

COVID-19 Epidemiological Update

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Key highlights

- Globally, during the 28-day period from 23 October to 19 November 2023, 104 countries reported COVID-19 cases and 43 countries reported COVID-19 deaths. Note that this does not reflect the actual number of countries where cases or deaths are occurring, as a number of countries have stopped or changed frequency of reporting.
- From the available data, the number of reported cases and deaths during the 28-day period have declined, with over half a million new cases and over 2400 new deaths, a decrease of 13% and 72%, respectively, compared to the previous 28 days (25 September to 22 October 2023). Trends in the number of reported new cases and deaths should be interpreted with caution due to decreased testing and sequencing, alongside reporting delays in many countries.
- SARS-CoV-2 PCR percent positivity, as detected in integrated sentinel surveillance as part of the Global Influenza Surveillance and Response System (GISRS) and reported to FluNet, has remained stable at 8.0% over the last 28-days, with a slight dip in early November.
- During the 28-day period from 16 October to 12 November 2023, 62 and 37 countries provided data on COVID-19 hospitalizations and admissions to an intensive care unit (ICU) at least once, respectively. From the available data, over 84 000 new hospitalizations and over 700 new ICU admissions were reported during the 28-day reporting period, a decrease of 18% and 57% respectively, compared to the previous 28-day period from 18 September to 15 October 2023. However, amongst the countries reporting these data consistently over the two reporting periods, there was an overall decrease of 12% in new hospitalizations, and a 26% increase in new ICU admissions.
- During this reporting period, BA.2.86 was reclassified from a variant under monitoring (VUM) to a variant of interest (VOI). WHO is currently tracking several SARS-CoV-2 variants: four VOIs – XBB.1.5, XBB.1.16, EG.5 and BA.2.86; and five VUMs. Globally, EG.5, reported by 89 countries, represents 51.6% of sequences shared on GISAID and is presently the most prevalent VOI.

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

- [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](#)
- [COVID-19 surveillance reporting requirements update for Member States](#)
- [Summary Tables of COVID-19 vaccine effectiveness \(VE\) studies and results \(last updated on 16 November 2023\)](#)
- [Forest Plots displaying results of COVID-19 VE studies \(last updated on 20 November 2023\)](#)
- [Special focus WEU on interpreting relative VE \(29 June 2022, pages 6-8\)](#)
- [Neutralization plots \(last updated on 20 November 2023\)](#)
- [WHO COVID-19 VE Resources](#)

Global overview

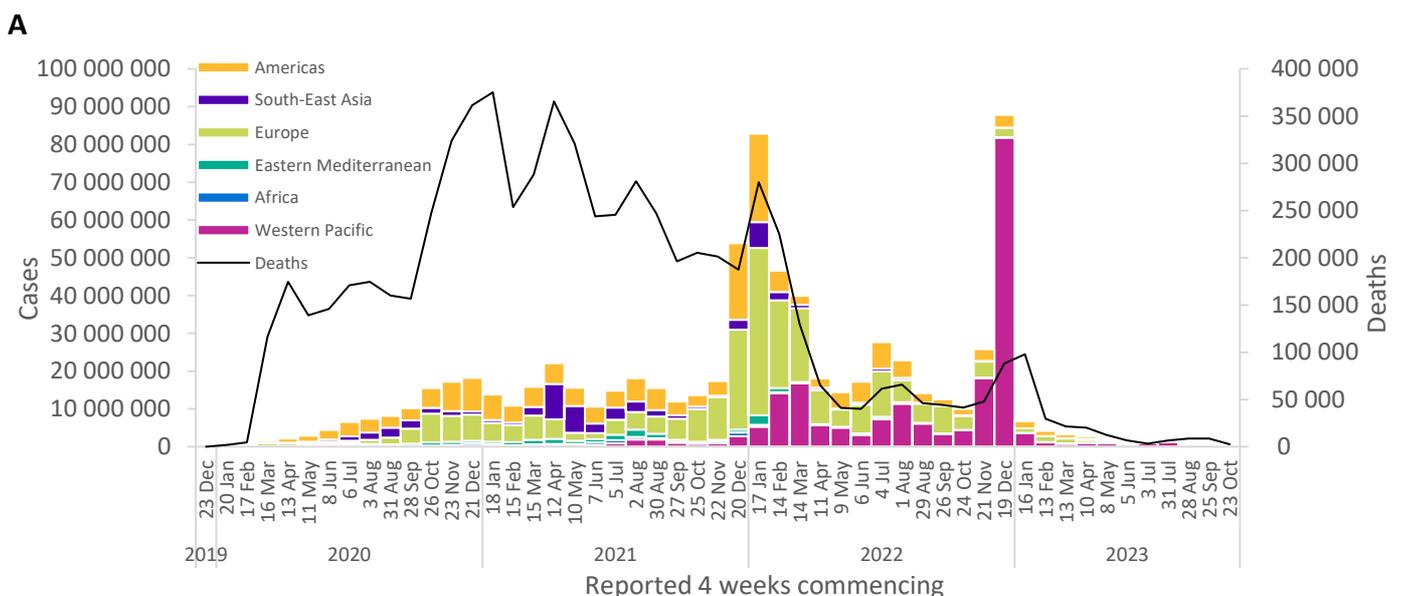
Data as of 19 November 2023

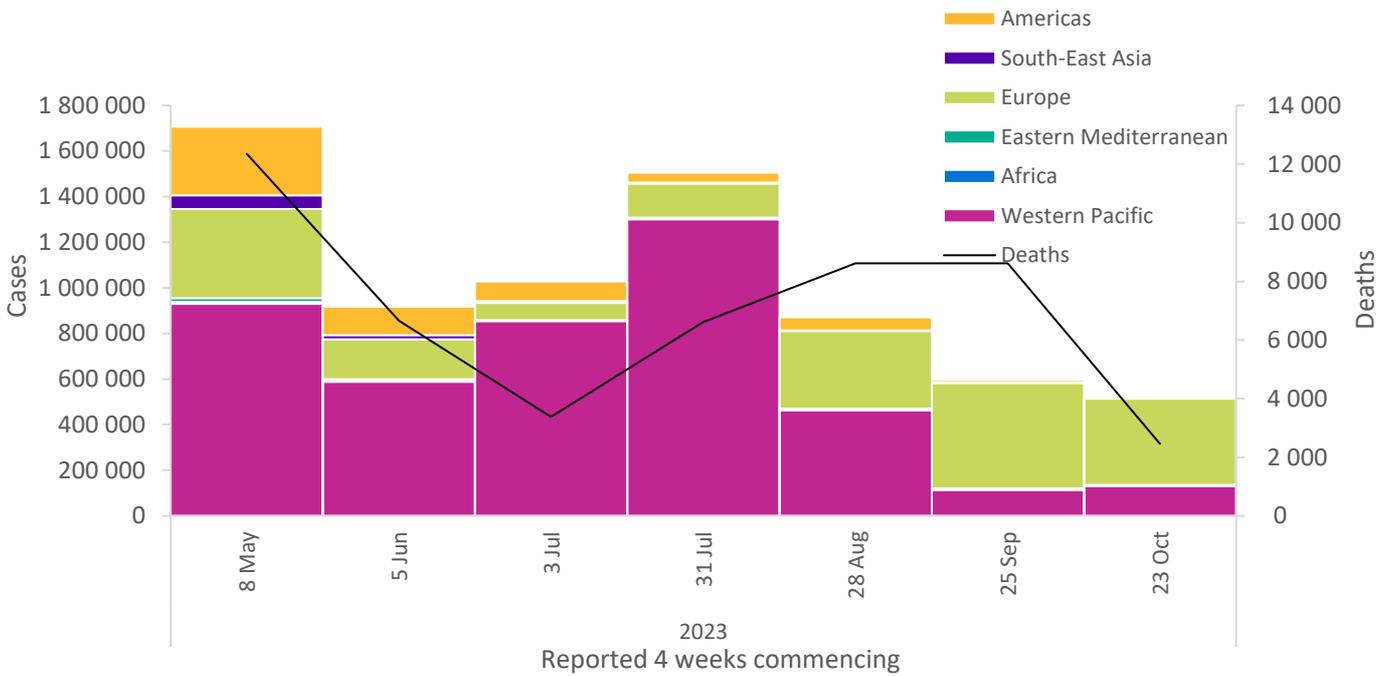
Globally, over half a million new cases were reported during the 28-day period from 23 October to 19 November 2023. The number of new cases decreased by 13% as compared to the previous 28-day period (Figure 1, Table 1). Over 2400 new deaths were reported during this period, a decrease of 72% as compared to the previous 28-day period. As of 19 November 2023, over 772 million confirmed cases and over six million deaths have been reported globally.

Reported cases do not accurately represent infection rates due to the reduction in testing and reporting globally. During this 28-day period, only 44% (104 of 234) of countries reported at least one case to WHO. It is important to note that this statistic does not reflect the actual number of countries where cases exist. Additionally, data from the previous 28-day period are continuously being updated to incorporate retrospective changes in reported COVID-19 cases and deaths made by countries. Data presented in this report are therefore incomplete and should be interpreted considering these limitations. Some countries continue to report high burdens of COVID-19, including increases in newly reported cases and, more importantly, increases in hospitalizations and deaths – the latter of which are considered more reliable indicators given reductions in testing. Global and national data on SARS-CoV-2 PCR percent positivity are available on [WHO’s integrated influenza and other respiratory viruses surveillance dashboard](#). Recent data (epidemiological week 45, 6 to 12 November 2023) show that the SARS-CoV-2 PCR percent positivity from reporting countries averages approximately 8.0% from sentinel sites (Figure 2).

As many countries discontinue COVID-19-specific reporting and integrate it into respiratory disease surveillance, WHO will use all available sources to continue monitoring the COVID-19 epidemiological situation, especially data on morbidity and the impact on health systems. COVID-19 remains a major threat, and WHO urges Member States to maintain, not dismantle, their established COVID-19 infrastructure. It is crucial to sustain, *inter alia*, early warning, surveillance and reporting, variant tracking, early clinical care provision, administration of vaccine to high-risk groups, improvements in ventilation, and regular communication.

