

# COVID-19 Weekly Epidemiological Update

Edition 97, published 22 June 2022

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## Global overview

Data as of 19 June 2022

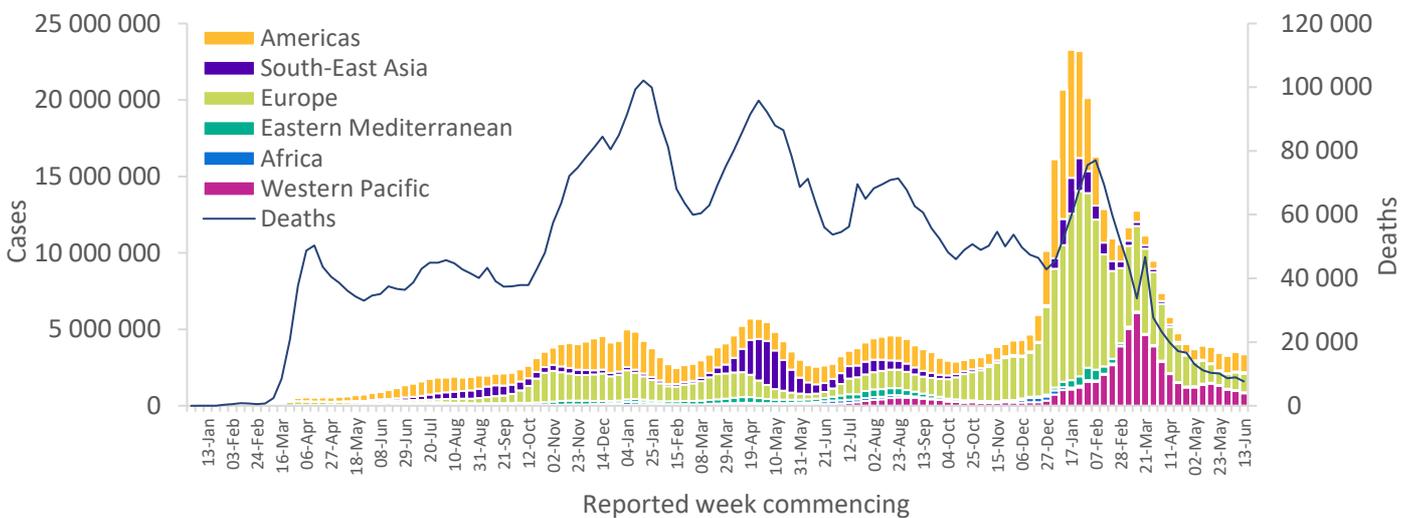
Globally, the number of new weekly cases has continued to decline since the peak in January 2022. During the week of 13 until 19 June 2022, over 3.3 million cases were reported, a 4% decrease as compared to the previous week (figure 1). The number of new weekly deaths declined by 16% as compared to the previous week, with over 7500 fatalities reported.

At the regional level, the number of new weekly cases increased in the South-East Asia Region (+46%), the Eastern Mediterranean Region (+45%), and the European Region (+6%), while it decreased in the other three WHO regions. The number of new weekly deaths increased in the South-East Asia Region (+4%), while decreasing trends were observed in the other five regions.

As of 19 June 2022, over 536 million confirmed cases and over 6.3 million deaths have been reported globally.

These trends should be interpreted with caution as several countries have been progressively changing COVID-19 testing strategies, resulting in lower overall numbers of tests performed and consequently lower numbers of cases detected.

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



\*\*See [Annex 1: Data, table, and figure notes](#)

At the country level, the highest number of new weekly cases were reported from the United States of America (652 217 new cases; -12%), China (406 401 new cases; -19%), Germany (356 414 new cases; +10%), Brazil (256 034 new cases; -9%), and France (253 322 new cases; +33%). The highest number of new weekly deaths were reported from the United States of America (1 858 new deaths; -13%), China (1 044 new deaths; -13%), Brazil (956 new deaths; -3%), the Russian Federation (443 new deaths; -11%), and Italy (338 new deaths; -24%).

**Table 1. Newly reported and cumulative COVID-19 confirmed cases and deaths, by WHO Region, as of 19 June 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 (%)
Europe	1 201 047 (36%)	6%	224 069 651 (42%)	1 985 (26%)	-26%	2 021 567 (32%)
Americas	1 169 388 (35%)	-9%	160 675 014 (30%)	3 437 (45%)	-11%	2 754 328 (44%)
Western Pacific	820 228 (24%)	-16%	62 806 589 (12%)	1 667 (22%)	-11%	235 643 (4%)
South-East Asia	99 237 (3%)	46%	58 339 959 (11%)	273 (4%)	4%	789 500 (12%)
Eastern Mediterranean	48 257 (1%)	45%	21 872 148 (4%)	61 (1%)	-2%	343 395 (5%)
Africa	22 296 (1%)	-21%	9 074 845 (2%)	169 (2%)	-24%	173 207 (3%)
<b>Global</b>	<b>3 360 453 (100%)</b>	<b>-4%</b>	<b>536 838 970 (100%)</b>	<b>7 592 (100%)</b>	<b>-16%</b>	<b>6 317 653 (100%)</b>

