

COVID-19 Epidemiological Update

Edition 162 published 22 December 2023

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Key highlights

- Globally, during the 28-day period from 20 November to 17 December 2023, 105 countries reported COVID-19 cases and 50 countries reported COVID-19 deaths. Note that this does not reflect the actual number of countries where cases or deaths are occurring, as many countries have stopped or changed frequency of reporting.
- From the available data, the number of reported cases has increased while deaths have decreased during the 28-day period, with over 850 000 new cases and over 3000 new deaths, an increase of 52% and a decrease of 8%, respectively, compared to the previous 28 days (23 October to 19 November 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 was 7.6% as of 10 December 2023.
- During the 28-day period from 13 November to 10 December 2023, 58 and 36 countries provided data at least once on COVID-19 hospitalizations and admissions to an intensive care unit (ICU), respectively. From the available data, over 118 000 new hospitalizations and over 1600 new ICU admissions were reported during the 28-day period. Amongst the countries reporting these data consistently over the current and past reporting period, there was an overall increase of 23% and 51% in new hospitalizations and new ICU admissions, respectively.
- On 18 December 2023, JN.1 ([link](#)), a sub-lineage of the BA.2.86 Omicron variant was designated a separate variant of interest (VOI), apart from its parent lineage BA.2.86, due to its rapid increase in prevalence in recent weeks. JN.1 accounted for 27.1% of sequences in week 48 compared to 3.3% in week 44. WHO is currently tracking several SARS-CoV-2 variants: five VOIs – XBB.1.5, XBB.1.16, EG.5 and BA.2.86 and JN.1; and five VUMs. Globally, EG.5 remains to be the most reported VOI. However, it has shown a declining trend over the past few weeks, accounting for 36.3% of sequences shared on GISAID in week 48 compared to 53.7% in week 44.
- The [Global WHO Coronavirus \(COVID-19\) Dashboard](#) has been updated and adapted with a new interface on 22 December 2023 to support WHO and Member States' work to transition from COVID-19 as an emergency to longer-term disease management, as outlined in WHO's 3 May 2023 [COVID-19 2023-2025 Updated Strategic Preparedness and Response Plan](#). The new dashboard will progressively incorporate more components throughout 2024. The previous link of the Global WHO Coronavirus (COVID-19) Dashboard will still be active and redirect users to the new one from 22 December onward. Please note that start time of the redirection can differ around the world by up to 24 hours.

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 \(last updated 14 December 2023\)](#)
 - [Forest Plots displaying results of COVID-19 VE studies \(last updated 18 December 2023\)](#)
 - [Special focus WEU on interpreting relative VE \(29 June 2022, pages 6-8\)](#)
 - [Neutralization plots \(last updated 18 December 2023\)](#)
 - [WHO COVID-19 VE Resources](#)
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Global overview

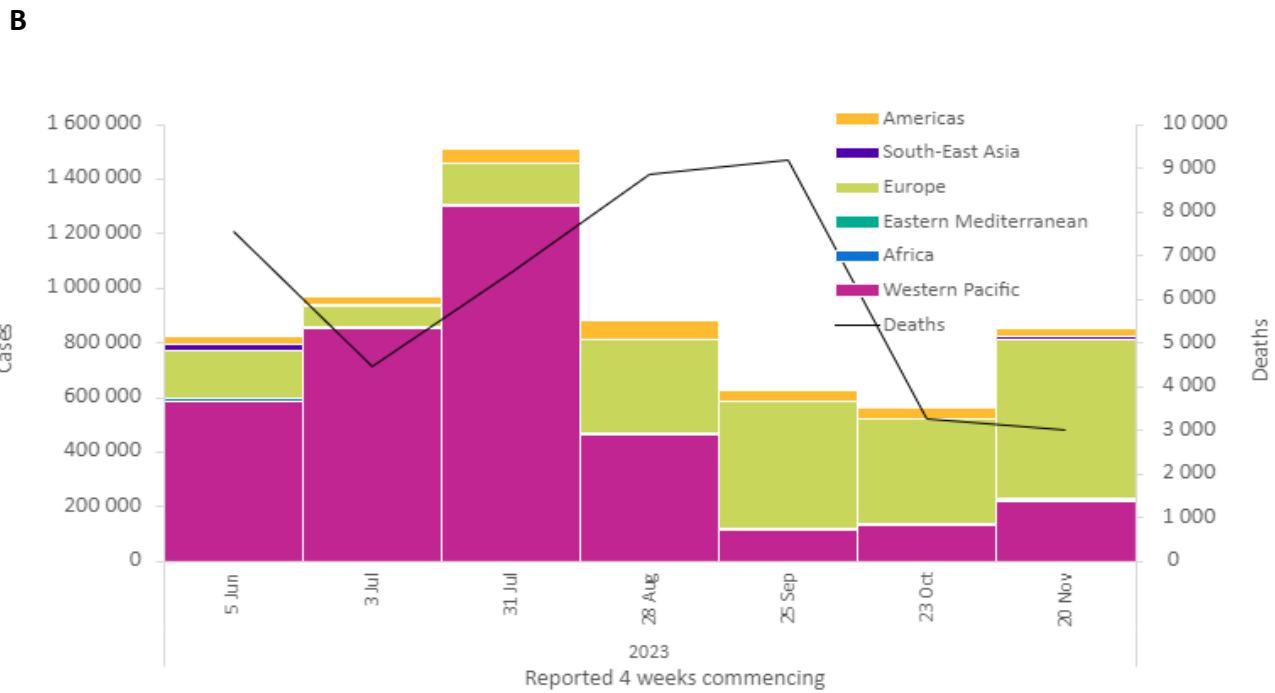
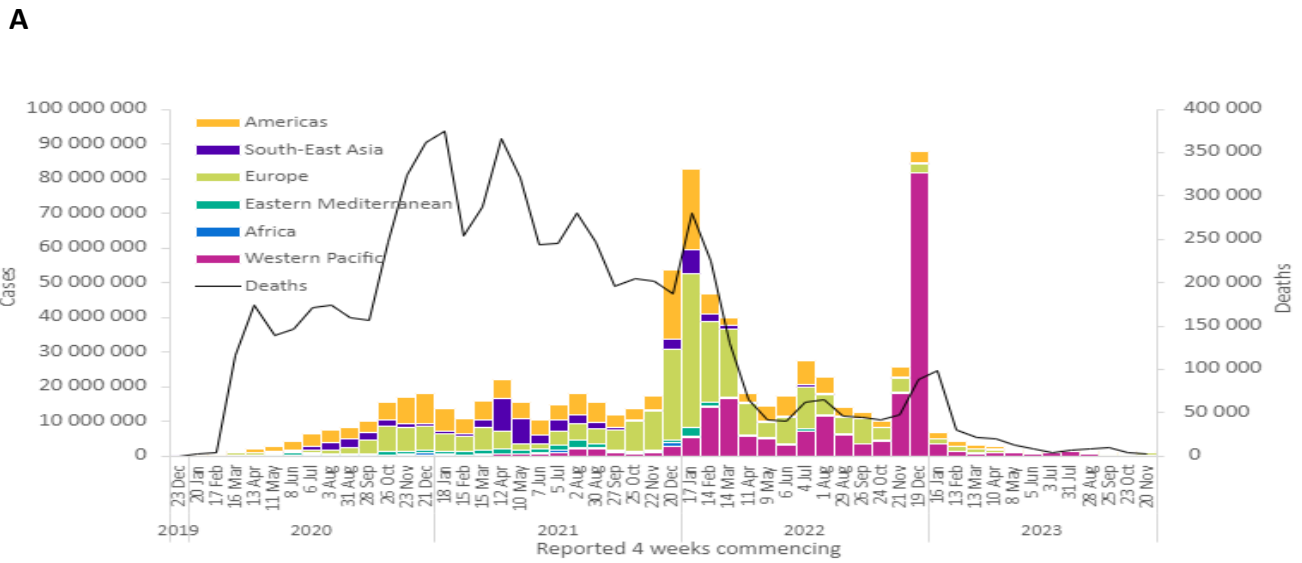
Data as of 17 December 2023

Globally, over 850 000 new cases were reported during the 28-day period from 20 November to 17 December 2023. The number of new cases increased by 52% as compared to the previous 28-day period (Figure 1, Table 1). Over 3000 new deaths were reported during this period, a decrease of 8% as compared to the previous 28-day period. As of 17 December 2023, over 772 million confirmed cases and nearly seven 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 45% (105 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 made by countries regarding reported COVID-19 cases and deaths. 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 49, 4 to 10 December 2023) from sentinel sites show that the SARS-CoV-2 PCR percent positivity from reporting countries averages approximately 7.6% (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 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 and global deaths by 28-day intervals reported by WHO Region, as of 17 December 2023 (A); 5 June to 17 December 2023 (B)**



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

At the regional level, the number of newly reported 28-day cases increased across four of the six WHO regions: the European Region (+54%), the Western Pacific Region (+67%), the African Region (+77%), and the South-East Asia Region (+388%); while cases decreased in two WHO regions: the Eastern Mediterranean Region (-51%), and the Region of the Americas (-23%). The number of newly reported 28-day deaths decreased across four regions: the Eastern Mediterranean Region (-65%), the African Region (-50%), the Region of the Americas (-48%), and the Western Pacific Region (-32%); while deaths increased in two WHO regions: the European Region (+14%), and the South-East Asia Region (+317%).

