COVID-19 Epidemiological Update

Edition 175 published 17 January 2025

In this edition:

Key highlights

- During the four-week reporting period (11 November to 8 December 2024), weekly SARS-CoV-2 PCR positivity conducted through systematic virological surveillance changed from 9.5% in the first week of the reporting period to 8.6% in the last week, with a weekly average of over 56 000 specimens tested across 103 countries with all regions reporting a percent test positivity below elevated level in the last reporting week.
- WHO is monitoring seven SARS-CoV-2 variants, including one variant of interest (VOI) JN.1, and six variants under monitoring (VUMs). JN.1, the VOI, accounted for 16.2% of sequences in week 49. The VUM, XEC continues to increase in prevalence, accounting for 38.6% of sequences in week 49, and is currently the most prevalent SARS-CoV-2 variant. All the remaining VUMs are declining in prevalence except JN.1.18, which is presenting a slight increase at a low level (0.7%).
- Wastewater surveillance, an important component of SARS-CoV-2 surveillance, is also important for early warning and for monitoring SARS-CoV-2 variant circulation. Around 30 countries from five WHO Regions have publicly available wastewater surveillance information and are featured on WHO's COVID-19 dashboard. According to estimates obtained from wastewater surveillance, circulation of the SARS-CoV-2 virus is approximately 2 to 19 times higher than identified and reported cases [*†‡§].
- Globally, during the 28-day period from 11 November to 8 December 2024, 81 countries reported COVID-19 cases, and 31 countries reported COVID-19 deaths. *Note that this does not reflect the actual number of countries where cases or deaths occur, as many countries have stopped or changed the frequency of reporting.* From the available data, the number of reported cases decreased by 6% during the 28-day period, with around 200 000 new cases while new deaths decreased by 24% with over 2600 fatalities, compared to the previous 28 days (14 October to 10 November 2024). *Trends in the number of new reported cases and deaths should be interpreted with caution due to decreased testing and sequencing, alongside reporting delays in many countries.*
- During the same period, 43 (18%) countries provided data on COVID-19 hospitalizations and 29 (12%) countries on admissions to an intensive care unit (ICU) at least once, respectively. From available data, about 22 000 new hospitalizations and more than 2000 new ICU admissions were reported during this

[*] Show us the data: global COVID-19 wastewater monitoring effectors, equity, and gaps

[†] Capturing the SARS-CoV-2 infection pyramid within the municipality of Rotterdam using longitudinal sewage surveillance

[§] Omicron COVID-19 Case Estimates Based on Previous SARS-CoV-2 Wastewater Load, Regional Municipality of Peel, Ontario, Canada

period. Among the countries reporting these data consistently over the current and past reporting period, there was an overall stable trend with 1% decrease and 3% increase in new hospitalizations and ICU admissions, respectively.

- Post-COVID-19 condition (PCC) continues to pose a substantial burden on health systems. It is challenging to estimate the incidence of PCC with high precision, but data suggest that approximately 6% of symptomatic SARS-CoV-2 infections resulted in PCC symptoms.[**] While severe COVID-19 is a significant risk factor for PCC, over 90% of PCC cases arise following mild COVID-19 due to the sheer volume of infections. Vaccination appears to offer a protective effect, reducing the likelihood of developing PCC.[††]
- On 20 December 2024, WHO published the latest COVID-19 Vaccination Insights Report for quarter three. As of the end of the third quarter of 2024, 39.2 million people in 90 Member States (covering the 31% of the global population) received a dose of a COVID-19 vaccine, with 14.8 million in quarter three alone. Among older adults, 19.7 million received a dose, a 1.68% uptake rate. Among healthcare workers, 1.3 million received a dose, a 0.96% uptake rate. Uptake varied significantly across regions and income levels, with higher rates in the Region of Americas and European Regions and in high- and upper middle-income countries than in other regions and income groups. This does not take into account the autumn/winter campaigns in the northern hemisphere.

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

- Past editions of the WHO Monthly Operational Update and 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 9 January 2025)
- Forest Plots displaying results of COVID-19 VE studies (last updated 14 January 2025)
- Special focus WEU on interpreting relative VE (29 June 2022, pages 6-8)
- Neutralization plots (last updated 13 January 2025)
- WHO COVID-19 VE Resources/Immunization Analysis and Insights

[**] Estimated Global Proportions of Individuals with Persistent Fatigue, Cognitive, and Respiratory Symptom Clusters Following Symptomatic COVID-19 in 2020 and 2021 - PubMed (nih.gov)

[††] Post-acute Sequelae of SARS-CoV-2 Infection in the Pre-Delta, Delta, and Omicron Eras | New England Journal of Medicine (nejm.org)

Global overview

Data as of 8 December 2024

SARS-CoV-2 test positivity rate conducted through systematic virological surveillance reflects the circulation of the virus in communities and is not much affected by reductions in disease surveillance. With the integration of SARS-CoV-2 into existing respiratory disease surveillance systems, more countries have started to report SARS-CoV-2 infections to the Global Influenza Surveillance and Response System (GISRS). Global and national data on SARS-CoV-2 PCR percent positivity are available on WHO's integrated influenza and other respiratory viruses surveillance dashboard.

Globally, during the four-week reporting period (11 November to 8 December 2024), the SARS-CoV-2 percent positivity of the specimens tested conducted through sentinel and systematic virological surveillance stayed relatively stable, changing from 9.5% to 8.6%. During this period, on average 56 313 specimens per week were tested for SARS-CoV-2 from across 103 countries that reported at least once (Table 1).

Globally, the number of new weekly cases decreased by 6% during the 28-day period from 11 November to 8 December 2024 compared to the previous 28-day period (14 October to 10 November), with over 194 000 new cases reported (Figure 2, Table 2). The number of new weekly deaths decreased by 24% compared to the previous 28-day period, with over 2600 new fatalities reported. As of 8 December 2024, over 777 million confirmed cases and over 7 million deaths have been reported globally. According to estimates obtained from wastewater surveillance, circulation is approximately 2 to 19 times higher than identified and reported cases.[‡‡§§***†††]

Reported cases do not accurately represent infection rates due to the reduction in testing and reporting globally. During this 28-day period, only 35% (81 of 234) and 12% (29 of 234) of countries reported at least one case and death to WHO, respectively. It is important to note that this statistic does not reflect the actual number of countries with cases. 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. The 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.

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 illness 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 early warning, surveillance and reporting, variant tracking, early clinical care provision, administration of vaccine to high-risk groups, improvements in ventilation, and regular communication.

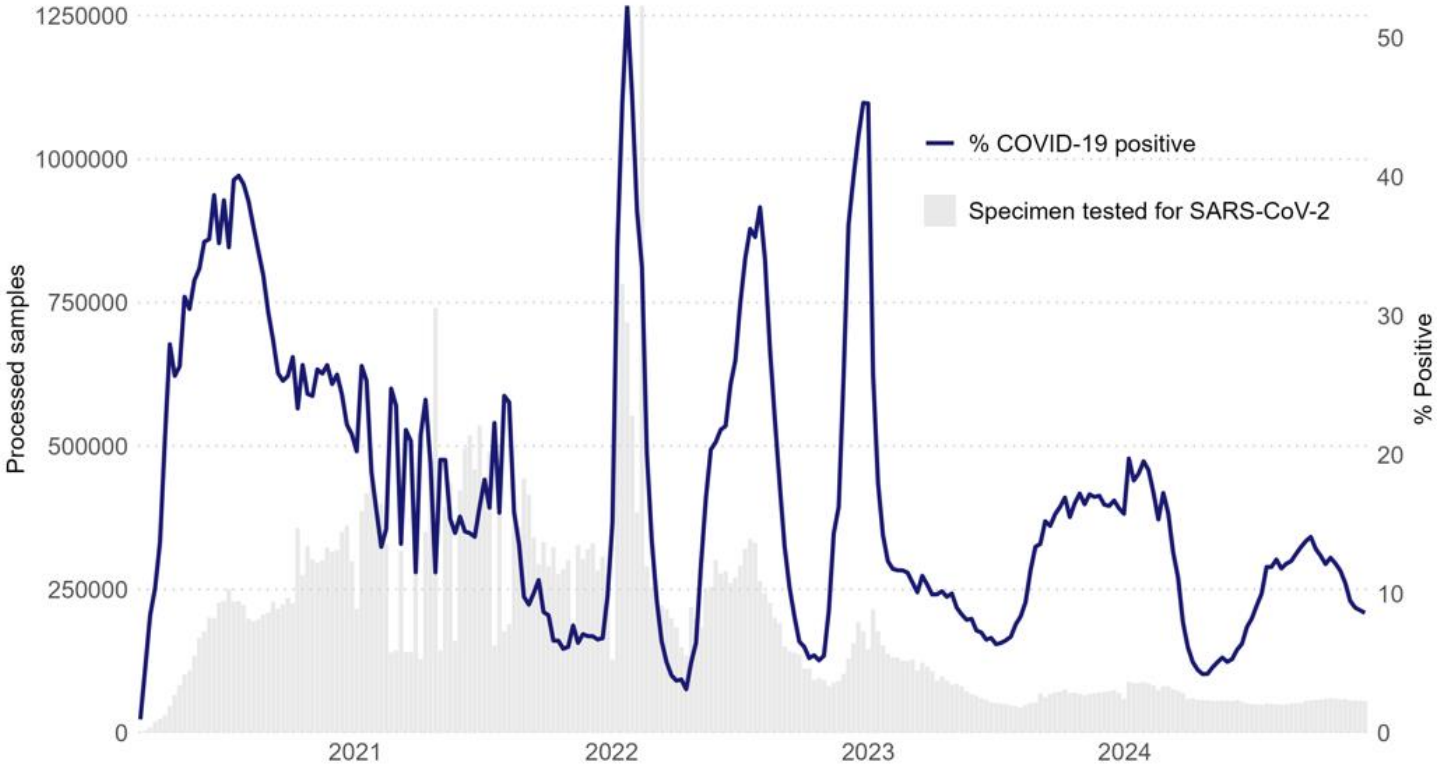
SARS-CoV-2 Test Positivity

‡‡ Show us the data: global COVID-19 wastewater monitoring effectors, equity, and gaps

§§ Capturing the SARS-CoV-2 infection pyramid within the municipality of Rotterdam using longitudinal sewage surveillance

†††. Omicron COVID-19 Case Estimates Based on Previous SARS-CoV-2 Wastewater Load, Regional Municipality of Peel, Ontario, Canada

Figure 1. Weekly SARS-CoV-2 percent test positivity reported to FluNet from systematically conducted virological surveillance, from 01 March 2020 to 8 December 2024

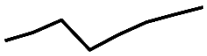
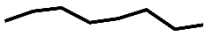


Source: Influenza and SARS-CoV-2 surveillance data from GISRS reported to FluNet; WHO

At the regional level, during the reporting period (11 November to 8 December 2024) the highest SARS-CoV-2 activity was observed in the Region of the Americas changed from 10.4% to 9.4% across 19 countries, followed by the African Region (from 8.3% to 5.3% across 16 countries), the Western Pacific Region (from 5.2% to 3.3% across 8 countries), the European Region (from 4.5% to 4% across 41 countries), the South-East Asia Region (from 3.4% to 1.3% across 6 countries), and the Eastern Mediterranean Region (from 2.4% to 1.5% across 11 countries) (Table 1).

At the country level, 101 countries reported SARS-CoV-2 test positivity from systematically conducted virological surveillance at least once during the reporting period (Figure 3). From the first to the fourth week of the reporting period, 12.9% (13/101) of countries reported an increase of more than 2.5% in weekly percent positivity. The top five highest increases in percent test positivity during the reporting period were reported from: Uruguay (from 5.6% to 28.6%), Sri Lanka (from 1.6% to 17.6%), Poland (from 16.7% to 27.6%), Chile (from 1.6% to 12.3%), Mozambique (from 0% to 7.5%), Russian Federation (from 2.7% to 6.9%), Slovenia (from 5.1% to 9.1%), Peru (from 4% to 7.8%), Georgia (from 0% to 3.7%), Ethiopia (from 4% to 7.5%), Madagascar (from 2.2% to 5.5%), Portugal (from 0% to 3.2%), and Ecuador (from -0.2% to 2.5%). At the end of the reporting week ending on 8 December 2024, 12% (12/103) of countries reported elevated SARS-CoV-2 activity (10% test positivity or more). The five highest test positivity rates at the end of the period were: Slovakia (50%), Uruguay (28.6%), Poland (27.6%), Sri Lanka (17.6%), and Indonesia (15.7%).

