

COVID-19 Weekly Epidemiological Update

Edition 144 published 25 May 2023

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Global overview

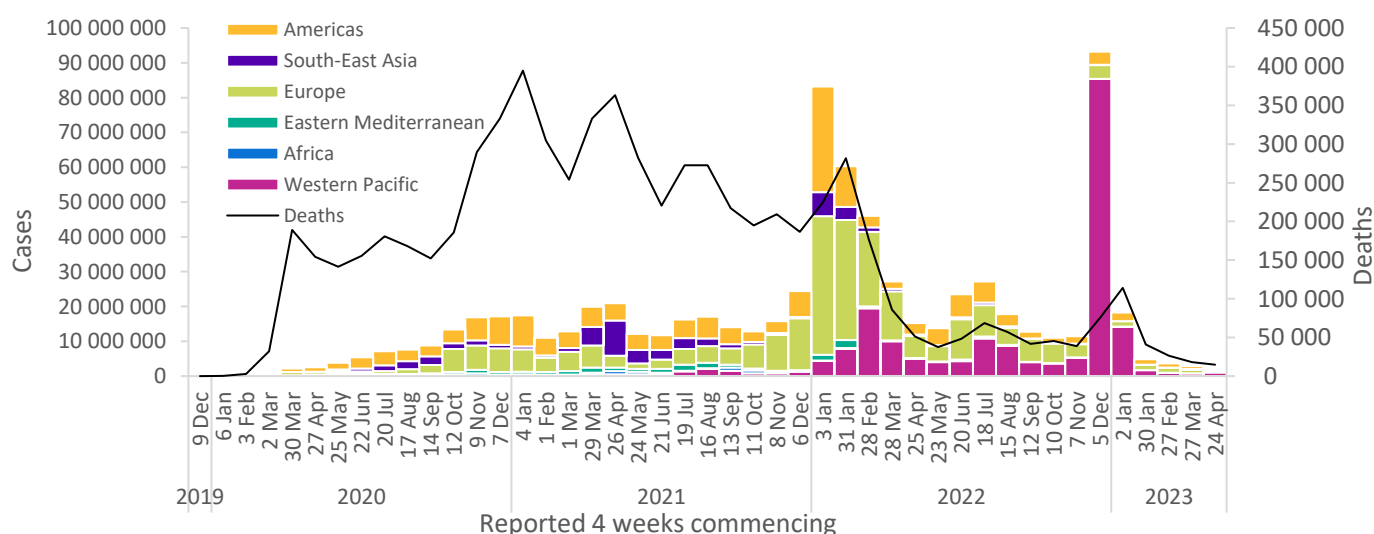
Data as of 21 May 2023

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%)

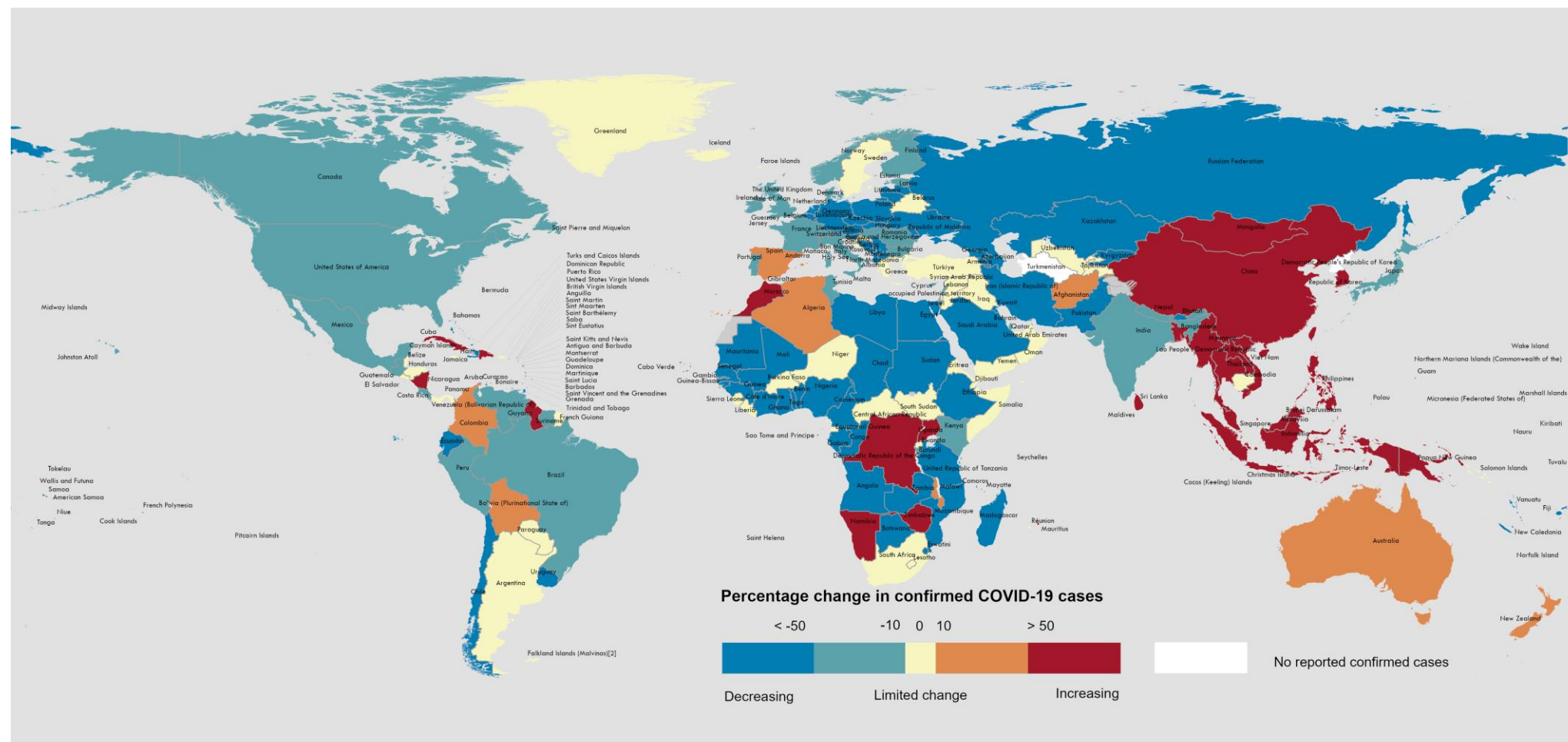
*Percent change in the number of newly confirmed cases/deaths in the past 28 days, compared to 28 days prior. Data from previous weeks are updated continuously with adjustments received from countries.

**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

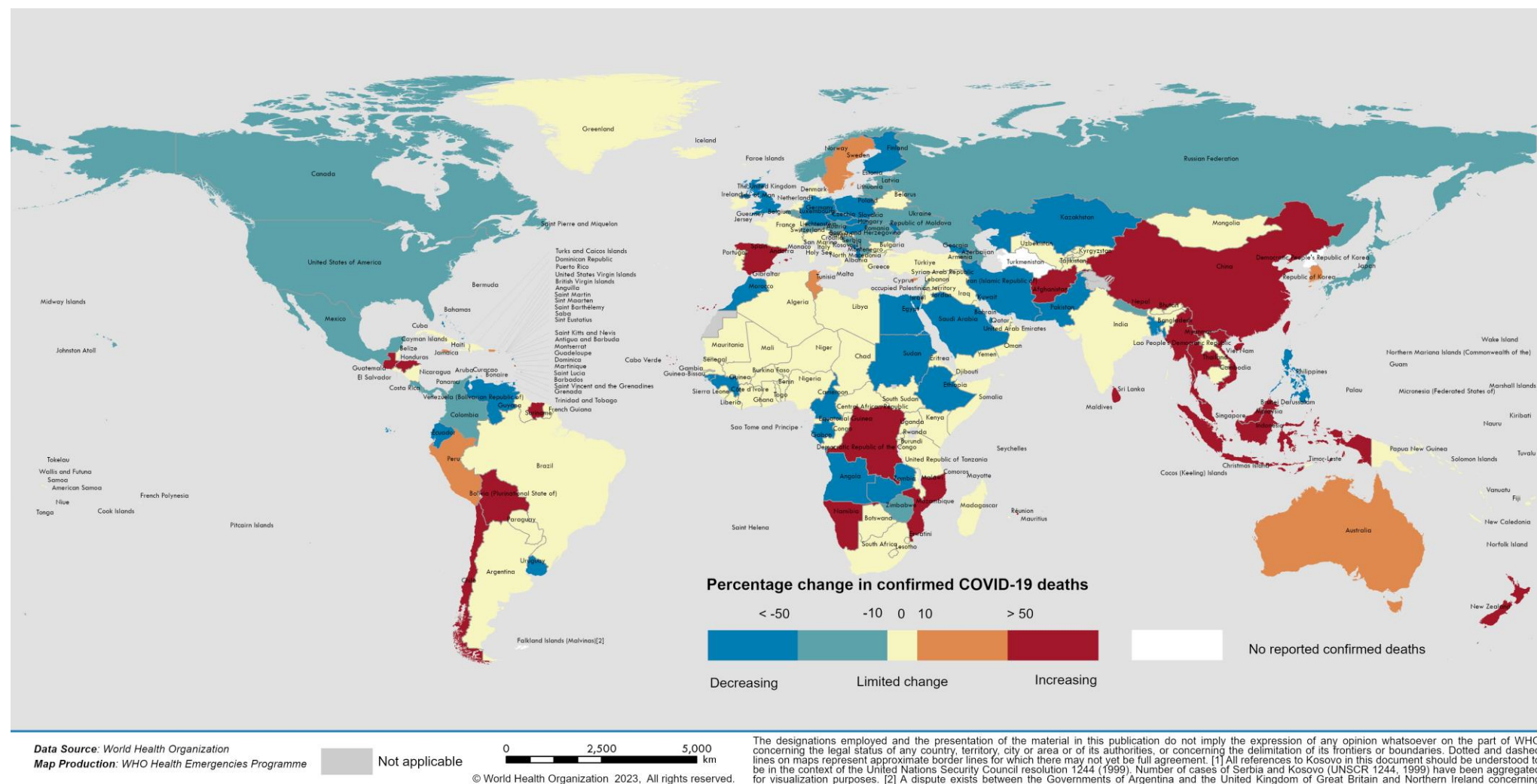
0 2,500 5,000 km

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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. [1] All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999). Number of cases of Serbia and Kosovo (UNSCR 1244, 1999) have been aggregated for visualization purposes. [2] A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas). Data for Bonaire, Sint Eustatius and Saba have been disaggregated and displayed at the subnational level.

**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**



**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).

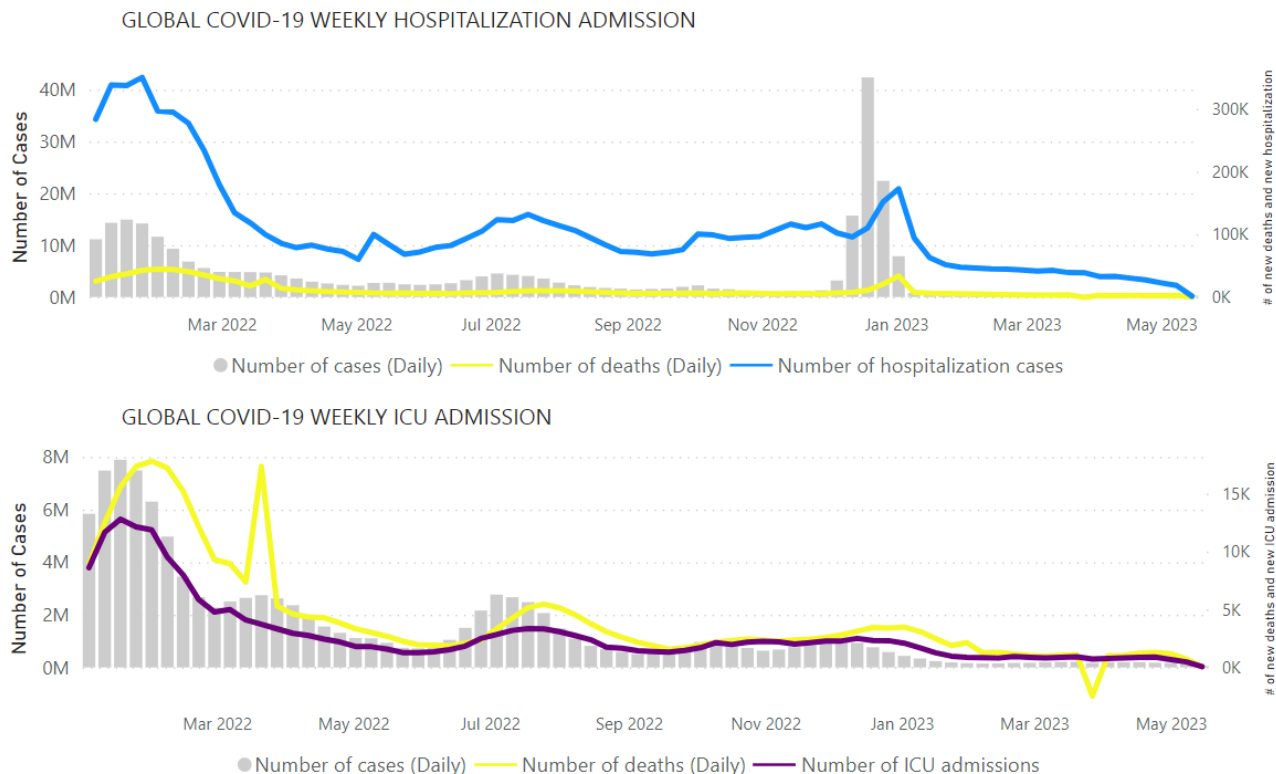
Among the 22 countries consistently reporting new hospitalizations, three (14%) countries registered an increase of 20% or greater in hospitalizations during the past 28 days compared to the previous 28-day period: Indonesia (9318 vs 2866; +225%), Afghanistan (59 vs 34; +74%), and Singapore (2231 vs 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.

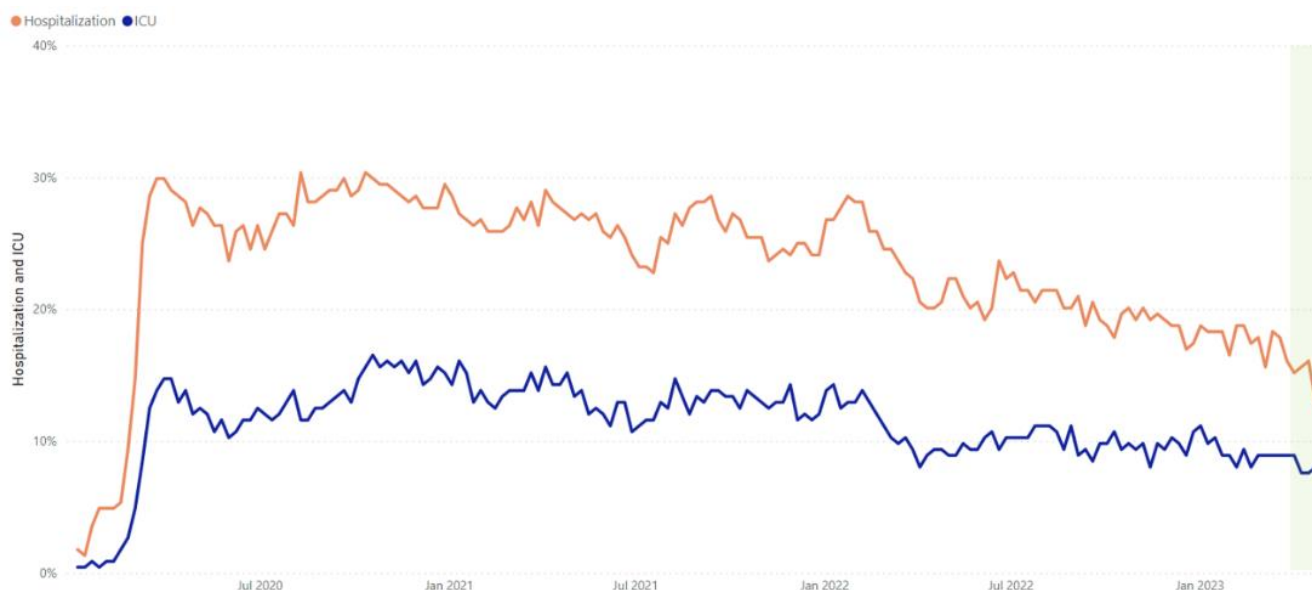
Figure 4. COVID-19 cases, deaths, hospitalizations, and ICU admissions reported weekly to WHO, as of 21 May 2023



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](#)

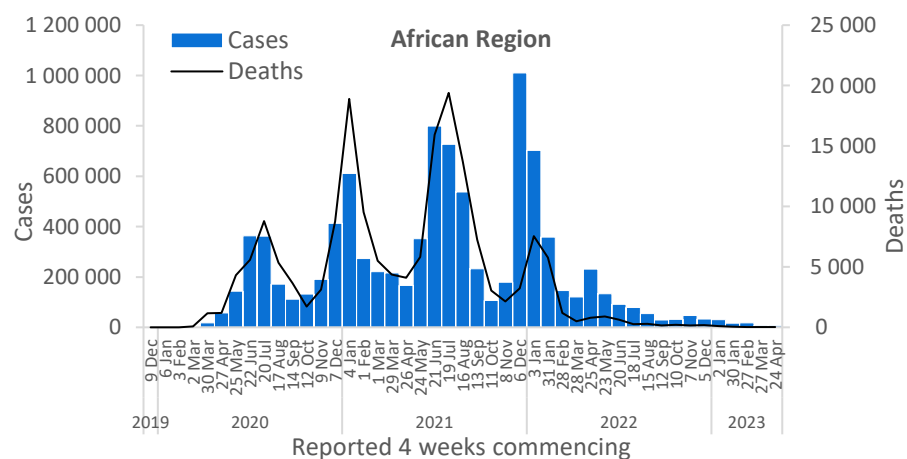
WHO regional overviews

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).

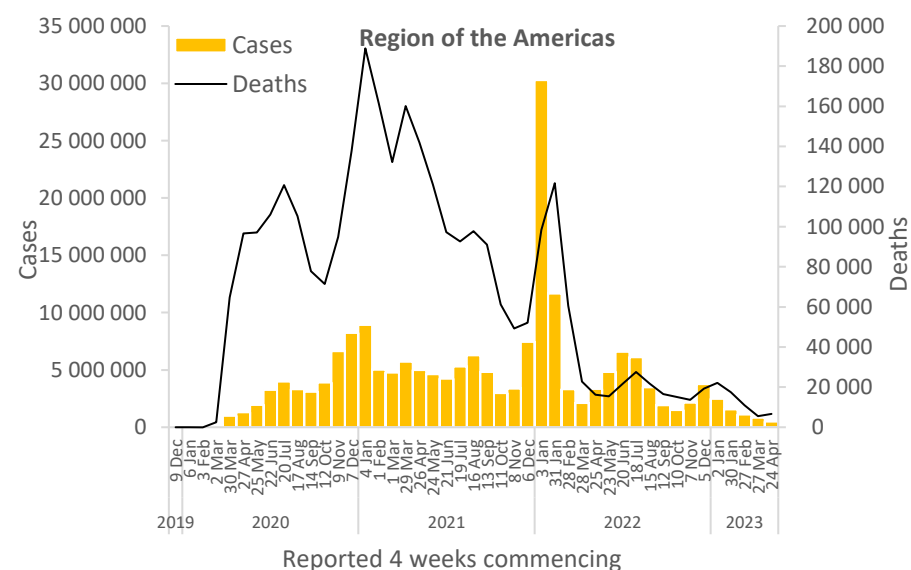


Updates from the [African Region](#)

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%).

