COVID-19 Epidemiological Update

Edition 172 published 9 October 2024

In this edition:

Key highlights

- During the four-week reporting period from 19 August to 15 September 2024, weekly SARS-CoV-2 PCR percent test positivity decreased from 8.2% in the first week of the reporting period to 5.8% in the last week, as detected in integrated sentinel surveillance within the Global Influenza Surveillance and Response System (GISRS). During this period, a weekly average of 16 209 specimens tested for SARS-CoV-2 across 89 countries that reported at least once. The highest SARS-CoV-2 activity was observed in the European Region (from 16.4% to 13.5% across 31 countries), followed by the Region of the Americas (from 11.5% to 7.1% across 21 countries), the Eastern Mediterranean Region (from 5.8% to 7.0% across 7 countries), the Western Pacific Region (from 7.7% to 4.3% across 7 countries), the South-East Asia Region (from 3.7% to 1.1% across 6 countries), and the African Region (from 1.8% to 3.4% across 17 countries).

- WHO is currently tracking several SARS-CoV-2 variants; two variants of interest (VOIs): BA.2.86 and JN.1; and seven variants under monitoring (VUMs): JN.1.7, JN.1.18, KP.2, KP.3, KP.3.1.1, LB.1, and XEC. As of September 24th, a new variant named XEC, which is a recombinant of KS.1.1 and KP.3.3, has been classified as a VUM. Globally, JN.1 is the most reported variant of interest (VOI), now reported by 140 countries, accounting for 16.0% of sequences in week 37, having declined from a prevalence of 19.4% in week 34. SARS-CoV-2 variants KP.3.1.1 and XEC are showing increasing prevalence globally, albeit at different rates while all the remaining VUMs are declining. KP.3.1.1 accounted for 46.6% of the sequences shared in week 37 compared to 36.6% in week 34 while XEC accounted for 4.8% in week 37 compared to 2.0% in week 34. KP.3 accounted for 14.4% of sequences in week 37 compared to 18.8% in week 34, KP.2 accounted for 8.1% of sequences in week 37 compared to 12.0% in week 34, JN.1.7 accounted for 0.1% in weeks 34 and 37, JN.1.18 accounted for 1.2% of sequences in week 37 compared to 2.3% in week 34, LB.1 accounted for 6.3% in week 37 compared to 6.9% in week 34.

- Wastewater surveillance is an important component of SARS-CoV-2 surveillance as well as important for early warning and or 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 is approximately 2 to 19 times higher than identified and reported cases.

- Globally, during the 28-day period from 19 August to 15 September 2024, 89 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 and deaths has increased during the 28-day period, with over 270 000 new cases and 5700 new deaths, an increase of 10% and 11%, respectively, compared to the previous 28 days (22 July to 18 August 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 28-day period from 19 August 2024 to 15 September 2024, 42 and 31 countries provided data at least once on COVID-19 hospitalizations and admissions to an intensive care unit (ICU), respectively. From available data, about 27 000 new hospitalizations and more than 1200 new ICU admissions were reported during this period. Among the countries reporting these data consistently over the current and past reporting period, there was overall 14% and 52% increase in new hospitalizations and ICU admissions, respectively. The increasing trend in new hospitalization and ICU admissions was driven mainly by countries from the European Region and the Region of the Americas.

- 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 suggests 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[†]

- WHO published the latest COVID-19 Vaccination Insights Report for quarter two (April-June) 2024. Globally, 16.6 million individuals have received a dose of COVID-19 vaccine across 79 reporting Member States (MS), containing 25% of the global population, in quarters 1 and 2. This is 6.4 million individuals more than as of end of quarter 1. Among older adults, 9.4 million individuals received a dose across the 63 MS reporting on uptake in this group, corresponding to an uptake rate of 0.81% through the end of quarter 2. This is 5.4 million individuals more than as of end of quarter 1. Data collection for quarter 3 (July-September) will open on 15 October 2024.

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 3 October 2024)
- Forest Plots displaying results of COVID-19 VE studies (last updated 1 October 2024)
- Special focus WEU on interpreting relative VE (29 June 2022, pages 6-8)
- Neutralization plots (last updated 1 October 2024)
- 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 15 September 2024

SARS-CoV-2 test positivity rate from sentinel sites 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 (19 August to 15 September 2024), the SARS-CoV-2 percent positivity of the specimens tested from sentinel sites decreased from 8.2% to 5.8%. During this period, on average 16 209 specimens per week were tested for SARS-CoV-2 from across 89 countries that reported at least once (Table 1).

Globally, the number of new weekly cases increased by 10% during the 28-day period of 19 August to 15 September 2024 as compared to the previous 28-day period, with over 270 000 new cases reported (Figure 2, Table 2). The number of new weekly deaths increased by 11% as compared to the previous 28-day period, with 5700 new fatalities reported. As of 15 September 2024, over 776 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 38% (89 of 234) and 13% (31 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.

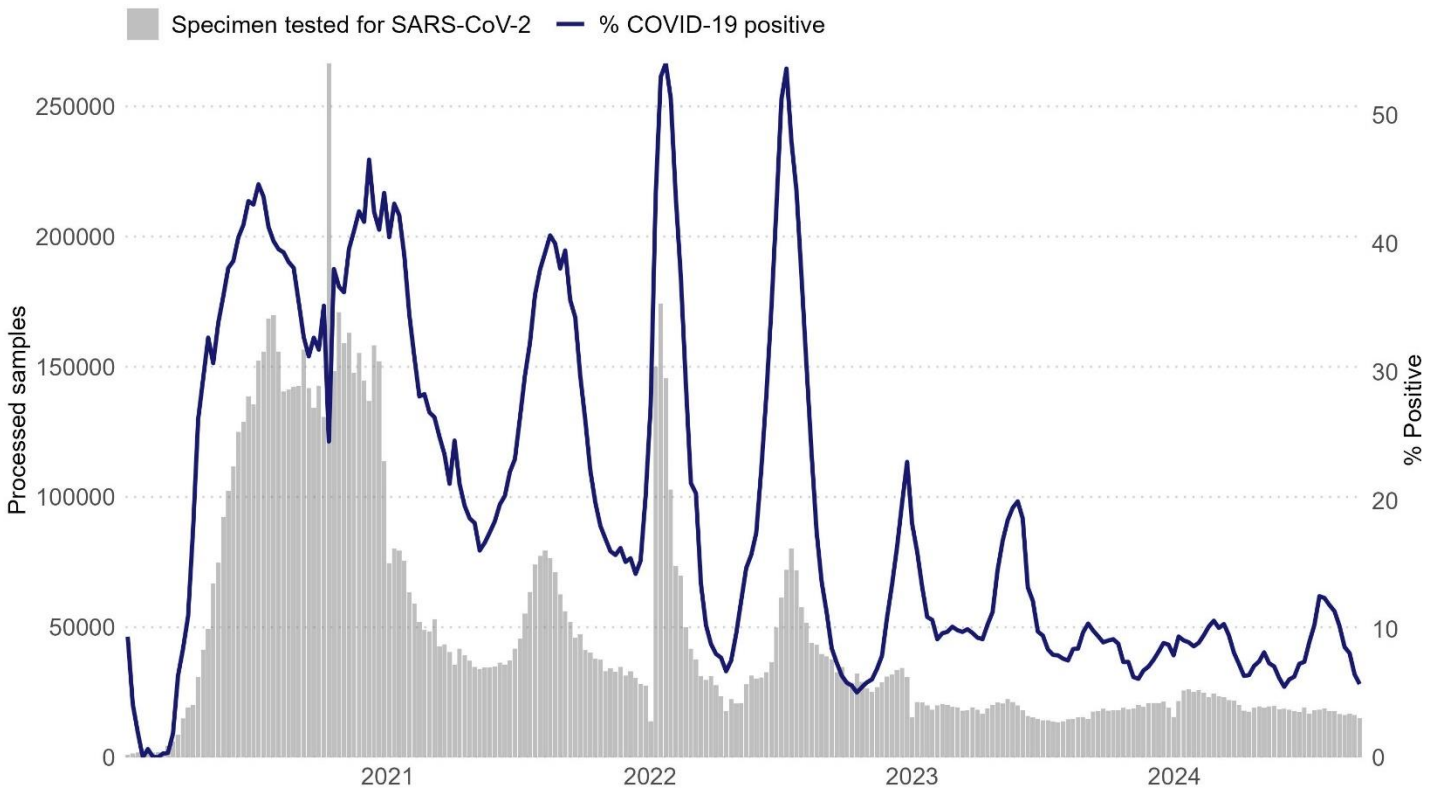
SARS-CoV-2 Test Positivity

‡ 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 sentinel sites, from 05 January 2020 to 15 September 2024

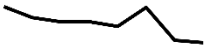
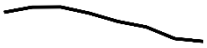


Source: Influenza and SARS-CoV-2 surveillance data from GISRS reported to FluNet; WHO Global Influenza Programme

At the regional level, during the reporting period (19 August to 15 September 2024), the highest SARS-CoV-2 activity was observed in the European Region (changed from 16.4% to 13.5% across 31 countries), followed by the Region of the Americas (from 11.5% to 7.1% across 21 countries), the Eastern Mediterranean Region (from 5.8% to 7.0% across 7 countries), the Western Pacific Region (from 7.7% to 4.3% across 7 countries), the South-East Asia Region (from 3.7% to 1.1% across 6 countries), and the African Region (from 1.8% to 3.4% across 17 countries) (Table 1).

At the country level, 89 countries reported SARS-CoV-2 test positivity from sentinel sites at least once during the reporting period. From the first to the fourth week of the reporting period, 5.6% (5/89) 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: Ghana (from 0.8% to 11.8%), Lao People's Democratic Republic (from 3.5% to 10.4%), United Arab Emirates (from 7.5% to 12%), Niger (from 0% to 4%), and Chile (from 2.5% to 5.4%). At the end of the reporting week ending on 15 September 2024, 26% (23/89) of countries reported elevated SARS-CoV-2 activity (10% test positivity or more) (Figure 3). The five highest test positivity rates at the end of the period were: Cyprus (100%), Poland (61%), Slovakia (50%), Netherlands (46%), and Azerbaijan (33%).

Table 1. SARS-CoV-2 test positivity as reported from sentinel sites by WHO Region during four-week reporting period (18 August to 15 September 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)			
			2024-34	2024-35	2024-36	2024-37
Africa		17	1.8% (1302)	1.5% (1462)	1.7% (1323)	3.4% (1258)
Americas		21	11.5% (3855)	10.4% (3610)	9.4% (3525)	7.1% (2979)
Eastern Mediterranean		7	5.8% (770)	7.6% (808)	8.9% (761)	7.0% (818)
Europe		31	16.4% (1508)	19.6% (1652)	13.9% (1635)	13.5% (1873)
South-East Asia		6	3.7% (897)	2.3% (981)	2.0% (981)	1.1% (899)
Western Pacific		7	7.7% (8030)	6.7% (8241)	4.8% (8070)	4.3% (7599)
Global		89	8.2% (16,362)	8.1% (16,754)	6.5% (16,295)	5.8% (15,426)