Table 1. SARS-CoV-2 test positivity as reported from systematically conducted virological surveillance by WHO Region during four-week reporting period (11 November to 8 December 2024)

WHO Region	TPR trend for the past eight weeks¥	Number of countries reporting at least once	Weekly percent test positivity* (number of specimens tested)			
			2024-46	2024-47	2024-48	2024-49
Africa		16	5.3% (1374)	6.7% (1380)	7.5% (1135)	8.3% (1066)
Americas		20	10.5% (47 751)	9.9% (47 559)	9.7% (47113)	9.4% (47 674)
Eastern Mediterranean		12	2.4% (904)	2.4% (921)	1.5% (821)	2.0% (813)
Europe		41	4.5% (4702)	4.2% (4808)	4.2% (4914)	4.0% (4814)
South-East Asia		6	2.3% (968)	3.0% (990)	1.3% (1172)	1.7% (1147)
Western Pacific		8	5.2% (712)	3.3% (881)	3.3% (844)	4.3% (788)
Global		103	9.5% (56 411)	9.0% (56 539)	8.8% (55 999)	8.6% (56 302)

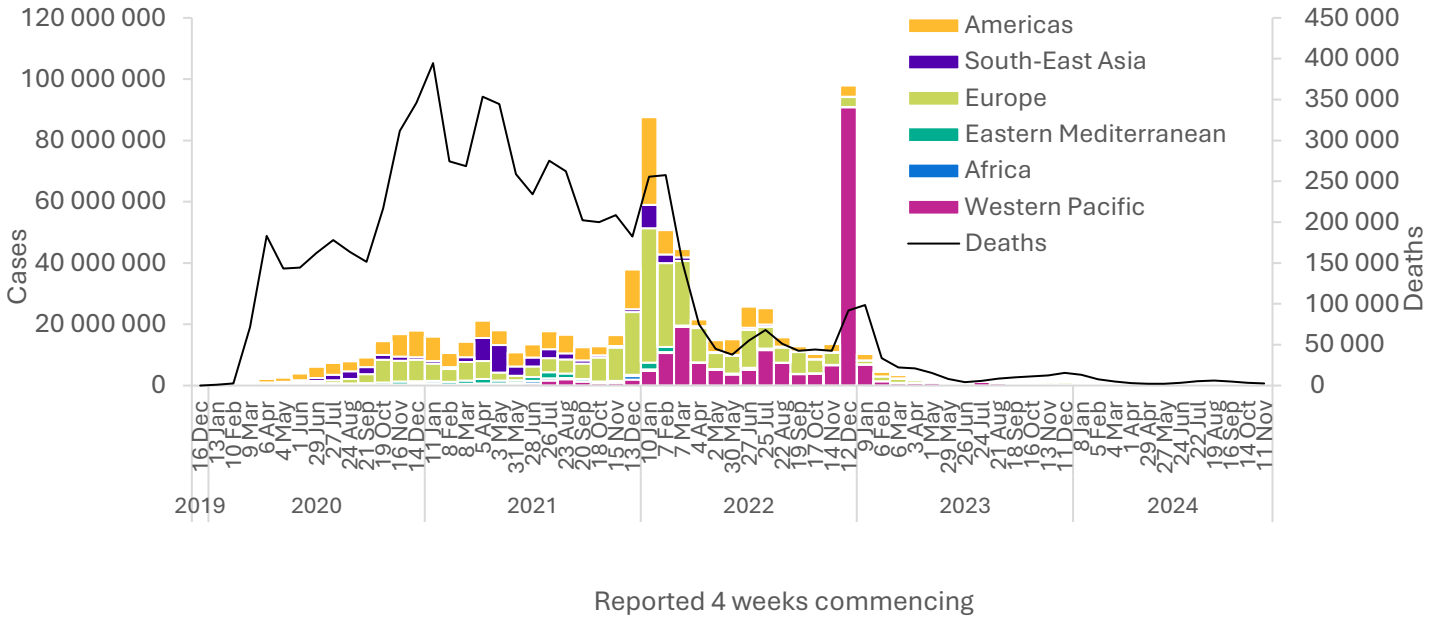
¥From week 46 to week 49 2024

**Percent test positivity is calculated by dividing the number of SARS-CoV-2 detections by the number of specimens tested for SARS-CoV-2 and expressed in percentage. Data from previous weeks are updated continuously with adjustments received from countries.*

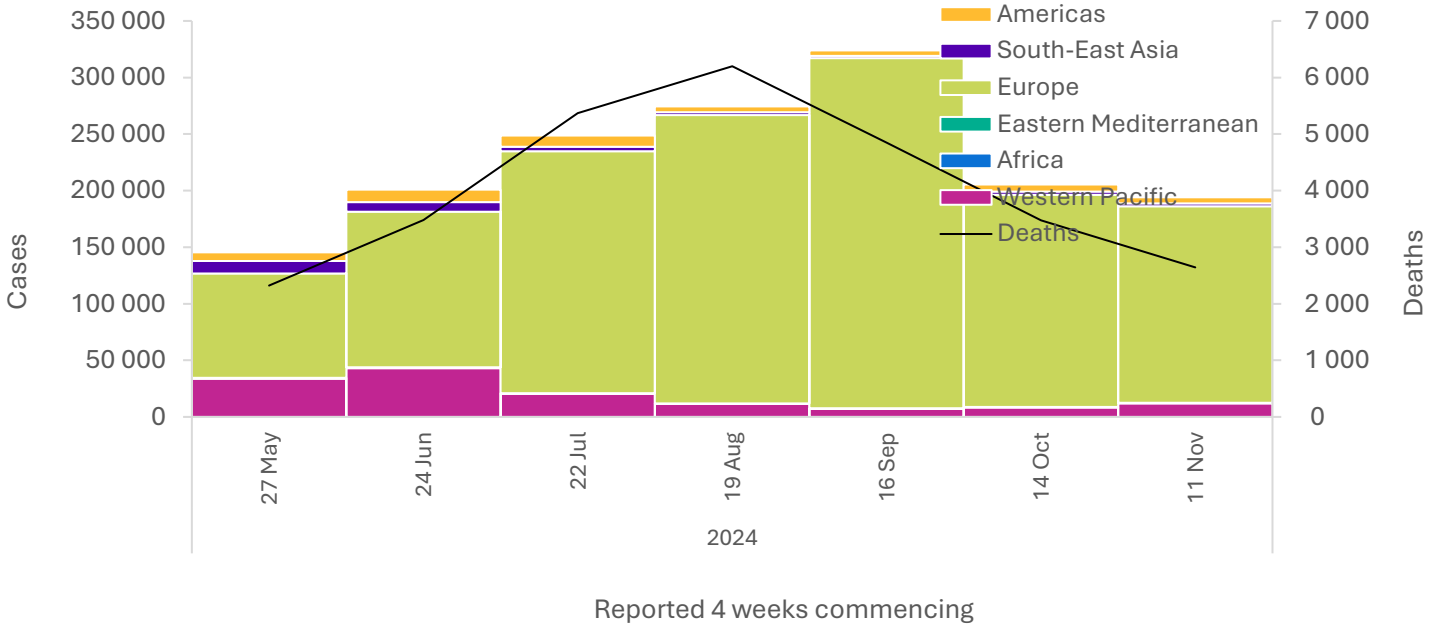
COVID-19 Morbidity and Mortality trends

Figure 2. COVID-19 cases and global deaths by 28-day intervals reported by WHO Region, as of 8 December 2024 (A); 27 May to 8 December 2024 (B)**

A



B



**See *Annex 1: Data, table, and figure note*

At the regional level, the number of newly reported 28-day cases decreased across three of the six WHO regions: the Region of the Americas (-14%), the European Region (-7%), and the South-East Asia Region (-6%); while case numbers increased in two WHO regions: the African Region (+16%), and the Western Pacific Region (+42%). The number of newly reported 28-day deaths decreased across three regions: the African Region (-100%), the European Region (-25%), and the Region of the Americas (-24%); while death numbers increased in two WHO regions: the South-East Asia Region (+29%), and the Western Pacific Region (+6%).

At the country level, the highest numbers of new 28-day cases were reported from the Russian Federation (118 986 new cases; +24%), Greece (11 404 new cases; -9%), Czechia (6220 new cases; -57%), New Zealand (5944 new cases; +44%), and the United Kingdom (5494 new cases; -49%). The highest numbers of new 28-day deaths were reported from the United States of America (1876 new deaths; -25%), followed by the Russian Federation (203 new deaths; -3%), Sweden (169 new deaths; -5%), Greece (123 new deaths; +38%), and Poland (39 new deaths; -43%).

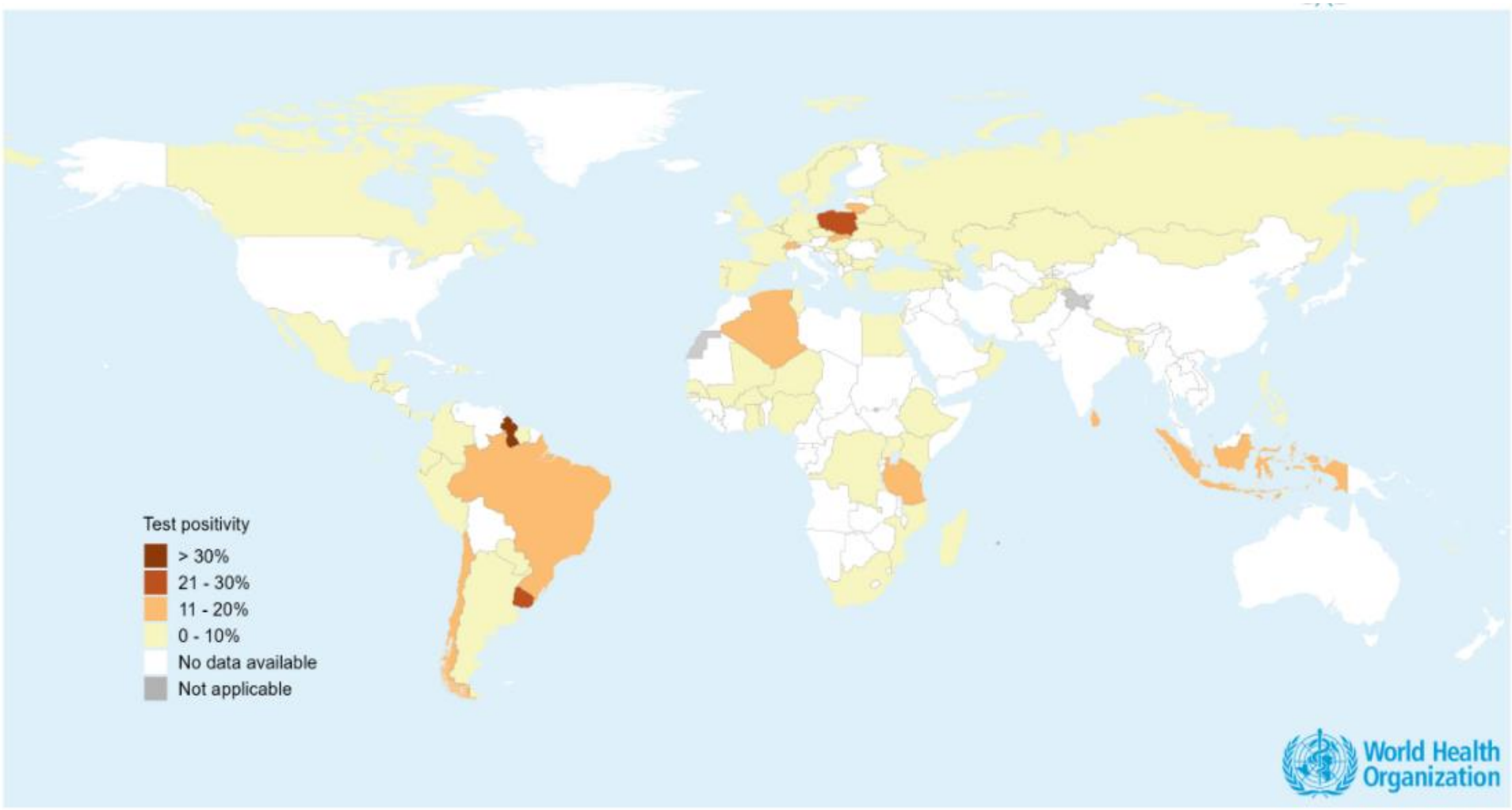
Table 2. Newly reported and cumulative COVID-19 confirmed cases and deaths by WHO Region, as of 8 December 2024**

