

COVID-19 and Mpox Situational Report in the ASEAN Region

– ASEAN BioDiaspora Virtual Center (ABVC)

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GLOBAL PARTNERS









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COVID-19: Highlights and Situation Overview

Global Update

- Worldwide, over 685 million cases and over 6 million deaths have been attributed to COVID-19.
- The World Health Organization (WHO) reported in its weekly update that COVID-19 cases and deaths continued to decline over the past 4 weeks, but levels for two of its six regions, Southeast Asia and the Eastern Mediterranean, have increased. It also reported that levels are rising in individual countries in other parts of the world. The rise in Southeast Asia is led by India's steady surge in cases fueled by the XBB.1.16 subvariant while levels have also increased in Indonesia. Iran, Qatar, and Saudi Arabia are among the countries with rising cases in the Eastern Mediterranean region. The number of newly reported 28-day deaths has also decreased across four regions including the Western Pacific Region, the Region of the Americas, the African Region, and the European Region while death numbers increased in two WHO regions including the Eastern Mediterranean Region and the South-East Asia Region. The WHO also reported that XBB.1.5 is still dominant and was reported in 95 countries, but XBB.1.16 (reported in 29 countries) and XBB.1.9.1 (reported in 61 countries) are increasing. [Full report]
- The **US Centers for Disease Control and Prevention (CDC)** said in its latest updates that the United States is averaging 14,491 new cases a day, down by 17.3% from its previous 7-day average for new daily cases.¹ The COVID-19-related daily deaths were also down by 25.5% from the last 7-day average for new daily deaths.¹ New daily hospitalizations for COVID-19 have also declined by 14.6% from the previous week.¹ Meanwhile, in its latest variant projections, XBB.1.16 now makes up 7.2% of US samples, up from 3.9% the previous week.² XBB.1.16 already makes up 21.3% of viruses in the country's south-central region, including Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.² Three other subvariants that still make up a relatively small proportion also gained ground: XBB.1.9.1, XBB.1.9.2, and XBB.1.5.1.² Nationally, the proportion of XBB.1.9.1 is at 6.5%, up from 5.1% the previous week.² [Full report <u>1</u>, <u>2</u>]

To prepare for the end of the COVID-19 public health emergency declaration on May 11, 2023, CDC is transitioning to sustainable national COVID-19 surveillance. CDC will continue to use all available resources to track COVID-19 and monitor its long-term effect on the United States and globally. Variant data is a good example of sustainable surveillance. The virus that causes COVID-19 is constantly changing, with new lineages emerging and then spreading or disappearing. At this time, the best ways to protect yourself and others from COVID-19 remain the same, regardless of which lineage causes infection. CDC will keep a close watch on these changes and continue to communicate about their potential impact.

 The European Centre for Disease Prevention and Control (ECDC) reported that COVID-19 activity in Europe shows overall decreasing trends.³ However, France has reported rising hospitalizations over the past 5 weeks in the older population, with Greece and Ireland also reporting rises in some of their metrics.³ Meanwhile, Latvia and some countries in central and eastern Europe are reporting increased deaths.³ [Full report]

Regional Update

• Indonesia: The daily increase in COVID-19 cases amid the controlled COVID-19 pandemic situation in Indonesia stands at 200-300 on average.⁴ However, in the last two weeks, the daily increase in cases had reached 900.⁴ The country's Head of the Communication and Public Service Bureau, Siti Nadia Tarmizi, said that most of the



COVID-19 cases in the country were caused by the BA.4 variant.⁴ However, she added that the Ministry of Health is still conducting an epidemiological investigation into the Omicron XBB.1.16 subvariant to determine whether it is the reason behind the surge in COVID-19 cases in Indonesia in recent weeks.⁴ The investigation was said to have been triggered when two XBB.1.16 cases were reported in Jakarta residents in March 2023.⁴ One of the patients was a man aged 56 years, with a recent travel history to India, while the other patient was a 30-year-old woman, with no recent travel history abroad.⁴ The ministry was said to be intensifying genomic surveillance to identify the cause of an increase in COVID-19 cases in the last few weeks.⁴ While cases have increased in the country, the authority emphasized that the number of deaths and people treated in hospitals had decreased, adding that decreasing adding that hospital occupancy was below 5%.⁴ [Full article]

