

# COVID-19 Weekly Epidemiological Update

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In this edition:

- [Global overview](#)
- [SARS-CoV-2 variants of interest and variant of concern](#)
- [Vaccine effectiveness of primary series and booster vaccination against the Omicron variant of concern](#)
- [WHO regional overviews](#)
- [Hospitalizations and ICU admissions](#)
- [Special focus: Updated Interim Guidance on Adjusting Public Health and Social Measures for COVID-19](#)

## Global overview

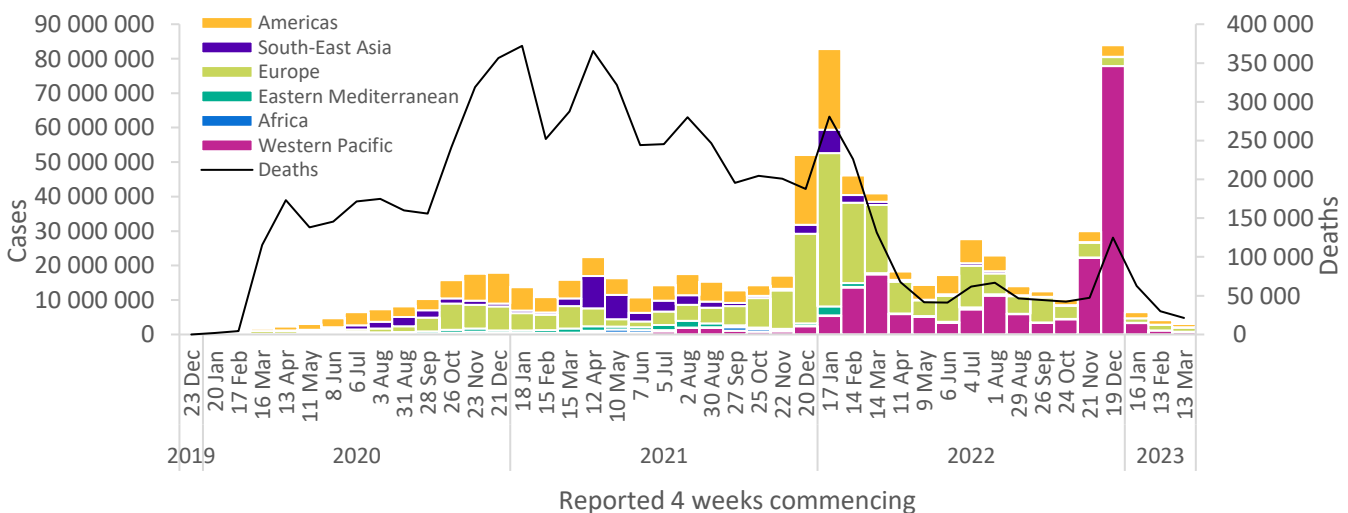
Data as of 9 April 2023

Globally, 3 million new cases and over 23 000 deaths were reported in the last 28 days (13 March to 9 April 2023), a decrease of 28% and 30%, respectively, compared to the previous 28 days (13 February to 12 March 2023) (Figure 1, Table 1). Contrary to the overall trend, important increases in reported cases and deaths were seen in the South-East Asia and Eastern Mediterranean regions and in several individual countries elsewhere. As of 9 April 2023, over 762 million confirmed cases and over 6.8 million deaths have been reported globally.

Current trends in reported COVID-19 cases continue to be underestimates of the true number of global infections and reinfections as shown by prevalence surveys.<sup>1-4</sup> This is partly due to the reductions in testing and delays in reporting in many countries. Data presented in this report are therefore incomplete and should be interpreted with caution. Additionally, data from previous weeks are continuously being updated to incorporate retrospective changes in reported COVID-19 cases and deaths made by countries.

We present changes in epidemiological trends using a 28-day interval. This wider time window helps to account for delays in reporting, smooth out weekly fluctuations in case numbers, and continue to provide a clear picture of where the pandemic is accelerating or decelerating. Disaggregated data are still accessible on the [WHO COVID-19 dashboard](#), where the full dataset is available for download.

**Figure 1. COVID-19 cases reported by WHO Region, and global deaths by 28-day intervals, as of 9 April 2023\*\***



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

At the regional level, the number of newly reported 28-day cases decreased across four of the six WHO regions: the African Region (-45%), the Western Pacific Region (-39%), the Region of the Americas (-33%), and the European Region (-22%); while case numbers increased in two WHO regions: the South-East Asia Region (+481%) and the Eastern Mediterranean Region (+144%). The number of newly reported 28-day deaths decreased across four regions: the Western Pacific Region (-62%), the Region of the Americas (-37%), the African Region (-24%), and the European Region (-12%); while death numbers increased in two WHO regions: the Eastern Mediterranean Region (+138%), and the South-East Asia Region (+109%).

At the country level, the highest numbers of new 28-day cases were reported from the United States of America (455 939 new cases; -50%), the Russian Federation (291 895 new cases; -17%), the Republic of Korea (275 126 new cases; similar to previous 28-day period), Brazil (233 734 new cases; +51%), and France (213 308 new cases; +92%). The highest numbers of new 28-day deaths were reported from the United States of America (5571 new deaths; -40%), the United Kingdom (2708 new deaths; -13%), Brazil (1246 new deaths; -24%), the Russian Federation (984 new deaths; - similar to previous 28-day period), and Germany (903 new deaths; -52%).

**Table 1. Newly reported and cumulative COVID-19 confirmed cases and deaths, by WHO Region, as of 9 April 2023\*\***

WHO Region	New cases in last 28 days (%)	Change in new cases in last 28 days *	Cumulative cases (%)	New deaths in last 28 days (%)	Change in new deaths in last 28 days *	Cumulative deaths (%)
Europe	1 257 642 (42%)	-22%	275 084 829 (36%)	9 844 (47%)	-12%	2 212 084 (32%)
Americas	882 336 (29%)	-33%	191 814 966 (25%)	8 237 (39%)	-37%	2 945 187 (43%)
Western Pacific	719 015 (24%)	-39%	202 141 741 (27%)	2 019 (10%)	-62%	409 523 (6%)
South-East Asia	80 039 (3%)	481%	60 854 783 (8%)	309 (1%)	109%	804 217 (12%)
Eastern Mediterranean	52 530 (2%)	144%	23 323 416 (3%)	718 (3%)	138%	350 417 (5%)
Africa	9 155 (<1%)	-45%	9 519 401 (1%)	22 (<1%)	-24%	175 337 (3%)
<b>Global</b>	<b>3 000 717 (100%)</b>	<b>-28%</b>	<b>762 739 900 (100%)</b>	<b>21 149 (100%)</b>	<b>-30%</b>	<b>6 896 778 (100%)</b>