Figure 1. COVID-19 cases reported by WHO Region, and global deaths by 28-day intervals, as of 19 November 2023 (A); 8 May to 19 November 2023 (B)**



B

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

At the regional level, the number of newly reported 28-day cases decreased across five of the six WHO regions: the Region of the Americas (-76%), the South-East Asia Region (-46%), the Eastern Mediterranean Region (-19%), the European Region (-18%), and the African Region (-14%); while cases increased in the Western Pacific Region (+14%). The number of newly reported 28-day deaths decreased across four regions: the South-East Asia Region (-99%), the Region of the Americas (-98%), the European Region (-49%), and the Western Pacific Region (-38%); while deaths increased in two WHO regions: the African Region (+167%), and the Eastern Mediterranean Region (+12%).

Among the countries reporting, the highest numbers of new 28-day cases at country level were reported from the Russian Federation (121 482 new cases; +90%), Italy (104 165 new cases; -32%), Singapore (65 021 new cases; +6%), Australia (34 635 new cases; +65%), and Poland (21 876 new cases; +208%). The highest numbers of new 28-day deaths were reported from Italy (597 new deaths; -10%), Sweden (372 new deaths; +151%), the Russian Federation (250 new deaths; +105%), the Islamic Republic of Iran (158 new deaths; +10%), and Czechia (112 new deaths; +87%).

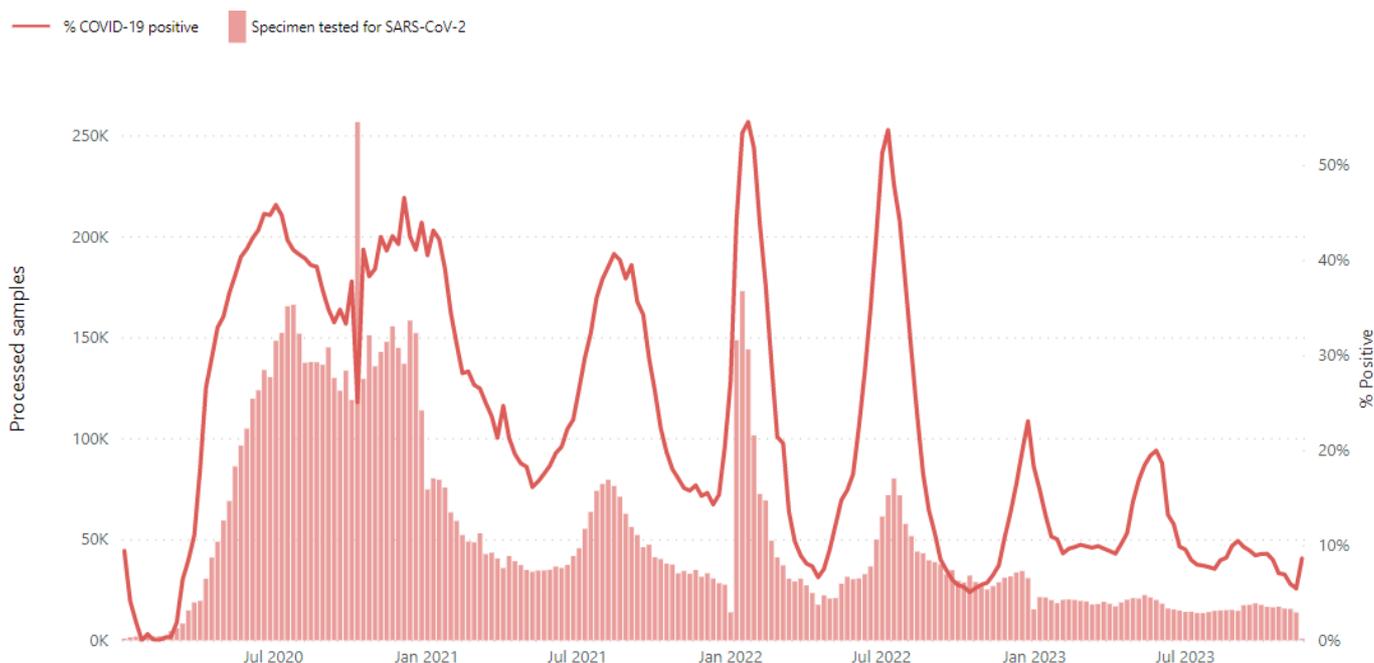
Table 1. Newly reported and cumulative COVID-19 confirmed cases and deaths, by WHO Region, as of 19 November 2023**

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 (%)	Countries reporting cases in the last 28 days	Countries reporting deaths in the last 28 days
Europe	378 602 (73%)	-18%	277 141 995 (36%)	1 951 (79%)	-49%	2 256 813 (32%)	33/61 (54%)	23/61 (38%)
Western Pacific	130 043 (25%)	14%	207 528 865 (27%)	266 (11%)	-38%	418 051 (6%)	17/35 (49%)	5/35 (14%)
Eastern Mediterranean	5 011 (1%)	-19%	23 405 314 (3%)	167 (7%)	12%	351 781 (5%)	4/22 (18%)	2/22 (9%)
Americas	2 754 (1%)	-76%	193 324 321 (25%)	52 (2%)	-98%	2 977 657 (43%)	18/56 (32%)	6/56 (11%)
South-East Asia	1 898 (<1%)	-46%	61 210 423 (8%)	12 (<1%)	-99%	808 065 (12%)	5/10 (50%)	3/10 (30%)
Africa	1 091 (<1%)	-14%	9 554 835 (1%)	8 (<1%)	167%	175 451 (3%)	27/50 (54%)	4/50 (8%)
Global	519 399 (100%)	-13%	772 166 517 (100%)	2 456 (100%)	-72%	6 987 831 (100%)	104/234 (44%)	43/234 (18%)

*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.

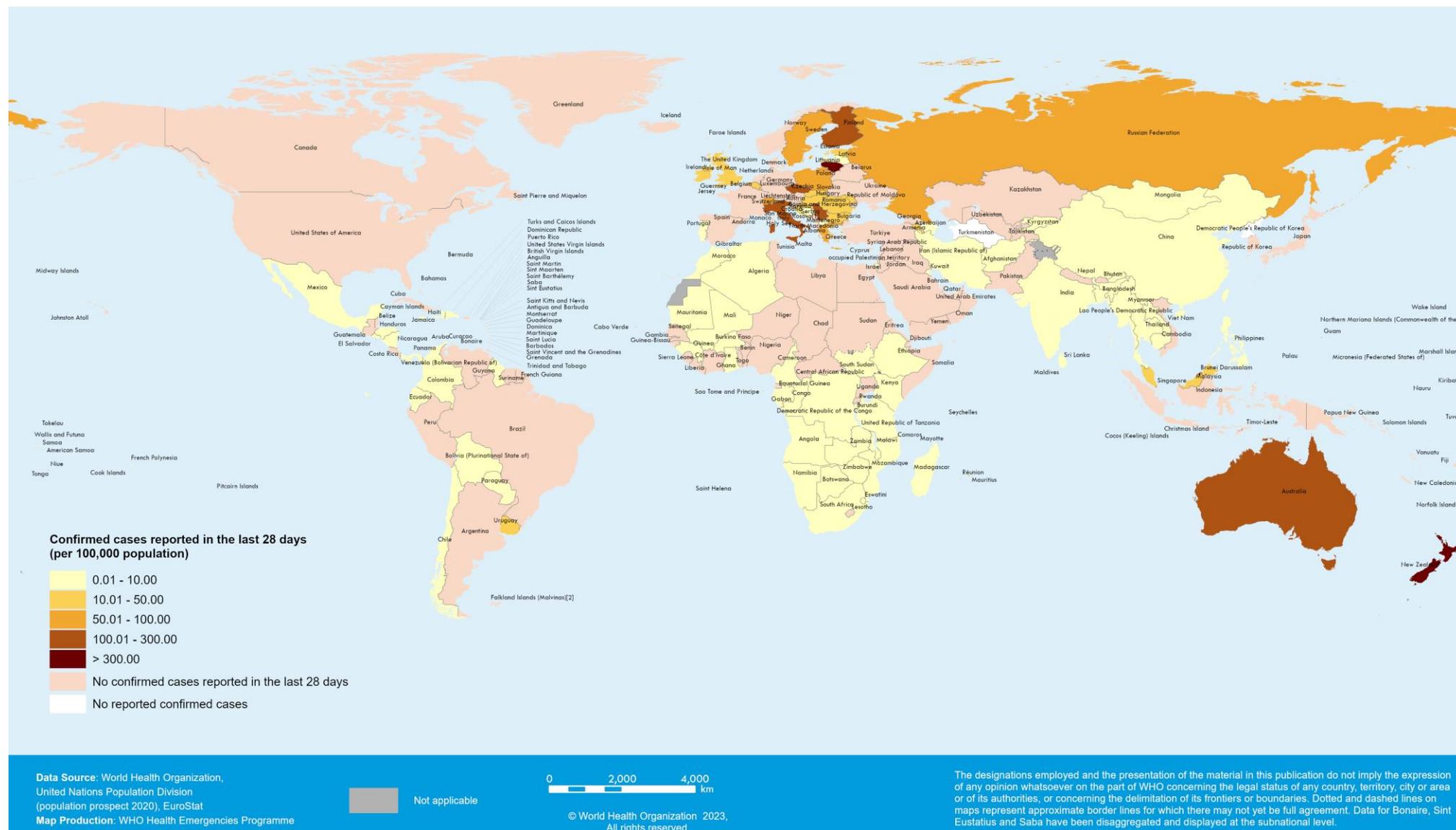
**See [Annex 1: Data, table, and figure notes](#)

Figure 2. SARS-CoV-2 test positivity rates and specimens reported to FluNet from sentinel sites; 5 January 2020 to 19 November 2023; 3:00 PM CET



