

COVID-19 and Monkeypox Situational Report in the ASEAN+3 Region

— ASEAN BioDiaspora Virtual Center (ABVC)

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COVID-19: Highlights and Situation Overview

Global Update

- **Worldwide**, there have been over 615 million cases and over 6 million deaths attributed to COVID-19.
- **World Health Organization:** Over 3.1 million new cases were recorded during the week of September 5 to 11, 2022, a 28% reduction from the previous week's total (Figure 1, Table 1). Just about 11 000 fatalities were recorded, a 22% reduction over the previous week in terms of new weekly deaths. Over 605 million confirmed cases and over 6.4 million fatalities had been recorded globally as of September 11, 2022. [[Full Report](#)]

Regional Update

- **Philippines:** Following an upsurge in cases, Metro Manila is now considered to be at "moderate risk" for COVID-19, the Department of Health stated on September 16. According to a briefing by the in-charge health officer, Undersecretary Maria Rosario Vergeire, the danger level in 11 of the capital region's 17 local government units is moderate. According to Vergeire, Metro Manila's optimism rating increased to 16.4%. For the virus to be kept under control, the positive rate, or the proportion of infected persons among all tested, should stay below 5%. Despite a rise in instances, the region's hospital use rate is still low-risk. 33% of the beds in the intensive care unit and 39% of the ward beds have both been used. Vergeire emphasized that the current increase in instances cannot, at least not yet, be linked to the relaxation of the face mask laws outside.
- **China:** The City of Chengdu in China on September 15 (Thursday) lifted the full COVID-19 lockdown in all districts still facing curbs as a recent outbreak comes under control. According to its latest COVID-19 guidelines released late on September 14 (Wednesday), residents of districts still under a full lockdown will no longer face limits on how frequently they can leave their homes, except for some areas that are still fighting community infections. Likewise, its public transportation will resume and workplaces will reopen. However, non-essential travel out of Chengdu is discouraged, and residents who need to leave the city must show negative COVID-19 results from tests taken within 24 hours prior to departure.

Vaccine Update

- **Malaysia:** In order to combat emerging viral strains, the Malaysian government will purchase new COVID-19 vaccinations, according to Health Minister Khairy Jamaluddin. According to Mr. Khairy, who was reported by Malaysian media as stating on Tuesday, high-risk groups including the elderly and people with major comorbidities will receive the immunizations free of charge (Sep 13). According to Mr. Khairy, who was quoted by the New Straits Times, Malaysia is now discussing the purchase with the vaccine producers.
- **Singapore** has granted temporary authorization for its first bivalent COVID-19 booster vaccine. The Spikevax Bivalent Original/Omicron COVID-19 jab by Moderna comprises two components that target the original SARS-CoV-2 strain and the Omicron BA.1 variant respectively and is authorized for use as a booster in individuals aged 18 years and above, who have received primary series COVID-19 vaccination. The Health Sciences Authority said that safety data from the clinical studies showed that the bivalent vaccine was generally well-tolerated, adding that it will take the necessary action and provide updates to the public if significant safety concerns are identified.

Shipments of the bivalent Moderna COVID-19 vaccine are expected to arrive in Singapore by the end of September 2022.

- **Thailand:** As the government intensifies its immunization campaign to reach all age groups, the youngest possible portion of the Thai population, aged between six months and five years old, will soon be eligible to get COVID-19 shots. Anutin Charnvirakul, the public health minister, anticipates that Pfizer (Thailand and Indochina) will begin shipping dosages for infants and small children the following month. The recommended vaccination must be administered in three 3-microgram doses to children in this group. Of Thailand's 70 million people, more than 53 million have gotten two COVID-19 vaccinations. At least 4 million of them are between the ages of 12 and 17; 2.6 million are between the ages of five and eleven.