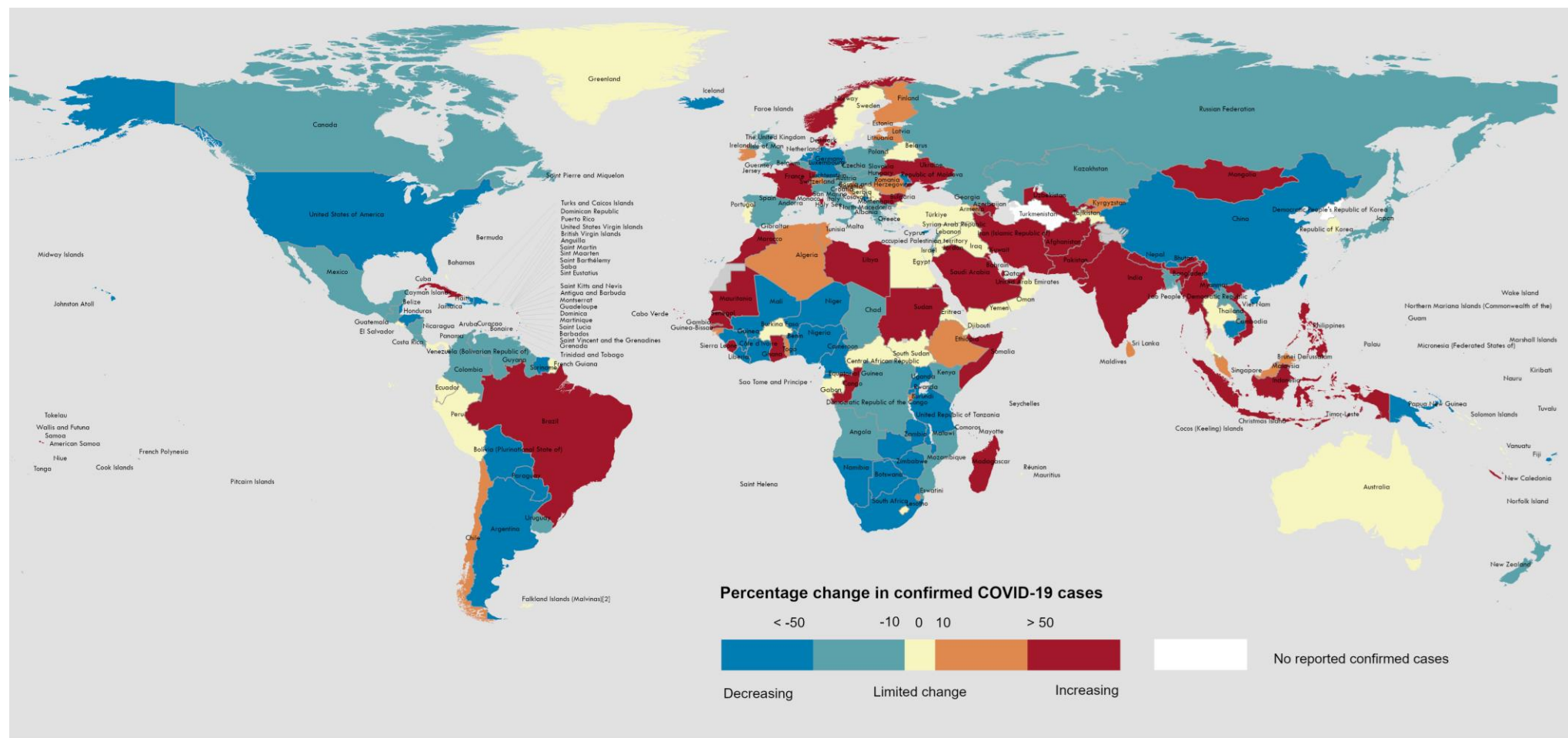
\*Percent change in the number of newly confirmed cases/deaths in the past 28 days, compared to 28 days prior. Data from previous weeks are updated continuously with adjustments received from countries.

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

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

- [WHO COVID-19 Dashboard](#)
- [WHO Monthly Operational Update and past editions of the Weekly Epidemiological Update on COVID-19](#)
- [WHO COVID-19 detailed surveillance data dashboard](#)
- [WHO COVID-19 policy briefs](#)

Figure 2. Percentage change in confirmed COVID-19 cases over the last 28 days relative to the previous 28 days, as of 9 April 2023\*\*



Data Source: World Health Organization  
Map Production: WHO Health Emergencies Programme

Not applicable

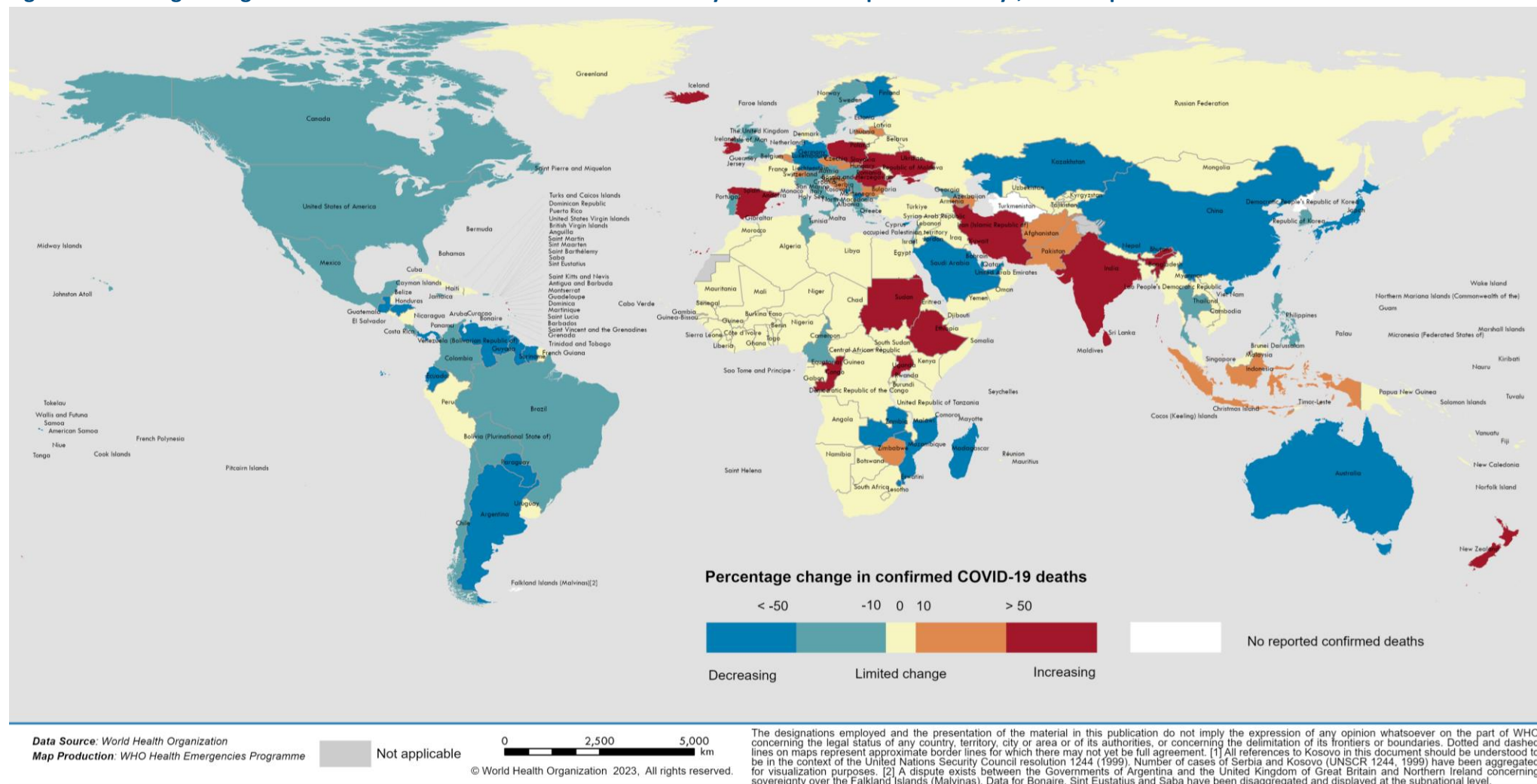
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\*\*See [Annex 1: Data, table, and figure notes](#)

Figure 3. Percentage change in confirmed COVID-19 deaths over the last 28 days relative to the previous 28 days, as of 9 April 2023\*\*



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

## SARS-CoV-2 variants of interest and variants under monitoring

### Geographic spread and prevalence

Globally, from 13 March to 9 April 2023 (28 days), 49 809 SARS-CoV-2 sequences were shared through GISAID.