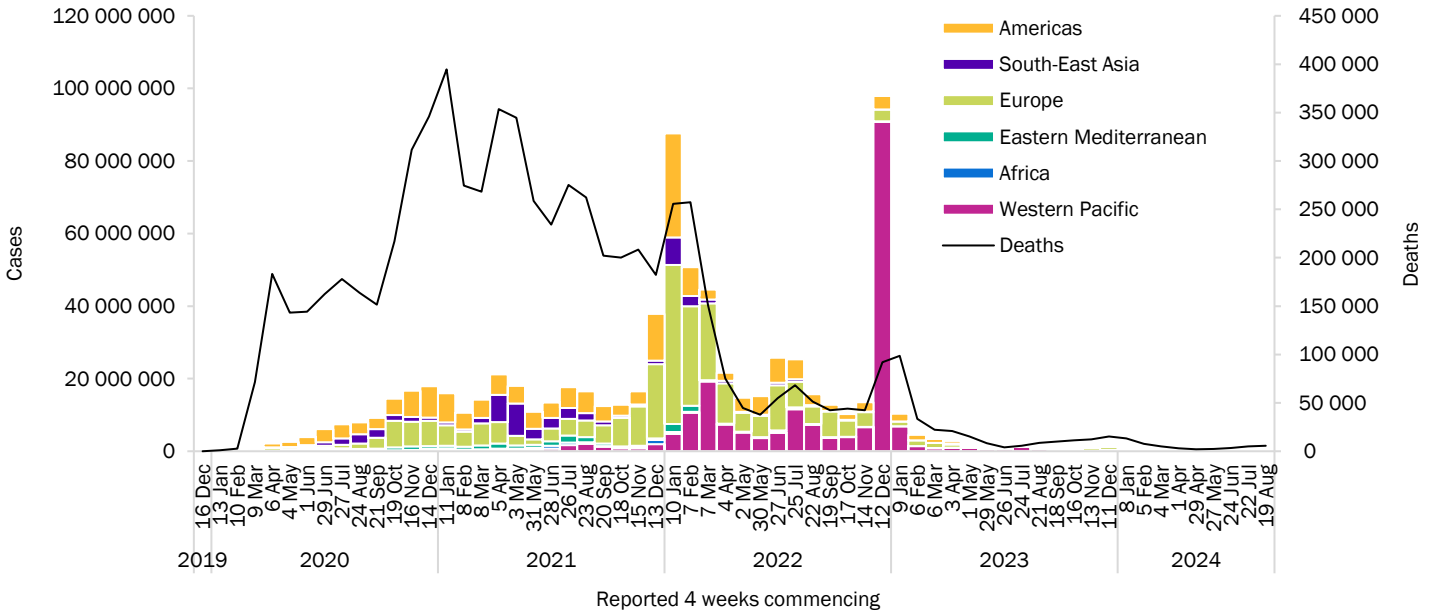
¥From week 30 to week 37 2024

**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.*

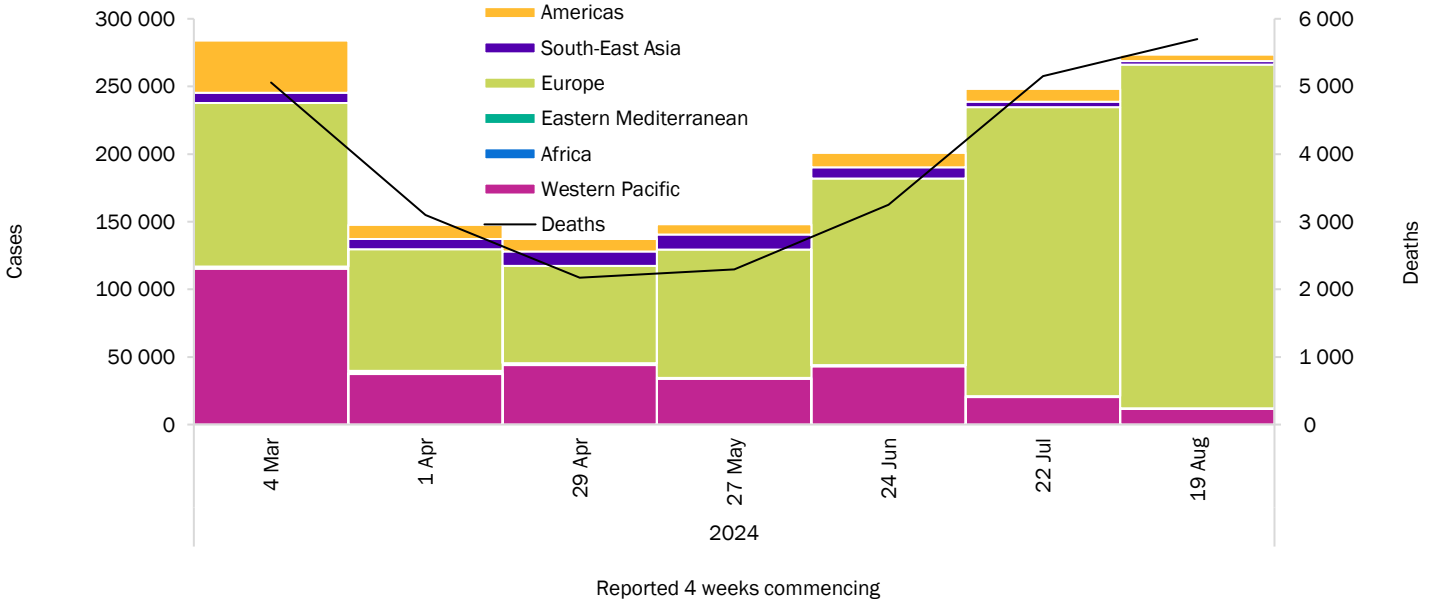
COVID-19 Morbidity and Mortality trends

Figure 2. COVID-19 cases and global deaths by 28-day intervals reported by WHO Region, as of 15 September 2024 (A); 5 February to 15 September 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 four of the six WHO regions: the Region of the Americas (-52%), the Western Pacific Region (-43%), the South-East Asia Region (-33%), and the African Region (-24%); while case numbers increased in one WHO regions: the European Region (+19%). The number of newly reported 28-day deaths decreased across three regions: the African Region (-79%), the European Region (-22%), and the South-East Asia Region (-13%); while death numbers increased in two WHO regions: the Region of the Americas (+20%), and the Western Pacific Region (+7%).

At the country level, the highest numbers of new 28-day cases were reported from the Russian Federation (95 943 new cases; >100%), Poland (36 435 new cases; >100%), Greece (18 021 new cases; -18%), Romania (13 152 new cases; -24%), and Lithuania (11 546 new cases; +172%). The highest numbers of new 28-day deaths were reported from the United States of America (4670 new deaths; +23%), Sweden (205 new deaths; +49%), Greece (144 new deaths; -13%), the Russian Federation (112 new deaths; +93%), and New Zealand (96 new deaths; +22%).

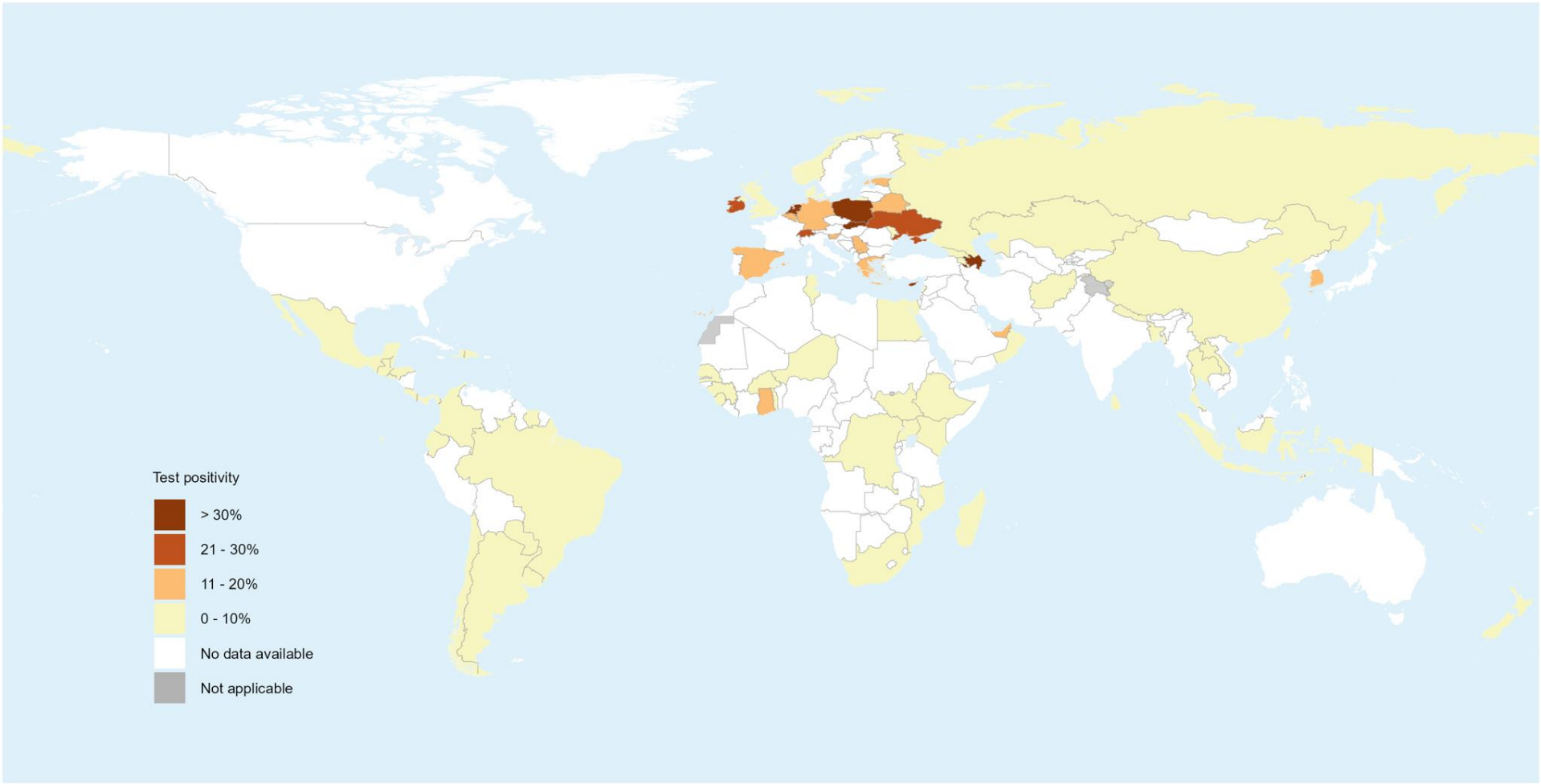
Table 2. Newly reported and cumulative COVID-19 confirmed cases and deaths by WHO Region, as of 15 September 2024**

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	254 164 (93%)	19%	**280 111 773 (36%)**	815 (14%)	-22%	**2 275 341 (32%)**	34/61 (56%)	19/61 (31%)
Western Pacific	11 550 (4%)	-43%	**208 570 058 (27%)**	130 (2%)	7%	**421 522 (6%)**	10/35 (29%)	3/35 (9%)
Americas	4 544 (2%)	-52%	**193 299 743 (25%)**	4 739 (83%)	20%	**3 033 120 (43%)**	18/56 (32%)	5/56 (9%)
South-East Asia	2 621 (1%)	-33%	**61 317 985 (8%)**	13 (0%)	-13%	**808 827 (11%)**	6/10 (60%)	2/10 (20%)
Africa	516 (0%)	-24%	**9 583 250 (1%)**	3 (0%)	-79%	**175 531 (2%)**	21/50 (42%)	2/50 (4%)
Eastern Mediterranean	0 (0%)	NA	**23 417 911 (3%)**	0 (0%)	NA	**351 975 (5%)**	0/22 (<1%)	0/22 (<1%)
Global	**273 395 (100%)**	**10%**	**776 301 484 (100%)**	**5700 (100%)**	**11%**	**7 066 329 (100%)**	**89/234 (38%)**	**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 15 September 2024