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	173 646 (89%)	-7%	**280 779 025 (36%)**	662 (25%)	-25%	**2 278 145 (32%)**	35/61 (57%)	19/61 (31%)
Western Pacific	11 918 (6%)	42%	**208 597 626 (27%)**	36 (1%)	6%	**421 621 (6%)**	4/35 (11%)	3/35 (9%)
Americas	5 399 (3%)	-14%	**193 317 980 (25%)**	1 934 (73%)	-24%	**3 042 421 (43%)**	17/56 (30%)	7/56 (12%)
South-East Asia	2 509 (1%)	-6%	**61 325 221 (8%)**	9 (0%)	29%	**808 864 (11%)**	6/10 (60%)	2/10 (20%)
Africa	557 (0%)	16%	**9 584 825 (1%)**	0 (0%)	-100%	**175 532 (2%)**	19/50 (38%)	0/50 (<1%)
Eastern Mediterranean	0 (0%)	NA	**23 417 911 (3%)**	0 (0%)	NA	**351 975 (5%)**	0/22 (<1%)	0/22 (<1%)
Global	**194 029 (100%)**	**-6%**	**777 023 352 (100%)**	**2 641 (100%)**	**-24%**	**7 078 571 (100%)**	**81/234 (35%)**	**31/234 (13%)**

**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.*

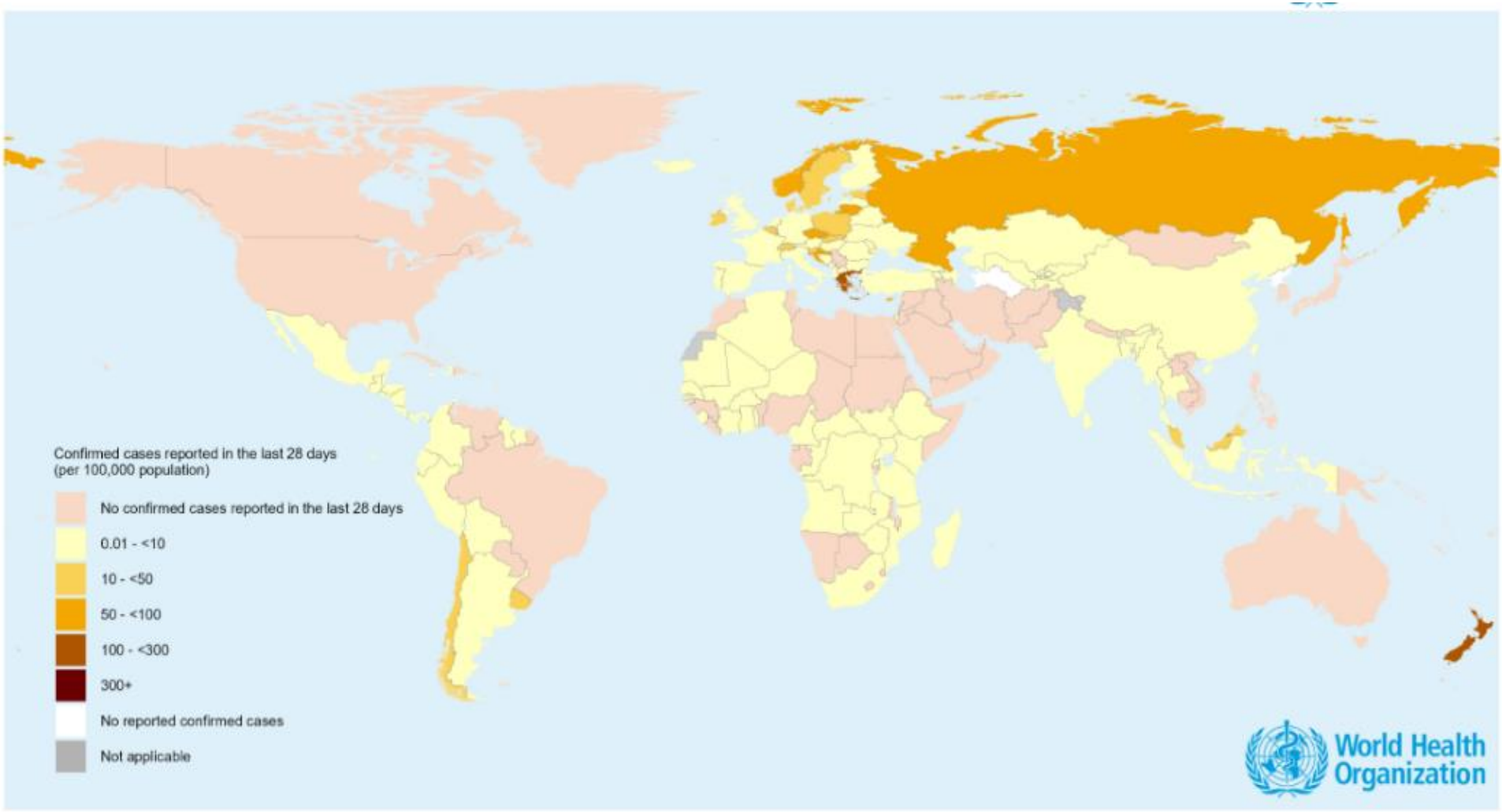
***See Annex 1: Data, table, and figure notes*

Figure 3. SARS-CoV-2 percent test positivity from sentinel sites during the week ending on 8 December 2024



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

Figure 4. Number of confirmed COVID-19 cases reported over the last 28 days per 100 000 population, as of 8 December 2024**



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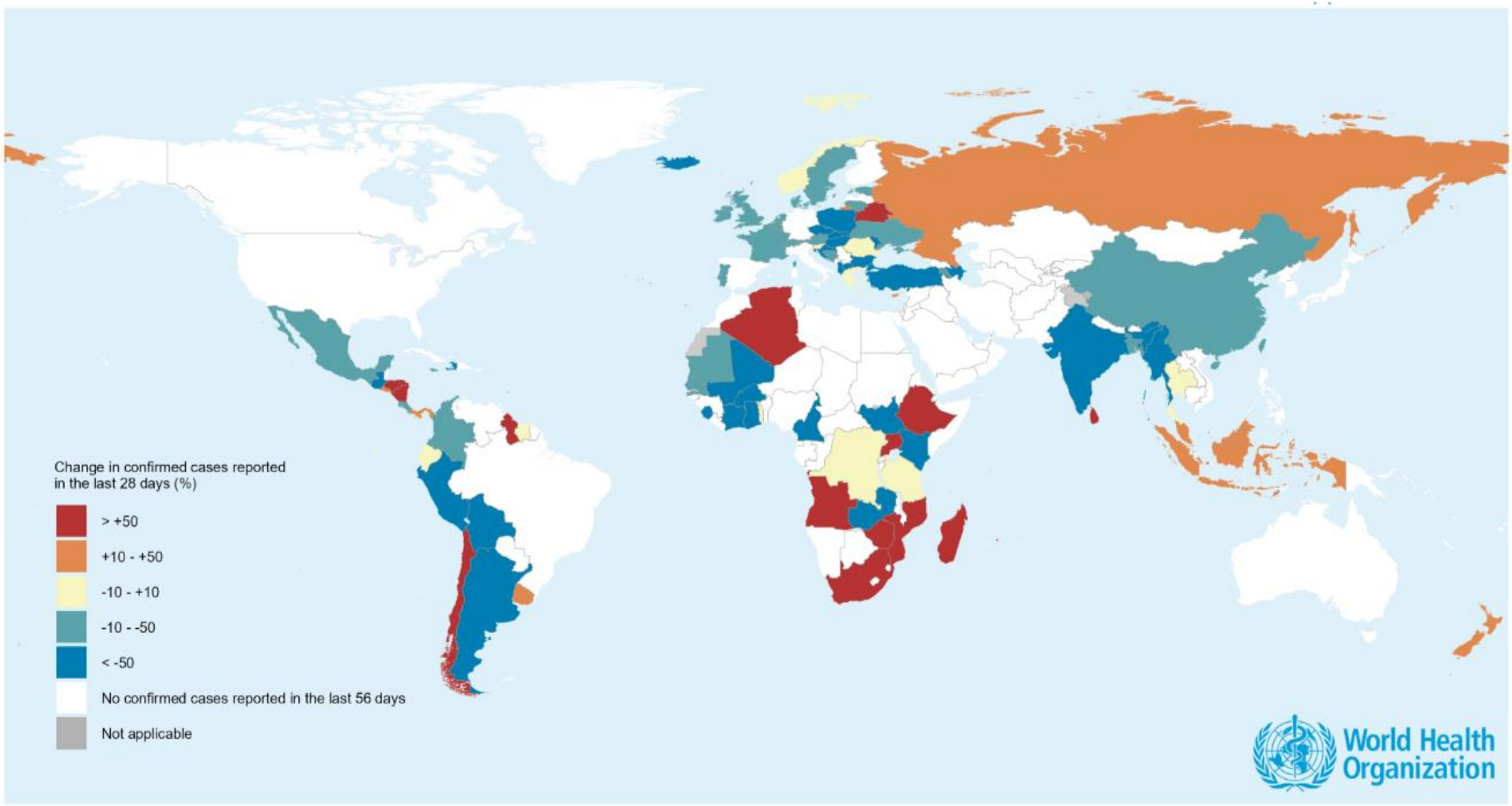
Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization, United Nations Population Division, EuroStat
Map Production: WHO Health Emergencies Programme

**See *Annex 1: Data, table, and figure notes*

Figure 5. Percentage change in confirmed COVID-19 cases over the last 28 days relative to the previous 28 days, as of 8 December 2024**



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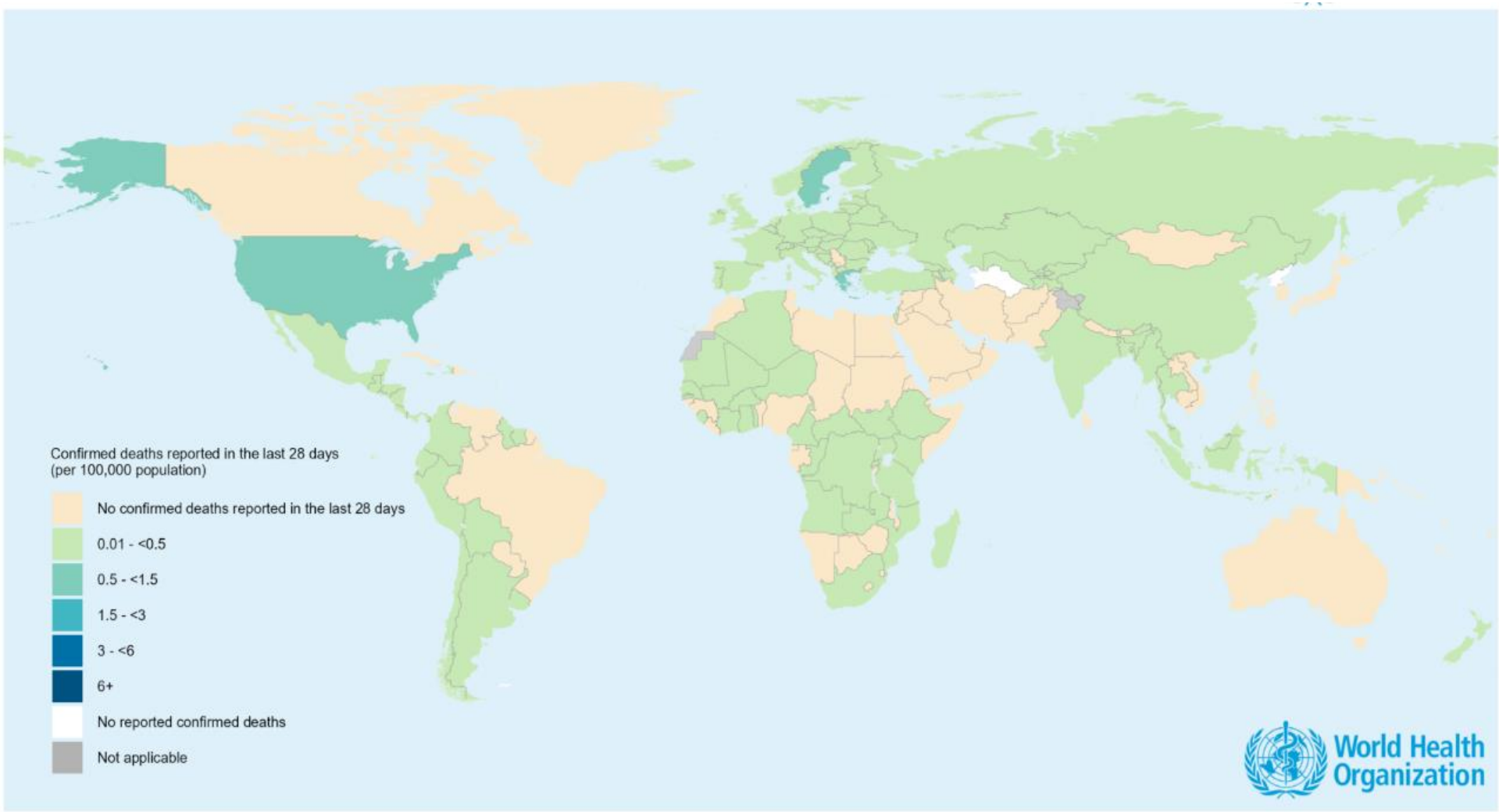
Data Source: World Health Organization
Map Production: WHO Health Emergencies Programme