Research Update

- South African researchers report waning monovalent (single-strain) COVID-19 vaccine booster effectiveness against the Omicron subvariants, with estimated efficacy falling to 50% against the BA.1/BA.2 and 47% against BA.4/BA.5 as early as 3 or 4 months after vaccination.¹ In the study **Effectiveness and Durability of the BNT162b2 Vaccine against Omicron Sublineages in South Africa** published on September 14 in the *New England Journal of Medicine (NEJM)*, the research team estimated the effectiveness of two and three doses of the monovalent Pfizer/BioNTech vaccine against COVID-19 hospitalization among 32,883 patients hospitalized for any cause and tested for COVID-19 from November 15, 2021 to June 24, 2022.¹ The study was conducted before US Food and Drug Administration (FDA) authorized the updated bivalent (two-strain) boosters designed to protect against BA.4/BA.5, in addition to the wild-type virus (BA.1/BA.2).¹ From November 15, 2021 to February 28, 2022 (BA.1/BA.2-dominant period) and April 15 to June 24, 2022 (BA.4/BA.5-dominant period), 18% of patients tested positive for COVID-19.¹ During both periods, two-dose effectiveness against hospitalization began waning as early as 3 or 4 months after vaccination.¹ Estimated vaccine effectiveness was 56.3% during BA.1/BA.2 dominance and 47.4% amid BA.4/BA.5. A third dose remained effective against severe infections with all four subvariants at 1 or 2 months, but effectiveness fell by 3 or 4 months to 50% amid BA.1/BA.2 dominance and 46.8% during the BA.4/BA.5 period.¹ The authors said that this evidence of rapid waning of durability indicates the need for regular boosting as early as 4 months after the last dose or the need for vaccines to incorporate variants of concern to maintain protection.¹ [\[Full Text\]](#)
- The Centers for Disease Control and Prevention (CDC) researchers published new data on September 15 in *Morbidity and Mortality Weekly Report* showing that the risk of death among hospitalized COVID-19 patients was substantially lower during the later Omicron period than during the earlier Omicron period or the Delta period, even though more elderly patients were hospitalized during the later Omicron period.² The authors used a large US hospital database composed of 678 hospitals to look at in-hospital mortality risk during the Delta (July–October 2021), early Omicron (January–March 2022), and later Omicron (April–June 2022) variant periods among patients hospitalized primarily for COVID-19.² From April 2020 to June 2022, a total of 1,072,106 COVID-19 hospitalizations and 128,517 in-hospital deaths were reported. Before the Omicron variant emerged as the dominant strain in the United States, COVID-19 hospitalizations identified as primarily for COVID-19 were 83.8% and fell during the Omicron period to 62.8%.² Among patients hospitalized primarily for COVID-19 during the Delta, early Omicron, and later Omicron periods, patients aged 65 years or older constituted 15.1%, 22.9%, and 28.9% of all COVID patients, respectively.² The authors found the crude mortality risk (cMR, recorded as deaths per 100 patients hospitalized primarily for COVID-19) was lower during the early

Omicron (13.1) and later Omicron (4.9) periods than during the Delta (15.1) period.² [\[Full Text\]](#)

- The incidence of cognitive decline among long-term care (LTC) residents was lower during the COVID-19 pandemic than it was before the pandemic, according to this matched population-based study.³ This result could be a result of the side effects of the greater death rate in the COVID-19 group. Importantly, cognitive decline was comparable amongst residents of LTC facilities with COVID-19 outbreaks and those without, indicating that higher exposure to public health limitations (such as in-room isolation) was not linked to worsening decline.³ These findings refute anecdotal worries that the pandemic has made LTC patients' cognitive deterioration worse.³ [\[Full Text\]](#)
- Acute stroke is linked to SARS-CoV2 infection, which may be brought on by the virus' viral tropism to the vascular endothelium.⁴ It is unclear if cerebrovascular endothelial dysfunction and inflammation continue after an acute infection.⁴ Ten never-infected controls and fifteen people with a history of SARS-CoV2 infection were included in this prospective investigation.⁴ In order to assess cerebral blood flow (CBF) and compute CVR, participants underwent research MRI that combined arterial spin labeling perfusion imaging with acetazolamide stimulation.⁴ Chronic CVR impairment is linked to SARS-CoV2 infection.⁴ From this investigation, it is uncertain what the mechanistic foundation is.⁴ [\[Full Text\]](#)

Travel Advisories (new update/s)

ASEAN+3 Country	Published	Foreign travelers allowed	COVID-19 vaccination requirement	Required COVID-19 testing for fully vaccinated	Required COVID-19 testing for NOT fully vaccinated	Quarantine upon arrival	Health insurance requirement	Arrival health declaration/ registration/ documents
Brunei	September 15, 2022	Yes	No	No	No	No	Minimum coverage: BN\$20,000	No
Cambodia	July 21, 2022	Yes	Yes – fully vaccinated* certificate.	No	Yes – Passengers are subject to a COVID-19 rapid antigen test upon arrival at their own expense.	No	No	No
Indonesia	September 14, 2022	Yes	Yes – fully vaccinated* certificate for 18 years old and above.	No, but may be subject to RT-PCR upon arrival	Foreign travelers who are not fully vaccinated may not be allowed to enter Indonesia or may be subjected to RT-PCR test upon arrival	No	No	Traveler is required to download and register at PeduliLindungi app before departure.
Laos	August 9, 2022	Yes	Yes – fully vaccinated* certificate for 12 years old and above.	No	Yes – Negative rapid antigen test within 48 hours before departure for 12 years old and above.	No	No	No
Malaysia	August 2, 2022	Yes	No	No	No	No	No	No
Myanmar	September 13, 2022	Yes Visa-free travel reimposed to ASEAN Member States travelers	Yes – fully vaccinated* certificate for 12 years old and above.	Yes – printed negative COVID-19 antigen test result for 12 years old and above taken within 48 hours before arrival.	Foreign travelers who are not fully vaccinated are not allowed to enter or transit Myanmar.	No	Required to obtain Myanmar Insurance	No
Philippines	September 12, 2022	Yes	Yes – fully vaccinated* with booster dose certificate for	No	Yes – Negative RT-PCR test within 48 hours before departure or negative rapid antigen test within	No	No	Traveler is required to download and register at One Health Pass app before departure for those without visa.