Among the countries reporting, the highest numbers of new 28-day cases at the country level were reported from the Russian Federation (279 359 new cases; +130%), Singapore (120 898 new cases; +86%), Italy (114 795 new cases; +10%), Poland (39 828 new cases; +82%), and Australia (39 505 new cases; +12%). The highest numbers of new 28-day deaths were reported from Italy (510 new deaths; -15%), Sweden (396 new deaths; +6%), the Russian Federation (376 new deaths; +50%), Australia (211 new deaths; -35%), and Poland (141 new deaths; +76%).

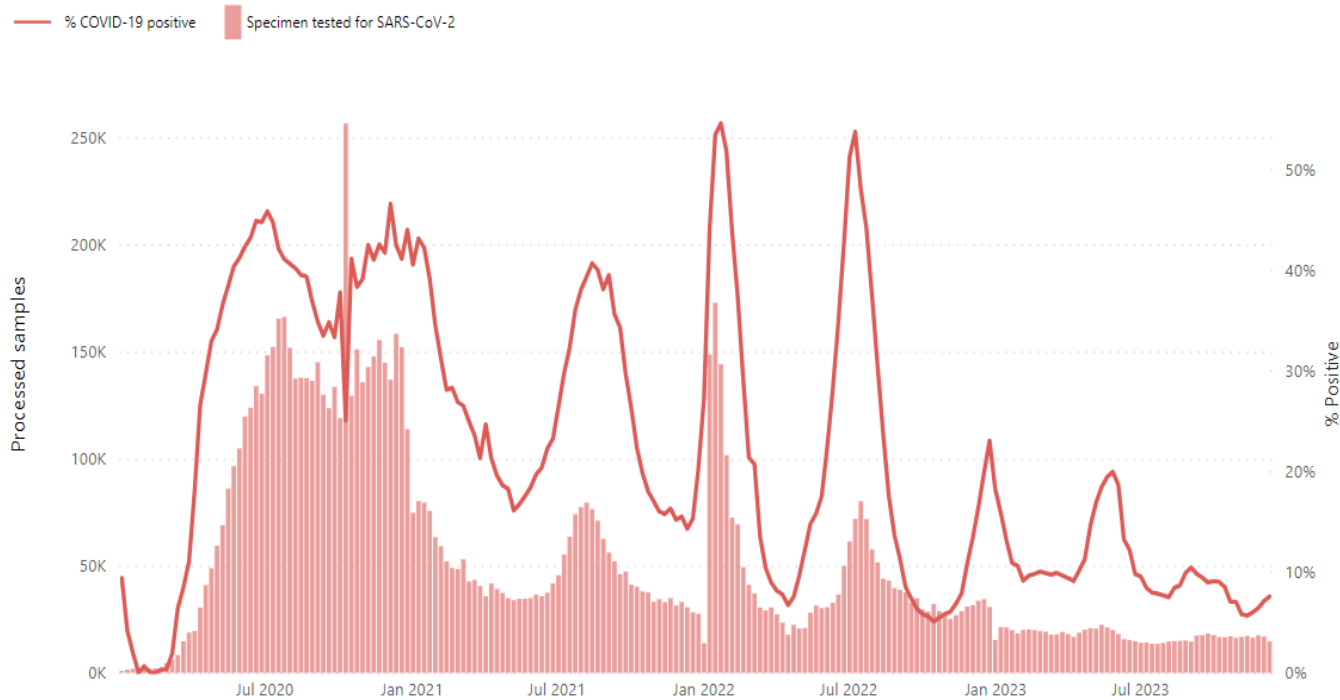
Table 1. Newly reported and cumulative COVID-19 confirmed cases and deaths, by WHO Region, as of 17 December 2023**

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	584 295 (68%)	54%	277 726 290 (36%)	2 217 (74%)	14%	2 259 030 (32%)	36/61 (59%)	24/61 (39%)
Western Pacific	221 667 (26%)	67%	207 753 363 (27%)	373 (12%)	-32%	418 727 (6%)	14/35 (40%)	6/35 (17%)
Americas	32 276 (4%)	-23%	193 169 196 (25%)	299 (10%)	-48%	2 975 481 (43%)	18/56 (32%)	8/56 (14%)
South-East Asia	9 287 (1%)	388%	61 219 716 (8%)	50 (2%)	317%	808 115 (12%)	6/10 (60%)	4/10 (40%)
Africa	4 665 (1%)	77%	9 561 535 (1%)	7 (<1%)	-50%	175 473 (3%)	27/50 (54%)	5/50 (10%)
Eastern Mediterranean	2 483 (<1%)	-51%	23 407 881 (3%)	59 (2%)	-65%	351 840 (5%)	4/22 (18%)	3/22 (14%)
Global	854 673 (100%)	52%	772 838 745 (100%)	3 005 (100%)	-8%	6 988 679 (100%)	105/234 (45%)	50/234 (21%)

*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 specimens tested and test positivity rates reported to FluNet from sentinel sites; 5 January 2020 to 10 December 2023



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 17 December 2023**



Data Source: World Health Organization
 United Nations Population Division (Population prospect 2020)
 Map Production: WHO Health Emergencies Programme

Not applicable

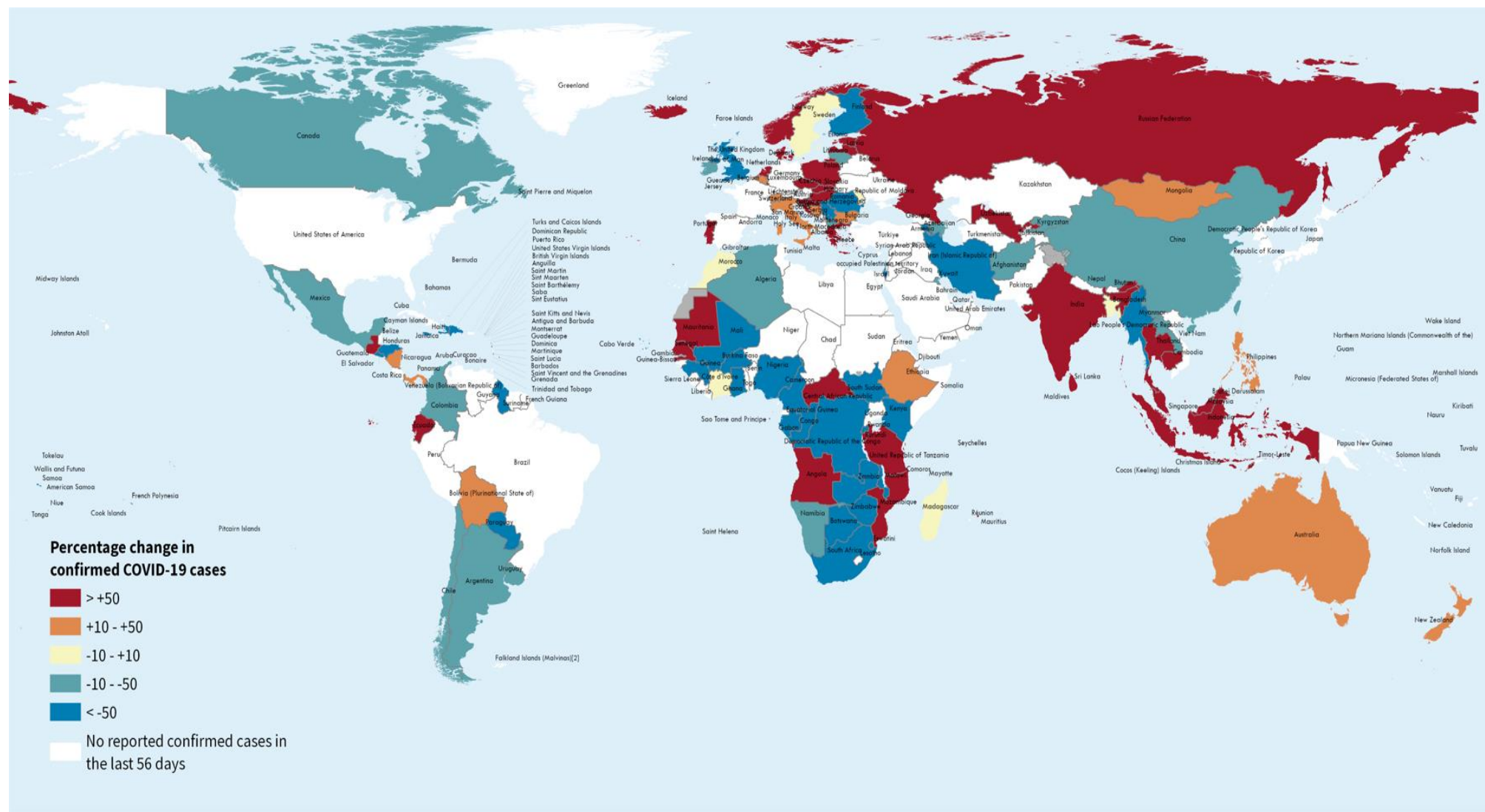


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**See [Annex 1: Data, table, and figure notes](#)