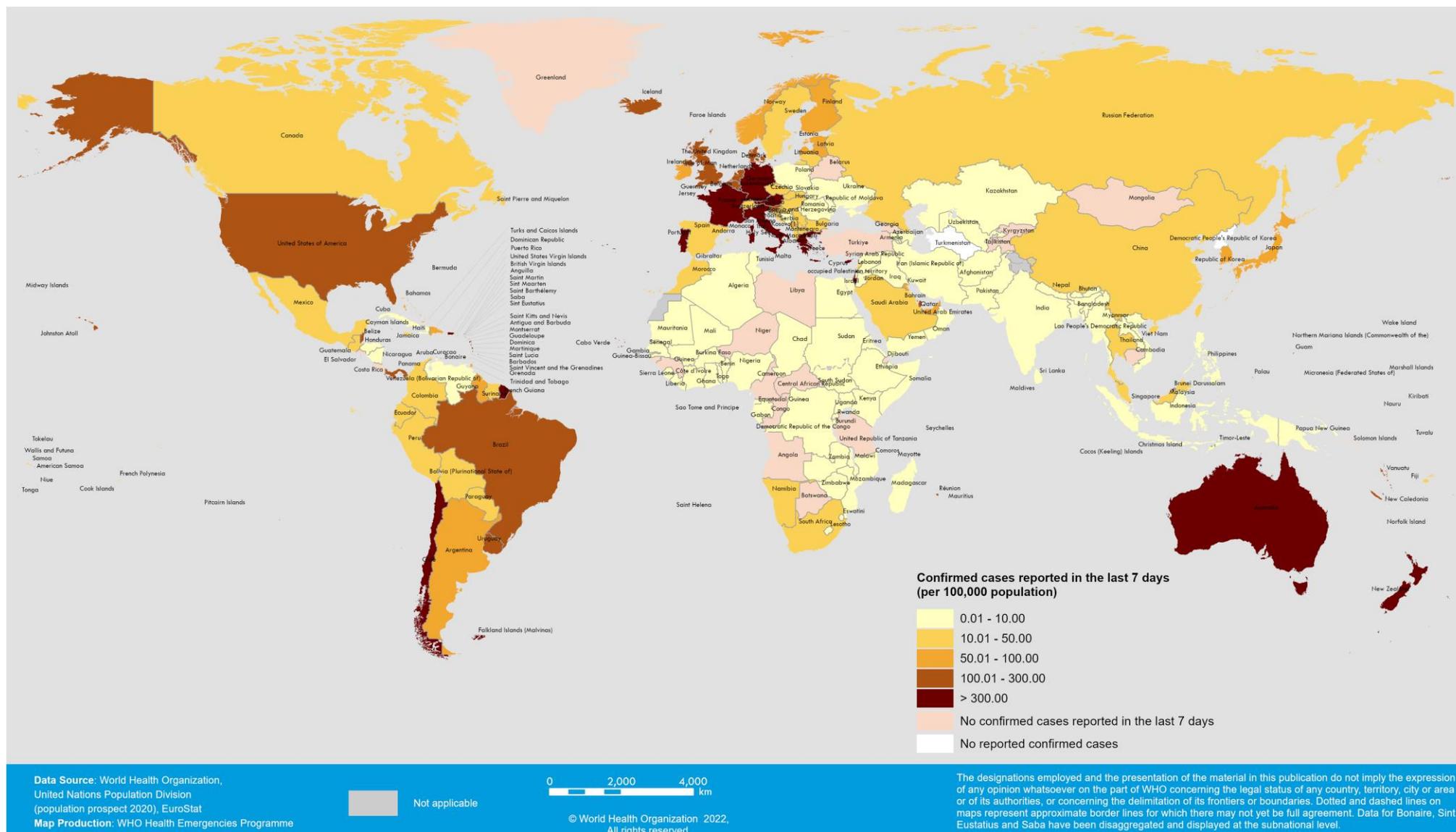
\*Percent change in the number of newly confirmed cases/deaths in the past seven days, compared to seven days prior

\*\*See [Annex 1: Data, table, and figure notes](#)

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

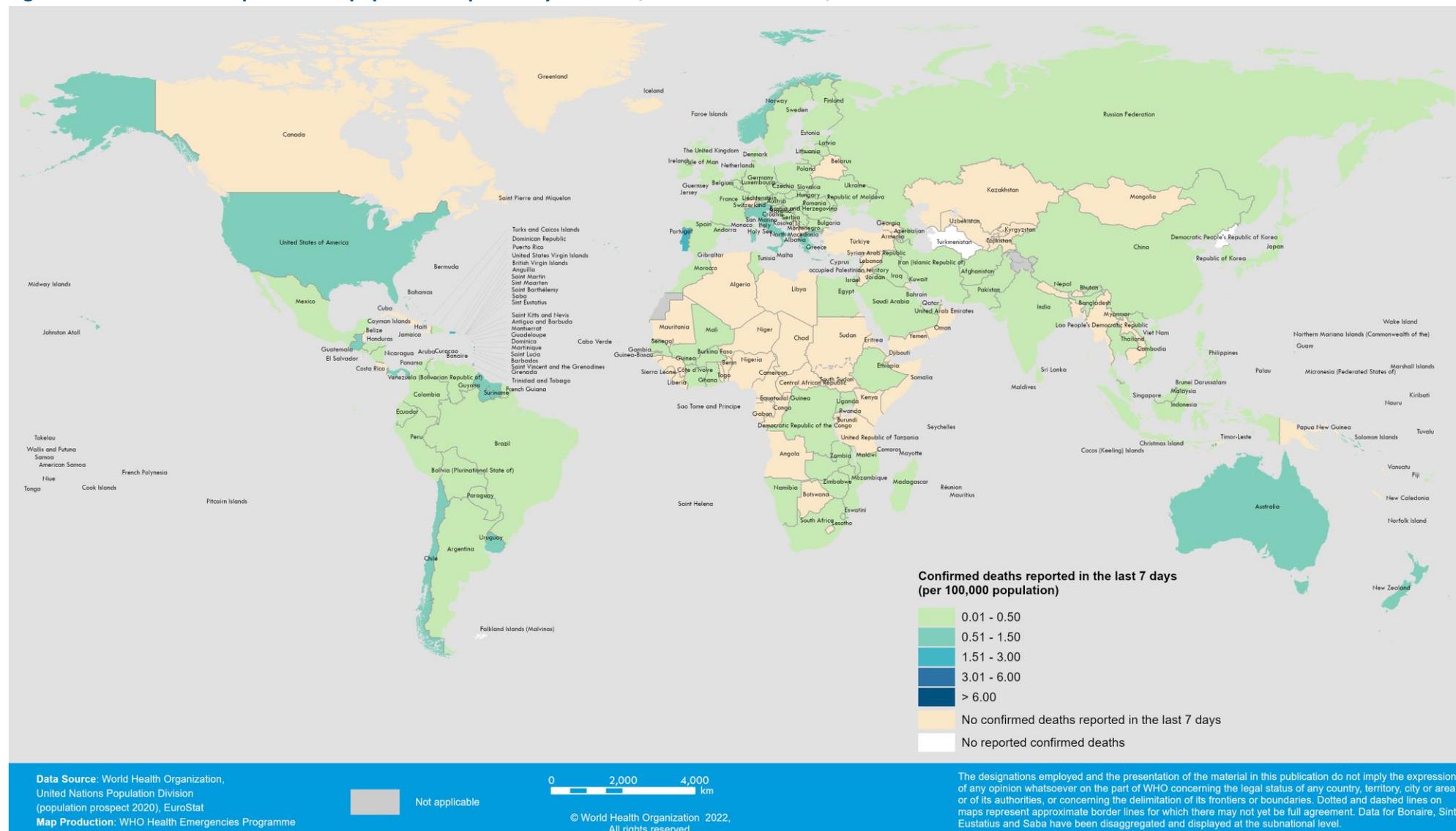
- [WHO COVID-19 Dashboard](#)
- [WHO COVID-19 Weekly Operational Update and previous editions of the Weekly Epidemiological Update](#)
- [WHO COVID-19 detailed surveillance data dashboard](#)

Figure 2. COVID-19 cases per 100 000 population reported by countries, territories and areas, 13 – 19 June 2022\*



\*\*See [Annex 1: Data, table, and figure notes](#)

Figure 3. COVID-19 deaths per 100 000 population reported by countries, territories and areas, 13-19 June 2022\*



\*\*See [Annex 1: 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 the 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.

