

COVID-19 Weekly Epidemiological Update

Edition 144 published 25 May 2023

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Global overview

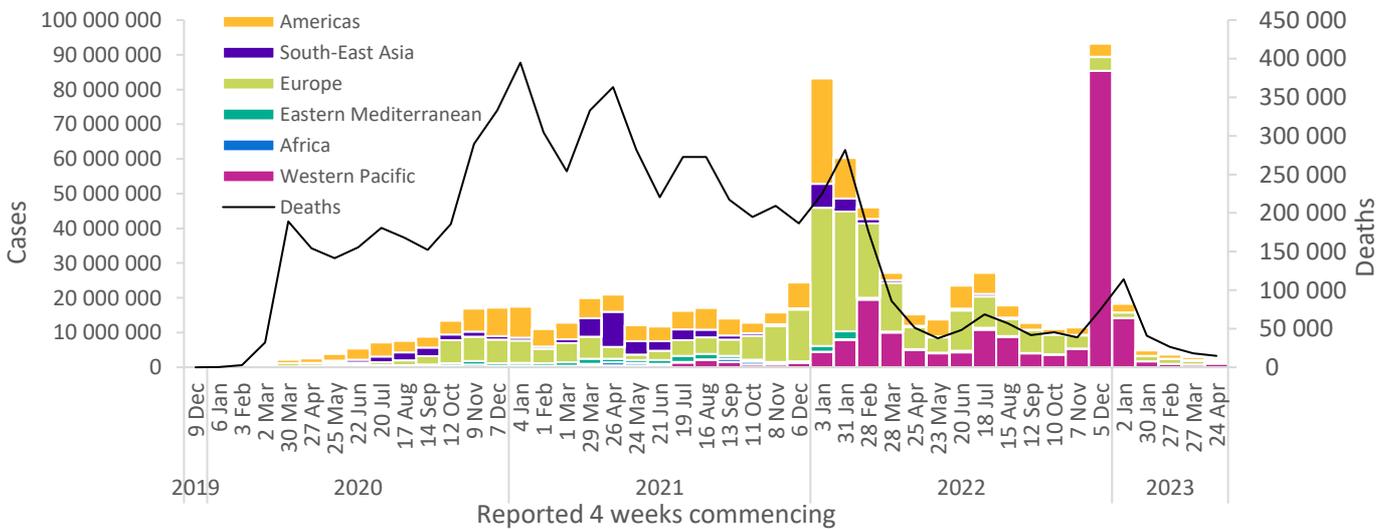
Data as of 21 May 2023

Globally, nearly 2.3 million new cases and nearly 15 000 deaths were reported in the last 28 days (24 April to 21 May 2023), a decrease of 21% and 17%, respectively, compared to the previous 28 days (27 March to 23 April 2023) (Figure 1, Table 1). The situation is mixed at the regional level, with increases in reported cases seen in the WHO African and Western Pacific Regions and increases in deaths in the African, the Americas, South-East Asia, and Western Pacific Regions. As of 21 May 2023, over 766 million confirmed cases and over 6.9 million deaths have been reported globally.

Reported COVID-19 cases are underestimates of infection rates, largely due to the reductions in testing globally, and potential delays in reporting. During the reporting period (28 days) 161/243 (66%) countries reported at least one case. Data presented in this report are therefore incomplete and should be interpreted in light of changes in testing and surveillance. 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. 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 21 May 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 Eastern Mediterranean Region (-48%), the European Region (-45%), the Region of the Americas (-41%), and the South-East Asia Region (-31%); while cases increased in two WHO regions: the African Region (+11%), and the Western Pacific Region (+38%). The number of newly reported 28-day deaths increased across four regions: the African Region (+6%), the Region of the Americas (+21%), the South-East Asia Region (+61%), and the Western Pacific Region (+9%); while deaths decreased in two WHO regions: the Eastern Mediterranean Region (-63%), and the European Region (-44%).

At the country level, the highest numbers of new 28-day cases were reported from the Republic of Korea (462 726 new cases; +52%), the United States of America (256 909 new cases; -47%), Japan (164 367 new cases; -24%), Brazil (146 105 new cases; -28%), and Australia (125 992 new cases; +49%). The highest numbers of new 28-day deaths were reported from the United States of America (4135 new deaths; -31%), Brazil (1206 new deaths; -7%), France (810 new deaths; -1%), Spain (745 new deaths; +92%), and the Russian Federation (663 new deaths; -33%).