Figure 4. Percentage change in confirmed COVID-19 cases over the last 28 days relative to the previous 28 days, as of 17 December 2023**



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

Not applicable

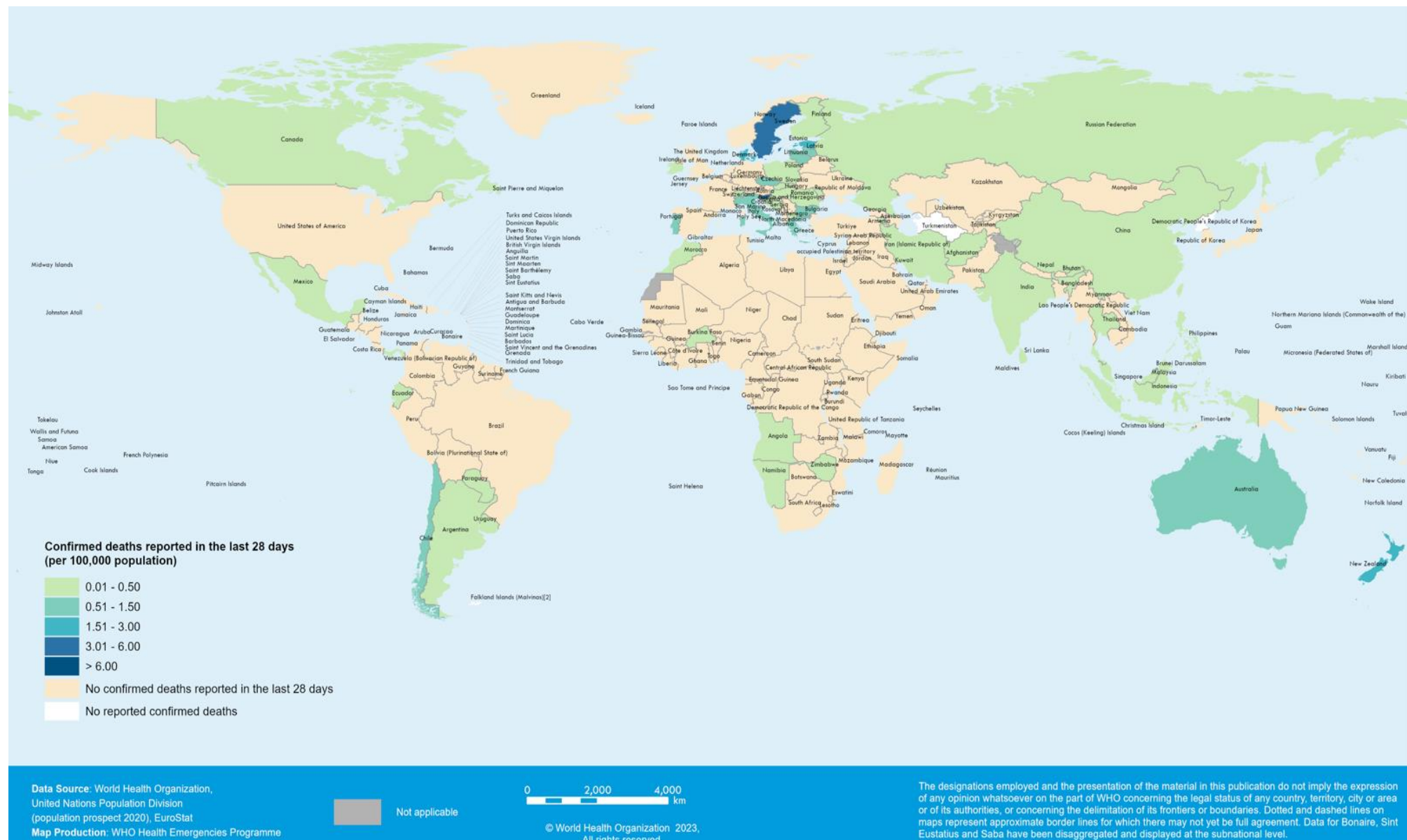
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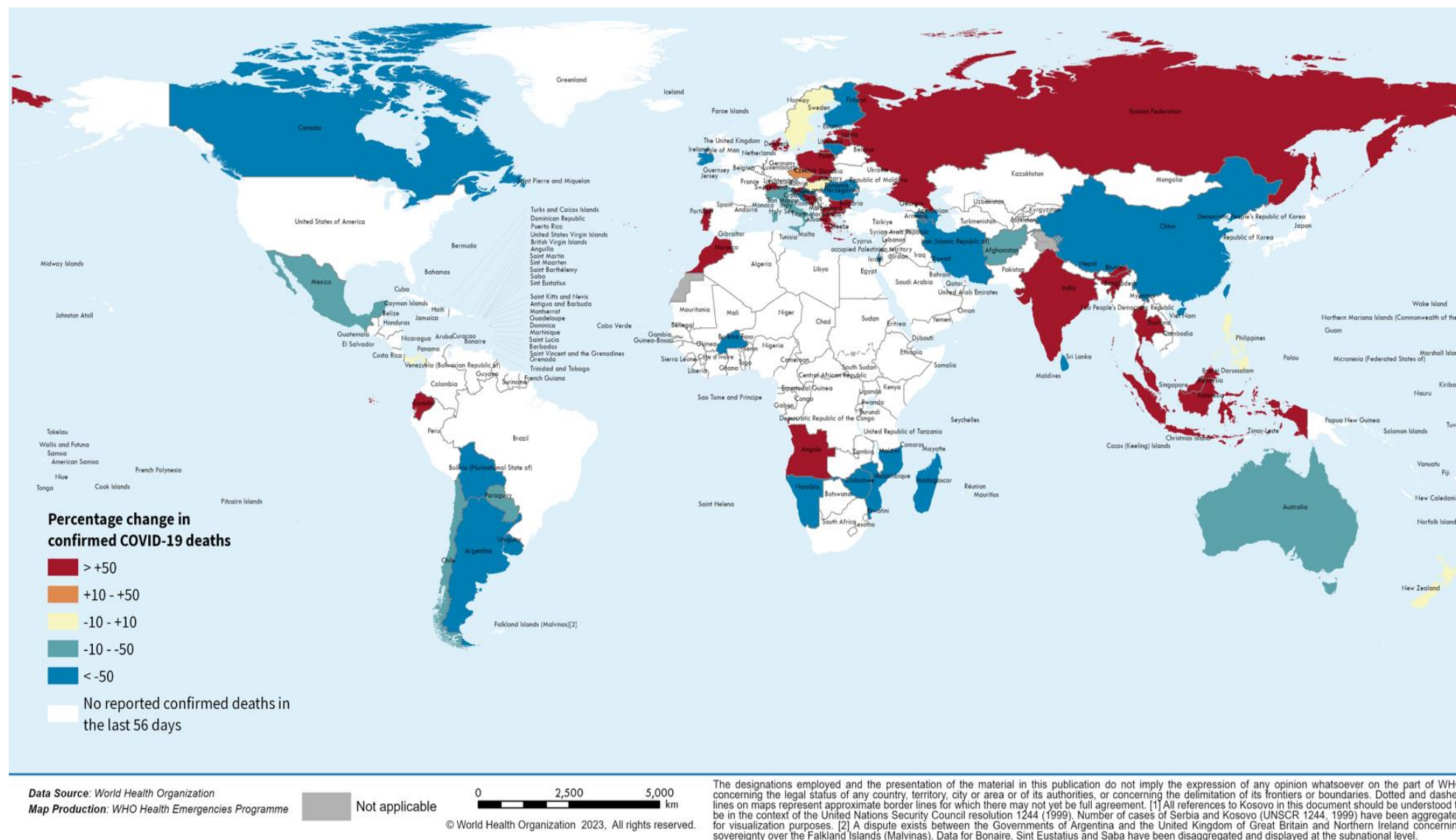
**See [Annex 1: Data, table, and figure notes](#)

Figure 5. Number of COVID-19 deaths reported over the last 28 days per 100 000 population, as of 17 December 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 17 December 2023**



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

Hospitalizations and ICU admissions

At the global level, during the past 28 days (13 November to 10 December 2023), a total of 118 958 new hospitalizations and 1610 new intensive care unit (ICU) admissions were reported from 58 and 36 countries, respectively (Figure 7). 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, these data are subject to reporting delays. They 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, 58 (25%) countries reported data to WHO on new hospitalizations at least once (Table 2). The Region of the Americas had the highest proportion of countries reporting data on new hospitalizations (20 countries; 36%), followed by the European Region (17 countries; 28%), the African Region (14 countries; 28%), the South-East Asia Region (two countries; 20%), and the Western Pacific Region (five countries; 14%). 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 the period was 15% (36 countries) (Table 2).