The classifications of variants will be revised as needed to reflect the continuous evolution of circulating variants and their changing epidemiology. Criteria for variant classification, and the lists of currently circulating and previously circulating 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 strongly encouraged to investigate and report newly emerging variants and their impact.<sup>1</sup>

### Geographic spread and prevalence of VOCs

The Omicron VOC continues to be the dominant variant circulating globally, accounting for nearly all sequences reported to GISAID between 17 May and 17 June 2022. Among Omicron lineages, as of epidemiological week 23 (6 to 12 June 2022), the proportions of BA.2 and its descendent lineages (pooled lineages named BA.2.X) are declining but nonetheless remain dominant, accounting for 36% and 12% respectively (Table 2).

Globally, BA.5 and BA.4 lineages continue to rise in prevalence and have been detected in 62 and 58 countries respectively. BA.2.12.1, which has now been detected in 69 countries, has decreased in prevalence since the previous week. As of week 23, the prevalence of BA.5 is 25% (from previous week 16%), BA.4 is 9% (from previous week 16%) and BA.2.12.1 is 17% (from previous week 31%). BA.4 and BA.5 have a constellation of genetic mutations that differ from BA.2, including a shared mutation at S:L452 which has been associated with higher transmissibility. The rise in prevalence of BA.4 and BA.5 has coincided with a rise in cases in several WHO regions. In some countries, the rise in cases has also led to a surge in hospitalizations and ICU admissions; however, the current evidence available does not indicate a change in severity associated with any of the three Omicron descendent lineages BA.2.12.1, BA.4 and BA.5.

Based on sequence data submitted to GISAID, variant circulation and dynamics differ by country. Multiple countries report co-circulation of BA.2.12.1, BA.4 and BA.5. The prevalence of VOC-LUMs BA.2.9.1, BA.2.11 and BA.2.13 (all carrying the S:L452 mutation) is <1%.

Figure 5 Panel A and B: The number and percentage of SARS-CoV-2 sequences, as of 20 June 2022

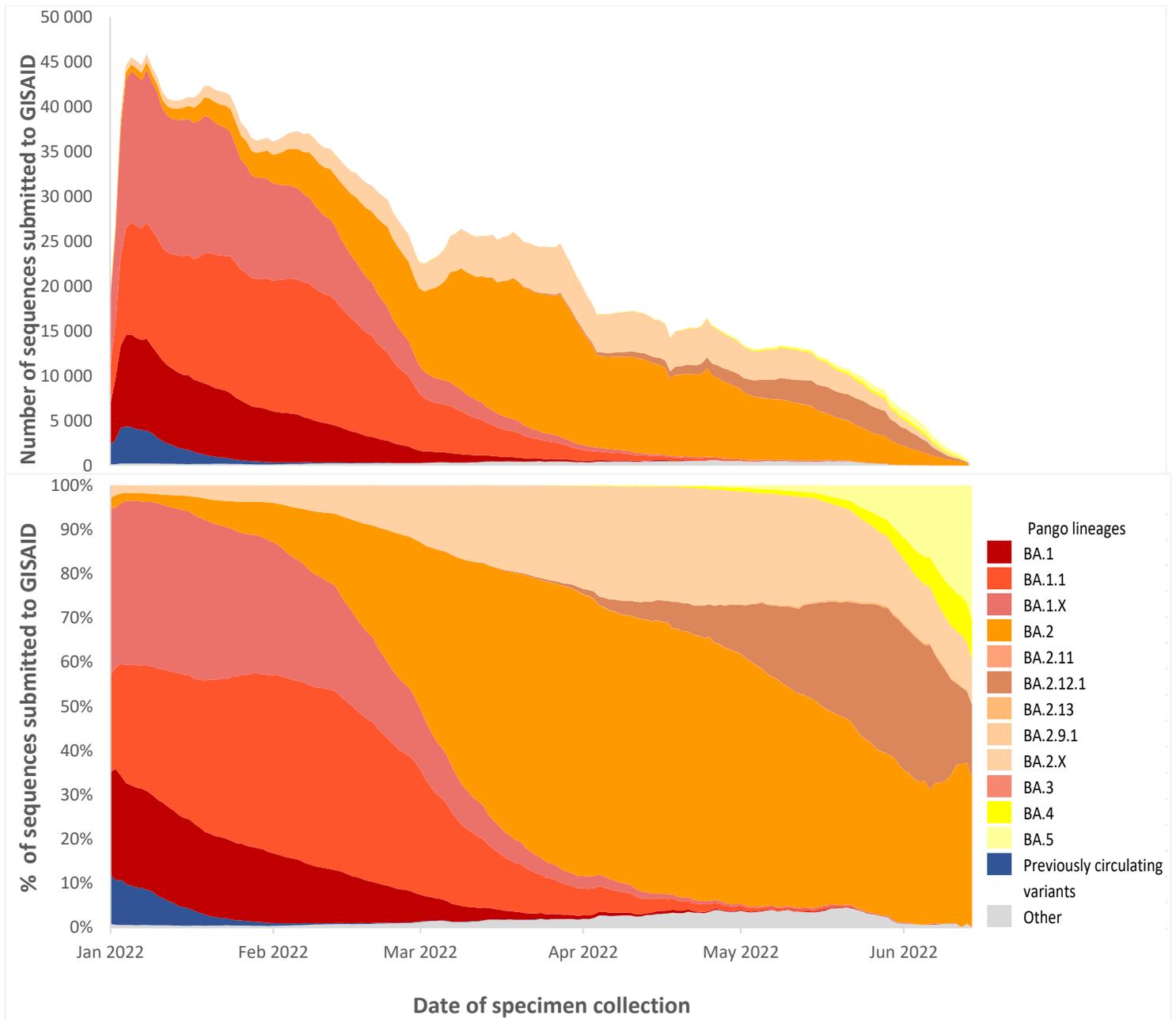


Figure 4 Panel A shows the number and Panel B the percentage of all circulating variants since 1 January 2022. Omicron sister-lineages and additional Omicron VOC descendent lineages under further monitoring (VOC-VUM) are shown. BA.1.X and BA.2.X include all BA.1 and BA.2 pooled descendent lineages, except those already shown in the figure above. Source: SARS-CoV-2 sequence data and metadata from GISAID, as of 20 June 2022.

**Table 2: Relative proportions of SARS CoV-2 variants over the last four weeks by specimen collection date**

Lineage	Countries	Sequences <sup>a</sup>	Last 4 weeks by collection date (%)			
			2022-20	2022-21	2022-22	2022-23
BA.1	178	494 314	0.13	0.04	0.04	0.05
BA.1.1	177	968 541	0.30	0.16	0.07	0.05
BA.1.X*	175	895 060	0.23	0.06	0.06	0.04
BA.2	146	1 137 826	41.42	36.51	32.53	36.40
BA.2.11	15	627	0.06	0.04	0.03	0.03
BA.2.12.1	69	118 126	27.02	33.04	30.57	17.20
BA.2.13	36	2 305	0.42	0.50	0.48	0.35
BA.2.9.1	13	699	0.07	0.05	0.03	0.08
BA.2.X*	133	452 477	20.26	15.59	13.16	11.60
BA.3	33	830	0.00	0.01	0.00	
BA.4	58	10 778	2.11	3.73	6.27	8.62
BA.5	62	18 556	3.57	7.91	16.11	24.78
Delta <sup>#</sup>	202	4 344 425	0.01	0.01	0.01	
Other	210	2 687 902	4.39	2.35	0.64	0.80

<sup>a</sup> Data source: sequences and metadata from GISAID.