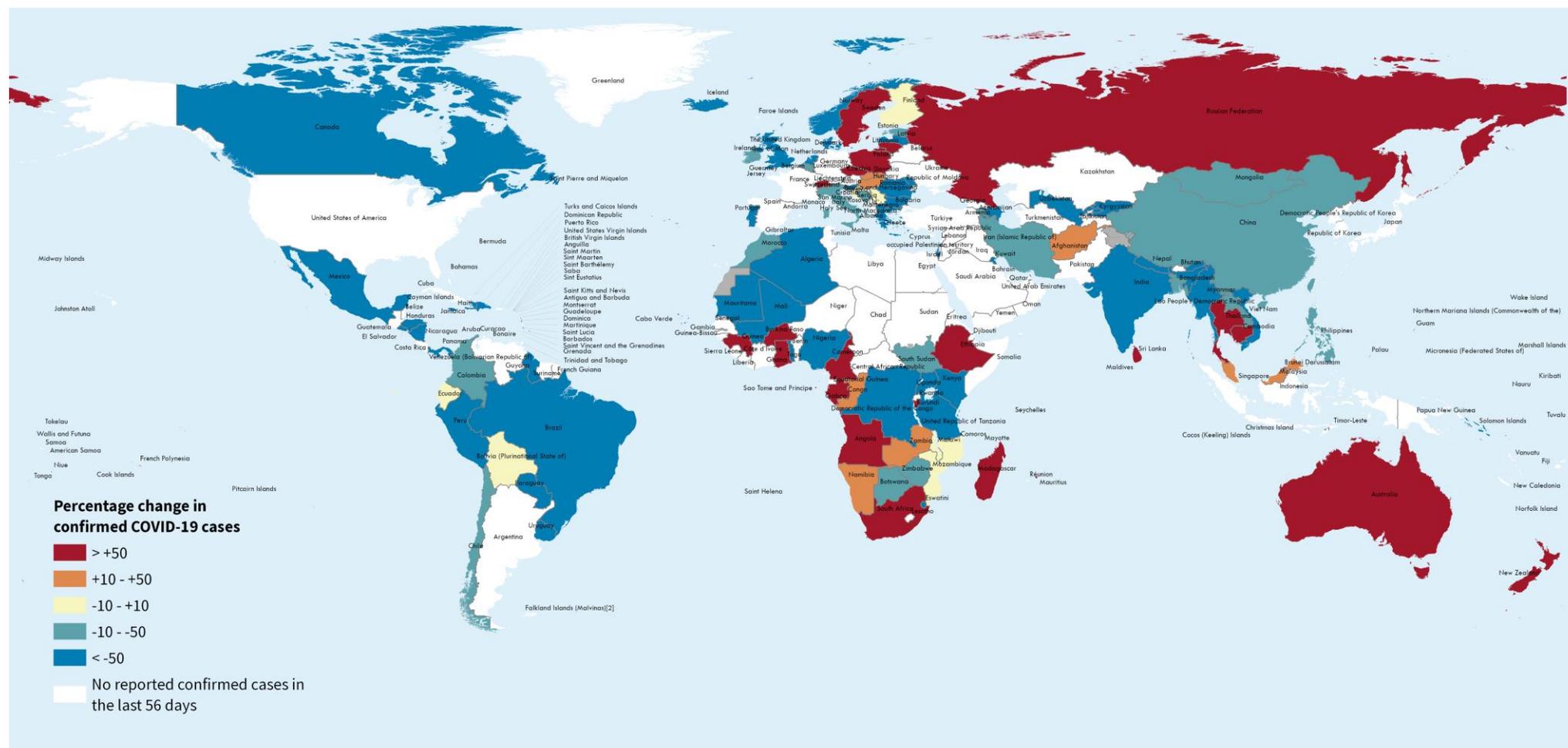
Source: *Influenza and SARS-CoV-2 surveillance data from GISRS reported to FluNet; WHO Global Influenza Programme*

Figure 3. Number of confirmed COVID-19 cases reported over the last 28 days per 100 000 population, as of 19 November 2023**



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

Figure 4. Percentage change in confirmed COVID-19 cases over the last 28 days relative to the previous 28 days, as of 19 November 2023**



Data Source: World Health Organization

Map Production: WHO Health Emergencies Programme

Not applicable

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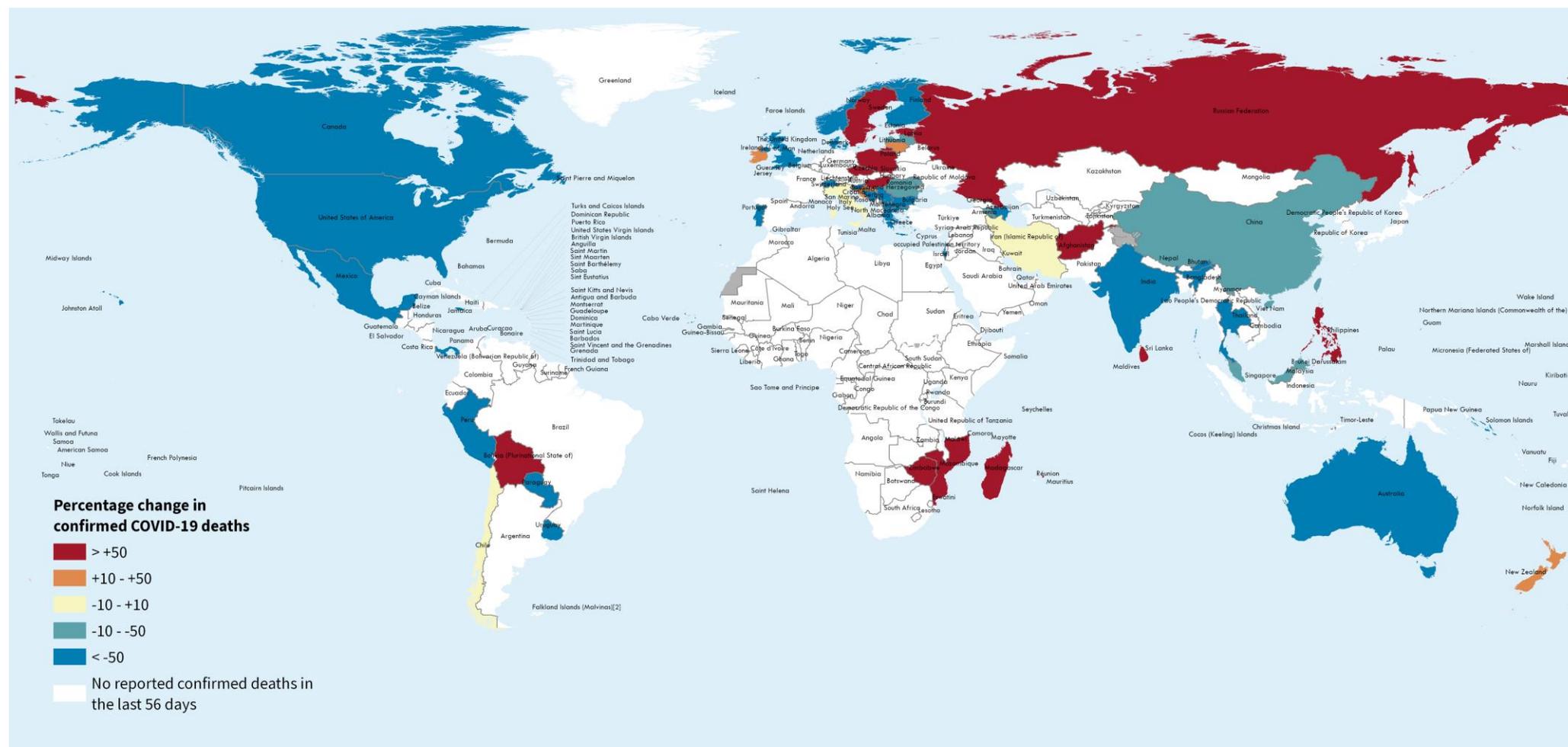
**See [Annex 1: Data, table, and figure notes](#)

Figure 5. Number of COVID-19 deaths reported over the last 28 days per 100 000 population, as of 19 November 2023 **



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

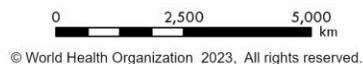
Figure 6. Percentage change in confirmed COVID-19 deaths over the last 28 days relative to the previous 28 days, as of 19 November 2023**



Data Source: World Health Organization

Map Production: WHO Health Emergencies Programme

Not applicable



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

Hospitalizations and ICU admissions

At the global level, during the past 28 days (16 October to 12 November 2023), a total of 84 244 new hospitalizations and 729 new intensive care unit (ICU) admissions were reported from 62 and 37 countries, respectively (Table 2, Table 4, Figure 7). This represents a decrease of 18% and 57% respectively, compared to the previous 28 days (18 September to 15 October 2023). Note that the absence of reported data from some countries to WHO does not imply that there are no COVID-19-related hospitalizations in those countries. 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.

New hospitalizations

During the past 28 days, 62 (26%) countries reported data to WHO on new hospitalizations at least once (Table 2, Table 3). The African Region had the highest proportion of countries reporting data on new hospitalizations (20 countries; 40%), followed by the Region of the Americas (19 countries; 34%), the European Region (17 countries; 28%), the South-East Asia Region (two countries; 20%), and the Western Pacific Region (four countries; 11%). No country in the Eastern Mediterranean Region shared a report with WHO during the period. The number of countries that consistently* reported new hospitalizations for this period was 14% (33 countries) (Table 2, Table 3).

Amongst the 33 countries consistently reporting new hospitalizations, the total number of hospitalizations decreased by 12% compared to the previous reporting period. Among the countries reporting consistently, 15 (45%) countries registered an increase of 20% or greater in hospitalizations during the past 28 days compared to the previous 28-day period: the Plurinational State of Bolivia (33 vs eight; +313%), Estonia (355 vs 88; +303%), Latvia (671 vs 186; +261%), Mauritius (24 vs seven; +243%), Honduras (70 vs 23; +204%), Guatemala (eight vs four; +100%), Chile (116 vs 58; +100%), Lithuania (340 vs 179; +90%), the Netherlands (1189 vs 739; +61%), Brunei Darussalam (48 vs 33; +45%), Saint Lucia (38 vs 27; +41%), Slovakia (609 vs 452; +35%), Bangladesh (33 vs 26; +27%), Mongolia (72 vs 59; +22%), and Indonesia (42 vs 35; +20%). The highest numbers of hospitalizations were reported from the United States of America (61 942 vs 72 773: -15%), Mexico (5969 vs 6319; -6%), and Greece (3542 vs 3793; -7%).

* "Consistently" as used here refers to countries that submitted data for new hospitalizations and intensive care unit admissions for the eight consecutive weeks (for the reporting and comparison period).

Table 2. Number of new hospitalization admissions reported by WHO regions, 16 October to 12 November 2023 compared to 18 September to 15 October 2023

Region	Countries reported at least once in the past 28 days		Countries reported consistently in the past and previous 28 days*		
	Number of countries (percentage)**	Number of new hospitalizations	Number of countries (percentage)**	Number of new hospitalizations	Percent change in new hospitalizations
Africa	20/50 (16%)	46	4/50 (8%)	24	+167%
Americas	19/56 (34%)	68 674	14/56 (25%)	68 592	-14%
Eastern Mediterranean	0/22 (<1%)	N/A***	0/22 (<1%)	N/A	N/A
Europe	17/61 (28%)	12 319	10/61 (16%)	7 704	+7%
South-East Asia	2/10 (20%)	75	2/10 (20%)	75	+23%
Western Pacific	4/35 (11%)	3 126	3/35 (9%)	1 029	+4%
Global	62/234 (26%)	84 240	33/234 (14%)	774 242	-12%

*Percent change is calculated for countries reporting consistently both in the past 28 days and the previous 28 days (comparison period). To be able to compare two periods, only the countries which reported consistently in both the last and previous 28 days periods are included in the table.