Among the 36 countries consistently reporting new hospitalizations, 12 (33%) countries registered an increase of 20% or greater in hospitalizations during the past 28 days compared to the previous 28-day period (16 October to 12 November): Ecuador (1367 vs 202; +577%), Chile (536 vs 116; +362%), Indonesia (149 vs 42; +255%), Mauritius (83 vs 24; +246%), Guatemala (15 vs six; +150%), Bosnia and Herzegovina (30 vs 16; +88%), Mongolia (106 vs 72; +47%), Hungary (632 vs 439; +44%), Estonia (474 vs 355; +34%), the United States of America (80 882 vs 64 522; +25%), Slovakia (830 vs 679; +22%), and Czechia (1506 vs 1242; +21%). The highest numbers of new hospital admissions were reported from the United States of America (80 882 vs 64 522; +25%), Italy (9351 vs 8083; +16%), and Mexico (7193 vs 6083; +18%).

* “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, 13 November to 10 December 2023 compared to 16 October to 12 November 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	14/50 (28%)	138	3/50 (6%)	94	+276%
Americas	20/56 (36%)	92 813	18/56 (32%)	92 763	+25%
Eastern Mediterranean	0/22 (0%)	N/A***	0/22 (0%)	N/A	N/A
Europe	17/61 (28%)	20 734	12/61 (20%)	20 091	+14%
South-East Asia	2/10 (20%)	172	2/10 (20%)	172	+129%
Western Pacific	5/35 (14%)	5 101	1/35 (14%)	106	+47%
Global	58/234 (25%)	118 958	36/234 (15%)	113 226	+23%

*Percent change is calculated for countries reporting consistently both in the past 28 days and the previous 28 days (comparison period).

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

*** N/A represents not available or applicable.

Table 3. Countries that consistently reported new hospitalizations by WHO regions, 13 November to 10 December 2023 compared 16 October to 12 November 2023.

Region	Country/Territory	New Hospitalization in last 28 days	% Change from previous 28-day period
Africa	Mauritius	83	246%
Africa	Angola	11	N/A*
Africa	Eswatini	0 ⁺	-100%
Americas	Mexico	7 193	18%
Americas	Canada	2 238	-13%
Americas	Ecuador	1 367	577%
Americas	Chile	536	362%
Americas	Colombia	193	-4%
Americas	Argentina	181	-48%
Americas	Uruguay	79	-25%
Americas	Honduras	37	-18%
Americas	Panama	26	4%
Americas	Guatemala	15	150%
Americas	Saint Lucia	10	-57%
Americas	Bolivia (Plurinational State of)	6	-78%
Americas	Dominica	0	N/A
Americas	Guyana	0	N/A
Americas	Haiti	0	N/A
Americas	Suriname	0	N/A
Americas	Turks and Caicos Islands	0	N/A
Americas	United States of America	80 882	25%
Europe	Italy	9 351	16%
Europe	Greece	3 792	7%
Europe	Netherlands	2 196	19%
Europe	Czechia	1 506	21%
Europe	Slovakia	830	22%
Europe	Ireland	816	-16%
Europe	Hungary	632	44%
Europe	Estonia	474	34%
Europe	Lithuania	387	14%
Europe	Portugal	56	-19%
Europe	Bosnia and Herzegovina	30	88%
Europe	Malta	21	-59%
South-East Asia	Indonesia	149	255%
South-East Asia	Bangladesh	23	-30%
Western Pacific	Mongolia	106	47%

* 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 40 (17%) countries reported data to WHO at least once on new ICU admissions (Figure 8). 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 (12 countries; 21%), the Western Pacific Region (six countries; 17%), the African Region (six countries; 12%), and the South-East Asia Region (one country; 10%). No country in the Eastern Mediterranean Region reported ICU data during the period. The proportion of countries that consistently reported new ICU admissions for the period was 9% (22 countries).

Among the 22 countries consistently reporting new ICU admissions, two (8%) countries showed an increase of 20% or greater in new ICU admissions during the past 28 days compared to the previous 28-day period: Ireland (26 vs 11; +136%) and Slovakia (10 vs eight; +25%). The highest numbers of new ICU admissions were reported from Italy (219 vs 232; -6%), Canada (161 vs 202; -20%), and Australia (138 vs 232; -41%).

Table 4. Number of new ICU admissions reported by WHO regions, 13 November to 10 December 2023 compared to 16 October to 12 November 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	6/50 (12%)	3	0/50 (<1%)	N/A	N/A
Americas	12/56 (21%)	477	9/56 (16%)	470	+98%
Eastern Mediterranean	0/22 (0%)	N/A***	0/22 (0%)	N/A	N/A
Europe	15/61 (25%)	898	11/61 (18%)	878	+32%
South-East Asia	1/10 (10%)	18	1/10 (10%)	18	+500%
Western Pacific	6/35 (17%)	214	1/35 (3%)	0 ⁺	N/A
Global	40/234 (17%)	1610	22/234 (9%)	1367	+51%

*Percent change is calculated for countries reporting consistently both in the past 28 days and the previous 28 days (comparison period).

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

*** N/A represents data not available or 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.

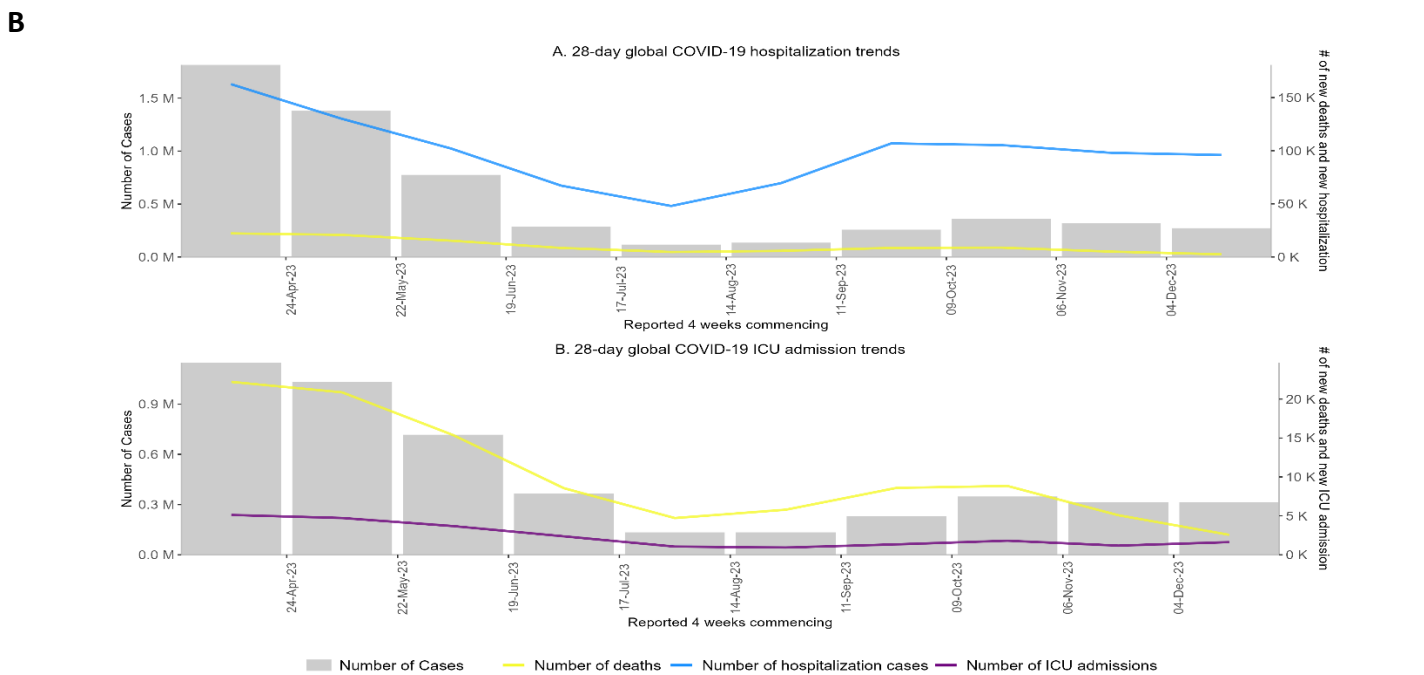
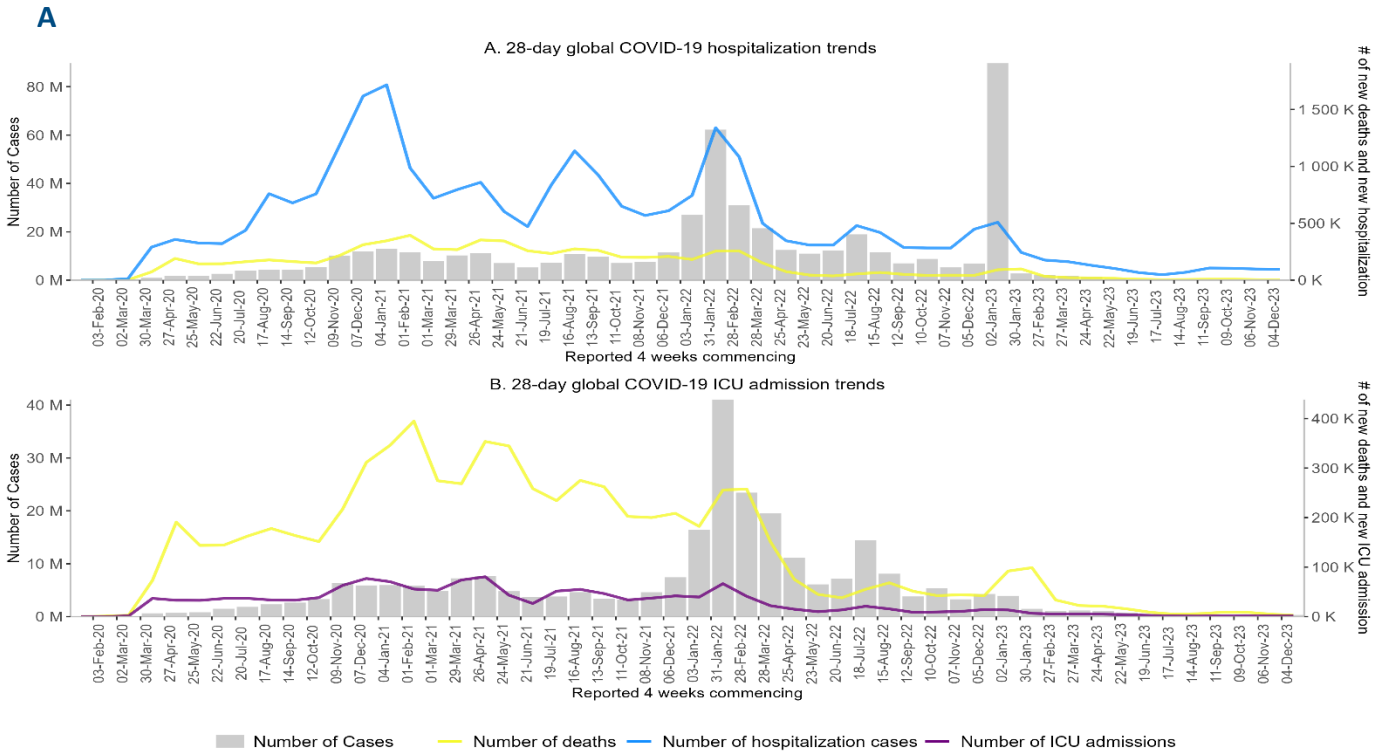
Table 5. Countries that consistently reported new ICU admissions by WHO regions, 13 November to 10 December 2023 compared 16 October to 12 November 2023.