<sup>b</sup> Relative proportions in %.

\* BA.1.X and BA.2.X include all BA.1 and BA.2 pooled descendent lineages, except those already shown in the table above.

<sup>#</sup>Previously circulating VOC

The blue rows indicate the dominant lineages. The darker grey rows indicate the lineages that are increasing in prevalence, light grey indicate the lineage with decreasing prevalence since last week.

## Characteristics of Omicron

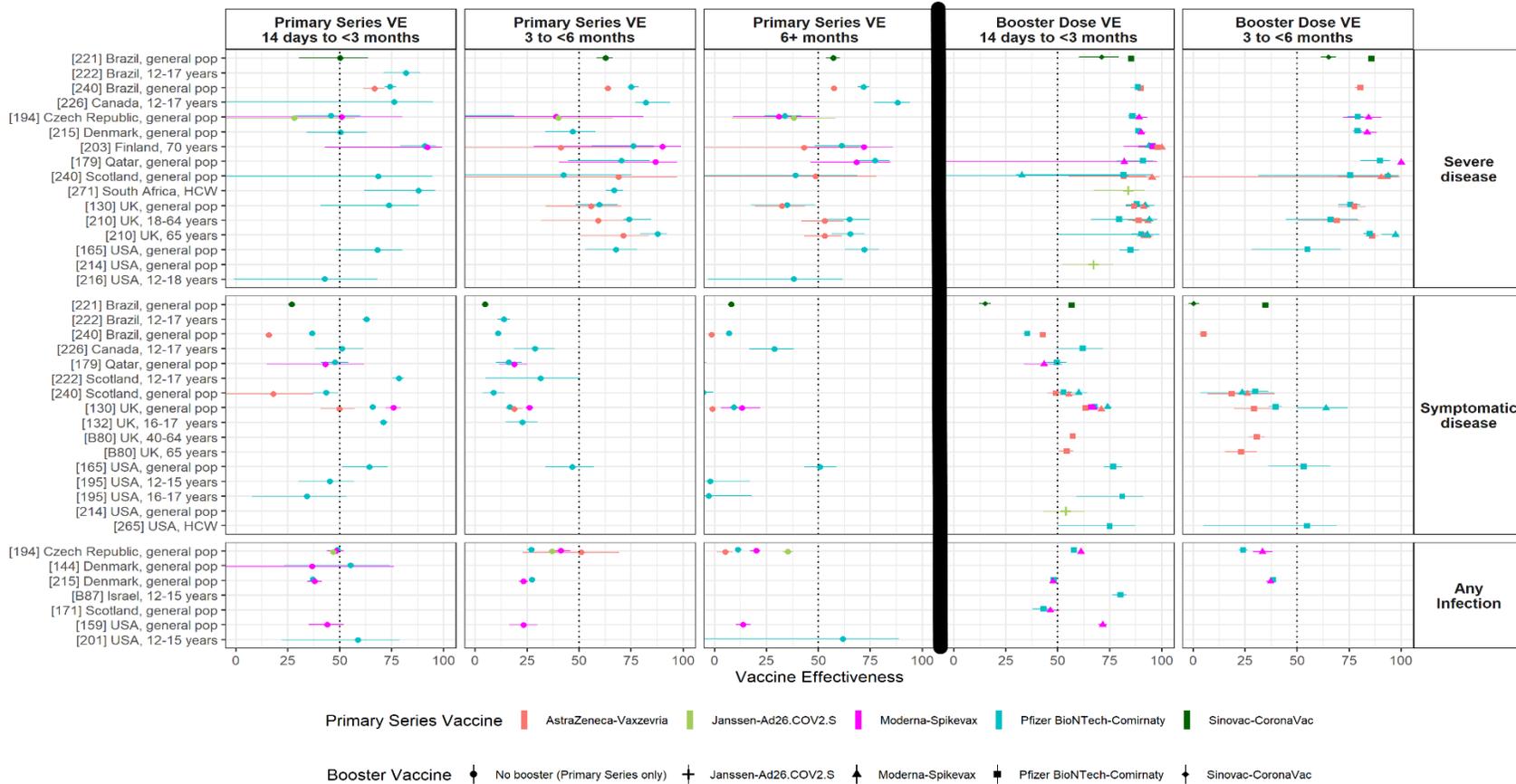
Available evidence on the phenotypic impacts of VOCs is reported in [previous editions](#) of the COVID-19 Weekly Epidemiological Update. Table 2 summarizes the phenotypic characteristics of the Omicron VOC and its sublineages for which evidence is available since the [last update on 8 June 2022](#). 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 phenotypic characteristics\* of the Omicron VOC**

Public health domain of impact	Omicron (B.1.1.529)	Omicron sublineages			
		BA.1	BA.2	BA.4	BA.5
Transmissibility	Growth advantage and increased transmissibility compared to Delta <sup>i</sup>	Lower transmissibility compared to BA.2 <sup>2</sup>	Increased transmissibility compared to BA.1 <sup>2</sup>	Growth advantage compared to BA.2 <sup>3</sup>	Growth advantage over BA.2 <sup>3</sup>
Disease severity	Overall evidence suggests lower severity despite contrasting evidence. Earlier studies reported lower severity compared to Delta. <sup>4-8</sup> However, more recent studies in different settings reported similar <sup>9,10</sup> or increased severity <sup>11</sup> compared to Delta. <sup>4-8,12 13</sup>	No difference in disease severity compared to BA.2 <sup>14</sup>	No difference in disease severity compared to BA.1 <sup>14</sup>	Currently available evidence does not suggest a difference in disease severity compared to BA.1 <sup>15</sup>	Currently available evidence does not suggest a difference in disease severity compared to BA.1 <sup>16,17</sup>
Risk of reinfection	Reduced risk of Omicron reinfection among individuals previously infected with a different SARS-CoV-2 variant compared to naïve individuals <sup>18,19</sup>	Reduced risk of reinfection with BA.1 following infection with BA.2 <sup>20</sup>	Reduced risk of reinfection with BA.2 following infection with BA.1 <sup>20</sup>	No specific data available	No specific data available
Impact on antibody responses	Reduction in neutralizing activity reported as compared to other VOCs <sup>21-23</sup>	Lower neutralising antibody titers compared to the index virus <sup>22</sup>	Lower neutralising antibody titers compared to the index virus <sup>22</sup>	Lower neutralising antibody titres (7.6-fold) compared to BA.1 <sup>24-26</sup>	Lower neutralising antibody titres (7.5-fold) compared to BA.1 <sup>24,26</sup>
Impacts on diagnostics	PCR assays that include multiple gene targets maintain their accuracy to detect Omicron <sup>27</sup> ; S gene target failure/positivity (SGTF) may be a proxy for screening. Limited to no impact on sensitivity of Ag-RDTs observed <sup>28-31</sup>	S gene target failure.	The majority will be S gene target positive (SGTP).	S gene target failure.	S gene target failure.
Impact on treatment	No difference in the effectiveness of antiviral agents (polymerase and protease inhibitors) against the Omicron variant <sup>32</sup> . Conserved neutralizing activity for three broadly neutralizing monoclonal antibodies (sotrovimab, S2X259 and S2H97) and a reduced effectiveness of other monoclonal antibodies <sup>33-36</sup>	Reduced efficacy of casirivimab-imdevimab against BA.1 <sup>37</sup>	Reduced neutralising activity of sotrovimab <sup>37</sup> , casirivimab and imdevimab against BA.2 <sup>38</sup>	Reduced neutralising activity of casirivimab and imdevimab <sup>38</sup>	Reduced neutralising activity of casirivimab and imdevimab <sup>38</sup>
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, <b>see the section Interpretation of the results of the VE for the Omicron variant</b>				