Currently, WHO is closely tracking one variant of interest (VOI), XBB.1.5, and seven variants under monitoring (VUMs) and their descendent lineages. The VUMs are BA.2.75\*, CH.1.1\*, BQ.1\*, XBB\* (excluding XBB.1.5\*, XBB.1.16\* and XBB.1.9.1\*), XBB.1.16\*, XBB.1.9.1\*, and XBF\*.

Globally, XBB.1.5 (VOI) has been detected in 95 countries and continues to be the most prevalent variant, accounting for 47.9% of cases in epidemiological week 12 (20 to 26 March 2023) compared to 39.8% in week 8 (20 to 26 February 2023). Table 2 shows the number of countries reporting the VOI and VUMs, and their prevalence from week 8 to week 12. Between 11 February and 12 March, 2023, 70 countries detected XBB.1.5 and uploaded sequencing data to GISAID, and among 43 countries that uploaded more than 50 sequences, the prevalence of XBB.1.5 has reached more than 50% in 11 countries. Figure 4 shows the global prevalence of XBB.1.5 over a 30-day period based on available data.

A comparison of sequences submitted to GISAID from week 8 to week 12 shows that among variants under monitoring (VUMs), XBB\* (excluding XBB.1.5\*, XBB.1.16\* and XBB.1.9.1\*), XBB.1.9.1\* and XBB.1.16\* have shown increasing trends. These three VUMs accounted for 17.6%, 7.6% and 4.0% of sequences respectively in week 12, as compared to 6.7%, 3.0% and 0.2% in week 8. Other VUMs have presented declining trends during the same period.

There are currently no reported laboratory or country reports associating the VOI and VUMs with increased disease severity. A recent laboratory study on XBB.1.16 shows the variant to have an increased growth rate compared to XBB and XBB.1.5 respectively. However, their immune evasion characteristics are similar.<sup>5</sup>

The global trend of the number and percentage of SARS-CoV-2 sequences is shown in Figure 5. With the declining testing and sequencing trends observed globally, the severity impact of SARS-CoV-2 variants with mutations that confer higher transmissibility remains unclear. Low and unrepresentative levels of SARS-CoV-2 genomic surveillance continue to pose challenges in adequately assessing the SARS-CoV-2 variant landscape.

### Additional resources

- [Tracking SARS-CoV-2 Variants](#)
- [WHO XBB.1.5 rapid risk assessment, 24 February 2023](#)
- [TAG-VE statement on Omicron sublineages BQ.1 and XBB, 27 October 2022](#)
- [Genomic sequencing of SARS-CoV-2: a guide to implementation for maximum impact on public health](#)
- [VIEW-hub: repository for the most relevant and recent vaccine data](#)

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\*includes descendant lineages except those individually specified elsewhere

**Table 2. Weekly prevalence of SARS-CoV-2 VOIs and VUMs, week 8 to week 12 of 2023**

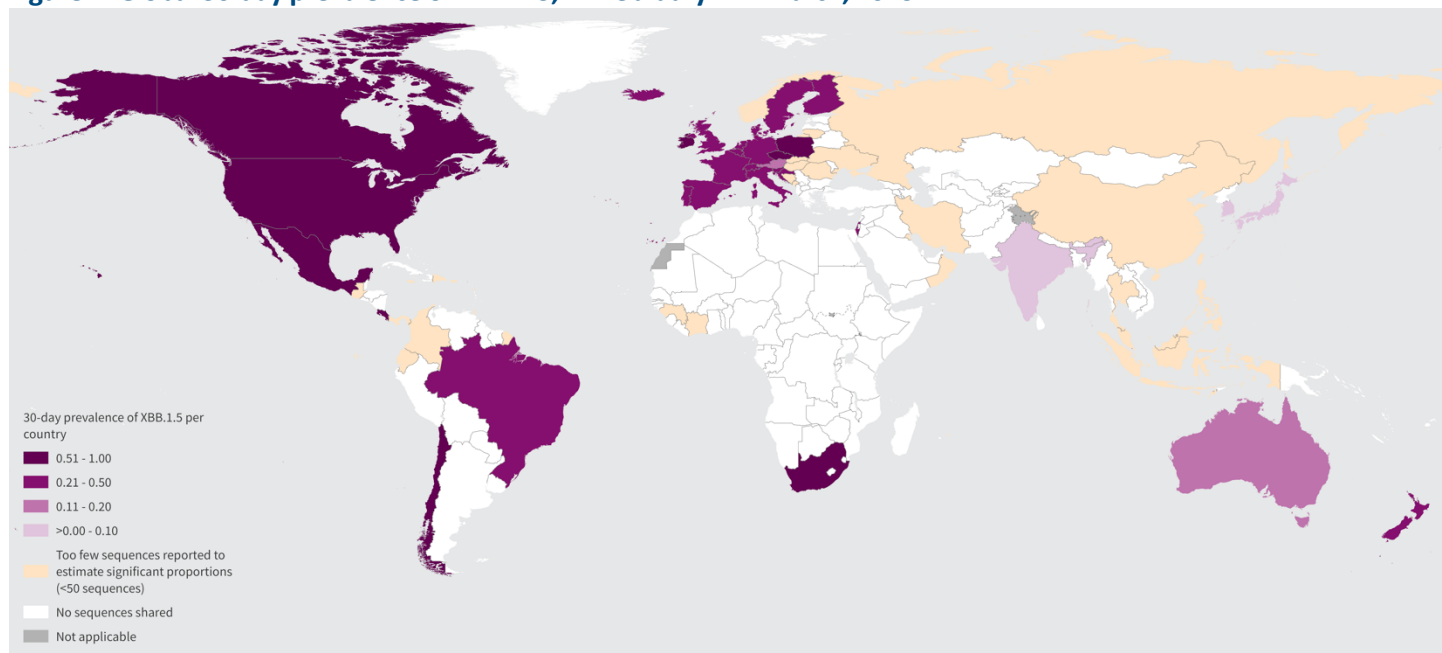
Lineage	Countries	Sequences	2023-08	2023-09	2023-10	2023-11	2023-12
XBB.1.5* (VOI)	95	154 278	43.50	46.01	47.02	47.03	47.91
BA.2.75*	121	105 680	5.91	5.18	4.98	4.78	1.95
CH.1.1*	88	40 873	6.69	6.43	5.70	5.49	5.17
BQ.1*	142	411 323	15.01	11.21	9.21	7.56	5.11
XBB*	122	80 144	6.69	8.39	11.64	14.33	17.64
XBB.1.9.1*	61	10 432	3.01	4.29	5.28	6.15	7.59
XBF*	49	8 852	1.24	1.09	1.23	0.97	0.83
Unassigned	98	292 966	8.78	10.57	9.03	9.45	10.40
Other <sup>†</sup>	207	6 692 332	1.08	1.09	1.06	1.04	1.67
XBB.1.16 <sup>§</sup>	29	2222	0.21	0.53	1.21	1.92	3.96

\* includes descendant lineages except those individually specified elsewhere.