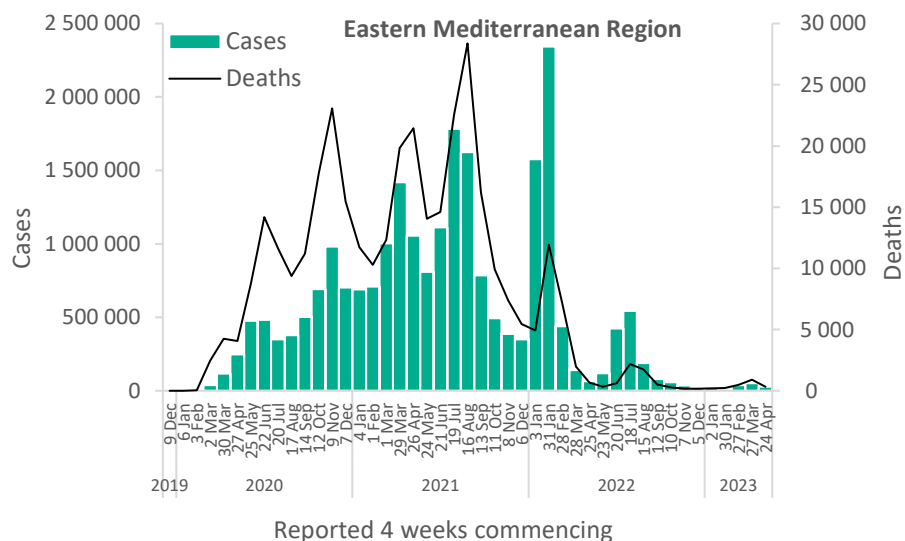


Updates from the [Region of the Americas](#)

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%).

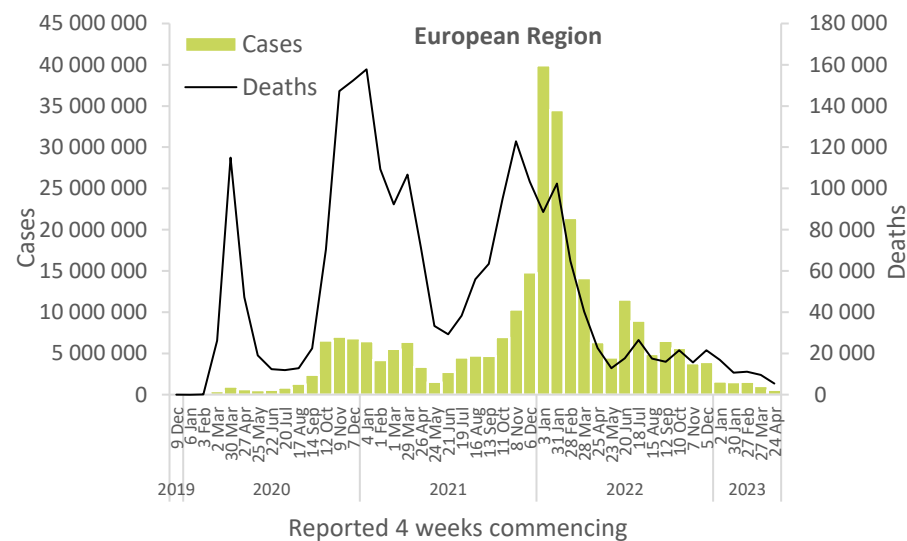


Updates from the [Eastern Mediterranean Region](#)

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%).

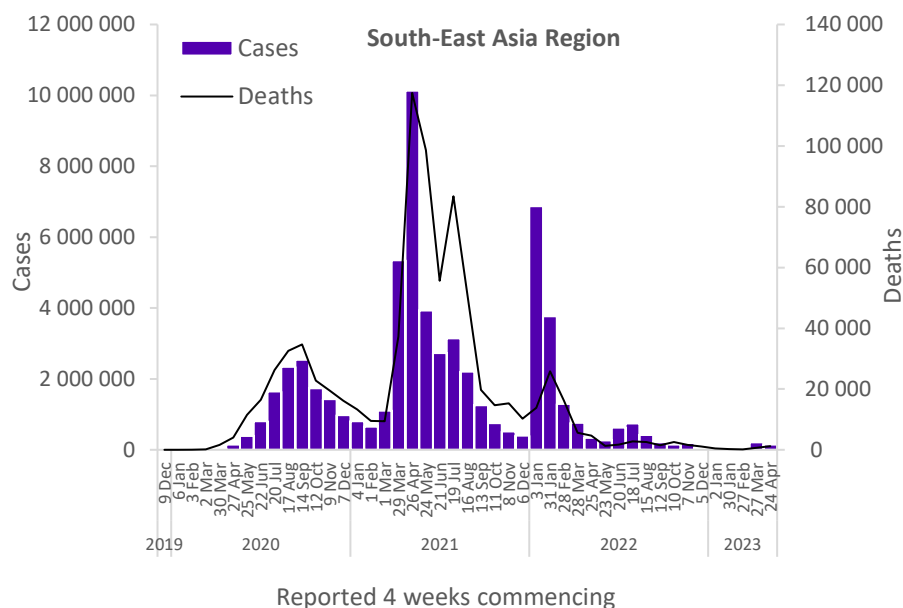


Updates from the [European Region](#)

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%).

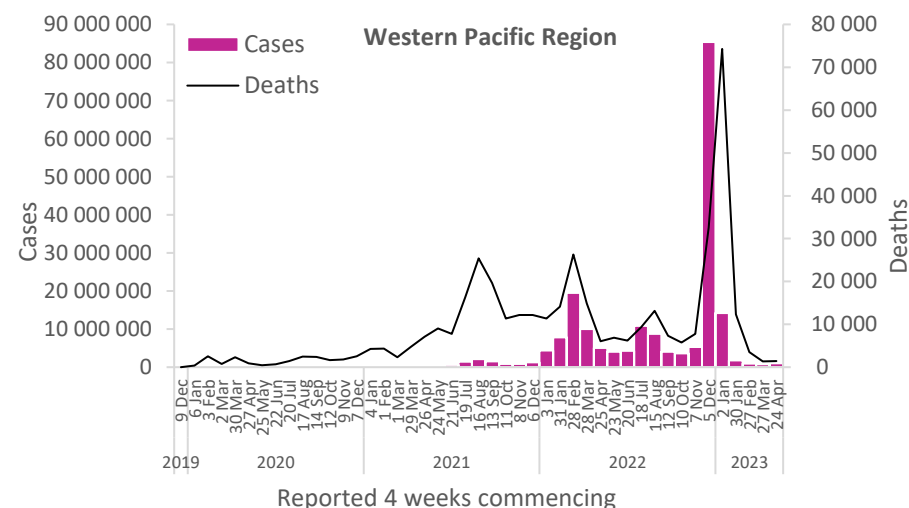


Updates from the [South-East Asia Region](#)

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>.

‘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 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

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Global overview

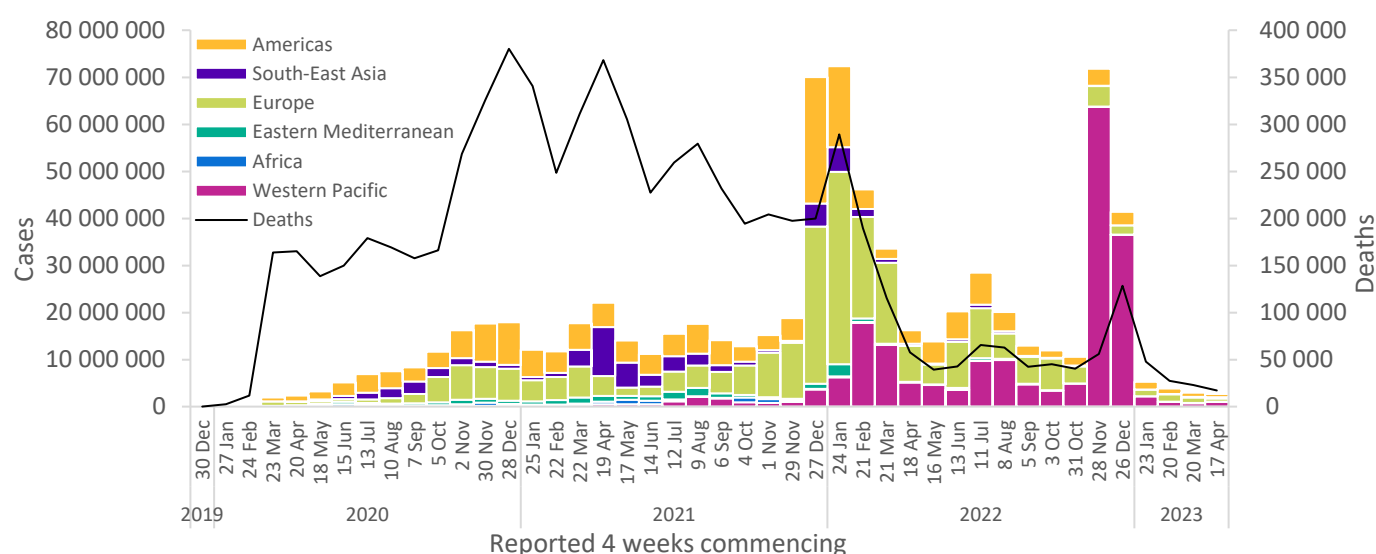
Data as of 14 May 2023

Globally, nearly 2.6 million new cases and over 17 000 deaths were reported in the last 28 days (17 April to 14 May 2023), a decrease of 14% and 26%, respectively, compared to the previous 28 days (20 March to 16 April 2023) (Figure 1, Table 1). The situation is mixed at regional levels, with increases in reported cases seen in the South-East Asia and Western Pacific regions and increases in deaths in South-East Asia. As of 14 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. 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. This wider time window helps to account for reductions and 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 14 May 2023**



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

At the regional level, the number of newly reported 28-day cases decreased or remained stable across four of the six WHO regions: the Eastern Mediterranean Region (-42%), the European Region (-41%), the Region of the Americas (-34%), and the African Region (+2%); while cases increased in two WHO regions: the Western Pacific Region (+47%), and the South-East Asia Region (+52%). The number of newly reported 28-day deaths decreased across five regions: the European Region (-43%), the Eastern Mediterranean Region (-42%), the Region of the Americas (-17%), the Western Pacific Region (-14%), and the African Region (-5%); while deaths increased in the South-East Asia Region (+153%).

At the country level, the highest numbers of new 28-day cases were reported from the Republic of Korea (418 960 new cases; +46%), the United States of America (355 376 new cases; -34%), Japan (229 877 new cases; +15%), India (162 559 new cases; +32%), and Brazil (153 829 new cases; -28%). The highest numbers of new 28-day deaths were reported from the United States of America (5333 new deaths; -22%), Brazil (1305 new deaths; +11%), France (925 new deaths; +31%), the Russian Federation (882 new deaths; -11%), and India (656 new deaths; +110%).

Table 1. Newly reported and cumulative COVID-19 confirmed cases and deaths, by WHO Region, as of 14 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	1 043 696 (40%)	47%	203 391 662 (27%)	1 402 (8%)	-14%	411 475 (6%)
Europe	687 604 (27%)	-41%	276 255 507 (36%)	5 814 (34%)	-43%	2 235 211 (32%)
Americas	606 308 (23%)	-34%	192 718 073 (25%)	8 143 (48%)	-17%	2 957 032 (43%)
South-East Asia	214 656 (8%)	52%	61 138 297 (8%)	1 225 (7%)	153%	805 667 (12%)
Eastern Mediterranean	31 904 (1%)	-42%	23 369 877 (3%)	502 (3%)	-42%	351 195 (5%)
Africa	8 407 (<1%)	2%	9 530 159 (1%)	20 (<1%)	-5%	175 365 (3%)
Global	2 592 575 (100%)	-14%	766 404 339 (100%)	17 106 (100%)	-26%	6 935 958 (100%)

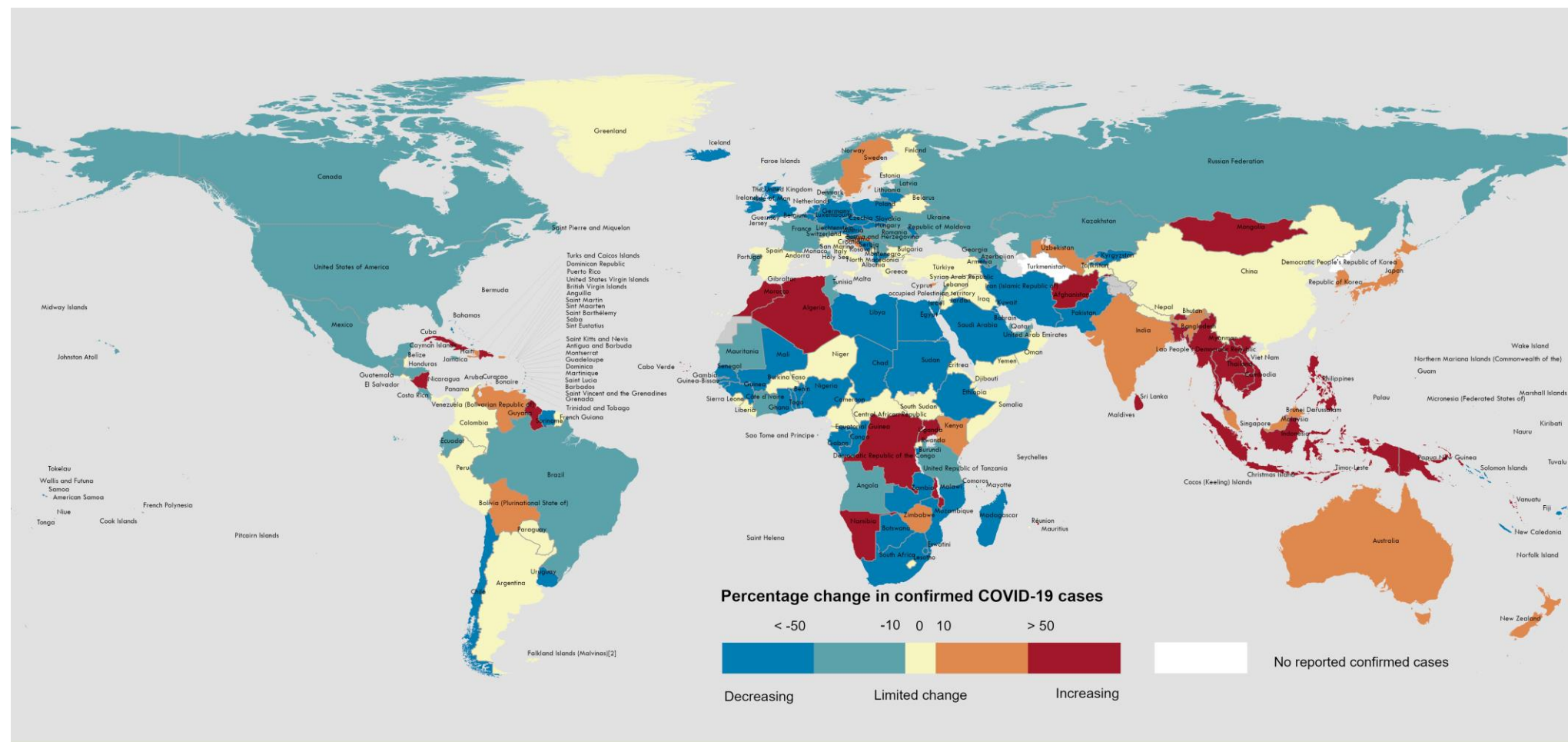
*Percent change in the number of newly confirmed cases/deaths in the past 28 days, compared to 28 days prior. Data from previous weeks are updated continuously with adjustments received from countries.

**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 14 May 2023**



Data Source: World Health Organization

Map Production: WHO Health Emergencies Programme

Not applicable

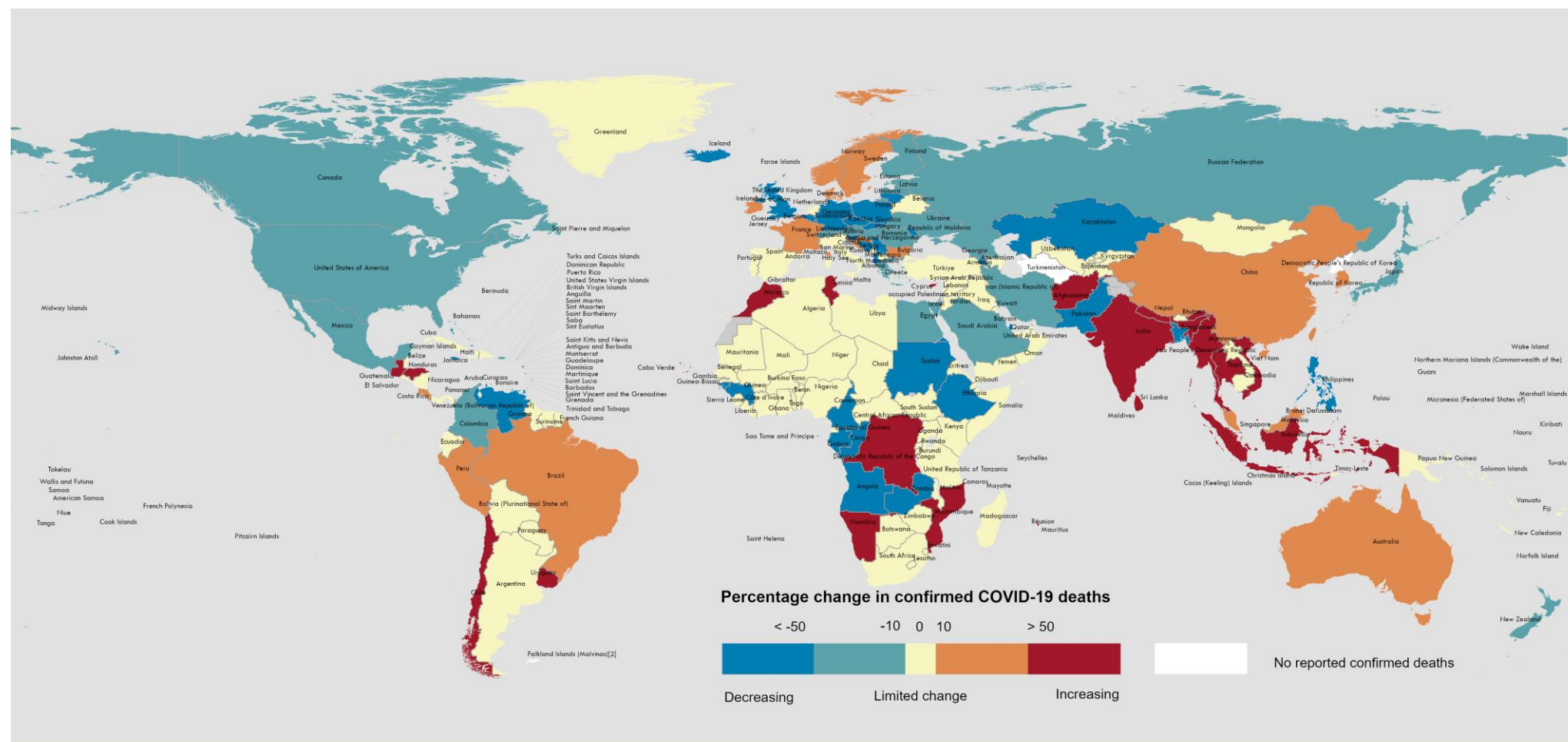
0 2,500 5,000 km

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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 14 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](#)

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

Geographic spread and prevalence

Globally, from 17 April to 14 May 2023 (28 days), 24 884 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. The VUMs are BA.2.75, CH.1.1, BQ.1, XBB, XBB.1.9.1, XBB.1.9.2, and XBB.2.3. On 18 May 2023, XBB.2.3 was added to the list of VUMs. XBB.2.3 is a descendent lineage of XBB, which is a recombinant of two BA.2 descendent lineages.