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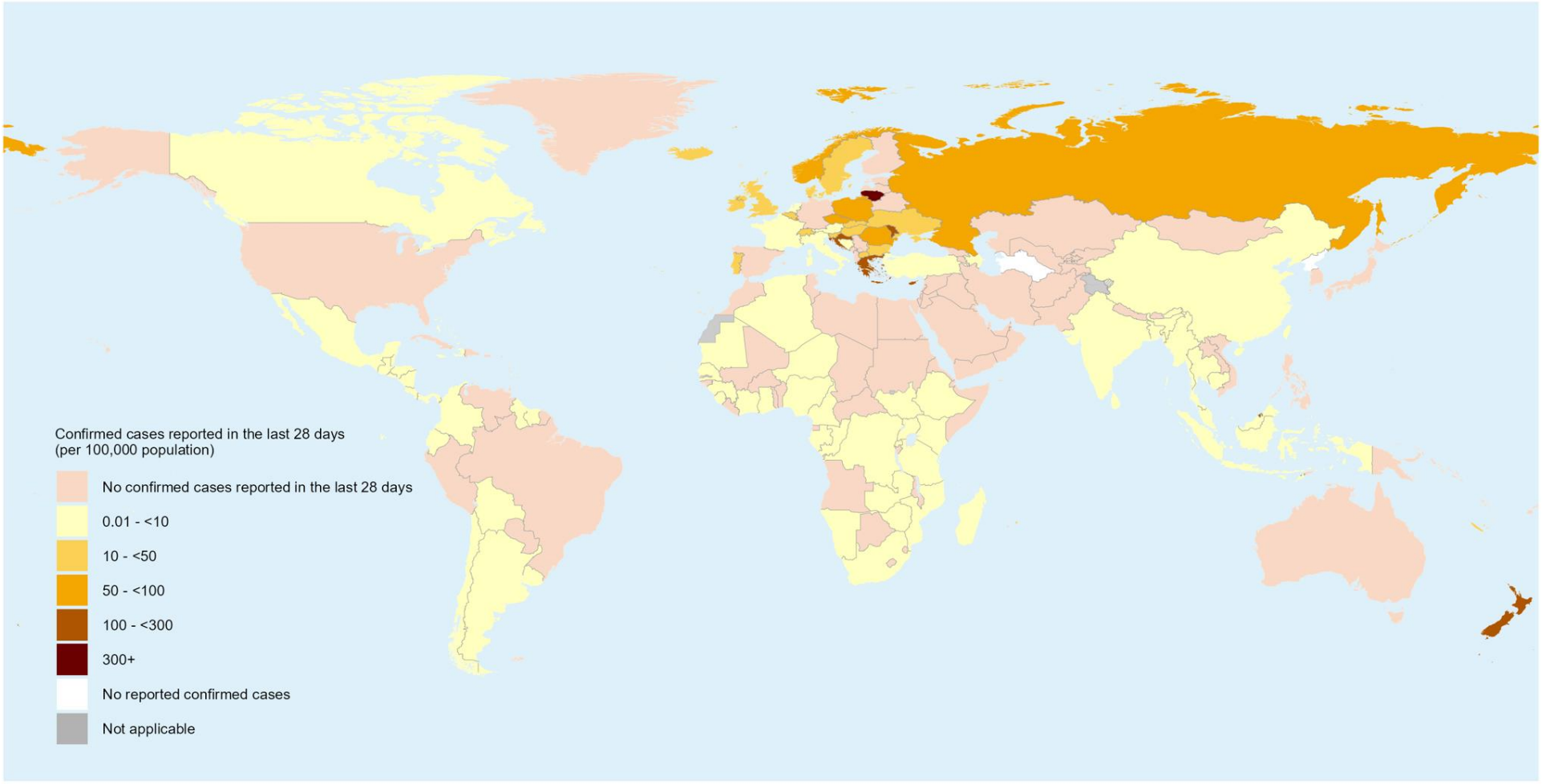
Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization, Global Influenza Surveillance and Response System (GISRS)
Map Production: WHO Health Emergencies Programme

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 15 September 2024**



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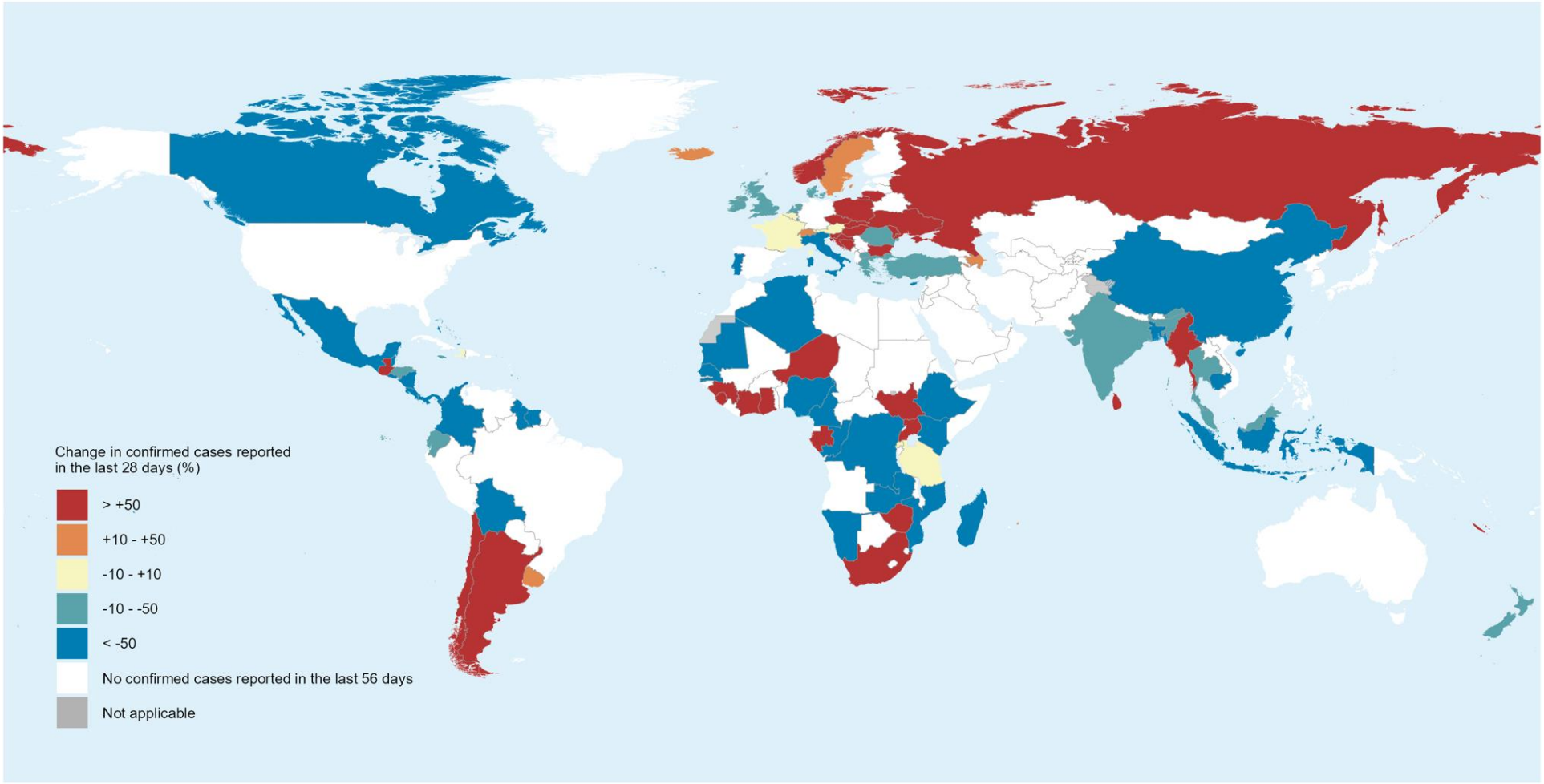
Data Source: World Health Organization, United Nations Population Division, EuroStat
Map Production: WHO Health Emergencies Programme

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

Figure 5. Percentage change in confirmed COVID-19 cases over the last 28 days relative to the previous 28 days, as of 15 September 2024**



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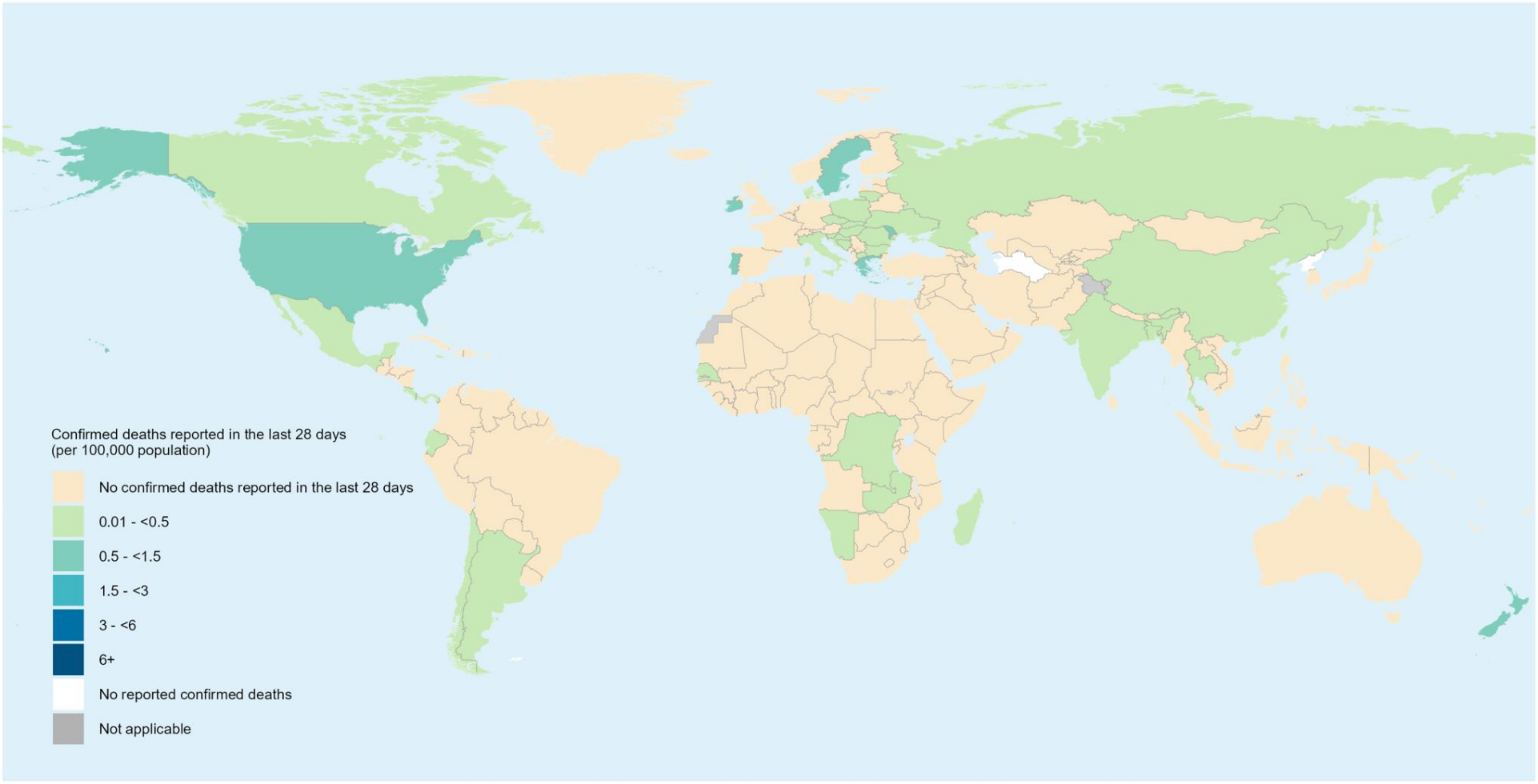
Data Source: World Health Organization
Map Production: WHO Health Emergencies Programme