		12 years old and above.		24 hours before departure for 3 years old and above.				
Singapore	August 31, 2022	Yes	Yes – fully vaccinated* certificate for 13 years old and above and vaccination status on the HealthHub app or TraceTogether app or acceptance letter issued by the Safe Travel Office (STO) or SGAC acknowledgment email.	No	Yes – Negative COVID-19 test within 48 hours before departure for travelers born on or after January 1, 2010.	No	No	Traveler is required to download and register at SG Arrival Card app before departure.
Thailand	July 1, 2022	Yes	Yes – fully vaccinated* certificate or certificate with at least one dose of COVID-19 vaccine for 18 years old and above.	No	Yes – Negative RT-PCR/rapid antigen test within 72 hours before departure for 18 years old above. Does not apply to travelers below 8 years old accompanied by fully vaccinated parents or guardian; passengers younger than 18 years with COVID-19 vaccination certificate with at least one dose.	No	No	No
Vietnam	May 16, 2022	Yes	No	No	No	No	No	No
China	August 31, 2022	No	-	-	-	-	-	-

Hong Kong	September 15, 2022	Yes	Yes – fully vaccinated* certificate for 18 years old and above. Passengers between 12 and 17 years old with COVID-19 vaccination certificate with at least one dose of Pfizer at least 14 days before arrival. Passengers younger than 12 years accompanied by a fully vaccinated parent/guardian.	No	Yes – Negative RT-PCR test within 48 hours before departure.	Travelers are subject to medical screening upon arrival and quarantine for up to 3 nights.	No	No
Macao	August 12, 2022	Yes	Yes – fully vaccinated* certificate for 12 years old and above.	Yes – Negative RT-PCR test within 48 hours before departure.	Foreign travelers who are not fully vaccinated are not allowed to enter or transit Macao.	Travelers are subject to medical screening upon arrival and quarantine for up to 10 days.	No	No
Japan	September 15, 2022	Yes	Yes – fully vaccinated* certificate for 18 years old and above.	No	Yes – Negative RT-PCR test within 72 hours before departure for 6 years old and above. Travelers could be subject to COVID-19 test upon arrival.	Travelers could be subject to quarantine for 5 days.	No	Traveler is required to download and register at MySOS app before departure.
South Korea	September 3, 2022	Yes	No	Yes – Passengers are subject to a COVID-19 RT-PCR test within 1 day upon arrival.	Yes – Passengers are subject to a COVID-19 RT-PCR test within 1 day upon arrival.	No	No	Upload test result on Q-code website .

Taiwan	September 13, 2022	Yes	No	Travelers are subject to RT-PCR test upon arrival at their own expense.	Travelers are subject to RT-PCR test upon arrival at their own expense.	Travelers are subject to quarantine for 3 days. Travelers must have confirmed booking of quarantine facility or hotel.	No	Traveler is required to download and register at Quarantine System for Entry Form before departure.
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- Reference: IATA Travel Centre
- *Fully vaccinated – at least 14 days from 2nd dose for two-dose vaccine or 14 days from a single dose vaccine upon arrival.

Cases and Deaths as of 16 September 2022

- As of 16 September 2022 (2PM, GMT+8), worldwide, there were **615,902,241** confirmed cases, including **6,531,378** deaths. Globally, Case Fatality Rate (CFR) was **1.1%**.
- 86,393,742 confirmed cases** of COVID-19 have been reported in the **ASEAN +3** countries including **34,318,342 cases** in the ASEAN region and **52,075,400 cases** in the PLUS THREE countries.
- The Case Fatality Rate in the **ASEAN +3** region is range between **0.1 to 3.2%**.
- There have been no tests reported in the last 14 days in the **ASEAN** Region.