Globally, XBB.1.5 has been reported from 110 countries. In epidemiological week 17 (24 to 30 April 2023), XBB.1.5 accounted for 43.8% of sequences, a decrease from 51.9% in epidemiological week 13 (27 March to 2 April 2023). XBB.1.16 has been reported from 49 countries. In week 17, XBB.1.16 accounted for 11.6% of sequences, an increase from 4.9% in week 13.

Available evidence does not show an increase in severity for XBB descendent lineages. An epidemiological study conducted in Singapore assessing the severity of SARS-CoV-2 variants in 3798 participants found no significant differences in COVID-19 infection or hospitalization outcomes across XBB descendent lineages, including the VOIs XBB.1.16 and XBB.1.5.ⁱ Additionally, a recent laboratory study showed that XBB.1.16 and XBB.1.5 have similar viral entry and neutralization evasion characteristics.ⁱⁱ

Table 2 shows the number of countries reporting the VOIs and VUMs and their prevalence from week 13 to week 17. 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 13 to week 17 of 2023

Lineage	Countries	Sequences	2023-13	2023-14	2023-15	2023-16	2023-17
XBB.1.5* (VOI)	110	212 878	51.89	50.43	49.01	47.30	43.76
XBB.1.16* (VOI)	49	8 686	4.91	6.55	8.12	9.24	11.56
BA.2.75*	123	110 226	3.32	3.47	3.19	1.28	0.95
CH.1.1*	91	44 977	4.87	3.84	3.70	3.13	2.82
BQ.1*	149	408 797	4.28	3.76	2.86	1.94	1.44
XBB*	125	63 887	5.78	6.00	6.90	7.64	9.85
XBB.1.9.1*	79	22 140	9.75	10.50	11.92	13.67	13.94
XBB.1.9.2*	55	5 559	2.73	2.72	3.13	4.09	4.11
XBB.2.3*	49	3 787	1.85	2.56	2.93	3.42	4.64
Unassigned	103	149 151	2.40	2.36	1.49	1.39	0.09
Other [†]	207	6 707 822	5.61	6.22	6.53	7.39	9.54

* 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*.

ⁱ Severity of SARS-CoV-2 Omicron XBB subvariants in Singapore: <https://www.medrxiv.org/content/10.1101/2023.05.04.23289510v1.full.pdf>

ⁱⁱ Host cell entry and neutralisation sensitivity of the SARS-CoV-2 XBB.1.16 lineage: <https://www.nature.com/articles/s41423-023-01030-z>

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](#)

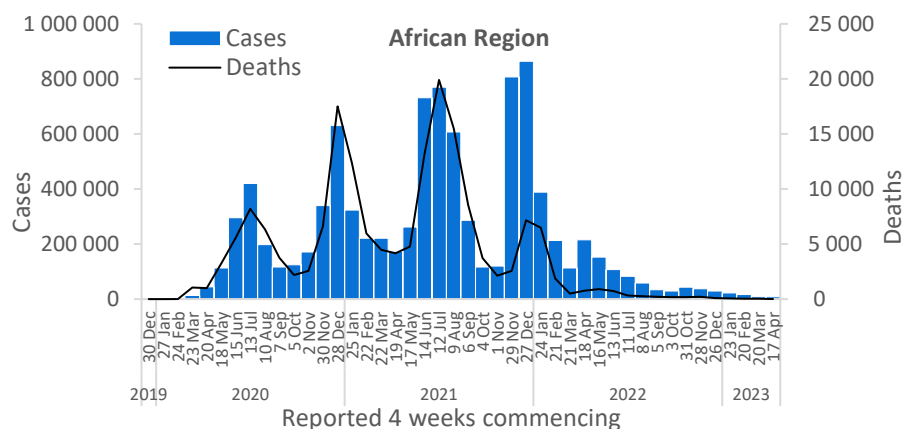
WHO regional overviews

Data for 17 April to 14 May 2023

African Region

The African Region reported 8407 new cases, a 2% increase as compared to the previous 28-day period. Eight (16%) 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 (460 vs 29 new cases; +1486%), the Democratic Republic of the Congo (708 vs 83 new cases; +753%), and Uganda (223 vs 61 new cases; +266%). The highest numbers of new cases were reported from Mauritius (5419 new cases; 426.1 new cases per 100 000; +179%), the Democratic Republic of the Congo (708 new cases; <1 new case per 100 000; +753%), and Cabo Verde (460 new cases; 82.7 new cases per 100 000; +1486%).

The number of new 28-day deaths in the Region decreased by 5% as compared to the previous 28-day period, with 20 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 (six new deaths; <1 new death per 100 000; similar to the previous 28-day period), and the Democratic Republic of the Congo (three new deaths; <1 new death per 100 000; no deaths reported the previous 28-day period).

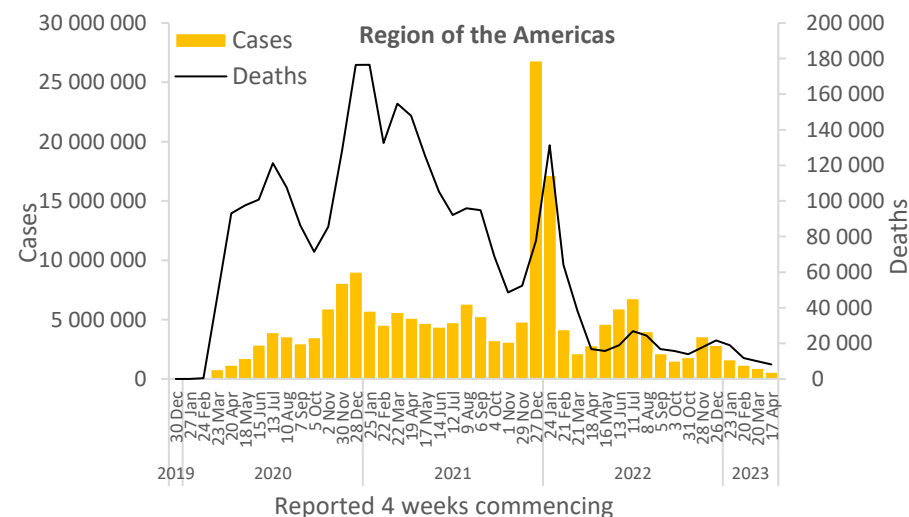


Updates from the [African Region](#)

Region of the Americas

The Region of the Americas reported over 606 000 new cases, a 34% decrease as compared to the previous 28-day period. Fourteen (25%) 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 Turks and Caicos Islands (23 vs three new cases; +667%), Guyana (86 vs 16 new cases; +438%), and Saint Vincent and the Grenadines (29 vs seven new cases; +314%). The highest numbers of new cases were reported from the United States of America (355 376 new cases; 107.4 new cases per 100 000; -34%), Brazil (153 829 new cases; 72.4 new cases per 100 000; -28%), and Mexico (32 772 new cases; 25.4 new cases per 100 000; -31%).

The number of new 28-day deaths in the Region decreased by 17% as compared to the previous 28-day period, with 8143 new deaths reported. The highest numbers of new deaths were reported from the United States of America (5333 new deaths; 1.6 new deaths per 100 000; -22%), Brazil (1305 new deaths; <1 new death per 100 000; +11%), and Peru (525 new deaths; 1.6 new deaths per 100 000; +48%).

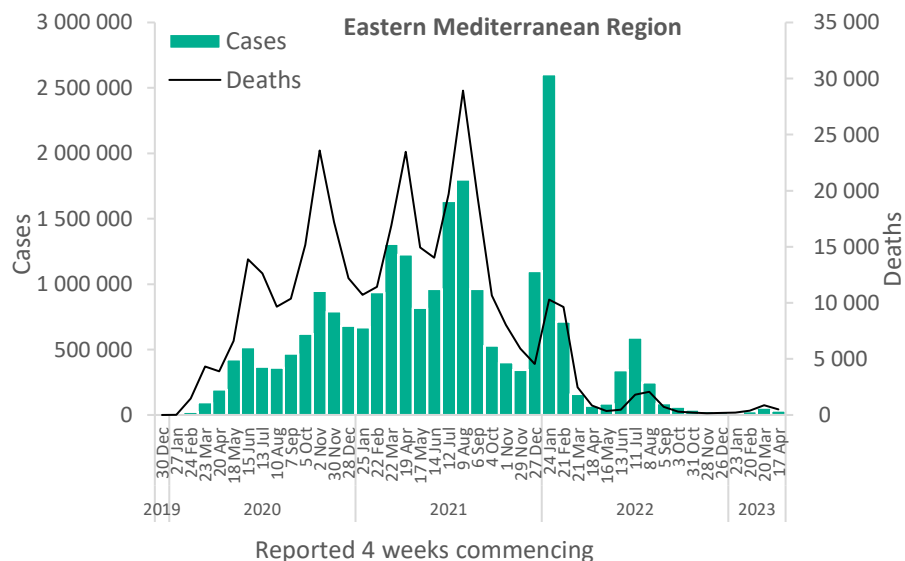


Updates from the [Region of the Americas](#)

Eastern Mediterranean Region

The Eastern Mediterranean Region reported nearly 32 000 new cases, a 42% 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 (1291 vs 304 new cases; +325%), and Afghanistan (6108 vs 2863 new cases; +113%). The highest numbers of new cases were reported from the Islamic Republic of Iran (7585 new cases; 9.0 new cases per 100 000; -68%), Afghanistan (6108 new cases; 15.7 new cases per 100 000; +113%), and Qatar (5744 new cases; 199.4 new cases per 100 000; -36%).

The number of new 28-day deaths in the Region decreased by 42% as compared to the previous 28-day period, with 502 new deaths reported. The highest numbers of new deaths were reported from the Islamic Republic of Iran (396 new deaths; <1 new death per 100 000; -47%), Tunisia (40 new deaths; <1 new death per 100 000; +82%), and Lebanon (29 new deaths; <1 new death per 100 000; -9%).

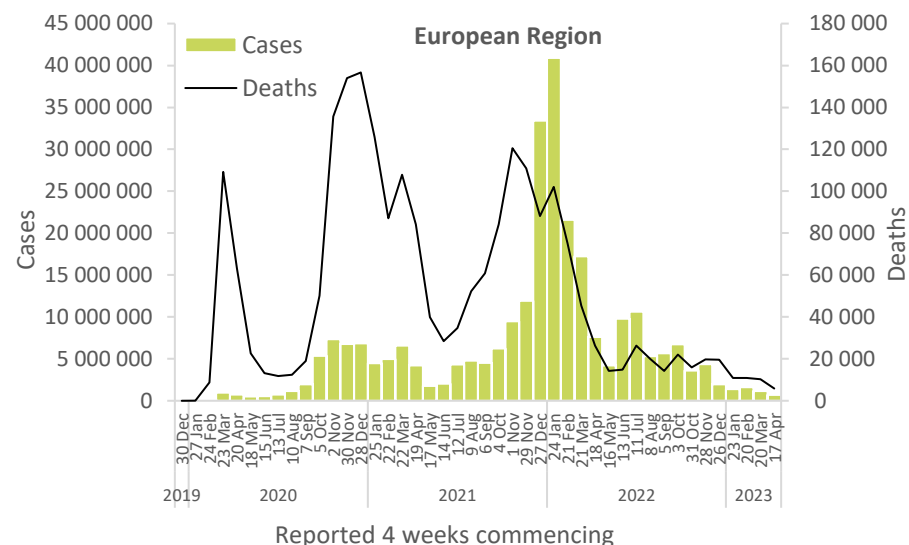


Updates from the [Eastern Mediterranean Region](#)

European Region

The European Region reported over 687 000 new cases, a 41% decrease as compared to the previous 28-day period. Six (10%) 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 37 new cases; +89%), Sweden (4371 vs 3176 new cases; +38%), and San Marino (287 vs 213 new cases; +35%). The highest numbers of new cases were reported from France (150 334 new cases; 231.1 new cases per 100 000; -31%), the Russian Federation (133 039 new cases; 91.2 new cases per 100 000; -49%), and Italy (82 452 new cases; 138.2 new cases per 100 000; -7%).

The number of new 28-day deaths in the Region decreased by 43% as compared to the previous 28-day period, with 5814 new deaths reported. The highest numbers of new deaths were reported from France (925 new deaths; 1.4 new deaths per 100 000; +31%), the Russian Federation (882 new deaths; <1 new death per 100 000; -11%), and Italy (640 new deaths; 1.1 new deaths per 100 000; -1%).

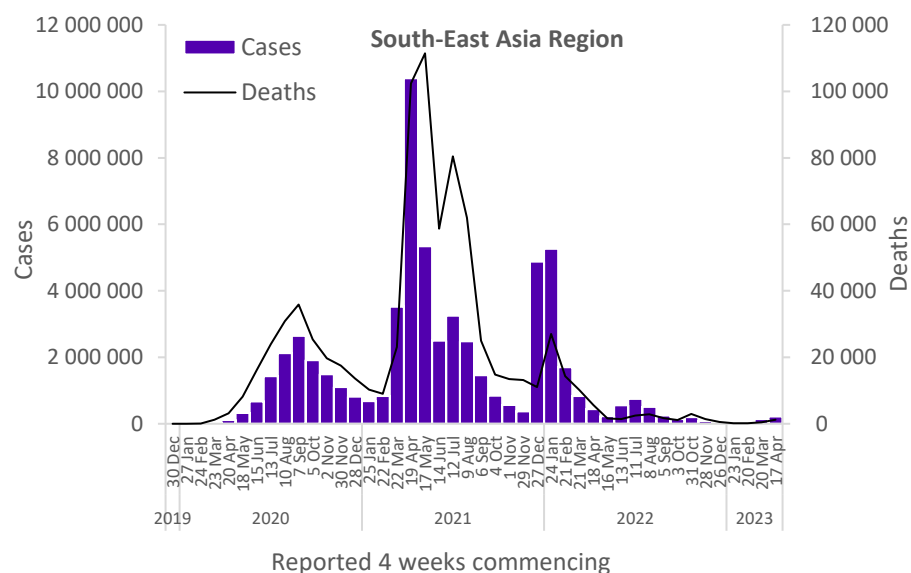


Updates from the [European Region](#)

South-East Asia Region

The South-East Asia Region reported over 214 000 new cases, a 52% increase as compared to the previous 28-day period. Nine (82%) 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 (3089 vs 168 new cases; +1739%), Thailand (6 954 vs 920 new cases; +656%), and Timor-Leste (17 vs four new cases; +325%). The highest numbers of new cases were reported from India (162 559 new cases; 11.8 new cases per 100 000; +32%), Indonesia (39 891 new cases; 14.6 new cases per 100 000; +148%), and Thailand (6954 new cases; 10 new cases per 100 000; +656%).

The number of new 28-day deaths in the Region increased by 153% as compared to the previous 28-day period, with 1225 new deaths reported. The highest numbers of new deaths were reported from India (656 new deaths; <1 new death per 100 000; +110%), Indonesia (486 new deaths; <1 new death per 100 000; +220%), and Thailand (47 new deaths; <1 new death per 100 000; +262%).

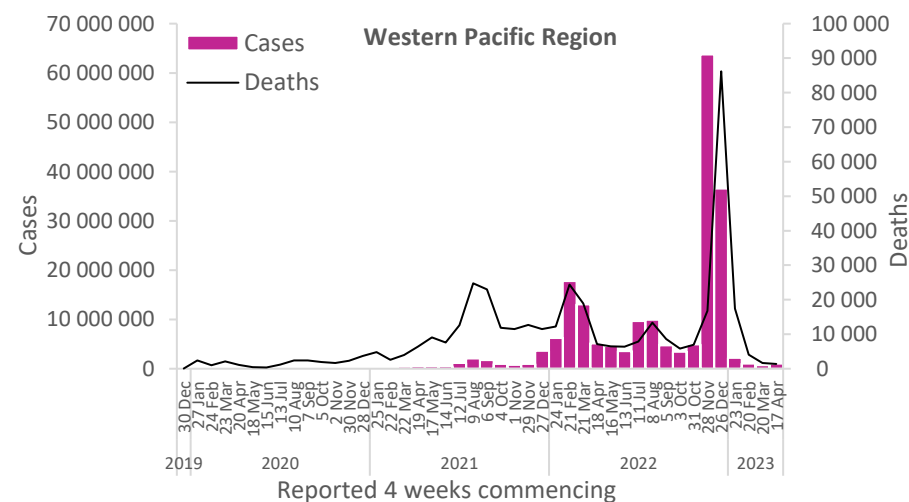


Updates from the [South-East Asia Region](#)

Western Pacific Region

The Western Pacific Region reported over one million new cases, a 47% 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 Viet Nam (59 211 vs 3217 new cases; +1741%), Mongolia (322 vs 32 new cases; +906%), and the Philippines (27 567 vs 6543 new cases; +321%). The highest numbers of new cases were reported from the Republic of Korea (418 960 new cases; 817.2 new cases per 100 000; +46%), Japan (229 877 new cases; 181.8 new cases per 100 000; +15%), and Australia (116 621 new cases; 457.3 new cases per 100 000; +46%).

The number of new 28-day deaths in the Region decreased by 14% as compared to the previous 28-day period, with 1402 new deaths reported. The highest numbers of new deaths were reported from Japan (474 new deaths; <1 new death per 100 000; -33%), Australia (362 new deaths; 1.4 new deaths per 100 000; +25%), and the Republic of Korea (231 new deaths; <1 new death per 100 000; +15%).



Updates from the [Western Pacific Region](#)

Hospitalizations and ICU admissions

At the global level, during the past 28 days (10 April to 7 May 2023), a total of 110 082 new hospitalizations and 3059 new intensive care unit (ICU) admissions were reported (Figure 5). This represents a 25% decrease in new hospitalizations and 1% increase in ICU admissions compared to the previous 28 days (13 March to 9 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, 45 (19%) countries reported data to WHO on new hospitalizations at least once (Figure 4). 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 African Region (eight countries; 16%), the Eastern Mediterranean Region (three countries; 14%), the Region of the Americas (six countries; 11%), and the Western Pacific Region (three countries; 9%). The proportion of countries that consistentlyⁱⁱⁱ reported new hospitalizations for the period was 11% (25 countries).