<sup>§</sup> The prevalence of XBB.1.16 was extracted from GISAID on 11 April 2023 using the nucleotides T12730A, T28297C, A28447G.

<sup>†</sup> Others are other circulating lineages excluding the VOI, VUMs, BA.1\*, BA.2\*, BA.3\*, BA.4\*, BA.5\*.

**Figure 4. Global 30-day prevalence of XBB.1.5, 11 February - 12 March, 2023**

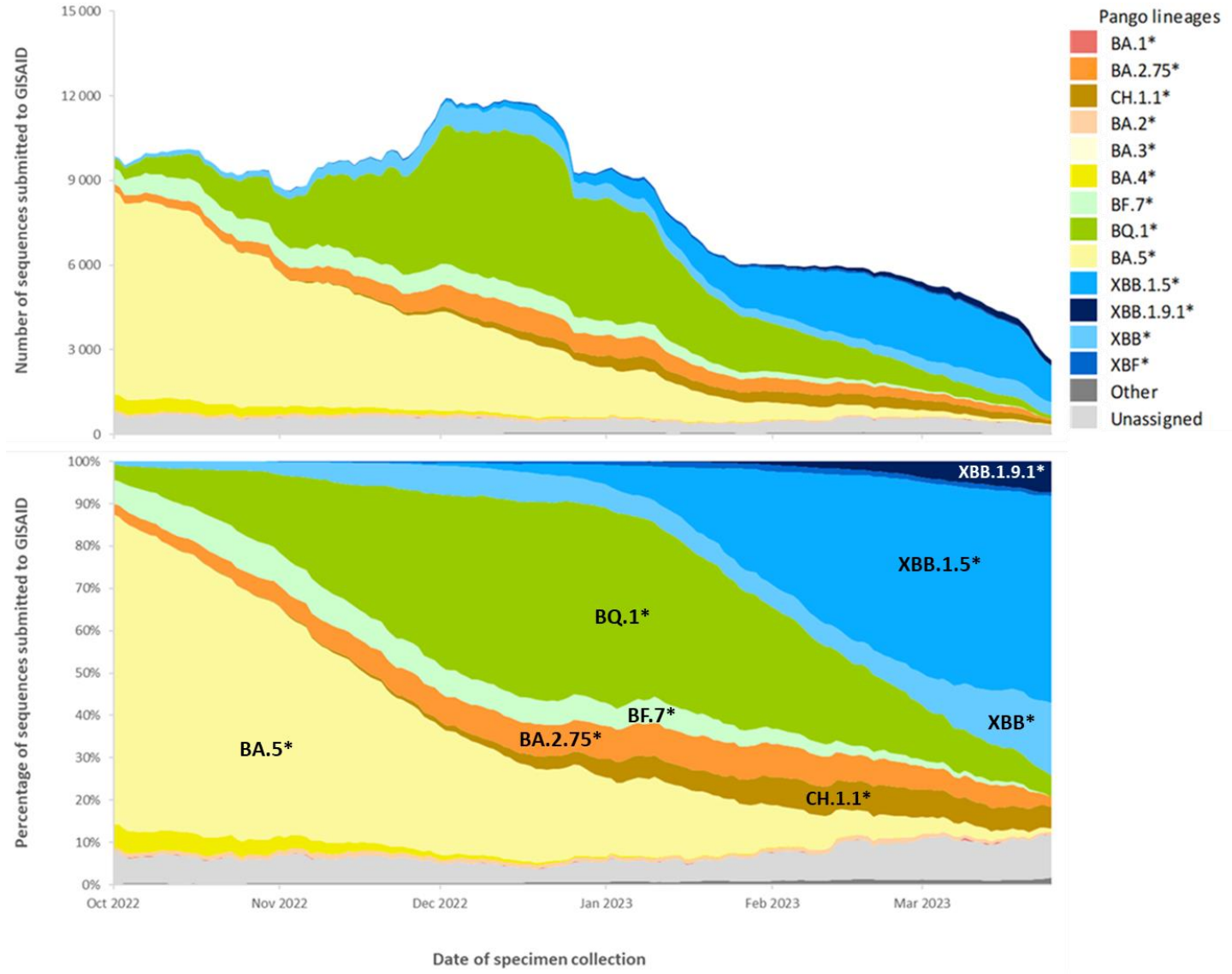


The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.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

Data Source: World Health Organization, Global Initiative on Sharing Avian Influenza Data  
Map Production: WHO Health Emergencies Programme  
Map Date: 6 April 2023

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**Figure 5. Panel A and B: The number and percentage of SARS-CoV-2 sequences globally, from 1 October 2022 to 25 March 2023**



**Figure 5 Panel A** shows the number, and **Panel B** the percentage, of all circulating variants since October 2022. Omicron sister-lineages and additional Omicron VOC descendent lineages under further monitoring are shown. *BA.1\**, *BA.2\**, *BA.3\**, *BA.4\** and *BA.5\** (\* indicates inclusion of descendent lineages) include all BA.1, BA.2, BA.3, BA.4 and BA.5 pooled descendent lineages, except currently circulating variants shown individually. The *Unassigned* category includes lineages pending for a PANGO lineage name, whereas the *Other* category includes lineages that are assigned but not listed in the legend. As XBB.1.16\* has not been assigned in GISAID, it is not shown individually. Source: SARS- CoV-2 sequence data and metadata from GISAID, from 1 October 2022 to 25 March 2023.

## Vaccine effectiveness of primary series and booster vaccination against the Omicron variant of concern

### *Vaccine Effectiveness*

[Forest plots](#) displaying the effectiveness of COVID-19 vaccines against the Omicron variant of concern (VOC) are available on View-hub.org and updated regularly (last updated 6 April 2023). All data are collected as part of an ongoing systematic review of COVID-19 vaccine effectiveness (VE) studies (methods described [here](#)). COVID-19 VE results are summarized in the following plots, where data are available:

- VE of primary series and first booster dose by vaccine for all vaccines
- VE for various sub-populations of interest
- Absolute and relative VE of a second booster dose (for more information on interpreting relative VE, see the special focus on relative vaccine effectiveness from the [29 June 2022 Weekly Epidemiological Update](#))
- Duration of VE over time for vaccines
- Absolute VE of bivalent vaccines given as a first, second, or third booster dose

In summary, findings from COVID-19 VE studies show reduced VE of primary series vaccines against the Omicron variant for all outcomes (*severe disease*, *symptomatic disease*, and *infection*) compared to the index virus and the four previous VOCs (Alpha, Beta, Gamma, and Delta). Importantly though, VE estimates against the Omicron variant remain higher for *severe disease* than for other outcomes. VE of primary series vaccination against *symptomatic disease* and *infection* decreased rapidly over time. First booster vaccination, regardless of the vaccine used in the primary series, substantially improves VE for all outcomes, with VE declining more in the first six months after first booster vaccination for *symptomatic disease* and *infection* than it does for *severe disease*. VE of a second booster dose with a monovalent mRNA vaccine showed similar patterns of improved VE followed by waning, as after the first booster dose. Emerging evidence on mRNA bivalent vaccines, which contain both the ancestral strain and the Omicron strain, show that a bivalent vaccine given as a first, second, or third booster dose improves protection against *symptomatic disease* and *severe disease* compared to unvaccinated persons; in addition, persons receiving a bivalent vaccine given as a second or third booster dose had improved protection compared to persons receiving a monovalent mRNA vaccine as a first or second booster dose, respectively. However, because the bivalent mRNA vaccines have been evaluated during different time periods than the monovalent mRNA vaccines, direct comparison in observational VE studies has proved challenging, due to potential time-related confounding (e.g., time since last vaccine dose, subvariant circulation, incidence rates).