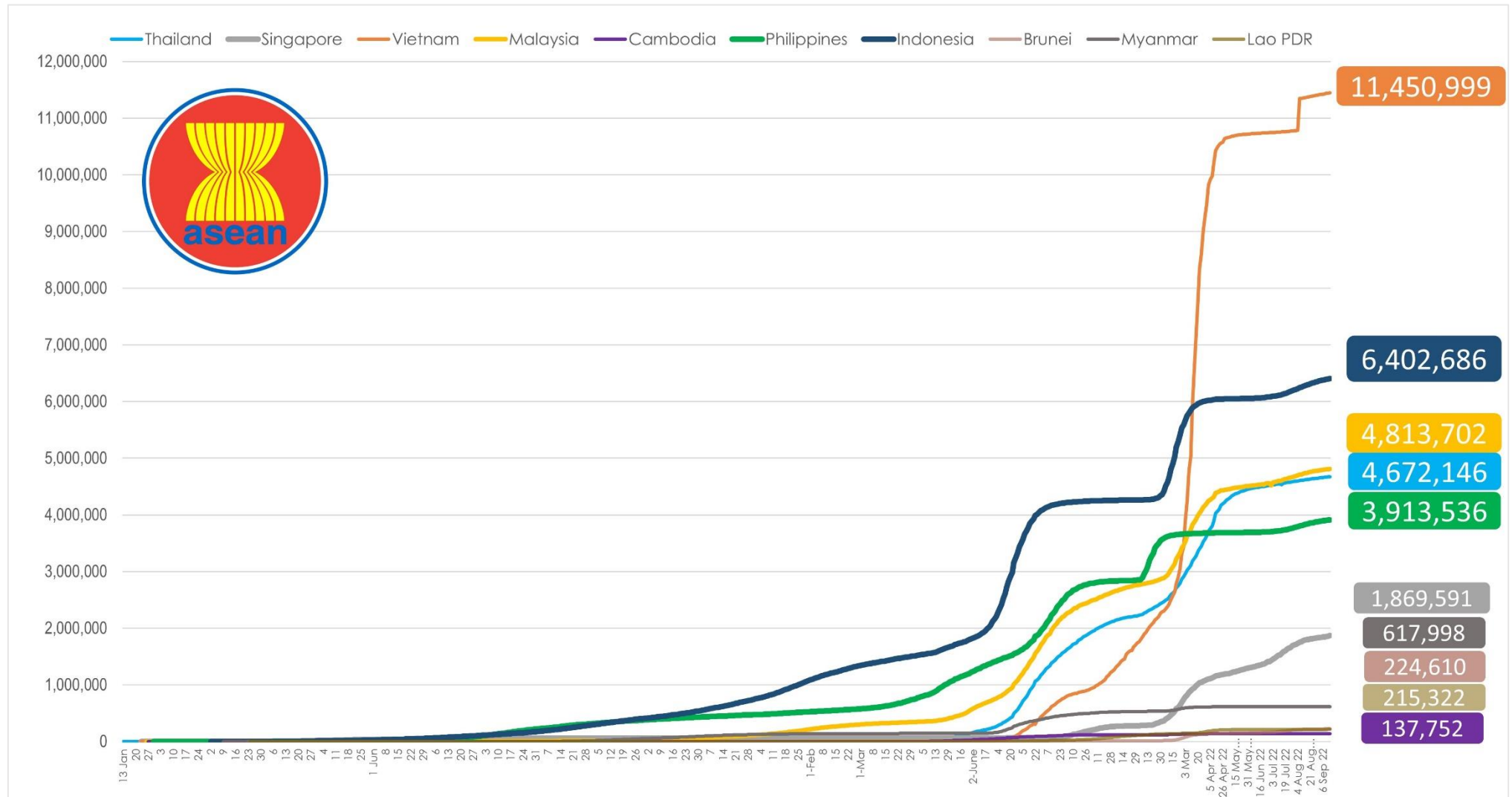
REGION	COUNTRY	FIRST CONFIRMED CASE(S)	LATEST REPORT ON CONFIRMED CASE(S)	TOTAL CONFIRMED CASES	NEW CASES	TOTAL DEATHS	NEW DEATHS	CUMULATIVE CASES/ 100,000	CUMULATIVE VACCINATED	CUMULATIVE FULLY VACCINATED	CUMULATIVE BOOSTERED	FULLY VACCINATED/ 100
ASEAN REGION	Brunei	10 Mar 20	15-Sep-22	224,610	740	225	-	51,481	449,149	444,079	330,826	99.7
	Cambodia	27 Jan 20	15-Sep-22	137,752	7	3,056	-	835	15,164,242	14,500,132	9,988,328	87.4
	Indonesia	02 Mar 20	15-Sep-22	6,402,686	2,651	157,849	20	2,364	203,435,374	171,111,977	61,135,788	62.5
	Lao PDR	24 Mar 20	15-Sep-22	215,322	50	757	-	3,000	5,888,649	5,222,417		70.3
	Malaysia	25 Jan 20	15-Sep-22	4,813,702	2,375	36,299	-	15,045	28,097,347	27,501,007	16,710,653	81.9
	Myanmar	23 Mar 20	15-Sep-22	617,998	259	19,444	1	1,142	34,777,314	27,545,329	2,227,351	51.2
	Philippines	30 Jan 20	15-Sep-22	3,913,536	2,141	62,447	40	3,616	77,134,380	72,416,833	17,726,336	63.6
