2024b).

As part of surveillance and case management, medical practitioners and healthcare institutions were instructed to promptly detect and report suspected cases individuals (Ministry of Health Singapore, 2024c). Suspected Clade I cases were referred to designated hospitals for assessment and testing, while confirmed cases were isolated until they were no longer infectious. Close contacts were quarantined for up to 21 days after their last exposure, with contact tracing conducted to identify exposed.

Under IPC, Singapore implemented environmental cleaning and disinfection and conducted wastewater testing in migrant worker dormitories and the Onboard Centre. Vaccination measures included offering JYNNEOS to healthcare workers at high risk of exposure and close contacts of confirmed cases (Ministry of Health Singapore, 2024d). For RCCE, public health advisories promoted personal hygiene, avoidance of direct contact with infected people or animals, and early medical assessment for returning travellers who developed symptoms within 21 days.

As part of international collaboration, in November 2024, Singapore provided mpox diagnostic kits and laboratory testing supplies sufficient for up to 50,000 tests to the Africa Centres for Disease Control and Prevention (Africa CDC) to support testing and case management in affected African countries (Ministry of Health Singapore and Africa CDC, 2024).



Thailand

In August 2024, Thailand's Division of Epidemiology issued Memorandum No. ๓๕ 0408.4/๓ 36 on 23 August 2024, circulating national guidelines for mpox surveillance and investigation following the WHO declaration of mpox as a PHEIC (Division of Epidemiology, Ministry of Public Health Thailand, 2024a). The memorandum

covered surveillance and disease investigation, clinical management and IPC, and risk assessment and international travel-related measures at points of entry. It also reinstated financial support for mpox laboratory testing.

For surveillance and points-of-entry measures, Thailand's Department of

Disease Control (DDC) published revised guidelines on 30 August 2024, requiring suspected cases to be reported through the event-based surveillance system within 24 hours (Division of Epidemiology, Ministry of Public Health Thailand, 2024b). Case investigation includes assessment of clinical symptoms and epidemiological links, while laboratory confirmation uses real-time PCR, with additional clade testing when indicated. The DDC also provides screening cards for healthcare facilities and revised mpox reporting and investigation forms to support case detection and reporting.

Regarding case management and IPC, the guidelines recommend isolating suspected cases in single rooms while awaiting laboratory results (Division of Epidemiology, Ministry of Public Health Thailand, 2024b). Close contacts are classified according to exposure risk and monitored for 21 days after their last

exposure. Additional measures include contact tracing, appropriate use of PPE, safe specimen collection and transportation, and guidance on laundry care for mpox patients. The DDC also provides guidelines for surveillance, disease investigation, and outbreak control following the downgrading of the operational center (Division of Epidemiology, Ministry of Public Health Thailand, 2024b).

As part of RCCE, Thailand provides public mpox checklists and guidance on recognizing symptoms and identifying exposure risks (Division of Epidemiology, Ministry of Public Health Thailand, n.d). The DDC also publishes updates on the mpox situation in Thailand, while the Department of Medical Sciences (DMSC) provides a list of laboratories that have passed proficiency testing for mpox virus detection.



Timor Leste

In August 2022, the MoH of Timor-Leste, with support from the WHO, strengthened national preparedness and response capacity for mpox (WHO Timor-Leste, 2022). On August 2022, WHO handed over PCR test kits to the MoH, enabling the National Health Laboratory to conduct up to 750 tests. WHO also provided technical assistance for the development of a national preparedness and response plan and guidelines for mpox prevention, detection, care, and treatment.

For surveillance and points-of-entry measures, the MoH, with WHO support, conducted six training sessions for personnel at airports and land crossings and healthcare providers, including doctors, nurses, and midwives from Hospital Nacional Guido Valadares and referral hospitals (WHO Timor-Leste, 2022). In September 2024, the MoH and WHO-Timor-Leste conducted a two-day mpox preparedness workshop ahead of the Pope's visit on 9–11 September, addressing screening, prevention,

diagnosis, and treatment, with discussions focusing on strengthening airport screening (WHO Timor-Leste, 2024a). Regarding case management and IPC, WHO provided technical assistance for the development of national guidelines covering mpox care and treatment (Ministry of Health Timor Leste, 2022).

As part of RCCE, WHO supported the MoH in developing risk communication. During the September 2024 workshop, representatives from the Ministry of Agriculture, the National Police, customs, airport authorities, religious leaders, development partners, and the media participated in discussions on mpox preparedness and misinformation measures (WHO Timor-Leste, 2024a).

WHO-Timor-Leste also disseminated mpox-related health education through its official Facebook page (WHO Timor-Leste, 2024b).

Further control measures, aligned with WHO's 2024–2027 strategy, include community engagement, case isolation where feasible, lesion coverage, mask use when isolation is challenging, infection prevention and control, healthcare worker protection, clinical care, and vaccination. A One Health approach, including animal surveillance and coordination across human, animal, and environmental health sectors, is also essential to monitor zoonotic risks and prevent potential transmission between humans and animals (Pinto, 2025).



Viet Nam

Viet Nam's Ministry of Health issued Official Letter No. 4849/BYT-DP on strengthening mpox prevention and control, directing provincial authorities and health institutions to enhance surveillance, preparedness, and outbreak response (Ministry of Health Viet Nam, 2024a). Under surveillance and early detection, measures include monitoring suspected cases at border crossings, healthcare facilities, dermatology and gynecology services, and facilities providing HIV/AIDS prevention services. Suspected and confirmed cases must be reported promptly through the designated online reporting system.

For case management and laboratory capacity, Decision No. 465/QD-BYT, issued

on February 2024, established national guidelines for mpox diagnosis, treatment, and prevention applicable to medical examination and treatment facilities nationwide (Ministry of Health Viet Nam, 2024b). The guidelines specify PCR-based diagnosis, specimen collection and transportation procedures, isolation, treatment according to disease severity, and referral pathways. Suspected and confirmed cases must be reported to the relevant Institutes of Hygiene and Epidemiology/Pasteur Institutes and the Ministry of Health within 24 hours.

Under IPC, the guidelines require isolation of suspected and confirmed cases, the use of personal protective equipment by healthcare workers and caregivers, and

infection prevention measures in healthcare facilities. General preventive measures include frequent handwashing, avoiding direct contact with infected individuals and contaminated items, and isolating patients according to their clinical condition.

For preparedness and response, Official Letter No. 4849/BYT-DP directs local authorities to update outbreak response plans, organize healthcare worker training, and ensure the availability of medicines, equipment, personnel, and funding (Ministry of Health Viet Nam, 2024a). The Institutes of Hygiene and Epidemiology/Pasteur Institutes and tertiary hospitals are also instructed to monitor outbreaks, prepare diagnostic equipment and reagents, support localities in outbreak investigation and

specimen testing, and prepare resources for patient classification, admission, and treatment.

Regarding RCCE, the Ministry of Health recommends communicating prevention measures, particularly to high-risk groups. Public guidance covers recognition of suspected symptoms, seeking medical assessment, self-isolation when symptomatic, avoiding sexual contact while suspected of infection, avoiding contact with infected individuals and potentially contaminated objects, and reporting to local health authorities after relevant exposure or travel. Under vaccination, Decision No. 465/QD-BYT identifies vaccination as a preventive measure for high-risk groups (Ministry of Health Viet Nam, 2024b).



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