Table 1. Newly reported and cumulative COVID-19 confirmed cases and deaths, by WHO Region, as of 21 May 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 (%)
Western Pacific	1 052 248 (46%)	38%	203 645 258 (27%)	1 465 (10%)	9%	411 885 (6%)
Europe	572 906 (25%)	-45%	276 366 950 (36%)	5 373 (36%)	-44%	2 237 150 (32%)
Americas	484 889 (21%)	-41%	192 775 054 (25%)	6 655 (44%)	21%	2 954 027 (43%)
South-East Asia	146 614 (6%)	-31%	61 152 597 (8%)	1 143 (8%)	61%	805 869 (12%)
Eastern Mediterranean	26 859 (1%)	-48%	23 374 087 (3%)	330 (2%)	-63%	351 231 (5%)
Africa	6 835 (<1%)	11%	9 530 267 (1%)	19 (<1%)	6%	175 365 (3%)
Global	2 290 351 (100%)	-21%	766 844 977 (100%)	14 985 (100%)	-17%	6 935 540 (100%)

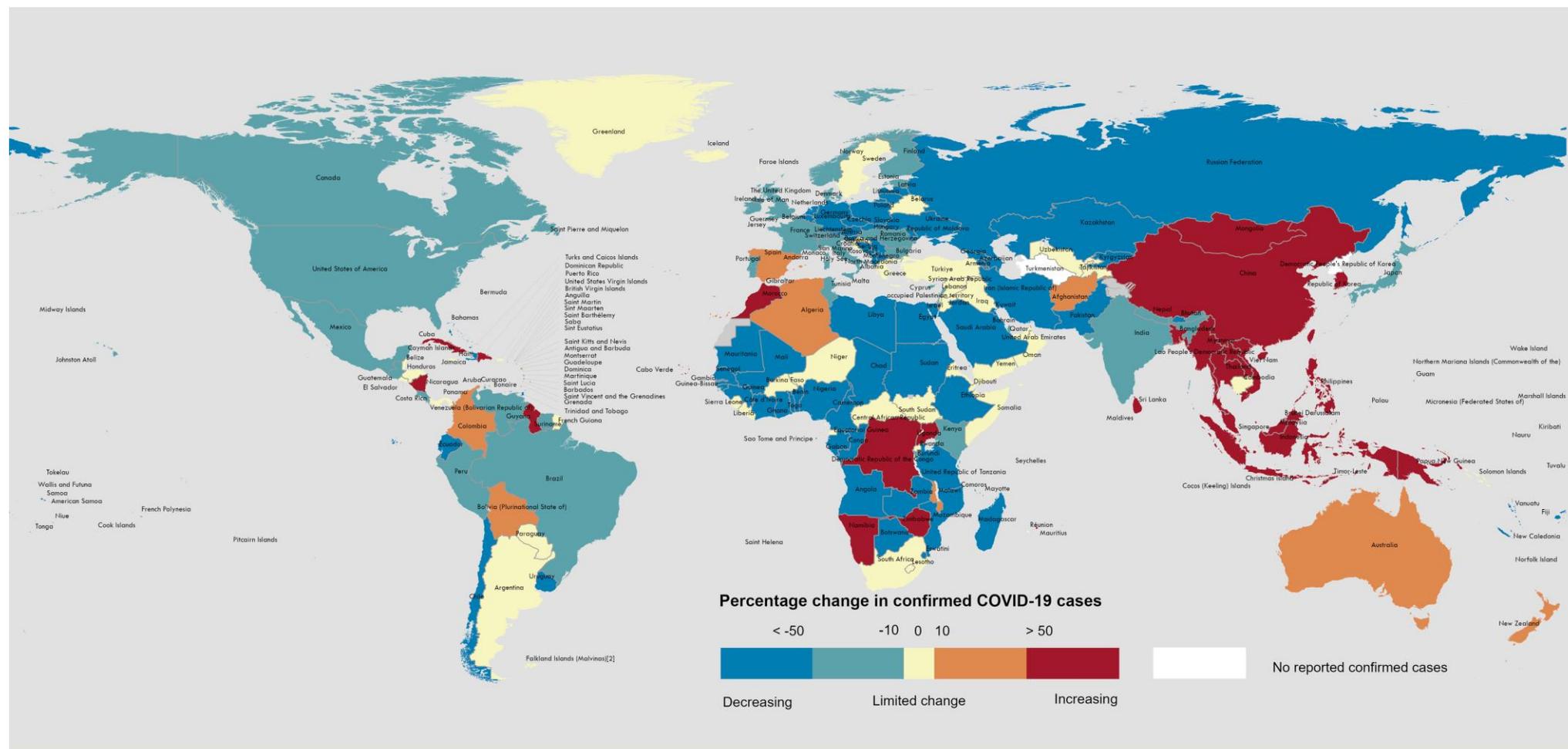
*Percent change in the number of newly confirmed cases/deaths in the past 28 days, compared to 28 days prior. Data from previous weeks are updated continuously with adjustments received from countries.