<sup>i</sup> Similar methodology used as Reference<sup>1</sup>

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



Abbreviations: pop=population; HCW=healthcare workers. 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.COVID.2.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, nine point estimates for the primary series with confidence intervals below 0 are not shown in the Omicron plot: two estimates from reference #144 against infection at 3 to <6 months (Pfizer BioNTech-Comirnaty and Moderna-Spikevax), two estimates from reference #179 against symptomatic disease at 6+ months (Pfizer BioNTech-Comirnaty and Moderna-Spikevax), and five estimates from reference #240 (one AstraZeneca-Vaxzevria estimate at 3 to <6 months; three AstraZeneca-Vaxzevria estimates and one Pfizer BioNTech estimate at 6+ months).

Figure 6 summarizes the impact of the Omicron variant on product-specific vaccine effectiveness (VE) over time for both primary series vaccines and booster vaccines. Additional information on vaccine performance against VOCs can also be found in Annex 4. Since the last [update](#), one new study assessing absolute vaccine effectiveness of three doses of Pfizer BioNTech-Comirnaty among healthcare workers in the United States of America has been added to the figure.<sup>39</sup> In addition, a study evaluating VE of two doses of Janssen-Ad26.COVID.2.S against hospitalization among healthcare workers in South Africa that had been previously included in the figure has now been published. The study has provided additional VE estimates for two doses of Pfizer-BioNTech-Comirnaty, which have been added to the figure.<sup>40</sup>

### Interpretation of the results of absolute VE for the Omicron variant

To date, 23 studies from ten countries (Brazil, Canada, Czech Republic, Denmark, Finland, Israel, Qatar, South Africa, the United Kingdom and the United States of America) have assessed the duration of protection of five vaccines against the Omicron variant (six studies assessed VE of primary series vaccination only, three assessed VE of booster vaccination only, and 14 assessed both). Findings from these studies show reduced VE of COVID-19 primary series vaccines against the Omicron variant for all outcomes (*severe disease*, *symptomatic disease*, and *infection*) than has been observed for the other four VOCs. Importantly though, VE estimates against the Omicron variant remain higher for *severe disease* than the other outcomes, in the majority of studies. Booster vaccination substantially improves VE for all outcomes and for all combinations of schedules with estimates available for both primary series and booster vaccination. VE declines more with time after booster vaccination for symptomatic disease and infection than it does for severe disease; however, studies that assess VE of booster vaccination beyond six months are needed to evaluate longer duration of protection.

For *severe disease*, within the first three months of primary series vaccination, seven of 13 (54%) VE estimates for the mRNA vaccines (Moderna-Spikevax and Pfizer BioNTech-Comirnaty) were  $\geq 70\%$ . Of the two studies available for vector vaccines, one reported a VE of  $< 70\%$  for AstraZeneca-Vaxzevria, and the other reported a VE of  $< 50\%$  for Janssen-Ad26.COVID.2.S. One study was available for inactivated vaccines (Sinovac-CoronaVac), reporting a VE of 50%. Beyond three months after vaccination, thirteen of 29 (45%) VE estimates for the mRNA vaccines were  $\geq 70\%$  while 20 (69%) were  $\geq 50\%$ ; one of the 12 (8%) VE estimates for AstraZeneca-Vaxzevria was  $\geq 70\%$  while eight (67%) were  $\geq 50\%$ ; neither of the two estimates for the other vector-based vaccine, Janssen-Ad26.COVID.2.S, were  $\geq 50\%$ . The two available VE estimates beyond three months of vaccination for Sinovac-CoronaVac were  $\geq 50\%$ .

Booster vaccination improved VE against *severe disease* in all studies in which it was assessed. There were 33 estimates evaluated an mRNA booster, two estimates for a booster dose of Janssen-Ad26.COVID.2.S, and one estimate for a booster dose of Sinovac-CoronaVac. Across the datasets, only one estimate for a booster dose of Pfizer BioNTech-Comirnaty and one estimate for a booster dose of Janssen-Ad26.COVID.2.S were below 70% between 14 days and three months of receipt of a booster dose. At three to six months post mRNA booster, 17 of 20 (85%) estimates showed VE  $\geq 70\%$  (an mRNA vaccine was given as the primary series in 13 of the 20 estimates while AstraZeneca-Vaxzevria and Sinovac-CoronaVac were given as the primary series for six and one of the twenty estimates, respectively).

VE estimates against *symptomatic disease* and *infection* within the first three months of primary series vaccination were lower than against severe disease, and VE decreased more substantially over time. For *symptomatic disease* within the first three months of primary series vaccination, three of 13 (23%) VE estimates for the mRNA vaccines were  $\geq 70\%$  and seven (54%) were  $\geq 50\%$ ; none of the three VE estimates for AstraZeneca-Vaxzevria nor the single estimate for Sinovac (CoronaVac) were above 50%. Beyond three months after vaccination, one of the 29 (3%) VE

estimates were  $\geq 50\%$  (21 estimates evaluated mRNA vaccines, six evaluated AstraZeneca-Vaxzevria, and two evaluated Sinovac-CoronaVac). mRNA booster vaccination after completion of a primary series of an mRNA vaccine, AstraZeneca-Vaxzevria, or Sinovac-CoronaVac, improved VE against *symptomatic disease*, with five of 21 (24%) VE estimates  $\geq 70\%$  and 16 (76%) estimates  $\geq 50\%$  between 14 days and three months post booster. However, booster dose protection declined with time since vaccination with only two of 13 (15%) available estimates indicating a VE of  $\geq 50\%$  at three to six months following receipt of an mRNA booster dose. Neither the single estimate for a booster dose of AstraZeneca-Vaxzevria nor the single estimate for a booster dose of Sinovac-CoronaVac three to six months post vaccination was above 50%. VE against *infection* showed a similar pattern as that against *symptomatic 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](#)