**Number of countries reported / total number of countries in the region (percentage of reporting).

*** N/A represents not available.

Table 3. Countries that consistently reported new hospitalizations by WHO regions, 16 October to 12 November 2023 compared 18 September to 15 October 2023

Region	Country/Territory	New Hospitalization in last 28 days	% Change from previous 28-day period
Africa	Burundi	0 ⁺	N/A [*]
Africa	Mauritania	0	N/A
Africa	Mauritius	24	243%
Africa	Angola	0	-100%
Americas	Suriname	2	N/A
Americas	Guyana	0	N/A
Americas	Haiti	0	N/A
Americas	Turks and Caicos Islands	0	N/A
Americas	Bolivia (Plurinational State of)	33	313%
Americas	Honduras	70	204%
Americas	Chile	116	100%
Americas	Guatemala	8	100%
Americas	Saint Lucia	38	41%
Americas	Ecuador	108	8%
Americas	Mexico	5 969	-6%
Americas	Colombia	202	-8%
Americas	United States of America	61 942	-15%
Americas	Uruguay	106	-29%
Europe	Estonia	355	303%
Europe	Latvia	671	261%
Europe	Lithuania	340	90%
Europe	Netherlands	1 189	61%
Europe	Slovakia	609	35%
Europe	Greece	3 542	-7%
Europe	Ireland	886	-33%
Europe	Malta	51	-47%
Europe	North Macedonia	37	-49%
Europe	Portugal	24	-90%
South-East Asia	Bangladesh	33	27%
South-East Asia	Indonesia	42	20%
Western Pacific	Brunei Darussalam	48	45%
Western Pacific	Mongolia	72	22%
Western Pacific	Singapore	909	2%

* N/A represents not applicable

**WHO emphasizes the importance of maintaining reporting and encourages countries to report the absence of new admissions ("zero reporting") if there are no new hospital or ICU admissions during the week.*

New ICU admissions

Across the six WHO regions, in the past 28 days, a total of 37 (16%) countries reported data to WHO on new ICU admissions at least once (Table 4, Table 5, Figure 7). The European Region had the highest proportion of countries reporting data on new ICU admissions (15 countries; 25%), followed by the Region of the Americas (13 countries; 23%), the Western Pacific Region (five countries; 14%), the South-East Asia Region (one country; 10%), and the African Region (three countries; 6%). No country in the Eastern Mediterranean Region shared data on ICU admissions during this period. The proportion of countries that consistently reported new ICU admissions for the period was 10% (22 countries).

Contrary to the overall decreasing trend, among the 22 countries consistently reporting new ICU admissions, there was an overall increase in new ICU admissions of 26% compared to the previous reporting period; eight (36%) countries showed an increase of 20% or greater during the past 28 days compared to the previous 28-day period: Bolivia (five vs one; +400%), Estonia (five vs one; +400%), Chile (17 vs eight; +113%), Honduras (four vs two; +100%), Sweden (55 vs 28; +96%), the Netherlands (82 vs 46; +78%), Australia (161 vs 109; +48%), and Latvia (13 vs nine; +44%). The highest numbers of new ICU admissions were reported from Australia (161 vs 109; +48%), the Netherlands (82 vs 46; +78%), and Greece (79 vs 81; -2%).

Table 4. Number of new ICU admissions reported by WHO regions, 16 October to 12 November 2023 compared to 18 September to 15 October 2023

Region	Countries reported at least once in the past 28 days		Countries reported consistently in the past and previous 28 days*		
	Number of countries (percentage)**	Number of new ICU admissions	Number of countries (percentage)**	Number of new ICU admissions	Percent change in new ICU admissions
Africa	3/50 (6%)	1	0/50 (<1%)	0 ⁺	N/A
Americas	13/56 (23%)	66	8/56 (14%)	59	+23%
Eastern Mediterranean	0/22 (<1%)	N/A***	0/22 (<1%)	N/A	N/A
Europe	15/61 (25%)	478	9/61 (15%)	276	+25%
South-East Asia	1/10 (10%)	1	1/10 (10%)	3	-63%
Western Pacific	5/35 (14%)	181	4/35 (11%)	171	+35%
Global	37/234 (16%)	727	22/234 (9%)	509	+26%

*Percent change is calculated for countries reporting consistently both in the past 28 days and the previous 28 days (comparison period). To be able to compare two periods, only the countries which reported consistently in both the last and previous 28 days periods are included in the table.

**Number of countries reported / total number of countries in the region (percentage of reporting).

*** N/A represents not available.

⁺ WHO emphasizes the importance of maintaining reporting and encourages countries to report the absence of new admissions ("zero reporting") if there are no new hospital or ICU admissions during the week.

Table 5. Countries that consistently reported new ICU admissions by WHO regions, 16 October to 12 November 2023 compared to 18 September to 15 October 2023.

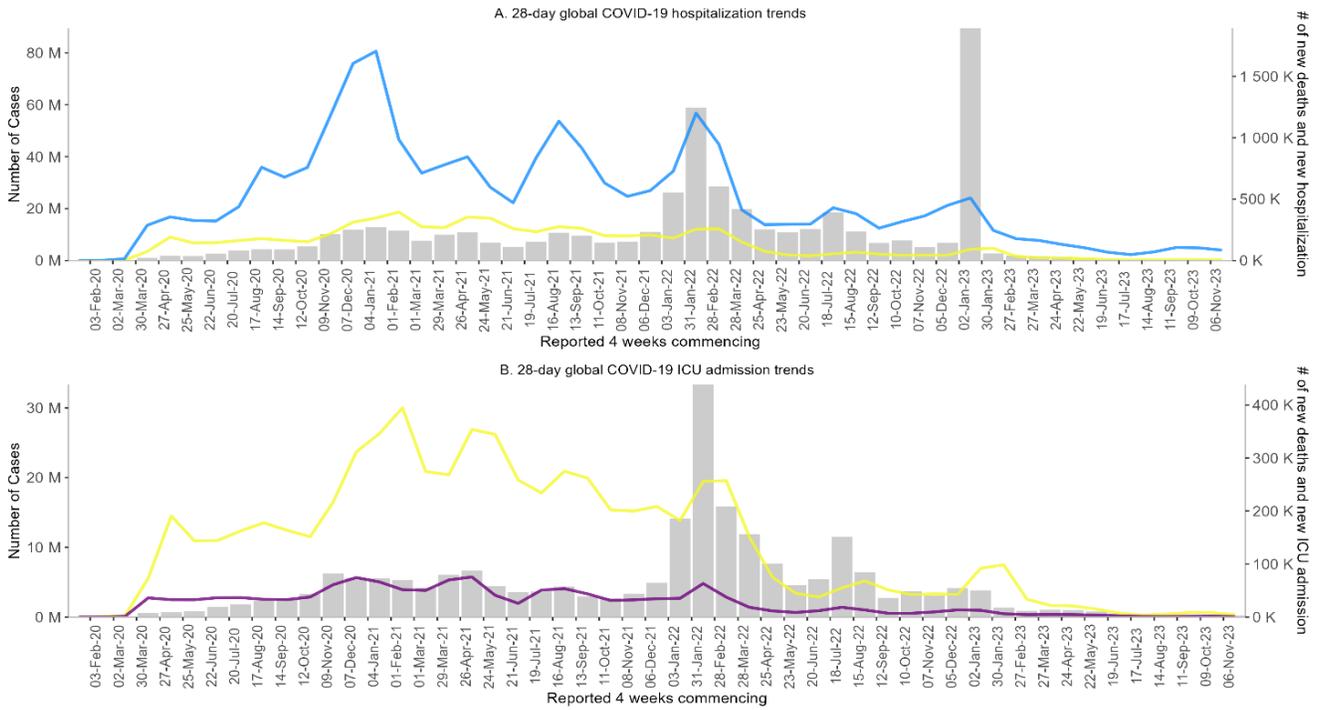
Region	Country/Territory	New ICU admissions in last 28 days	% Change from previous 28-day periods
Americas	Guyana	0 ⁺	N/A*
Americas	Saint Lucia	0	N/A
Americas	Suriname	0	N/A
Americas	Bolivia (Plurinational State of)	5	400%
Americas	Chile	17	113%
Americas	Honduras	4	100%
Americas	Guatemala	2	<1%
Americas	Uruguay	12	-33%
Europe	Estonia	5	400%
Europe	Sweden	55	96%
Europe	Netherlands	82	78%
Europe	Latvia	13	44%
Europe	Greece	79	-2%
Europe	Slovakia	7	-13%
Europe	Lithuania	14	-18%
Europe	Ireland	20	-23%
Europe	North Macedonia	1	-75%
South-East Asia	Indonesia	3	-63%
Western Pacific	Brunei Darussalam	0	N/A
Western Pacific	Mongolia	0	N/A
Western Pacific	Australia	161	48%
Western Pacific	Singapore	10	-44%