Philippines: The country has recorded 2,386 COVID-19 cases in the past week according to the Department of Health (DOH) on April 17 (Monday).⁵ From April 10 to 16, an average of 341 daily COVID-19 cases were reported across the country, a 23% increase compared to the previous week.⁵ According to DOH's latest COVID-19 bulletin, 17 of the new cases during the week were considered severe or critical.⁵ As of April 16 (Sunday), 356 COVID-19 cases or 91% of the total COVID-19 admissions were in severe and critical condition.⁵ [Full article]

Vaccine Update

• The **WHO**'s technical advisory group on COVID-19 vaccine composition has reviewed the performance of bivalent COVID-19 vaccines and established a timeline for a new recommendation for 2023.⁶ In a statement of the group's deliberations, the WHO said that after reviewing the latest evidence, the group said both BA.1 and BA.4/5 booster versions provide a broader immune response than vaccines containing only the original virus.⁶ They added that the vaccines containing the BA.4/5 component prompt higher antibody titers to more recent Omicron lineages than boosters with a BA.1 as the second component.⁶ The group has also planned to meet twice more this year to review COVID-19 vaccine composition, once in May and again about 6 months later.⁶ [Full article]

Research Update (Published and peer-reviewed studies)

- The study **Durability of Bivalent Boosters against Omicron Subvariants** provided two additional months of data on bivalent COVID vaccine effectiveness (VE) among North Carolina residents.⁷ The additional 2 months of data collected from December 2022 to February 2023 showed how the bivalent vaccines perform when the BQ.1/BQ.1.1 and XBB/XBB.1.5 Omicron subvariants have become the most prevalent.⁷ Results were based on 6,306,311 North Carolinians who were eligible to receive bivalent boosters; of these residents, 1,279,802 received the injections.⁷ The authors found that VE against hospitalization or death was 67.4% after 2 weeks but decreased to 47.5% after 4 weeks and 38.4% after 5 months.⁷ In general, effectiveness against infection was higher for the Moderna bivalent vaccine than for the Pfizer-BioNTech bivalent vaccine and higher among previously infected participants than among those with no previous infection.⁷
- The aerosol box has been used during the management of patients with COVID-19 to reduce health care practitioner (HCP) exposure during aerosol-generating medical procedures (AGMPs).⁸ This multicenter, simulation-based, randomized clinical trial, Aerosol Box Use in Reducing Health Care Worker Contamination During Airway Procedures (AIRWAY Study) A Simulation-Based Randomized Clinical Trial, investigated whether the use of an aerosol box during AGMPs reduces HCP contamination or influences the time to successful completion and first-pass success rate for endotracheal intubation (ETI) and laryngeal mask airway (LMA) insertion.⁸ This was conducted from



May to December 2021 at tertiary care pediatric hospitals.⁸ Participant teams performed 3 simulated patient scenarios: bag-valve-mask ventilation, ETI, and LMA insertion.⁸ During the scenarios, aerosols were generated using Glo Germ.⁸ Teams of 2 HCPs were randomly assigned to control (no aerosol box) or intervention groups (aerosol box).⁸ The aerosol box (or SplashGuard CG) is a transparent, plastic barrier covering the patient's head and shoulders with access ports allowing HCPs to manage the airway.⁸ The primary outcome was surface area of contamination (AOC) on participants.⁸ Secondary outcomes were time to successful completion and first-pass success rates for ETI and LMA insertion.⁸ A total of 64 teams (128 participants) were enrolled, with data from 61 teams (122 participants) analyzed.⁸ Use of an aerosol box was associated with a 77.5% overall decreased AOC to the torso and a 60.7% overall decreased AOC to the facial area in airway HCPs.⁸ There was no statistically significant difference in surface contamination after doffing personal protective equipment between groups.⁸ Time to completing ETI was longer in the aerosol box group compared with the control group (mean difference: 10.2 seconds; 95% CI, 0.2 to 20.2 seconds; P = .04), but there was no difference between groups for LMA insertion (mean difference: 2.4 seconds; 95% CI, -8.7 to 13.5 seconds; P = .67).⁸ The use of an aerosol box reduced contamination deposition on HCPs' torso and face predoffing; the use of an aerosol box delayed time to successful intubation.⁸ These results suggest that the incremental benefits of reduced surface contamination from aerosol box use should be weighed against delayed time to complete intubation, which may negatively affect patient outcome.⁸ [Full text]