**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 21 May 2023**



Data Source: World Health Organization

Map Production: WHO Health Emergencies Programme

Not applicable

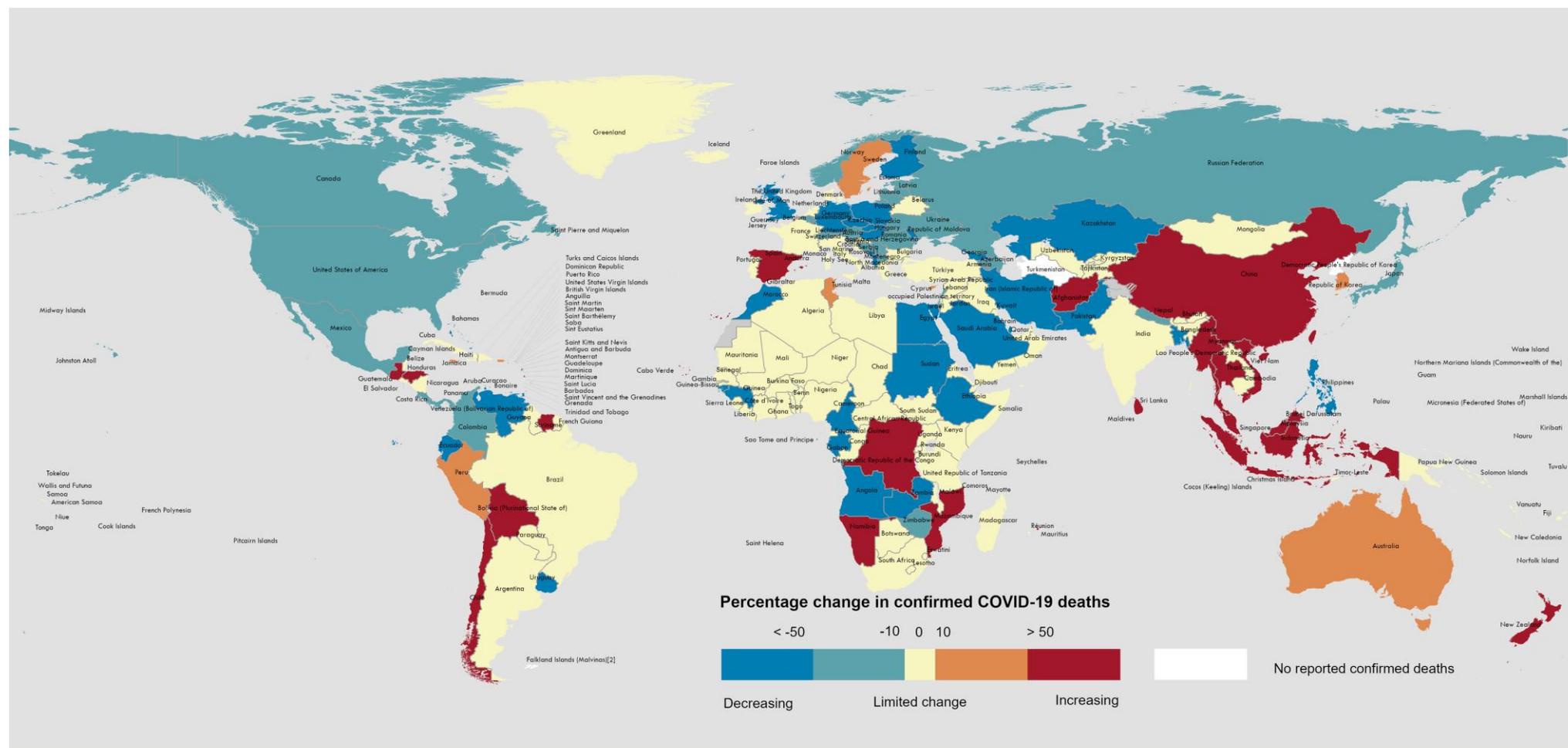
0 2,500 5,000 km

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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 21 May 2023**



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

Not applicable

0 2,500 5,000 km

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

Hospitalizations and ICU admissions

At the global level, during the past 28 days (17 April to 14 May 2023), a total of 96 701 new hospitalizations and 2875 new intensive care unit (ICU) admissions were reported (Figure 4). This represents a 31% and 8% decrease in hospitalizations and ICU admissions, respectively, compared to the previous 28 days (20 March to 16 April 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 also likely include both hospitalizations with incidental cases of SARS-CoV-2 infection and those due to COVID-19 disease.

Globally, during the past 28 days, 42 (18%) countries reported data to WHO on new hospitalizations at least once (Figure 5). The European Region had the highest proportion of countries reporting data on new hospitalizations (22 countries; 36%), followed by the South-East Asia Region (three countries; 27%), the Eastern Mediterranean Region (three countries; 14%), the African Region (six countries; 12%), the Region of the Americas (five countries; 9%), and the Western Pacific Region (three countries; 9%). The proportion of countries that consistentlyⁱ reported new hospitalizations for the period was 9% (22 countries).