**See *Annex 1: Data, table, and figure notes*

Figure 6. Number of COVID-19 deaths reported over the last 28 days per 100 000 population, as of 8 December 2024 **



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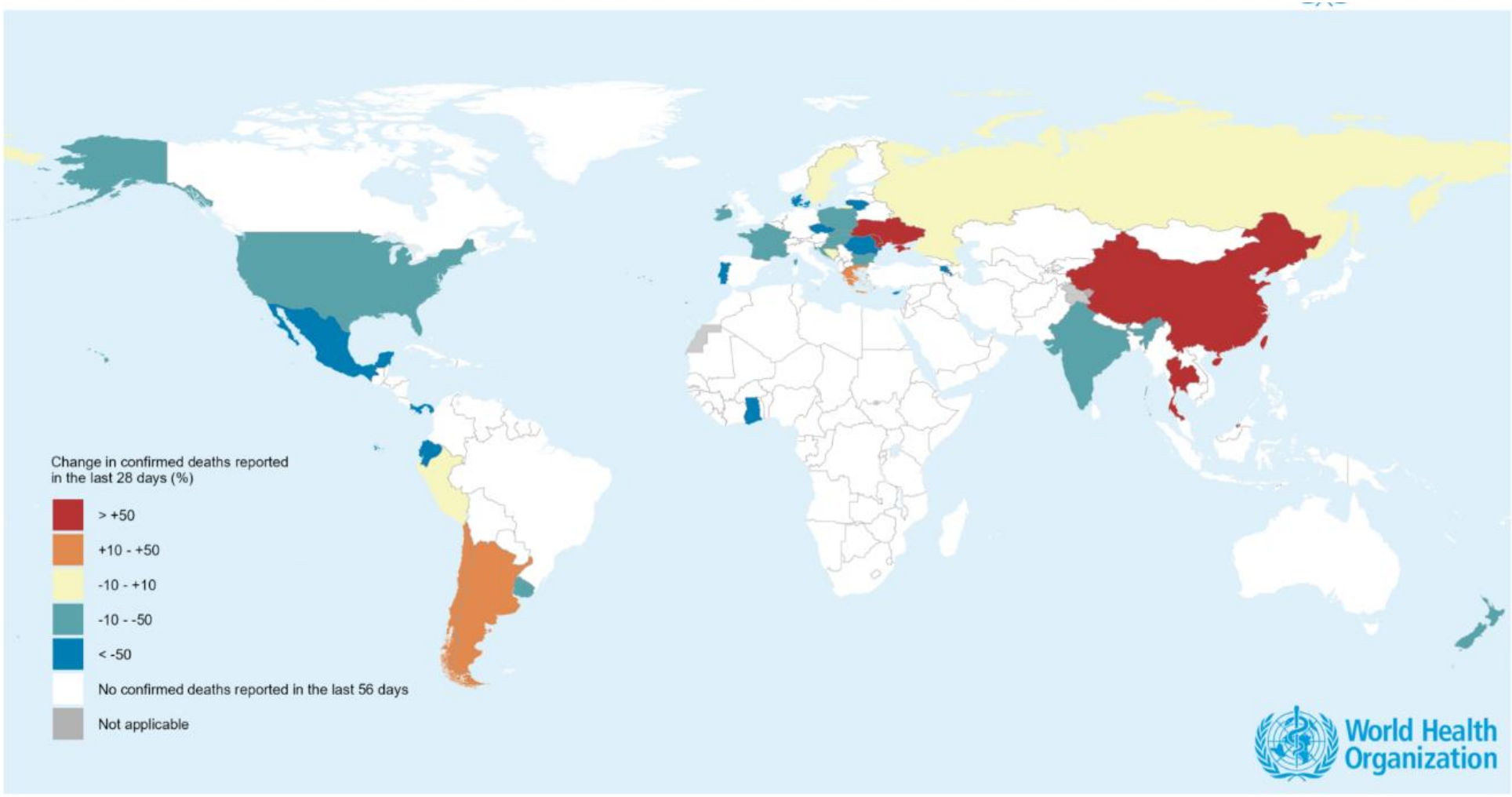
Data Source: World Health Organization, United Nations Population Division, EuroStat
Map Production: WHO Health Emergencies Programme

**See *Annex 1: Data, table, and figure notes*

Figure 7. Percentage change in confirmed COVID-19 deaths over the last 28 days relative to the previous 28 days, as of 8 December 2024**



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

**See *Annex 1: Data, table, and figure notes*

Hospitalizations and ICU admissions

At the global level, during the 28 days from 11 November to 8 December 2024, a total of 21 576 new hospitalizations and 2039 new ICU admissions were reported from 43 and 29 countries, respectively. Among the countries reporting these data consistently over the current and past reporting period, there was overall a decrease of 1% in new hospitalizations and 3% in ICU admissions, respectively, compared to the previous 28 days (14 October to 10 November 2024) (Tables 3 and 4). The European Region reported a decrease in hospitalization and ICU admissions. 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 28-day period from 11 November to 8 December 2024, 43 (18%) countries reported data to WHO on new hospitalizations at least once (Table 3). The Region of the Americas had the highest proportion of countries reporting data on new hospitalizations (21 countries; 38%), followed by the European Region (16 countries; 26%), South-East Asia Region (two countries; 20%), the Western Pacific Region (three countries; 9%), and the African Region (two countries; 4%). No country in the Eastern Mediterranean Region shared data during the period. The number of countries that consistently[11] reported new hospitalizations for the period was 36 (15%) (Table 3).

Among the 36 countries consistently reporting new hospitalizations, 6 (17%) countries registered an increase of 20% or greater in hospitalizations during the past 28 days compared to the previous 28-day period: Mauritius (7 vs 4; 75%), Panama (13 vs 8; 63%), Malaysia (416 vs 268; 55%), New Zealand (505 vs 382; 32%), Chile (170 vs 131; 30%), and Brazil (1990 vs 1615; 23%). The highest numbers of hospitalizations were reported in the Russian Federation (9660), the United States of America (2425), and Greece (2354).

[11] "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 3. Number of new hospitalization admissions reported by WHO regions, 11 November to 8 December 2024 compared to 14 October to 10 November 2024

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	2/50 (4%)	7	2/50 (4%)	7	75%
Americas	21/56 (38%)	5266	18/56 (32%)	5248	-3%
Eastern Mediterranean	0/22 (<1%)	N/A[+]	0/22 (<1%)	N/A	N/A
Europe	16/61 (26%)	13 253	12/61 (20%)	13 058	-3%
South-East Asia	1/10 (10%)	2107	1/10 (10%)	2107	5%
Western Pacific	3/35 (11%)	943	3/35 (9%)	943	39%
Global	**43/234 (18%)**	**21 576**	**36/234 (15%)**	**21 363**	**-1%**

**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 not applicable.

New ICU admissions

Across the four WHO regions, in the past 28 days, a total of 29 (12%) countries reported data to WHO on new ICU admissions at least once (Table 4). The Region of the Americas had the highest proportion of countries reporting data on new ICU admissions (13 countries; 23%), followed by the European Region (10 countries; 16%), the Western Pacific Region (four countries; 11%), and the African Region (two countries; 4%). No country from the South-East Asia Region or the Eastern Mediterranean Region shared data during the period. The proportion of countries that consistently reported new ICU admissions for the period was 10% (24 countries).

Among the 24 countries consistently reporting new ICU admissions, three (13%) countries showed an increase of 20% or greater in new ICU admissions during the past 28 days compared to the previous 28-day period: Chile (15 vs 6; >100%), New Zealand (17 vs 13; 31%), and Brazil (671 vs 556; 21%). The highest numbers of ICU admissions were reported in Brazil (671), France (49), and Greece (40).

Table 4. Number of new ICU admissions reported by WHO regions, 11 November to 8 December 2024 compared to 14 October to 10 November 2024

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	2/50 (4%)	0[#]	2/50 (4%)	0	N/A
Americas	13/56 (23%)	1884	10/56 (18%)	705	21%
Eastern Mediterranean	0/22 (<1%)	N/A[+]	N/A	N/A	N/A
Europe	10/61 (16%)	148	8/61 (13%)	142	-40%
South-East Asia	0/10 (<1%)	N/A	N/A	N/A	N/A
Western Pacific	4/35 (11%)	48	4/35 (11%)	48	-8%
Global	**29/234 (12%)**	**2039**	**24/234 (10%)**	**895**	**3%**

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

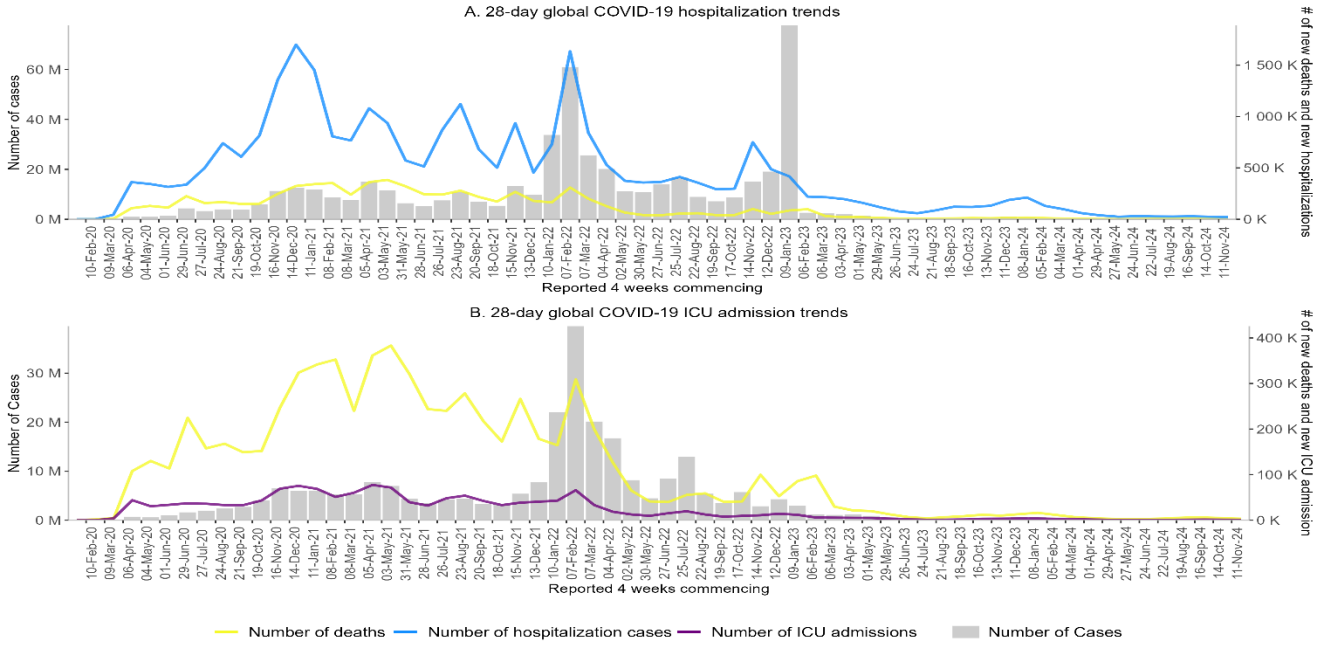
***Number of countries reported / total number of countries in the region (percentage of reporting).*

[+] N/A represents data not available or applicable.