### *Neutralization*

Neutralizing antibody studies can provide early insights into vaccine performance against new and emerging variants of concern and their subvariants. For more information about the capacity of COVID-19 vaccines to neutralize various Omicron sub-variants, please see a [systematic review](#) of post-monovalent vaccination neutralization responses to Omicron BA.1, BA.2, BA.3, and BA.4/BA.5. In addition, [neutralization plots](#) displaying the results of a living systematic review of neutralization studies are updated regularly on VIEW-hub.org (last updated 9 April 2023) and contain information on more recent subvariants such as BQ.1 and XBB. The totality of the evidence to date suggests that neutralizing antibody response of first booster vaccination against Omicron BA.1 is approximately six-fold lower compared to the ancestral strain, which is a greater reduction than observed with previous VOCs. In addition, the median fold-reduction in geometric mean titers was two times lower for BA.4/BA.5 relative to BA.1. A [recent report](#) suggests that VE against BA.4/BA.5 is likely lower than against BA.1, although the reasons for this finding might be both due to the lower neutralization titers as well as methodological factors in how the VE studies were done. Early evidence suggests even further reductions of neutralization capacity against the new subvariants BQ.1/BQ.1.1 and XBB/XBB.1/XBB.1.5. Primary series neutralization against Omicron (without a booster) was too poor to enable accurate comparisons of reductions for subvariants. Finally, a [summary](#) of neutralization responses comparing monovalent to bivalent mRNA vaccines is also available on VIEW-hub.org, providing preliminary evidence of improved performance of bivalent vaccines against more recent Omicron subvariants.



# WHO regional overviews

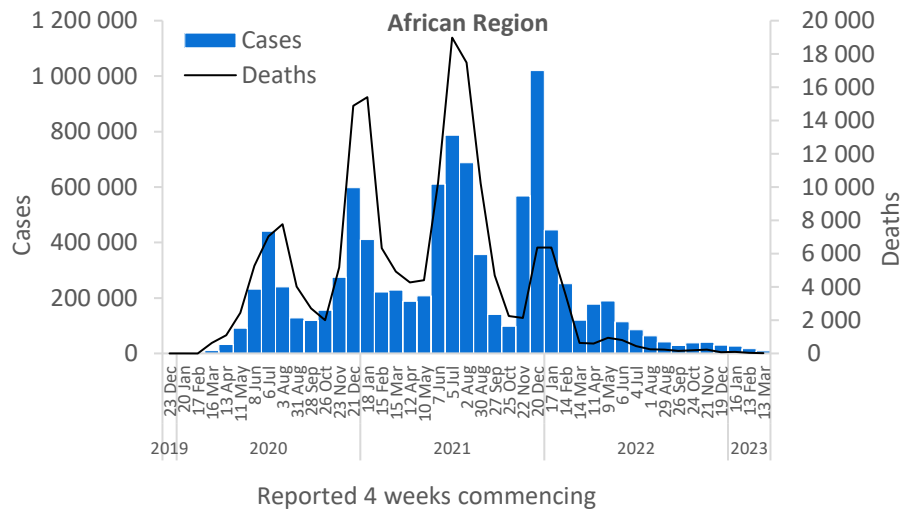
Data for 13 March to 9 April 2023

## African Region

The African Region reported over 9155 new cases, a 45% decrease as compared to the previous 28-day period. Ten (20%) of the 50 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Sao Tome and Principe (219 vs one new cases; +21800%), Mauritania (122 vs two new cases; +6000%), and Cabo Verde (33 vs 10 new cases; +230%).

The highest numbers of new cases were reported from South Africa (4309 new cases; 7.3 new cases per 100 000; -54%), Mauritius (1372 new cases; 107.9 new cases per 100 000; similar to previous 28-day period), and Ethiopia (557 new cases; <1 new case per 100 000; +43%).

The number of new 28-day deaths in the Region decreased by 24% as compared to the previous 28-day period, with 22 new deaths reported. The highest numbers of new deaths were reported from Zimbabwe (12 new deaths; <1 new death per 100 000; +20%), Cameroon (two new deaths; <1 new death per 100 000; -33%), and Sao Tome and Principe (two new deaths; <1 new death per 100 000; no death reported the previous 28-day period).



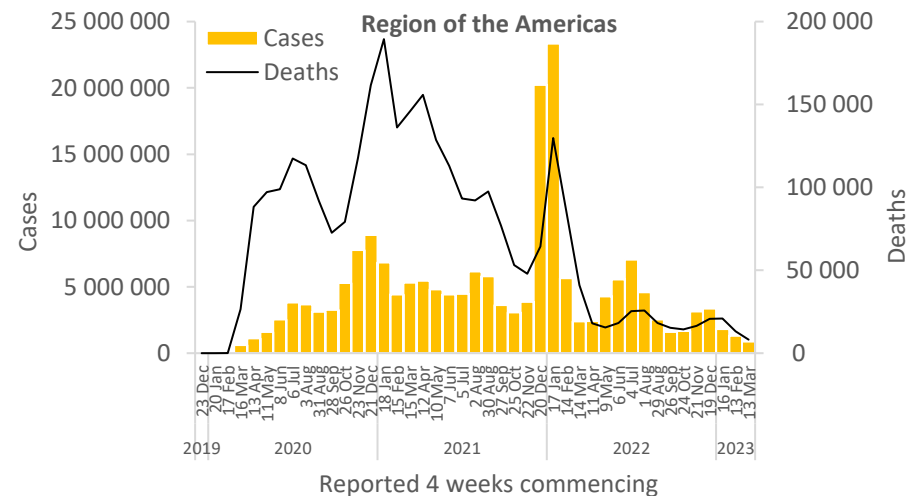
Updates from the [African Region](#)

## Region of the Americas

The Region of the Americas reported over 882 000 new cases, a 33% decrease as compared to the previous 28-day period. Eight (14%) of the 56 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Saba (71 vs one new cases; +7000%), Saint Barthélemy (29 vs 14 new cases; +107%) and Cuba (216 vs 124 new cases; +74%).

The highest numbers of new cases were reported from the United States of America (455 939 new cases; 137.7 new cases per 100 000; -50%), Brazil (233 734 new cases; 110.0 new cases per 100 000; +51%), and Chile (72 988 new cases; 381.8 new cases per 100 000; +17%).