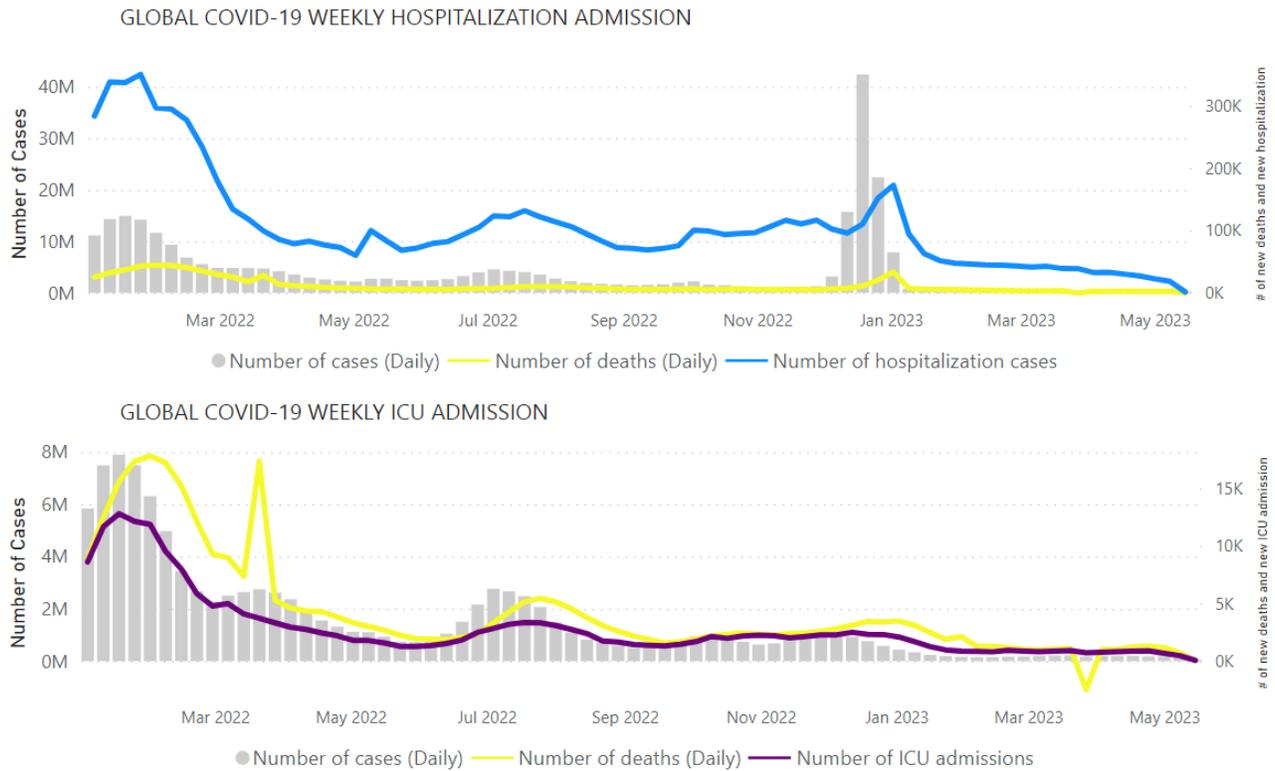
Among the 22 countries consistently reporting new hospitalizations, three (14%) countries registered an increase of 20% or greater in hospitalizations during the past 28 days compared to the previous 28-day period: Indonesia (9318 vs 2866; +225%), Afghanistan (59 vs 34; +74%), and Singapore (2231 vs 1552; +44%). The highest number of new hospitalizations was reported from the United States of America (40 821 vs 60 566; -33%), Ukraine (10 041 vs 16 446; -39%), and France (9619 vs 10 939; -12%).

Across the six WHO regions, in the past 28 days, a total of 36 (15%) countries reported data to WHO on new ICU admissions at least once (Figure 5). The European Region had the highest proportion of countries reporting data on new ICU admissions (18 countries; 30%), followed by the Eastern Mediterranean Region (five countries; 23%), the South-East Asia Region (two countries; 18%), the Western Pacific Region (five countries; 14%), the Region of the Americas (four countries; 7%), and the African Region (two countries; 4%). The proportion of countries that consistentlyⁱ reported new ICU admissions for the period was 7% (17 countries).

Among the 17 countries consistentlyⁱ reporting new ICU admissions, three (18%) countries showed an increase of 20% or greater in new ICU admissions during the past 28 days compared to the previous 28-day period: Indonesia (390 vs 149; +162%), Singapore (56 vs 26; +115%), and Brunei (15 vs 8; +88%). The highest numbers of new ICU admissions were reported from France (1024 vs 978; +5%), Indonesia (390 vs 149; +162%), and Italy (333 vs 343; -3%).

ⁱ “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.

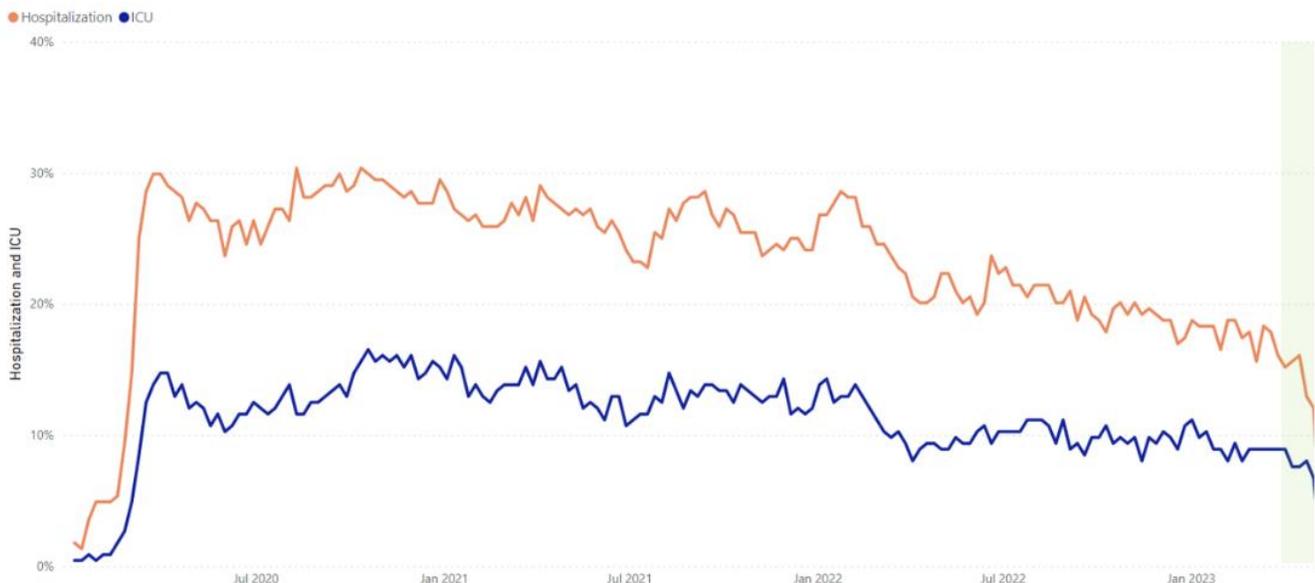
Figure 4. COVID-19 cases, deaths, hospitalizations, and ICU admissions reported weekly to WHO, as of 21 May 2023