- This cross-sectional retrospective study, Health Care-Associated Infections Among Hospitalized Patients With COVID-19, March 2020-March 2022, assessed health care associated infections (HAIs) occurrence among patients admitted to hospitals with and without COVID-19.9 Analysis of inpatients discharged both with and without laboratoryconfirmed COVID-19 infection was conducted.⁹ From community hospitals affiliated with a large health care system in the US, data on the incidence of central lineassociated bloodstream infection (CLABSI), catheter-associated urinary tract infection (CAUTI), methicillin-resistant Staphylococcus aureus (MRSA) bacteremia, and Clostridioides difficile infection as reported to the National Healthcare Safety Network, were obtained between January 1, 2019, and March 31, 2022.9 Among nearly 5 million hospitalizations in 182 hospitals between 2020 and 2022, the occurrence of health careassociated infections (HAIs) were high among the 313,200 COVID-19 inpatients.9 Incidence per 100,000 patient-days showed higher HAIs among those with COVID-19 compared with those without.⁹ For CLABSI, the incidence for the full 9 guarters of the study was nearly 4-fold higher among the COVID-19 population than the non-COVID-19 population (25.4 vs 6.9).9 For CAUTI, the incidence in the COVID-19 population was 2.7-fold higher in the COVID-19 population (16.5 vs 6.1), and for MRSA, 3.0-fold higher (11.2 vs 3.7).⁹ Quarterly trends were compared with the same quarter in 2019.⁹ The greatest increase in the incidence of HAI in comparison with the same quarter in 2019 for the entire population occurred in quarter 3 of 2020 for CLABSI (11.0 vs 7.3), quarter 4 of 2021 for CAUTI (7.8 vs 6.8), and guarter 3 of 2021 for MRSA (5.2 vs 3.9).9 When limited to the non-COVID-19 population, the increase in CLABSI incidence vs the 2019 incidence was eliminated, and the quarterly rates of MRSA and CAUTI were lower vs the pre-pandemic 2019 comparator quarter.⁹ In this cross-sectional study of hospitals during the pandemic, HAI occurrence among inpatients without COVID-19 was similar to that during 2019 despite additional pressures for infection control and healthcare professionals.⁹ The findings suggest that patients with COVID-19 may be more susceptible to HAIs and may require additional prevention measures.⁹ [Full text]
- This cohort study, Association of In-person vs Virtual Education with Community COVID-19 Case Incidence Following School Reopenings in the First Year of the COVID-19 Pandemic, estimated the association of in-person vs virtual instruction for students at the sixth grade level or above with county-level COVID-19 incidence in the first year of the



COVID-19 pandemic.¹⁰ This study included matched pairs of counties resuming school programs with in-person vs virtual instruction, drawn from 229 US counties that contained a single public school district and with county populations exceeding 100,000 residents.¹⁰ Counties with 1 single public school district and reopened in-person schooling for students at the sixth-grade level or above during the fall of 2020 were matched 1-to-1 with counties whose school district reopened with only virtual instruction, based on geographic proximity, population level demographic factors, the resumption of school district-level fall sports activity, and baseline county COVID-19 incidence rates from November 2021 to November 2022. The inclusion criteria and subsequent matching algorithm led to the identification of 51 pairs of matched counties among 79 total unique counties.¹⁰ Exposed counties had a median (IQR) of 141,840 (81,441-241,910) residents each, and unexposed counties had a median (IQR) of 131,412 (89,011-278,666) residents each.¹⁰ County schools with in-person vs virtual instruction had similar daily COVID-19 case incidence within the first 4 weeks after in-person reopening, but counties with in-person instruction had higher daily incidence beyond 4 weeks.¹⁰ Daily case incidence per 100,000 residents among counties with in-person instruction, compared with counties with virtual instruction, was higher at 6 weeks (adjusted incidence rate ratio, 1.24 [95% CI, 1.00-1.55]) and at 8 weeks after (adjusted incidence rate ratio, 1.31 [95% CI, 1.06-1.62]).¹⁰ This outcome was also concentrated in counties where schools provided full rather than hybrid instructional models.¹⁰ Counties with in-person school instructional models early in the COVID-19 pandemic experienced increases in countylevel COVID-19 incidence at 6 and 8 weeks after in-person reopening, compared with counties with virtual instructional models.¹⁰ [Full text]