	Singapore	23 Jan 20	15-Sep-22	1,869,591	2,423	1,605	-	32,576	5,024,115	5,003,831	4,285,045	91.8
	Thailand	13 Jan 20	15-Sep-22	4,672,146	837	32,606	10	6,706	56,968,072	53,419,228	31,863,076	74.6
	Vietnam	23 Jan 20	15-Sep-22	11,450,999	2,963	43,137	2	11,865	89,255,868	82,993,225	67,031,734	85.2
ASEAN COUNTRIES				34,318,342	14,446	357,425	73	128,630	516,194,510	460,158,058	211,299,137	
ASEAN PLUS THREE	South Korea	20-Jan-20	13-Sep-22	24,099,134	57,309	27,533	35	46,605	45,108,436	44,670,594	40,871,361	86.2
	Japan	16-Jan-20	13-Sep-22	20,306,340	87,572	42,581	220	16,082	104,165,569	102,765,927	112,664,291	82.5
	China	31-Dec-19	13-Sep-22	7,669,926	54,455	25,381	27	47,484	1,331,855,588	1,298,085,209	830,886,431	87.4
	PLUS THREE COUNTRIES				52,075,400	199,336	95,495	282	110,171	1,481,129,593	1,445,521,730	984,422,083
ASEAN +3				86,354,372	209,683	452,920	355	238,802	1,997,324,103	1,905,679,788	1,195,721,220	