**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 15 September 2024 **



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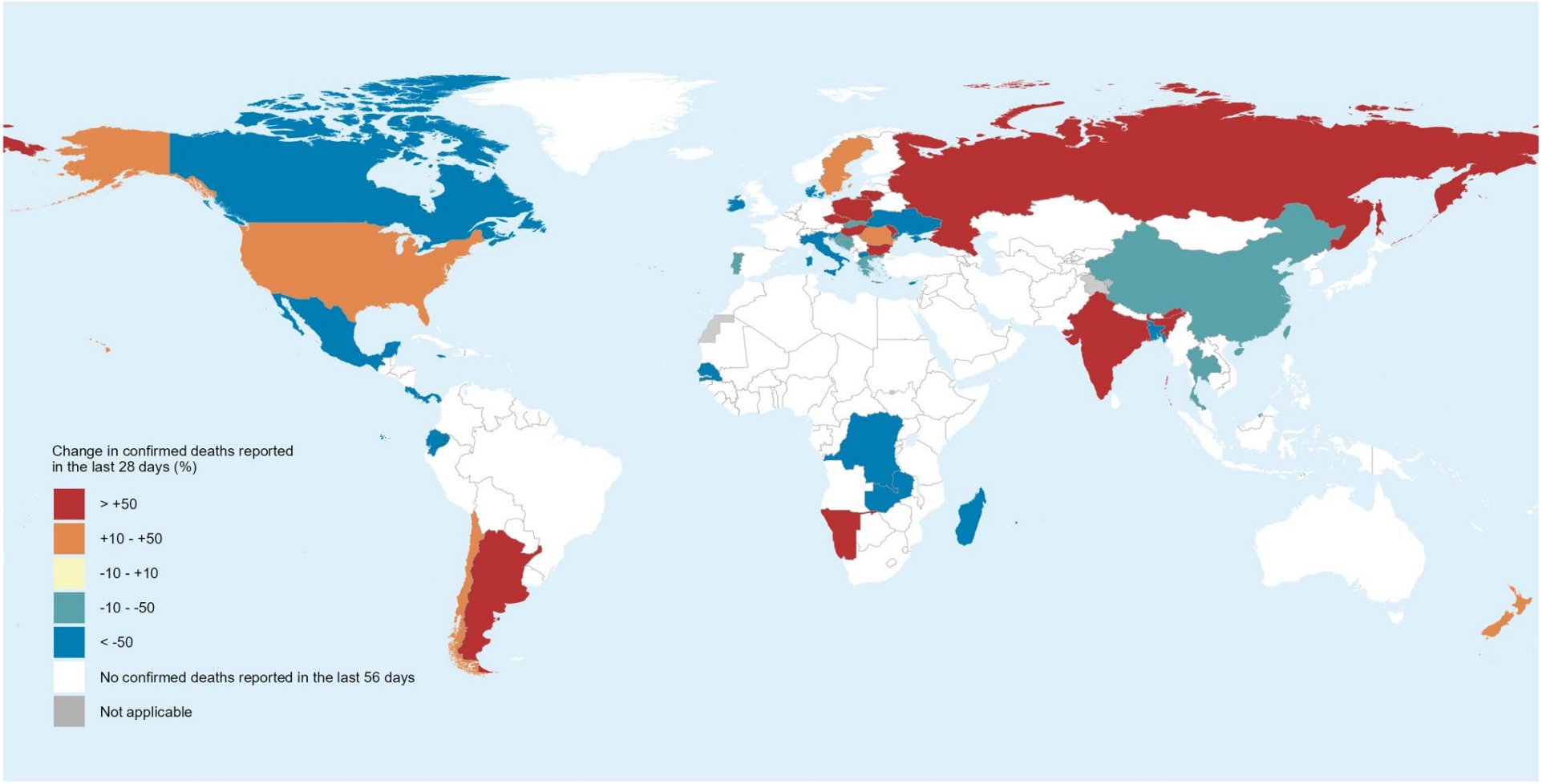
Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

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 7. Percentage change in confirmed COVID-19 deaths over the last 28 days relative to the previous 28 days, as of 15 September 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 19 August to 15 September 2024, a total of 26 730 new hospitalizations and 1248 new ICU admissions were reported from 42 and 31 countries, respectively. Among the countries reporting these data consistently over the current and past reporting period, there were overall 14% and 58% increase in new hospitalizations and ICU admissions, respectively, compared to the previous 28 days (22 July to 18 August 2024) (Tables 3 and 4). The increasing trend is mainly driven by countries from the European Region and the Region of Americas. 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 19 August to 15 September 2024, 42 (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 (19 countries; 34%), followed by the European Region (14 countries; 23%), South-East Asia Region (two countries; 20%), the Western Pacific Region (four countries; 11%), and the African Region (three countries; 6%). No country in the Eastern Mediterranean Region shared data during the period. The number of countries that consistently[7] reported new hospitalizations for the period was 35 (15%) (Table 3).

Among the 35 countries consistently reporting new hospitalizations, 8 (23%) countries registered an increase of 20% or greater in hospitalizations during the past 28 days compared to the previous 28-day period: Russian Federation (9477 vs 3662; >100%), Brazil (3000 vs 1414; >100%), Czechia (221 vs 111; 99%), Argentina (378 vs 207; 83%), Slovakia (236 vs 135; 75%), Uruguay (40 vs 27; 48%), Chile (55 vs 42; 31%), and Mauritius (13 vs 10; 30%). The highest numbers of hospitalizations were reported in the Russian Federation (9477; >100%), the United States of America (5312; -11%), and Brazil (3000; >100%).

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

Table 3. Number of new hospitalization admissions reported by WHO regions, 19 August to 15 September 2024 compared to 22 July to 18 August 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	3/50 (6%)	13	2/50 (4%)	13	30%
Americas	19/56 (34%)	9855	18/56 (32%)	9854	-3%
Eastern Mediterranean	0/22 (<1%)	N/A[+]	0/22 (<1%)	N/A	N/A
Europe	14/61 (23%)	14 431	10/61 (16%)	14 305	52%
South-East Asia	2/10 (20%)	1443	1/10 (10%)	1443	-41%
Western Pacific	4/35 (11%)	988	4/35 (11%)	988	-26%
Global	**42/234 (18%)**	**26 730**	**35/234 (15%)**	**26 603**	**14%**

**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.
[#] 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 four WHO regions, in the past 28 days, a total of 31 (13%) 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 Western Pacific Region (five countries; 14%), the European Region (six countries; 10%), and the African Region (three countries; 6%). 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% (23 countries).

Among the 23 countries consistently reporting new ICU admissions, six (26%) countries showed an increase of 20% or greater in new ICU admissions during the past 28 days compared to the previous 28-day period: Brazil (969 vs 448; >100%), Slovakia (5 vs 1; >100%), Czechia (22 vs 13; 69%), Chile (6 vs 4; 50%), Sweden (44 vs 30; 47%), and Ireland (10 vs 8; 25%). The highest numbers of ICU admissions were reported in Brazil (969; >100%), Ecuador (58; -38%), and Sweden (44; 47%).

Table 4. Number of new ICU admissions reported by WHO regions, 19 August to 15 September 2024 compared to 22 July to 18 August 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	3/50 (6%)	0[#]	1/50 (2%)	0	N/A
Americas	13/56 (23%)	1050	11/56 (20%)	1050	77%
Eastern Mediterranean	0/22 (<1%)	N/A[+]	N/A	N/A	N/A
Europe	10/61 (16%)	138	6/61 (10%)	131	19%
South-East Asia	0/10 (<1%)	N/A	N/A	N/A	N/A
Western Pacific	5/35 (14%)	60	5/35 (14%)	60	-22%
Global	**31/234 (13%)**	**1248**	**23/234 (10%)**	**1241**	**+59%**

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

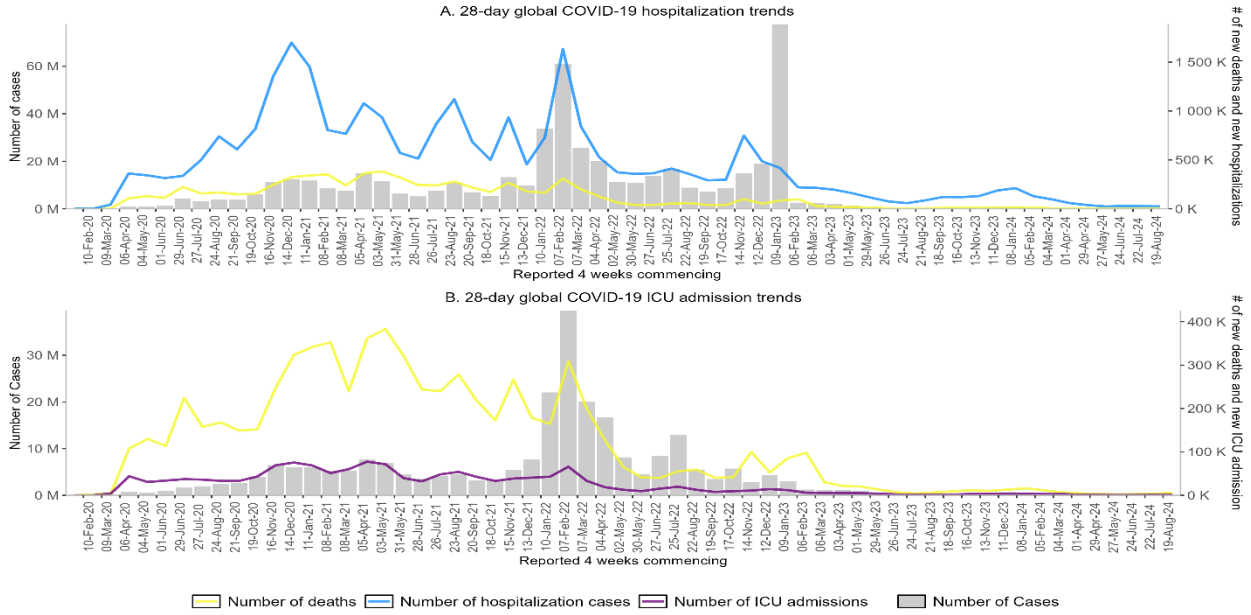
***Number of countries reported / total number of countries in the region (percentage of reporting).*

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

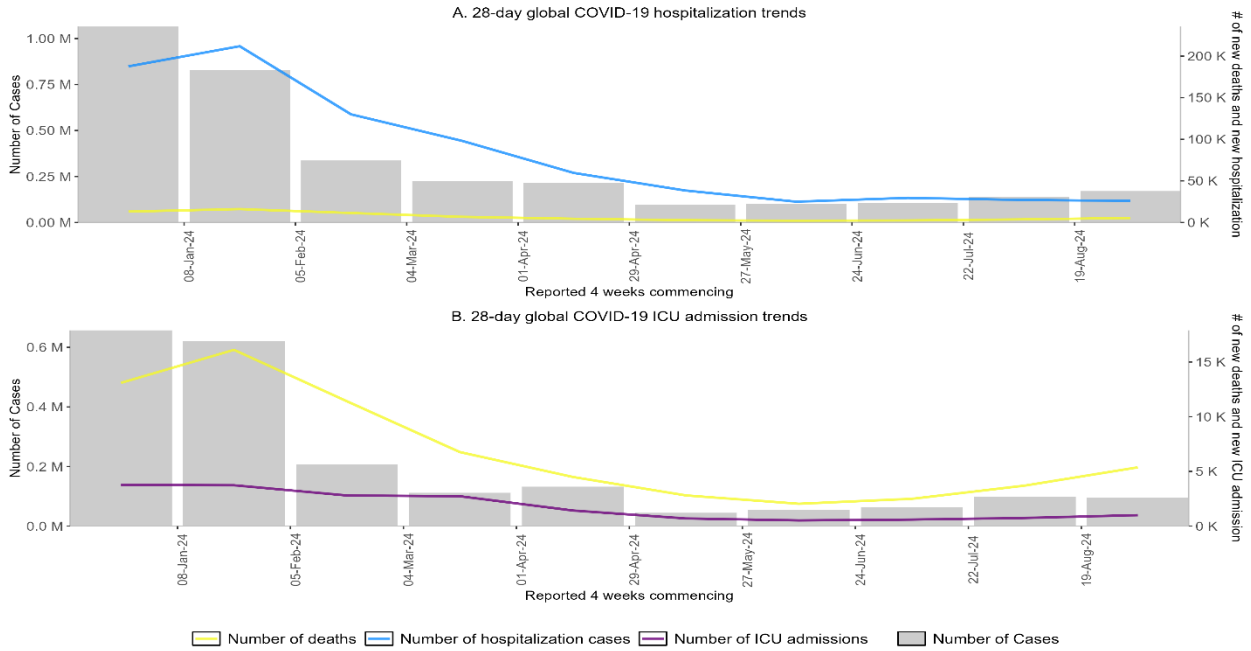
[#] WHO emphasizes the importance of maintaining reporting and encourages countries to report the absence of new admissions ("zero reporting") if there are no new hospital or ICU admissions during the week.

Figure 8. 28-day global COVID-19 hospitalization and ICU admission trends, from 10 February 2020 to 15 September 2024 (A); and from 11 December 2023 to 15 September 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 during the pandemic, 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.