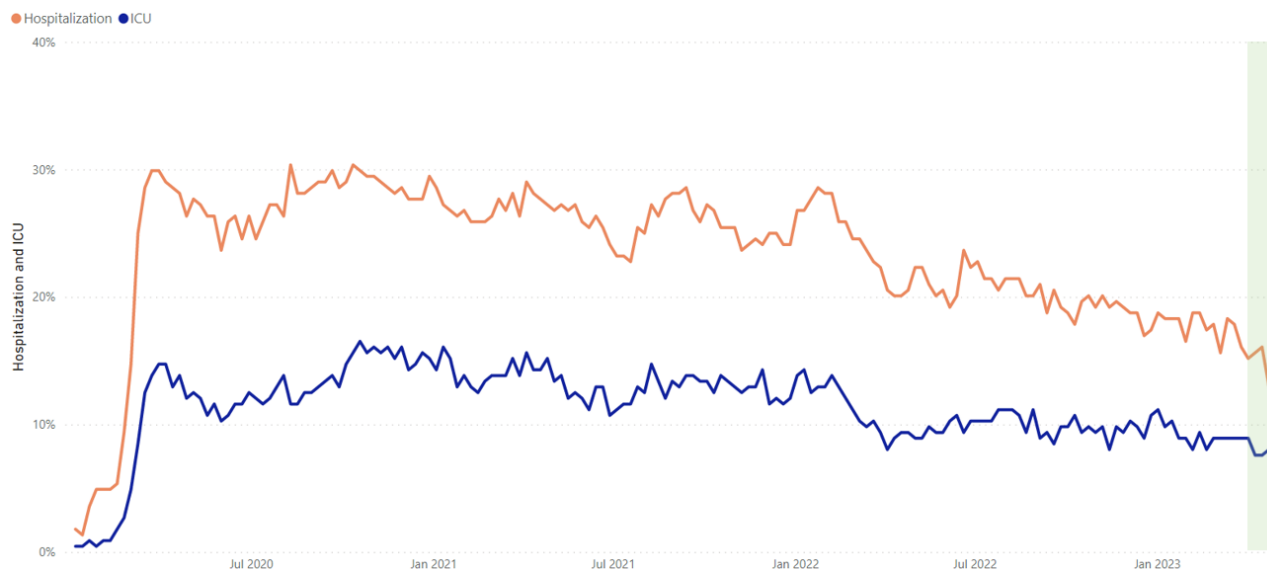
Among the 25 countries consistently reporting new hospitalizations, four (16%) countries registered an increase of 20% or greater in hospitalizations during the past 28 days compared to the previous 28-day period: Mongolia (302 vs 33; +815%), Afghanistan (81 vs 13; +523%), Indonesia (8125 vs 2106; +286%), and Singapore (2201 vs 1248; +76%). The highest number of new hospitalizations was reported from the United States of America (45 308 vs 65 238; -31%), Ukraine (11 473 vs 17 423; -34%), and France (10 907 vs 10 450; +4%).

Across the six WHO regions, in the past 28 days, a total of 38 (16%) countries reported data to WHO on new ICU admissions at least once (Figure 4). 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 country; 18%), the Western Pacific Region (five countries; 14%), the Region of the Americas (five countries; 9%), and the African Region (three countries; 6%). The proportion of countries that consistentlyⁱⁱⁱ reported new ICU admissions for the period was 9% (21 countries).

Among the 21 countries consistentlyⁱⁱⁱ reporting new ICU admissions, six (29%) 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 (346 vs 113; +206%), Singapore (49 vs 27; +81%), Sweden (56 vs 42; +33%), Lithuania (34 vs 27; +26%), Brunei (10 vs 8; +25%), and Ireland (17 vs 14; +21%). The highest numbers of new ICU admissions were reported from France (1111 vs 960; +16%), Italy (391 vs 335; +17%), and Ukraine (367 vs 438; -16%).

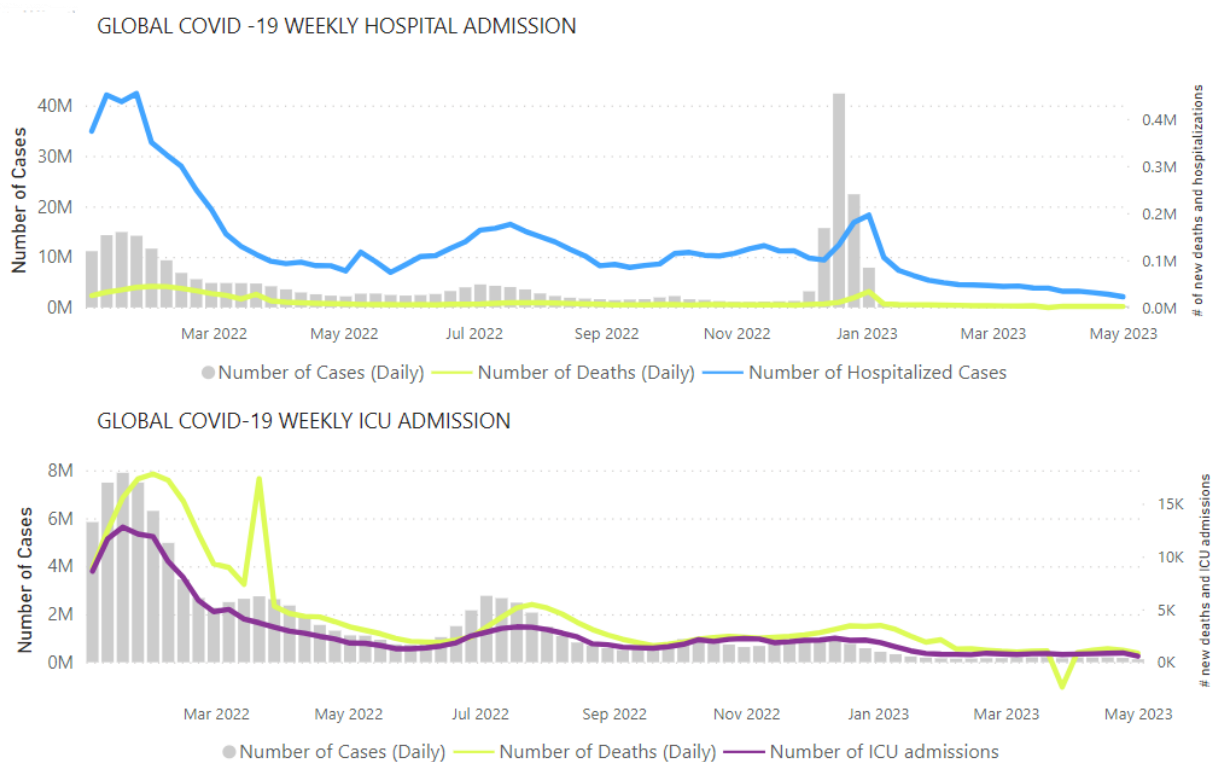
ⁱⁱⁱ “Consistently” as used here refers to countries that submitted data for new hospitalizations and intensive care unit admissions for the four consecutive weeks that make up the 28-day period.

Figure 4. Weekly proportion of countries reporting new hospitalizations and ICU admissions: epidemiological week 1, 2020 to week 18, 2023



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

Figure 5. COVID-19 cases, deaths, hospitalizations, and ICU admissions reported weekly to WHO, as of 14May 2023



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

Source: WHO Detailed Surveillance Dashboard

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>.

‘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 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

COVID-19 Weekly Epidemiological Update

Edition 142 published 11 May 2023

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- [SARS-CoV-2 variants of interest and variants under monitoring](#)
- [Vaccine effectiveness of primary series and booster vaccination against Omicron and its descendant lineages](#)
- [WHO regional overviews](#)
- [Hospitalizations and ICU admissions](#)
- [Summary of the Monthly Operational Update](#)

Global overview

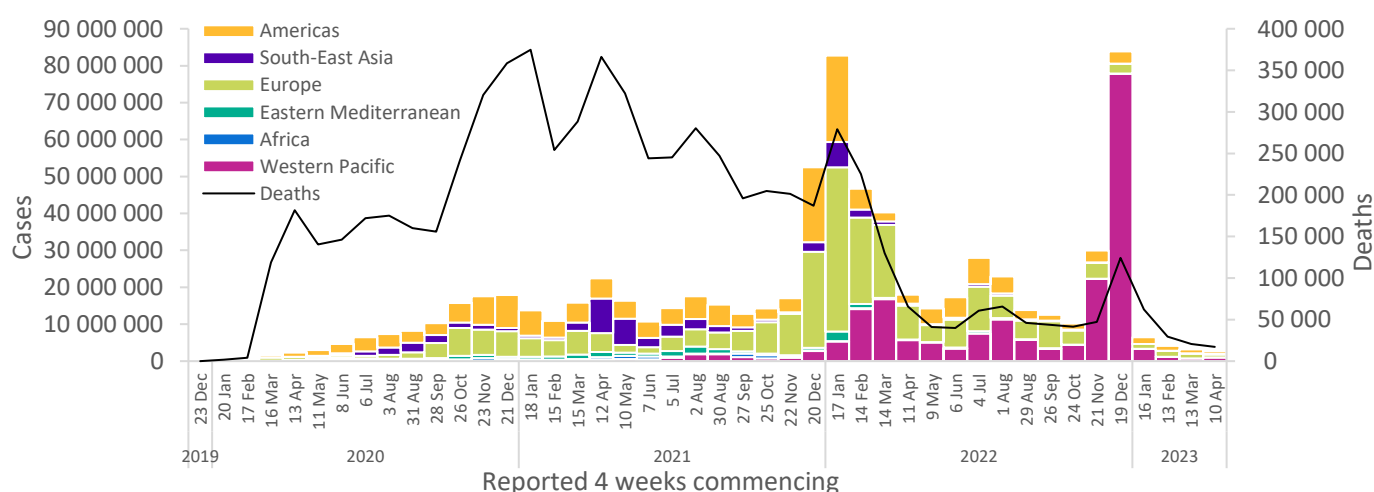
Data as of 7 May 2023

Globally, over 2.7 million new cases and over 17 000 deaths were reported in the last 28 days (10 April to 7 May 2023), a decrease of 14% and 17%, respectively, compared to the previous 28 days (13 March to 9 April 2023) (Figure 1, Table 1). The picture is mixed at the regional level, with increases in reported cases seen in the South-East Asia and Western Pacific regions and decreases in other regions. As of 7 May 2023, over 765 million confirmed cases and over 6.9 million deaths have been reported globally.

Reported COVID-19 cases are underestimates as shown by prevalence surveys.^{1–4} 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 7 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 European Region (-38%), the Region of the Americas (-35%), the African Region (-25%), and the Eastern Mediterranean Region (-24%); while cases increased in two WHO regions: the Western Pacific Region (+35%), and the South-East Asia Region (+223%). The number of newly reported 28-day deaths decreased or remained stable across four regions: the African Region (-50%), the European Region (-41%), the Western Pacific Region (-33%), and the Eastern Mediterranean Region (+1%); while deaths increased in two WHO regions: the Region of the Americas (+9%) and the South-East Asia Region (+281%).

At the country level, the highest numbers of new 28-day cases were reported from the United States of America (366 173 new cases; -35%), the Republic of Korea (363 691 new cases; +32%), Japan (262 145 new cases; +36%), India (213 014 new cases; +222%), and France (173 375 new cases; -19%). The highest numbers of new 28-day deaths were reported from the United States of America (4680 new deaths; -36%), Brazil (1277 new deaths; +2%), the Russian Federation (955 new deaths; -3%), France (944 new deaths; +39%), and India (715 new deaths; +289%).

Table 1. Newly reported and cumulative COVID-19 confirmed cases and deaths, by WHO Region, as of 7 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	975 488 (36%)	35%	203 126 109 (27%)	1 387 (8%)	-33%	411 080 (6%)
Europe	800 615 (29%)	-38%	276 123 761 (36%)	6 345 (37%)	-41%	2 233 349 (32%)
Americas	647 270 (24%)	-35%	192 581 201 (25%)	7 483 (44%)	9%	2 950 808 (43%)
South-East Asia	258 500 (9%)	223%	61 113 283 (8%)	1 178 (7%)	281%	805 395 (12%)
Eastern Mediterranean	40 047 (1%)	-24%	23 362 519 (3%)	707 (4%)	1%	351 092 (5%)
Africa	7 408 (<1%)	-25%	9 527 473 (1%)	12 (<1%)	-50%	175 351 (3%)
Global	2 729 328 (100%)	-14%	765 835 110 (100%)	17 112 (100%)	-17%	6 927 088 (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](#)

Percentage change in confirmed COVID-19 cases

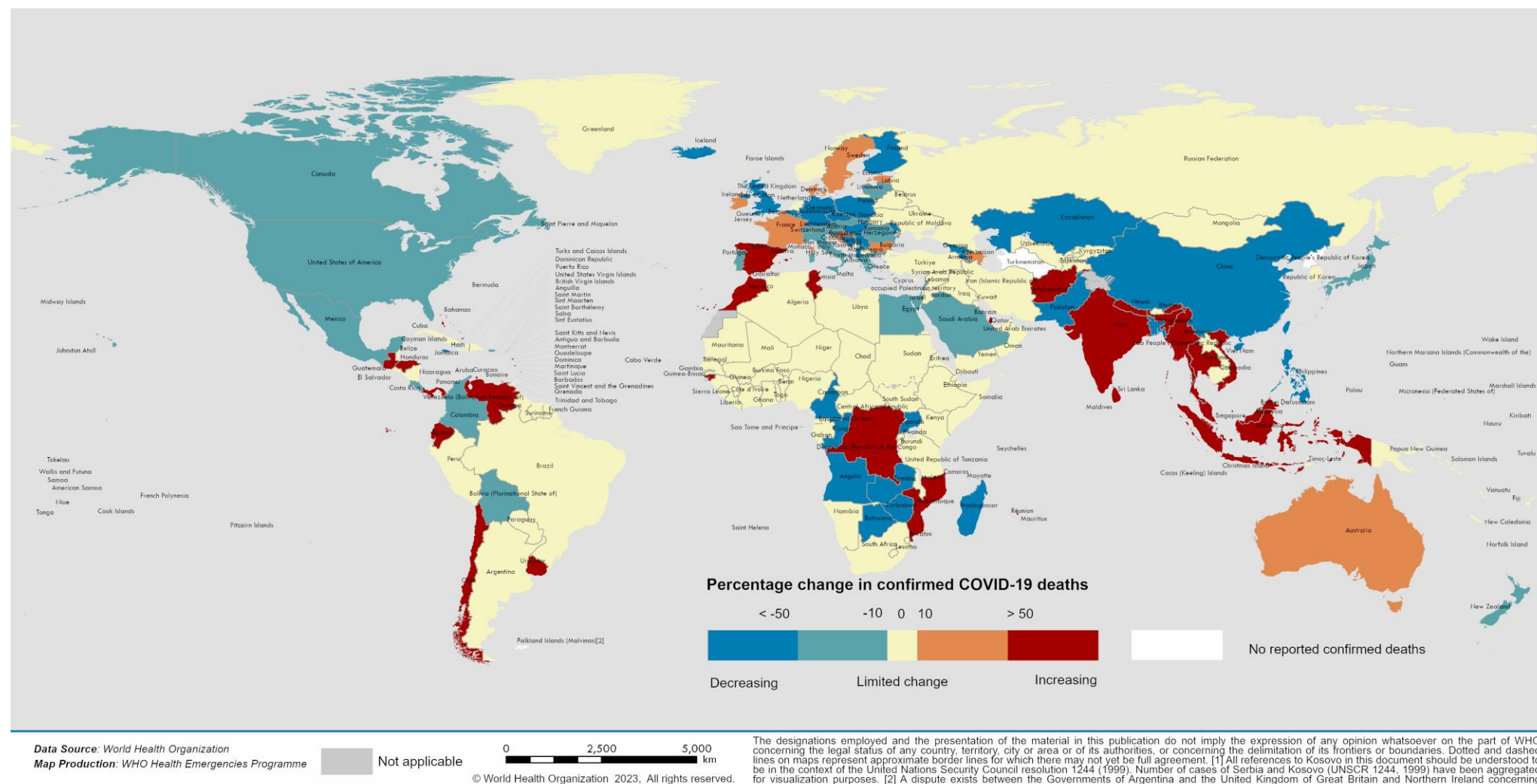
Percentage change	Color	Category
< -50	Dark Blue	Decreasing
-10	Light Blue	Limited change
0	Yellow	Limited change
10	Orange	Limited change
> 50	Red	Increasing
White	White	No reported confirmed cases

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 7 May 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 10 April to 7 May 2023 (28 days), 27 992 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 six variants under monitoring (VUMs) and their descendent lineages. The VUMs are BA.2.75, CH.1.1, BQ.1, XBB, XBB.1.9.1, and XBB.1.9.2. The variant XBF has been removed from the list of VUMs due to its declining prevalence (<1%) observed both globally and across WHO regions over the past four weeks.

There has been an increase in the number of countries reporting the VOIs. Between 20 March and 16 April 2023, 64 countries reported XBB.1.5 sequences, resulting in a cumulative total of 109 countries (Figure 4A, Table 2). During the same 28-day period, 34 countries reported XBB.1.16 sequences, bringing the cumulative total to 46 countries (Figure 4B, Table 2). While XBB.1.5 remains dominant globally, its prevalence has been declining steadily. In week 16 (17 to 23 April 2023), XBB.1.5 accounted for 47.5% of sequences, down from 52.4% in week 12 (20 to 26 March 2023). Globally, XBB.1.16 continues to rise in prevalence, accounting for 8.6% of sequences in week 16 compared to 4.0% in week 12.

Table 2 shows the number of countries reporting VOIs and VUMs, and their prevalence from week 12 to week 16. Among the VUMs, XBB, XBB.1.9.1 and XBB.1.9.2 have shown increasing trends. Conversely, other VUMs show declining trends during the same reporting period. The VOI and VUMs exhibiting increasing trends are highlighted in orange, while those with decreasing trends are highlighted in green.

Current SARS-CoV-2 variant trends differ across and within WHO regions and countries. Population immunity--from vaccination and previous SARS-CoV-2 infection--is among the factors contributing to the observed heterogeneity in the variant circulation dynamics.^{i,ii} The VOIs, XBB.1.5 and XBB.1.16, are dominant in four regions and one region, respectively: XBB.1.5 is dominant in the African, American, European, and Western Pacific Regions; XBB.1.16 is dominant in the South-East Asia region. The VUM XBB.1.9.1 is dominant in the Eastern Mediterranean Region (Figure 5).

The global trend of the number and percentage of SARS-CoV-2 sequences is shown in Figure 6. With the declining trends of testing and sequencing globally, the impact of emerging SARS-CoV-2 variants on disease severity remains unclear. Although there are currently no reported laboratory or country reports indicating an association between VOIs/VUMs and increased disease severity, low and unrepresentative levels of SARS-CoV-2 genomic surveillance continue to pose challenges in adequately assessing the SARS-CoV-2 variant landscape.