This study, Preclinical models suggest dysregulation of the renin-angiotensin system • (RAS) caused by SARS-CoV-2 infection may increase the relative activity of angiotensin II compared with angiotensin (1-7) and may be an important contributor to COVID-19 pathophysiology, evaluated the efficacy and safety of renin-angiotensin system (RAS) modulation using 2 investigational RAS agents, TXA-127 (synthetic angiotensin [1-7]) and TRV-027 (an angiotensin II type 1 receptor-biased ligand), that are hypothesized to potentiate the action of angiotensin (1-7) and mitigate the action of the angiotensin II.¹¹ Preclinical models suggest dysregulation of RAS caused by SARS-CoV-2 infection may increase the relative activity of angiotensin II compared with angiotensin (1-7) and may be an important contributor to COVID-19 pathophysiology.¹¹ Two randomized clinical trials including adults hospitalized with acute COVID-19 and new-onset hypoxemia were conducted at 35 sites in the US between July 22, 2021 and April 20, 2022, with a last follow-up visit in July 26, 2022.¹¹ Interventions were a 0.5-mg/kg intravenous infusion of TXA-127 once daily for 5 days or placebo or a 12-mg/h continuous intravenous infusion of TRV-027 for 5 days or placebo.¹¹ The primary outcome was oxygen-free days, an ordinal outcome that classifies a patient's status at day 28 based on mortality and duration of supplemental oxygen use; an adjusted odds ratio (OR) greater than 1.0 indicated superiority of the RAS agent vs placebo.¹¹ A key secondary outcome was 28day all-cause mortality.¹¹ Safety outcomes included allergic reaction, new kidney replacement therapy, and hypotension.¹¹ Both trials met prespecified early stopping criteria for a low probability of efficacy.¹¹ Of 343 patients in the TXA-127 trial (226 [65.9%] aged 31-64 years, 200 [58.3%] men, 225 [65.6%] White, and 274 [79.9%] not Hispanic), 170 received TXA-127 and 173 received placebo.¹¹ Of 290 patients in the TRV-027 trial (199 [68.6%] aged 31-64 years, 168 [57.9%] men, 195 [67.2%] White, and 225 [77.6%] not Hispanic), 145 received TRV-027 and 145 received placebo.¹¹ Compared with placebo, both TXA-127 and TRV-027 resulted in no difference in oxygen-free days.¹¹ In the TXA-127 trial, 28-day all-cause mortality occurred in 22 of 163 patients (13.5%) in the TXA-127 aroup vs 22 of 166 patients (13.3%) in the placebo aroup. In the TRV-027 trial, 28-day allcause mortality occurred in 29 of 141 patients (20.6%) in the TRV-027 group vs 18 of 140 patients (12.9%) in the placebo group.¹¹ The frequency of the safety outcomes was similar with either TXA-127 or TRV-027 vs placebo.¹¹ In adults with severe COVID-19, RAS



modulation (TXA-127 or TRV-027) did not improve oxygen-free days vs placebo.¹¹ These results do not support the hypotheses that pharmacological interventions that selectively block the angiotensin II type 1 receptor or increase angiotensin (1-7) improve outcomes for patients with severe COVID-19.¹¹ [Full text]