Note: Recent weeks are subject to reporting delays and should not be interpreted as a declining trend. Cases included in the graph are only from countries reporting either hospitalisation or ICU admissions respectively.

Source: WHO Detailed Surveillance Dashboard

Figure 5. Weekly proportion of countries reporting new hospitalizations and ICU admissions: epidemiological week 5, 2020 to week 19, 2023



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

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

Geographic spread and prevalence

Globally, from 24 April to 21 May 2023 (28 days), 25 415 SARS-CoV-2 sequences were shared through GISAID. WHO is currently monitoring two variants of interest (VOIs), XBB.1.5 and XBB.1.16, along with seven variants under monitoring (VUMs) and their descendent lineages: BA.2.75, CH.1.1, BQ.1, XBB, XBB.1.9.1, XBB.1.9.2, and XBB.2.3.

Globally, XBB.1.5 has been reported from 113 countries. In epidemiological week 18 (1 to 7 May 2023), XBB.1.5 accounted for 41.6% of sequences, a decrease from 50.4% in epidemiological week 14 (3 to 9 April 2023). XBB.1.16 has been reported from 58 countries. In week 18, XBB.1.16 accounted for 13.2% of sequences, an increase from 6.9% in week 14.

Table 2 shows the number of countries reporting the VOIs and VUMs and their prevalence from week 14 to week 18. Among the VUMs, XBB, XBB.1.9.1, XBB.1.9.2, and XBB.2.3 have shown increasing trends in recent weeks. Other VUMs show declining trends during the same reporting period. VOI and VUMs that have shown increasing trends are highlighted in orange, and those with decreasing trends are highlighted in green.

Table 2. Weekly prevalence of SARS-CoV-2 VOIs and VUMs, week 14 to week 18 of 2023

Lineage	Countries [§]	Sequences [§]	2023-14	2023-15	2023-16	2023-17	2023-18
XBB.1.5* (VOI)	113	227 033	50.44	49.44	46.41	45.65	41.57
XBB.1.16* (VOI)	58	11 857	6.92	8.55	10.01	10.73	13.17
BA.2.75*	123	111 031	3.28	2.84	2.42	1.00	1.17
CH.1.1*	91	45 949	3.85	3.77	3.15	2.86	2.26
BQ.1*	149	410 340	3.73	2.83	2.06	1.42	0.75
XBB*	127	67 073	6.28	6.76	7.21	9.02	10.80
XBB.1.9.1*	84	26 149	10.57	11.93	13.34	14.79	15.65
XBB.1.9.2*	58	6 805	2.65	3.25	4.14	4.77	5.15
XBB.2.3*	52	3 657	1.95	2.18	2.52	2.88	3.59
Unassigned	103	149 154	2.13	1.26	0.93	0.03	-
Other [†]	207	6 710 043	6.14	6.40	7.28	8.16	7.94

* Includes descendant lineages, except those individually specified elsewhere in the table. For example, XBB* does not include XBB.1.5, XBB.1.9.1, XBB.1.9.2, XBB.1.16, and XBB.2.3.

[†] Others are other circulating lineages excluding the VOI, VUMs, BA.1*, BA.2*, BA.3*, BA.4*, BA.5*.

[§] Countries and sequences are since the emergence of the variants

Additional resources

- [Tracking SARS-CoV-2 Variants](#)
- [WHO statement on updated tracking system on SARS-CoV-2 variants of concern and variants of interest](#)
- [WHO XBB.1.16 Initial Risk Assessment, 17 April 2023](#)
- [WHO XBB.1.5 rapid risk assessment, 24 February 2023](#)