ⁱ SARS-CoV-2 variant biology: immune escape, transmission and fitness: <https://www.nature.com/articles/s41579-022-00841-7>

ⁱⁱ Rapidly shifting immunologic landscape and severity of SARS-CoV-2 in the Omicron era in South Africa: <https://www.nature.com/articles/s41467-022-35652-0>

Table 2. Weekly prevalence of SARS-CoV-2 VOIs and VUMs, week 12 to week 16 of 2023

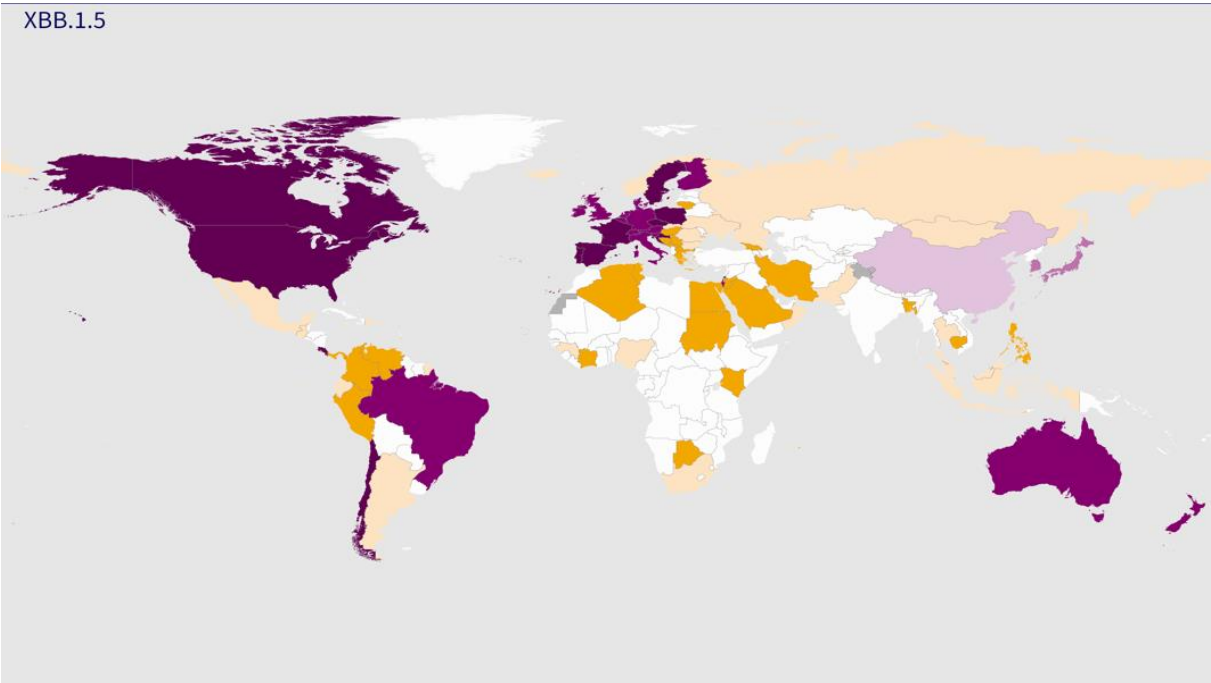
Lineage	Countries	Sequences	2023-12	2023-13	2023-14	2023-15	2023-16
XBB.1.5* (VOI)	109	203 469	52.38	51.66	50.46	48.98	47.54
XBB.1.16* (VOI)	46	7153	4.01	4.98	6.64	7.73	8.58
BA.2.75*	121	109 754	3.70	3.39	3.46	3.15	1.51
CH.1.1*	91	44 419	4.88	4.92	3.89	3.92	3.57
BQ.1*	147	406 465	5.83	4.28	3.72	2.74	1.75
XBB*	124	61 726	4.92	5.59	5.94	7.14	8.20
XBB.1.9.1*	78	19 946	8.03	9.82	10.40	12.34	12.40
XBB.1.9.2*	53	4877	1.94	2.68	2.72	3.03	3.82
Unassigned	103	149 082	4.25	2.49	2.53	1.79	2.75
Other [†]	207	6 704 771	4.39	5.67	6.25	6.76	8.47

* 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 and XBB.1.16.

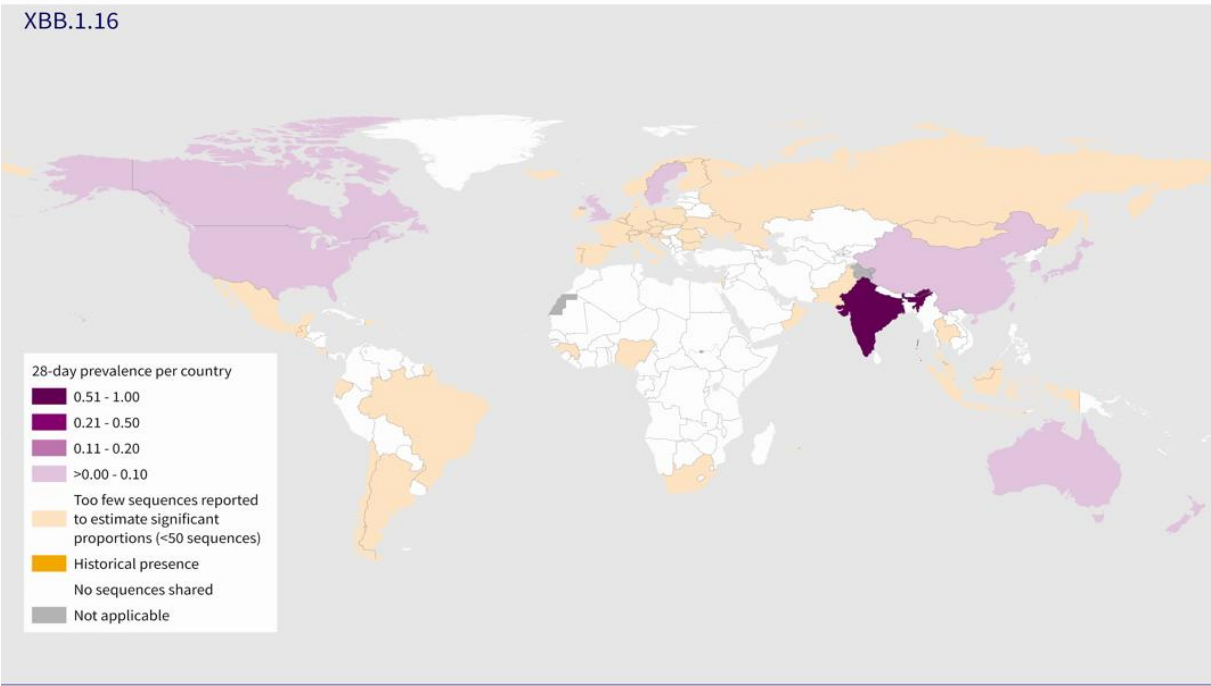
[†] Others are other circulating lineages excluding the VOI, VUMs, BA.1*, BA.2*, BA.3*, BA.4*, BA.5*.

Figure 4. Global prevalence of XBB.1.5 and XBB.1.16, 20 March to 16 April 2023**

A




B



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 All Influenza Data
Map Production: WHO Health Emergencies Programme
Map Date: 8 May 2023

 **World Health Organization**
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*Reporting period to account for delay in sequence submission to GISAID.
*Historical presence indicates countries previously reporting XBB.1.5 sequences but that have not reported them within the period from 20 March to 16 April 2023.

Figure 5. Top three SARS-CoV-2 variants (including non-VOIs/VUMs) by WHO region, week 12 to week 16 of 2023

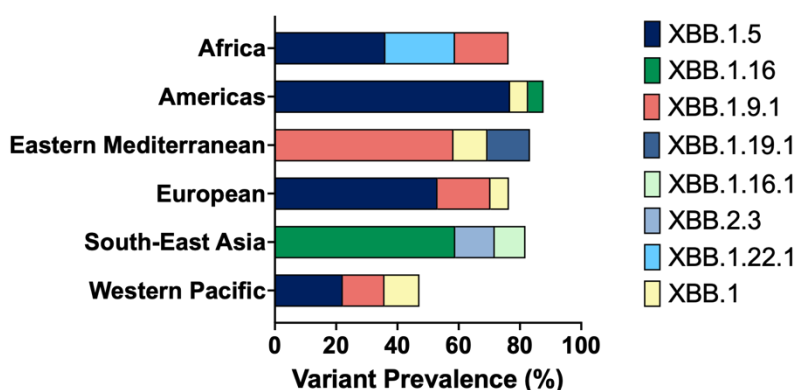


Figure 6. The number and percentage of SARS-CoV-2 sequences, from 1 October 2022 to 16 April 2023

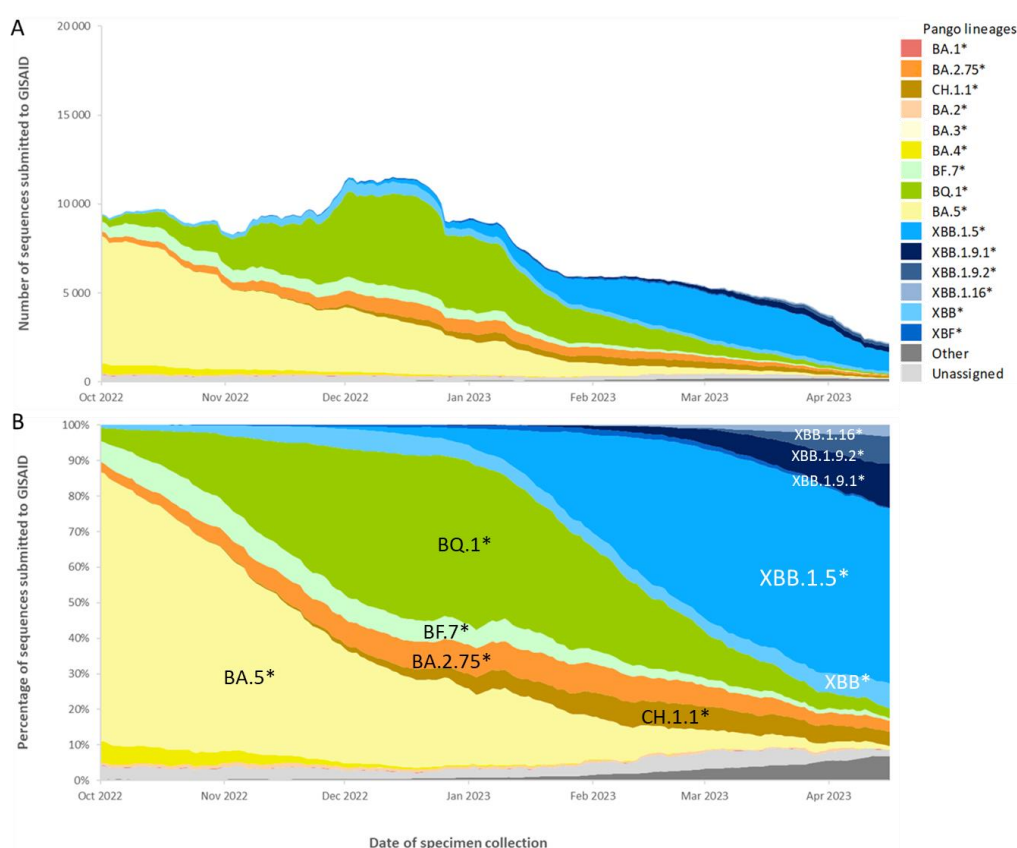


Figure 6. Panel A shows the number, and **Panel B** the percentage, of all circulating variants since October 2022. Omicron sister-lineages and additional Omicron VOC descendent lineages under further monitoring are shown. *BA.1**, *BA.2**, *BA.3**, *BA.4** and *BA.5** (* indicates inclusion of descendent 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. Source: SARS- CoV-2 sequence data and metadata from GISAID, from 1 October 2022 to 16 April 2023.

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](#)

Vaccine effectiveness of primary series and booster vaccination against Omicron and its descendant lineages

Vaccine effectiveness

The [Forest plots](#) displaying the effectiveness of COVID-19 vaccines against Omicron and its descendant lineages are available on View-hub.org and are updated regularly (last updated on 8 May 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 original SARS-CoV-2 strain 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* decreases 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 shows a similar pattern of improved VE followed by waning, as observed after the first booster dose.

Emerging evidence on mRNA bivalent vaccines, which contain both the ancestral strain and the Omicron strain, indicates that a bivalent vaccine administered as a first, second, or third booster dose improves protection against *symptomatic disease* and *severe disease* compared to unvaccinated persons. Additionally, persons receiving a bivalent vaccine as a second or third booster dose have additional protection compared to persons who received a monovalent mRNA vaccine as a first or second booster dose in the past. However, comparing bivalent and monovalent boosters directly in observational VE studies has proven challenging due to potential time-related confounding (e.g., time since last vaccine dose, subvariant circulation, incidence rates). A few recent studies have evaluated protection of bivalent and monovalent boosters during the same time period; two studies (United Kingdom, France) have shown marginal (approximately 10%) higher VE for bivalent vaccines against Omicron infection; one study from Canada showed no difference in VE between monovalent and bivalent vaccines against hospitalization.

Neutralization

Neutralizing antibody studies can provide early insights into vaccine performance against new and emerging variants. For more information on the neutralization capacity of COVID-19 vaccines against Omicron sub-variants, please see a [recent 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 on 5 May 2023) and contain information on more recent Omicron descendant lineages, 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 represents a greater reduction than observed with previous VOCs. The median fold-reduction in geometric mean titers is also 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, possibly due to lower neutralization titers, although the results may also be due to methodological factors relating to how the VE studies were performed. Early evidence suggests further reductions in 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 insufficient to accurately compare neutralization reductions for recent lineages.

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 descendant lineages.

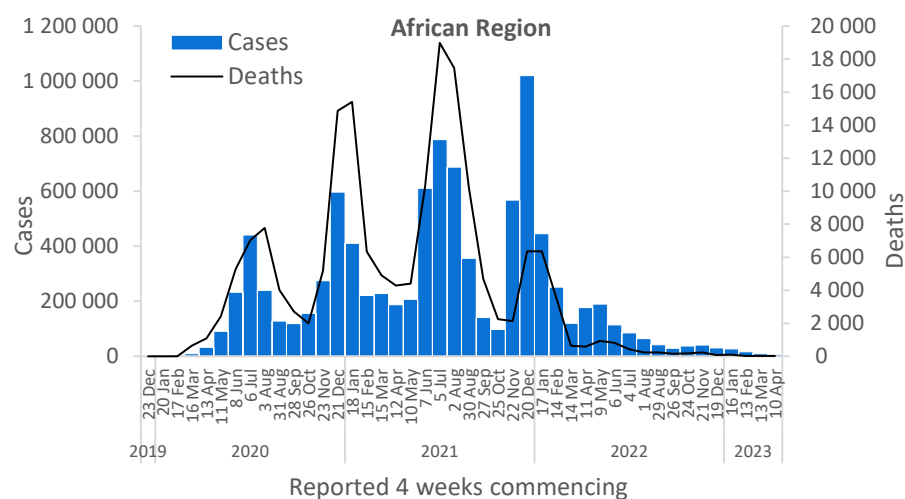
WHO regional overviews

Data for 10 April to 7 May 2023

African Region

The African Region reported 7408 new cases in the last 28 days, a 25% decrease as compared to the previous 28-day period. Nine (18%) 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 (335 vs 33 new cases; +915%), Mayotte (19 vs four new cases; +375%), and the Democratic Republic of the Congo (459 vs 130 new cases; +253%). The highest numbers of new cases were reported from Mauritius (4596 new cases; 361.4 new cases per 100 000; +235%), the Democratic Republic of the Congo (459 new cases; <1 new case per 100 000; +253%), and Cabo Verde (335 new cases; 60.3 new cases per 100 000; +915%).

The number of new 28-day deaths in the Region decreased by 50% as compared to the previous 28-day period, with 12 new deaths reported. The highest numbers of new deaths were reported from Mauritius (four new deaths; <1 new death per 100 000; no deaths reported the previous 28-day period), Zimbabwe (two new deaths; <1 new death per 100 000; -83%), and Cameroon (one new death; <1 new death per 100 000; -50%).

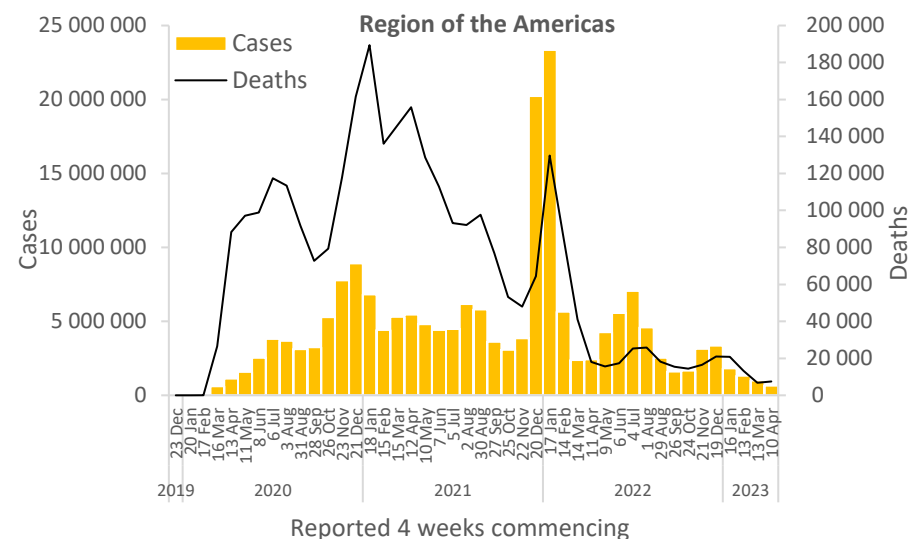


Updates from the [African Region](#)

Region of the Americas

The Region of the Americas reported over 647 000 new cases in the last 28 days, a 35% decrease as compared to the previous 28-day period. Seventeen (30%) 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 Saint Lucia (24 vs two new cases; +1100%), Turks and Caicos Islands (23 vs four new cases; +475%), and Grenada (10 vs three new cases; +233%). The highest numbers of new cases were reported from the United States of America (366 173 new cases; 110.6 new cases per 100 000; -35%), Brazil (168 717 new cases; 79.4 new cases per 100 000; -28%), and Mexico (34 058 new cases; 26.4 new cases per 100 000; -40%).

The number of new 28-day deaths in the Region increased by 9% as compared to the previous 28-day period, with 7483 new deaths reported. The highest numbers of new deaths were reported from the United States of America (4680 new deaths; 1.4 new deaths per 100 000; -36%), Brazil (1277 new deaths; <1 new death per 100 000; +2%), and Canada (508 new deaths; 1.3 new deaths per 100 000; -16%).

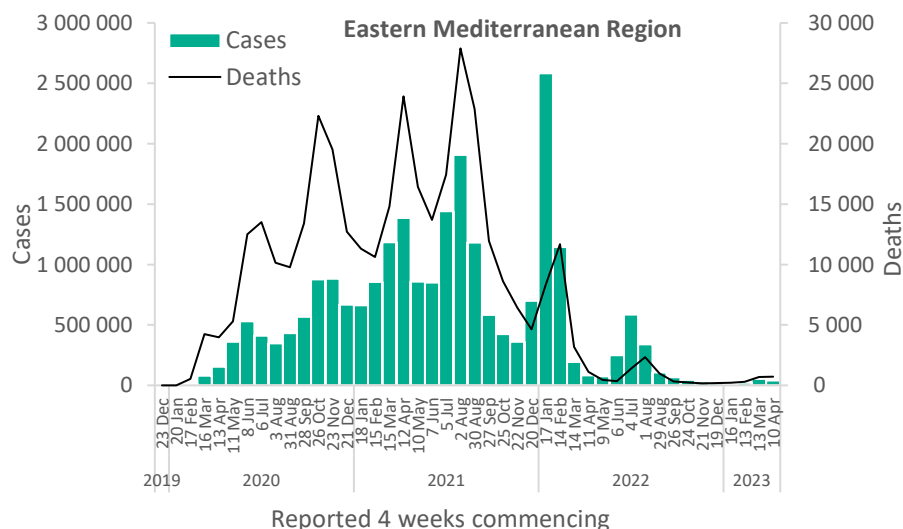


Updates from the [Region of the Americas](#)

Eastern Mediterranean Region

The Eastern Mediterranean Region reported over 40 000 new cases in the last 28 days, a 24% decrease as compared to the previous 28-day period. Three (14%) 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 (1099 vs 207 new cases; +431%), Afghanistan (5244 vs 2002 new cases; +162%), and Qatar (7895 vs 6455 new cases; +22%). The highest numbers of new cases were reported from the Islamic Republic of Iran (12 023 new cases; 14.3 new cases per 100 000; -51%), Qatar (7895 new cases; 274 new cases per 100 000; +22%), and Saudi Arabia (5273 new cases; 15.1 new cases per 100 000; -12%).