- 529,508,499 confirmed cases** of COVID-19 have been reported in **5 continents** (other than ASEAN +3 countries):

CONTINENT	TOTAL CONFIRMED CASES	NEW CASES	TOTAL DEATHS	NEW DEATHS	CUMULATIVE CASES/ 100,000	CUMULATIVE VACCINATED	CUMULATIVE FULLY VACCINATED	CUMULATIVE BOOSTERED
AFRICA	12,882,937	272	258,460	-	250,208	391,065,032	308,988,951	47,949,007
AMERICAS	180,080,990	20,942	2,862,601	210	1,169,390	821,188,818	720,844,348	468,577,388
ASIA PACIFIC	85,134,965	30,807	748,793	164	470,076	1,441,329,458	1,329,695,037	345,749,172
EUROPE	229,046,527	91,238	1,970,957	249	1,973,624	564,658,632	536,739,849	348,121,259
MIDDLE EAST	22,363,080	3,064	237,647	34	209,806	143,615,519	128,977,387	58,919,576
TOTAL	529,508,499	146,323	6,078,458	657	4,073,104	3,361,857,459	3,025,245,572	1,269,316,402

COVID-19 Epi curve among ASEAN Countries:

From January 1, 2021 to September 15, 2022

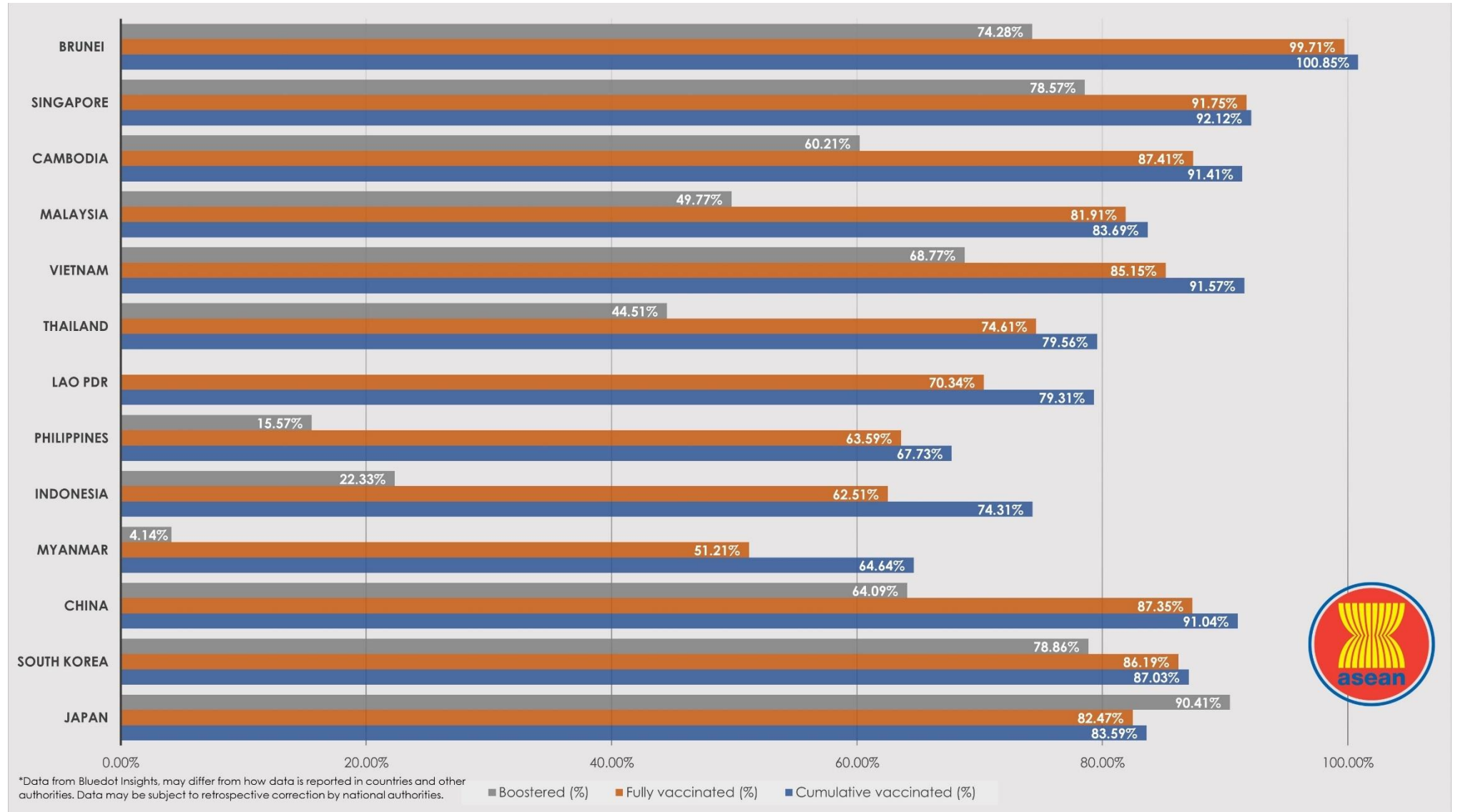


Cumulative cases of COVID-19 in the ASEAN Region as of September 15, 2022 (Report generated by ASEAN Biodiaspora Virtual Center)

*Data from Bluedot Insights, cases may differ from how data is reported in countries and other authorities. Data may be subject to retrospective correction by national authorities.


