COVID-19 Weekly Epidemiological Update

Edition 84, published 22 March 2022

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Global overview

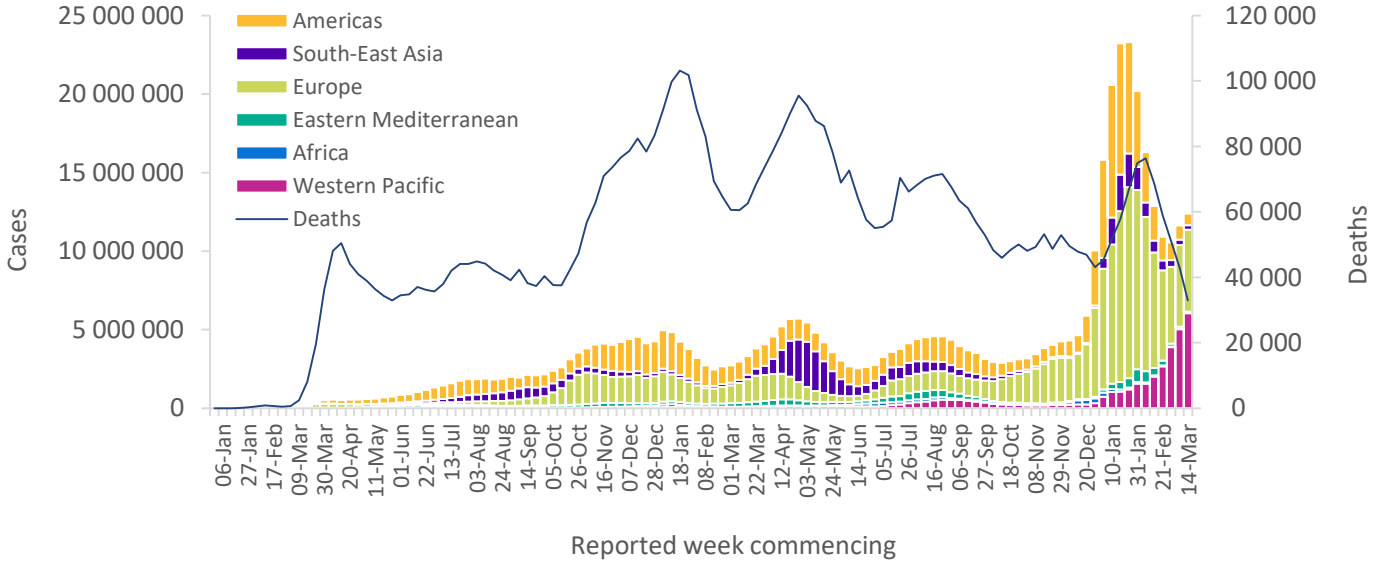
Data as of 20 March 2022

After a consistent decrease since the end of January 2022, the number of new weekly cases rose for a second consecutive week, with a 7% increase reported during the week of 14 through 20 March 2022, as compared to the previous week. The number of new deaths has continued a decreasing trend (-23% as compared to the previous week) (Figure 1). Across the six WHO regions, over 12 million cases and just under 33 000 deaths were reported (Table 1). As of 20 March 2022, over 468 million confirmed cases and just over 6 million deaths have been reported globally.

At the regional level, the number of new weekly cases increased in the Western Pacific Region (+21%), remained stable in the European Region, and decreased in the Eastern Mediterranean (-41%), Africa (-33%), South-East Asia (-23%) and Americas (-17%) regions. On the other hand, the number of new weekly deaths increased in the Western Pacific Region (+5%), while decreasing in the other regions: Americas (-42%), Eastern Mediterranean (-38%), Africa (-19%), Europe (-18%) and South-East Asia (-18%).

These trends should be interpreted with caution as several countries are progressively changing their testing strategies, resulting in lower overall numbers of tests performed and consequently numbers of cases detected.

Figure 1. COVID-19 cases reported weekly by WHO Region, and global deaths, as of 20 March 2022**



**See *Annex 2: Data, table, and figure notes*

At the country level, the highest number of new weekly cases were reported from the Republic of Korea (2 817 214 new cases; +34%), Viet Nam (1 888 694 new cases; +13%), Germany (1 538 666 new cases; +14%), France (582 344 new cases; +39%), and Australia (513 388 new cases; +161%).

The highest number of new weekly deaths were reported from the Russian Federation (3 681 new deaths; -19%), the United States of America (3 612 new deaths; -58%), Brazil (2 242 new deaths; -32%), the Republic of Korea (2 033 new deaths; +41%), and China (1 921 new deaths; -2%).

Table 1. Newly reported and cumulative COVID-19 confirmed cases and deaths, by WHO Region, as of 20 March 2022**

WHO Region	New cases in last 7 days (%)	Change in new cases in last 7 days *	Cumulative cases (%)	New deaths in last 7 days (%)	Change in new deaths in last 7 days *	Cumulative deaths (%)
Western Pacific	6 055 914 (49%)	21%	38 516 204 (8%)	6 995 (21%)	5%	200 735 (3%)
Europe	5 221 339 (42%)	0%	193 241 723 (41%)	13 047 (40%)	-18%	1 918 389 (32%)
Americas	738 048 (6%)	-17%	149 691 756 (32%)	8 845 (27%)	-42%	2 673 043 (44%)
South-East Asia	269 520 (2%)	-23%	56 739 711 (12%)	2 797 (8%)	-18%	771 822 (13%)
Eastern Mediterranean	74 004 (1%)	-41%	21 490 623 (5%)	1 042 (3%)	-38%	339 234 (6%)
Africa***	25 475 (0%)	-33%	8 521 974 (2%)	233 (1%)	-19%	170 822 (3%)
Global	**12 384 300 (100%)**	**7%**	**468 202 755 (100%)**	**32 959 (100%)**	**-23%**	**6 074 058 (100%)**

**Percent change in the number of newly confirmed cases/deaths in the past seven days, compared to seven days prior*

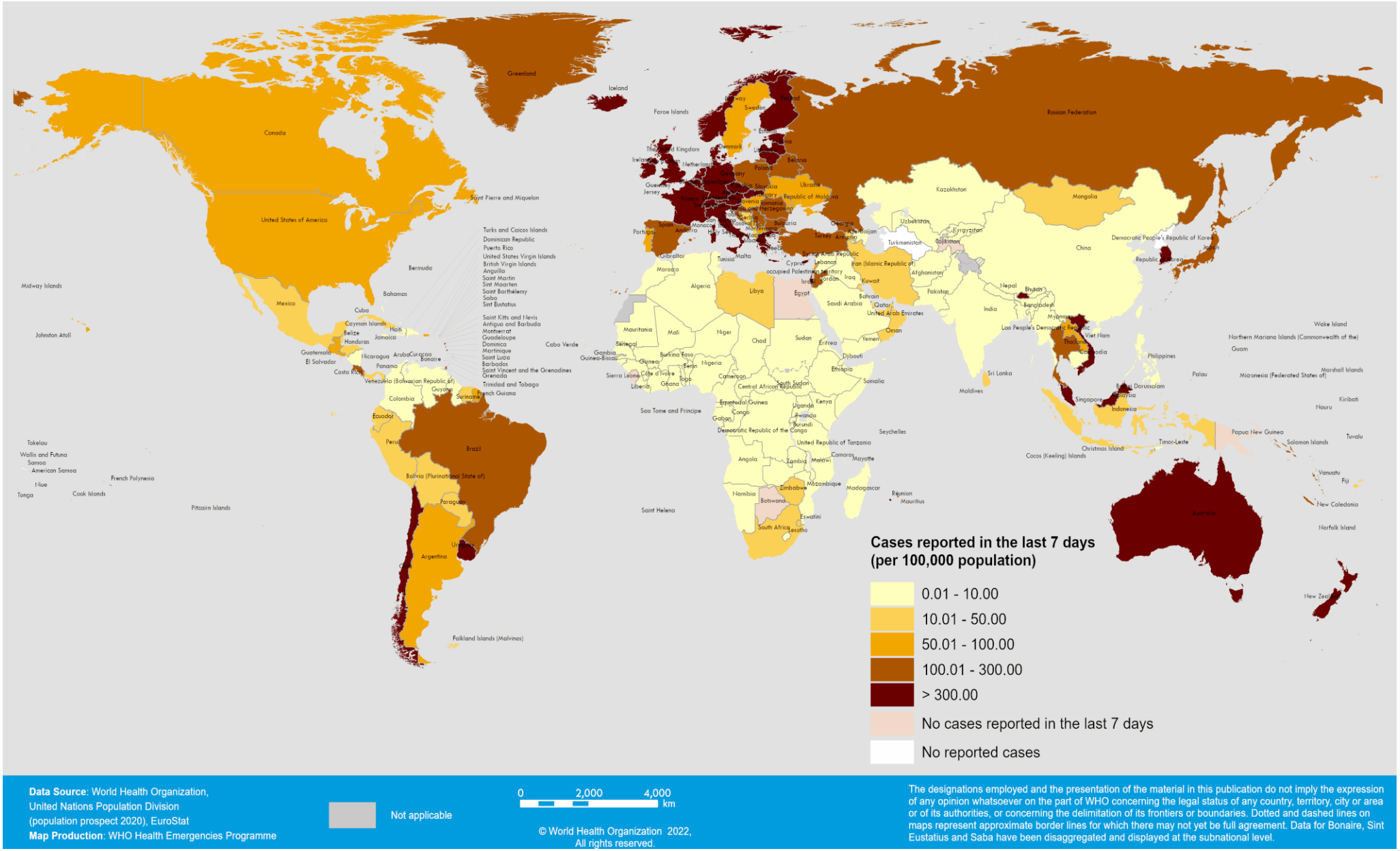
**See *Annex 2: Data, table, and figure notes*