The number of new 28-day deaths in the Region decreased by 37% as compared to the previous 28-day period, with 8237 new deaths reported. The highest numbers of new deaths were reported from the United States of America (5571 new deaths; 1.7 new deaths per 100 000; -40%), Brazil (1246 new deaths; <1 new death per 100 000; -24%), and Canada (443 new deaths; 1.2 new deaths per 100 000; -35%).



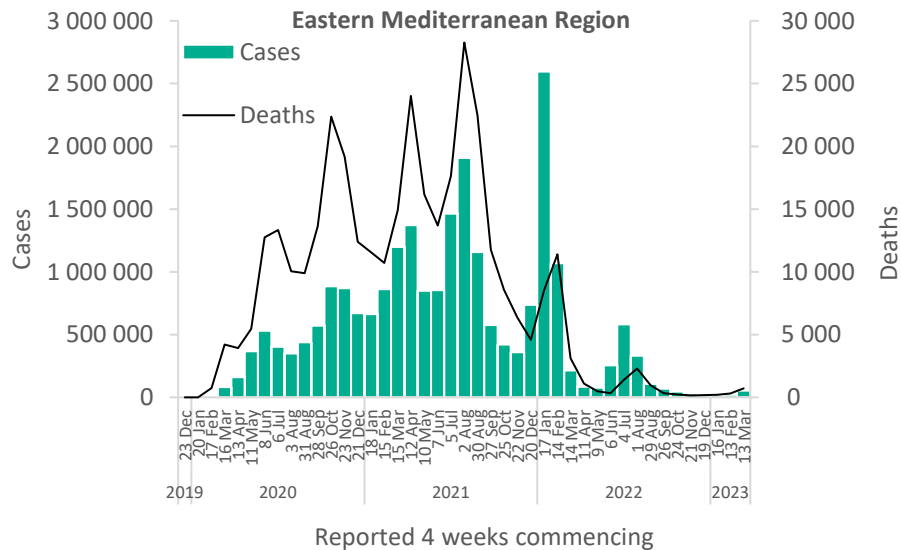
Updates from the [Region of the Americas](#)

## Eastern Mediterranean Region

The Eastern Mediterranean Region reported over 52 000 new cases, a 145% increase as compared to the previous 28-day period. Twelve (55%) of the 22 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Somalia (10 vs two new cases; +400%), Saudi Arabia (5903 vs 1807 new cases; +227%), and Qatar (7018 vs 2165 new cases; +224%).

The highest numbers of new cases were reported from the Islamic Republic of Iran (24 654 new cases; 29.4 new cases per 100 000; +210%), Qatar (7018 new cases; 243.6 new cases per 100 000; +224%), and Saudi Arabia (5903 new cases; 17.0 new cases per 100 000; +227%).

The number of new 28-day deaths in the Region increased by 138% as compared to the previous 28-day period, with 718 new deaths reported. The highest numbers of new deaths were reported from the Islamic Republic of Iran (615 new deaths; <1 new death per 100 000; +247%), Lebanon (31 new deaths; <1 new death per 100 000; -24%), and Tunisia (22 new deaths; <1 new death per 100 000; -24%).



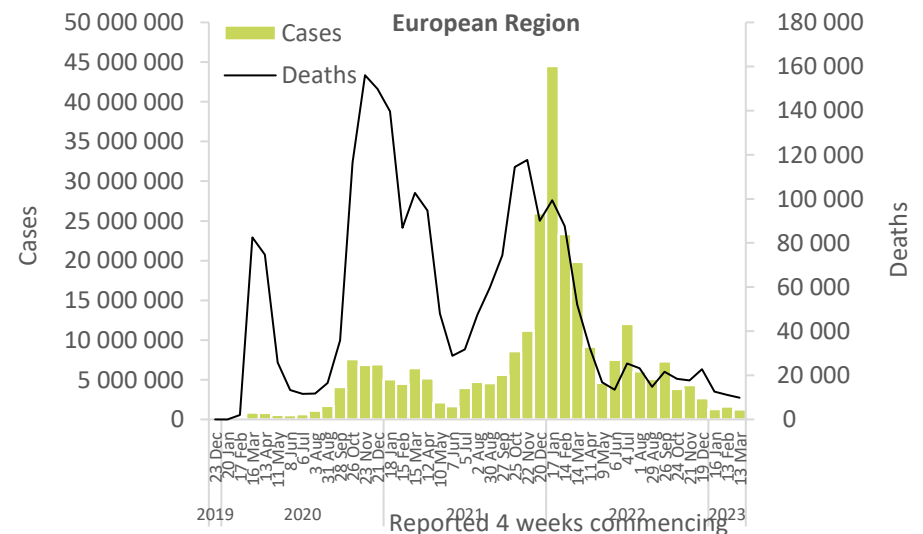
Updates from the [Eastern Mediterranean Region](#)

## European Region

The European Region reported over one million new cases, a 22% decrease as compared to the previous 28-day period. Seventeen (28%) of the 61 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Ukraine (72 948 vs 35 176 new cases; +107%), Azerbaijan (1395 vs 696 new cases; +100%) and Monaco (52 vs 26 new cases; +100%).

The highest numbers of new cases were reported from the Russian Federation (291 895 new cases; 200.0 new cases per 100 000; -17%), France (213 308 new cases; 328.0 new cases per 100 000; +92%), and Germany (108 787 new cases; 130.8 new cases per 100 000; -68%).

The number of new 28-day deaths in the Region decreased by 12% as compared to the previous 28-day period, with 9844 new deaths reported. The highest numbers of new deaths were reported from the United Kingdom (2708 new deaths; 4.0 new deaths per 100 000; -13%), the Russian Federation (984 new deaths; <1 new death per 100 000; similar to previous 28-day period), and Germany (903 new deaths; 1.1 new deaths per 100 000; -52%).



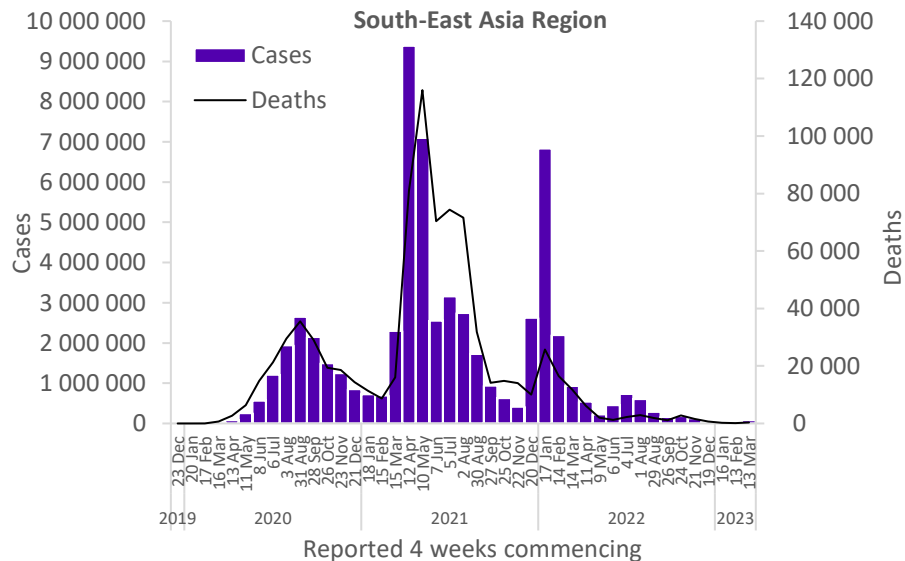
Updates from the [European Region](#)

## South-East Asia Region

The South-East Asia Region reported over 80 000 new cases, a 481% increase as compared to the previous 28-day period. Seven (64%) of the 11 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Nepal (636 vs 49 new cases; +1198%), India (66 124 vs 6 374 new cases; +937%) and the Maldives (150 vs 21 new cases; +614%).