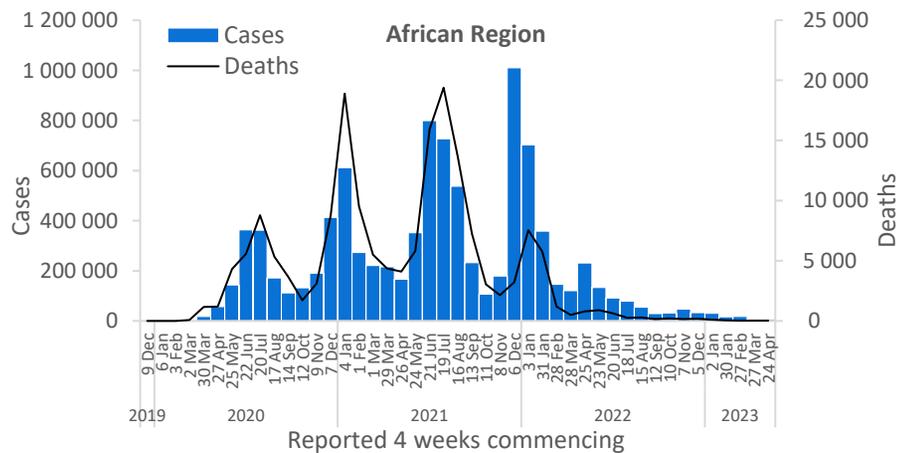
WHO regional overviews

Data for 24 April to 21 May 2023

African Region

The African Region reported 6835 new cases, an 11% increase as compared to the previous 28-day period. Six (12%) 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 Cabo Verde (467 vs 96 new cases; +386%), the Democratic Republic of the Congo (583 vs 174 new cases; +235%), and Uganda (173 vs 92 new cases; +88%). The highest numbers of new cases were reported from Mauritius (4457 new cases; 350.5 new cases per 100 000; +77%), the Democratic Republic of the Congo (583 new cases; <1 new case per 100 000; +235%), and Cabo Verde (467 new cases; 84 new cases per 100 000; +386%).

The number of new 28-day deaths in the Region increased by 6% as compared to the previous 28-day period, with 19 new deaths reported. The highest numbers of new deaths were reported from Mauritius (six new deaths; <1 new death per 100 000; no deaths reported the previous 28-day period), Zimbabwe (five new deaths; <1 new death per 100 000; -17%), and the Democratic Republic of the Congo (three new deaths; <1 new death per 100 000; no deaths reported the previous 28-day period).

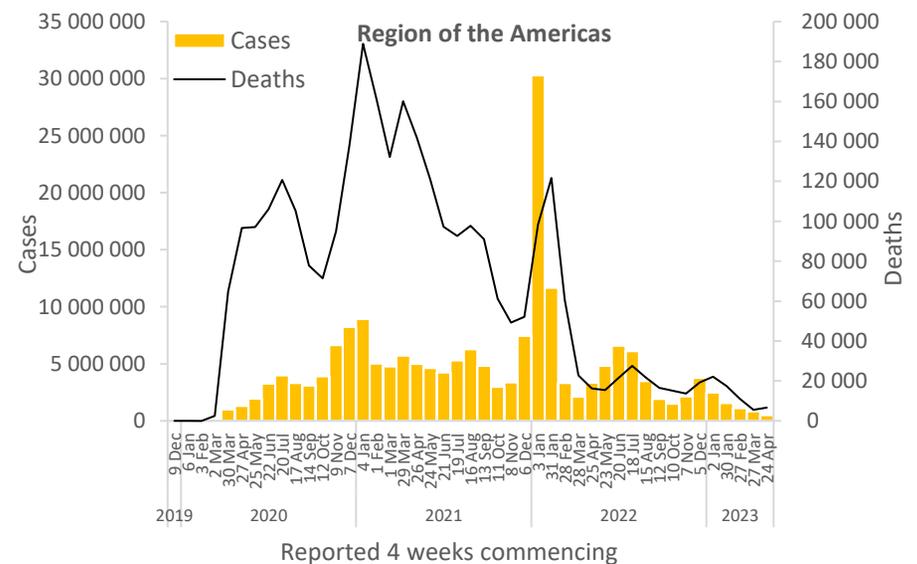


Updates from the [African Region](#)

Region of the Americas

The Region of the Americas reported over 484 000 new cases, a 41% decrease as compared to the previous 28-day period. Twelve (21%) 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 Aruba (66 vs 15 new cases; +340%), Guyana (74 vs 19 new cases; +289%), and Curaçao (14 vs five new cases; +180%). The highest numbers of new cases were reported from the United States of America (256 909 new cases; 77.6 new cases per 100 000; -47%), Brazil (146 105 new cases; 68.7 new cases per 100 000; -28%), and Mexico (30 764 new cases; 23.9 new cases per 100 000; -27%).

The number of new 28-day deaths in the Region increased by 21% as compared to the previous 28-day period, with 6655 new deaths reported. The highest numbers of new deaths were reported from the United States of America (4135 new deaths; 1.2 new deaths per 100 000; -31%), Brazil (1206 new deaths; <1 new death per 100 000; -7%), and Peru (488 new deaths; 1.5 new deaths per 100 000; +34%).