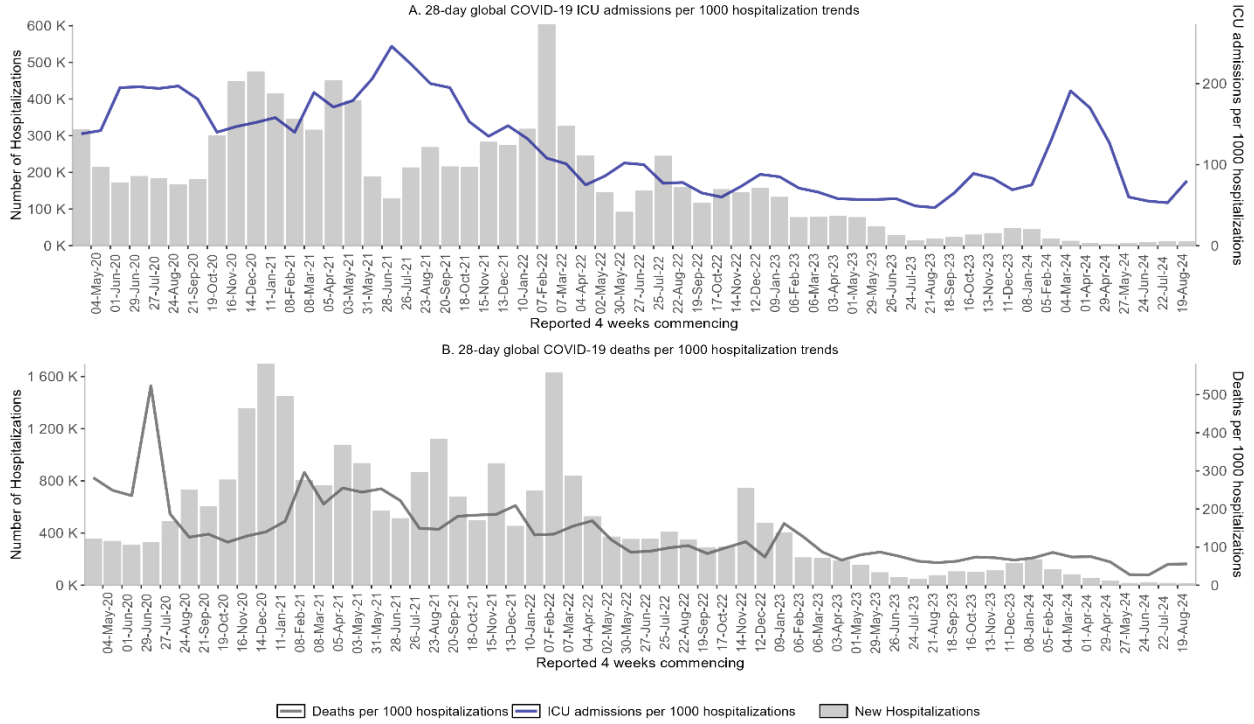
Overall, ICU admissions per 1000 hospitalizations have been decreasing since the peak in July 2021 when the rate was 245 per 1000 hospitalizations, dropping below 132 per 1000 hospitalizations at the beginning of 2022, and to less than 69 per 1000 hospitalizations by the end of 2023 (Figure 8). At the beginning of 2024, there was an increase in this rate, rising to above 191 per 1000 hospitalizations in March, and later declining to 80 per 1000 hospitalizations in August 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 the start of January 2024, the rate has continued to decline reaching 56 deaths per 1000 hospitalizations by the end of August 2024 (Figure 9).

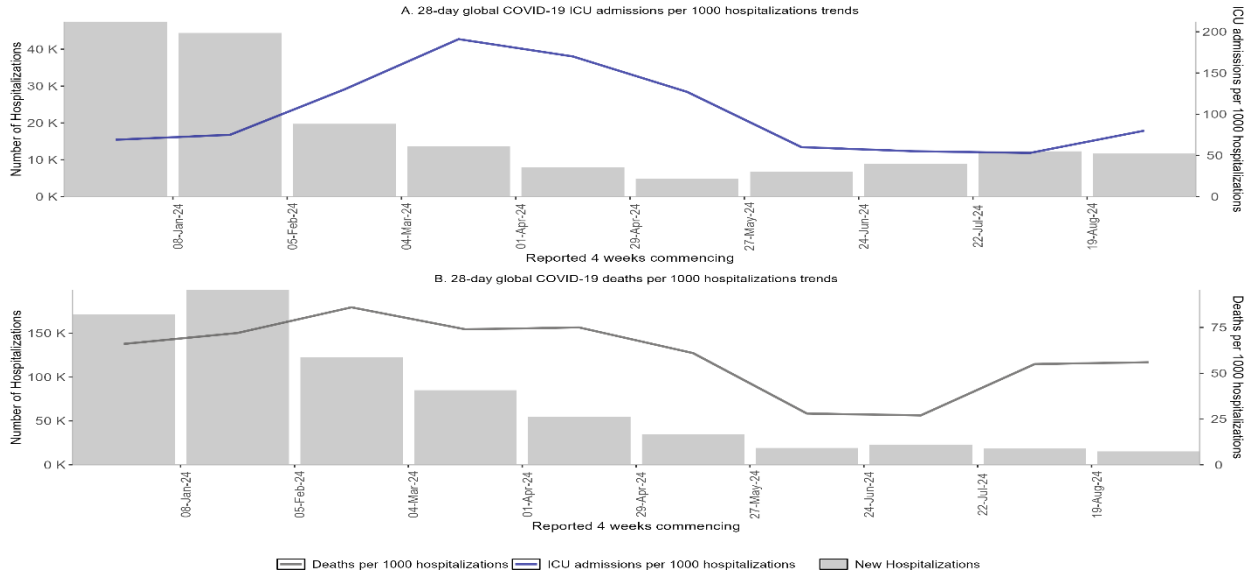
Please note that the causes for these trends cannot be directly interpreted from these data, but likely include a combination of increases or decreases in infection-derived or vaccine-derived immunity, improvements in early diagnosis and clinical care, reduced strain on health systems, and other factors. 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 15 September 2024 (A), and 11 December 2023 to 15 September 2024 (B)

A



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 23 September 2024, WHO published the COVID-19 Vaccination Insights Report analysing and presenting data covering the first and second quarters of 2024 (Q1/Q2 2024) (January-June). As of the end of Q2 2024, 16.6 million individuals were reported as having received a COVID-19 vaccine dose so far this year, from 79 MS containing 25% of the global population. Of those, 6.4 million individuals received a COVID-19 vaccine dose during quarter 2 2024. Among older adults, 9.4 million individuals were reported as having received a dose so far this year, across the 63 MS reporting on uptake in this group, corresponding to an uptake rate of 0.81%. This is 5.4 million more individuals than as of end of quarter 1. Among healthcare workers, 462 000 individuals were reported as having received a dose so far this year, across the 42 MS reporting on uptake in this group, corresponding to an uptake rate of 0.35%. This is 171.2K more individuals than as of end of quarter 1.

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

Population group	Number of MS having reported at least once *#*	Quarter 1 uptake, January – March 2024 *# (% of pop.)*	Quarter 2 uptake, April – June 2024 *# (% of pop.)*	Cumulative 2024 uptake, January - June 2024 *# (% of pop.)*
Older adults	63	4.02M (0.34%)	5.42M (0.46%)	9.44M (0.81%)
Health and care workers	42	0.29M (0.22%)	0.17M (0.13%)	0.46M (0.35%)
All population groups[8]	79	10.2M	6.37M	16.61M

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

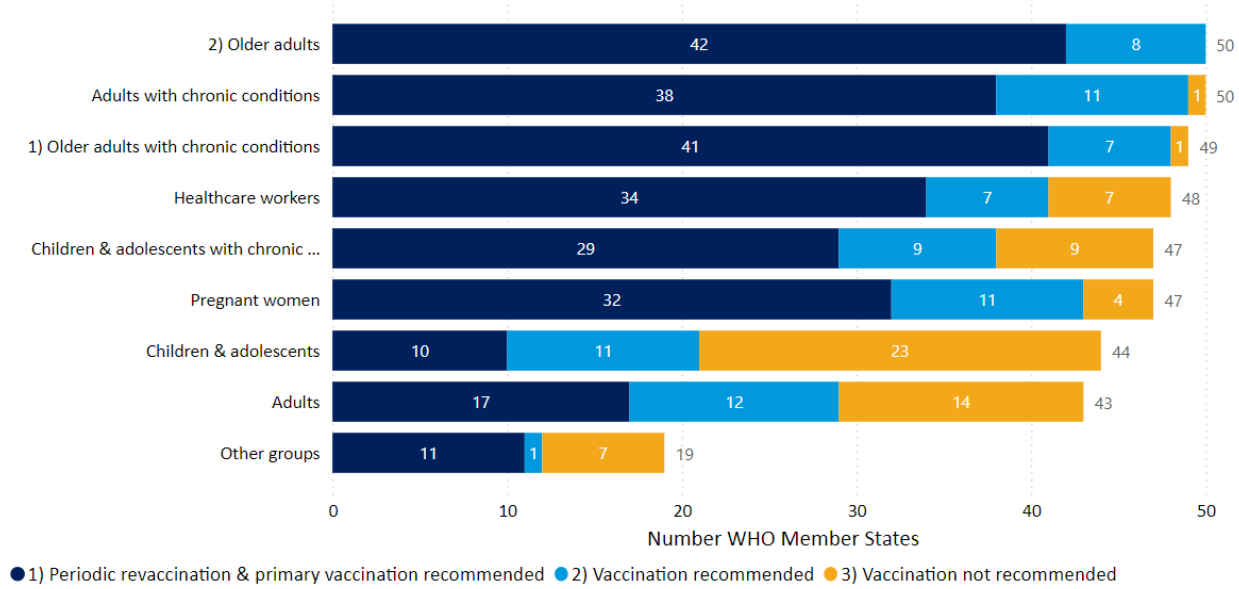
Strong variations in uptake are observed across regions and income strata in all population groups. Across all groups, uptake in the AMR and EUR regions and in high- and upper middle-income MS was greater than in other regions and income groups. In older adults, uptake in EUR (2.2%) and AMR (1.8%) was considerably more than in other regions, all between 0.0-0.3% uptake. Also in older adults, HICs had an uptake rate of 2.1%, as compared with 0.37% in LICs. In healthcare workers, again, uptake in AMR (1.07%) and EUR (0.14%) was more than in the other regions, all between 0.0 and 0.06% uptake. Uptake in healthcare workers varied between income groups, with UMICs and HICs featuring uptake rates of 0.57% and 0.3%, respectively, as compared with 0.2% and 0.04% in LICs and LMICs, respectively.

During Q2 2024, 74 WHO MS reported on current national COVID-19 vaccination policies for at least one population group. Among those 74 MS, 58 reported recommending periodic revaccination in at

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

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 repeated vaccination, with over half of responding MS reporting this. Children and adolescents, and adults were the groups most frequently not recommended for vaccination with 52% (23/44) and 33% (14/43) of responding MS reporting not administering doses to this group, respectively.

Figure 10: National policies on COVID-19 vaccination & periodic revaccination per population group, across reporting WHO Member States (74)



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 19 August to 15 September 2024, 25 267 SARS-CoV-2 sequences were shared through GISAID. In comparison, in the two previous 28-day periods, there were 42 354 and 46 501 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:

- Variants of interest (VOIs): BA.2.86 and JN.1
- Variants under monitoring (VUMs): JN.1.7, JN.1.18, KP.2, KP.3, KP.3.1.1, LB.1 and XEC

Table 5 shows the number of countries reporting VOIs and VUMs, and their prevalence from epidemiological week 34 (19 to 25 August 2024) to week 37 (9 to 15 September 2024). The VOIs and VUMs exhibiting increasing trends are highlighted in yellow, those that have remained stable are highlighted in blue, and those with decreasing trends are highlighted in green.

Globally, JN.1 is the most reported VOI (now reported by 140 countries), accounting for 16.0% of sequences in week 37 and having declined from a prevalence of 19.4% in week 34 (Figure 12, Table 6). Its parent lineage, BA.2.86, continues to show very low prevalence, accounting for 0.1-0.3% of sequences in each week between week 34 and week 37 (Figure 12, Table 6).

The seven listed VUMs are all JN.1 descendent lineages. KP.3.1.1 and XEC (a recently listed VUM) are showing increasing prevalence globally, albeit at different rates, while all the remaining are declining. KP.3 accounted for 14.4% of sequences in week 37 compared to 18.8% in week 34, KP.2 accounted for 8.1% of sequences in week 37 compared to 12.0% in week 34, JN.1.7 accounted for 0.1% in weeks 34 and 37, JN.1.18 accounted for 1.2% of sequences in week 37 compared to 2.3% in week 34, LB.1 accounted for 6.3% in week 37 compared to 6.9% in week 34, KP.3.1.1 accounted for 46.6% of sequences in week 37 compared to 36.6% in week 34, and XEC accounted for 4.8% of sequences in week 37 compared to 2.0% in week 34.