The highest numbers of new cases were reported from India (66 124 new cases; 4.8 new cases per 100 000; +937%), Indonesia (12 101 new cases; 4.4 new cases per 100 000; +93%), and Thailand (663 new cases; <1 new case per 100 000; -2%).

The number of new 28-day deaths in the Region increased by 109% as compared to the previous 28-day period, with 309 new deaths reported. The highest numbers of new deaths were reported from India (184 new deaths; <1 new death per 100 000; +494%), Indonesia (104 new deaths; <1 new death per 100 000; +24%), and Thailand (16 new deaths; <1 new death per 100 000; -47%).



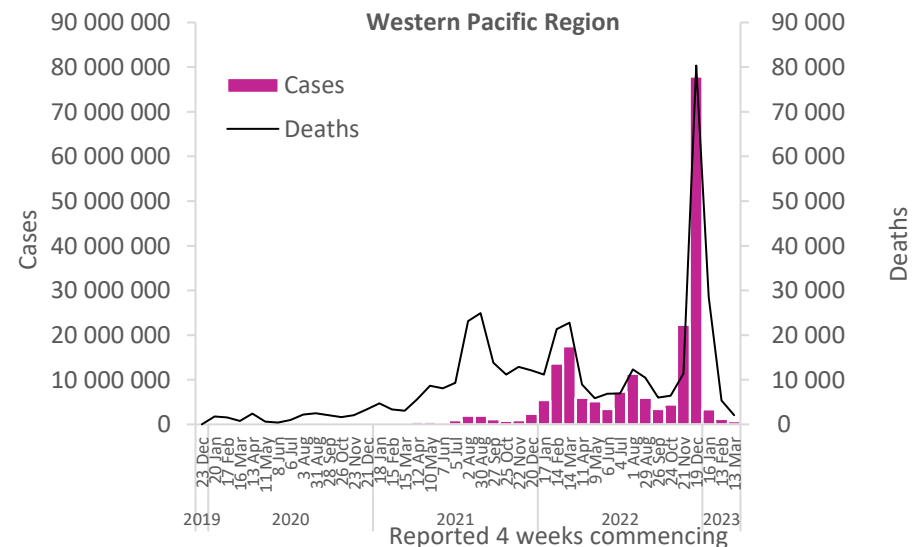
Updates from the [South-East Asia Region](#)

## Western Pacific Region

The Western Pacific Region reported over 719 000 new cases, a 39% decrease as compared to the previous 28-day period. Ten (29%) of the 35 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Samoa (248 vs 25 new cases; +892%), Marshall Islands (364 vs 59 new cases; +517%) and American Samoa (five vs one new cases; +400%).

The highest numbers of new cases were reported from the Republic of Korea (275 126 new cases; 536.6 new cases per 100 000; similar to previous 28-day period), Japan (193 326 new cases; 152.9 new cases per 100 000; -48%), and Australia (76 114 new cases; 298.5 new cases per 100 000; similar to previous 28-day period).

The number of new 28-day deaths in the Region decreased by 62% as compared to the previous 28-day period, with 2019 new deaths reported. The highest numbers of new deaths were reported from Japan (882 new deaths; <1 new death per 100 000; -65%), China (393 new deaths; <1 new death per 100 000; -75%), and Australia (218 new deaths; <1 new death per 100 000; -60%).



Updates from the [Western Pacific Region](#)

## Hospitalizations and ICU admissions

At the global level, during the past 28 days (6 March to 2 April 2023), a total of 69 821 new hospitalizations and 2652 new intensive care unit (ICU) admissions were reported. This represents a 0.2% increase in new hospitalizations and a 7% reduction in ICU admissions compared to the previous 28 days (6 February to 5 March 2023). The presented hospitalization data are preliminary and might change as new data become available. Furthermore, hospitalization data are subject to reporting delays. These data are also likely to include both hospitalizations with incidental cases of SARS-CoV-2 infection and those due to COVID-19 disease.

Globally, during the past 28 days, 53 (23%) countries reported data to WHO on new hospitalizations at least once. The European Region had the highest proportion of countries reporting data on new hospitalizations (23 countries; 38%), followed by the Eastern Mediterranean Region (six countries; 27%), the South-East Asia Region (three countries; 27%), the African Region (ten countries; 20%), the Region of the Americas (eight countries; 14%), and the Western Pacific Region (three countries; 9%). The proportion of countries that consistently<sup>i</sup> reported new hospital admissions for the period was 14% (33 countries).

Among the 33 countries consistently reporting new hospitalizations, seven (21%) countries registered an increase of 20% or greater in hospitalizations during the past 28 days compared to the previous 28-day period: Qatar (191 vs 38; +403%), Singapore (984 vs 300; +228%), Iceland (36 vs 24; +50%), France (10 012 vs 7081; +41%), Latvia (707 vs 511; +38%), Ukraine (17195 vs 12618; +36%), and Tunisia (92 vs 71; +30%). The highest numbers of new hospitalizations were reported from Ukraine (17 195 vs 12 618; +36%), France (10 012 vs 7081; +41%), and Italy (4496 vs 10 863; -59%).