**** In the last WEU, there was an increase in the number of cases in the Africa Region due to the artifact*

For the latest data and other updates on COVID-19, please see:

- WHO COVID-19 Dashboard
- WHO COVID-19 Weekly Operational Update and previous editions of the Weekly Epidemiological Update

Figure 2. COVID-19 cases per 100 000 population reported by countries, territories and areas, 14-20 March 2022*

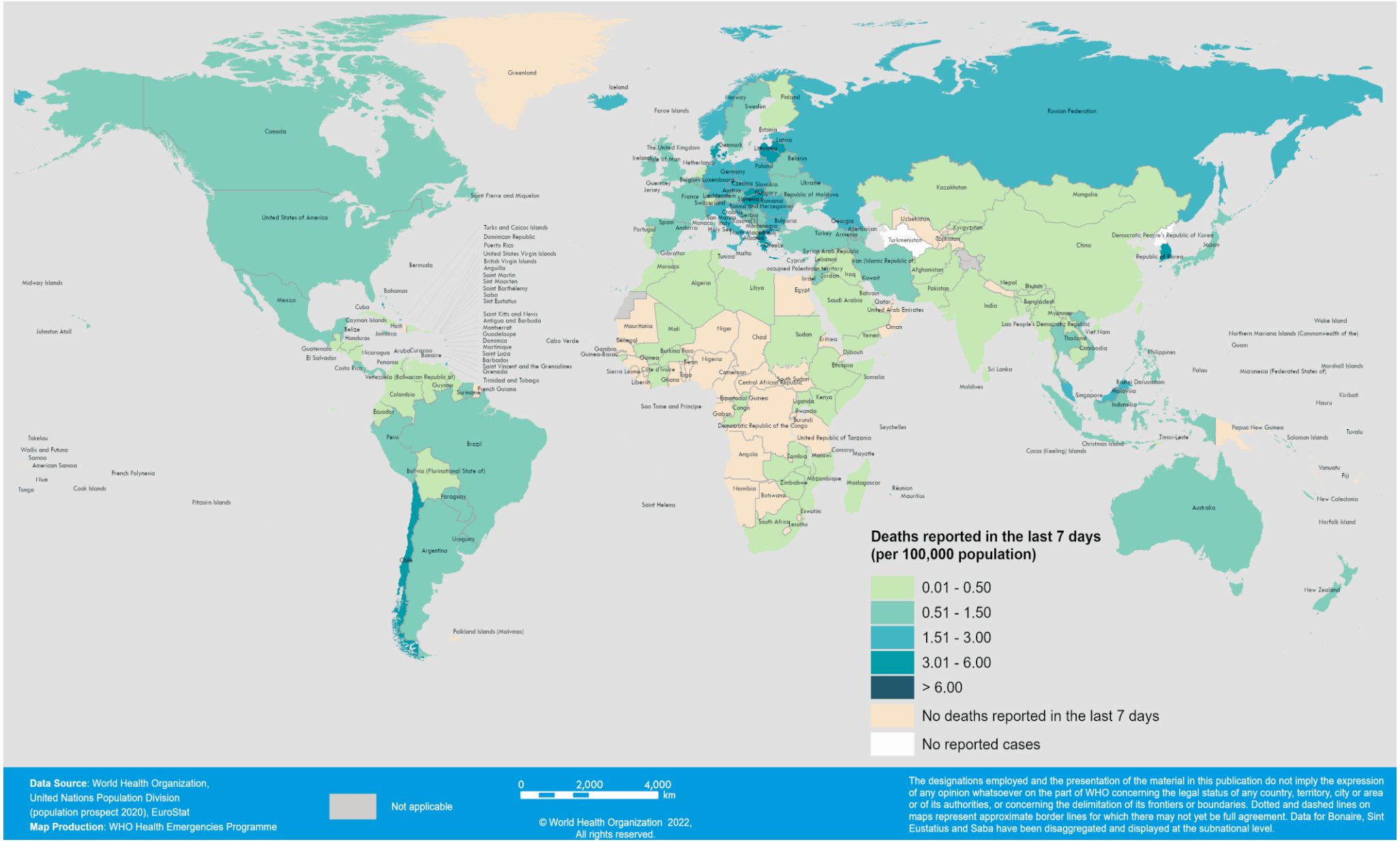


Data Source: World Health Organization, United Nations Population Division (population prospect 2020), EuroStat
Map Production: WHO Health Emergencies Programme

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement. Data for Bonaire, Sint Eustatius and Saba have been disaggregated and displayed at the subnational level.

**See *Annex 2: Data, table, and figure notes*

Figure 3. COVID-19 deaths per 100 000 population reported by countries, territories and areas, 14-20 March 2022**



**See *Annex 2: Data, table, and figure notes*

Special Focus: Update on SARS-CoV-2 variants of interest and variants of concern

WHO, in collaboration with national authorities, institutions and researchers, routinely assesses if variants of SARS-CoV-2 alter transmission or disease characteristics, or impact effectiveness of vaccines, therapeutics, diagnostics or public health and social measures (PHSM) applied to control disease spread. Potential variants of concern (VOCs), variants of interest (VOIs) or variants under monitoring (VUMs) are regularly assessed based on the risk posed to global public health. As evidence becomes available, classifications of variants will be revised to reflect the continuous evolution of circulating variants and their changing epidemiology. Criteria for variant classification, and the current lists of VOCs, VOIs and VUMs, are available on the WHO Tracking SARS-CoV-2 variants website. National authorities may choose to designate other variants and are encouraged to investigate and report on the impacts of these variants.

Geographic spread and prevalence of VOCs

The current global epidemiology of SARS-CoV-2 is characterized by the global dominance of the Omicron variant. Among the 412 982 sequences uploaded to GISAID with specimens collected in the last 30 days[i], 412 119 (99.8%) were Omicron and 259 (0.1%) were Delta.

Since the first reporting of the Omicron variant in November 2021, more than 2.4 million sequences have been deposited in GISAID. By the first week of January 2022, Omicron accounted for 90% of submitted sequences; by week five, Omicron had largely replaced all other variants and now accounts for over 99.8% of submitted sequences globally.
Omicron has a number of descendant lineages, including BA.1, BA.1.1, BA.2 and BA.3. In the last 30 days[ii], BA.2 has become the predominant variant, with 251 645 sequences (85.96%) reported. During the same period, 125 485 BA.1.1 sequences (8.98%), 54 724 BA.1 sequences (4.26%) and 70 BA.3 sequences (<0.1%) have been also uploaded to GISAID.

Among the major Omicron descendent lineages, weekly trends (figure 4, panel A) show that the relative proportion of BA.2 has increased steadily since the end of 2021, with BA.2 becoming the dominant lineage by week seven of 2022. This trend is most pronounced in the South-East Asia Region, followed by the Eastern Mediterranean, African, Western Pacific and European Regions. BA.2 is currently dominant in the Region of the Americas.
However, the absolute numbers of submitted BA.1 and BA.1.1 sequences, as well as an apparent plateau in the absolute number of BA.2 sequences indicate a recent declining trend in the descendent lineages of Omicron since the beginning of 2022 (figure 4, panel B). This trend should be interpreted with some caution, as data for the most recent weeks may be incomplete due to the delay between specimen collection and submission of sequences to GISAID.

To note, the global distribution of VOCs should be interpreted with due consideration of surveillance limitations, including differences in sequencing capacities and sampling strategies between countries, as well as delays in reporting. In addition, some countries may have changed their testing and sequencing policies during the presented period.

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[i] Includes sequences submitted to GISAID with sample collected dates from 16 February to 17 March 2022 (last reported sample at the time of data extraction), excluding low coverage sequences. Proportions are estimated for countries submitting more than 100 total sequences. In the past 30 days, 47 countries submitted a total of 100 sequences and above on GISAID.

[ii] Please note that uploaded GISAID data for the maps and the global epidemiological reporting are slightly different in absolute numbers as compared to Omicron descendent lineage sequence data. The latter is taken from the manual GISAID data availability.

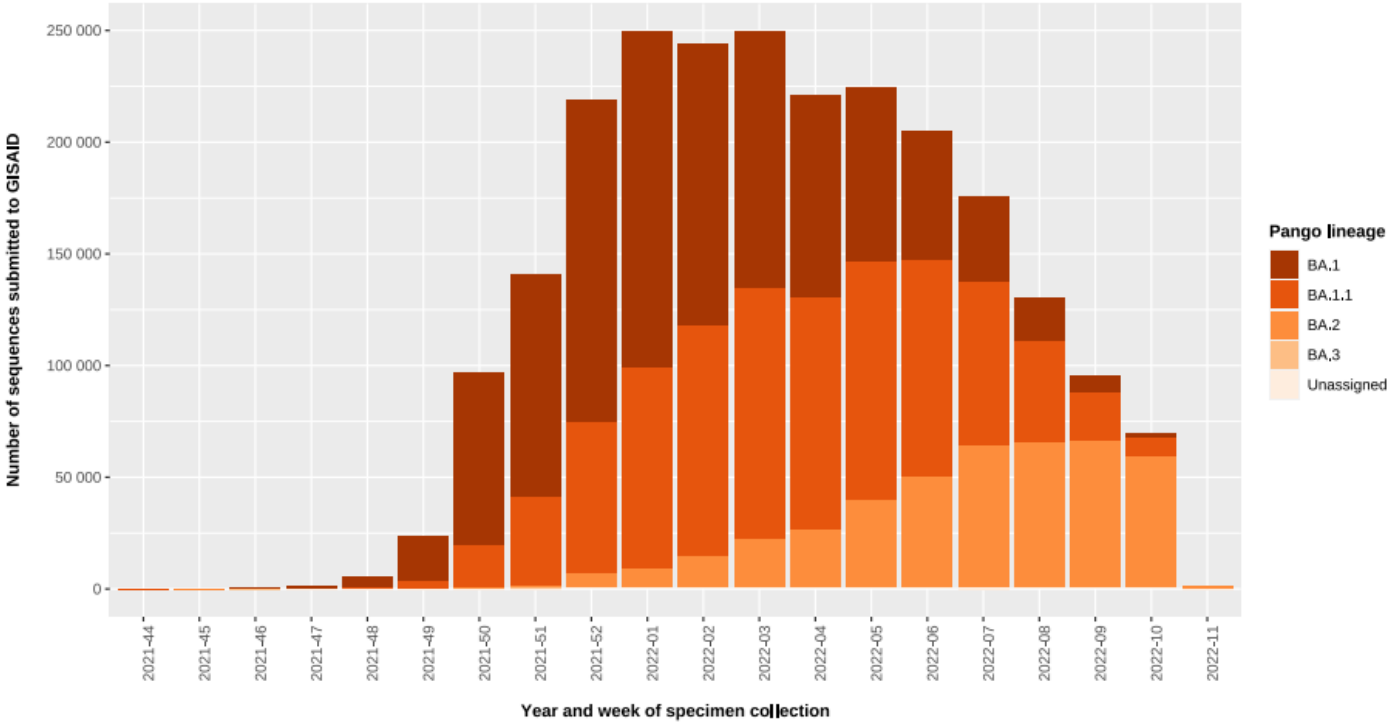
Figure 4. Global distribution and relative proportion of Omicron lineages for sequences submitted to GISAID presented by week of specimen collection