The dynamics of KP.3.1.1 and XEC show notable regional differences, as seen in Figure 11. Between weeks 34 and 37, KP.3.1.1 exhibited robust growth in the Americas and the Western Pacific, while XEC's increase was more gradual, with the most significant rises seen in Europe and the Americas. Southeast Asia continues to show only a minor presence of both variants. In the Americas, KP.3.1.1 rose from 34.1% in week 34 to 49.2% in week 37. In Europe, it grew from 48.2% to 50.4% over the same period, and in the Western Pacific, it expanded from 13.5% to 24.2%. In Southeast Asia, there was only a single sequence of KP.3.1.1 reported in both weeks 34 and 37. XEC, on the other hand, showed more modest growth: in Europe, it increased from 5.3% in week 34 to 12.0% in week 37; in the Americas, it rose from 0.9% to 2.8%; and in the Western Pacific, it grew from 0.2% to 2.0%. XEC has not been reported in the African, Eastern Mediterranean, or Southeast Asian regions.

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

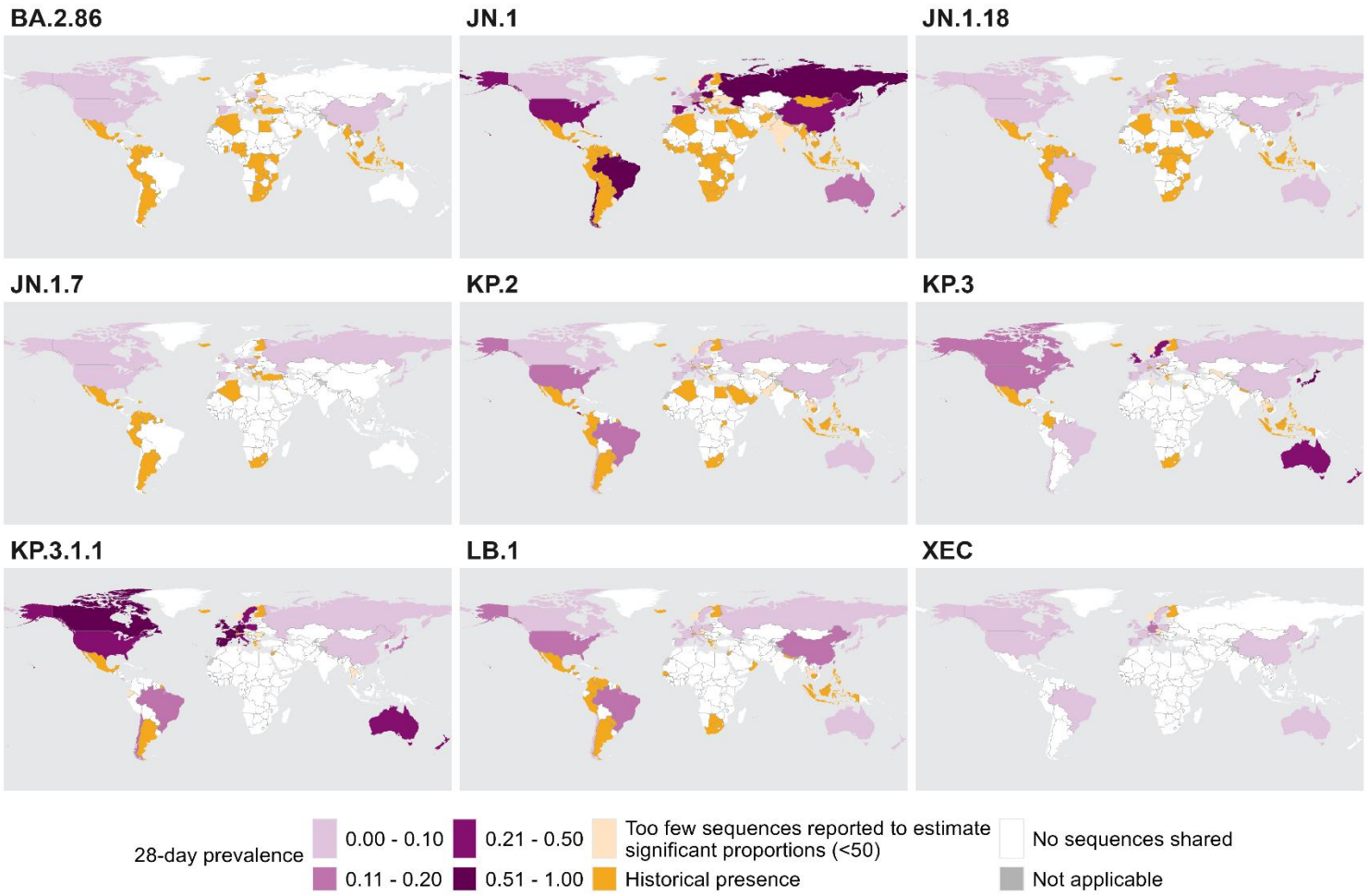
laboratory or epidemiological reports indicating any association between VOIs/VUMs and increased disease severity. As shown in Figure 11 and Figure 12, low and unrepresentative levels of SARS-CoV-2 genomic surveillance continue to pose challenges in adequately assessing the variant landscape.

Table 6. Weekly prevalence of SARS-CoV-2 VOIs and VUMs, week 30 to week 33 of 2024

Lineage*	Countries§	Sequences§	2024-34	2024-35	2024-36	2024-37
VOIs						
BA.2.86	104	24074	0.2	0.3	0.1	0.1
JN.1	140	265665	19.4	18.5	16.9	16.0
VUMs						
JN.1.7	68	9516	0.1	0.2	0.2	0.1
KP.2	82	27976	12.0	10.7	8.9	8.1
KP.3	70	45327	18.8	18.4	16.9	14.4
KP.3.1.1	54	29557	34.6	37.0	41.9	46.6
JN.1.18	89	6318	2.3	2.0	1.7	1.2
LB.1	73	12675	6.9	7.3	6.3	6.3
XEC	29	1263	2.0	3.1	4.8	4.8
Recombinant	144	490518	3.5	2.4	2.4	2.3
Unassigned	63	3937	0.2	0.1	0.0	0.0
Others	91	12371	0.2	0.2	0.1	0.0

§ 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 June 2023.
* Includes descendant lineages, except those individually specified elsewhere in the table. For example, JN.1* does not include JN.1.7, JN.1.18, KP.2, KP.3, KP.3.1.1 and LB.1 and Recombinant* does not include XEC.

Figure 11. Global 28-day prevalence of VOIs (BA.2.86 and JN.1) and VUMs (JN.1.18, JN.1.7, KP.2, KP.3, KP.3.1.1, LB.1, and XEC), 19 August to 15 September 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 19 August to 15 September 2024

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

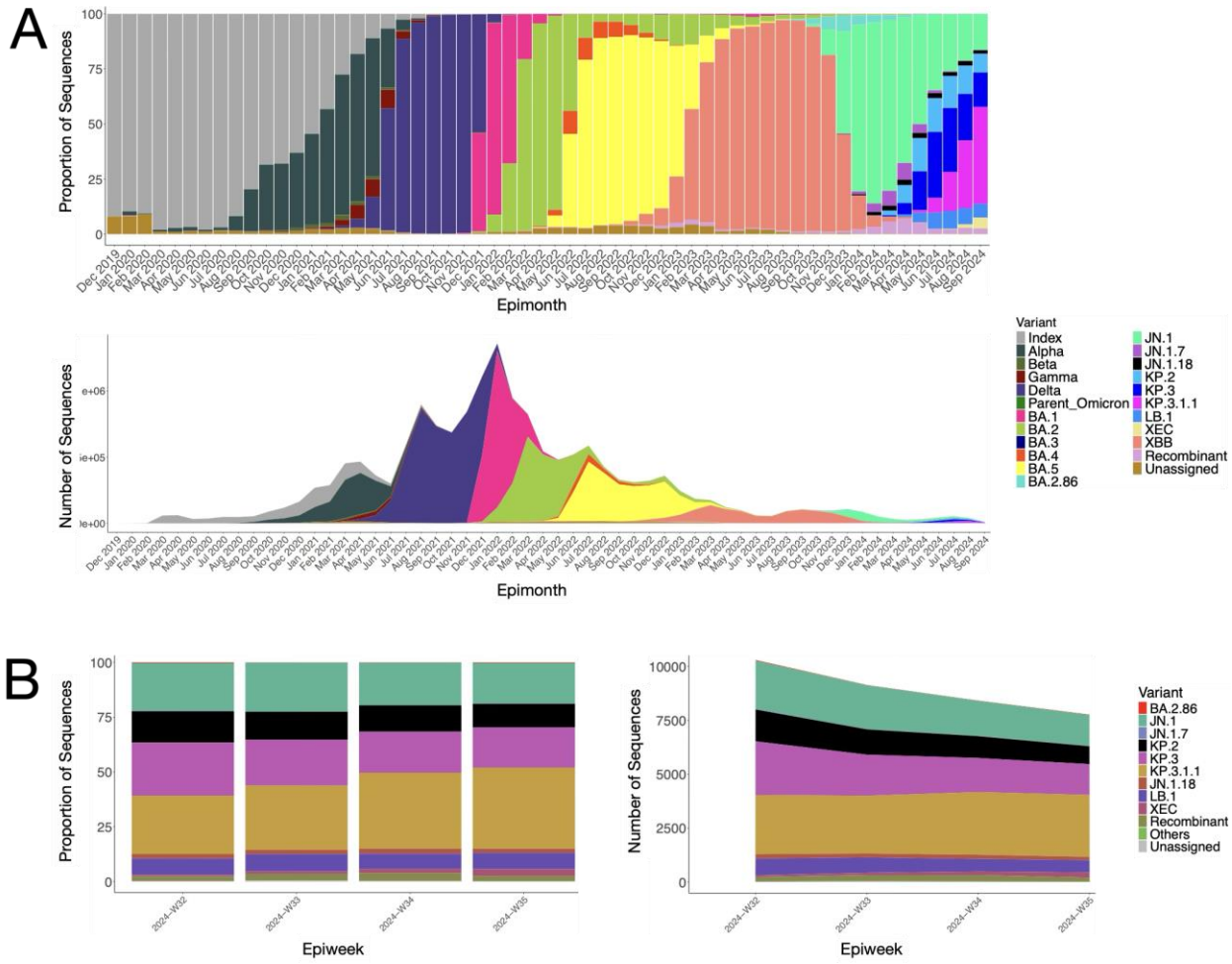


Figure 12. (**A**) The proportion (top panel) and number (bottom panel) of sequences belonging to each major SARS-CoV-2 variant in each month since the start of the pandemic. (**B**) The proportion (left panel) and number (right panel) of sequences belonging to each SARS-CoV-2 variant in each week from 19 August to 15 September 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 19 August to 15 September 2024, downloaded on 30th September 2024.