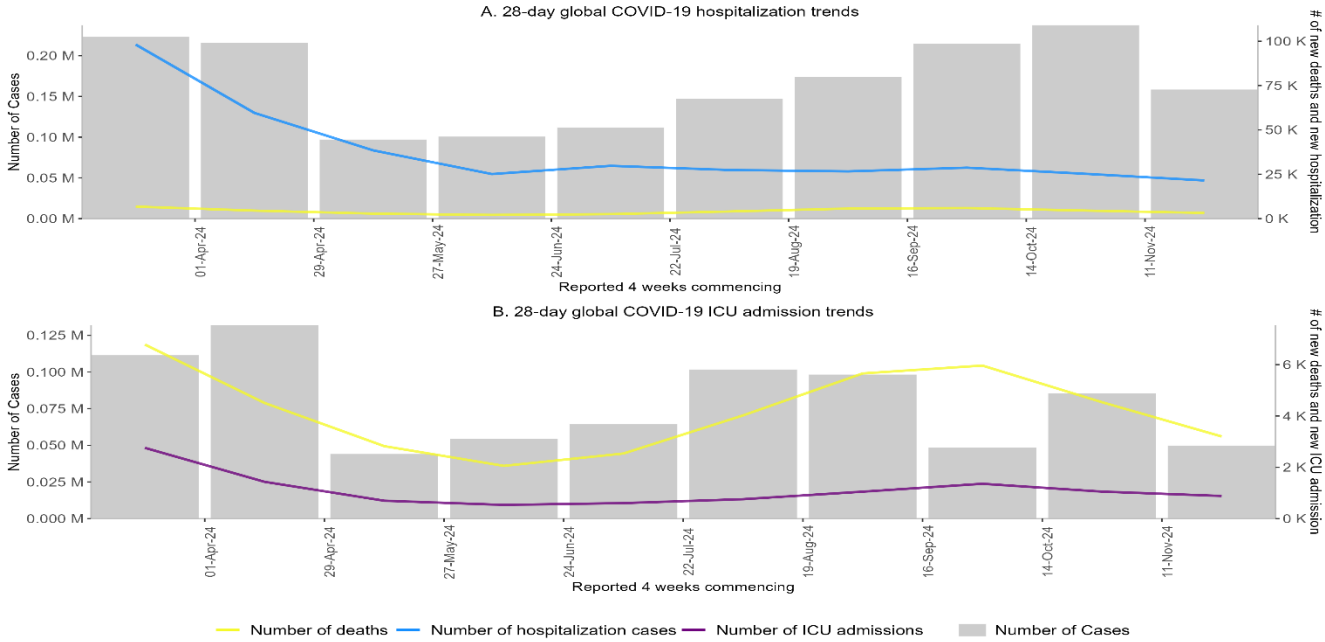
[#] WHO emphasizes the importance of maintaining reporting and encourages countries to report the absence of new admissions ("zero reporting") if there are no new hospital or ICU admissions during the week.

Figure 8. 28-day global COVID-19 hospitalization and ICU admission trends, from 10 February 2020 to 8 December 2024 (A); and from 5 February 2024 to 8 December 2024 (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 incidence of ICU admissions per 1000 hospitalizations and the mortality rate per 1000 hospitalizations serve as critical indicators for monitoring the severity of COVID-19, especially since case-based surveillance is no longer systematically conducted. The ICU admissions per 1000 hospitalizations allow us to evaluate the number of patients requiring intensive care in relation to the total number of hospitalizations, while number of deaths per 1000 hospitalization allow us to monitor deaths occurring among those hospitalized.

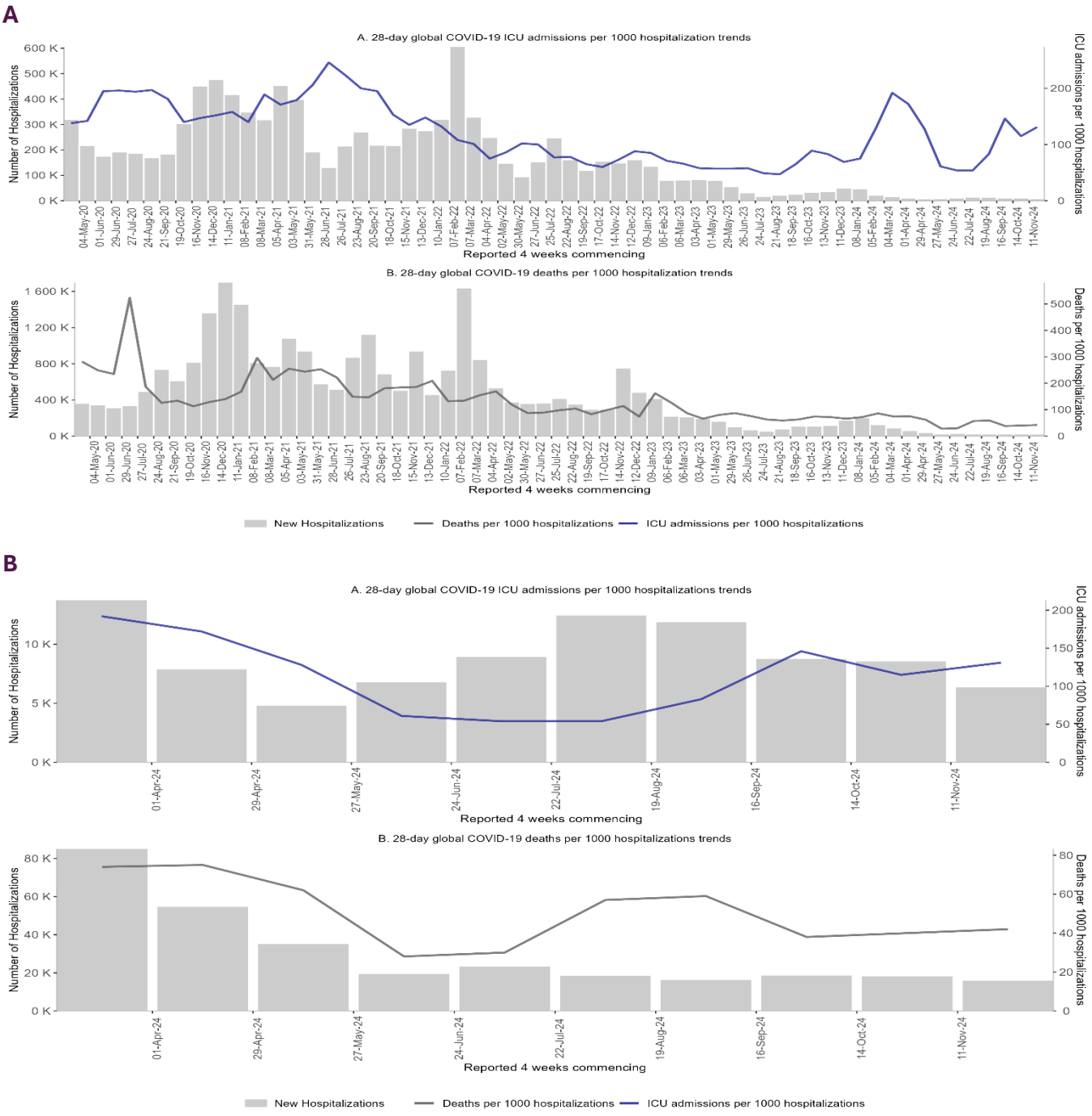
These indicators are subject to the same limitations mentioned in hospitalizations and ICU admissions section and their calculations are limited to the countries reporting all relevant data elements (hospitalizations, ICU admissions and deaths) in a given reporting period. It should be noted that there 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, ICU admissions per 1000 hospitalizations have been decreasing since the peak in July 2021 when the rate was 245 per 1000 hospitalizations, dropping below 132 per 1000 hospitalizations at the beginning of 2022, and to less than 69 per 1000 hospitalizations by the end of 2023 (Figure 8). At the beginning of 2024, there was an increase in this rate, rising to above 191 per 1000 hospitalizations in March, and later declining to 131 per 1000 hospitalizations in early December 2024. Note that due to limited reporting this does not suggest a global increase in the rate of new hospitalizations requiring intensive care. The number of countries reporting both ICU admissions and hospitalizations continues to decline, and a downward trend of admissions is observed in most of the reporting countries (Table 3 and 4). The combination of these two factors facilitates the fluctuations in the global trend driven by only one or two countries.

The deaths per 1000 hospitalization showed a consistent decline from June 2021 when it reached 253 per 1000 hospitalizations to a low level of 59 per 1000 hospitalizations in August 2023. Since January 2024, the rate has continued to decline reaching 42 deaths per 1000 hospitalizations by early December 2024 (Figure 9).

Please note that the causes for these trends cannot be directly interpreted from these data but likely include a combination of increases or decreases 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 changed intrinsic virulence amongst newer SARS-CoV-2 variants from these data.

Figure 9. COVID-19 ICU per 1000 hospitalization and death per 1000 hospitalization, from 04 May 2020 to 8 December 2024 (A), and 4 May 2020 to 8 December 2024 (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 that 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

COVID-19 Vaccination Updates

On 20 December 2024, WHO published the COVID-19 Vaccination Insights Report analysing and presenting data covering first to third quarters of 2024 (Q1-Q3 2024) (January-September). As of the end of quarter 3 2024, 39.2 million individuals across all population groups were reported as having received a COVID-19 vaccine dose so far this year, in 90 Member States containing 31% of the global population. Of those, 14.8 million individuals received their COVID-19 vaccine dose during quarter 3. Among older adults, 19.7 million individuals were reported as having received a dose so far this year, across the 75 Member States reporting on uptake in this group, corresponding to an uptake rate of 1.68%. This is 8.9 million more older adults than as of end of quarter 2. Among healthcare workers, 1.3 million individuals were reported as having received a dose so far this year, across the 54 Member States reporting on the uptake in this group, corresponding to an uptake rate of 0.96%. This is 311 300 more health and care workers than as of end of quarter 2.

Table 5: COVID-19 vaccine uptake in select target groups during quarters 1, 2, and 3 of 2024

Population group	**Number of Member State having reported at least once** *#*	**Quarter 1 uptake, January – March 2024** *# (% of pop.)*	**Quarter 2 uptake, April – June 2024** *# (% of pop.)*	**Quarter 3 uptake, July – September 2024** *# (% of pop.)*	**Cumulative 2024 uptake, January - September 2024** *# (% of pop.)*
Older adults	75	4.02M (0.34%)	5.42M (0.46%)	8.9M	19.7M (1.68%)
Health and care workers	54	0.29M (0.22%)	0.17M (0.13%)	311.3K	1.3M (0.96%)
All population groups[12]	90	10.2M	6.37M	14.8M	39.2M (31.0%)

Source: WHO-UNICEF electronic Joint Reporting Form COVID-19 module & WHO regional reporting systems.

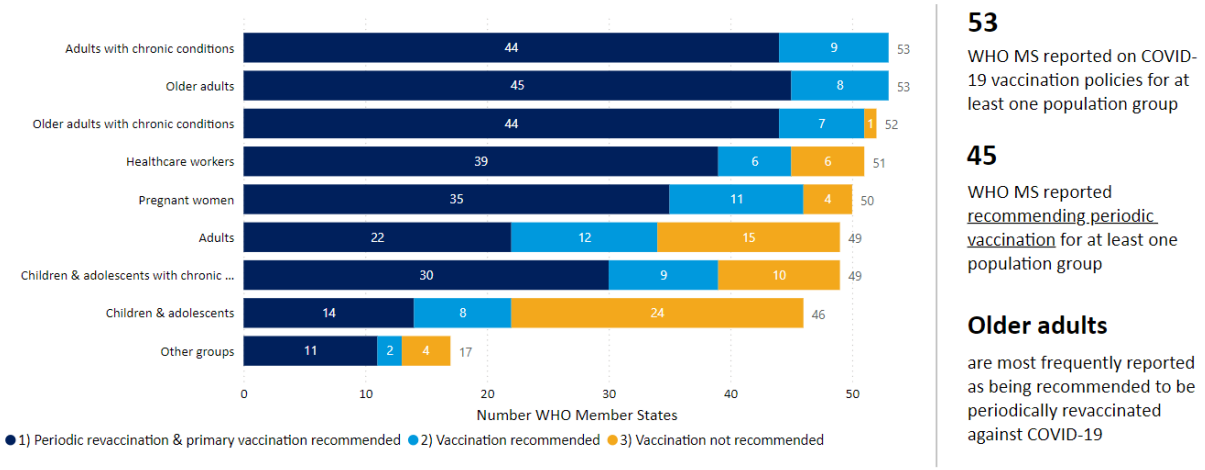
Strong variations in uptake continue to be observed in 2024 across regions and income strata in all population groups. Across all groups, the uptake in the Region of the Americas and the European region and in high- and upper middle-income groups was greater than in other regions and income groups. In older adults, uptake rates in the European region (5.1%) and the Region of the Americas (3.6%) were considerably higher than in other regions, all between 0.0-0.3% uptake. Also in older adults, high-income countries had an uptake rate of 4.3%, as compared with 0.5% in low-income countries. In health and care workers, again, the uptake in the Americas (2.8%) and European region (0.4%) was more than in the other regions, all between 0.0 and 0.2% uptake. Uptake rates in health and care workers further varied between income groups, with upper-middle-income and high-

[12] Uptake figures are not calculated for 'All population groups' given unknown denominator composition and poor denominator quality for many countries.

income countries featuring uptake rates of 2.1% and 0.6%, respectively, as compared with 0.3% and 0.1% in low-income and lower-middle-income countries, respectively.