Panel A. Relative proportions of Omicron lineages over the last 4 weeks by specimens collection week

				Overall (%)	Last 4 weeks by collection date (%)			
Lineage	**Countries**	**Sequences[a]**	**SGTF[b]**	**Total**	**2022-08**	**2022-09**	**2022-10**	**2022-11**
BA.1	164	1 077 755	96.26	44.40	15.21	8.24	3.98	4.26
BA.1.1	151	913 277	95.72	37.62	34.51	22.29	11.61	8.98
BA.2	106	431 242	0.18	17.77	49.93	69.12	83.95	85.96
BA.3	21	648	96.91	0.03	0.01	0.02	0.01	0.00
Unassigned	62	4 536	34.99	0.19	0.35	0.34	0.44	0.80

[a] Data source: sequences and metadata from GISAID
[b] Percentage of sequences with Spike H 69-70 deletion associated with S gene failure

Panel B. Incidence of Omicron lineages by week of specimens collection.



Global distribution of Omicron lineages from sequences and metadata submitted to GISAID
Data was extracted from GISAID on 22 March 2022 at 14:00 CET; figures are correct at the time of printing

SARS-CoV-2 recombinant variants

Recombination of variants of the same virus is a natural phenomenon and can be regarded as an expected mutational event. WHO has been notified of several recombinant variants, either recombination between Delta and BA.1 variants, or BA.1 and BA.2 variants. The same monitoring and assessment process is applied to these recombinants as for any other emerging variant, after verification and exclusion of potential contamination or co-infection. Two Delta and Omicron recombinants and one BA.1 x BA.2 recombinant have now been given Pango lineage designations XD, XE and XF. None of the preliminary available evidence indicates that these recombinant variants are associated with higher transmissibility or more severe outcomes. WHO continues to monitor recombinant variants, alongside other SARS-CoV-2 variants, and will provide updates as further evidence becomes available.

Characteristics of Omicron

Available evidence on the phenotypic impacts of VOCs is reported in previous editions of the COVID-19 Weekly Epidemiological Update. Since the last update on 8 March 2022, there have been several new publications on the phenotypic characteristics of VOCs**,** including literature on Omicron (Table 2). Some of these studies have not been peer-reviewed and the findings must therefore be interpreted with due consideration of this limitation.

Table 2: Summary of current evidence on Omicron

Domain	Indicator	Main results
Epidemiology	Impact on disease prevalence/incidence	After a consistent decrease since the end of January 2022, for the second week in a row, the number of new weekly cases increased by 7% during the week of 14 through 20 March 2022, as compared to the previous week. The number of new weekly cases increased in the Western Pacific Region (+21%), remained stable in the European Region, while decreased in the Eastern Mediterranean Region (-41%), Africa Region (-33%), South-East Asia Region (-23%) and the America Region (-17%). It is important to note that changes in testing policies may influence the number of reported cases. The Omicron variant is the dominant circulating variant globally, representing 99.8% of samples collected between 16 February and 17 March 2022 (GISAID), while the Delta variant represents 0.1%. Among the Omicron Pango lineages, BA.2 is now the most prevalent (86%), followed by BA.1.1 (9%), BA.1 (4%) and BA.3 (<0.1%).
	Impact on transmission	An updated analysis of GISAID data[1] shows Omicron still having a growth rate advantage over Delta in 67 countries with sufficient sequence data available up to 21 March 2022, translating to a pooled mean transmission advantage (i.e. relative difference in effective reproduction numbers) of 5% (95% CI: 74%-103%) across epidemiological contexts under the assumption of an unchanged generation time (i.e. duration between the moment a person gets infected to the moment they infect another person). However, evidence for a reduced generation time of Omicron suggests the transmission advantage may be lower; for a 20% shorter generation time, the estimated pooled mean transmission advantage of Omicron over Delta is 74% (95% CI: 66%-90%). The same analysis demonstrates a growth rate advantage of the Omicron Pango lineage BA.2 over the Pango lineage BA.1, with a pooled mean transmission advantage of 72% (95% CI: 55%-82%) under the assumption of an unchanged generation time. These estimates are stabilising as the number of Omicron sequences is increasing and data become available from more countries. An updated analysis published on 11 March 2022 by the United Kingdom[2], which used data on samples collected between 01 December 2021 and 01 March 2022, confirms that BA.2 has a higher growth rate compared to BA.1 (median: 78.8 % per week) and higher secondary attack rates for household (13.6%; 95%CI: 13.2%-14.0% vs. 10.7%; 95%CI: 10.6%-10.8%) and non-household (5.3%; 95%CI:4.7%-5.8% vs. 4.2%; 95%CI: 4.0%-4.3%) contacts.
	Impact on disease severity	Omicron has consistently been found to have lower severity when compared to Delta across different settings[3–7]. An updated analysis comparing patients infected with BA.1 and BA.2 shows similar findings to previously published data, with no difference in the risk of hospitalisation (HR=0.91; 95% CI: 0.85-0.98) in the United Kingdom [2]. There is still a sustained decrease in the number of reported hospitalisations since the end of January 2022 in the United States of America[8] and South Africa[9] while the United Kingdom reported an increase in hospitalisations in week 10 (7-10 March) compared to week 9 (28 February – 6 March) of 2022 (13.38 per 100,000 vs 11.67 per 100,000)[10].
Immune response	Impact on reinfection	Higher rates of reinfection have been reported for the Omicron variant among individuals previously infected with other SARS-CoV-2 variants. Reinfection with BA.2 following BA.1 was associated with mild disease in Denmark[11] while a study conducted in Qatar reported that previous infection with one of the Omicron Pango lineages may confer protection against infection with other Omicron Pango lineages; 94.9% (95% CI: 88.4-97.8%) protection against BA.2 following infection with BA.1, and 85.6% (95% CI: 77.4-90.9%) protection against BA.1 following infection with BA.2[12].
	Impact on vaccination	Results of vaccine effectiveness (VE) studies should be interpreted with caution because estimates vary with the type of vaccine administered and the number of doses and scheduling (sequential administration of different vaccines). For further information, see the section Interpretation of the results of the VE for the Omicron variant.

Domain	Indicator	Main results
	Impact on antibody responses	There are no new data on antibody responses to Omicron since the last update. An analysis of neutralization data from 23 laboratories found a 20-fold reduction in neutralization associated with the Omicron variant[13]. These findings are consistent with results of recent studies that reported lower neutralising antibody titers to BA.1 and BA.2 compared to wild-type SARS-CoV-2 and similar responses for BA.1 and BA.2 [14,15]. Another recent study found similar non-neutralising antibody responses to BA.1 and BA.2 in vaccinated individuals[16]. Overall, these results indicate similar humoral responses to BA.1 and BA.2.
Diagnostic tools	**Impact on PCR assays**	There is no new evidence on the impact of Omicron on PCR assays, which include multiple gene targets. The BA.2 lineage is the only descendant variant of Omicron that lacks the 69-70 deletion responsible for S-gene target failure. Assessment of PCR tests for SARS-CoV-2 that include multiple gene targets predicted limited impact of the Omicron variant on the accuracy of these assays[17,18].
	Impact on Rapid Diagnostic tests	There is no new evidence on the impact of Omicron on antigen-based rapid diagnostic tests (Ag-RDTs). Available data show contradictory results on the diagnostic performance of Ag-RDTs to detect Omicron compared to other variants: while some studies have shown reduced sensitivity of Ag-RDTs [19–22], others have reported comparable sensitivity of Ag-RDT tests to detect Omicron compared to Delta or other VOCs[23–26].
Impact on treatment	**Impact on antivirals**	There has been no new evidence since the publication of preliminary data showing no difference in the effectiveness of antiviral agents against the Omicron variant[27–29].
	Impact on biologicals	Initially, studies on the effectiveness of monoclonal antibodies for treating patients with Omicron reported conserved neutralizing activity for three broadly neutralizing monoclonal antibodies (sotrovimab, S2X259 and S2H97) and a reduction in effectiveness of other monoclonal antibodies [30–34]. However, additional preclinical evidence shows reduced neutralizing activity of sotrovimab against the BA.2 Pango lineage and lack of efficacy of casirivimab-imdevimab against the BA.1 Omicron Pango lineage [35].
	Other treatment options	There is no evidence to suggest that Interleukin-6 receptor blockers and corticosteroids are not effective in the management of patients with severe and critical disease.