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

WHO regional overviews

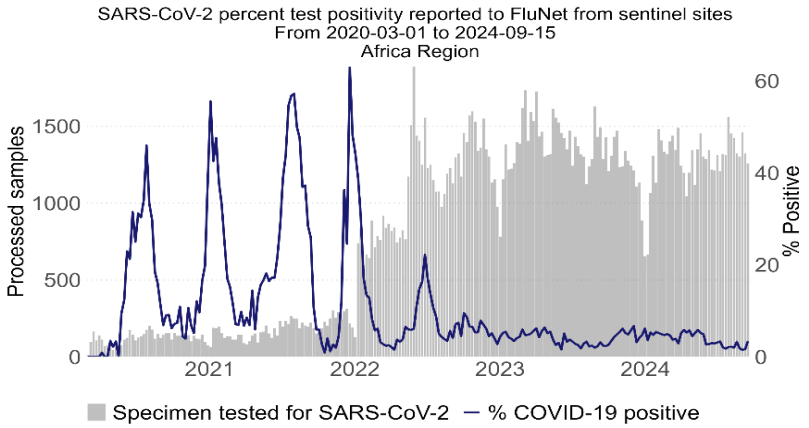
SAR-CoV-2 test positivity from sentinel sites and morbidity and mortality trends

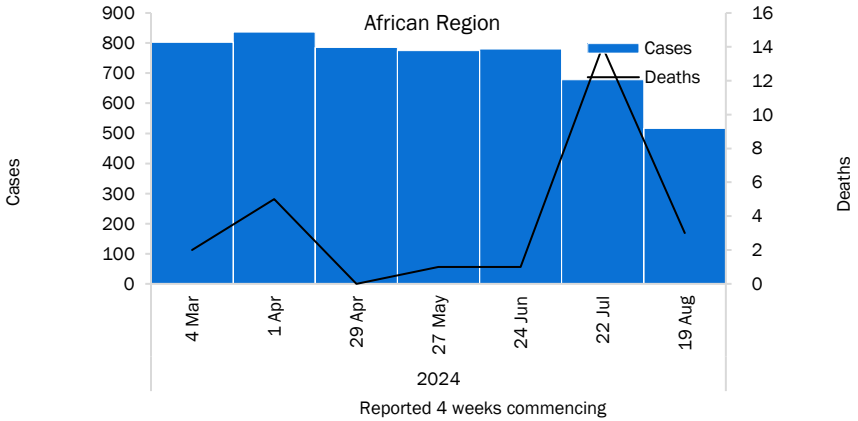
African Region

The SARS-CoV-2 weekly percent test positivity from sentinel sites in the African Region changed from 1.8% to 3.4% across 17 countries that reported at least once during the four-week period. Two countries reported an increase of more than 2.5% in percent test positivity during the four-week reporting period: Ghana (from 1% to 12%) and Niger (from 0% to 4%). One country showed elevated SARS-CoV-2 activity (10% or more) in the final week: Ghana (12%). During the reporting period, the weekly average number of specimens tested was 1,336.

The African Region reported over 516 new cases, a 24% decrease as compared to the previous 28-day period. Seven (14%) 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 Uganda (four vs one new cases; >100%), Ghana (36 vs 12 new cases; >100%), Zimbabwe (six vs two new cases; >100%), Sierra Leone (two vs one new cases; +100%), South Africa (28 vs 18 new cases; +56%), Côte d'Ivoire (six vs four new cases; +50%), and Mauritius (334 vs 243 new cases; +37%). The highest numbers of new cases were reported from Mauritius (334 new cases; 26.3 new cases per 100 000; +37%), Ghana (36 new cases; <1 new case per 100 000; >100%) and South Africa (28 new cases; <1 new case per 100 000; +56%).

The number of new 28-day deaths in the Region decreased by 79% as compared to the previous 28-day period, with three new deaths reported. The highest numbers of new deaths were reported from Namibia (2 new deaths; <1 new death per 100 000; no death reported the previous 28-day period) and Zambia (1 new death; <1 new death per 100 000; -88%).





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

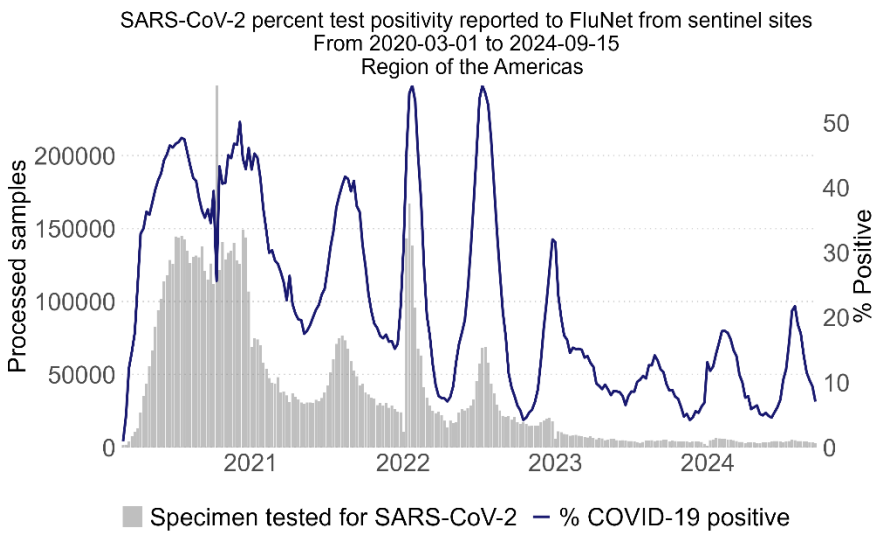
Updates from the African Region

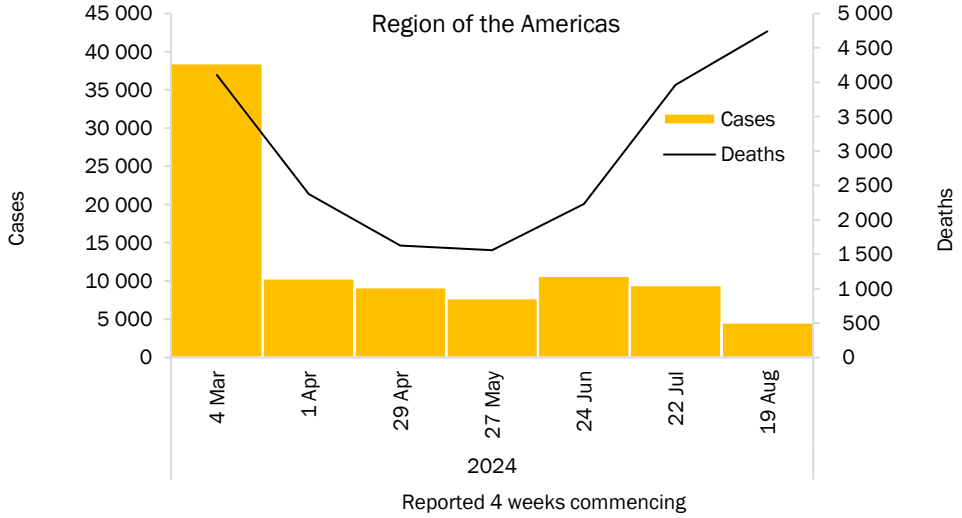
Region of the Americas

The SARS-CoV-2 weekly percent test positivity from sentinel sites in the Region of the Americas changed from 11.5% to 7.1% across 21 countries that 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: Chile (from 2% to 5%). One country showed elevated SARS-CoV-2 activity (10% or more) in the final week: Saint Vincent and the Grenadines (12%). During the reporting period, the weekly average number of specimens tested was 3,492.

The Region of the Americas reported over 4544 new cases, a 52% 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 Argentina (999 vs 516 new cases; +94%), Guatemala (13 vs seven new cases; +86%), Chile (679 vs 444 new cases; +53%), and Uruguay (69 vs 57 new cases; +21%). The highest numbers of new cases were reported from Mexico (1029 new cases; <1 new case per 100 000; -62%), Argentina (999 new cases; 2.2 new cases per 100 000; +94%), and Colombia (946 new cases; 1.9 new cases per 100 000; -70%).

The number of new 28-day deaths in the Region increased by 20% as compared to the previous 28-day period, with 4739 new deaths reported. The highest numbers of new deaths were reported from the United States of America (4670 new deaths; 1.4 new deaths per 100 000; +23%), Mexico (48 new deaths; <1 new death per 100 000; -59%), and Chile (12 new deaths; <1 new death per 100 000; +20%).





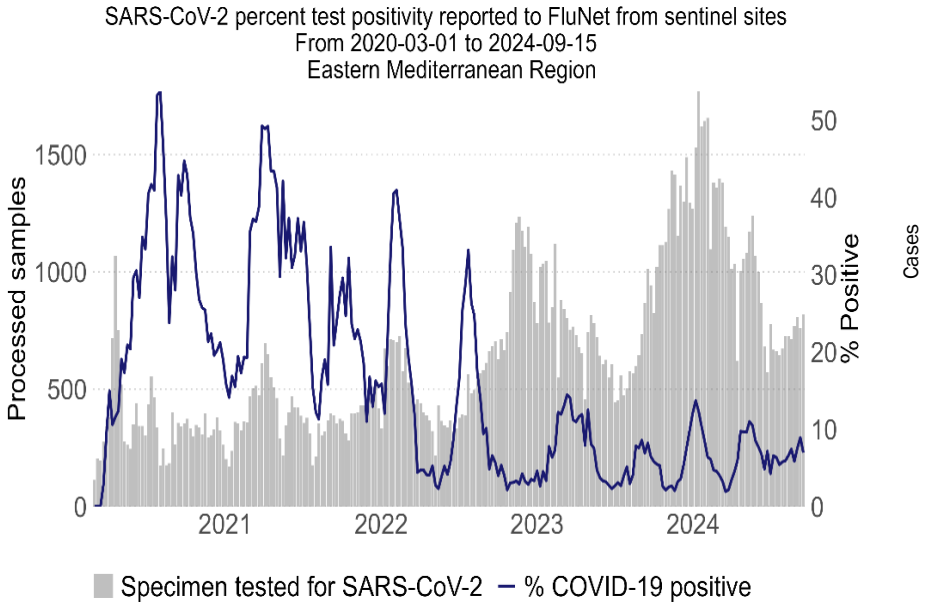
Source: Influenza and SARS-CoV-2 surveillance data from GISRS reported to FluNet; WHO

Updates from the Region of the Americas

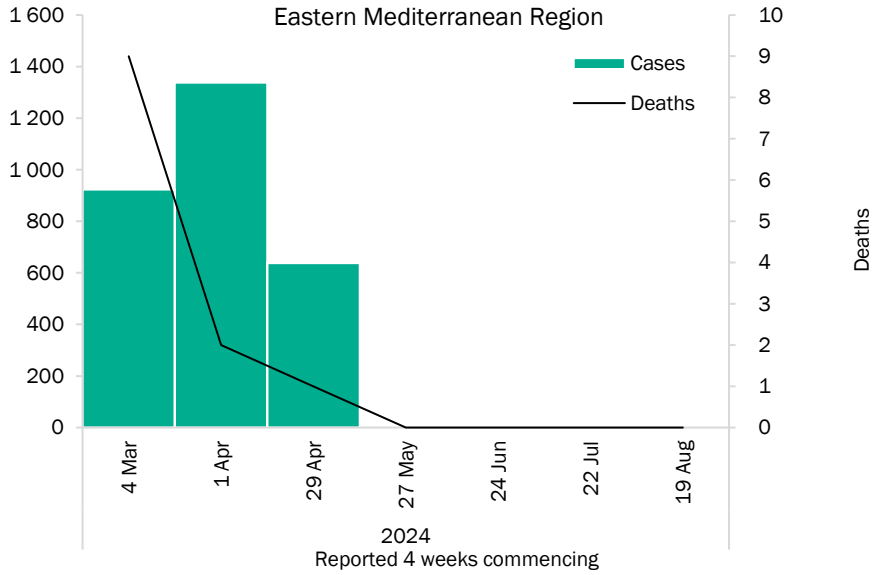
Eastern Mediterranean Region

The SARS-CoV-2 weekly percent test positivity from sentinel sites in the Eastern Mediterranean Region changed from 5.8% to 7.0% across 7 countries that 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: United Arab Emirates (from 7% to 12%). One country showed elevated SARS-CoV-2 activity (10% or more) in the final week: United Arab Emirates (12%). During the reporting period, the weekly average number of specimens tested was 789.

The Eastern Mediterranean Region did not report data for cases and deaths during this period.