* N/A represents not applicable

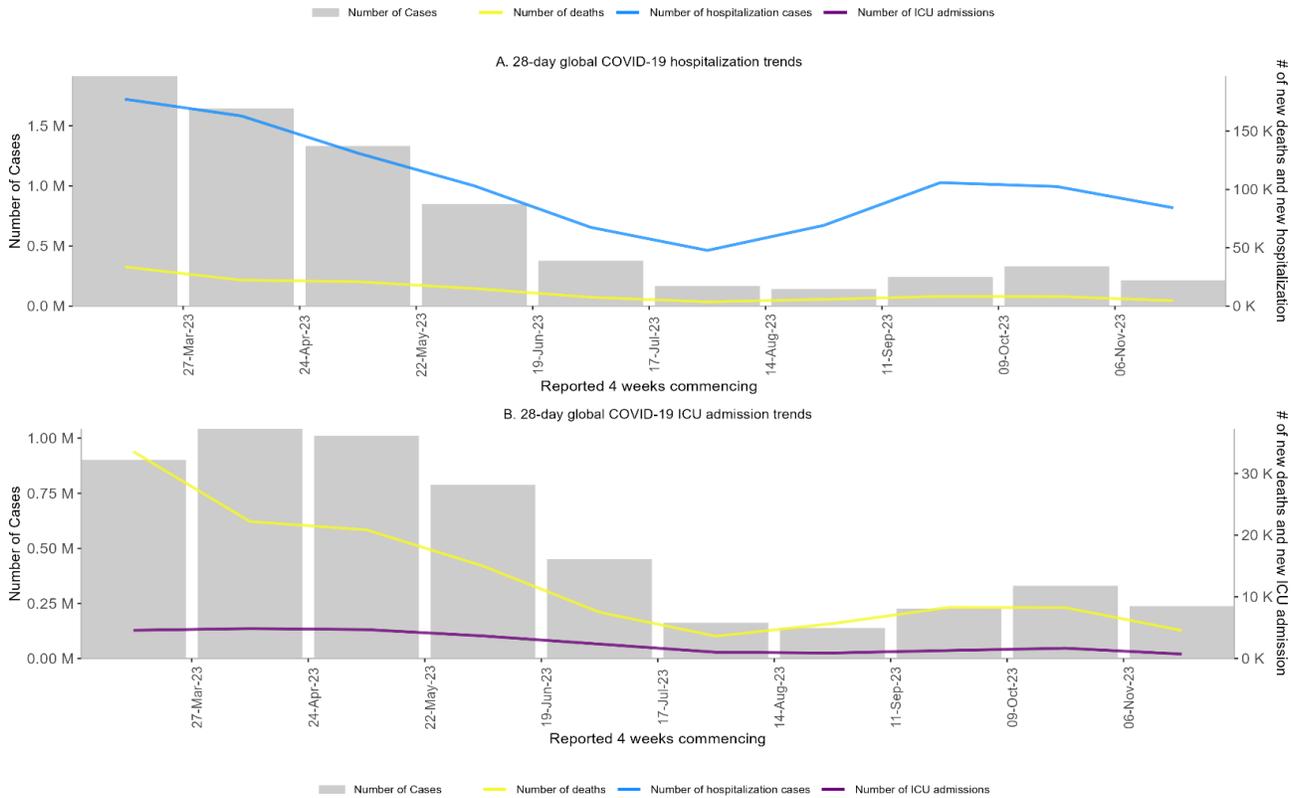
⁺ WHO emphasizes the importance of maintaining reporting and encourages countries to report the absence of new admissions (“zero reporting”) if there are no new hospital or ICU admissions during the week.

Figure 7. 28-day global COVID-19 new hospitalizations and ICU admissions, from 03 February 2023 to 12 November 2023 (A); and from 27 February to 12 November 2023 (B)

A



B



Note: Recent weeks are subject to reporting delays and data might not be complete, thus the data should be interpreted with caution. Cases included in grey bars are only from countries reporting hospitalizations or ICU admissions, respectively.

Severity indicators

The ICU-to-hospitalization ratio and death-to-hospitalization ratio have been key indicators for understanding COVID-19 severity throughout the pandemic. The ICU-to-hospitalization ratio is used to assess the proportion of patients requiring ICU admission in relation to the total number of hospitalizations. The death-to-hospitalization ratio is used to assess the proportion of deaths in relation to hospitalized patients.

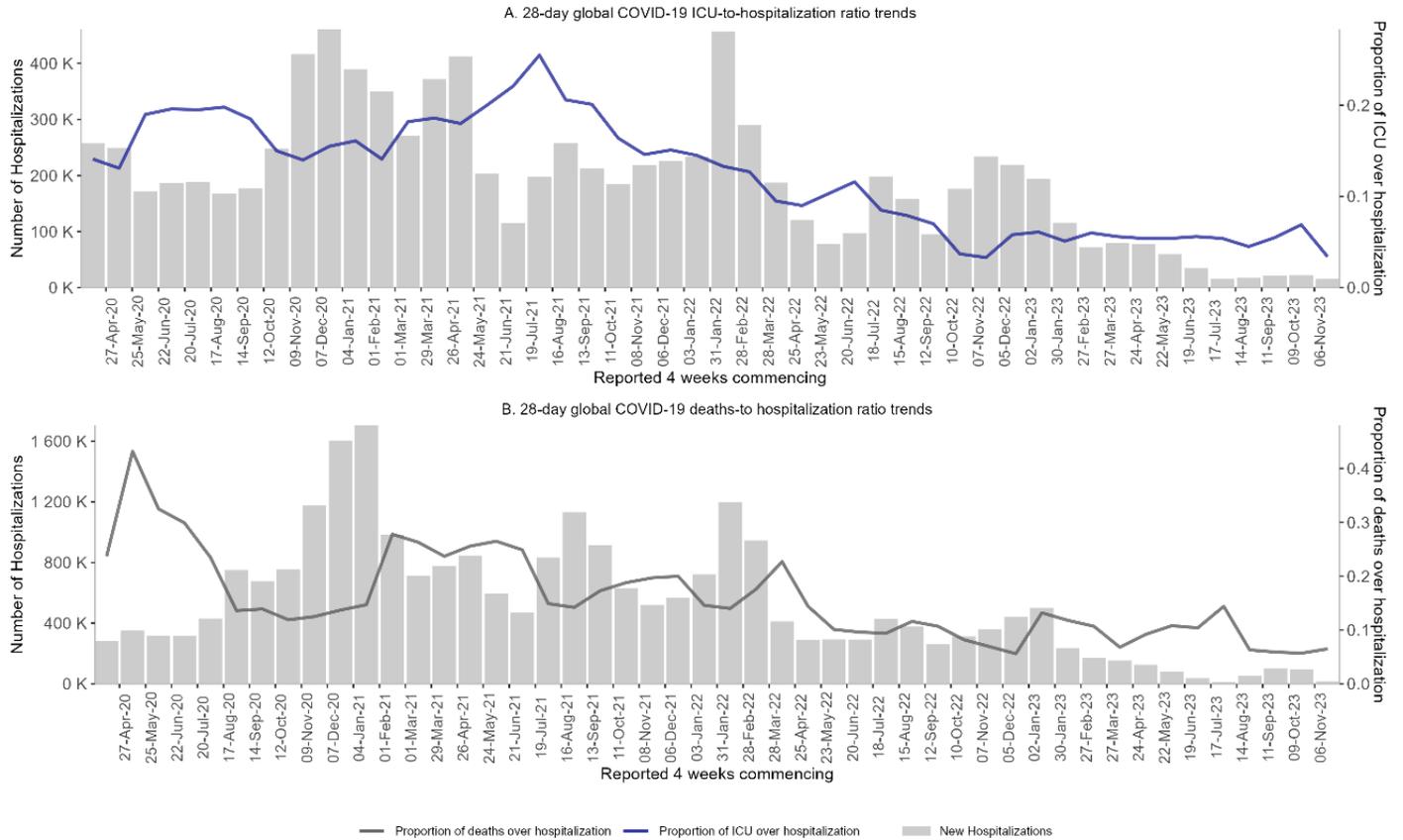
These indicators are subject to the same limitations mentioned above and their calculations are limited to the countries reporting all relevant data elements (hospitalizations; and ICU admissions or deaths, respectively) in a given reporting period. It should be noted that there may be differences in reporting among countries. For instance, in some countries, hospitalization data may include ICU admissions, whereas in others, ICU admissions may be reported separately. Furthermore, it is important to consider that some deaths might have occurred outside of hospital facilities.

Overall, the ICU-to-hospitalization ratio has been decreasing since the peak in July 2021 when the ratio was 0.26, dropping below 0.15 since the beginning of 2022, and around 0.05 since the start of 2023 (Figure 8). This suggests that a decreasing proportion of new hospitalizations require intensive care.

Similarly, the death-to-hospitalization ratio has been showing a general decline since July 2021. Since January 2023, it has remained under 0.15, varying between 0.06 to 0.14. This is an encouraging trend indicating a lower mortality risk among hospitalized individuals.

Please note that the causes for these decreases cannot be directly interpreted from these data, but likely include a combination of increases in infection-derived or vaccine-derived immunity, improvements in early diagnosis and clinical care, reduced strain on health systems, the distribution of cases across different countries, and other factors. It should be noted that it is not possible to infer a decreased intrinsic virulence amongst newer SARS-CoV-2 variants from these data.

Figure 8. COVID-19 ICU-to-hospitalization ratio and death-to-hospitalization ratio, as of 12 November 2023



Note: Recent weeks are subject to reporting delays and should not be interpreted as a declining trend. The ICU ratio figure is created from the data of the countries reported both new hospitalizations and new ICU admissions. The death ratio figure is created from the data of the countries reported both new hospitalization and new deaths.

Source: [WHO Detailed Surveillance Dashboard](#)

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

Geographic spread and prevalence

Globally, during the 28-day period from 23 October to 19 November 2023, 18 719 SARS-CoV-2 sequences were shared through GISAID. In comparison, in the two previous 28-day periods, there were 67 525 and 84 942 sequences shared, respectively. The data are periodically retrospectively updated to include sequences with earlier collection dates, so the number of submissions in a given time period may change.

WHO is currently tracking several SARS-CoV-2 variants, including:

- Four variants of interest (VOIs): XBB.1.5, XBB.1.16, EG.5 and BA.2.86
- Five variants under monitoring (VUMs): DV.7, XBB, XBB.1.9.1, XBB.1.9.2 and XBB.2.3

Table 6 shows the number of countries reporting VOIs and VUMs, and their prevalence from epidemiological week 40 (2 to 8 October 2023) to week 44 (30 October to 5 November 2023). The VOIs and VUMs exhibiting increasing trends are highlighted in yellow, those that have remained stable are highlighted in blue, and those with decreasing trends are highlighted in green.

Globally, all VOIs have been detected in all WHO regions, with EG.5 continuing to be the most prevalent VOI, now reported by 89 countries. EG.5 continues to steadily rise in prevalence, accounting for 51.6% of sequences submitted to GISAID in week 44 in comparison to 47.0% in week 40 (Figure 9, Figure 10 and Table 6). This includes two descendent lineages, HK.3 and HV.1, which have been included under EG.5 since 23 October 2023. The last [risk evaluation for EG.5](#) was published on 21 November 2023, with an overall evaluation of low additional public health risk at the global level based on available evidence. This aligns with the risk associated with the other currently circulating VOIs.

As of 20 November 2023, BA.2.86 has been designated as a VOI due to the steady increase in its global prevalence in recent weeks. BA.2.86 accounted for 8.9% of sequences in week 44, an increase from 1.8% in week 40 (Figure 10, Table 6). The [initial risk evaluation for BA.2.86](#) was published on 21 November 2023, with an overall evaluation of low public health risk at the global level based on available evidence.