Additional resources

- Tracking SARS-CoV-2 Variants
- COVID-19 new variants: Knowledge gaps and research
- Genomic sequencing of SARS-CoV-2: a guide to implementation for maximum impact on public health
- Considerations for implementing and adjusting public health and social measures in the context of COVID-19
- VIEW-hub: repository for the most relevant and recent vaccine data
- WHO Statement on Omicron sublineage BA.2

Figure 5. Vaccine effectiveness (VE) of primary series and booster vaccination against the Delta variant of concern

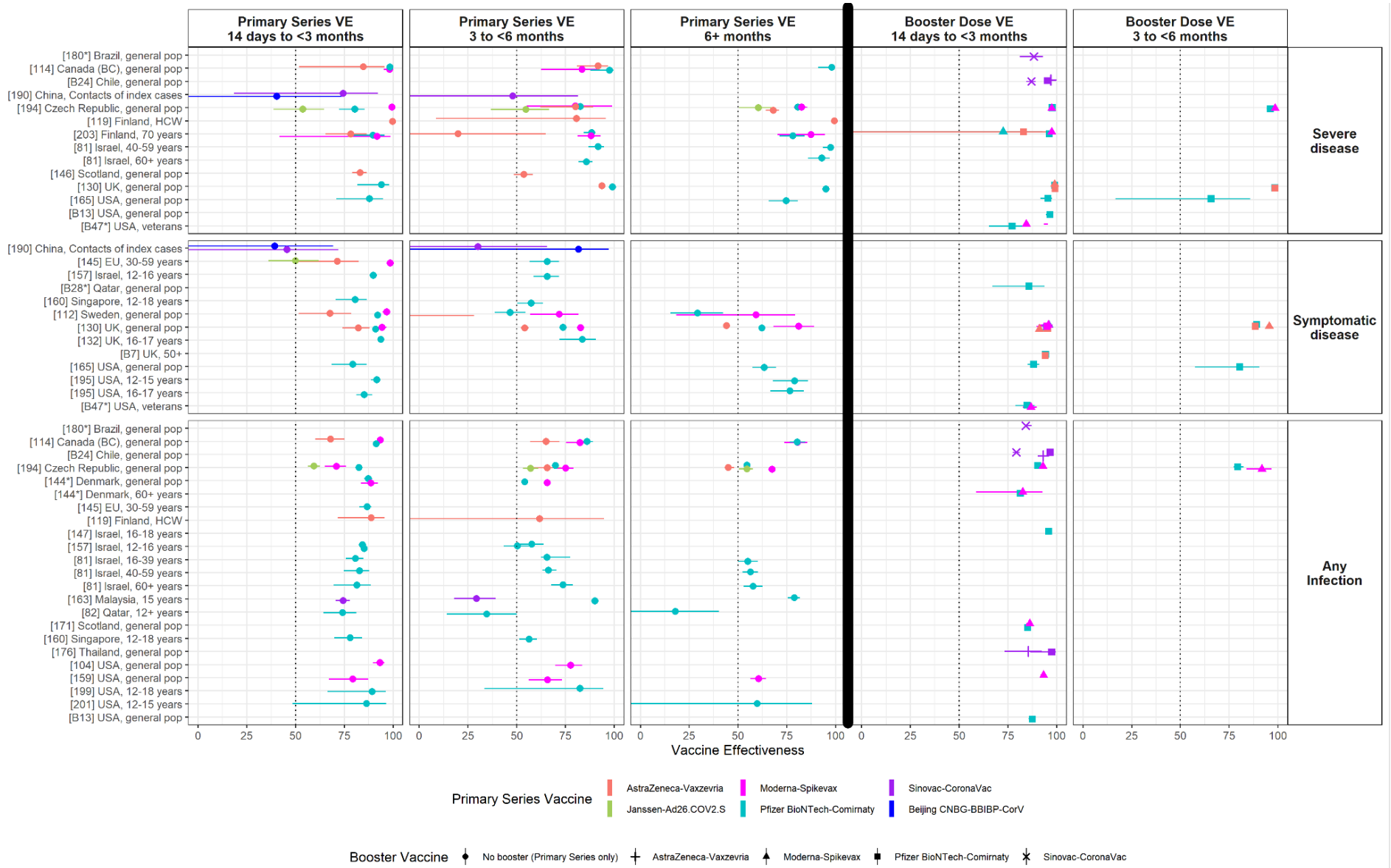
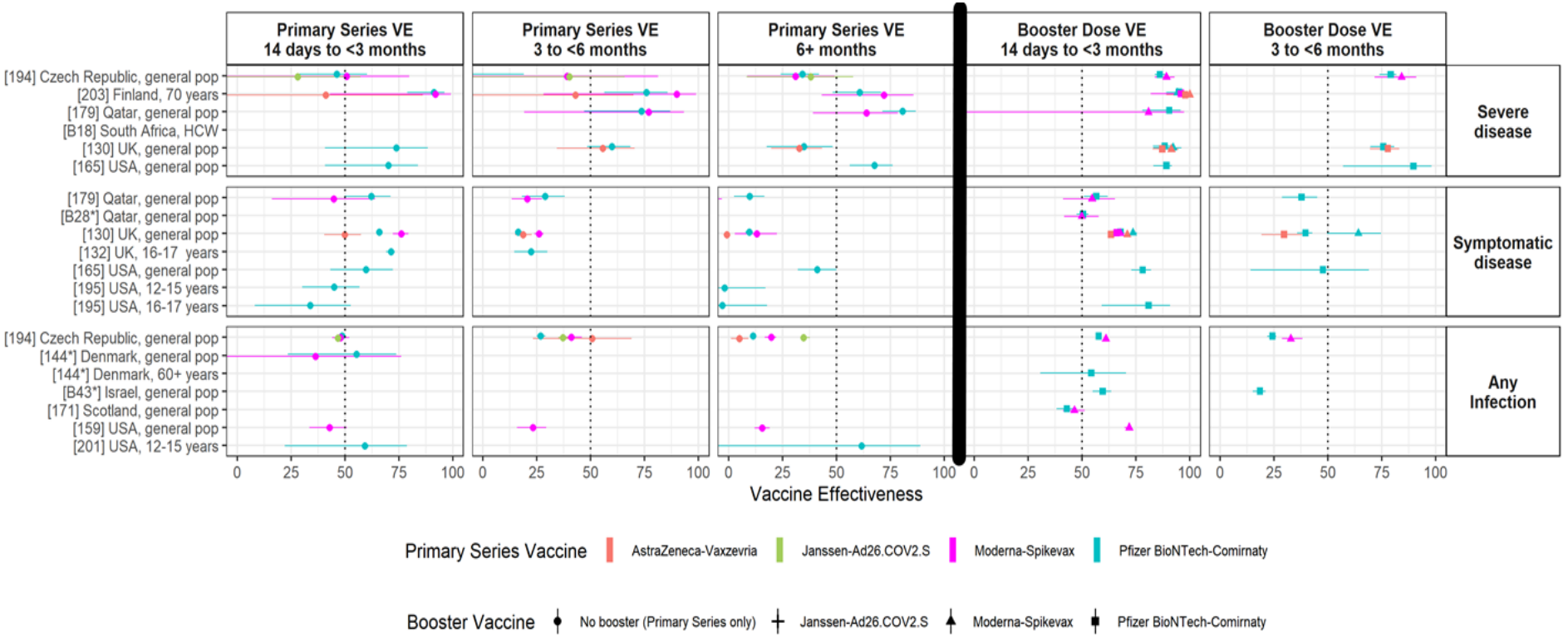


Figure 6. Vaccine effectiveness (VE) of primary series and booster vaccination against the Omicron variant of concern



*Indicates booster dose vaccine effectiveness evaluated using persons completing primary series as reference group, rather than unvaccinated persons. Abbreviations: pop=population; HCW=healthcare workers; EU=European Union. Dots represent point estimates of vaccine effectiveness; horizontal lines represent the 95% confidence intervals. Labels along left side of plot indicate reference numbers [], country, and study population. Reference numbers identify the study and link to the summary table of VE effectiveness studies on view-hub.org (Table 1 in summary table); references starting with a 'B' are studies found in the booster VE table only (Table 2 in summary table). Primary series refers to the completion of two doses of vaccines for AstraZeneca-Vaxzevria; Moderna-Spikevax, Pfizer BioNTech-Comirnaty and Sinovac-CoronaVac and one dose of Janssen-Ad26.COV2.S. Severe disease includes severe disease, hospitalization, and pneumonia; symptomatic disease includes disease of any severity level; any infection can include symptomatic and asymptomatic infection. Additional details on the methods for inclusion of the estimates in the plots provided in Annex 3. Note, three negative point estimates for the primary series are not shown in the Omicron plot: Moderna-Spikevax VE against symptomatic disease at 6+ months (reference 179) as well as Moderna-Spikevax and Pfizer BioNTech-Comirnaty VE against infection at 3-6 months (reference 144); one negative point estimate for primary series is not shown in the Delta plot: AstraZeneca-Vaxzevria VE against Delta symptomatic disease (reference 112) with 95% CIs crossing 0 is not fully visible in the plot.

Figures 5 and 6 summarize the impact of Delta and Omicron variants, respectively, on product-specific vaccine effectiveness (VE) over time for both primary series vaccines and booster vaccines. Since the last update, five new studies, all of which assessed VE against Delta and three which also assessed VE against Omicron, have been added to the figures.[36–40] Of the Omicron studies, one study provided new VE data on AstraZeneca-Vaxzevria[37], two (not yet peer-reviewed) on Moderna-Spikevax[37,38], and four (two not yet peer-reviewed) on Pfizer BioNTech-Comirnaty.[37–40] Additional information on vaccine performance against VOCs can also be found in Annex 4.