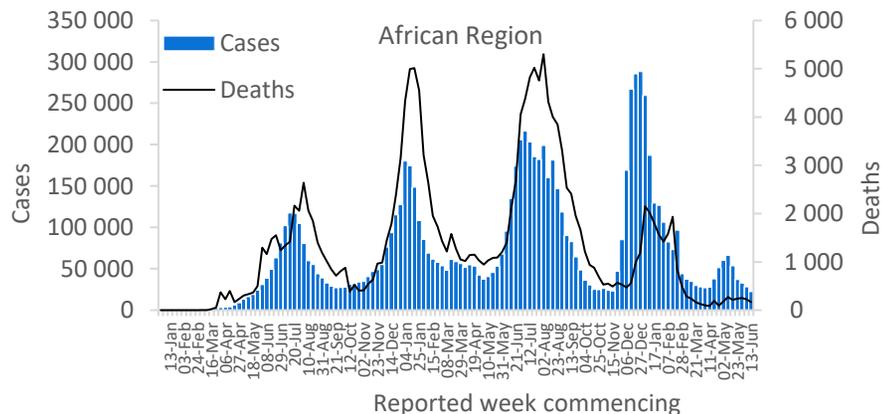
## WHO regional overviews:

Epidemiological week 13-19 June 2022\*\*

### African Region

The African Region reported 22 000 new cases, a 21% decrease as compared to the previous week. Eleven (22%) countries reported an increase in the number of new cases of 20% or greater, with some of the greatest proportional increases seen in Senegal (51 vs 17 new cases; +200%), South Sudan (36 vs 18 new cases; +100%) and Mozambique (758 vs 392 new cases; +93%). The countries that reported the highest numbers of new cases were South Africa (7978 new cases; 13.5 new cases per 100 000 population; -24%), Ethiopia (3488 new cases; 3.0 new cases per 100 000; -9%), and Kenya (2370 new cases; 4.4 new cases per 100 000; +83%).

The number of new weekly deaths in the Region decreased by 24% as compared to the previous week, with over 150 new deaths reported. The highest numbers of new deaths were reported from South Africa (121 new deaths; <1 new death per 100 000 population; -26%), Uganda (eight new deaths; <1 new death per 100 000; +167%), and Zimbabwe (eight new deaths; <1 new deaths per 100 000; -27%).

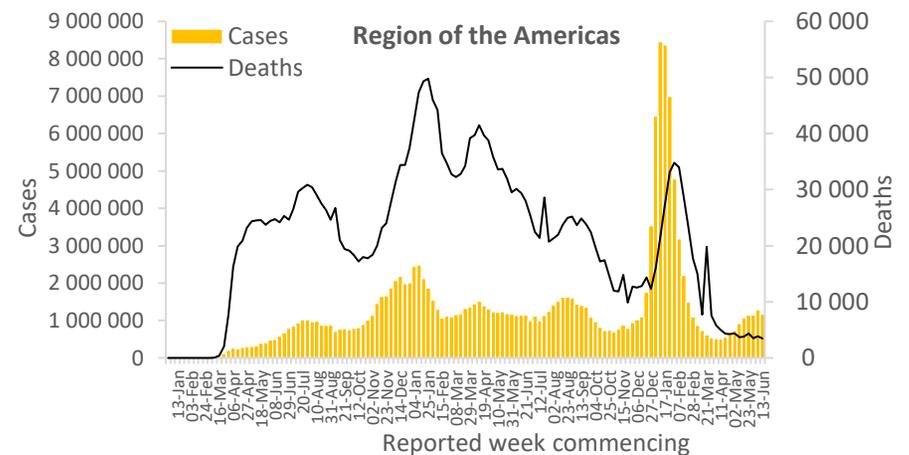


Updates from the [African Region](#)

### Region of the Americas

After reporting increases in the number of new weekly cases observed since mid-April 2022, the Region of the Americas reported over 1.1 million new cases, a 9% decrease as compared to the previous week. However, fourteen (25%) countries reported increases in the number of new cases of 20% or greater, with the greatest proportional increases observed in Turks and Caicos Islands (29 vs 12 new cases; +142%), Saint Kitts and Nevis (73 vs 39 new cases; +87%) and Paraguay (1384 vs 776 new cases; +78%). The highest numbers of new cases were reported from the United States of America (652 217 new cases; 197.0 new cases per 100 000; -12%), Brazil (256 034 new cases; 120.5 new cases per 100 000; -9%), and Chile (73 455 new cases; 384.3 new cases per 100 000; +6%).

The number of new weekly deaths in the Region decreased by 11% as compared to the previous week, with over 3400 new deaths reported. The highest numbers of new deaths were reported from the United States of America (1858 new deaths; <1 new death per 100 000; -13%), Brazil (956 new deaths; <1 new death per 100 000; -3%), and Chile (150 new deaths; <1 new death per 100 000; +24%).

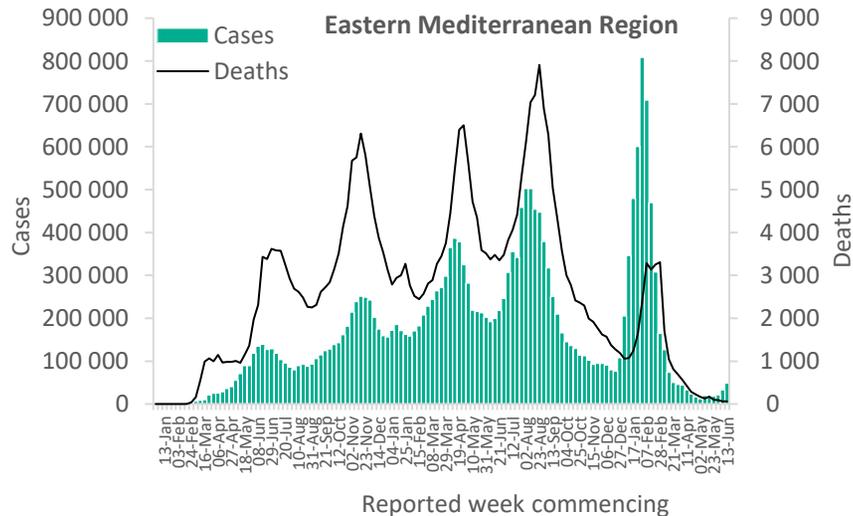


Updates from the [Region of the Americas](#)

## Eastern Mediterranean Region

The Eastern Mediterranean Region reported over 48 000 new weekly cases, representing a 45% increase as compared to the previous week. Fourteen (63%) countries reported increases in the number of new cases of 20% or greater, with the greatest proportional increases observed in Iraq (2210 vs 1080 new cases; +105), Morocco (9628 vs 5184 new cases; +86%) and Oman (327 vs 194 new cases; +69%). The highest numbers of new cases were reported from the United Arab Emirates (9651 new cases; 97.6 new cases per 100 000; +63%), Morocco (9628 new cases; 26.1 new cases per 100 000; +86%), and Bahrain (9227 new cases; 542.3 new cases per 100 000; +41%).