The other VOIs, XBB.1.5 and XBB.1.16, have remained stable and decreased in global prevalence, respectively, during the same period: XBB.1.5 accounted for 8.3% of sequences in week 44, similar to its prevalence in week 40 at 8.5%; XBB.1.6 accounted for 8.2% of sequences in week 44, a decrease from 15.9% in week 40 (Figure 10, Table 6).

Among the VUMs, DV.7 and XBB have shown stable trends in the reporting period, accounting for 1.9% and 2.3%, respectively, of sequences in week 44 (Table 6). The other VUMs, XBB.1.9.1, XBB.1.9.2 and XBB.2.3 continue to decrease in prevalence, accounting for 6.4%, 1.9% and 3.7% of all sequences in week 44, respectively.

Sufficient sequencing data to calculate variant prevalence at the regional level during weeks 40 to 44 were available from three WHO regions: the Region of the Americas, the Western Pacific Region, and the European Region (Table 7). Among the VOIs, EG.5 was the most prevalent variant, and BA.2.86 showed an increasing trend in all three regions. XBB.1.5 and XBB.1.6 showed decreasing or stable trends. Amongst the VUMs, all three regions observed decreasing or stable trends for XBB, XBB.1.9.1, XBB.1.9.2 and XBB.2.3. DV.7 presented an increasing trend in the Region of the Americas and the Western Pacific region, whereas the European region saw a decreasing trend.

With declining rates of testing and sequencing globally (Figure 10), it is increasingly challenging to estimate the severity impact of emerging SARS-CoV-2 variants. There are currently no reported laboratory or epidemiological reports indicating any association between VOIs/VUMs and increased disease severity. As shown in Figure 9 and Figure 10, low and unrepresentative levels of SARS-CoV-2 genomic surveillance continue to pose challenges in adequately assessing the variant landscape.

Table 6. Weekly prevalence of SARS-CoV-2 VOIs and VUMs, week 40 to week 44 of 2023

Lineage	Countries [§]	Sequences [§]	2023-40	2023-41	2023-42	2023-43	2023-44
VOIs							
XBB.1.5*	128	308 614	8.5	8.2	8.3	7.2	8.3
XBB.1.16*	117	94 914	15.9	14.0	12.4	9.8	8.2
EG.5*	89	104 423	47.0	50.2	50.9	51.9	51.6
BA.2.86*	41	3 109	1.8	2.8	4.1	6.4	8.9
VUMs							
DV.7*	38	3 887	1.8	1.8	1.7	1.9	1.9
XBB*	142	88 309	3.4	2.9	2.7	2.8	2.3
XBB.1.9.1*	118	80 383	9.5	8.0	8.0	7.0	6.4
XBB.1.9.2*	95	36 685	2.4	2.3	1.8	2.1	1.9
XBB.2.3*	104	31 394	6.0	5.6	5.2	4.9	3.7
Unassigned	95	152 256	0.5	1.4	2.5	3.6	4.5
Other+	211	6 785 691	3.0	2.6	2.3	2.2	2.2

[§] Number of countries and sequences are since the emergence of the variants.

* Includes descendant lineages, except those individually specified elsewhere in the table. For example, XBB* does not include XBB.1.5, XBB.1.16, EG.5, XBB.1.9.1, XBB.1.9.2, and XBB.2.3.

+ "Other" represents other circulating lineages excluding the VOI, VUMs, BA.1*, BA.2*, BA.3*, BA.4*, BA.5*. Due to delays in or retrospective assignment of variants, caution should be taken when interpreting the prevalence of the "Other" category.

Table 7. Weekly prevalence of SARS-CoV-2 VOIs and VUMs by WHO regions, week 40 to week 44 of 2023

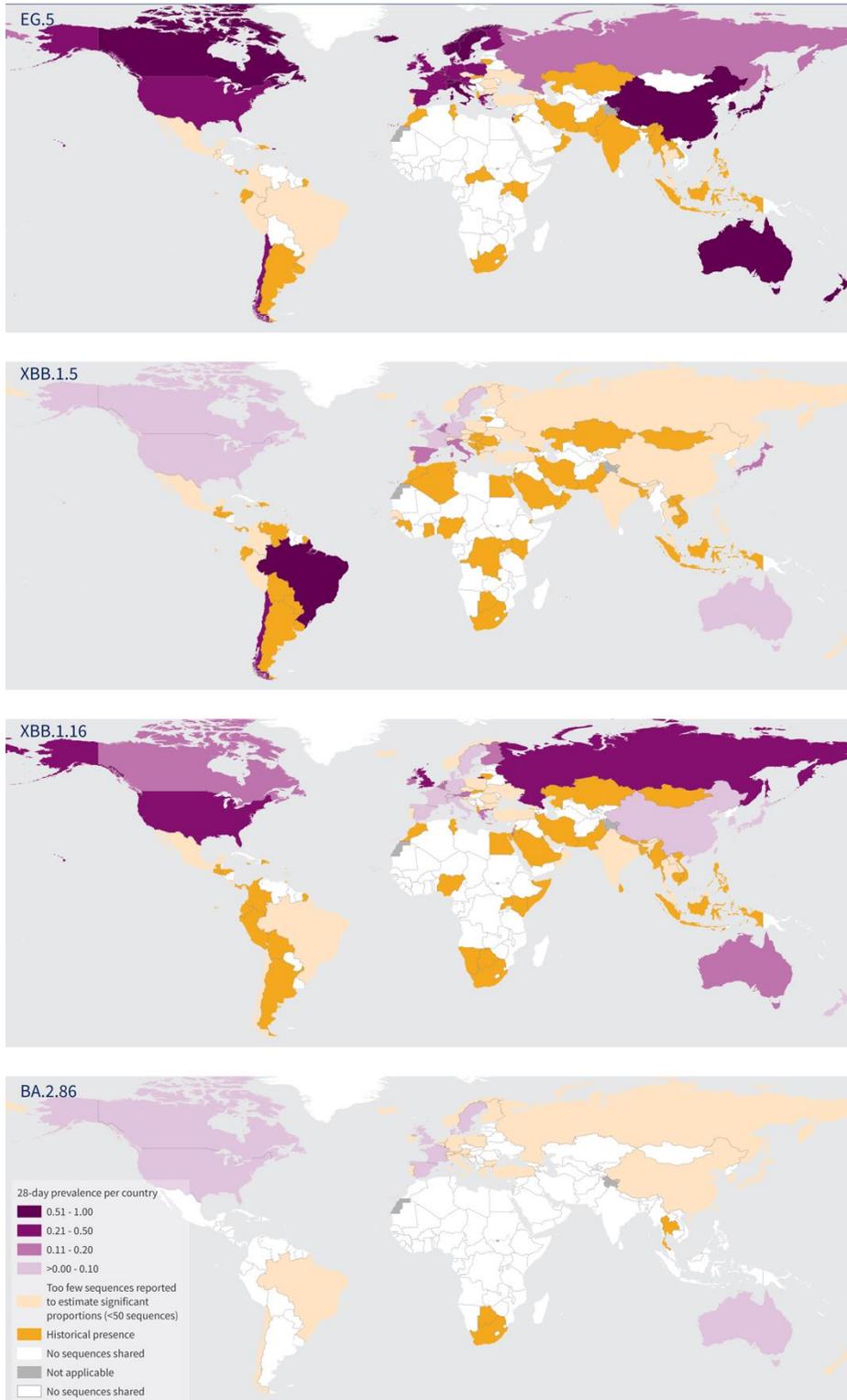
Lineage (week 40 to week 44)	AMRO	AFRO [‡]	EMRO [‡]	EURO	SEARO [‡]	WPRO
VOIs						
XBB.1.5*	↓	insufficient data	insufficient data	↔	insufficient data	↓
XBB.1.16*	↓	insufficient data	insufficient data	↓	insufficient data	↓
EG.5*	↑	most prevalent variant(s)	insufficient data	↑	most prevalent variant(s)	↑
BA.2.86*	↑	insufficient data	insufficient data	↑	insufficient data	↑
VUMs						
DV.7*	↑	insufficient data	insufficient data	↓	insufficient data	↑
XBB*	↓	insufficient data	insufficient data	↔	insufficient data	↓
XBB.1.9.1*	↓	insufficient data	most prevalent variant(s)	↓	insufficient data	↓
XBB.1.9.2*	↔	insufficient data	insufficient data	↔	insufficient data	↓
XBB.2.3*	↓	most prevalent variant(s)	insufficient data	↓	insufficient data	↔

↑ increasing trend ↔ stable trend
 ↓ decreasing trend  most prevalent variant(s)
  insufficient data

* Includes descendant lineages, except those individually specified elsewhere in the table. For example, XBB* does not include XBB.1.5, XBB.1.16, EG.5, XBB.1.9.1, XBB.1.9.2, and XBB.2.3.

[‡] due to the small numbers of sequences submitted in these regions, it has not been possible to determine trends for the VOIs and VUMs in these regions; this is also represented by the shaded cells in the table.

Figure 9. Global 28-day prevalence of EG.5, XBB.1.5, XBB.1.16, and BA.2.86, 2 to 29 October 2023**



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

Data Source: World Health Organization, Global Initiative on Sharing All Influenza Data
 Map Production: WHO Health Emergencies Programme
 Map Date: 22 November 2023



* Reporting period to account for delay in sequence submission to GISAID.

+ Historical presence indicates countries previously reporting sequences of VOIs but which have not reported within the period from 2 to 29 October 2023.