Interpretation of the results of the VE for the Delta variant[iii]

To date, 31 studies contribute evidence of the effectiveness of COVID-19 vaccines against disease and infection due to the Delta variant. VE against Delta is substantially higher than that of Omicron and declines more gradually over time for *symptomatic disease* and *infection*, with only slight declines over time against *severe disease*.

For *severe disease* outcomes with the Delta variant within the first three months of vaccination with the primary series, all eight (100%) VE estimates for the mRNA vaccines (Moderna-Spikevax and Pfizer BioNTech-Comirnaty) and four of five (80%) VE estimates for the adenovector vaccines (AstraZeneca-Vaxzevria and Janssen-Ad26.COV2.S) were ≥ 70%. Beyond three months after vaccination, all 18 (100%) VE estimates for the mRNA vaccines and five of 10 (50%) VE estimates for the adenovector vaccines were ≥ 70%.

For *symptomatic disease* and *infection*, initial VE estimates tended to be lower than against *severe disease*, and VE decreased more significantly over time. Still, for *symptomatic disease* outcomes within the first three months of vaccination with the primary series, all 11 (100%) VE estimates for the mRNA vaccines were ≥ 70%; two of four (50%) VE estimates for the adenovector vaccines were ≥ 70%. Beyond three months after vaccination, seven of 15 (47%) VE estimates for the mRNA vaccines and none of three (0%) VE estimates for the adenovector vaccines were ≥ 70%. mRNA booster vaccination after completion of a primary series of an mRNA vaccine or of AstraZeneca-Vaxzevria restored VE against *symptomatic disease* to ≥ 70% in all studies (12/12 estimates) within three months of a booster dose which persisted through six months post booster (all four VE estimates ≥ 70%). Limited data were available for VE of inactivated vaccines (Beijing CNBG-BBIBP-CorV and Sinovac-CoronaVac) against *symptomatic disease*, though a similar pattern was seen with VE of inactivated vaccines against *infection* over time: the only VE estimate within the first three months of completion of Sinovac-CoronaVac was ≥ 70%, which declined to <50% at three to six months; however, booster vaccination with various platforms following Sinovac-CoronaVac primary series restored VE to ≥ 70% in all studies (6/6 VE estimates) within the first three months of receipt of any booster dose.

Interpretation of the results of the VE for the Omicron variant [iii]

To date, ten studies of VE against the Omicron variant show reduced protection of the primary series COVID-19 vaccines for all outcomes (*severe disease*, *symptomatic disease*, and *infection*) than has been observed for other variants of concern. Importantly though, VE estimates against the Omicron variant remain highest for *severe disease*, while they are lower for s*ymptomatic disease and infection.* Booster vaccination substantially improves VE for all outcomes for all products. However, due to short follow-up time after boosters, more data are needed to

[iii] Summarize the totality of the evidence for Omicron and Delta by disease outcome (infection, symptomatic disease, severe disease) for each of the vaccine platforms by calculating the proportion of all VE estimates that are at or above 70% within each vaccine platform for each disease outcome. Please note that a single study may contribute multiple VE estimates.

characterize the duration of VE following a booster dose. No data is yet available on the duration of protection of inactivated vaccines against Omicron.

For *severe disease*, within the first three months of primary series vaccination, four of six (67%) VE estimates for the mRNA vaccines were ≥70%, with only two studies available for vector vaccines both which reported a VE of <50%. Beyond three months after vaccination, six of 15 (40%) VE estimates for the mRNA vaccines and none of five (0%) VE estimates for the adenovector vaccines were ≥ 70%. Booster vaccination improved VE against *severe disease* in all studies, with all 16 estimates showing VE ≥ 70% (15 estimates evaluated an mRNA booster and one estimate evaluated a booster dose of Janssen-Ad26.COV2.S) between 14 days and three months of receipt of a booster dose. At three to six months post mRNA booster, all five (100%) estimates showed VE ≥ 70%.

Initial VE estimates against *symptomatic disease* and *infection* tended to be lower than against *severe disease*, and VE decreased more substantially over time. For *symptomatic disease,* outcomes within the first three months of vaccination with the primary series, two of eight (25%) VE estimates for the mRNA vaccines were ≥ 70% and none of the VE estimates for the adenovector vaccines (AstraZeneca-Vaxzevria and Janssen-Ad26.COV2.S). Beyond three months after vaccination, none of 12 (0%) VE estimates for the mRNA vaccines and none of two (0%) VE estimates for AstraZeneca-Vaxzevria were ≥ 50%. mRNA booster vaccination after completion of a primary series of an mRNA vaccine or of AstraZeneca-Vaxzevria improved VE against *symptomatic disease* with four of 10 (40%) VE estimates ≥ 70% and all 12 (100%) ≥ 50% 14 days to three months post booster. However, booster dose protection declined with time since vaccination with one of five (20%) of available estimates indicating a VE of ≥ 50% at three to six months following receipt of an mRNA booster dose. VE against *infection* showed a similar pattern.

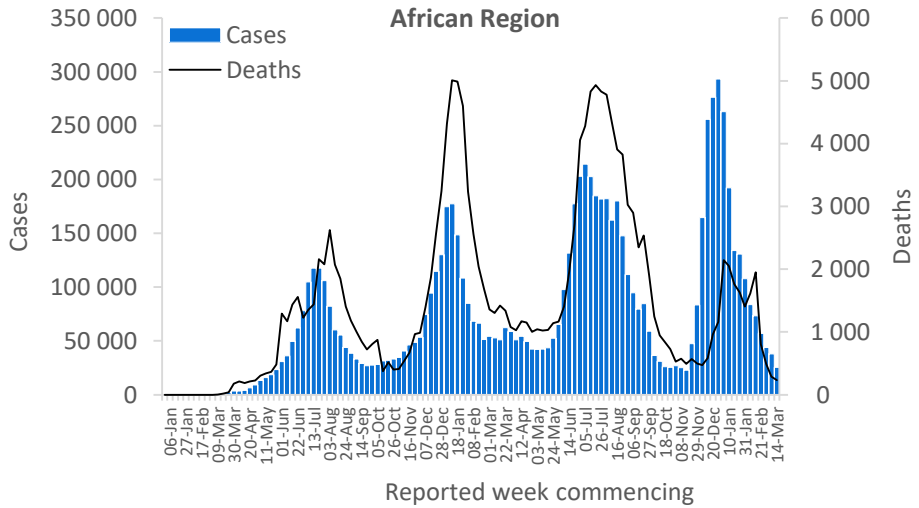
One new pre-print study from Chile (not included in the plots due to not meeting the criterion of presenting VE estimates for more than one time point after vaccination) assessed VE of Sinovac-CoronaVac against *infection* and hospitalization among children aged three to five years during an Omicron dominant period.[41] VE against hospitalization and infection 14 or more days after receipt of the second dose of Sinovac-CoronaVac was 65.2% (95% CI: 50.4-75.6%) and 37.9% (95% CI: 36.1-39.6%), respectively, with a maximum follow-up time of approximately 14 weeks following receipt of the second dose.

WHO regional overviews Epidemiological week 14-20 March 2022**

African Region

The Africa Region reported over 25 000 new cases, a 33% decrease as compared to the previous week. The number of cases has continued to decrease since late December 2021. Nine (18%) countries in the Region reported an increase in cases by over 20% this week, although these countries reported fewer than 100 new cases. The highest numbers of new cases were reported from South Africa (9797 new cases; 16.5 new cases per 100 000 population; similar to the previous week's figures), Réunion (8514 new cases; 951.0 new cases per 100 000; +6%), and Zimbabwe (2095 new cases; 14.1 new cases per 100 000; -37%).

The number of new weekly deaths in the Region decreased by 19% as compared to the previous week, with over 200 new deaths reported. The highest numbers of new deaths were reported from South Africa (167 new deaths; <1 new death per 100 000 population; similar to the previous week's figures), Zimbabwe (12 new deaths; <1 new death per 100 000; -29%), Algeria (9 new deaths; <1 new death per 100 000; similar to the previous week's figures), and Réunion (9 new deaths; 1.0 new deaths per 100 000; -36%).

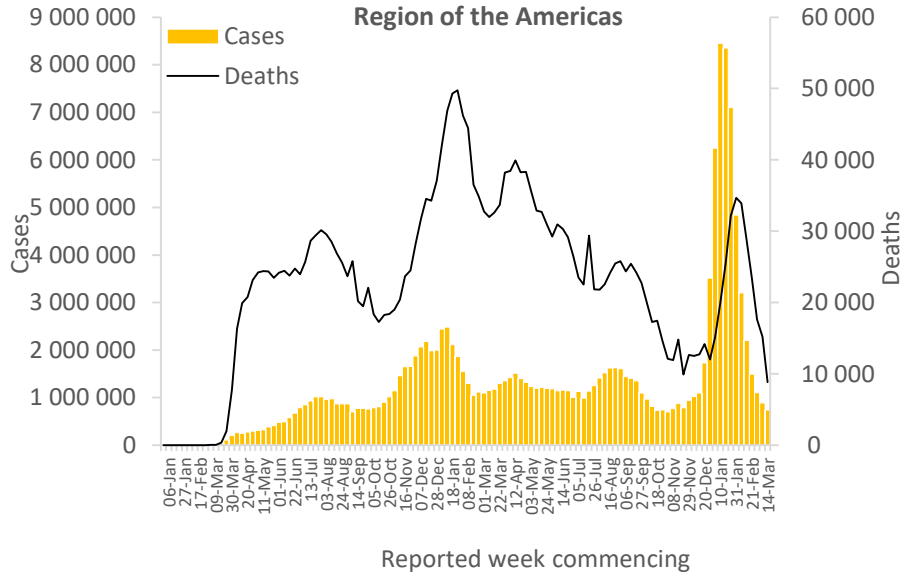


Updates from the African Region

Region of the Americas

The Region of the Americas reported over 738 000 new cases and over 8800 new deaths, decreases of 17% and 42% respectively as compared to the previous week. However, 13 (23%) countries in the Region reported increases in new cases of 20% or greater, with some of the largest increases reported from Saint Pierre and Miquelon (298 vs 52 new cases,+473%), Curacao (375 vs 102 new cases, +268%) and Mexico (22 418 vs 11 193 new cases, +100%). The highest numbers of new cases were reported from Brazil (267 998 new cases; 126.1 new cases per 100 000; -19%), the United States of America (212 751 new cases; 64.3 new cases per 100 000; -16%), and Chile (95 205 new cases; 498.0 new cases per 100 000; -19%).

