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MPOX RISK ASSESSMENT IN THE ASEAN REGION

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Issue by Demand





MPOX RISK ASSESSMENT IN THE ASEAN REGION

Highlights

- As of July 14, 2023, the WHO reports a significant increase in mpox cases in the South-East Asia Region, mainly due to community transmission in Thailand (Precision Vaccinations, 2023). All patients are male, mostly from Bangkok, and half are HIV-infected.
- On August 31, 2023, ABVC Weekly Situation Report, there were 216 reported Mpox cases in the ASEAN region for 2023, a 671% increase in cases compared to the same period in 2022 according to the ABVC Situational Report on August 31, 2022.
- The ASEAN Region has also recorded its first Mpox-related death in 2023 since the outbreak (ABVC, 2023). The first recorded death was in Thailand.
- There has been a significant increase of Mpox cases in 2023 in East Asia from the People's Republic of China (601 cases), Hong Kong SAR (44 cases), Republic of China (278 cases), Republic of Korea (131 cases), and Japan (187 cases) compared to the previous year (ABVC, 2023).

Overview

Mpox is an infectious disease caused by the monkeypox virus, which causes a painful rash, enlarged lymph nodes, and fever (WHO, 2023). It spreads from contact with infected individuals and is caused by the Orthopoxvirus genus in the Poxviridae family. The virus was discovered in Denmark in 1958 and first reported in the Democratic Republic of the Congo in 1970. Mpox can spread from person to person or occasionally from animals to people. Since the eradication of smallpox in 1980 and the end of smallpox vaccination, Mpox has emerged in central, east, and west Africa, with a global outbreak occurring in 2022-2023. The natural reservoir of the virus remains unknown, but various small mammals, including squirrels and monkeys, are susceptible.

Transmission

According to the WHO (2023), Mpox can be transmitted through:

- person-to-person contact
- contact with infectious skin
- lesions or respiratory droplets
- mouth-to-mouth
- mouth-to-skin contact
- The virus can enter the body through broken skin, mucosal surfaces, or the respiratory tract
- Mpox can spread to household members and sex partners, with people with multiple sexual partners at higher risk.

Animal-to-human transmission occurs from infected animals to humans through bites or scratches, hunting, skinning, trapping, cooking, or eating animals. Mpox can also be contracted from contaminated objects, sharps injuries, or community settings.



Signs and Symptoms

Mpox is a viral infection that causes symptoms such as (WHO, 2023):

- rash
- fever
- sore throat
- headache
- muscle aches
- back pain
- low energy
- swollen lymph nodes

Common symptoms include:

- fever
- muscle aches
- sore throat
- rash that can appear anywhere on the body, including the face, mouth, throat, groin, and anus

The disease can spread to others, especially children, pregnant people, and those with weak immune systems. The global outbreak of mpox began in 2022, and some people may experience a rash before or at the same time as other symptoms. Complications from mpox include skin infections, pneumonia, corneal infection, pain, vomiting, diarrhea, sepsis, brain inflammation, heart disease, rectum, genital organs, urinary passages, and death. People with immune suppression due to medication or medical conditions are at higher risk of serious illness and death due to mpox.

Diagnosis

- RT-PCR (swabbing of skin lesions or oropharyngeal, anal, or rectal swabs; blood testing is not recommended) [WHO, 2023].

Treatment and Vaccination

Treatment for mpox focuses on managing rash and pain, and preventing complications (WHO, 2023). Early and supportive care is crucial. Vaccination is recommended for high-risk individuals, such as health workers, men with multiple partners, and sex workers.

Antivirals like tecovirimat have been used to treat mpox, and further studies are ongoing.



Mpox Cases in the ASEAN Region

ASEAN Member State	Cumulative Cases Same Period 2022	Cumulative Cases 2023	Trend in Cases	% Change in Cases	Deaths in 2023	Case Fatality Rate (CFR) in 2023
<i>Indonesia</i>	1	0	↓	-100%	-	-
<i>Malaysia</i>	0	2	↑	200%	-	0.00%
<i>Philippines</i>	4	1	↓	-75%	-	0.00%
<i>Singapore</i>	16	7	↓	-56%	-	0.00%
<i>Thailand</i>	7	205	↑	2,829%	1	0.49%
<i>Vietnam</i>	0	1	↑	100%	-	0.00%
ASEAN Total	28	216	↑	671%	1	0.46%