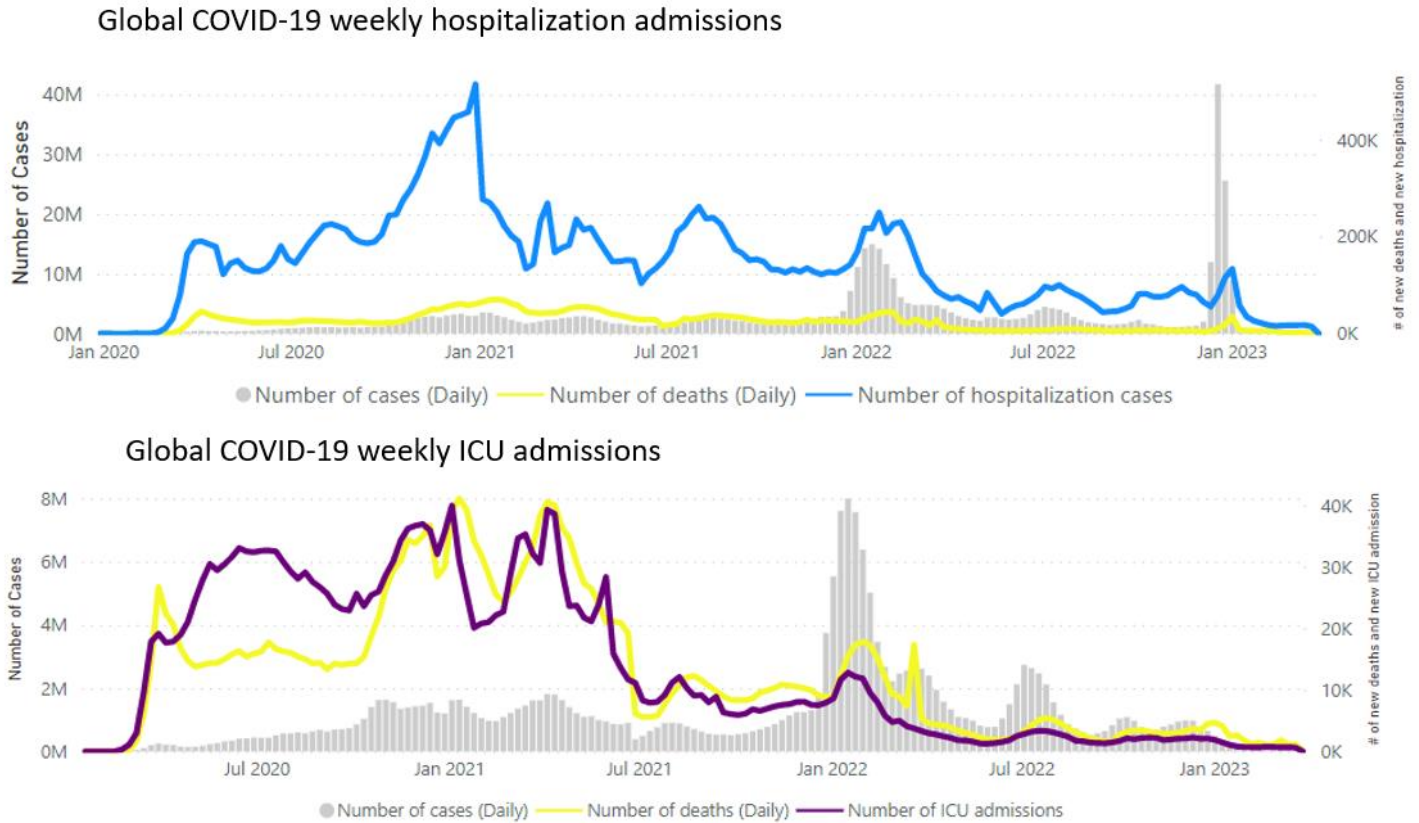
Across the six WHO regions, in the past 28 days, a total of 40 (17%) countries reported data to WHO on new ICU admissions at least once. The European Region had the highest proportion of countries reporting data on new ICU admissions (19 countries; 31%), followed by the Eastern Mediterranean Region (five countries; 23%), the South-East Asia Region (two countries; 18%), the Region of the Americas (six countries; 11%), the African Region (five countries; 10%), and the Western Pacific Region (three countries; 9%). The proportion of countries that consistently reported new ICU admissions for the period was 12% (29 countries).

Among the 29 countries consistently reporting new ICU admissions, five (17%) countries showed an increase of 20% or greater in new ICU admissions during the past 28 days compared to the previous 28-day period: Singapore (24 vs 10; +140%), Pakistan (23 vs 10; +130%), Latvia (35 vs 27; +30%), Qatar (5 vs 4; +25%), and France (881 vs 725; +22%). The highest numbers of new ICU admissions were reported from France (881 vs 725; +22%), Ukraine (450 vs 435; +3%), and Australia (181 vs 190; -5%).

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<sup>i</sup>“Consistently” as used here refers to countries that submitted data for new hospitalizations and intensive care unit admissions for the four consecutive weeks that make up the 28-day period

Figure 6. COVID-19 cases, deaths, hospitalizations, and ICU admissions reported weekly to WHO, as of 2 April 2023



Note: Recent weeks are subject to reporting delays and should not be interpreted as a declining trend.

Source: WHO Detailed Surveillance Dashboard

## Special focus: Updated Interim Guidance on Adjusting Public Health and Social Measures for COVID-19 (30 March 2023)

Public health and social measures (PHSM) have been implemented across the world since the beginning of the COVID-19 pandemic to suppress SARS-CoV-2 transmission, reduce morbidity and mortality and minimize the impact on the health systems and other critical societal functions.

Since the publication of the June 2021 update of *Considerations for implementing and adjusting public health and social measures in the context of COVID-19*, several important developments have occurred. The global population-level immunity against SARS-CoV-2 has increased significantly due to infection and/or vaccination, leading to a decoupling between infection and severe disease surveillance trends, although there remain substantial differences in population immunity and inequity in access to diagnostics and therapeutics between countries and regions. The emergence and spread of the Omicron variant of concern has had multiple impacts on considerations for adjusting PHSM, such as its immune escape properties reducing the ability of infection- or vaccine-derived immunity to prevent infection and transmission and contributing to a rapid growth rate. COVID-19 is not yet an endemic disease, and there is a high risk of additional variants and of cases of post-COVID-19 condition.

In light of these developments, on 30 March 2023, WHO issued the updated interim guidance *Considerations for implementing and adjusting public health and social measures in the context of COVID-19*. The purpose of the updated guidance is to provide recommended epidemiological techniques to assess the current COVID-19 situation with respect to transmissibility, morbidity and mortality, and impact on the health system, to inform the evidence-based adjustment of PHSM. It also provides recommendations about the appropriate PHSM to implement at different levels of severity of the COVID-19 situation ('situational levels').

The key changes from the previous version of this guidance include a shift to qualitative assessment of transmission rather than the use of transmission categories with numeric cut-offs, due to the declining surveillance/testing for SARS-CoV-2 in many countries, which has made it a challenge to rely on reported incidence as a valid indicator of transmission rates. The guidance further shifts the focus of assessment to the dimensions of COVID-19 morbidity/mortality and health system impact. Consequently, the situational level matrix and the wording of each level have been updated. The use of three dimensions for assessment puts this framework in line with the Pandemic Influenza Severity Assessment (PISA) methodology and partially adopts the terminology used in PISA for the three dimensions. Guidance for determining locally-relevant thresholds is provided, similar to the principles used for PISA. Finally, the updated guidance eliminates the recommendation to relax some measures for individuals with infection- or vaccine-induced immunity.

The decisions of which PHSM measures to implement, lift or strengthen, and in which order they should be implemented, should be informed by their acceptability, feasibility, and proven effectiveness, and these decisions should be made through participatory approaches rather than directives and one-way communication. Decisions to tighten, loosen or re-introduce PHSM must be weighed against their health and socio-economic impacts, such as impacts on health, mental health, and psychosocial wellbeing; continuity of other public health programmes; diagnosis, treatment, and management of medical conditions other than COVID-19; and other aspects such as livelihoods, the economy, security, human rights, food security, socioeconomic disparities, and gender-based violence. The overall health and well-being of communities should be at the forefront of considerations when implementing and adjusting PHSM.

## 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.

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 excepted, the names of proprietary products are distinguished by initial capital letters.

Updates on the COVID-19 outbreak in the Democratic People's Republic of Korea are not included in this report as the number of laboratory-confirmed COVID-19 cases is not reported.

## Annex 2. SARS-CoV-2 variants assessment and classification

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.

WHO continues to monitor SARS-CoV-2 variants and to track changes in prevalence and viral characteristics. The current trends describing the circulation of variants should be interpreted with due consideration of the limitations of the COVID-19 surveillance systems. These include differences in sequencing capacity and sampling strategies between countries, changes in sampling strategies over time, reductions in tests conducted and sequences shared by countries, and delays in uploading sequence data to GISAID.<sup>6</sup>

## References

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