The highest numbers of new deaths were reported from the United States of America (3612 new deaths; 1.1 new deaths per 100 000; -58%), Brazil (2242 new deaths; 1.1 new deaths per 100 000; -32%), and Mexico (829 new deaths; <1 new death per 100 000; +156%).

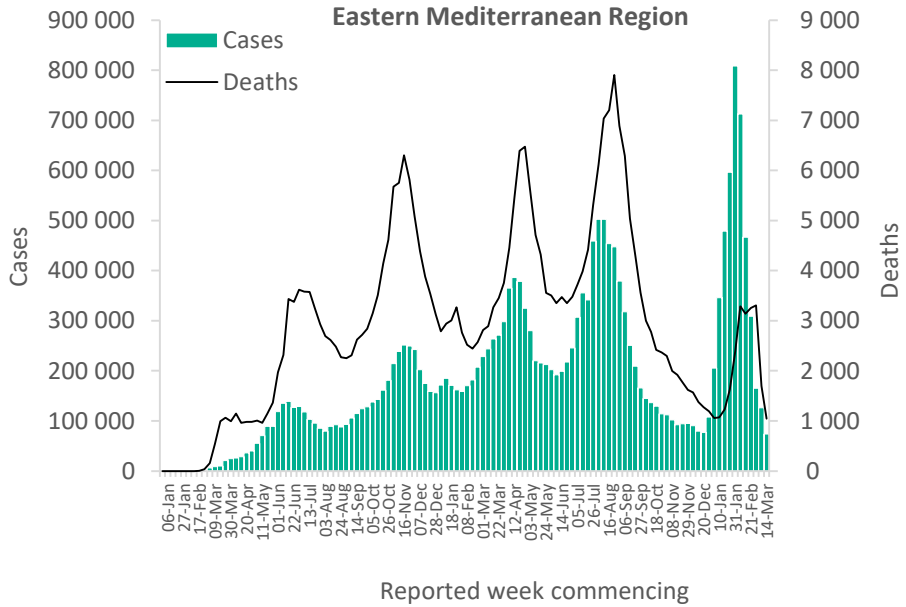


Updates from the Region of the Americas

Eastern Mediterranean Region

The Eastern Mediterranean Region continued to report a decrease in new weekly cases with over 74 000 new cases, a 41% decrease as compared to the previous week. However, Jordan reported an increase in new weekly cases of 20% or greater (25 502 vs 16 449 new cases; +55%). The highest numbers of new cases were reported from Jordan (25 502 new cases; 249.9 new cases per 100 000; +55%), the Islamic Republic of Iran (19 454 new cases; 23.2 new cases per 100 000; -45%), and Bahrain (7594 new cases; 446.3 new cases per 100 000; -31%).

In the past week, the Region reported 1000 new deaths, a 38% decrease as compared to the previous week. The highest numbers of new deaths were reported from the Islamic Republic of Iran (719 new deaths; <1 new death per 100 000; -34%), Jordan (77 new deaths; <1 new deaths per 100 000; +133%), and Lebanon (43 new deaths; <1 new deaths per 100 000; -26%).

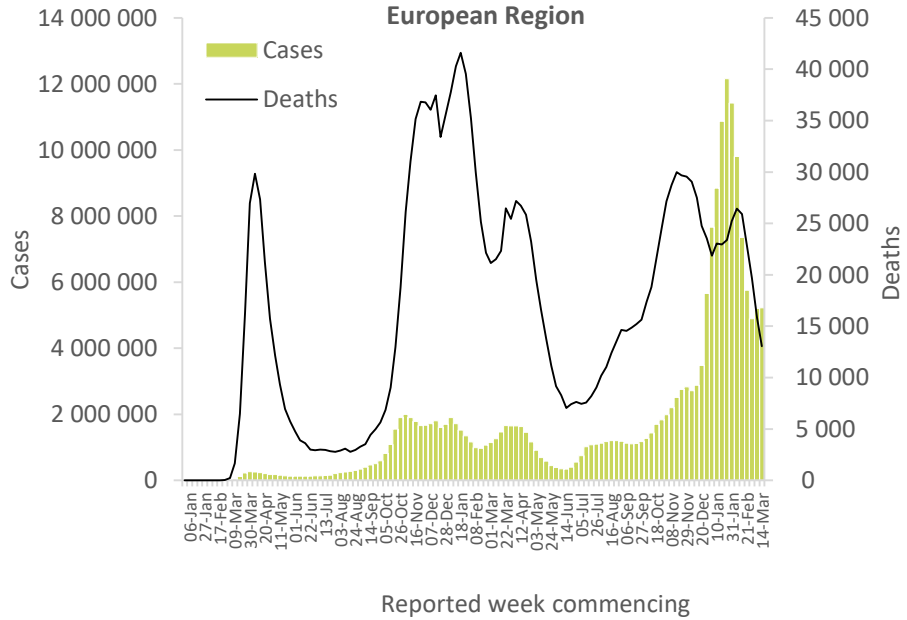


Updates from the Eastern Mediterranean Region

European Region

Following the increase reported during the week of 7 through 13 March 2022, the number of new weekly cases appears to have stabilized in the European Region (<1%) with over 5.2 million new cases reported. Ten countries (18%) in the Region reported increases in new cases of 20% or greater, with the largest observed in Gibraltar (471 vs 231 new cases; +104%), Isle of Man (1814 vs 903 new cases; +101%), Malta (1628 vs 887 new cases; +84%) and Guernsey (2077 vs 1196 new cases; +74%)

The number of new deaths has continued to decrease in the Region, with over 13 000 new deaths reported this week, an 18% decrease as compared to the previous week. The highest numbers of new deaths were reported from the Russian Federation (3681 new deaths; 2.5 new deaths per 100 000; -19%), Germany (1345 new deaths; 1.6 new deaths per 100 000; -8%), and Italy (910 new deaths; 1.5 new deaths per 100 000; -9%)

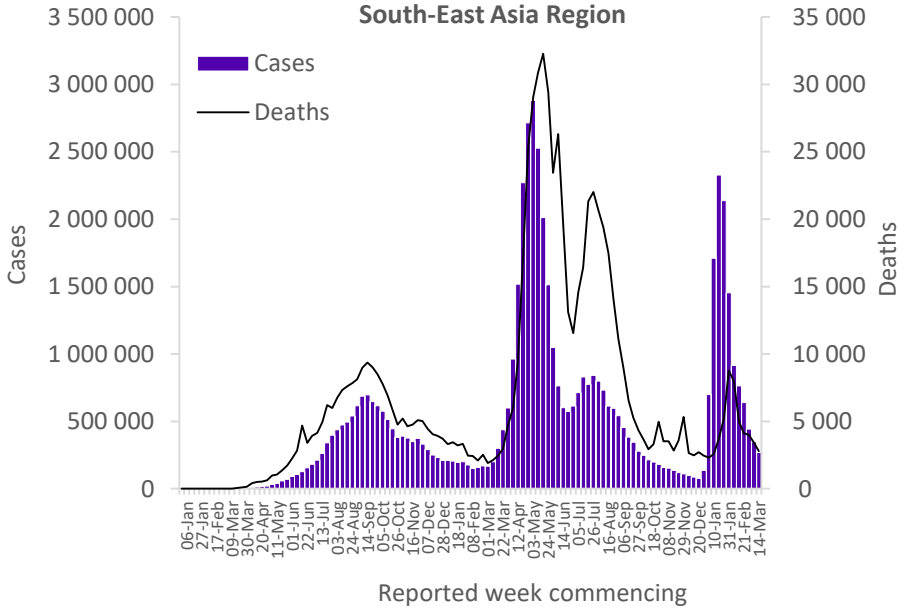


Updates from the European Region

South-East Asia Region

The decreasing trend observed in the South-East Asia Region since the end of January 2022 continues, with over 269 000 new cases reported, a 23% decrease as compared to the previous week. One country in the Region, reported an increase of 20% or greater in the past week: Bhutan (4384 vs 2822 new cases; +55%). The highest numbers of new cases were reported from Thailand (169 144 new cases; 242.3 new cases per 100 000; +7%), Indonesia (71 988 new cases; 26.3 new cases per 100 000; -49% decrease), and India (16 850 new cases; 1.2 new cases per 100 000; -40%).

Regionally, the number of new weekly deaths continues to decline, with just under 2800 new deaths reported, an 18% decrease as compared to the previous week. The highest numbers of new deaths were reported from Indonesia (1572 new deaths; <1 new death per 100 000; -21%), India (629 new deaths; <1 new death per 100 000; -23%), and Thailand (537 new deaths; <1 new death per 100 000; +13%).