This study, Effect of Angiotensin-Converting Enzyme Inhibitor and Angiotensin Receptor Blocker Initiation on Organ Support-Free Days in Patients Hospitalized With COVID-19 A Randomized Clinical Trial, determined whether angiotensin-converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) initiation improves outcomes in patients hospitalized for COVID-19.12 In this ongoing, adaptive platform randomized clinical trial, 721 critically ill and 58 non-critically ill hospitalized adults were randomized to receive an RAS inhibitor or control between March 16, 2021, and February 25, 2022, at 69 sites in 7 countries (final follow-up on June 1, 2022).¹² Patients were randomized to receive open-label initiation of an ACE inhibitor (n = 257), ARB (n = 248), ARB in combination with DMX-200 (a chemokine receptor-2 inhibitor; n = 10), or no RAS inhibitor (control; n = 264) for up to 10 days.¹² The primary outcome was organ support-free days, a composite of hospital survival and days alive without cardiovascular or respiratory organ support through 21 days.¹² The primary analysis was a bayesian cumulative logistic model.¹² Odds ratios (ORs) greater than 1 represent improved outcomes.¹² On February 25, 2022, enrollment was discontinued due to safety concerns.¹² Among 679 critically ill patients with available primary outcome data, the median age was 56 years and 239 participants (35.2%) were women.¹² Median (IQR) organ support-free days among critically ill patients was 10 (-1 to 16) in the ACE inhibitor group (n = 231), 8 (-1 to 17) in the ARB group (n = 217), and 12 (0 to 17) in the control group (n = 231) (median adjusted odds ratios of 0.77 [95% bayesian credible interval, 0.58-1.06] for improvement for ACE inhibitor and 0.76 [95% credible interval, 0.56-1.05] for ARB compared with control).¹² The posterior probabilities that ACE inhibitors and ARBs worsened organ support-free days compared with control were 94.9% and 95.4%, respectively.¹² Hospital survival occurred in 166 of 231 critically ill participants (71.9%) in the ACE inhibitor group, 152 of 217 (70.0%) in the ARB group, and 182 of 231 (78.8%) in the control group (posterior probabilities that ACE inhibitor and ARB worsened hospital survival compared with control were 95.3% and 98.1%, respectively).¹² Among critically ill adults with COVID-19, initiation of an ACE inhibitor or ARB did not improve, and likely worsened, clinical outcomes.¹² [Full text]

Cases and Deaths as of 17 April 2023

- As of 17 April 2023 (1PM, GMT+7), worldwide, there were 685,679,172 confirmed cases, including 6,842,555 deaths. Globally, Case Fatality Rate (CFR) was 1.0%.
- 35,751,379 confirmed cases of COVID-19 have been reported in the ASEAN Region.
- The Case Fatality Rate in the ASEAN Region is range between 0.1 to 3.1%

COVID-19 cases in 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	Brunei Darussalam	10 Mar 20	14-Apr-23	284,632	-	225	-	64,053	450,404	445,929	338,987	99.3
REGION	Cambodia	27 Jan 20	04-Apr-23	138,726	-	3,056	-	841	15,244,858	14,609,937	10,433,215	87.1
	Indonesia	02 Mar 20	17-Apr-23	6,757,752	307	161,124	1	2,490	203,657,535	172,693,321	67,952,274	62.7
	Lao PDR	24 Mar 20	10-Apr-23	218,048	-	758	-	3,041	5,888,649	5,222,417		69.4
	Malaysia	25 Jan 20	14-Apr-23	5,056,911	-	36,994	-	15,788	28,125,245	27,536,657	17,056,957	81.1
	Myanmar	23 Mar 20	15-Apr-23	634,160	-	19,490	-	1,173	34,777,314	27,545,329	2,227,351	50.8
	Philippines	30 Jan 20	15-Apr-23	4,085,969	-	66,439	-	3,771	78,369,243	73,937,435	21,341,197	64.0
	Singapore	23 Jan 20	07-Apr-23	2,314,707	-	1,727	-	39,049	5,161,990	5,120,768	4,440,289	90.8
	Thailand	13 Jan 20	15-Apr-23	4,729,402	-	33,940	-	6,791	57,005,497	53,486,086	32,143,431	74.6
	Vietnam	23 Jan 20	15-Apr-23	11,531,072	-	43,186	-	11,950	90,450,881	85,848,363	57,452,750	87.4
4 7 1			EAN COUNTRIES	35,751,379	307	366,939	1	148,946	519,131,616	466,446,242	213,386,451	

*There have been no tests reported in the last 14 days in the ASEAN Region.