Figure 10. The (A) number and (B) percentage of SARS-CoV-2 sequences, from 1 April to 31 October 2023

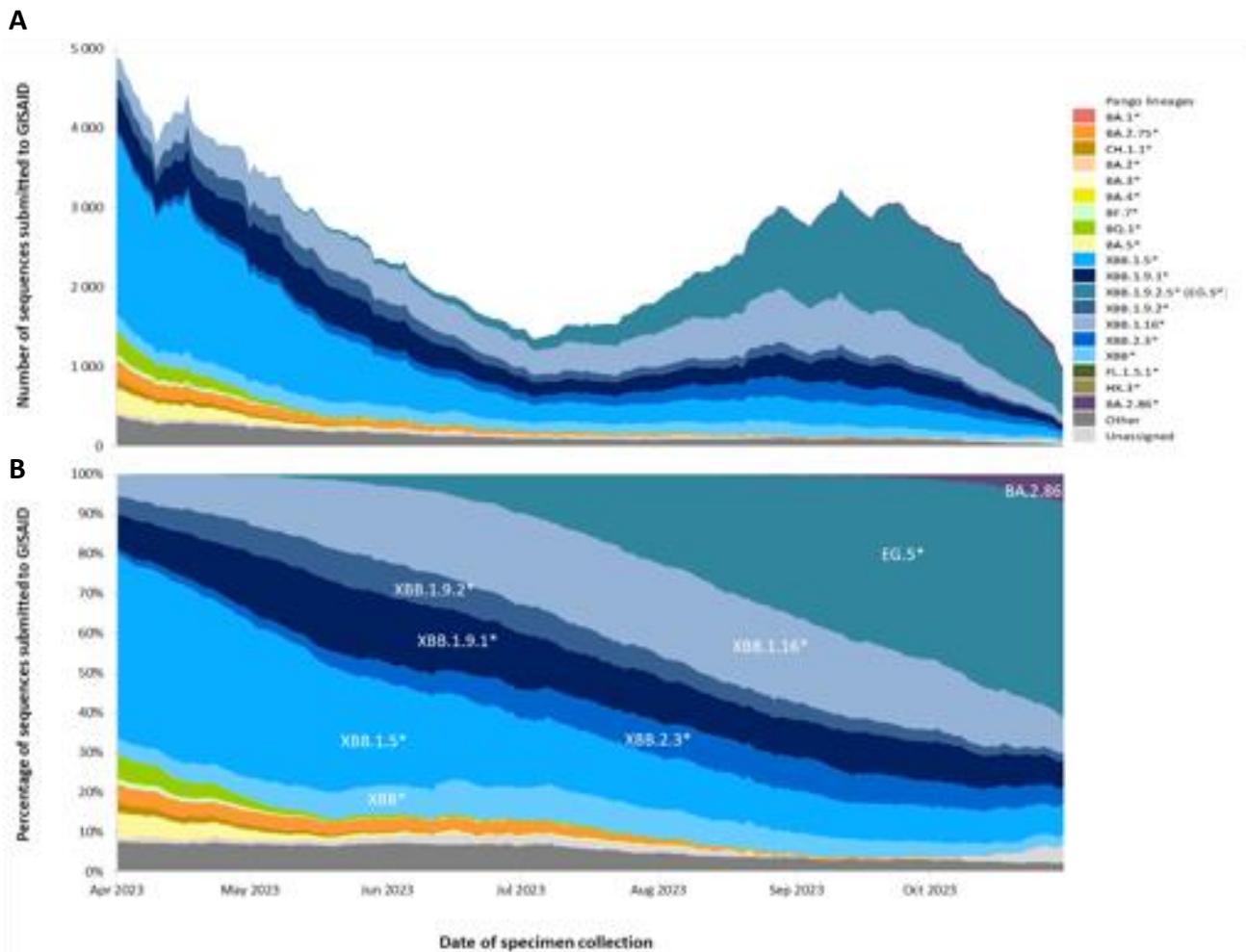


Figure 10. Panel A shows the number, and Panel B the percentage, of all circulating variants since April 2023. Omicron sister-lineages and additional Omicron VOC descendent lineages under further monitoring are shown. *BA.1**, *BA.2**, *BA.3**, *BA.4** and *BA.5** (* indicates inclusion of descendent 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 April to 31 October 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](#)
- [SARS-CoV-2 variant risk evaluation framework, 30 August 2023](#)
- [WHO BA.2.86 Initial Risk Evaluation, 21 November 2023](#)
- [WHO EG.5 Updated Risk Evaluation, 21 November 2023](#)
- [WHO XBB.1.5 Updated Risk Assessment, 20 June 2023](#)
- [WHO XBB.1.16 Updated Risk Assessment, 5 June 2023](#)

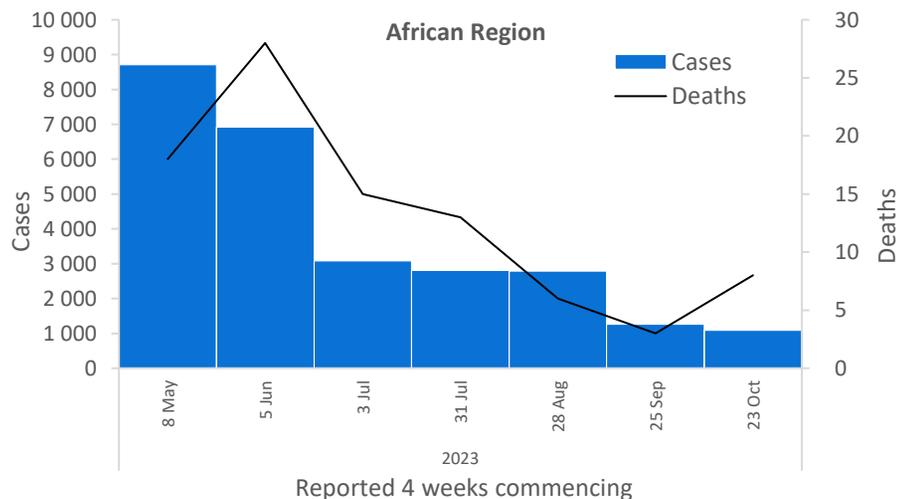
WHO regional overviews

Data for 23 October to 19 November 2023

African Region

The African Region reported over 1000 new cases, a 14% decrease as compared to the previous 28-day period. Twelve (24%) of the 50 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Sao Tome and Principe (34 vs two new cases; +1600%), Burkina Faso (14 vs two new cases; +600%), and South Africa (22 vs five new cases; +340%). The highest numbers of new cases were reported from Mauritius (475 new cases; 37.3 new cases per 100 000; +70%), South Sudan (62 new cases; <1 new case per 100 000; -39%), and Zimbabwe (56 new cases; <1 new case per 100 000; -31%).

The number of new 28-day deaths in the Region increased by 167% as compared to the previous 28-day period, with eight new deaths reported. These new deaths were reported from Zimbabwe (five new deaths; <1 new death per 100 000; +150%), Madagascar (one new death; <1 new death per 100 000; no deaths reported the previous 28-day period), Mauritius (one new death; <1 new death per 100 000; no deaths reported the previous 28-day period), and Mozambique (one new death; <1 new death per 100 000; no deaths reported the previous 28-day period).

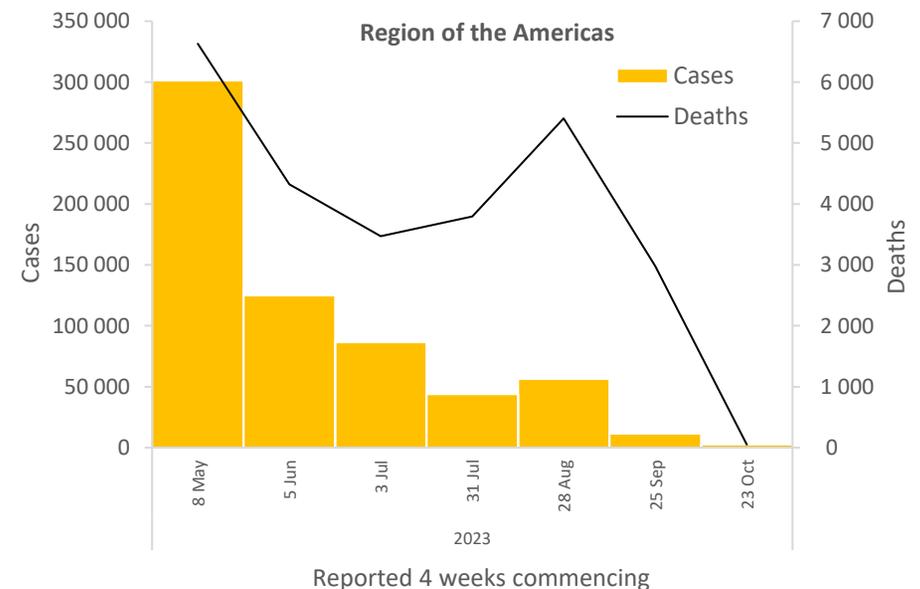


Updates from the [African Region](#)

Region of the Americas

The Region of the Americas reported over 2700 new cases, a 76% decrease as compared to the previous 28-day period. No country has reported increases in new cases of 20% or greater compared to the previous 28-day period. The highest numbers of new cases were reported from Colombia (882 new cases; 1.7 new cases per 100 000; -36%), the Plurinational State of Bolivia (683 new cases; 5.9 new cases per 100 000; -4%), and Uruguay (414 new cases; 11.9 new cases per 100 000; -51%).

Due to the adoption of the new strategy of surveillance in the Region, the number of new 28-day deaths in the Region decreased by 98% as compared to the previous 28-day period, with 52 new deaths reported. The steep rise and then decline in reported deaths is mainly due to changes in sources of deaths data from the United States of America, which has historically reported an important proportion of cases for the Region. The highest numbers of new deaths were reported from Mexico (30 new deaths; <1 new death per 100 000; -72%), Uruguay (seven new deaths; <1 new death per 100 000; -68%), and Paraguay (six new deaths; <1 new death per 100 000; -50%).

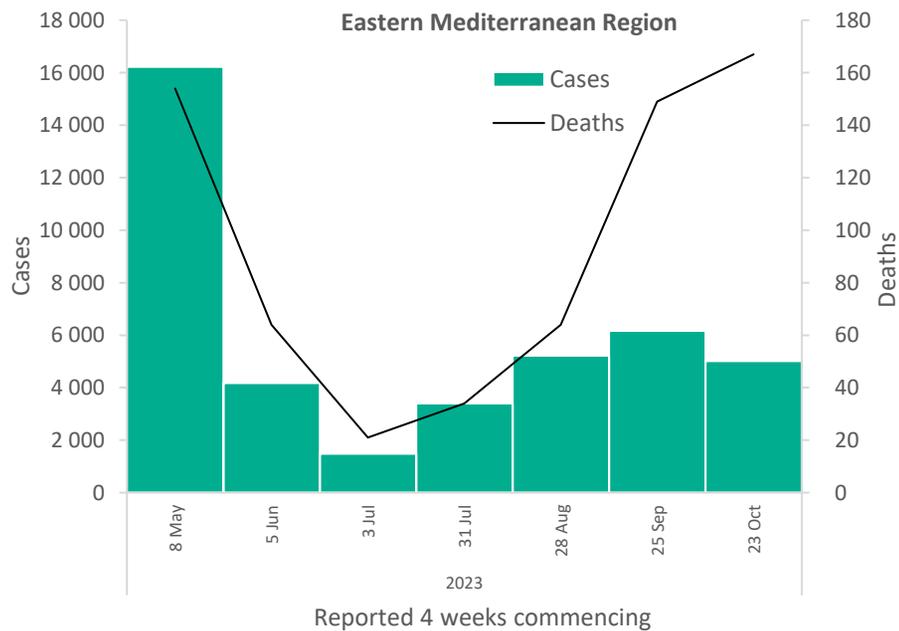


Updates from the [Region of the Americas](#)

Eastern Mediterranean Region

The Eastern Mediterranean Region reported over 5000 new cases, a 19% decrease as compared to the previous 28-day period. One (5%) of the 22 countries for which data are available reported increases in new cases of 20% or greater: Afghanistan (1455 vs 1157 new cases; +26%). The highest numbers of new cases were reported from the Islamic Republic of Iran (3072 new cases; 3.7 new cases per 100 000; -28%), Afghanistan (1455 new cases; 3.7 new cases per 100 000; +26%), and Morocco (424 new cases; 1.1 new cases per 100 000; -27%).