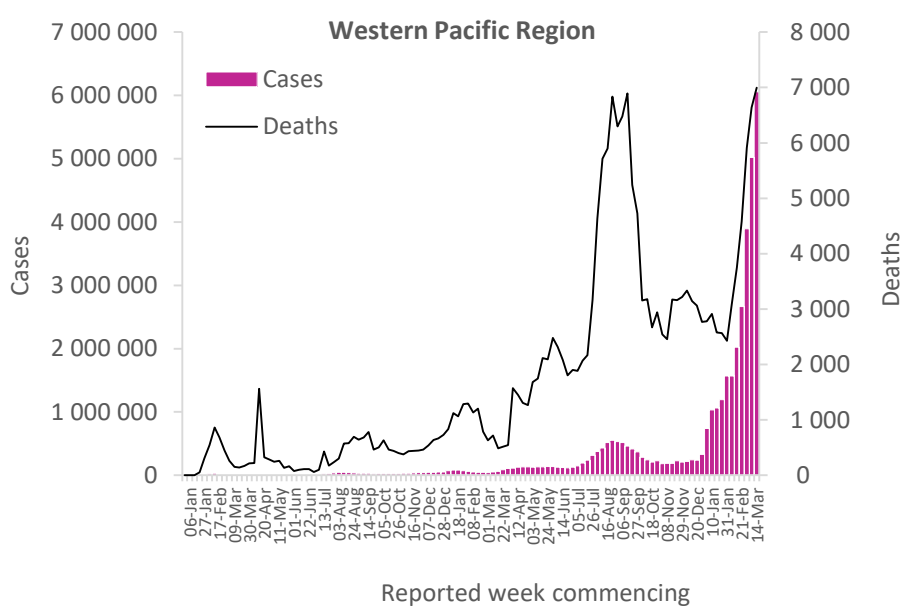


Updates from the South-East Asia Region

Western Pacific Region

Consistent with the increasing trend observed since the end of December 2021, the Western Pacific Region reported an increase of 21% in the number of new weekly cases as compared to the previous week, with over 6 million new cases. Ten (44%) countries in the Region reported an increase of 20% or greater in the past week, with the largest increases observed in Lao People's Democratic Republic (6449 vs 1538 new cases; +319%), Australia (513 388 vs 196 803 new cases; +161%), American Samoa (623 vs 247 new cases; +152%), Vanuatu (352 vs 146 new cases; +141%) and Fiji (148 vs 63 new cases; +135%).

The number of new weekly deaths also continued to increase, with just under 7000 new deaths reported, a 5% increase as compared to the previous week. The highest numbers of new deaths were reported from the Republic of Korea (2033 new deaths; 4.0 new deaths per 100 000; +41%), China (1921 new deaths; <1 new death per 100 000; -2%), and Japan (1016 new deaths; <1 new death per 100 000; -18%).



Updates from the Western Pacific Region

Summary of the COVID-19 Weekly Operational Update

The Weekly Operational Update is a report provided by the COVID-19 Strategic Preparedness and Response Plan (SPRP) Monitoring and Evaluation team, which aims to update on the ongoing global progress against the COVID-19 SPRP 2021 framework, and to highlight country-level actions and WHO support to countries. In this week's edition, highlights include the following:

- Rallying to combat COVID-19 rumours in the Democratic Republic of the Congo through a rumour alert and refutation system
- WHO recommends the Kingdom of Saudi Arabia's public health laboratory for recognition as a national influenza centre
- WHO and Ministry of Health Zambia scale-up COVID-19 response and continuity of health services through the support of the Act-A Health Systems Connector
- WHO/Europe holds a workshop on data analysis and information management for emergency response for Azerbaijan through the Emergency Response Information Management System (ERIMS) initiative
- Lao People's Democratic Republic Ministry of Health and WHO prepare local media for potential Omicron surge
- The Plurinational State of Bolivia leverages influenza capacities for COVID-19 response
- WHO builds a Global Health Facilities Database: Leveraging insights from COVID-19 to ensure better access to primary healthcare and Universal Health Coverage (UHC)
- Updates from the UN Crisis Management Team (UNCMT)
- Measuring the impact of online COVID-19 vaccine training courses
- Operations Support and Logistics
- Progress on a subset of global indicators that demonstrate country and global progress to end the acute phase of the pandemic

Technical guidance and other resources

- WHO technical guidance
- WHO COVID-19 Dashboard
- WHO Weekly Operational Updates on COVID-19
- WHO COVID-19 case definitions
- COVID-19 Supply Chain Inter-Agency Coordination Cell Weekly Situational Update
- Research and Development
- Open WHO courses on COVID-19 in official UN languages and in additional national languages
- WHO Academy COVID-19 mobile learning app
- The Strategic Preparedness and Response Plan (SPRP) outlining the support the international community can provide to all countries to prepare and respond to the virus
- EPI-WIN: tailored information for individuals, organizations, and communities
- Recommendations and advice for the public:
  - Protect yourself
  - Questions and answers
  - Travel advice

Annex 1. List of countries/territories/areas reporting currently circulating variants of concern as of 22 March 2022.

Country/Territory/Area	Delta	Omicron
Afghanistan	●	-
Albania	○	●
Algeria	●	●
American Samoa	○	○
Andorra	○	○
Angola	●	●
Anguilla	●	●
Antigua and Barbuda	●	●
Argentina	●	●
Armenia	●	●
Aruba	●	●
Australia	●	●
Austria	●	●
Azerbaijan	○	●
Bahamas	●	●
Bahrain	●	●
Bangladesh	●	●
Barbados	●	●
Belarus	○	●
Belgium	●	●
Belize	●	●
Benin	●	●
Bermuda	●	●
Bhutan	●	●
Bolivia (Plurinational State of)	●	●
Bonaire	●	●
Bosnia and Herzegovina	○	○
Botswana	●	●
Brazil	●	●
British Virgin Islands	●	●
Brunei Darussalam	●	●
Bulgaria	●	●

Country/Territory/Area	Delta	Omicron
Burkina Faso	●	●
Burundi	●	-
Cabo Verde	●	●
Cambodia	●	●
Cameroon	●	●
Canada	●	●
Cayman Islands	●	●
Central African Republic	●	●
Chad	●	○*
Chile	●	●
China	●	●
Colombia	●	●
Comoros	●	●
Congo	●	●
Costa Rica	●	●
Croatia	●	●
Cuba	●	●
Curaçao	●	●
Cyprus	●	●
Czechia	●	●
Côte d'Ivoire	●	●
Democratic Republic of the Congo	●	●
Denmark	●	●
Djibouti	●	●
Dominica	●	-
Dominican Republic	●	●
Ecuador	●	●
Egypt	●	●
El Salvador	●	●
Equatorial Guinea	●	-
Estonia	○	●

Country/Territory/Area	Delta	Omicron
Eswatini	●	●
Ethiopia	●	●
Falkland Islands (Malvinas)	-	-
Faroe Islands	-	-
Fiji	●	●
Finland	●	●
France	●	●
French Guiana	●	●
French Polynesia	●	●
Gabon	●	●
Gambia	●	●
Georgia	●	●
Germany	●	●
Ghana	●	●
Gibraltar	○	●
Greece	●	●
Greenland	●	-
Grenada	●	●
Guadeloupe	●	●
Guam	●	●
Guatemala	●	●
Guernsey	-	●
Guinea	●	●
Guinea-Bissau	●	-
Guyana	●	●
Haiti	●	-
Honduras	●	●
Hungary	○	●
Iceland	●	●
India	●	●
Indonesia	●	●
Iran (Islamic Republic of)	●	●

Country/Territory/Area	Delta	Omicron
Iraq	●	●
Ireland	●	●
Israel	●	●
Italy	●	●
Jamaica	●	●
Japan	●	●
Jordan	●	●
Kazakhstan	●	●
Kenya	●	●
Kiribati	-	●
Kosovo[1]	○	●
Kuwait	●	●
Kyrgyzstan	●	●
Lao People's Democratic Republic	●	●
Latvia	○	●
Lebanon	●	●
Lesotho	●	-
Liberia	●	-
Libya	●	-
Liechtenstein	○	○
Lithuania	○	●
Luxembourg	●	●
Madagascar	-	-
Malawi	●	●
Malaysia	●	●
Maldives	●	●
Mali	●	○
Malta	○	●
Martinique	●	●
Mauritania	●	●
Mauritius	●	●

Country/Territory/Area	Delta	Omicron
Mayotte	●	●
Mexico	●	●
Monaco	●	●
Mongolia	●	●
Montenegro	○	○
Montserrat	●	●
Morocco	●	●
Mozambique	●	●
Myanmar	●	●
Namibia	●	●
Nepal	●	●
Netherlands	●	●
New Caledonia	●	●
New Zealand	●	●
Nicaragua	●	●
Niger	●	●
Nigeria	●	●
North Macedonia	○	○
Northern Mariana Islands (Commonwealth of the)	●	●
Norway	●	●
Occupied Palestinian Territory	●	●
Oman	●	●
Pakistan	●	●

Country/Territory/Area	Delta	Omicron
Palau	○	○
Panama	●	●
Papua New Guinea	●	●
Paraguay	●	●
Peru	●	●
Philippines	●	●
Poland	●	●
Portugal	●	●
Puerto Rico	●	●
Qatar	●	●
Republic of Korea	●	●
Republic of Moldova	●	●
Romania	●	●
Russian Federation	●	●
Rwanda	●	●
Réunion	●	●
Saba	●	-
Saint Barthélemy	●	●
Saint Kitts and Nevis	●	●
Saint Lucia	●	●
Saint Martin	●	●
Saint Pierre and Miquelon	●	●
Saint Vincent and the Grenadines	●	●