During the third quarter of 2024, 53 WHO Member States reported at least once on current national COVID-19 vaccination policies for at least one population group. Among those 53 Member States, 45 reported recommending periodic revaccinations in at least one population group. Across target groups, older adults are most reported as being recommended to be periodically revaccinated against COVID-19. Adults with chronic conditions are also frequently targeted under national policies for periodic re-vaccination, with over half of responding Member States reporting this. Children and adolescents, and adults were the groups most frequently not recommended for vaccination with 52% (24/46) and 31% (15/49) of responding Member States reporting not recommending vaccination in these groups, respectively.

Figure 10: National policies on COVID-19 vaccination & periodic revaccination per population group, across reporting WHO Member States (53)



Source: WHO-UNICEF electronic Joint Reporting Form COVID-19 module & WHO regional reporting systems.

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

Geographic spread and prevalence

Globally, during the 28-day period from 11 November to 8 December 2024, 19 089 SARS-CoV-2 sequences were shared through GISAID. In comparison, in the two previous 28-day periods, there were 26 926 and 37 814 sequences shared, respectively. The data are retrospectively updated periodically 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:

- Variant of interest (VOI): JN.1
- Variants under monitoring (VUMs): JN.1.18, KP.2, KP.3, KP.3.1.1, LB.1 and XEC

Table 6 shows the number of countries reporting VOIs and VUMs, and their prevalence from epidemiological week 46 (11 to 17 November 2024) to week 49 (2 to 8 December 2024). The VOI 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, JN.1 is the most reported VOI (now reported by 147 countries), accounting for 16.2% of sequences in week 49 and showing a small increase from a prevalence of 15.8% in week 46 (Figure 12, Table 6).

The six listed VUMs are all JN.1 descendent lineages. XEC, the current most prevalent SARS-CoV-2 variant, increased in prevalence, accounting for 38.6% of sequences in week 49 compared to 31.0% in week 46. KP.3.1.1, the previously most prevalent SARS-CoV-2 variant, declined in prevalence accounting for 33.2% of sequences in week 49 compared to 39.1% in week 46. KP.3 accounted for 6.6% of sequences in week 49 compared to 7.8% in week 46, KP.2 accounted for 1.0% of sequences in week 49 compared to 1.8% in week 46, JN.1.18 accounted for 2.2% of sequences in week 49 compared to 1.5% in week 46, and LB.1 accounted for 0.6% in week 49 compared to 0.9% in week 46.

KP.3.1.1 and XEC prevalence decreased and increased, respectively, for regions with sufficient data, as seen in Figure 11. Between weeks 46 and 49, KP.3.1.1 decreased in the region of the Americas (10.6%), European region (2.4%), and Western Pacific region (4.1%). XEC had increases in all three regions: 7.9% in the region of the Americas, 10.3% in the European region, and 4.0% in the Western Pacific region.

With rates of testing and sequencing declining globally (Figure 12), 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 11 and Figure 12, 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 46 to week 49 of 2024

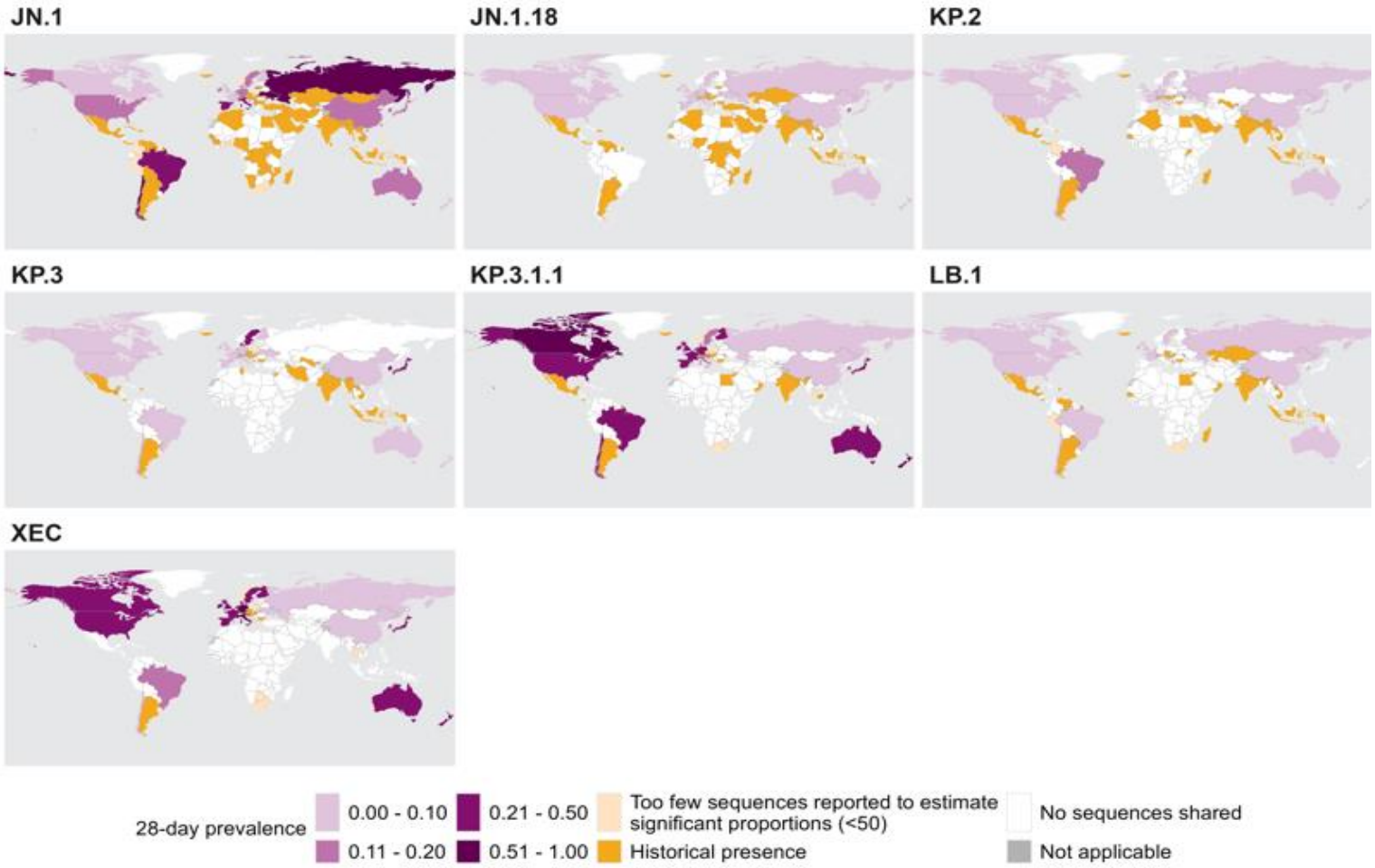
Lineage*	Countries§	Sequences§	2024-46	2024-47	2024-48	2024-49
VOIs						
JN.1	147	304594	15.8	16.1	15.8	16.2
VUMs						
KP.2	89	35258	1.8	1.3	1.3	1.0
KP.3	79	59576	7.8	6.5	7.2	6.6
KP.3.1.1	69	77009	39.1	37.1	35.1	33.2
JN.1.18	104	8890	1.5	1.8	2.0	2.2
LB.1	85	17447	0.9	0.8	0.7	0.6
XEC	55	23353	31.0	35.2	36.3	38.6
Recombinant	148	496613	1.6	1.0	1.4	1.3
Unassigned	68	4180	0.1	0.1	0.1	-
Others	120	37498	0.4	0.2	0.3	0.3

§ Number of countries and sequences are since the emergence of the variants. Note, however, that this does not apply to recombinants, unassigned and the other variants categories, and only from 1 July 2023.
* Includes descendant lineages, except those individually specified elsewhere in the table. For example, JN.1* does not include JN.1.18, KP.2, KP.3, KP.3.1.1 and LB.1 and Recombinant* does not include XEC.

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 Updated Risk Evaluation, 9 February 2024
- WHO BA.2.86 Initial Risk Evaluation, 21 November 2023

Figure 11. Global 28-day prevalence of VOIs (JN.1) and VUMs (JN.1.18, KP.2, KP.3, KP.3.1.1, LB.1, and XEC), 11 November to 8 December 2024*



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

[+] Historical presence indicates countries previously reporting sequences of VOIs and VUMs but have not been reported within the period from 11 November to 8 December 2024

Figure 12. The distribution of SARS-CoV-2 variants in available sequence data from different time periods

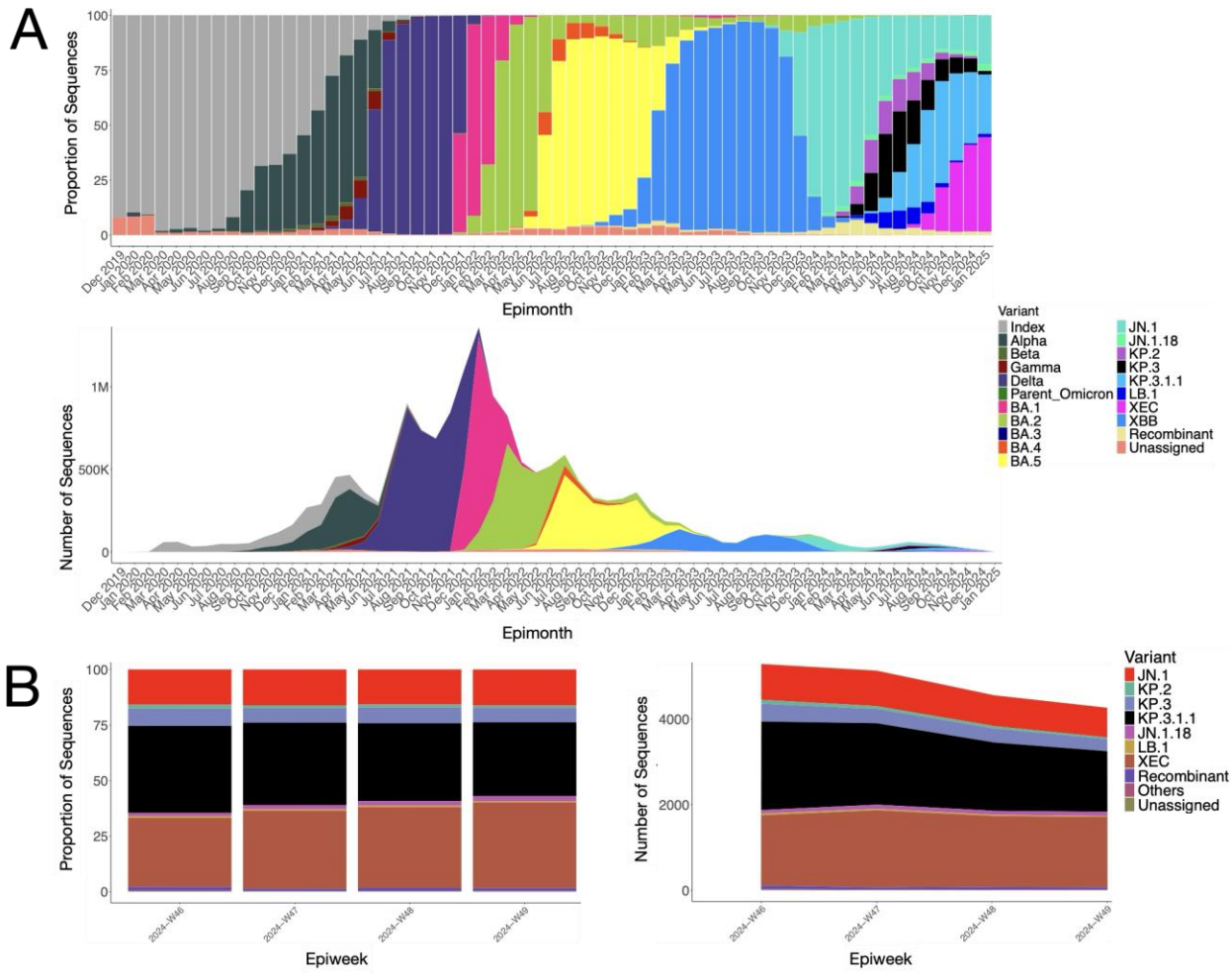


Figure 12. (**A**) The proportion (top panel) and number (bottom panel) of sequences belonging to each major SARS-CoV-2 variant in each month since the start of the pandemic. (**B**) The proportion (left panel) and number (right panel) of sequences belonging to each SARS-CoV-2 variant in each week from 11 November to 8 December 2024. The variants shown include all descendent lineages, except for the descendent lineage(s) that are listed separately, for example KP.3 includes all the lineages that descend from KP.3 with the exception of KP.3.1.1 and its descendent sublineages that are instead included within KP.3.1.1. The *Unassigned* category includes lineages pending for a PANGO lineage name designation, *Recombinant* includes all SARS-CoV-2 recombinant lineages not listed here, and the *Other* category includes lineages that are assigned but not listed here. Source: SARS-CoV-2 sequence data and metadata from GISAID, from 11 November to 8 December 2024, downloaded on 13th January 2024.