The number of new weekly deaths in the Region decreased by 2% as compared to the previous week, with 61 new deaths reported. The highest numbers of new deaths were reported from Saudi Arabia (15 new deaths; <1 new death per 100 000; similar to the previous week's figures), the Islamic Republic of Iran (14 new deaths; <1 new death per 100 000; -33%), and Tunisia (seven new deaths; <1 new death per 100 000; similar to the previous week's figure).

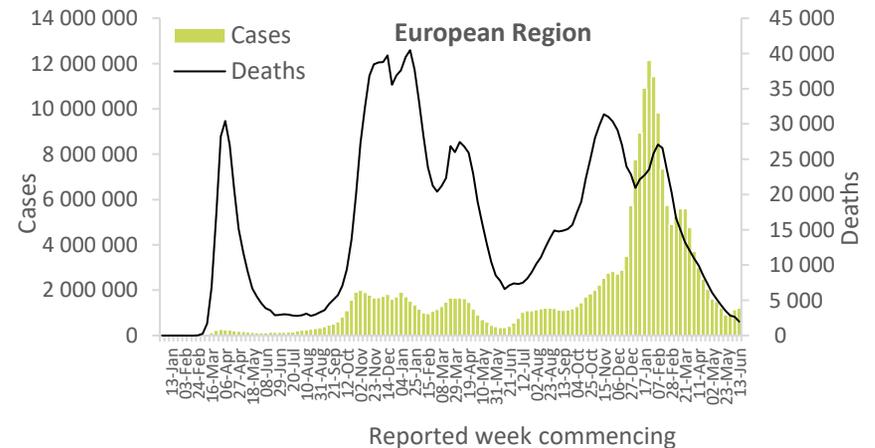


Updates from the [Eastern Mediterranean Region](#)

## European Region

After reporting decreases in the number of new weekly cases since mid-March 2022, a slight increase has been reported in the last two weeks in the European Region, with over 1.2 million new cases reported this week, a 6% increase compared to the previous week. Twenty-one (34%) countries in the Region reported increases in new cases of 20% or greater, with the greatest proportional increases observed in the Isle of Man (570 vs 153 new cases; +272%), Uzbekistan (370 vs 140 new cases; +164%) and Kosovo<sup>[1]</sup> (93 vs 37 new cases; +151%). The highest numbers of new cases were reported from Germany (356 414 new cases; 428.6 new cases per 100 000; +10%), France (253 322 new cases; 389.5 new cases per 100 000; +33%), and Italy (210 840 new cases; 353.5 new cases per 100 000; +47%).

With just under 2000 new weekly deaths, a 26% decrease as compared to the previous week, the Region reports a decreasing trend since early February 2022. The highest numbers of new deaths were reported from the Russian Federation (443 new deaths; <1 new death per 100 000; -11%), Italy (338 new deaths; <1 new death per 100 000; -24%), and France (272 new deaths; <1 new death per 100 000; +6%).

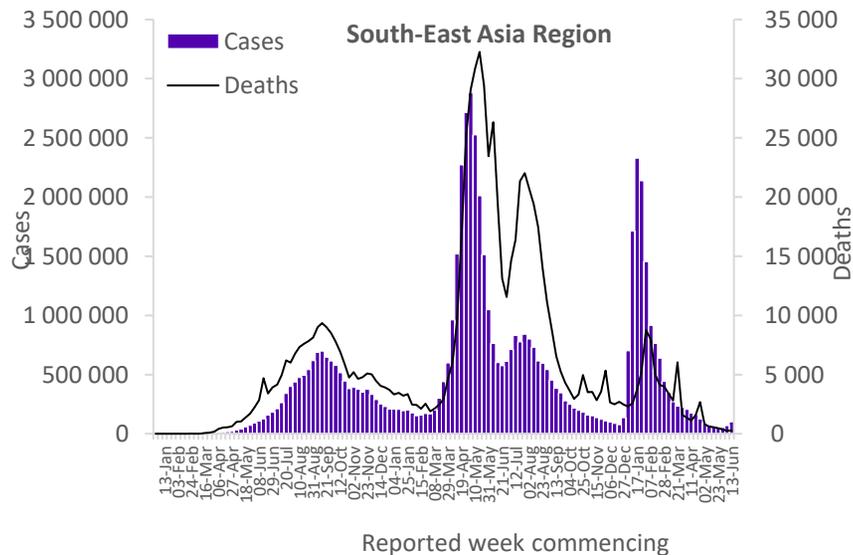


Updates from the [European Region](#)

## South-East Asia Region

After the declining trend in new cases observed since mid-January 2022, the Region has reported an increase in the last three weeks, with over 99 000 new cases reported this week, a 46% increase as compared to the previous week. Six (60%) countries showed increases in the number of new cases of 20% or greater, with the greatest proportional increases observed in Bangladesh (2212 vs 492 new cases; +350%), Maldives (369 vs 160 new cases; +131%) and Indonesia (7587 vs 3688 new cases; +106%). The highest numbers of new cases were reported from India (74 675 new cases; 5.4 new cases per 100 000; +65%), Thailand (14 181 new cases; 20.3 new cases per 100 000; -22%), and Indonesia (2.8 new cases per 100 000).

The number of new weekly deaths increased by 4% as compared to the previous week, with over 273 new deaths reported. The highest numbers of new deaths were reported from Thailand (133 new deaths; <1 new death per 100 000; -18%), India (94 new deaths; <1 new death per 100 000; +36%), and Indonesia (44 new deaths; <1 new death per 100 000; +57%).