The number of new 28-day deaths in the Region increased by 1% as compared to the previous 28-day period, with 707 new deaths reported. The highest numbers of new deaths were reported from the Islamic Republic of Iran (595 new deaths; 0.7 new deaths per 100 000; similar with the previous 28-day), Tunisia (35 new deaths; <1 new death per 100 000; +59%), and Lebanon (28 new deaths; <1 new death per 100 000; -22%).

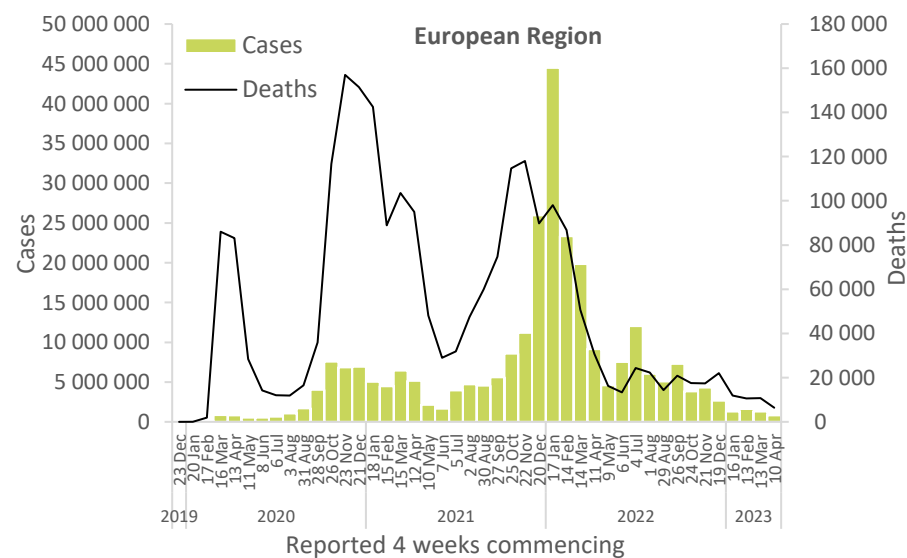


Updates from the [Eastern Mediterranean Region](#)

European Region

The European Region reported over 800 000 new cases in the last 28 days, a 38% decrease as compared to the previous 28-day period. Six (10%) 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 Spain (47 078 vs 20 280 new cases; +132%), Andorra (76 vs 41 new cases; +85%), and Sweden (4471 vs 3006 new cases; +49%). The highest numbers of new cases were reported from France (173 375 new cases; 266.6 new cases per 100 000; -19%), the Russian Federation (163 661 new cases; 112.1 new cases per 100 000; -44%), and Italy (88 154 new cases; 147.8 new cases per 100 000; +2%).

The number of new 28-day deaths in the Region decreased by 41% as compared to the previous 28-day period, with 6345 new deaths reported. The highest numbers of new deaths were reported from the Russian Federation (955 new deaths; <1 new death per 100 000; -3%), France (944 new deaths; 1.5 new deaths per 100 000; +39%), and Spain (694 new deaths; 1.5 new deaths per 100 000; +60%).

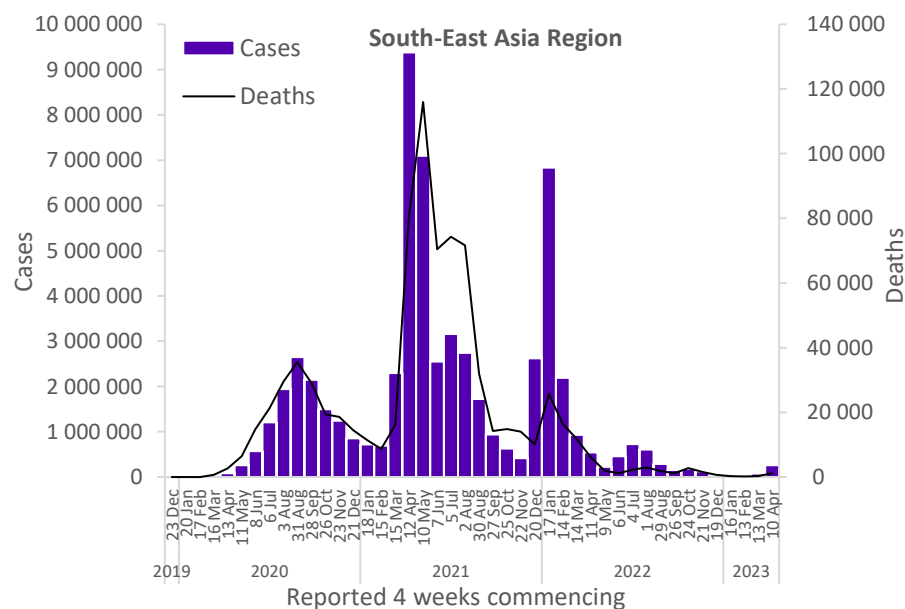


Updates from the [European Region](#)

South-East Asia Region

The South-East Asia Region reported over 258 000 new cases in the last 28 days, a 223% increase as compared to the previous 28-day period. Ten (91%) 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 Myanmar (1933 vs 143 new cases; +1252%), Thailand (5033 vs 663 new cases; +659%), and the Maldives (632 vs 150 new cases; +321%). The highest numbers of new cases were reported from India (213 014 new cases; 15.4 new cases per 100 000; +222%), Indonesia (36 186 new cases; 13.2 new cases per 100 000; +199%), and Thailand (5033 new cases; 7.2 new cases per 100 000; +659%).

The number of new 28-day deaths in the Region increased by 281% as compared to the previous 28-day period, with 1178 new deaths reported. The highest numbers of new deaths were reported from India (715 new deaths; <1 new death per 100 000; +289%), Indonesia (407 new deaths; <1 new death per 100 000; +291%), and Thailand (27 new deaths; <1 new death per 100 000; +69%).

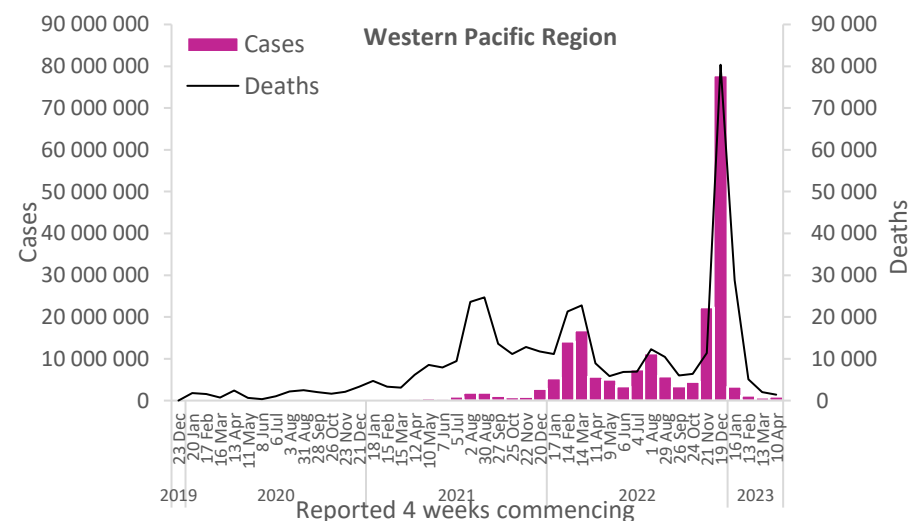


Updates from the [South-East Asia Region](#)

Western Pacific Region

The Western Pacific Region reported over 975 000 new cases in the last 28 days, a 35% 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 Viet Nam (46 230 vs 664 new cases; +6862%), Mongolia (118 vs 13 new cases; +808%), and the Lao People's Democratic Republic (48 vs 14 new cases; +243%). The highest numbers of new cases were reported from the Republic of Korea (363 691 new cases; 709.4 new cases per 100 000; +32%), Japan (262 145 new cases; 207.3 new cases per 100 000; +36%), and Australia (114 460 new cases; 448.9 new cases per 100 000; +51%).

The number of new 28-day deaths in the Region decreased by 33% as compared to the previous 28-day period, with 1387 new deaths reported. The highest numbers of new deaths were reported from Japan (564 new deaths; <1 new death per 100 000; -36%), Australia (315 new deaths; 1.2 new deaths per 100 000; +23%), and the Republic of Korea (210 new deaths; <1 new death per 100 000; +4%).



Updates from the [Western Pacific Region](#)

Hospitalizations and ICU admissions

At the global level, during the past 28 days (3 April to 30 April 2023), a total of 109 546 new hospitalizations and 2834 new intensive care unit (ICU) admissions were reported (Figure 8). This represents a 29% and 4% decrease in new hospitalizations and in ICU admissions, respectively, compared to the previous 28 days (6 March 2 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, 46 (20%) countries reported data to WHO on new hospitalizations at least once (Figure 7). 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 African Region (eight countries; 16%), the Eastern Mediterranean Region (three countries; 14%), the Region of the Americas (seven countries; 13%), and the Western Pacific Region (three countries; 9%). The proportion of countries that consistentlyⁱⁱⁱ reported new hospitalizations for the period was 10% (23 countries).

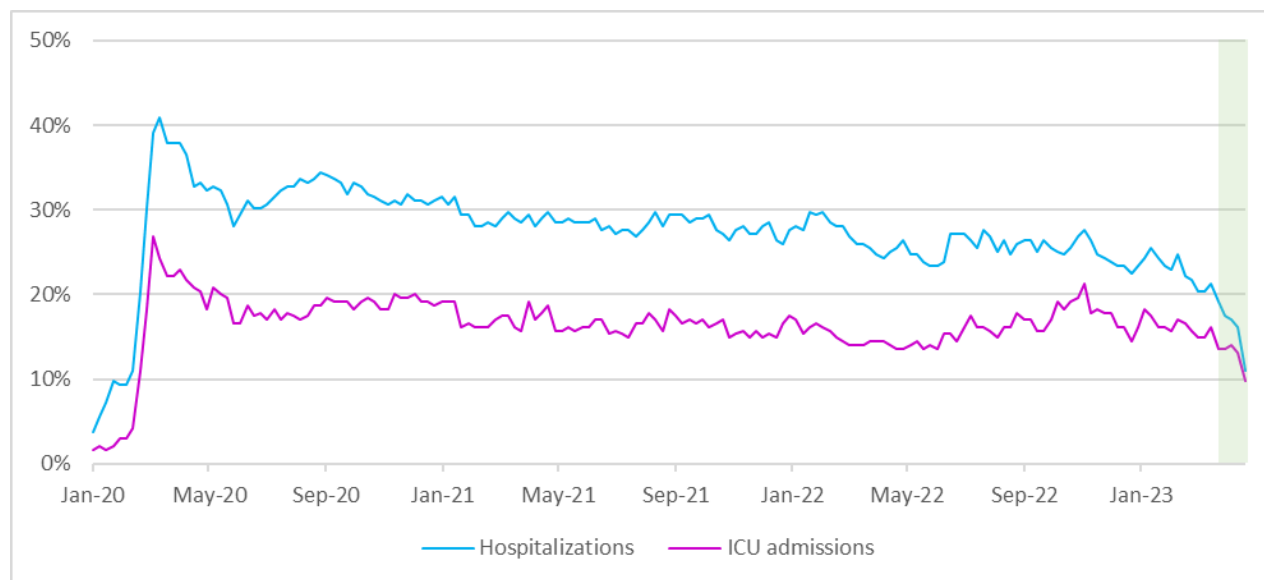
Among the 23 countries consistently reporting new hospitalizations, four (17%) countries registered an increase of 20% or greater in hospitalizations during the past 28 days compared to the previous 28-day period: Mongolia (117 vs 12; +875%), Afghanistan (67 vs 8; +738%), Indonesia (6091 vs 1732; +252%), and Singapore (2078 vs 984; +111%). The highest number of new hospitalizations was reported from the United States of America (49 384 vs 70 898; -30%), Ukraine (13 380 vs 17 195; -22%) and France (11 373 vs 9995; +14%).

Across the six WHO regions, in the past 28 days, a total of 38 (16%) countries reported data to WHO on new ICU admissions at least once (Figure 7). 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 (six countries; 11%), and the African Region (two countries; 4%). The proportion of countries that consistentlyⁱⁱⁱ reported new ICU admissions for the period was 9% (20 countries).

Among the 20 countries consistentlyⁱⁱⁱ reporting new ICU admissions, six (30%) 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 (262 vs 103; +154%), Singapore (47 vs 24; +96%), Sweden (48 vs 31; +55%), France (1127 vs 881; +28%), Australia (260 vs 211; +23%), and Latvia (42 vs 35; +20%). The highest numbers of new ICU admissions were reported from France (1127 vs 881; +28%), Ukraine (391 vs 450; -13%), and Indonesia (262 vs 103; +154%).

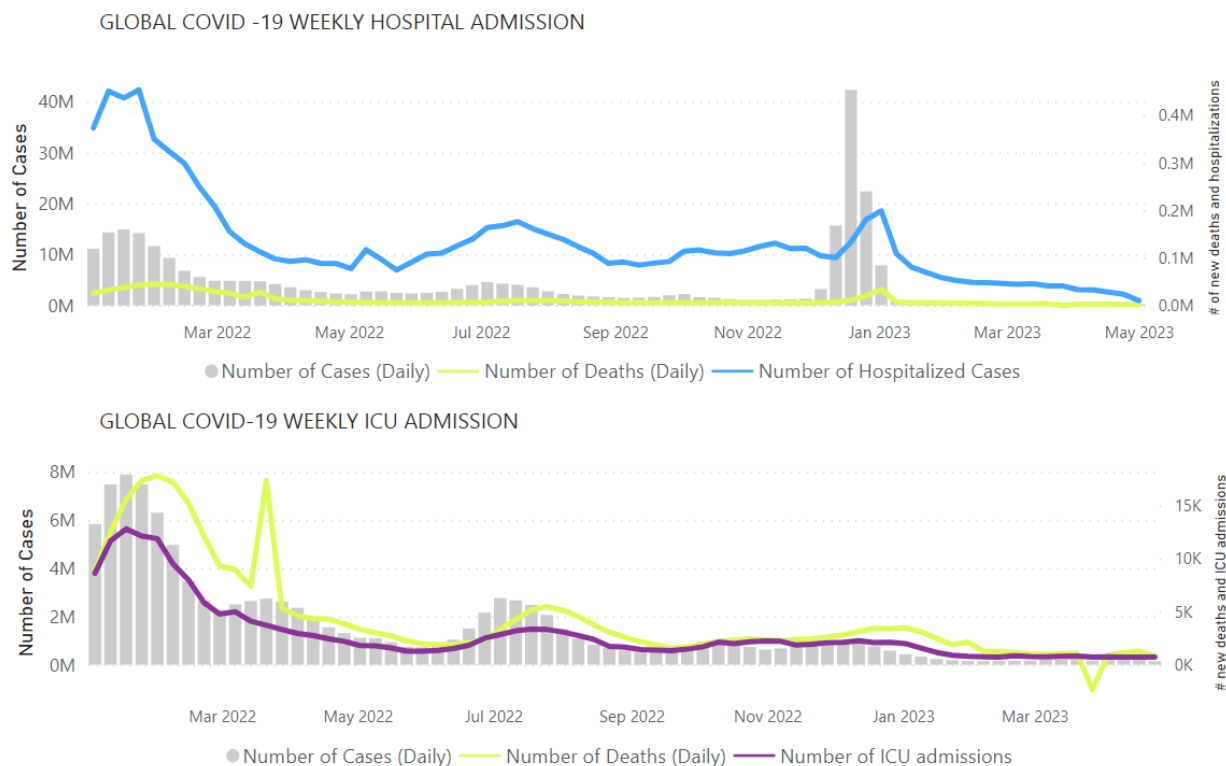
ⁱⁱⁱ “Consistently” as used here refers to countries that submitted data for new hospitalizations and intensive care unit admissions for the four consecutive weeks that make up the 28-day period.

Figure 7. Weekly proportion of countries reporting new hospitalizations and ICU admissions: epidemiological week 1, 2020 to week 17, 2023



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

Figure 8. COVID-19 cases, deaths, hospitalizations, and ICU admissions reported weekly to WHO, as of 30 April 2023



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

Source: [WHO Detailed Surveillance Dashboard](#)

Summary of the 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, highlights of country-level actions and WHO support to countries for COVID-19 and other respiratory diseases include:

- The Eastern Mediterranean Region holds its third Scientific Conference and sixth EMARIS meeting on acute respiratory infections
- Strengthening influenza preparedness through an OpenWHO online course
- Mobile health caravans rally the western Balkans to COVID-19 vaccination, bringing health advice closer to where people are
- Assessing the quality of laboratory testing for SARS-CoV-2 through external quality assessments (EQA)
- WHO Global Influenza Surveillance and Response System (GISRS) External Quality Assessment Programme 2022 for molecular detection of SARS-CoV-2
- A global analysis of COVID-19 intra-action reviews: Reflecting on, adjusting and improving emergency preparedness and response during a pandemic – examples from the European Region

Fifteenth meeting of the International Health Regulations (2005) Emergency Committee regarding the COVID-19 pandemic

The fifteenth meeting of the International Health Regulations (2005) (IHR) Emergency Committee regarding the COVID-19 pandemic was held on 4 May 2023. During the deliberative session, the Committee members highlighted the decreasing trend in COVID-19 deaths, the decline in COVID-19 related hospitalizations and ICU admissions, and the high levels of population immunity to SARS-CoV-2. While acknowledging the remaining uncertainties posed by potential evolution of SARS-CoV-2, they advised the WHO Director-General that it is time to transition to the long-term management of the COVID-19 pandemic.

The WHO Director-General concurred with the advice offered by the Committee regarding the ongoing COVID-19 pandemic. He determined that COVID-19 is now an established and ongoing health issue, which no longer constitutes a public health emergency of international concern (PHEIC).

The WHO Director-General considered the advice provided by the Committee and issued a series of Temporary Recommendations. The WHO Director-General will convene an IHR [Review Committee](#) to advise on Standing Recommendations for the long-term management of the SARS-CoV-2 pandemic, taking into account the [2023-2025 COVID-19 Strategic Preparedness and Response Plan](#). During this transition, States Parties are advised to continue following the issued Temporary Recommendations.

The Temporary Recommendations issued by the WHO Director-General to all States Parties, as well as the full statement on the fifteenth meeting of the IHR (2005) Emergency Committee on the COVID-19 pandemic, are available on the [WHO website](#).

[Statement of the 15th IHR Emergency Committee on COVID-19](#)
[WHO Director-General's announcement of the decision](#)

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>.