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



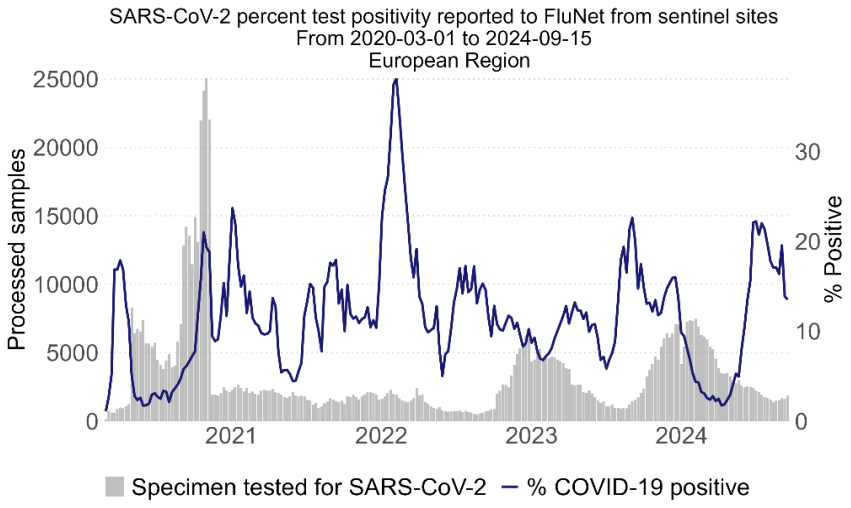
Updates from the Eastern Mediterranean Region

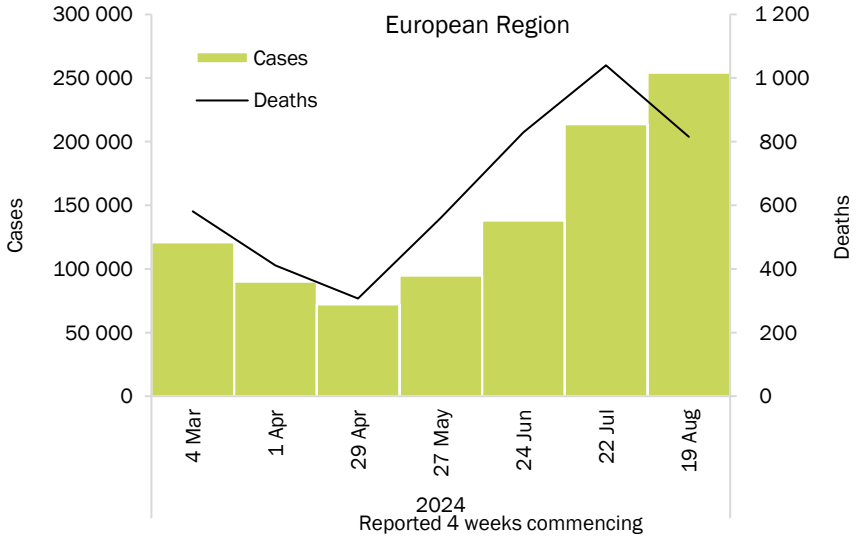
European Region

The SARS-CoV-2 weekly percent test positivity from sentinel sites in the European Region changed from 16.4% to 13.5% across 31 countries that 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. Eighteen countries showed elevated SARS-CoV-2 activity (10% or more) in the final week: Cyprus (100%), Poland (60%), Slovakia (50%), Netherlands (46%), Azerbaijan (33%), Ukraine (24%), Switzerland (23%), Ireland (21%), Belgium (20%), Greece (18%), Serbia (17%), Germany (16%), Slovenia (15%), Belarus (13%), Spain (13%), Estonia (11%), Armenia (11%), and the United Kingdom (10%). During the reporting period, the weekly average number of specimens tested was 1,667.

The European Region reported over 254 000 new cases, a 19% increase as compared to the previous 28-day period. 18 (29%) of the 62 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Ukraine (5788 vs 973 new cases; >100%), Poland (36 435 vs 11 599 new cases; >100%), Czechia (8425 vs 2891 new cases; >100%), Lithuania (11 546 vs 4239 new cases; >100%), and Slovakia (993 vs 374 new cases; >100%). The highest numbers of new cases were reported from the Russian Federation (95 943 new cases; 65.7 new cases per 100 000; >100%), Poland (36 435 new cases; 96 new cases per 100 000; >100%), and Greece (18 021 new cases; 168.1 new cases per 100 000; -18%).

The number of new 28-day deaths in the Region decreased by 22% as compared to the previous 28-day period, with 815 new deaths reported. The highest numbers of new deaths were reported from Sweden (205 new deaths; 2 new deaths per 100 000; +49%), Greece (144 new deaths; 1.3 new deaths per 100 000; -13%), and the Russian Federation (112 new deaths; <1 new death per 100 000; +93%).





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

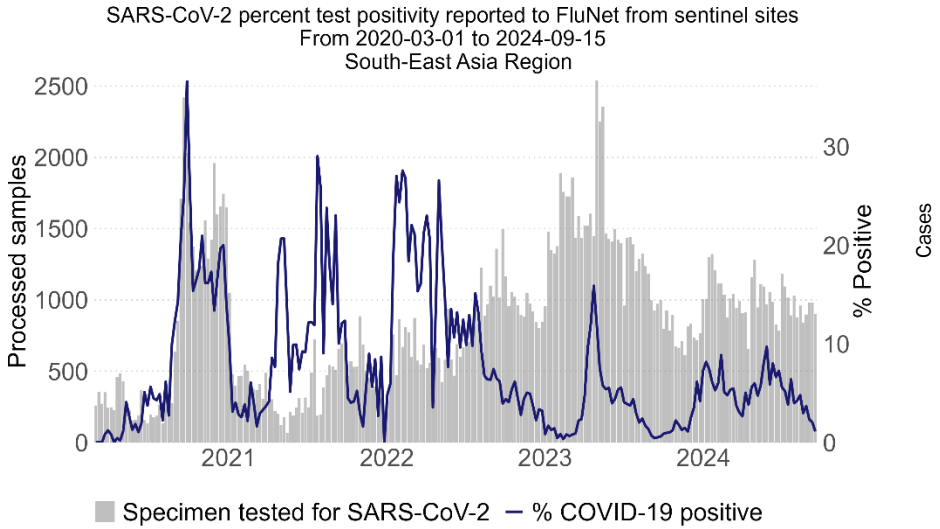
Updates from the European Region

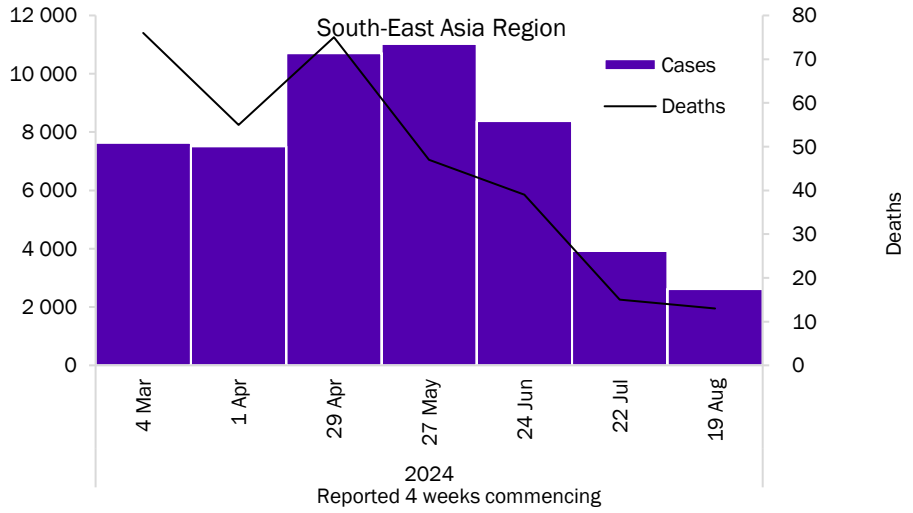
South-East Asia Region

The SARS-CoV-2 weekly percent test positivity from sentinel sites in the South-East Asia Region changed from 3.7% to 1.1% across 6 countries that 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 939.

The South-East Asia Region reported over 2621 new cases, a 33% decrease as compared to the previous 28-day period. Two (20%) of the 10 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Sri Lanka (four vs one new cases; >100%), and Myanmar (169 vs 85 new cases; +99%). The highest numbers of new cases were reported from Thailand (1443 new cases; 2.1 new cases per 100 000; -41%), India (907 new cases; <1 new case per 100 000; -20%), and Myanmar (169 new cases; <1 new case per 100 000; +99%).

The number of new 28-day deaths in the Region decreased by 13% as compared to the previous 28-day period, with 13 new deaths reported. The highest numbers of new deaths were reported from India (9 new deaths; <1 new death per 100 000; +50%) and Thailand (4 new deaths; <1 new death per 100 000; -50%).





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

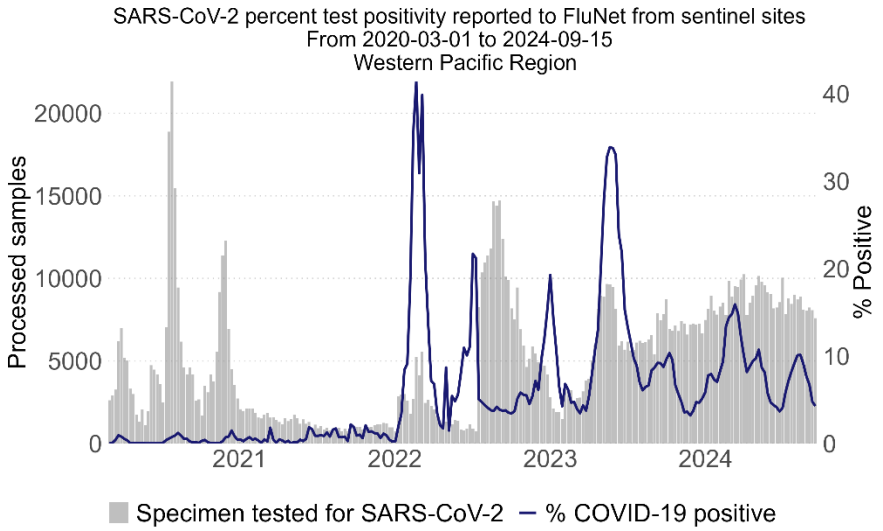
Updates from the South-East Asia Region

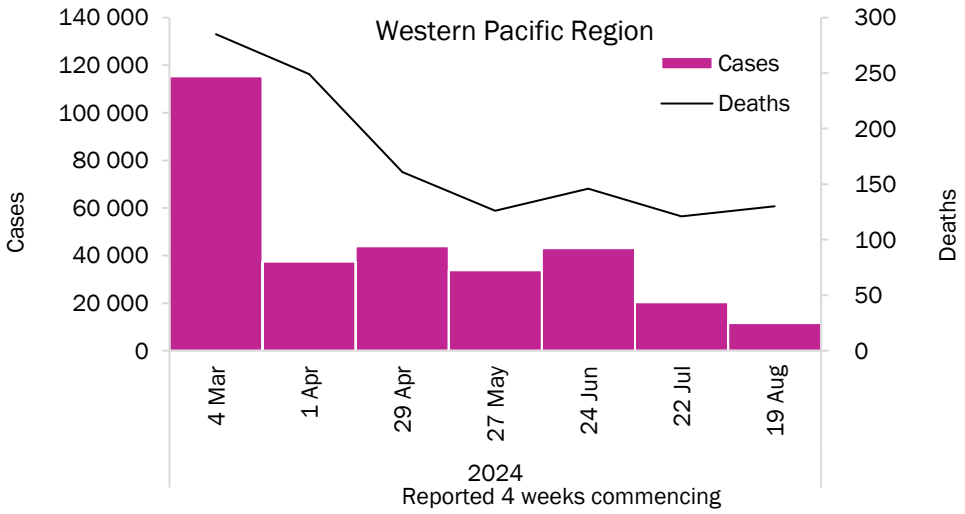
Western Pacific Region

The SARS-CoV-2 weekly percent test positivity from sentinel sites in the Western Pacific Region changed from 7.7% to 4.3% across 7 countries that 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: Lao People's Democratic Republic (from 4% to 10%). Two countries showed elevated SARS-CoV-2 activity (10% or more) in the final week: Republic of Korea (19%) and Lao People's Democratic Republic (10%). During the reporting period, the weekly average number of specimens tested was 7,985.

The Western Pacific Region reported over 11 000 new cases, a 43% 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 New Zealand (4822 new cases; 100 new cases per 100 000; -31%), China (3371 new cases; <1 new case per 100 000; -57%), and Malaysia (2756 new cases; 8.5 new cases per 100 000; -35%).

The number of new 28-day deaths in the Region increased by 7% as compared to the previous 28-day period, with 130 new deaths reported. The highest numbers of new deaths were reported from New Zealand (96 new deaths; 2 new deaths per 100 000; +22%), China (33 new deaths; <1 new death per 100 000; -15%), and Brunei Darussalam (1 new death; <1 new death per 100 000; -50%).





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.