COVID-19 Vaccination Status

as of 15 September 2022



COVID-19 Outlook Assessment

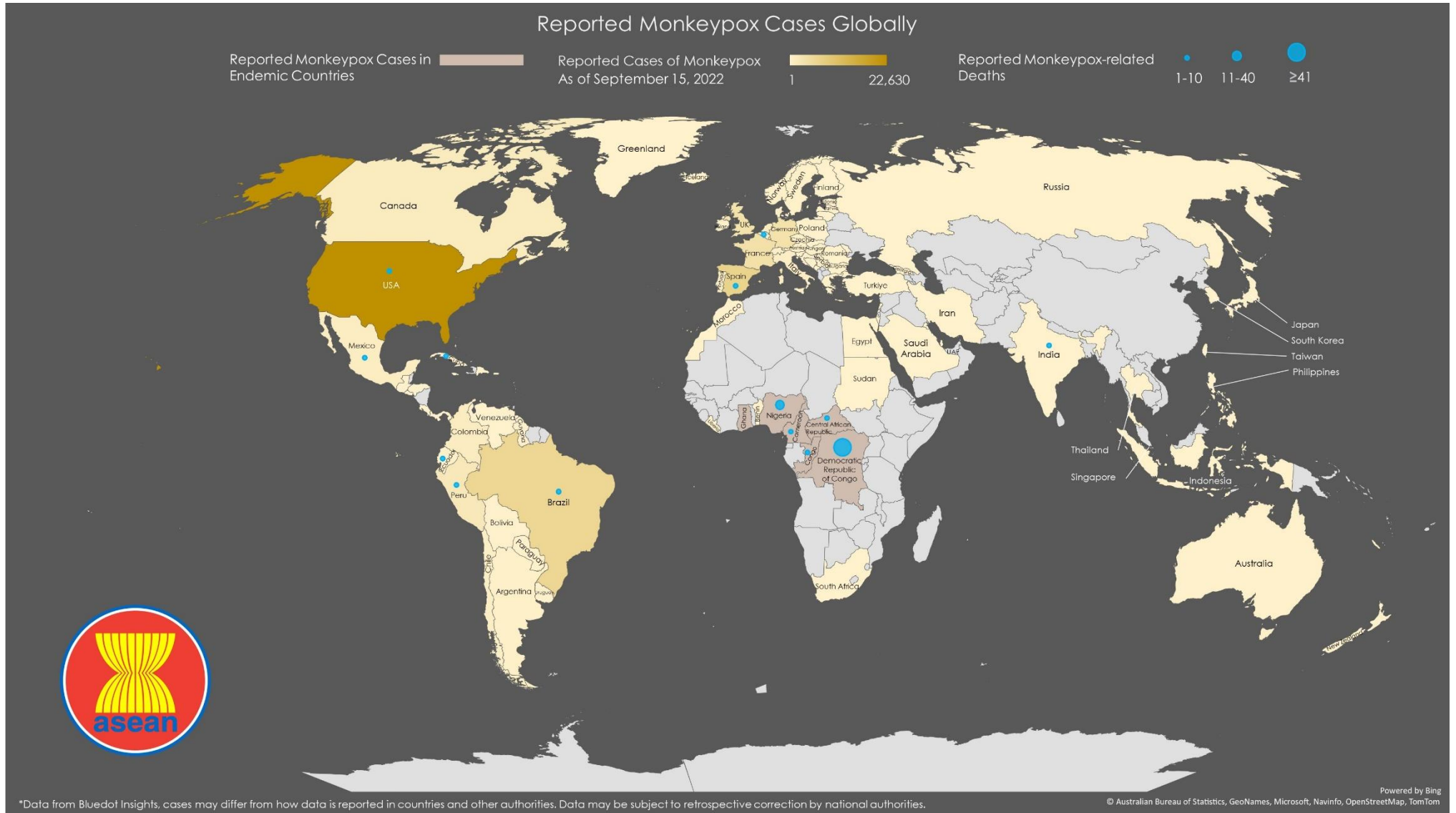
as of 13 September 2022

 ASEAN MEMBER STATE	REQUIREMENT						
	At least 80% of the high-risk population has been vaccinated with at least one dose of a COVID-19 vaccine.	At least 65% of the total population has a level of immunity to COVID-19; either recovered from COVID-19 or have been vaccinated with at least one dose of a COVID-19 vaccine.		Case levels are generally low (a 7-day rolling average number of daily new cases that is <10 cases per 100,000, with each day's past-14-day test positivity is consistently <5%).		Government Policy on containment and health (strictness and comprehensiveness in COVID-19 related government policies)	
	Population vaccinated/ day (7-day average)	% of Total population fully vaccinated / boosted	Population vaccinated/ day (7-day average)	Daily cases/ 100,000	Test positivity last 14 days	Containment and health index score - Oxford COVID-19 Government Response Tracker (OxCGRT)	Change over the past 30 days
Brunei	0%/day	≥90.0/74.9	Unknown	0.00	Unknown	31.0/100	undefined
Cambodia	0%/day	≥90.0/60.2	Unknown	0.04	Unknown	31.5/100	undefined
Indonesia	0%/day	65.5/22.3	Unknown	0.95	Unknown	54.2/100	undefined
Lao PDR	0%/day	77.3/ND	Unknown	1.22	Unknown	61.6/100	undefined
Malaysia	0%/day	84.4/49.8	0.01%/day	5.12	Unknown	51.8/100	undefined
Myanmar	0%/day	52.1/4.1	Unknown	0.45	Unknown	69.1/100	undefined
Philippines	0%/day	70.2/15.9	Unknown	1.97	Unknown	55.4/100	undefined
Singapore	0%/day	88.8/78.8	0.01%/day	36.88	Unknown	58.9/100	undefined
Thailand	0%/day	77.6/44.5	0.01%/day	1.56	Unknown	31.5/100	undefined
Vietnam	Unknown	≥90.0/69.9	Unknown	2.87	Unknown	43.5/100	undefined
Japan	0%/day	81.2/≥90.4%	0%/day	70.92	Unknown	42.9/100	undefined
South Korea	0%/day	86.5/78.9	0%/day	110.81	Unknown	38.1/100	undefined
China	Unknown	≥90.0/56.5	Unknown	0.027	Unknown	84.5/100	undefined

All of the countries have achieved the estimated high-risk population fully vaccinated of ≥90.0% except China with 35.1%.