Region	Country/Territory	New ICU admissions in last 28 days	% Change from previous 28-day period
Americas	Ecuador	244	578%
Americas	Canada	173	4%
Americas	Chile	36	112%
Americas	Uruguay	11	-8%
Americas	Guatemala	5	N/A*
Americas	Panama	1	N/A
Americas	Guyana	0 ⁺	N/A
Americas	Honduras	0	-100%
Americas	Bolivia (Plurinational State of)	0	-100%
Europe	Italy	308	39%
Europe	Sweden	128	10%
Europe	Czechia	102	21%
Europe	Greece	87	7%
Europe	Netherlands	86	19%
Europe	Lithuania	73	421%
Europe	Hungary	64	68%
Europe	Ireland	13	-35%
Europe	Estonia	10	100%
Europe	Slovakia	5	-50%
Europe	Bosnia and Herzegovina	2	100%
South-East Asia	Indonesia	18	500%
Western Pacific	Mongolia	0	N/A

* 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 3 February 2020 to 10 December 2023 (A); and from 1 March 2023 to 10 December 2023 (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.

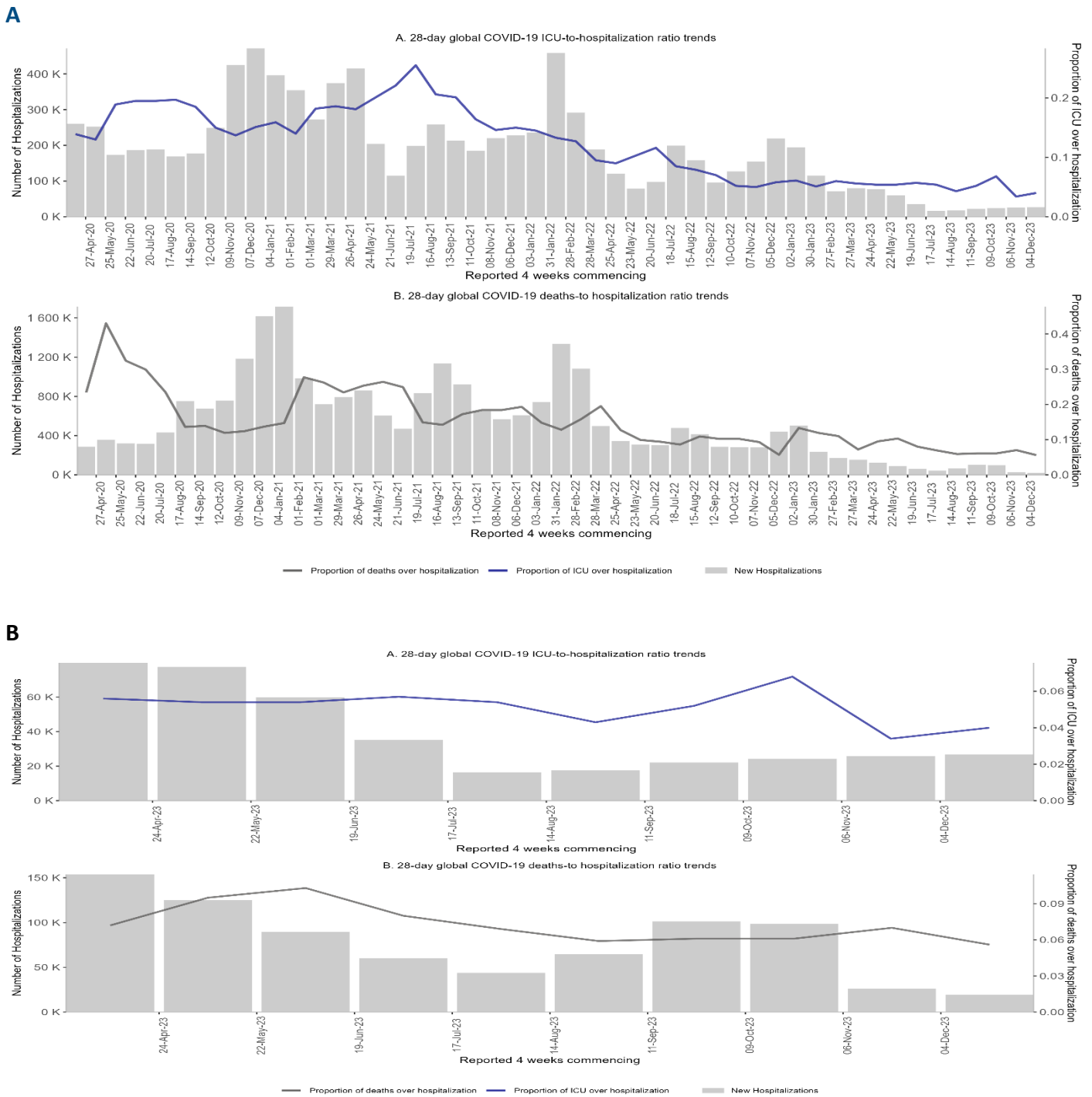
These indicators are subject to the same limitations mentioned above and their calculations are limited to the countries reporting all relevant data elements (hospitalizations, ICU admissions and deaths) in a given reporting period. It should be noted that there may be differences in reporting among 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, and other factors. 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, from 27 April 2020 to 10 December 2023 (A), and 24 April to 10 December 2023 (B)



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 that reported both new hospitalization and new deaths.

Source: [WHO COVID-19 Detailed Surveillance Dashboard](#)

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

Geographic spread and prevalence

Globally, during the 28-day period from 20 November to 17 December 2023, 22 413 SARS-CoV-2 sequences were shared through GISAID. In comparison, in the two previous 28-day periods, there were 62 927 and 77 550 sequences shared, respectively. As there is usually a several-week average delay between case incidence and sequence reporting, it remains to be seen whether there will be an increase in reported sequences in the coming weeks commensurate to the current increase in new cases reported, or whether this decline in reported sequences will persist as countries continue to scale down sequencing. The data are periodically updated to retrospectively 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:

- Five variants of interest (VOIs): XBB.1.5, XBB.1.16, EG.5, BA.2.86 and JN.1
- 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 44 (30 October to 5 November 2023) to week 48 (27 November to 3 December 2023).

Globally, EG.5 remains to be the most reported VOI (now reported by 93 countries), however it has shown declining trends over the past few weeks, accounting for 36.3% of sequences in week 48 compared to 53.7% in week 44.

JN.1, a sub-lineage of the BA.2.86 Omicron variant, was designated a VOI on 18 December 2023, due to its rapid increase in prevalence in recent weeks. Previously WHO was tracking it as part of the BA.2.86 VOI. JN.1 accounted for 27.1% of SARS-CoV-2 sequences in week 48 compared to 3.3% in week 44. This is a notable increase when comparing to its parent lineage, BA.2.86, which accounted for 5.9% of sequences in week 48 compared to 4.4% in week 44. The [initial risk evaluation for JN.1](#) was published on 18 December 2023, with an overall evaluation of low additional public health risk at the global level based on available evidence.