WHO regional overviews

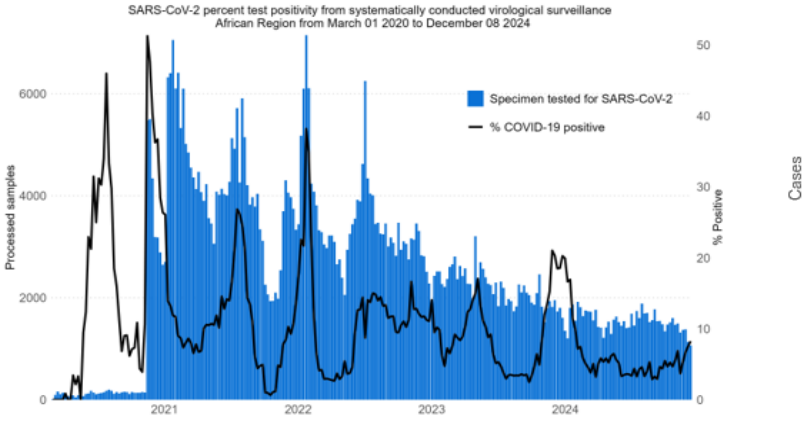
SAR-CoV-2 test positivity from sentinel sites and morbidity and mortality trends

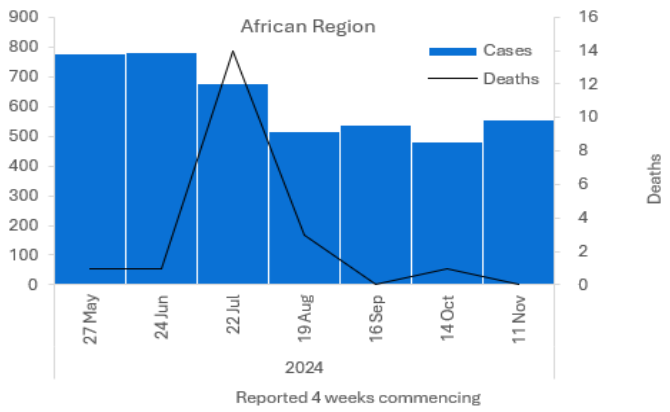
African Region

The SARS-CoV-2 weekly percent test positivity from systematically conducted virological surveillance in the African Region changed from 5.3% to 8.3% across 16 countries who reported at least once during the four-week period. Three countries reported an increase of more than 2.5% in percent test positivity during the four-week reporting period: Mozambique (from 0% to 7.5%), Ethiopia (from 4.0% to 7.5%), and Madagascar (from 2.2% to 5.5%). One country showed elevated SARS-CoV-2 activity (10% or more) in the final week: Democratic Republic of the Congo (11%). During the reporting period, the weekly average number of specimens tested was 1239.

The Region reported 557 new cases, a 16% increase compared to the previous 28-day period. Five (10%) 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 Algeria (15 vs one new cases; >100%), Madagascar (14 vs six new cases; >100%), Ethiopia (14 vs seven new cases; +100%), South Africa (25 vs 13 new cases; +92%), and Mauritius (346 vs 221 new cases; +57%). The highest numbers of new cases were reported from Mauritius (346 new cases; 27.2 new cases per 100 000; +57%), the United Republic of Tanzania (56 new cases; <1 new case per 100 000; +2%), and Ghana (42 new cases; <1 new case per 100 000; -58%).

No new deaths were reported during the reporting period.





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

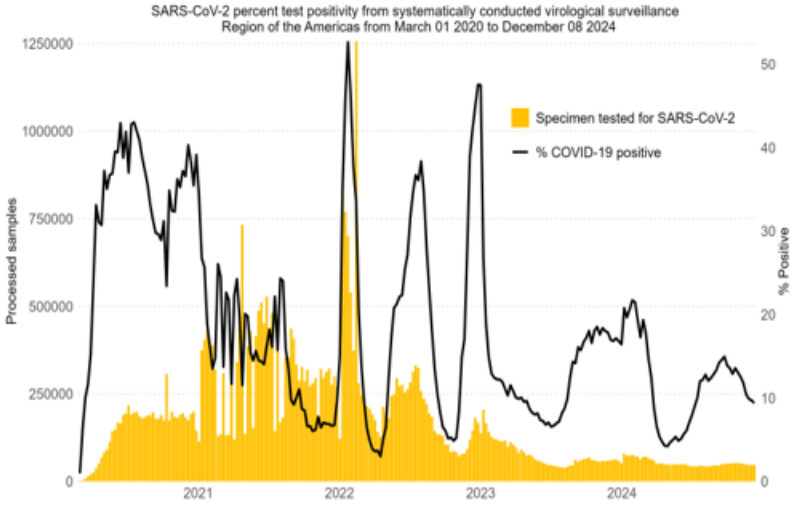
Updates from the African Region

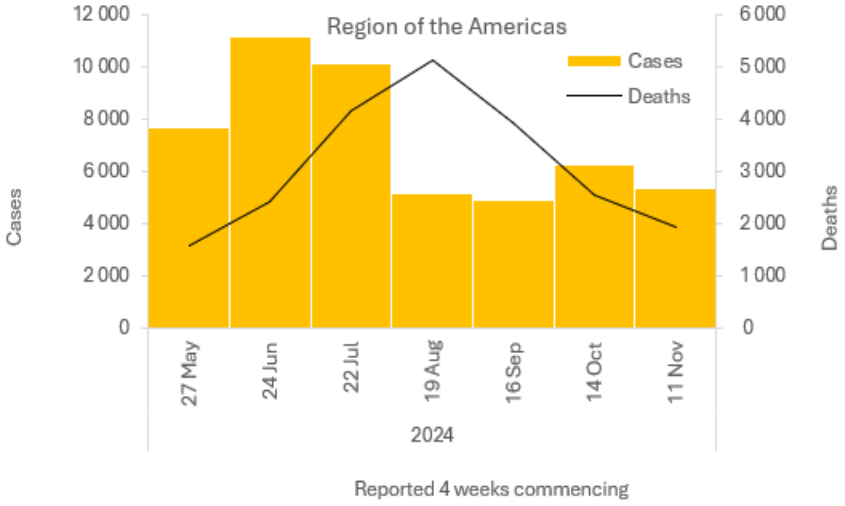
Region of the Americas

The SARS-CoV-2 weekly percent test positivity from systematically conducted virological surveillance in the Region of the Americas changed from 10.5% to 9.4% across 20 countries who reported at least once during the four-week period. Four countries reported an increase of more than 2.5% in percent test positivity during the four-week reporting period: Uruguay (from 5.6% to 28.6%), Chile (from 1.6% to 12.3%), Peru (from 4.0% to 7.8%), and Ecuador (from 0.2% to 2.5%). Four countries showed elevated SARS-CoV-2 activity (10% or more) in the final week: Uruguay (29%), Brazil (14%), Chile (12%), and Argentina (11%). During the reporting period, the weekly average number of specimens tested was 47 524.

The Region reported 5399 new cases, a 14% decrease as compared to the previous 28-day period. Four (7%) 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 Chile (3059 vs 1614 new cases; +90%), Panama (22 vs 16 new cases; +38%), Uruguay (403 vs 318 new cases; +27%), and El Salvador (five vs four new cases; +25%). The highest numbers of new cases were reported from Chile (3059 new cases; 16 new cases per 100 000; +90%), Argentina (1449 new cases; 3.2 new cases per 100 000; -59%), and Uruguay (403 new cases; 11.6 new cases per 100 000; +27%).

The number of new 28-day deaths in the Region decreased by 24% compared to the previous 28-day period, with 1934 new deaths reported. The highest numbers of new deaths were reported from the United States of America (1876 new deaths; <1 new death per 100 000; -25%), Chile (30 new deaths; <1 new death per 100 000; +20%), and Argentina (18 new deaths; <1 new death per 100 000; +38%).





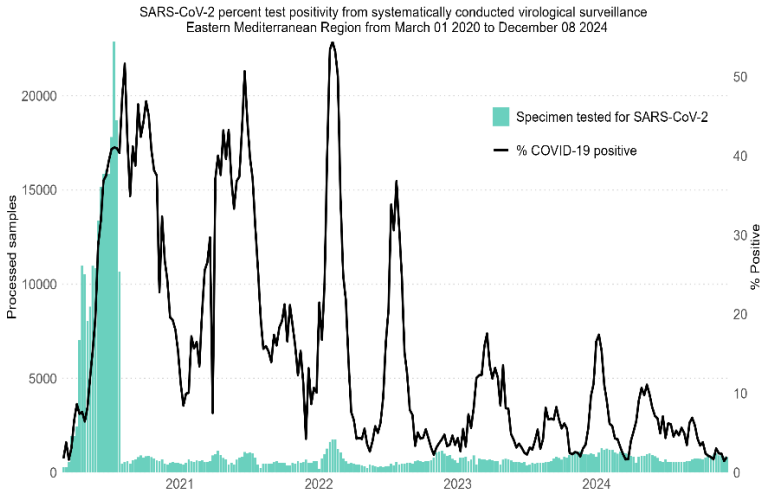
Source: Influenza and SARS-CoV-2 surveillance data from GISRS reported to FluNet; WHO

Updates from the Region of the Americas

Eastern Mediterranean Region

The SARS-CoV-2 weekly percent test positivity from systematically conducted virological surveillance in the Eastern Mediterranean Region changed from 2.4% to 1.97% across 12 countries who reported at least once during the four-week period. No country reported an increase of more than 2.5% in percent test positivity during the four-week reporting period. No country showed elevated SARS-CoV-2 activity (10% or more) in the final week. During the reporting period, the weekly average number of specimens tested was 865.

The Region no longer reports cases and deaths.