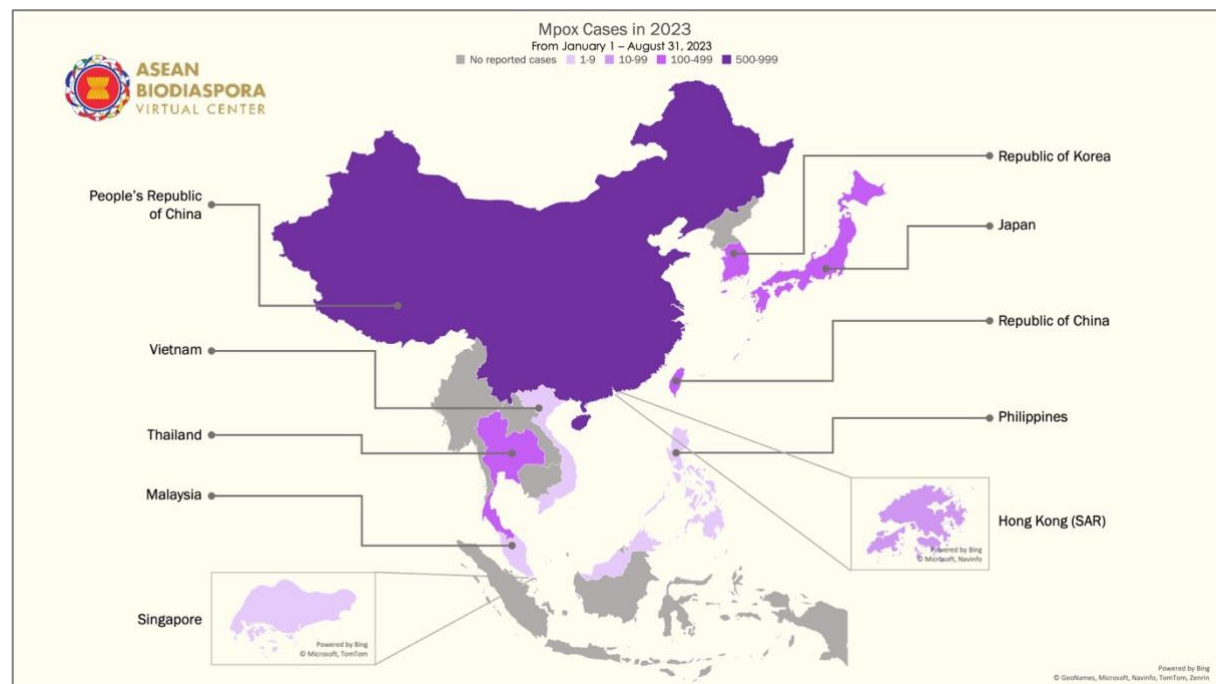
*Data from ABVC Situational Report August 31, 2022 and ABVC MMWR August 31, 2023

Mpox Cases in the East Asia

Country/ Territory	Cumulative Cases Same Period 2022	Cumulative Cases 2023	Trend in Cases	% Change in Cases	Deaths in 2023	Case Fatality Rate (CFR) in 2023
<i>Hong Kong (SAR)</i>	0	44	↑	4,400%	-	0.00%
<i>Japan</i>	4	187	↑	4,575%	-	0.00%
<i>People’s Republic of China</i>	0	601	↑	60,100%	-	0.00%
<i>Republic of China</i>	3	278	↑	9,267%	-	0.00%
<i>Republic of Korea</i>	1	131	↑	13,000%	-	0.00%

*Data from ABVC Situational Report August 31, 2022 and ABVC MMWR August 31, 2023

Map of Mpox Cases in the ASEAN Region and Neighboring Countries



*Data from ABVC MMWR August 31, 2023



Mpox Importation Likelihood to the ASEAN Member States from Thailand and Neighboring Countries