The other VOIs, XBB.1.5 and XBB.1.16, have decreased in global prevalence, respectively, during the same period: XBB.1.5 accounted for 7.3% of sequences in week 48, a slight decrease from 8.2% in week 44; XBB.1.6 accounted for 4.2% of sequences in week 48, a decrease from 9.6% in week 44 (Figure 10, Table 6).

All VUMs have shown a decreasing trend over the reporting period (Table 6).

Sufficient sequencing data to calculate variant prevalence at the regional level during weeks 44 to 48 were available from three WHO regions: the Region of the Americas, the Western Pacific Region, and the European Region (Table 7). Among the VOIs, JN.1 was the most reported variant and showed an increasing trend in the European and Western Pacific regions, whilst EG.5 remained the most reported variant in the Regions of the Americas. BA.2.86, XBB.1.5 and XBB.1.16 showed increasing or stable trends in all three regions. All VUMs in all three regions observed decreasing or stable trends.

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 findings 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 44 to week 48 of 2023

Lineage	Countries [§]	Sequences [§]	2023-44	2023-45	2023-46	2023-47	2023-48
VOIs							
XBB.1.5*	128	316 888	8.2	7.9	8.6	7.4	7.3
XBB.1.16*	119	103 516	9.6	9.0	6.6	5.6	4.2
EG.5*	93	143 675	53.7	54.1	51.7	46.5	36.3
BA.2.86*	49	5 972	4.4	4.8	5.8	7.1	5.9
JN.1*	41	7 344	3.3	5.3	10.1	16.7	27.1
VUMs							
DV.7*	40	4 635	1.2	0.9	0.9	1.0	0.6
XBB*	143	90 441	2.3	2.0	1.8	1.2	1.0
XBB.1.9.1*	118	85 640	6.7	5.4	5.5	4.3	3.3
XBB.1.9.2*	95	37 764	1.7	1.1	0.7	0.5	0.2
XBB.2.3*	107	34 573	3.5	3.4	2.5	2.3	1.6
Unassigned	95	155 778	3.4	4.2	4.2	6.4	11.9
Other+	211	6 795 697	1.9	1.6	1.5	0.8	0.5

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.

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

* 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 44 to week 48 of 2023

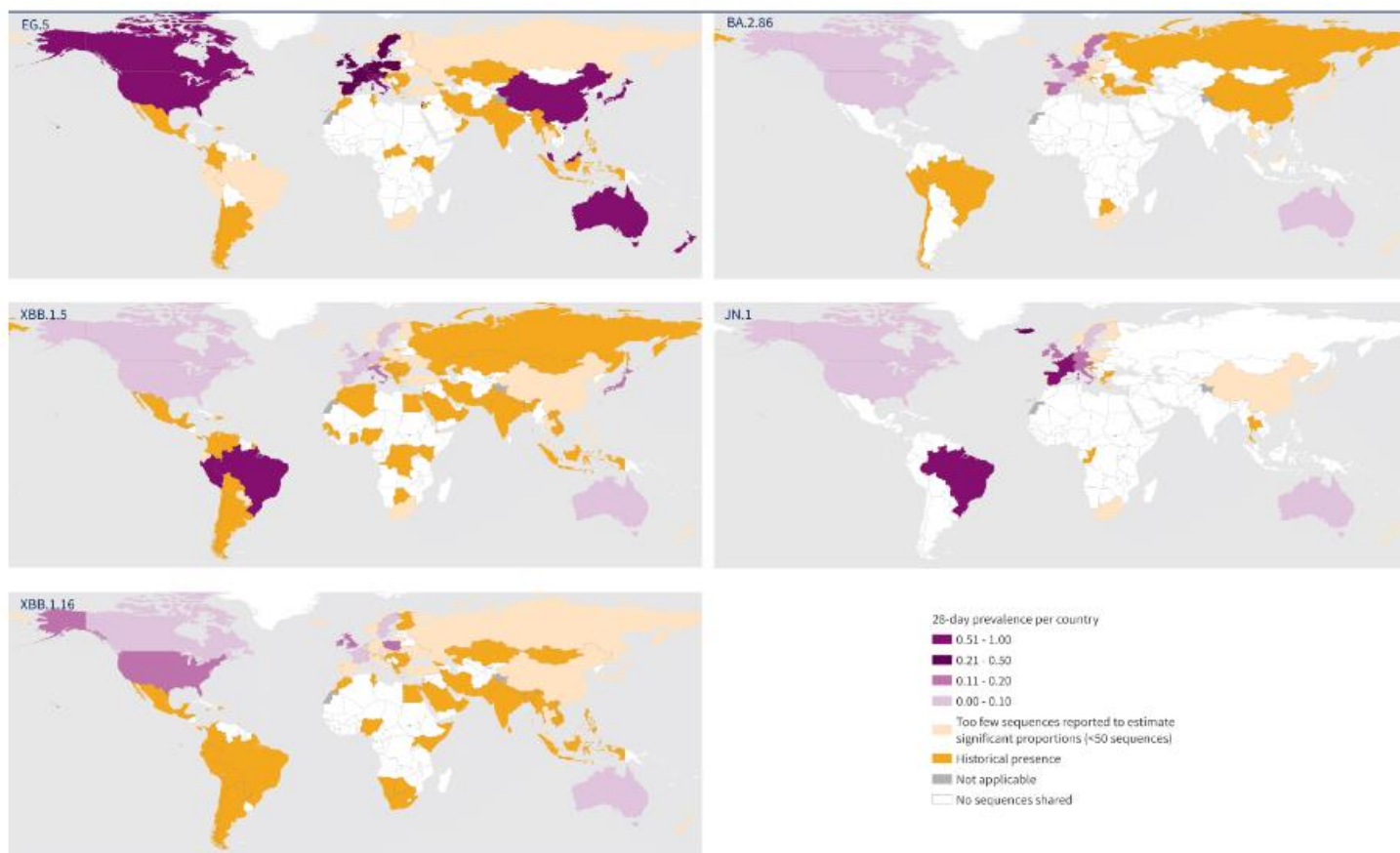
Lineage (week 44 to week 48)	AMRO	AFRO [‡]	EMRO [‡]	EURO	SEARO [‡]	WPRO
VOIs						
XBB.1.5*	↔	▨	▨	↓	▨	↔
XBB.1.16*	↓	▨	▨	↓	▨	↓
EG.5*	↔	▨	▨	↓	▨	↓
BA.2.86*	↑	▨	▨	↔	▨	↔
JN.1*	↑	▨	▨	↑	▨	↑
VUMs						
DV.7*	↔	▨	▨	↓	▨	↓
XBB*	↓	▨	▨	↓	▨	↓
XBB.1.9.1*	↓	▨	▨	↓	▨	↓
XBB.1.9.2*	↓	▨	▨	↓	▨	↓
XBB.2.3*	↓	▨	▨	↓	▨	↔

↑ 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 VOIs EG.5, XBB.1.5, XBB.1.16, BA.2.86, and JN.1, from 4 November to 3 December 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 Influenza on Sharing All Influenza Data
Map Producers: WHO Health Emergencies Programme
Map Date: 20 December 2023



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

+ Historical presence indicates countries previously reporting sequences of VOIs but have not reported within the period from 4 November to 3 December 2023

Figure 10. The (A) number and (B) percentage of SARS-CoV-2 sequences, from 1 May to 3 December 2023