‘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 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.⁵

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COVID-19 Weekly Epidemiological Update

Edition 141 published 4 May 2023

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- [Hospitalizations and ICU admissions](#)

Global overview

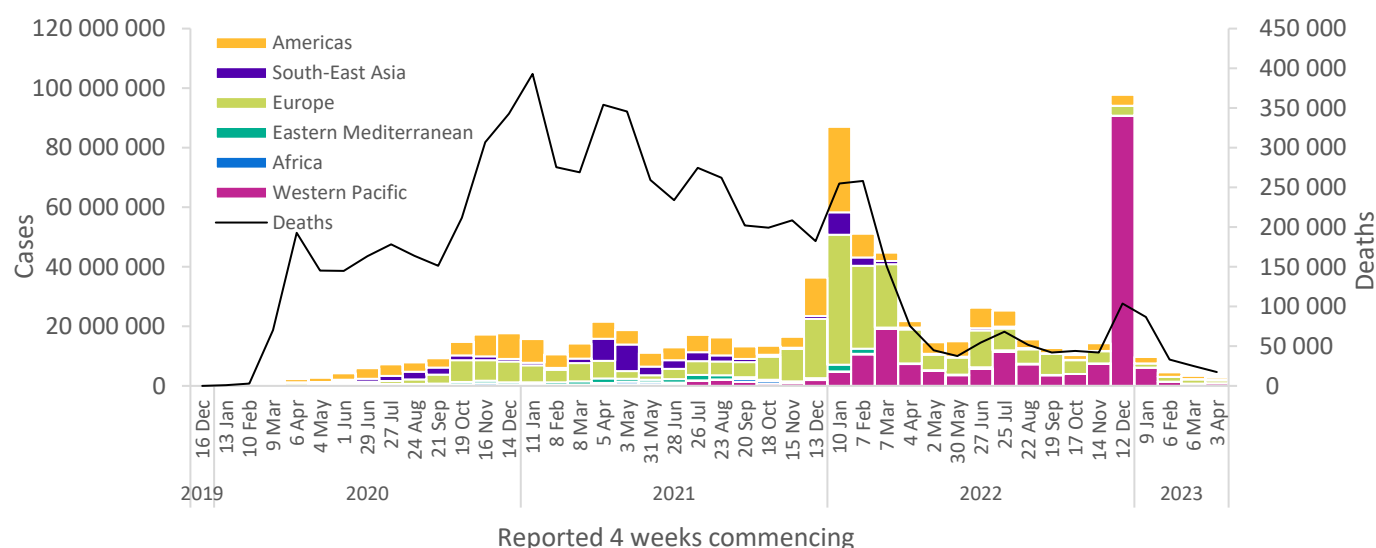
Data as of 30 April 2023

Globally, nearly 2.8 million new cases and over 17 000 deaths were reported in the last 28 days (3 to 30 April 2023), a decrease of 17% and 30%, respectively, compared to the previous 28 days (6 March to 2 April 2023) (Figure 1, Table 1). The picture is mixed at the regional level, with increases in reported cases and deaths seen in the South-East Asia, Eastern Mediterranean, and Western Pacific regions, and decreases in other regions. As of 30 April 2023, over 765 million confirmed cases and over 6.9 million deaths have been reported globally.

Reported COVID-19 cases are underestimates as shown by prevalence surveys.^{1–4} 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 30 April 2023**



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

At the regional level, the number of newly reported 28-day cases increased across three of the six WHO regions: the Eastern Mediterranean Region (+8%), the Western Pacific Region (+15%), and the South-East Asia Region (+454%); while cases decreased in three WHO regions: the African Region (-49%), the European Region (-37%), and the Region of the Americas (-34%). The number of newly reported 28-day deaths decreased across four regions: the Western Pacific Region (-56%), the European Region (-44%), the African Region (-33%), and the Region of the Americas (-21%); while deaths increased in two WHO regions: the Eastern Mediterranean Region (+61%), and the South-East Asia Region (+317%).

At the country level, the highest numbers of new 28-day cases were reported from the United States of America (392 480 new cases; -37%), the Republic of Korea (330 509 new cases; +22%), Japan (251 158 new cases; +24%), India (222 784 new cases; +540%), and France (197 190 new cases; +2%). The highest numbers of new 28-day deaths were reported from the United States of America (5263 new deaths; -29%), Brazil (1255 new deaths; +30%), the Russian Federation (993 new deaths; -2%), France (871 new deaths; +39%), and the Islamic Republic of Iran (762 new deaths; +82%).

Table 1. Newly reported and cumulative COVID-19 confirmed cases and deaths, by WHO Region, as of 30 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	888 081 (32%)	-37%	275 958 509 (36%)	6234 (36%)	-44%	2 230 459 (32%)
Western Pacific	883 574 (32%)	15%	202 829 430 (27%)	1234 (7%)	-56%	410 552 (6%)
Americas	698 126 (25%)	-34%	192 441 131 (25%)	8162 (47%)	-21%	2 952 507 (43%)
South-East Asia	256 907 (9%)	454%	61 073 176 (8%)	950 (5%)	317%	805 056 (12%)
Eastern Mediterranean	46 182 (2%)	8%	23 352 192 (3%)	865 (5%)	61%	350 992 (5%)
Africa	6328 (<1%)	-49%	9 525 057 (1%)	14 (<1%)	-33%	175 347 (3%)
Global	2 779 198 (100%)	-17%	765 180 259 (100%)	17 459 (100%)	-30%	6 924 926 (100%)

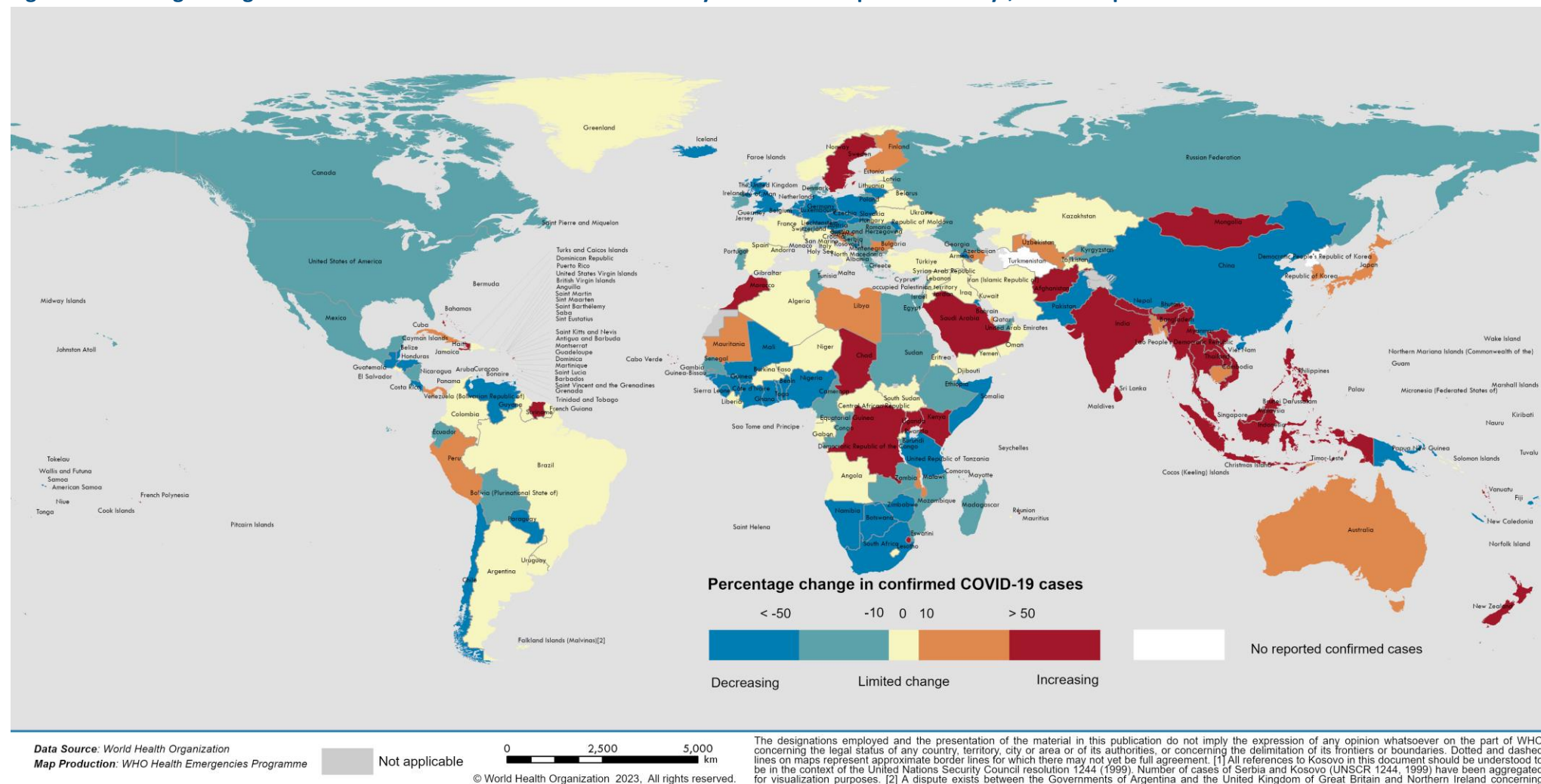
*Percent change in the number of newly confirmed cases/deaths in the past 28 days, compared to 28 days prior. Data from previous weeks are updated continuously with adjustments received from countries.

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

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

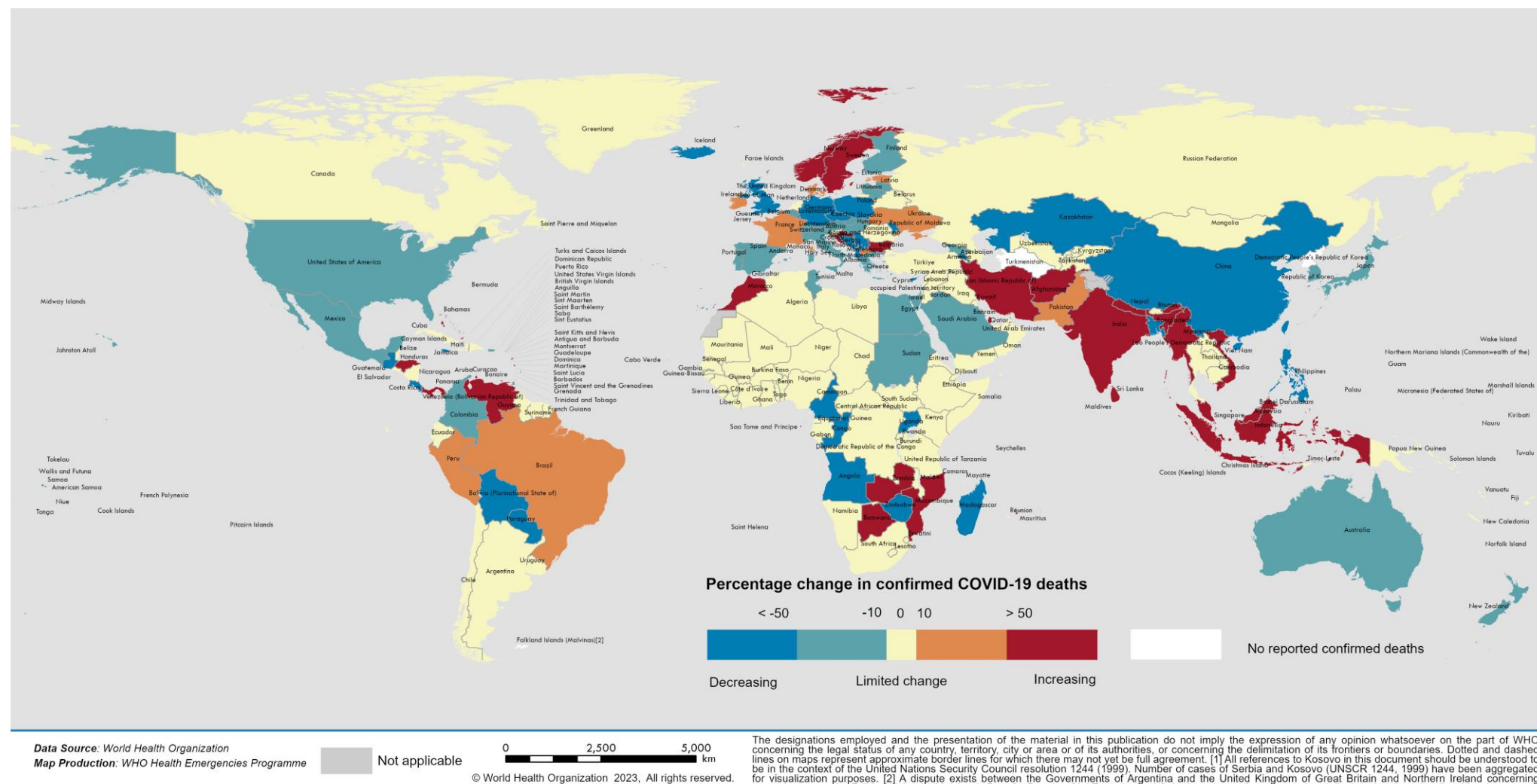
- [WHO COVID-19 Dashboard](#)
- [WHO Monthly Operational Update and past editions of the Weekly Epidemiological Update on COVID-19](#)
- [WHO COVID-19 detailed surveillance data dashboard](#)
- [WHO COVID-19 policy briefs](#)

Figure 2. Percentage change in confirmed COVID-19 cases over the last 28 days relative to the previous 28 days, as of 30 April 2023**



*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 30 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 3 to 30 April 2023 (28 days), 30 147 SARS-CoV-2 sequences were shared through GISAID. WHO is currently monitoring two variants of interest (VOIs), XBB.1.5 and XBB.1.16, and seven variants under monitoring (VUMs) and their descendent lineages. The VUMs are BA.2.75, CH.1.1, BQ.1, XBB, XBB.1.9.1, XBB.1.9.2, and XBF.

Globally, XBB.1.5 has been reported from 106 countries. In epidemiological week 15 (10 to 16 April 2023), XBB.1.5 accounted for 46.7% of sequences, a decrease from 49.3% in epidemiological week 11 (13 to 19 March 2023). XBB.1.16 has been reported from 40 countries. In week 15, XBB.1.16 accounted for 5.7% of sequences, an increase from 2.0% in week 11.

Table 2 shows the number of countries reporting the VOIs and VUMs and their prevalence from week 11 to week 15. Among the VUMs, XBB, XBB.1.9.1 and XBB.1.9.2 have shown increasing trends. 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, epidemiological week 11 to week 15 of 2023

Lineage	Countries	Sequences	2023-11	2023-12	2023-13	2023-14	2023-15
XBB.1.5* (VOI)	106	188 635	49.27	49.91	47.10	48.40	46.71
XBB.1.16* (VOI)	40	4777	2.02	3.51	4.40	4.81	5.70
BA.2.75*	121	108 699	4.60	3.84	3.51	1.89	1.57
CH.1.1*	91	43 364	5.70	4.89	4.91	3.94	3.50
BQ.1*	146	404 622	7.73	5.91	4.28	3.64	2.58
XBB*	123	76 775	8.10	10.07	12.16	13.09	16.39
XBB.1.9.1*	73	16 628	6.87	7.38	8.95	9.63	10.66
XBB.1.9.2*	53	4 089	1.76	1.90	2.57	2.50	2.79
XBF*	55	10 382	1.07	0.88	0.58	0.47	0.30
Unassigned	110	154 484	7.38	5.71	2.68	2.57	2.66
Other [†]	207	6 669 584	0.02	0.02	0.02	0.03	0.01

* 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 and XBB.1.16.

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

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](#)

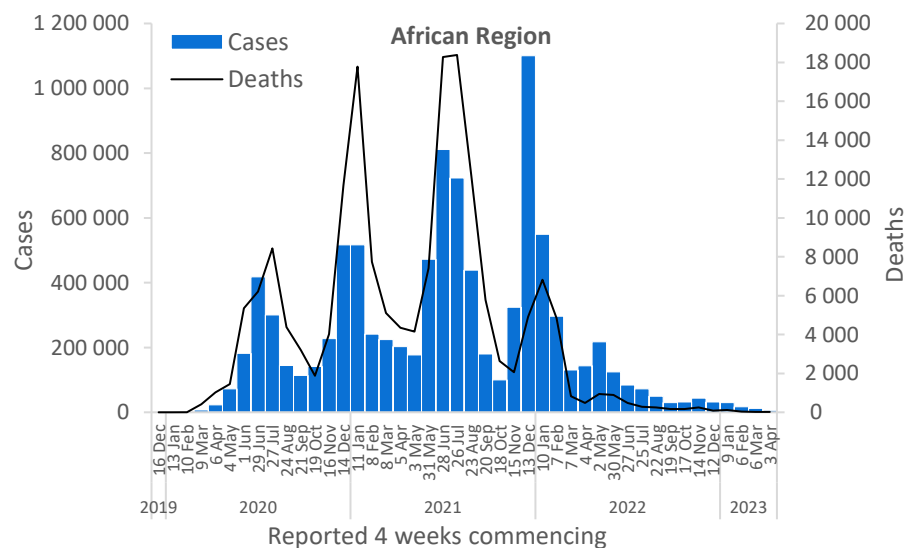
WHO regional overviews

Data for 3 to 30 April 2023

African Region

The African Region reported over 6300 new cases, a 49% 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 Cabo Verde (207 vs 15 new cases; +1280%), Chad (132 vs 10 new cases; +1220%), and Eswatini (304 vs 56 new cases; +443%). The highest numbers of new cases were reported from Mauritius (3336 new cases; 262.3 new cases per 100 000; +133%), Zambia (344 new cases; 1.9 new cases per 100 000; -44%), and Eswatini (304 new cases; 26.2 new cases per 100 000; +443%).

The number of new 28-day deaths in the Region decreased by 33% as compared to the previous 28-day period, with 14 new deaths reported. The highest numbers of new deaths were reported from Zimbabwe (five new deaths; <1 new death per 100 000; -50%), Mauritius (two new deaths; <1 new death per 100 000; no deaths reported the previous 28-day period), and Sao Tome and Principe (two new deaths; <1 new death per 100 000; +100%).

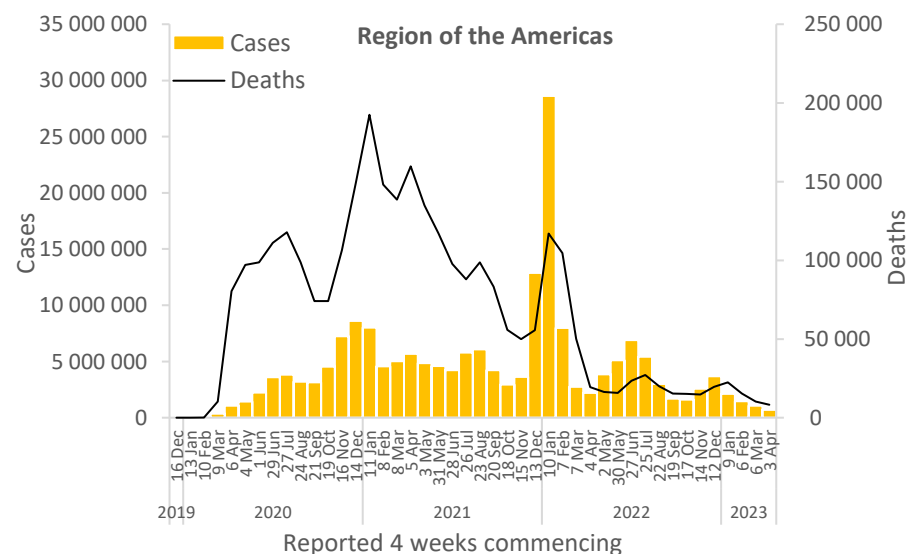


Updates from the [African Region](#)

Region of the Americas

The Region of the Americas reported over 698 000 new cases, a 34% decrease as compared to the previous 28-day period. Six (11%) 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 Grenada (10 vs three new cases; +233%), Saint Martin (20 vs nine new cases; +122%), and Guadeloupe (490 vs 277 new cases; +77%). The highest numbers of new cases were reported from the United States of America (392 480 new cases; 118.6 new cases per 100 000; -37%), Brazil (190 755 new cases; 89.7 new cases per 100 000; +4%), and Mexico (34 854 new cases; 27.0 new cases per 100 000; -49%).