Country of Destination	Country/Territory of Origin	Importation Likelihood**	Forecasted Volume of Passengers (August 2023)
Brunei Darussalam	Thailand	0.0001	1,981
	Hong Kong (SAR)	0	1,215
	Japan	0.0002	1,112
	People's Republic of China	0	1,656
	Republic of China	0.0002	1,309
	Republic of Korea	0	1,070
Cambodia	Thailand	0.00239841	55,835
	Hong Kong (SAR)	0	4,902
	Japan	0.001599	8,346
	People's Republic of China	0	43,267
	Republic of China	0.00169984	5,728
	Republic of Korea	0	11,003
Indonesia	Thailand	0.002697221	71,960
	Hong Kong (SAR)	0.0004	34,190
	Japan	0.014712214	57,527
	People's Republic of China	0	74,181
	Republic of China	0.007781702	24,786
	Republic of Korea	0	36,258
Lao PDR	Thailand	0.00099965	19,074
	Hong Kong (SAR)	0	157
	Japan	0.00019999	1,153
	People's Republic of China	0	13,001
	Republic of China	0	282
	Republic of Korea	0	6,213
Malaysia	Thailand	0.003995032	152,232
	Hong Kong (SAR)	0.00019999	41,126
	Japan	0.013434579	46,261
	People's Republic of China	0	128,148
	Republic of China	0.01147161	52,342
	Republic of Korea	0	59,532
Myanmar	Thailand	0.00099971	32,863
	Hong Kong (SAR)	0	612
	Japan	0.00109962	3,418
	People's Republic of China	0	15,884
	Republic of China	0.0006	2,564
	Republic of Korea	0	3,954
Philippines	Thailand	0.00109981	37,264
	Hong Kong (SAR)	0.0004	73,842
	Japan	0.024258973	96,654
	People's Republic of China	0	49,831
	Republic of China	1.0766388	61,741
	Republic of Korea	0.0001	150,425
Singapore	Thailand	0.00489532	159,101
	Hong Kong (SAR)	0.0001	57,484
	Japan	0.025681526	85,978
	People's Republic of China	0	206,091
	Republic of China	0.0171	71,698
	Republic of Korea	0	70,338
Vietnam	Thailand	0.004890181	141,979
	Hong Kong (SAR)	0	36,807
	Japan	0.034175731	107,882
	People's Republic of China	0	88,476
	Republic of China	0.020744393	127,788
	Republic of Korea	0.00039995	343,998

*Importation likelihood data from Bluedot, accessed August 31, 2023

**Value between 0 and 1, inclusive. Indicates the probability of an infected patient arriving at the Destination Location from Origin with mpox in the next 30 days.



Mpox Vaccine and Treatment in Thailand

Thailand's first batch of mpox vaccine is expected to arrive in August 2023, with 1,000 doses to protect vulnerable individuals, the Disease Control Department (DCD) said on August 1, 2023 (The Nation Thailand, 2023). The DCD is coordinating with the Government Pharmaceutical Organization to purchase a third-generation vaccine, which is easy to administer and has few side effects. A public health committee will determine which vulnerable groups should receive the vaccine doses.

On August 14, Dr. Sophon Iamsirithaworn, deputy director-general of DDC, said that Thailand has received a batch of the antiviral Tecovirimat (TPOXX) medication from the World Health Organization to treat patients who get the virus (Wipatayotin, 2023).

Risk Assessment

As of July 14, 2023, there has been a significant increase of mpox cases in 2023 in East Asia from the People's Republic of China (601 cases), Hong Kong SAR (44 cases), Republic of China (278 cases), Republic of Korea (278 cases), and Japan (187 cases) compared to the previous year (ABVC, 2023).

Based on data from ABVC Situation Report (August 31, 2022) and ABVC Weekly Situation Report (August 31, 2023), mpox cases in the ASEAN region have been reported since 2022 in several countries, namely Singapore, Thailand, the Philippines, and Indonesia. In 2023 mpox cases were also reported in Vietnam and Malaysia. The number of cases in the ASEAN region increased significantly from 28 cases in 2022 to 216 cases in 2023 (671%). Most cases in 2023 (as of August 31, 2023) were reported from Thailand with 205 cases and 1 death (CFR = 0.49%). The ABVC reports a significant increase in Mpox cases in the Southeast Asia Region, mainly due to community transmission in Thailand.

Mpox can be transmitted to humans through physical contact with someone who is infectious, with contaminated materials, or with infected animals.

The likelihood of starting local transmission is predicted to be 42% after a case of Mpox is introduced into an active MSM population with essentially little population immunity (Deng et al., 2023). This risk would increase to >95% with more than six cases.

The spread of mpox cases in the ASEAN region is possible with medium to high risk to the MSM population with little immunity and low risk to the general population, regardless of immunity, in the ASEAN region.

Recommendations

Based on WHO recommendations, the ABVC recommends countries to develop their own context-specific approaches to preparing for and responding to mpox outbreaks, with a particular focus on strategic objectives:

1. Stopping human-to-human transmission
2. Protecting vulnerable groups at risk including vaccination
3. Minimizing potential zoonotic transmission
4. Increase awareness campaign



Achieving this requires implementing effective public health measures in emergency coordination, collaborative intelligence; community protection; safe and scalable treatment; as well as prevention and research. Facing this global epidemic requires fast action, while upholding inclusivity and respect for human rights.



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