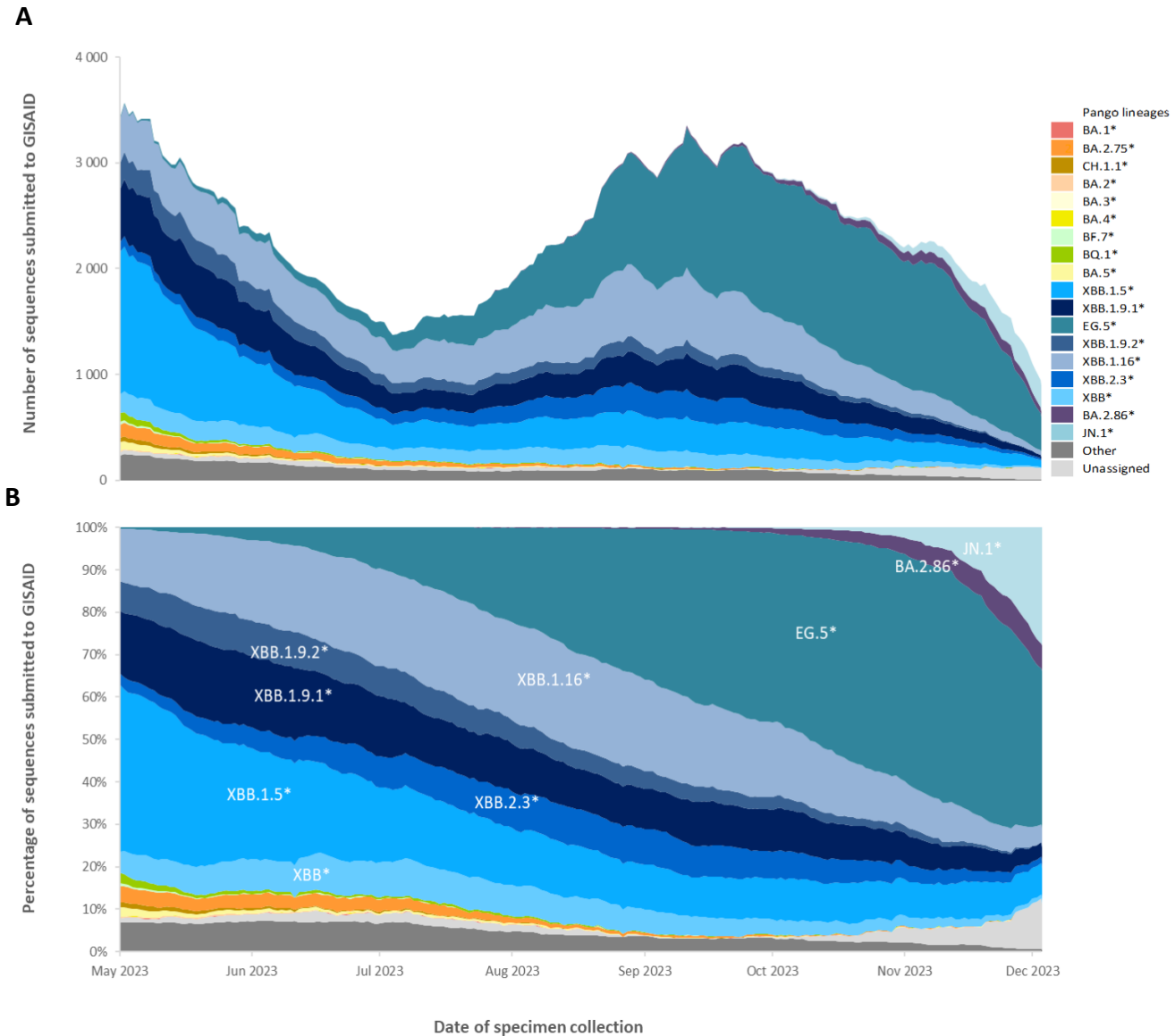


Figure 10. Panel A shows the number, and **Panel B** the percentage, of all circulating variants since April 2023. Omicron sister-lineages and additional Omicron VOC descendent lineages under further monitoring are shown. *BA.1**, *BA.2**, *BA.3**, *BA.4** and *BA.5** (* indicates inclusion of descendent 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 May to 3 December 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 JN.1 Initial Risk Evaluation, 18 December 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](#)

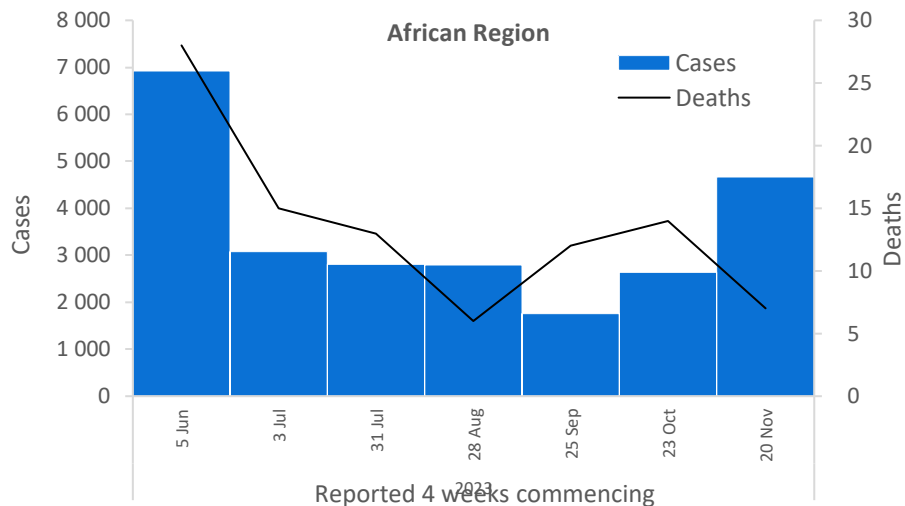
WHO regional overviews

Data for 20 November to 17 December 2023

African Region

The African Region reported over 4500 new cases, a 77% increase 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 Burundi (26 vs two; +1200%), Angola (301 vs 26; +1058%), and United Republic of Tanzania (64 vs 17; +276%). The highest numbers of new cases were reported from Mauritius (3635 new cases; 285.8 new cases per 100 000; +158%), Angola (301 new cases; <1 new case per 100 000; +1058%), and Seychelles (134 new cases; 136.3 new case per 100 000; +11%).

The number of new 28-day deaths in the Region decreased by 50% as compared to the previous 28-day period, with seven new deaths reported. These new deaths were reported from Zimbabwe (three new deaths; <1 new death per 100 000; -57%), Angola (one new death; <1 new death per 100 000; no deaths reported the previous 28-day period), Burkina Faso (one new death; <1 new death per 100 000; -50%), Mauritius (one new death; <1 new death per 100 000; 0%), and Namibia (one new death; <1 new death per 100 000; -50%).

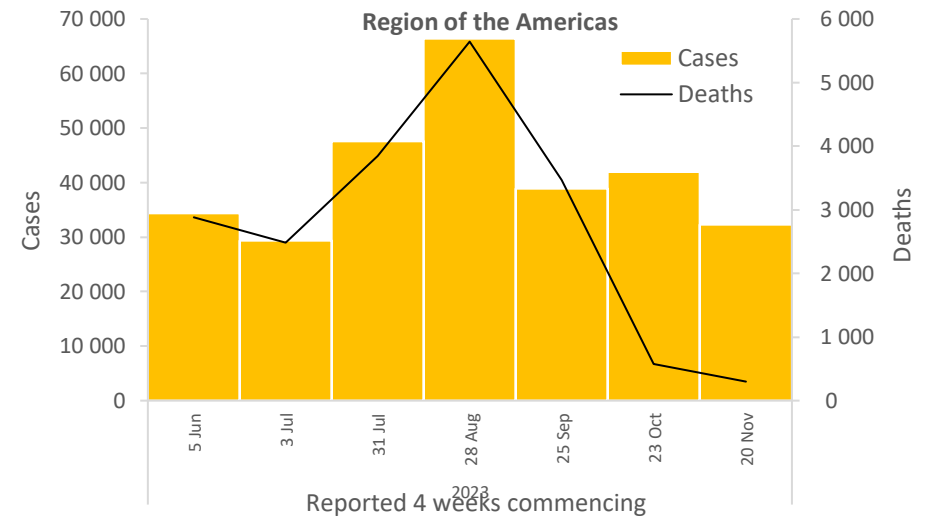


Updates from the [African Region](#)

Region of the Americas

The Region of the Americas reported over 32 000 new cases, a 23% decrease as compared to the previous 28-day period. Six countries have reported increases in new cases of 20% or greater compared to the previous 28-day period, with the highest proportion increases observed in Barbados (13 vs five; +160%), Ecuador (2217 vs 1056; +110%), and Guatemala (two vs one; +100%). The highest numbers of new cases were reported from Canada (16 980 new cases; 45.0 new cases per 100 000; -19%), Chile (9117 new cases; 47.7 new cases per 100 000; -39%), and Ecuador (2217 new cases; 12.6 new cases per 100 000; +110%).

The number of new 28-day deaths in the Region decreased by 48% as compared to the previous 28-day period, with 299 new deaths reported. The highest numbers of new deaths were reported from Canada (130 new deaths; <1 new death per 100 000; -57%), Chile 129 new deaths; <1 new death per 100 000; -34%), and Mexico (22 new deaths; <1 new death per 100 000; -43%).

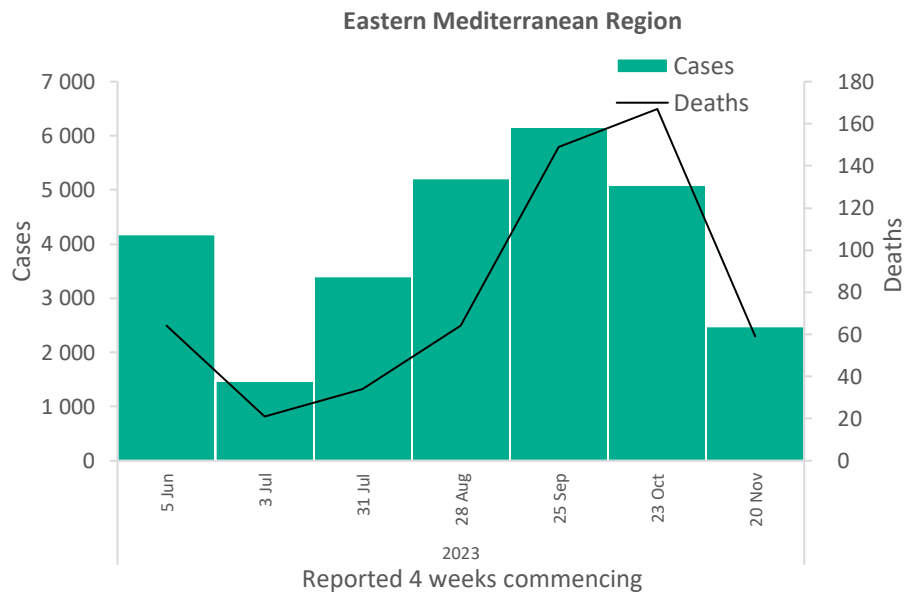


Updates from the [Region of the Americas](#)

Eastern Mediterranean Region

The Eastern Mediterranean Region reported over 2400 new cases, a 51% 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 the Islamic Republic of Iran (1048 new cases; 1.2 new cases per 100 000; -66%), Afghanistan (991 new cases; 2.5 new cases per 100 000; -36%), and Morocco (413 new cases; 1.1 new cases per 100 000; -3%).