Country/Territory/Area	Delta	Omicron
Sao Tome and Principe	○	-
Saudi Arabia	●	●
Senegal	●	●
Serbia	●	○
Seychelles	●	●
Sierra Leone	●	●
Singapore	●	●
Sint Maarten	●	●
Slovakia	●	●
Slovenia	●	●
Solomon Islands	●	●
Somalia	●	-
South Africa	●	●
South Sudan	●	●
Spain	●	●
Sri Lanka	●	●
Sudan	●	●
Suriname	●	●
Sweden	●	●
Switzerland	●	●
Thailand	●	●
Timor-Leste	●	●
Togo	●	●
Tonga	-	○

Country/Territory/Area	Delta	Omicron
Trinidad and Tobago	●	●
Tunisia	●	●
Turkey	●	●
Turks and Caicos Islands	●	●*
Uganda	●	●
Ukraine	○	●
United Arab Emirates	●	●
United Kingdom	●	●
United Republic of Tanzania	●	●
United States Virgin Islands	●	●
United States of America	●	●
Uruguay	●	●
Uzbekistan	○	●
Vanuatu	●	-
Venezuela (Bolivarian Republic of)	●	●
Viet Nam	●	●
Wallis and Futuna	-	-
Yemen	-	-
Zambia	●	●
Zimbabwe	●	●

**Newly reported in this update. "●" indicates that information for this variant was received by WHO from official sources. "○" indicates that information for this variant was received by WHO from unofficial sources and will be reviewed as more information becomes available. **Includes countries/territories/areas reporting the detection of VOCs among travelers (e.g., imported cases detected at points of entry), or local cases (detected in the community). Excludes countries, territories, and areas that have never reported the detection of a variant of concern.*

See also Annex 2: Data, table, and figure notes

Annex 2. Data, table, and figure notes

Data presented are based on official laboratory-confirmed COVID-19 cases and deaths reported to WHO by country/territories/areas, largely based upon WHO case definitions and surveillance guidance. While steps are taken to ensure accuracy and reliability, all data are subject to continuous verification and change, and caution must be taken when interpreting these data as several factors influence the counts presented, with variable underestimation of true case and death incidences, and variable delays to reflecting these data at the global level. Case detection, inclusion criteria, testing strategies, reporting practices, and data cut-off and lag times differ between countries/territories/areas. A small number of countries/territories/areas report combined probable and laboratory-confirmed cases. Differences are to be expected between information products published by WHO, national public health authorities, and other sources.

Due to public health authorities conducting data reconciliation exercises that remove large numbers of cases or deaths from their total counts, negative numbers may be displayed in the new cases/deaths columns as appropriate. When additional details become available that allow the subtractions to be suitably apportioned to previous days, graphics will be updated accordingly. A record of historic data adjustment made is available upon request by emailing epi-data-support@who.int. Please specify the countries of interest, time period, and purpose of the request/intended usage. Prior situation reports will not be edited; see covid19.who.int for the most up-to-date data. COVID-19 confirmed cases and deaths reported in the last seven days by countries, territories, and areas, and WHO Region (reported in previous issues) are now available at: https://covid19.who.int/table.

'Countries' may refer to countries, territories, areas or other jurisdictions of similar status. The designations employed, and the presentation of these materials do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement. Countries, territories, and areas are arranged under the administering WHO region. The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions except, the names of proprietary products are distinguished by initial capital letters.

[1] All references to Kosovo should be understood to be in the context of the United Nations Security Council resolution 1244 (1999). In the map, the number of cases of Serbia and Kosovo (UNSCR 1244, 1999) have been aggregated for visualization purposes.

Annex 3. Methods for Figures 5 and 6

Figures include fourteen studies from the Czech Republic, Denmark, Finland, Israel, Qatar, South Africa, the United Kingdom, and the United States of America evaluating the VE against the Omicron variant, and 31 studies of the VE against the Delta variant from various countries from the European Region, Region of the Americas, and South-East Asia Region as well as Qatar and Thailand.

VE studies included in the plot were identified from an ongoing systematic review of COVID-19 vaccine effectiveness studies. All studies were cohort or test-negative studies. Methods for the systematic review and inclusion/exclusion criteria are available on view-hub.org. The studies were conducted during a period when either Delta or Omicron was the predominant circulating variant. Estimates were included if they were of laboratory-confirmed cases of the Omicron or Delta variant. In addition, for the primary series VE, only studies providing VE estimates for discrete time intervals since vaccination, which evaluate changes in VE over time, are included.
For the primary series VE, estimates are only included in the plot for studies that report VE for more than one time period.

Annex 4. Summary of primary series vaccine performance against Variants of Concern *(VE data as of 17 March 2022; Neutralization data as of 14 March 2022)*

	WHO Emergency Use Listing (EUL) Qualified Vaccines[+]								Vaccines without WHO EUL[+]	
	AstraZeneca-Vaxzevria/SII - Covishield	Beijing CNBG-BBIBP-CorV	Bharat-Covaxin	Janssen-Ad26.COV 2.S	Moderna-mRNA-1273	Novavax-Nuvaxovid/SII - Covavax	Pfizer BioNTech-Comirnaty	Sinovac-CoronaVac	Anhui ZL-Recombinant	Gamaleya-Sputnik V
Alpha, Beta, Gamma										
Summary of VE*	*(see update from 11 January 2022 for details of vaccine performance against Alpha, Beta, and Gamma variants of concern*									
Delta[42]										
Summary of VE*	Protection retained against severe disease; possible reduced protection against symptomatic disease and infection									
- Severe disease	↔$_3$	-	-	↓$_1$	↔$_4$	-	↔$_7$	-	-	-
- Symptomatic disease	↔to↓↓$_6$	-	↓$_1$	-	↔$_2$	-	↔to↓$_5$	-	-	-
- Infection	↔to↓$_5$	-	-	↓↓↓$_1$	↔$_6$	-	↔to↓$_7$	-	-	-
Neutralization	↓$_{15}$	↔to↓$_2$	↔to↓$_4$	↔to↓↓$_{11}$	↓$_{15}$	-	↔to↓$_{40}$	↓to↓↓$_{10}$	↔to↓$_2$	↓to↓↓↓$_3$
Omicron										
Summary of VE*	Reduced protection against infection and symptomatic disease; possible reduced protection against for severe disease but limited evidence									
- Severe disease	-	-	-	-	↓/↓↓$_1$	-	↓↓/↓↓↓$_3$	-	-	-
- Symptomatic disease	↓↓↓$_1$	-	-	-	↓↓/↓↓↓$_2$	-	↓↓↓$_2$	-	-	-
- Infection	↓↓↓$_1$	-	-	-	↓↓↓$_3$	-	↓↓↓$_3$	-	-	-
Neutralization	↓↓↓$_7$	↔to↓↓↓$_3$	↓↓$_1$	↔to↓↓↓$_3$	↓↓↓$_{17}$	-	↓↓↓$_{37}$	↓↓to↓↓↓$_4$	-	↓↓$_1$

VE refers to vaccine effectiveness and vaccine efficacy. *Summary of VE: indicates the general conclusions but only for the vaccines evaluated against the specific variant. Arrows generalize the magnitude of reduction in VE or neutralization: "↔" <10 percentage point (pp) reduction in VE, or VE >90% with no comparator, or that there was a <2-fold reduction in neutralization; "↓" 10 to <20 pp reduction in VE, or 2 to <5-fold reduction in neutralization; "↓↓" 20 to <30 pp reduction in VE, or 5 to <10-fold reduction in neutralization; "↓↓↓" ≥30 pp reduction in VE, or ≥10-fold reduction in neutralization. When more than one neutralization study is available, the interquartile range (25th and 75th percentiles) of fold-reductions across all studies for specific vaccine/variant was used. "Moderna-mRNA-1273/Pfizer BioNTech-Comirnaty" indicates that both vaccines were evaluated together in the study. The number of studies is shown as subscripts: vaccine effectiveness and neutralization studies informing this table can be found on the VIEW-hub Resources Library. References indicated by superscripts next to VOC name in column 1 are vaccine efficacy results from randomized controlled trials informing this table.

Additional notes on VOC impacts on vaccines

- Reductions in VE do not necessarily mean loss of protection, as indicated by the absolute VE estimate. For example, a 10-percentage point reduction in VE against symptomatic disease for mRNA vaccines would still mean high vaccine effectiveness of ~85%. Likewise, vaccines have shown higher VE against severe disease; thus, small reductions in VE against severe disease due to VOCs may still mean substantial protection.
- Annex 4 summarizes the impact of VOCs on COVID-19 vaccine performance in the absence of waning, and, therefore, does not include studies that only assess VE greater than four months post final dose.
- Studies reporting VOC-specific VE estimates for full vaccination (seven days and over after the final dose) are assessed against a comparator VE estimate for that vaccine product to determine level of reduction in VE. For symptomatic disease, VOC VE is compared against phase 3 RCT results from non-VOC settings. For severe disease and infection, due to instability or lack of phase 3 RCT estimates, VOC VE is compared to non-VOC VE estimates from the same study when available (or to Alpha VE from same study when assessing Beta, Gamma, or Delta); with an exception for AstraZeneca-Vaxzevria for infection (where a phase 3 estimate of VE against infection due to non-VOC is available and used as comparator). In some instances, a study may be included for severe disease or infection outcome even without a comparator if a very high VE estimate is reported against a VOC (i.e., >90%).
- It is also important to note that studies vary in population, outcome definitions, study design and other methodological considerations, which may in part explain differences when comparing VE estimates for a product between different studies. In addition, the reductions summarized in the table represent VE point estimates and do not represent the uncertainty intervals around these estimates which vary substantially across studies. The reductions in VE noted should be interpreted with these limitations in mind.
- Neutralization studies that use samples collected more than seven days and less than six months after complete vaccination and that use an ancestral strain as the reference are included in Annex 4.

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