The number of new 28-day deaths in the Region decreased by 21% as compared to the previous 28-day period, with 8162 new deaths reported. The highest numbers of new deaths were reported from the United States of America (5263 new deaths; 1.6 new deaths per 100 000; -29%), Brazil (1255 new deaths; <1 new death per 100 000; +30%), and Canada (562 new deaths; 1.5 new deaths per 100 000; -9%).

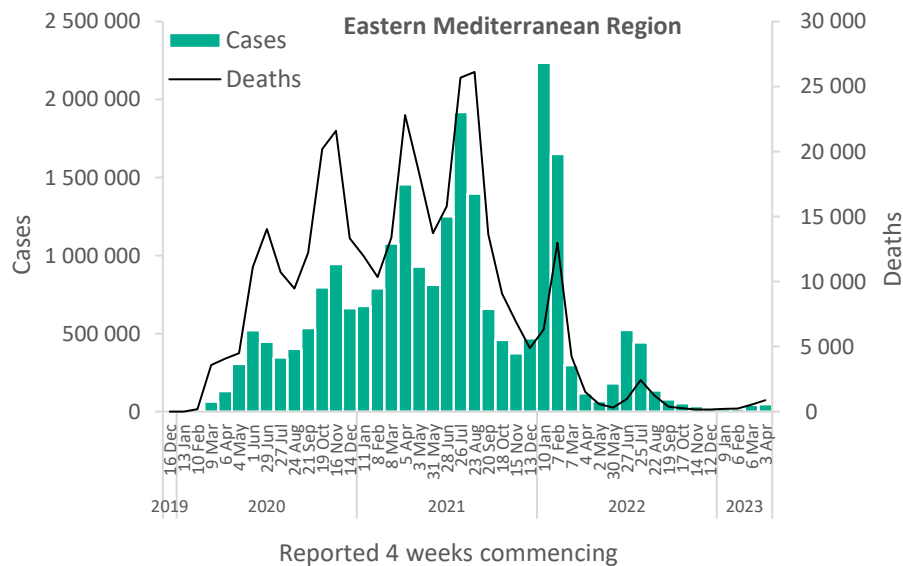


Updates from the [Region of the Americas](#)

Eastern Mediterranean Region

The Eastern Mediterranean Region reported over 46 000 new cases, an 8% increase as compared to the previous 28-day period. Five (23%) 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 (784 vs 193 new cases; +306%), Afghanistan (4252 vs 1259 new cases; +238%), and Saudi Arabia (6457 vs 4150 new cases; +56%). The highest numbers of new cases were reported from the Islamic Republic of Iran (19 204 new cases; 22.9 new cases per 100 000; +2%), Qatar (6884 new cases; 238.9 new cases per 100 000; +43%), and Saudi Arabia (6457 new cases; 18.5 new cases per 100 000; +56%).

The number of new 28-day deaths in the Region increased by 61% as compared to the previous 28-day period, with 865 new deaths reported. The highest numbers of new deaths were reported from the Islamic Republic of Iran (762 new deaths; <1 new death per 100 000; +82%), Lebanon (30 new deaths; <1 new death per 100 000; -9%), and Tunisia (25 new deaths; <1 new death per 100 000; -19%).

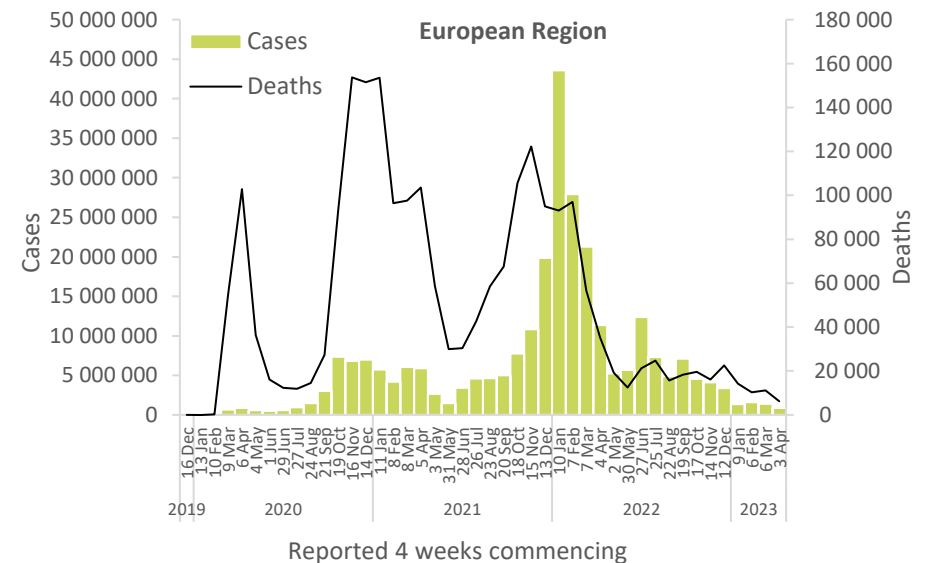


Updates from the [Eastern Mediterranean Region](#)

European Region

The European Region reported over 888 000 new cases, a 37% decrease as compared to the previous 28-day period. Seven (11%) 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 Gibraltar (88 vs 29 new cases; +203%), Sweden (4435 vs 2848 new cases; +56%), and Finland (6052 vs 4240 new cases; +43%). The highest numbers of new cases were reported from France (197 190 new cases; 303.2 new cases per 100 000; +2%), the Russian Federation (195 083 new cases; 133.7 new cases per 100 000; -38%), and Italy (87 240 new cases; 146.3 new cases per 100 000; -4%).

The number of new 28-day deaths in the Region decreased by 44% as compared to the previous 28-day period, with 6234 new deaths reported. The highest numbers of new deaths were reported from the Russian Federation (993 new deaths; <1 new death per 100 000; -2%), France (871 new deaths; 1.3 new deaths per 100 000; +39%), and Italy (583 new deaths; 1 new death per 100 000; -23%).

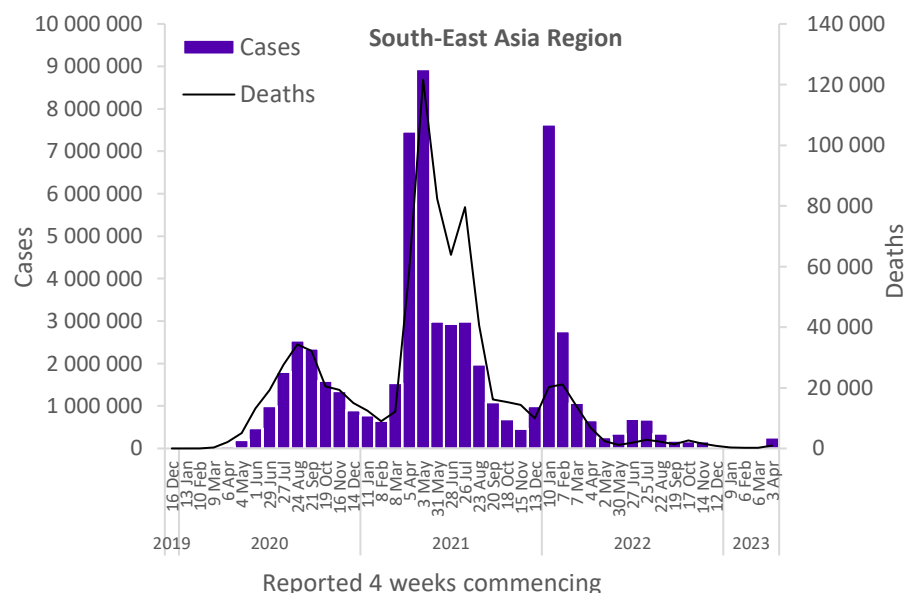


Updates from the [European Region](#)

South-East Asia Region

The South-East Asia Region reported nearly 257 000 new cases, a 454% increase as compared to the previous 28-day period. Eight (73%) 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 the Maldives (625 vs 72 new cases; +768%), India (222 784 vs 34 785 new cases; +540%), and Myanmar (792 vs 139 new cases; +470%). The highest numbers of new cases were reported from India (222 784 new cases; 16.1 new cases per 100 000; +540%), Indonesia (27 358 new cases; 10.0 new cases per 100 000; +168%), and Thailand (3502 new cases; 5.0 new cases per 100 000; +468%).

The number of new 28-day deaths in the Region increased by 317% as compared to the previous 28-day period, with 950 new deaths reported. The highest numbers of new deaths were reported from India (652 new deaths; <1 new death per 100 000; +515%), Indonesia (257 new deaths; <1 new death per 100 000; +165%), and Thailand (19 new deaths; <1 new death per 100 000; -5%).

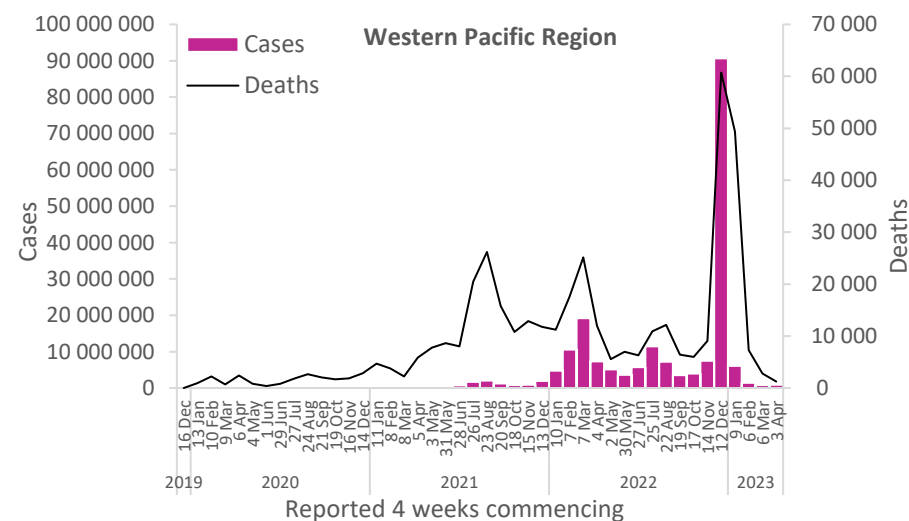


Updates from the [South-East Asia Region](#)

Western Pacific Region

The Western Pacific Region reported over 883 000 new cases, a 15% increase as compared to the previous 28-day period. Thirteen (37%) 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 Viet Nam (32 546 vs 350 new cases; +9199%), Mongolia (56 vs 14 new cases; +300%), and Singapore (98 318 vs 35 283 new cases; +179%). The highest numbers of new cases were reported from the Republic of Korea (330 509 new cases; 644.7 new cases per 100 000; +22%), Japan (251 158 new cases; 198.6 new cases per 100 000; +24%), and Singapore (98 318 new cases; 1680.6 new cases per 100 000; +179%).

The number of new 28-day deaths in the Region decreased by 56% as compared to the previous 28-day period, with 1234 new deaths reported. The highest numbers of new deaths were reported from Japan (589 new deaths; <1 new death per 100 000; -50%), the Republic of Korea (198 new deaths; <1 new death per 100 000; -20%), and Australia (177 new deaths; <1 new death per 100 000; -45%).



Updates from the [Western Pacific Region](#)

Hospitalizations and ICU admissions

At the global level, during the past 28 days (27 March to 23 April 2023), a total of 121 329 new hospitalizations and 2640 new intensive care unit (ICU) admissions were reported (Figure 5). This represents a 23% and 11% decrease in new hospitalizations and in ICU admissions respectively compared to the previous 28 days (27 February to 26 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 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, 49 (21%) countries reported data to WHO on new hospitalizations at least once (Figure 4). 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 (four countries; 18%), the African Region (nine countries; 18%), the Region of the Americas (eight countries; 14%), and the Western Pacific Region (three countries; 9%). The proportion of countries that consistentlyⁱ reported new hospital admissions for the period was 11% (27 countries).

Among the 27 countries consistently reporting new hospitalizations, eight (32%) countries registered an increase of 20% or greater in hospitalizations during the past 28 days compared to the previous 28-day period: Afghanistan (59 vs six; +883%), Qatar (330 vs 120; +175%), Singapore (1849 vs 729; +154%), Indonesia (3556 vs 1428; +149%), Malaysia (5867 vs 3777; +55%), France (11 305 vs 9024; +25%), Latvia (743 vs 616; +21%), and Estonia (563 vs 467; +21%). The highest number of new hospitalizations was reported from the United States of America (55 158 vs 77 424; -29%), France (11 305 vs 9024; +25%), and Italy (6808 vs 10 686; -36%).

Across the six WHO regions, in the past 28 days, a total of 35 (15%) countries reported data to WHO on new ICU admissions at least once (Figure 4). The European Region had the highest proportion of countries reporting data on new ICU admissions (17 countries; 28%), followed by the Eastern Mediterranean Region (four countries; 18%), the South-East Asia Region (two country; 18%), the Western Pacific Region (five countries; 14%), the Region of the Americas (five countries; 9%), and the African Region (two countries; 4%). The proportion of countries that consistentlyⁱ reported new ICU admissions for the period was 10% (23 countries).

Among the 23 countries consistentlyⁱ reporting new ICU admissions, nine (39%) 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 (164 vs 81; +102%), Sweden (47 vs 26; +81%), Malaysia (49 vs 29; +69%), Ireland (19 vs 12; +58%), Latvia (44 vs 28; +57%), Brunei Darussalam (six vs four; +50%), Singapore (36 vs 25; +44%), Qatar (seven vs five; +40%), and France (1019 vs 850; +20%). The highest numbers of new ICU admissions were reported from France (1019 vs 850; +20%), Italy (226 vs 344; -34%), and Indonesia (164 vs 81; +102%).

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. Weekly proportion of countries reporting new hospitalizations and ICU admissions: epidemiological week 5, 2020 to week 16, 2023

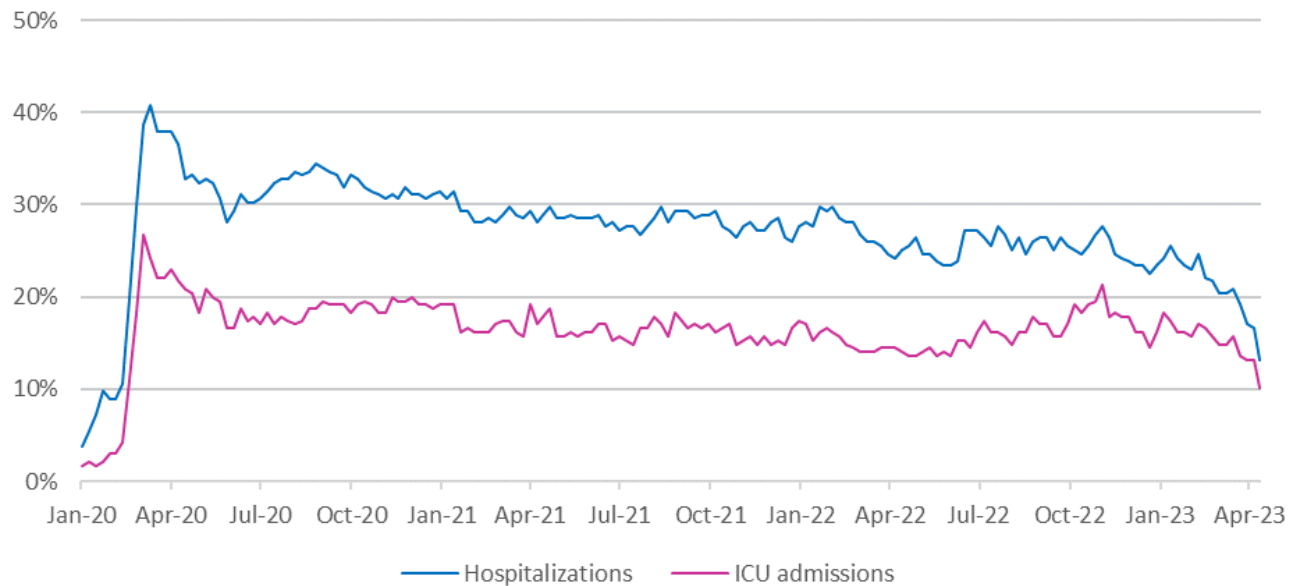
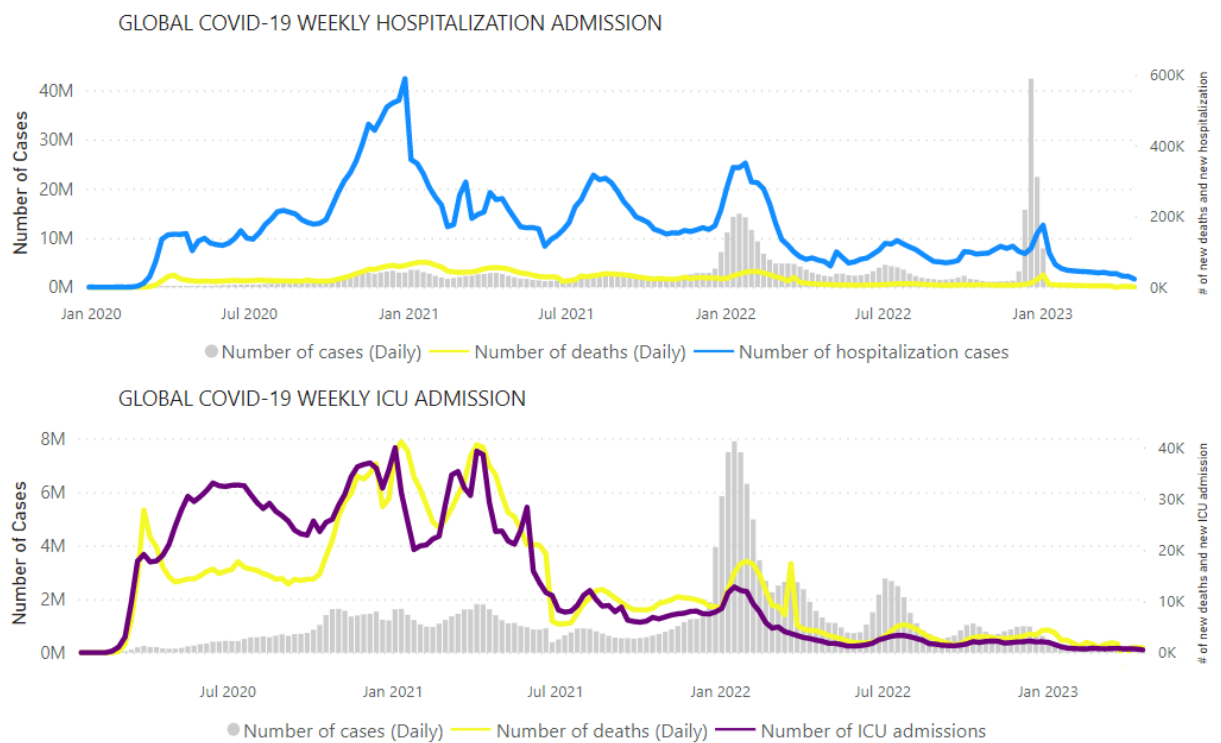


Figure 5. COVID-19 cases, deaths, hospitalizations, and ICU admissions reported weekly to WHO, as of 23 April 2023



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

Source: [WHO Detailed Surveillance Dashboard](#)

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>.

‘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.⁵

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