The number of new 28-day deaths in the Region increased by 12% as compared to the previous 28-day period, with 167 new deaths reported. The highest numbers of new deaths were reported from the Islamic Republic of Iran (158 new deaths; <1 new death per 100 000; +10%), and Afghanistan (nine new deaths; <1 new death per 100 000; +80%).

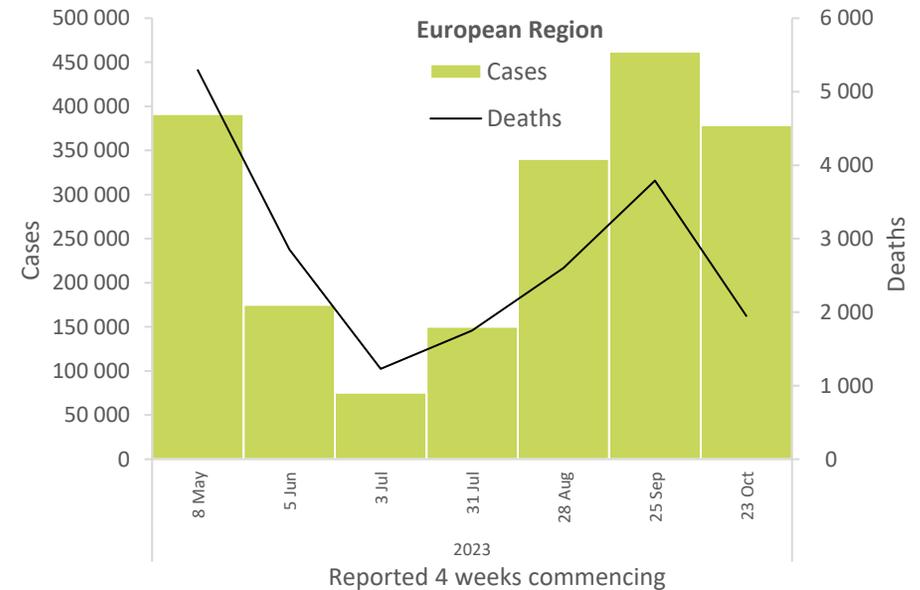


Updates from the [Eastern Mediterranean Region](#)

European Region

The European Region reported over 378 000 new cases, an 18% decrease as compared to the previous 28-day period. Nine (15%) 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 San Marino (436 vs 102 new cases; +327%), Sweden (9531 vs 2933 new cases; +225%), and Poland (21 876 vs 7103 new cases; +208%). The highest numbers of new cases were reported from the Russian Federation (121 482 new cases; 83.2 new cases per 100 000; +90%), Italy (104 165 new cases; 174.7 new cases per 100 000; -32%), and Poland (21 876 new cases; 57.6 new cases per 100 000; +208%).

The number of new 28-day deaths in the Region decreased by 49% as compared to the previous 28-day period, with 1951 new deaths reported. The highest numbers of new deaths were reported from Italy (597 new deaths; 1.0 new death per 100 000; -10%), Sweden (372 new deaths; 3.6 new deaths per 100 000; +151%), and the Russian Federation (250 new deaths; <1 new death per 100 000; +105%).

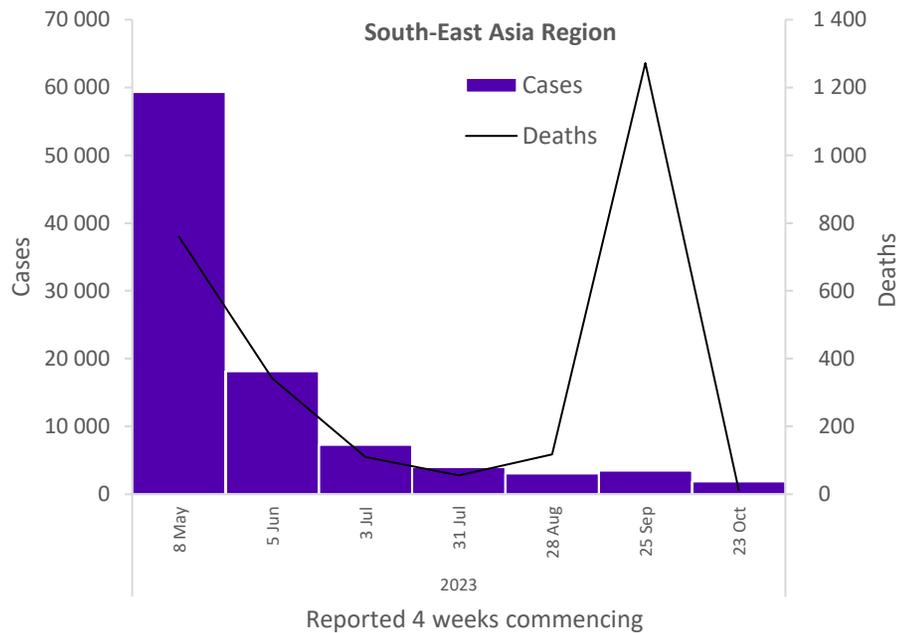


Updates from the [European Region](#)

South-East Asia Region

The South-East Asia Region reported over 1800 new cases, a 46% decrease as compared to the previous 28-day period. Two (20%) of the 10 countries for which data are available reported increases in new cases of 20% or greater: Sri Lanka (21 vs Ten new cases; +110%), and Thailand (1187 vs 636 new cases; +87%). The highest numbers of new cases were reported from Thailand (1187 new cases; 1.7 new cases per 100 000; +87%), India (523 new cases; <1 new case per 100 000; -79%), and Bangladesh (134 new cases; <1 new case per 100 000; -39%).

The number of new 28-day deaths in the Region decreased by 99% as compared to the previous 28-day period, with 12 new deaths reported. The new deaths were reported from Thailand (five new deaths; <1 new death per 100 000; -58%), India (four new deaths; <1 new death per 100 000; -100%), and Sri Lanka (three new deaths; <1 new death per 100 000; no deaths reported the previous 28-day period).

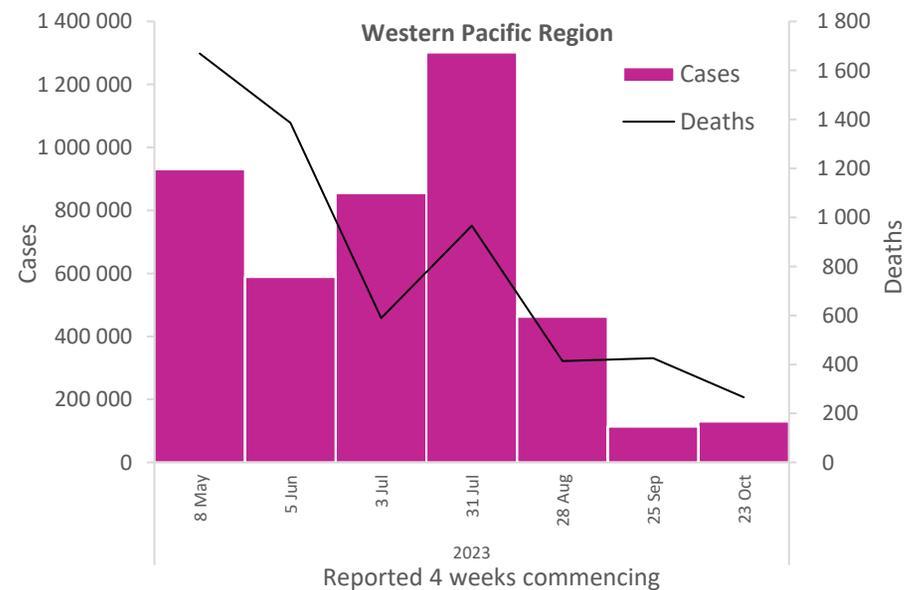


Updates from the [South-East Asia Region](#)

Western Pacific Region

The Western Pacific Region reported over 130 000 new cases, a 14% increase as compared to the previous 28-day period. Seven (20%) 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 Guam (131 vs 50 new cases; +162%), Brunei Darussalam (1725 vs 958 new cases; +80%), and Australia (34 635 vs 21 000 new cases; +65%). The highest numbers of new cases were reported from Singapore (65 021 new cases; 1111.4 new cases per 100 000; +6%), Australia (34 635 new cases; 135.8 new cases per 100 000; +65%), and New Zealand (16 395 new cases; 340.0 new cases per 100 000; +50%).

The number of new 28-day deaths in the Region decreased by 38% as compared to the previous 28-day period, with 266 new deaths reported. The highest numbers of new deaths were reported from Australia (107 new deaths; <1 new death per 100 000; -54%), New Zealand (86 new deaths; 1.8 new deaths per 100 000; +25%), and China (34 new deaths; <1 new death per 100 000; -32%).



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. Differences are to be expected between information products published by WHO, national public health authorities, and other sources.

A record of historic data adjustment 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.

New case and death counts from the Region of the Americas: Starting from the week commencing on 11 September 2023, the source of the data from the Region of the Americas was switched to the aggregated national surveillance data received through the COVID-19, Influenza, RSV and Other Respiratory Viruses program in the Americas. Data have been included retrospectively since 31 July 2023.

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, including descendent lineages of VOCs, to track changes in prevalence and viral characteristics. The current trends describing the circulation of Omicron descendent lineages should be interpreted with due consideration of the limitations of current COVID-19 surveillance. 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.