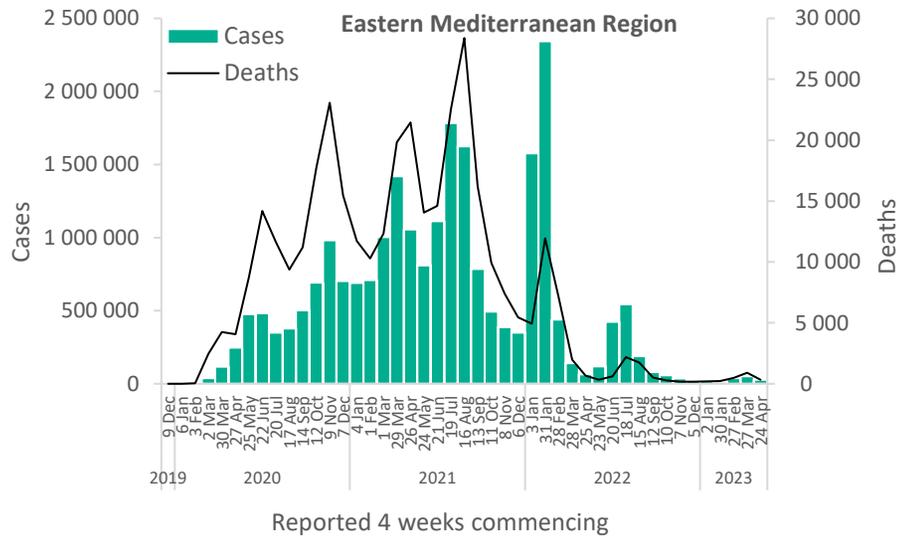


Updates from the [Region of the Americas](#)

Eastern Mediterranean Region

The Eastern Mediterranean Region reported over 26 000 new cases, a 48% decrease as compared to the previous 28-day period. Two (9%) 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 Morocco (1050 vs 508 new cases; +107%), and Afghanistan (5904 vs 3 990 new cases; +48%). The highest numbers of new cases were reported from Afghanistan (5904 new cases; 15.2 new cases per 100 000; +48%), Qatar (5609 new cases; 194.7 new cases per 100 000; -33%), and the United Arab Emirates (4984 new cases; 50.4 new cases per 100 000; -4%).

The number of new 28-day deaths in the Region decreased by 63% as compared to the previous 28-day period, with 330 new deaths reported. The highest numbers of new deaths were reported from the Islamic Republic of Iran (244 new deaths; <1 new death per 100 000; -69%), Tunisia (34 new deaths; <1 new death per 100 000; +48%), and Afghanistan (26 new deaths; <1 new death per 100 000; +420%).

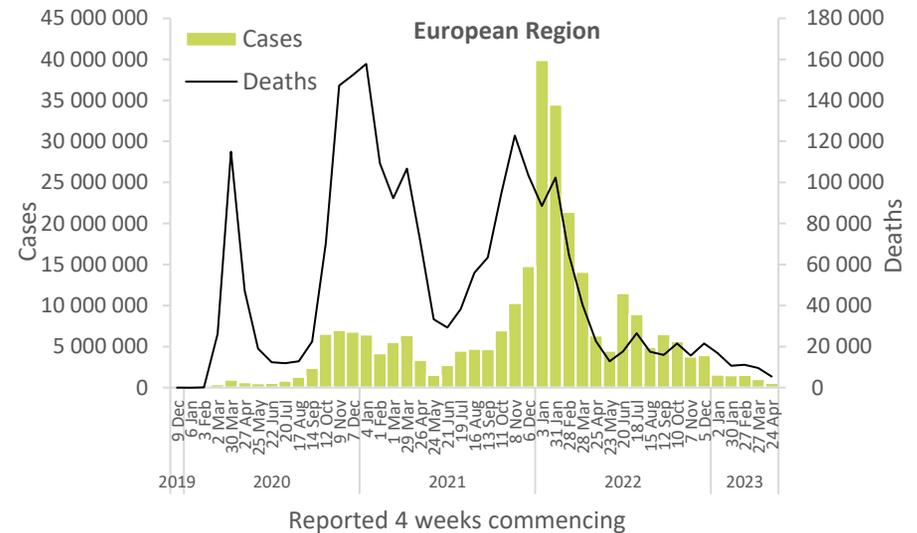


Updates from the [Eastern Mediterranean Region](#)

European Region

The European Region reported nearly 573 000 new cases, a 45% decrease as compared to the previous 28-day period. Three (5%) 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 Andorra (70 vs 28 new cases; +150%), Liechtenstein (six vs four new cases; +50%), and Spain (43 197 vs 34 472 new cases; +25%). The highest numbers of new cases were reported from France (122 239 new cases; 187.9 new cases per 100 000; -43%), the Russian Federation (90 491 new cases; 62.0 new cases per 100 000; -60%), and Italy (70 136 new cases; 117.6 new cases per 100 000; -24%).

The number of new 28-day deaths in the Region decreased by 44% as compared to the previous 28-day period, with 5373 new deaths reported. The highest numbers of new deaths were reported from France (810 new deaths; 1.2 new deaths per 100 000; -1%), Spain (745 new deaths; 1.6 new deaths per 100 000; +92%), and the Russian Federation (663 new deaths; <1 new death per 100 000; -33%).