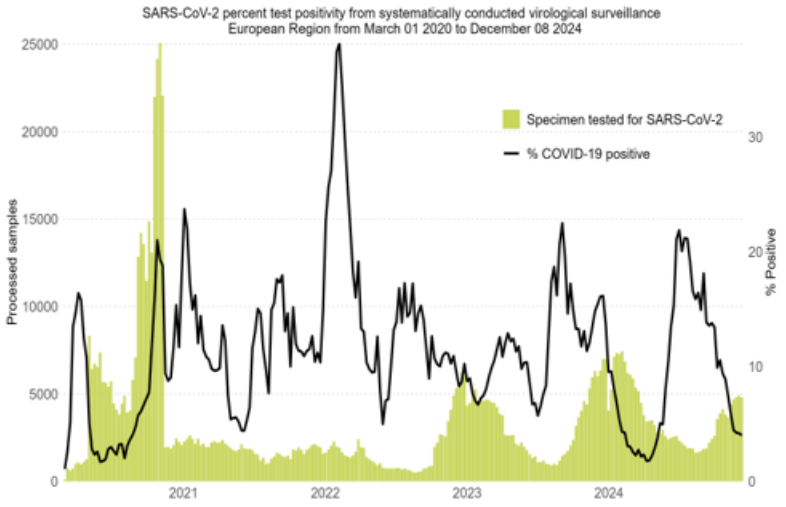
Source: Influenza and SARS-CoV-2 surveillance data from GISRS reported to FluNet; WHO

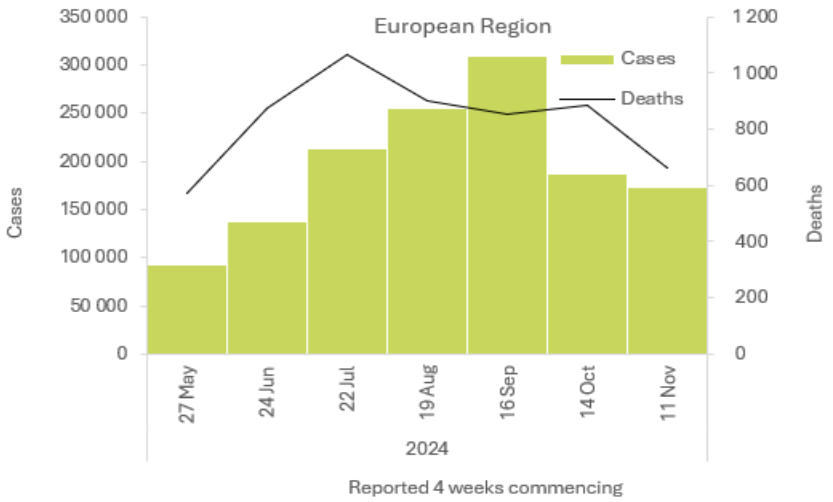
European Region

The SARS-CoV-2 weekly percent test positivity from systematically conducted virological surveillance in the European Region changed from 4.5% to 4.0% across 41 countries who reported at least once during the four-week period. Eight countries reported an increase of more than 2.5% in percent test positivity during the four-week reporting period: Poland (from 16.7% to 27.6%), Czechia (from 3.1% to 7.6%), Russian Federation (from 2.7% to 6.9%), Slovenia (from 5.1% to 9.1%), Estonia (from 4.8% to 8.7%), Georgia (from 0% to 3.7%), Portugal (from 0% to 3.2%), and Slovakia (from 8.1% to 11.1%). Four countries showed elevated SARS-CoV-2 activity (10% or more) in the final week: Poland (28%), Lithuania (12%), Switzerland (11%), and Slovakia (11%). During the reporting period, the weekly average number of specimens tested was 4810.

The Region reported over 173 000 new cases, a 7% decrease as compared to the previous 28-day period. Two (3%) 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 Liechtenstein (five vs three new cases; +67%), and the Russian Federation (118 986 vs 96 108 new cases; +24%). The highest numbers of new cases were reported from the Russian Federation (118 986 new cases; 81.5 new cases per 100 000; +24%), Greece (11 404 new cases; 106.4 new cases per 100 000; -9%), and Czechia (6220 new cases; 58.2 new cases per 100 000; -57%).

The number of new 28-day deaths in the Region decreased by 25% compared to the previous 28-day period, with 662 new deaths reported. The highest numbers of new deaths were reported from the Russian Federation (203 new deaths; <1 new death per 100 000; -3%), Sweden (169 new deaths; 1.6 new deaths per 100 000; -5%), and Greece (123 new deaths; 1.1 new deaths per 100 000; +38%).





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

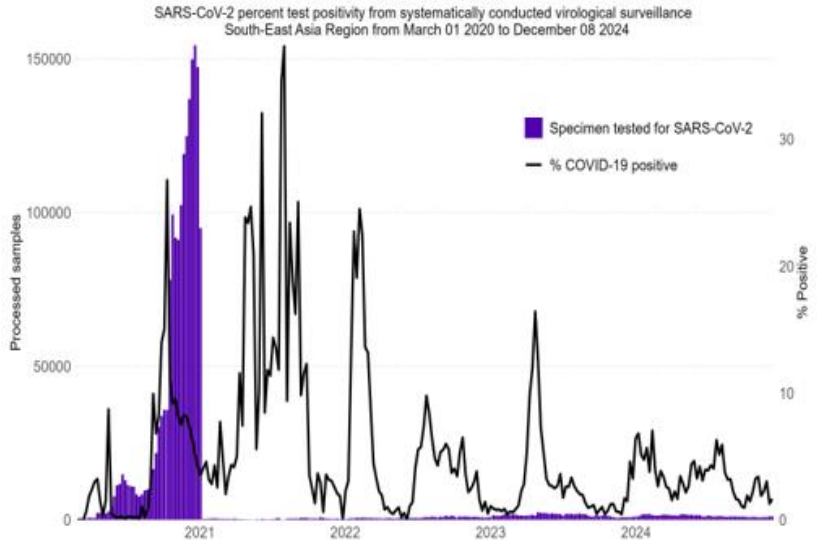
Updates from the European Region

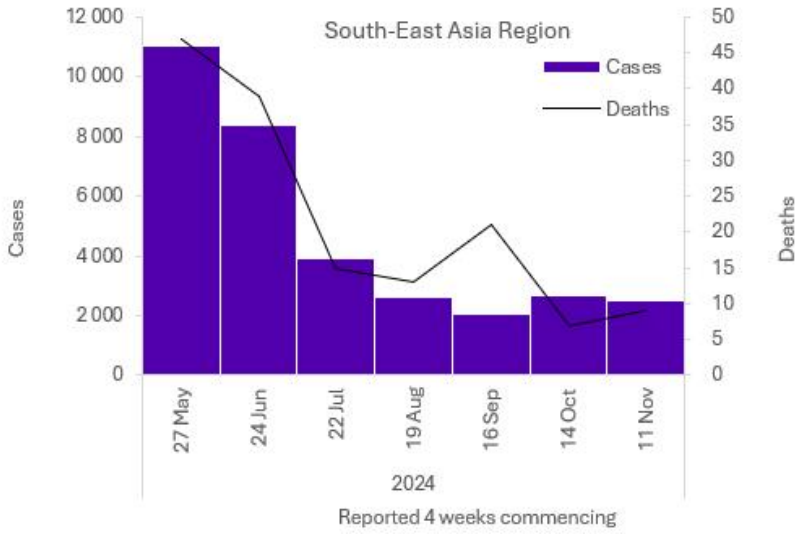
South-East Asia Region

The SARS-CoV-2 weekly percent test positivity from systematically conducted virological surveillance in the South-East Asia Region changed from 2.3% to 1.7% across six countries who reported at least once during the four-week period. One country reported an increase of more than 2.5% in percent test positivity during the four-week reporting period: Sri Lanka (from 1.6% to 17.7%). Two countries showed elevated SARS-CoV-2 activity (10% or more) in the final week: Sri Lanka (18%) and Indonesia (16%). During the reporting period, the weekly average number of specimens tested was 1069.

The Region reported over 2509 new cases, a 6% decrease 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 Thailand (2107 new cases; 3 new cases per 100 000; +5%), Indonesia (183 new cases; <1 new case per 100 000; +11%), and India (175 new cases; <1 new case per 100 000; -56%).

The number of new 28-day deaths in the Region increased by 29% as compared to the previous 28-day period, with 9 new deaths reported. The highest numbers of new deaths were reported from Thailand (6 new deaths; <1 new death per 100 000; +100%), and India (3 new deaths; <1 new death per 100 000; -25%).





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

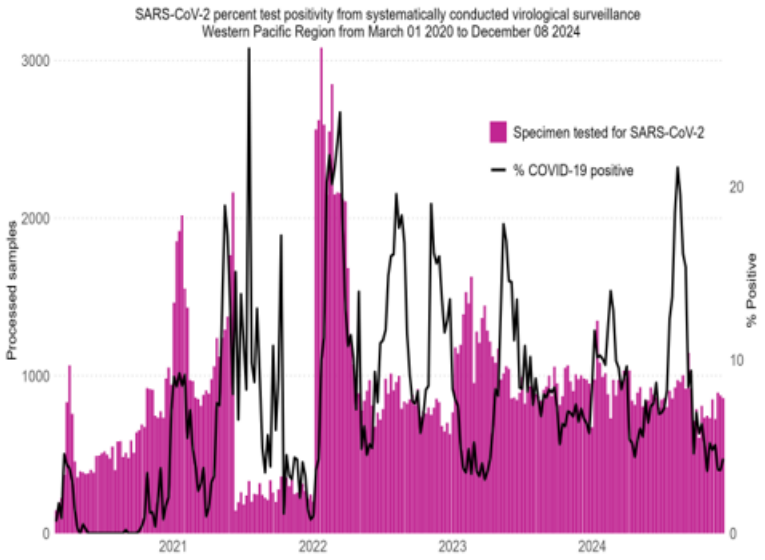
Updates from the South-East Asia Region

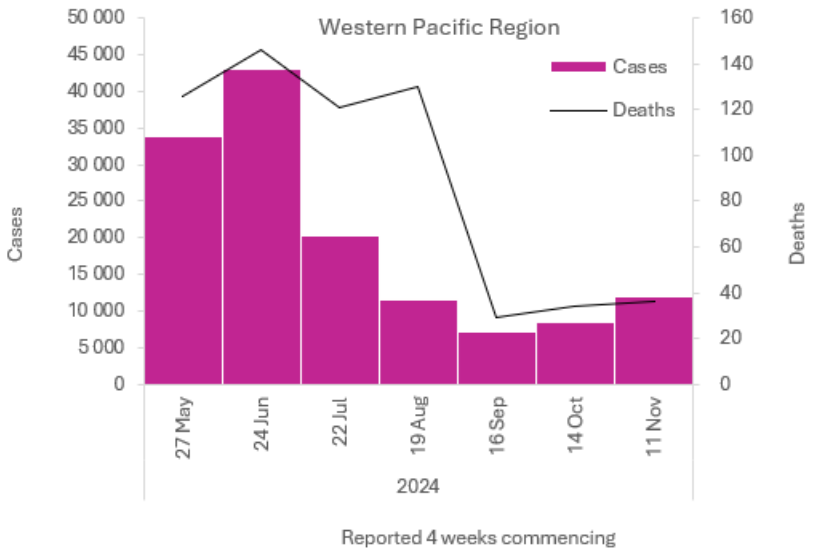
Western Pacific Region

The SARS-CoV-2 weekly percent test positivity from systematically conducted virological surveillance in the Western Pacific Region changed from 5.1% to 4.3% across eight countries who reported at least once during the four-week period. No country reported an increase of more than 2.5% in percent test positivity during the four-week reporting period. No country showed elevated SARS-CoV-2 activity (10% or more) in the final week. During the reporting period, the weekly average number of specimens tested was 806.

The Western Pacific Region reported just under 12 000 new cases, a 42% increase as compared to the previous 28-day period. Two (6%) 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 Malaysia (5406 vs 3633 new cases; +49%), and New Zealand (5944 vs 4117 new cases; +44%). The highest numbers of new cases were reported from New Zealand (5944 new cases; 123.3 new cases per 100 000; +44%), Malaysia (5406 new cases; 16.7 new cases per 100 000; +49%), and Brunei Darussalam (387 new cases; 88.5 new cases per 100 000; +5%).

The number of new 28-day deaths in the Region increased by 6% as compared to the previous 28-day period, with 36 new deaths reported. The highest numbers of new deaths were reported from New Zealand (22 new deaths; <1 new death per 100 000; -15%), China (13 new deaths; <1 new death per 100 000; +62%), and Brunei Darussalam (1 new death; <1 new death per 100 000; no death reported the previous 28-day period).





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

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. Some countries (e.g., USA) are only reporting deaths and hospitalizations but not cases or vice versa and they might not necessarily be the same countries, and therefore number of deaths or hospitalizations may be greater than the cases in some regions (e.g., Region of the Americas)

Case detection, inclusion criteria, testing strategies, reporting practices, and data cut-off and lag times differ between countries/territories/areas. In some instances, reporting frequencies between national and subnational level might be different and retrospectively completed. 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.

Annex 3. SARS-CoV-2 test positivity

SARS-CoV-2 test positivity, as detected in integrated sentinel surveillance as part of the Global Influenza Surveillance and Response System (GISRS) and reported to FluNet, has fast become the most important measure of the circulation of the virus in communities with reduced surveillance activities.

Only data on respiratory specimens tested for SARS-CoV-2 and reported to FluNet from sentinel surveillance were included in the report. Countries may monitor respiratory virus activity using other surveillance approaches; however, those data were not included. Data reported to RespiMart from other sources of respiratory virus surveillance can be viewed here.