REGION	TOTAL CONFIRMED CASES	NEW CASES	TOTAL DEATHS	NEW DEATHS	
ASIA	194,328,833	7,468	1,202,859	11	
AFRICA	12,815,691	-	258,682		
AMERICAS	194,434,866	-	2,979,171	-	
EUROPE	248,348,403	-	2,034,904	-	
TOTAL	649,927,793	7,468	6,475,616	11	

**Data Reference: <u>Worldometer</u>

COVID-19 Epi curve among ASEAN Countries:

From January 1, 2022 to April 17, 2023



ASEAN Weekly COVID-19 New Cases and New Deaths

From January 1, 2022 to April 16, 2023



ASEAN COVID-19 Vaccination Status

as of 09 March 2023



*Last update in COVID-19 vaccination status in ASEAN was on March 9, 2023.

Mpox (Monkeypox) Cases Reported Globally

as of April 16, 2023





Mpox Daily Trend Globally

as of April 16, 2023





Mpox: Highlights and Situation Overview

- As of 16 April 2023 (1PM, GMT+7), worldwide, there were **86,930** confirmed cases, including **116** deaths. Globally, Case Fatality Rate (CFR) was **0.13%**.
- **48 confirmed cases** in the ASEAN region, with CFR of **0%**.
- **86,882 confirmed cases** of Mpox have been reported in other **5 regions** (other than ASEAN region):

Mpox cases in ASEAN region

Country	Total Cases	New Cases	Deaths	Case Fatality Rate (CFR)
Indonesia	1	-	-	0.00%
Philippines	4	-	-	0.00%
Singapore	22	-	-	0.00%
Thailand	19	-	-	0.00%
Vietnam	2	-	-	0.00%
ASEAN Total	48	-	-	0.00%

Mpox cases in Asia-Pacific region

Country/Territory	Total Cases	New Cases	Deaths	Case Fatality Rate (CFR)
Australia	144	-	-	0.00%
India	22	-	1	4.55%
Japan	95	-	-	0.00%
New Caledonia	1	-	-	0.00%
New Zealand	41	-	-	0.00%
People's Republic of China*	24	-	-	0.00%
Republic of Korea*	5	-	-	0.00%
Sri Lanka	2	-	-	0.00%
Asia-Pacific Total	334	-	1	0.30%

*People's Republic of China – including Hong Kong (SAR), Macao (SAR), and Taiwan (Province of China)

Top 5 countries with most mpox cases globally

Country	Total Cases	New Cases	Deaths	Case Fatality Rate (CFR)
United States of America	30,091	-	39	0.13%
Brazil	10,897	-	15	0.14%
Spain	7,549	-	3	0.04%
France	4,144	-	-	0.00%
Colombia	4,089	-	-	0.00%



Mpox cases per region

REGION	TOTAL CONFIRMED CASES SINCE JANUARY 1, 2022	NEW CASES SINCE THE PREVIOUS REPORT	TOTAL DEATHS	CASE FATALITY RATE
AFRICA	1,497	-	19	1.27%
AMERICAS	59,127	-	90	0.15%
ASEAN	48	-	-	0.00%
ASIA PACIFIC	334	-	1	0.30%
EUROPE	25,603	-	6	0.02%
MIDDLE EAST	321	-	-	0.00%
TOTAL	86,930	-	116	0.13%



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ASEAN Biodiaspora Virtual Center (ABVC) in collaboration with Bluedot Inc. Email: support@biodiaspora.org Facebook: https://facebook.com/ASEANBiodiaspora Instagram: https://instagram.com/ASEANBiodiaspora