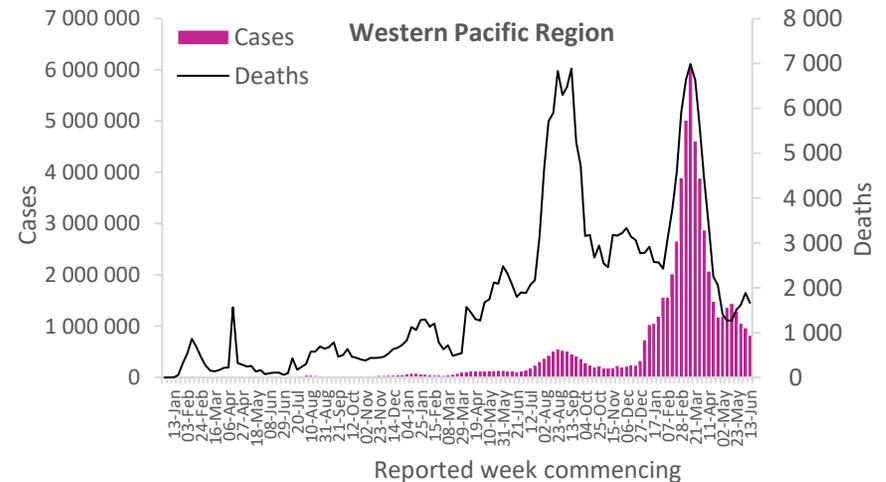


Updates from the [South-East Asia Region](#)<sup>[3]</sup>

## Western Pacific Region

With over 820 000 new cases reported last week, the Western Pacific Region continues the decreasing trend that has been observed for the past month. This represents a 16% decline in new cases as compared to the previous week. Seven (21%) countries reported increases in new cases of 20% or greater, with the largest proportional increases observed in Fiji (163 vs 41 new cases; +298%), Northern Mariana Islands (Commonwealth of the) (79 vs 37 new cases; +114%) and the Philippines (2738 vs 1587 new cases; +73%). The highest numbers of new cases were reported from China (406 401 new cases; 27.6 new cases per 100 000; -19%), Australia (181 980 new cases; 713.7 new cases per 100 000; -6%), and Japan (91 491 new cases; 72.3 new cases per 100 000; -27%).

The Region reported over 1600 new weekly deaths, representing a 11% decrease as compared to the previous week. The highest numbers of new deaths were reported from China (1044 new deaths; <1 new death per 100 000; -13%), Australia (311 new deaths; 1.2 new deaths per 100 000; +5%), and Japan (144 new deaths; <1 new death per 100 000; similar to the previous week's figures).



Updates from the [Western Pacific Region](#)

## Summary of the COVID-19 Monthly Operational Update

The [Monthly 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.

In this edition of the COVID-19 Monthly Operational Update, highlights of country-level actions and WHO support to countries include:

- WHO Country Office and Ministry of Health Türkiye lead the development of a national genomic surveillance strategy: 24–26 June 2022 in Izmir, Türkiye
- The United Republic of Tanzania hosts the first simulation exercise in East Africa since the onset of the COVID-19 pandemic, to improve readiness to health emergencies at points of entry
- Empowering indigenous women as ‘agents of change’: WHO supports Ecuador to engage community stakeholders as part of its COVID-19 response strategy
- 15 tonnes of lifesaving COVID-19 supplies arrive in Samoa
- The Syrian Arab Republic’s coastal areas takes COVID-19 vaccination campaign to a new level
- Myanmar: learning from COVID-19 to prepare for influenza
- WHO/Europe carried out an Intra-Action Review in Azerbaijan, identifying challenges and best practices from the response to COVID-19
- PAHO/WHO supports the Plurinational State of Bolivia to introduce and expand oxygen therapy for COVID-19 patients
- Strengthening Yemen’s response to COVID-19 and the delivery of essential health services
- Preparing for future outbreaks with free online courses on 28 diseases through OpenWHO
- “The Story of Coronavirus”: an animated video to understand COVID-19 transmission
- WHO Scientific Advisory Group for the Origins of Novel Pathogens (SAGO) released its first preliminary report
- WHO holds a global consultation entitled “Crafting the Mosaic”: Resilient surveillance systems for respiratory viruses of pandemic potential
- Global Lead Coordinator for COVID-19 Vaccine Delivery Partnership visits Malawi
- Updated WHO guidance and publications

## Annex 1. 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](mailto: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](https://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.

<sup>[1]</sup> 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.

<sup>[2]</sup> Since 21 May, data for COVID-19 cases and deaths in Northern Ireland was no longer included in the United Kingdom updates (see here for the official announcement).

<sup>[3]</sup> Updates of an outbreak of COVID-19 reported in the Democratic People’s Republic of Korea continue through official media since 12 May 2022; however, at present, no confirmed cases or deaths have been reported to WHO.

## Annex 2. 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.
- Table 3 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 4 months post final dose.
- Studies reporting VOC-specific VE estimates for full vaccination ( $\geq 7$  days post 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 (when 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  $>7$  days and  $< 6$  months after complete vaccination and that use an ancestral strain as the reference are included in the Table 3.

## Annex 3. Methods for Figure 6

- 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](https://view-hub.org). The studies were conducted during a period when Omicron was the predominant circulating variant. Only studies providing VE estimates of individual vaccines are included in the plot (studies assessing combined VE of more than one vaccine are excluded). 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 absolute VE for more than one time period for an individual vaccine. Thirteen studies of VE against Omicron provided only a single cumulative VE estimate for an individual vaccine, which due to varying lengths of time since vaccination are difficult to interpret due to the marked waning of VE over time with omicron.

**Annex 4. Summary of Primary Series Vaccine Performance against Variants of Concern**  
*(VE data as of 16 June 2022; Neutralization data as of 15 June 2022)*

	WHO Emergency Use Listing (EUL) Qualified Vaccines <sup>+</sup>									Vaccines without WHO EUL <sup>+</sup>	
	AstraZeneca-Vaxzevria/SII - Covishield	Beijing CNBG-BBIBP-CorV	Bharat-Covaxin	Cansino - Convidecia	Janssen-Ad26.COV 2.S	Moderna-mRNA-1273	Novavax-Nuvaxovid/SII - Covavax	Pfizer BioNTech-Comirnaty	Sinovac-CoronaVac	Anhui ZL-Recombinant	Gamaleya-Sputnik V
<b>Alpha, Beta, Gamma</b>											
<b>Summary of VE*</b>	<i>see <a href="#">update from 11 January 2022</a> for details of vaccine performance against Alpha, Beta, and Gamma variants of concern</i>										
<b>Delta</b>											
<b>Summary of VE*</b>	<i>see <a href="#">update from 27 April 2022</a> for details of vaccine performance against Delta variant of concern</i>										
<b>Omicron</b>											
<b>Summary of VE*</b>	Reduced protection against infection and symptomatic disease; possible reduced protection against for severe disease but limited evidence										
- Severe disease	-	-	-	-	-	↓to↓↓/↓↓↓	-	↓↓↓to↓↓↓ <sub>5</sub>	-	-	-
- Symptomatic disease	↓↓↓ <sub>1</sub>	-	-	-	-	↓↓/↓↓↓ <sub>2</sub>	-	↓↓↓ <sub>3</sub>	-	-	-
- Infection	↓↓↓ <sub>1</sub>	-	-	-	-	↓↓↓ <sub>3</sub>	-	↓↓↓ <sub>3</sub>	-	-	-
<b>Neutralization</b>	↓↓↓ <sub>7</sub>	↓to↓↓ <sub>4</sub>	↓↓ <sub>1</sub>	-	↓to↓↓↓ <sub>4</sub>	↓↓↓ <sub>18</sub>	-	↓↓↓ <sub>47</sub>	↓↓↓to↓↓↓ <sub>5</sub>	-	↓↓ <sub>1</sub>

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 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.

## 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](#)

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