The number of new 28-day deaths in the Region decreased by 65% as compared to the previous 28-day period, with 59 new deaths reported. The highest numbers of new deaths were reported from the Islamic Republic of Iran (53 new deaths; <1 new death per 100 000; -66%), Afghanistan (five new deaths; <1 new death per 100 000; -44%), and Morocco (one new death; <1 new death per 100 000; no deaths reported the previous 28-day period).

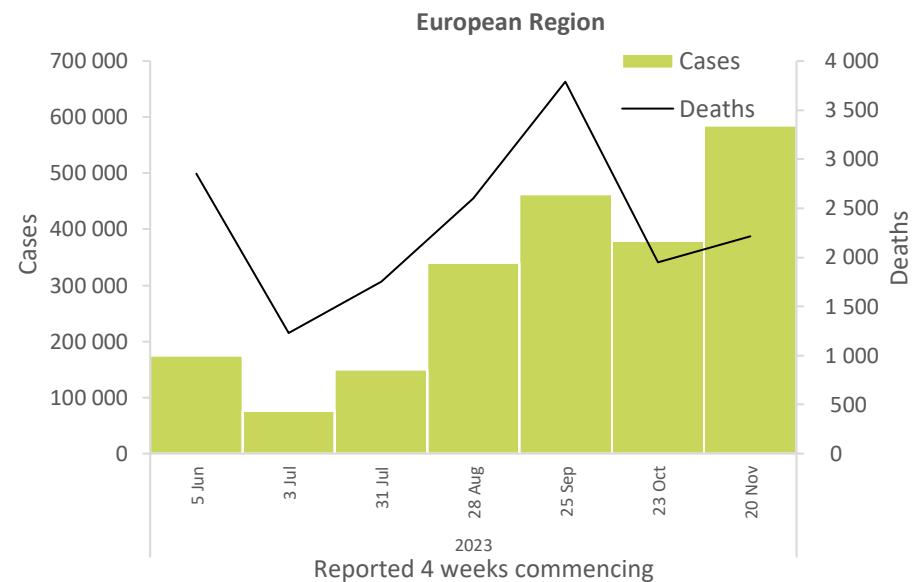


Updates from the [Eastern Mediterranean Region](#)

European Region

The European Region reported over 584 000 new cases, a 54% increase as compared to the previous 28-day period. Seventeen (27%) 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 Estonia (2041 vs 273; +648%), Luxembourg (1437 vs 284; +406%), and Slovakia (2561 vs 715; +258%). The highest numbers of new cases were reported from the Russian Federation (279 359 new cases; 191.4 new cases per 100 000; +130%), Italy (114 795 new cases; 192.5 new cases per 100 000; +10%), and Poland (39 828 new cases; 104.9 new cases per 100 000; +82%).

The number of new 28-day deaths in the Region increased by 14% as compared to the previous 28-day period, with 2217 new deaths reported. The highest numbers of new deaths were reported from Italy (510 new deaths; <1 new death per 100 000; -15%), Sweden (396 new deaths; 3.8 new deaths per 100 000; +6%), and the Russian Federation (376 new deaths; <1 new death per 100 000; +50%).

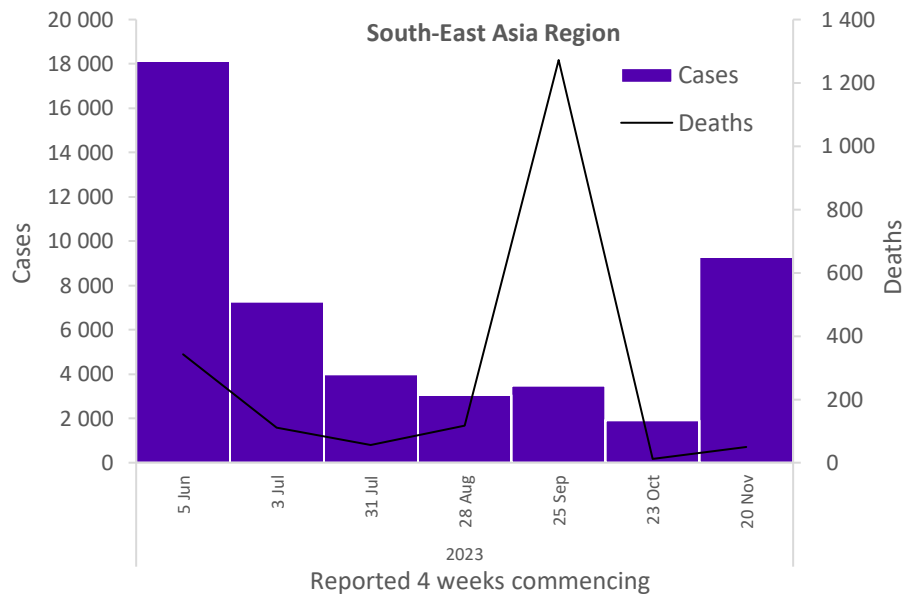


Updates from the [European Region](#)

South-East Asia Region

The South-East Asia Region reported over 9200 new cases, a 388% increase as compared to the previous 28-day period. Three (30%) 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 India (3241 vs 523; +520%), Sri Lanka (43 vs 21; +105%), and Thailand (2120 vs 1187; +79%). The highest numbers of new cases were reported from Indonesia (3725 new cases; 1.4 new cases per 100 000; no cases reported the previous 28-day period), India (3241 new cases; <1 new case per 100 000; +520%), and Thailand (2120 new cases; 3.0 new cases per 100 000; +79%).

The number of new 28-day deaths in the Region increased by 317% as compared to the previous 28-day period, with 50 new deaths reported. The highest numbers of new deaths were reported from India (21 new deaths; <1 new death per 100 000; +425%), Thailand (16 new deaths; <1 new death per 100 000; +220%), and Indonesia (12 new deaths; <1 new death per 100 000; no deaths reported the previous 28-day period).

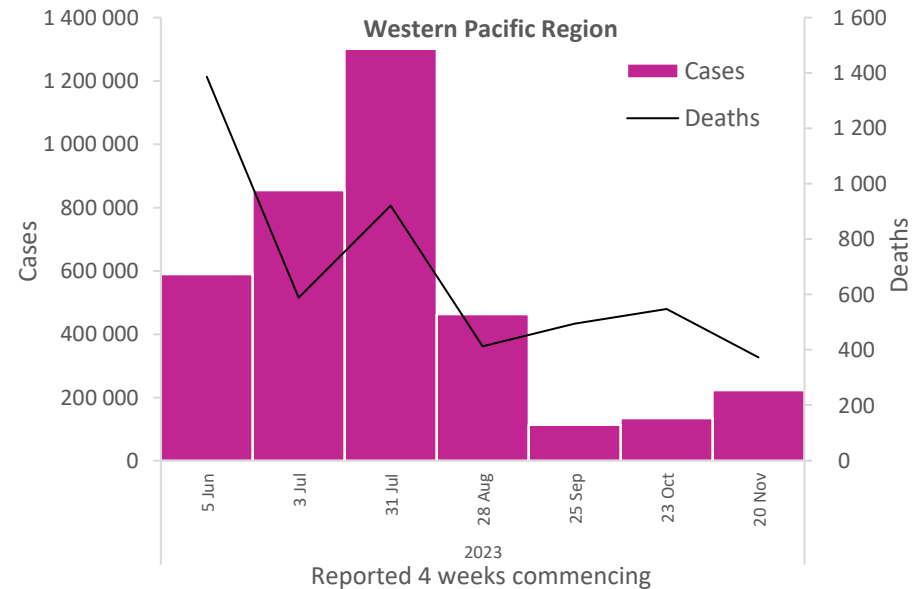


Updates from the [South-East Asia Region](#)

Western Pacific Region

The Western Pacific Region reported over 221 000 new cases, a 67% increase as compared to the previous 28-day period. Eight (23%) 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 Brunei Darussalam (7316 vs 1725; +324%), Malaysia (23 179 vs 7137; +225%), and Cambodia (28 vs nine; +211%). The highest numbers of new cases were reported from Singapore (120 898 new cases; 2066.5 new cases per 100 000; +86%), Australia (39 505 new cases; 154.9 new cases per 100 000; +12%), and New Zealand (23 680 new cases; 491.1 new cases per 100 000; +44%).

The number of new 28-day deaths in the Region decreased by 32% as compared to the previous 28-day period, with 373 new deaths reported. The highest numbers of new deaths were reported from Australia (211 new deaths; <1 new death per 100 000; -35%), New Zealand (94 new deaths; 1.9 new deaths per 100 000; +9%), and the Philippines (33 new deaths; <1 new death per 100 000; +3%).



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.

'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.

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.