Monkeypox Cases Reported Globally

as of September 15, 2022



Monkeypox: Highlights and Situation Overview

- As of 16 September 2022 (2PM, GMT+8), worldwide, there were **63,389** confirmed cases, including **88** deaths. Globally, Case Fatality Rate (CFR) was **0.14%**.
- **43 confirmed cases** of Monkeypox have been reported in the **ASEAN+3** region composed of **31 cases** in the ASEAN region and **12 cases** in the PLUS THREE countries, with CFR of **0%**.
- **63,346 confirmed cases** of Monkeypox have been reported in other **5 regions** (other than ASEAN +3 countries):

Monkeypox cases in ASEAN+3 region

Region	Country	Total Cases	New Cases	Deaths	Case Fatality Rate
ASEAN	Singapore	19	3	-	0.00%
ASEAN	Thailand	7	-	-	0.00%
ASEAN	Philippines	4	-	-	0.00%
Plus Three	Japan	4	-	-	0.00%
Plus Three	Taiwan	4	-	-	0.00%
Plus Three	South Korea	3	-	-	0.00%
ASEAN	Indonesia	1	-	-	0.00%
Plus Three	Hong Kong (SAR)	1	-	-	0.00%
ASEAN+3 Total		43	3	-	0.00%

Top 5 countries with most monkeypox cases globally

Region	Country	Total Cases	New Cases	Deaths	Case Fatality Rate
Americas	USA	22,630	1,126	2	0.01%
Europe	Spain	6,947	63	2	0.03%
Americas	Brazil	6,129	403	1	0.02%
Europe	France	3,832	112	-	0.00%
Europe	United Kingdom	3,552	62	-	0.00%

Monkeypox cases per region other than ASEAN+3

REGION	TOTAL CONFIRMED CASES SINCE JANUARY 1, 2022	NEW CASES SINCE THE PREVIOUS REPORT	TOTAL DEATHS	CASE FATALITY RATE
AFRICA*	3,683	781	78	2.12%
AMERICAS	35,610	2,235	6	0.02%
ASIA PACIFIC	146	0	1	0.68%
EUROPE	23,620	335	3	0.01%
MIDDLE EAST	287	7	-	0.00%
TOTAL	63,346	3,358	88	0.14%

Global Update

- Three months after instances of monkeypox were discovered in nations outside of West and Central Africa, where the virus illness was widespread, many fatalities have been reported. However, recent information has led some scientists to evaluate the pandemic from two distinct angles. 95 nations that are not endemic (where instances occur naturally) to the monkeypox virus have previously reported cases of monkeypox, an uncommon illness brought on by the monkeypox virus, a member of the orthopoxvirus genus in the family poxviridae. According to information gathered by the US CDC, monkeypox has caused a total of 19 fatalities worldwide. However, a recent study that was peer-reviewed and published in the scientific journal Nature found that the current fatality rate, which included approximately 57,000 cases and about 22 fatalities, was only 0.04 percent. The true number of deaths brought on by monkeypox, according to epidemiologist Andrea McCollum, leader of the poxvirus section at the US CDC, may, however, be greater than the current figures. McCollum stated that owing to a lack of testing and monitoring capabilities in regions like Africa, fatalities may not be fully reported and updated.

Regional Update

- **Singapore:** In a weekly report of infectious diseases uploaded in Singapore's Ministry of Health's (MOH) website on September 15 (Thursday), three additional cases of monkeypox were recorded in the week between September 4 and September 10. MOH's previous update about the disease on September 8 reported no new cases for the week of August 28 to September 3. The last monkeypox case was recorded in the week between August 14 and August 20.

Research Update

- Based on findings from animal models, the Food and Drug Administration licensed Tecovirimat (Tpoxx) for the treatment of smallpox; however, there are no safety or effectiveness data for its use in individuals infected with the monkeypox virus.⁵ Tecovirimat was administered orally as an outpatient to 99.8% of the 549 individuals with monkeypox virus infection who were treated with it under an Expanded Access Investigational New Drug regimen.⁵ Few adverse effects were recorded among 369 individuals.⁵ These results suggest continuing access to tecovirimat therapy during the present monkeypox outbreak because the drug is typically well tolerated.⁵ [\[Full Text\]](#)
- Data from 19 suitable studies (with 1512 people and 1031 infections verified by CDC criteria or PCR testing) were taken from 1705 distinct investigations. Most of them were case studies and cohort studies without controls. In general, study quality was average.⁶ Seizures, disorientation, and encephalitis were the three clinical characteristics that qualified for meta-analysis. Myalgia, headaches, and tiredness were other frequently reported symptoms, but there was too much variability in these cases to estimate their combined frequency, presumably as a function of the different viral clades and research design.⁶ Preliminary data supports a variety of neuropsychiatric presentations, including those with severe neurological consequences (encephalitis and seizures) and general neurological characteristics (confusion, headache and myalgia).⁶ Less information is available on the mental manifestations or consequences of MPX.⁶ [\[Full Text\]](#)

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