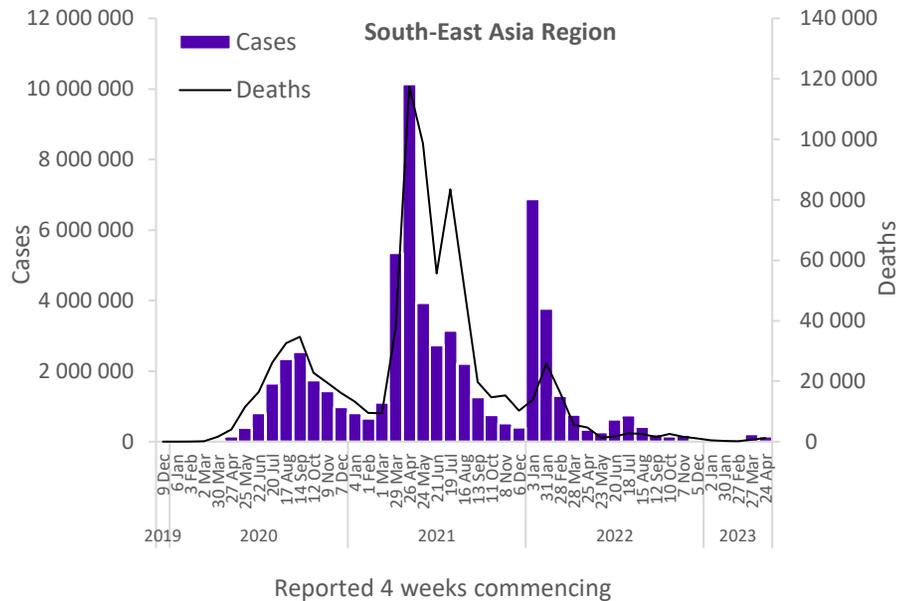


Updates from the [European Region](#)

South-East Asia Region

The South-East Asia Region reported over 146 000 new cases, a 31% decrease as compared to the previous 28-day period. Six (55%) of the 10 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Myanmar (3685 vs 276 new cases; +1235%), Thailand (8498 vs 1858 new cases; +357%), and Timor-Leste (16 vs four new cases; +300%). The highest numbers of new cases were reported from India (94 472 new cases; 6.8 new cases per 100 000; -50%), Indonesia (38 150 new cases; 13.9 new cases per 100 000; +92%), and Thailand (8498 new cases; 12.2 new cases per 100 000; +357%).

The number of new 28-day deaths in the Region increased by 61% as compared to the previous 28-day period, with 1143 new deaths reported. The highest numbers of new deaths were reported from India (503 new deaths; <1 new death per 100 000; +1%), Indonesia (497 new deaths; <1 new death per 100 000; +172%), and Thailand (106 new deaths; <1 new death per 100 000; +783%).

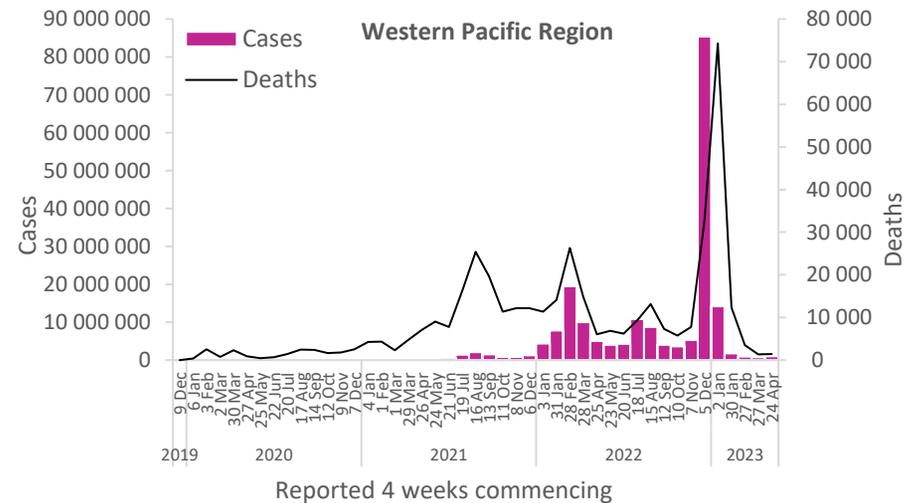


Updates from the [South-East Asia Region](#)

Western Pacific Region

The Western Pacific Region reported over one million new cases, a 38% increase as compared to the previous 28-day period. Fourteen (40%) 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 Mongolia (685 vs 56 new cases; +1123%), Papua New Guinea (26 vs three new cases; +767%), and Brunei Darussalam (16 909 vs 3465 new cases; +388%). The highest numbers of new cases were reported from the Republic of Korea (462 726 new cases; 902.5 new cases per 100 000; +52%), Japan (164 367 new cases; 130.0 new cases per 100 000; -24%), and Australia (125 992 new cases; 494.1 new cases per 100 000; +49%).

The number of new 28-day deaths in the Region increased by 9% as compared to the previous 28-day period, with 1465 new deaths reported. The highest numbers of new deaths were reported from Australia (417 new deaths; 1.6 new deaths per 100 000; +30%), Japan (338 new deaths; <1 new death per 100 000; -44%), and the Republic of Korea (262 new deaths; <1 new death per 100 000; +38%).



Updates from the [Western Pacific Region](#)

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. 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>.

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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 all 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.¹

References

1. Chen Z, Azman AS, Chen X, et al. Global landscape of SARS-CoV-2 genomic surveillance and data sharing. *Nature genetics*. 2022;54(4). doi:10.1038/s41588-022-01033-y