COVID-19 Epidemiological Update

Special Edition 174 published 24 December 2024

In this edition:

Key highlights

- While there are periodic waves of COVID-19 in some countries, SARS-CoV-2, the virus that causes COVID-19, largely circulates without clear seasonality and continues to infect, cause severe acute disease and post COVID-19 condition.
- The impact of COVID-19 has varied by country depending on the circulating variants, national policies, capacities to respond and access to countermeasures.
- WHO's ability to monitor circulation, severity, virus evolution and impact is challenged by reduced surveillance, testing, sequencing, limited integration into longer term infectious disease prevention and control programs, and reporting, as Member States adapt from crisis management to longer term prevention and control of COVID-19.
- Changes to COVID-19 surveillance over the past five years have been consistent and expected, adapting to the changing landscape of the pandemic. Many Member States are transitioning from comprehensive case reporting to integrating SARS-CoV-2 monitoring into existing respiratory disease and infectious diseases surveillance systems. This is an important step towards sustainable infectious disease surveillance, monitoring and risk assessment. At the present time, the integration of SARS-CoV-2 into existing influenza surveillance systems is variable across regions ranging from 41% in countries from the Western Pacific Region to 96% in countries in the European Region.

Current Circulation:

- During the four-week reporting period (14 October to 10 November 2024), weekly SARS-CoV-2 PCR positivity reduced from 13.6% in the first week of the reporting period to 10.8%. in the last week, with a weekly average of 59 414 specimens tested across 99 countries. The European Region showed elevated activity at a decreasing trend (from 14.4% to 10.4%) during the reporting period compared to the other regions.
- Globally, during the 28-day period from 14 October to 10 November 2024, 77 countries reported COVID-19 cases, and 27 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 39% during the 28-day period, with over 201 000 new cases while new deaths decreased by 36% with over 3000 fatalities, compared to the previous 28 days (16 September to 13 October 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 16 September to 13 October 2024), 46 countries provided data on COVID-19 hospitalizations and 34 countries on admissions to an intensive care unit (ICU) at least once, respectively.

From available data, over 22 000 new hospitalizations and about 900 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 a 15% and 24% decrease in new hospitalizations and ICU admissions, respectively. However, the European Region reported an increase in both hospitalization and ICU admissions.

- Wastewater surveillance continues to be a critical component of SARS-CoV-2 surveillance as it is 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.[1],[2],[3]

Virus evolution:

- SARS-CoV-2 has evolved significantly since its emergence. Key variants of concern (VOCs) Alpha, Beta, Gamma, Delta, and Omicron each emerged with unique traits affecting transmissibility, severity and vaccine efficacy. Omicron diversified into further subvariants such as BA.1, BA.2, and BA.5, leading to successive infection waves globally. By 2023, recombinant subvariants like XBB and XBB.1.5 appeared. In late 2023, BA.2.86 led to JN.1, the most prevalent variant globally. As of December 2024, KP.3.1.1 is the most prevalent JN.1 descendent, followed by XEC, the latest designated variants under monitoring (VUMs), which is increasing in prevalence. The public health risk posed by XEC, relative to other circulating variants, has been assessed as low. Although its prevalence is increasing, XEC remains a VUM as it does not meet the criteria for classification as a VOI.

Monitoring Impact:

- From the start of the pandemic until 10 November 2024, over 776.8 million confirmed COVID-19 cases and over 7 million confirmed deaths were notified to WHO across 234 countries, areas and territories. The weekly average reported confirmed COVID-19 cases rose from 414 000 in early 2020 to 9.9 million in early 2022, peaking at 21 million in January 2022. Average weekly cases declined from mid-2022 at the time when there were significant gradual reductions in testing and number of countries reporting. By early 2023, weekly cases reduced to approximately 1.3 million, to approximately 246 000 in late 2023, and to approximately 70 000 in early 2024.
- The majority (95%) of COVID-19 associated deaths were reported in 2020, 2021, and 2022. Increased immunity from infection and/or vaccination resulted in a significant decrease in deaths from the second half of 2022. The weekly average reported deaths surged from over 21 000 in early 2020 to 78 000 in early 2021, peaking at over 99 000 in January 2021. By the end of 2021, cumulative reported deaths were 5.49 million, but WHO estimates global excess mortality at 14.91 million for 2020-2021. Weekly average reported deaths further declined to over 33 000 in early 2022, 13 000 in late 2022, 8000 in early 2023, 2400 in late 2023, and 1400 in early 2024. Global excess mortality for 2022-2024 is in the process of being estimated by WHO (not yet available).
- Individuals aged 65 and over continue to be most at risk of severe disease and death. From January 2020 to April 2022, the proportion of COVID-19 deaths in this age group fluctuated between 54% and 85%. From April 2022, an average of 88% of monthly reported deaths occurred in this population. Children under 15 years old represent 0.2% of global reported COVID-19 deaths. Among these, 60% were children under five.
- While the overall number of reported deaths among children under 15 years has decreased since 2020, in line with reduction in overall deaths, the proportion of those under five years has shown an increasing trend in 2023 and 2024 accounting for 68% and 75% of all deaths respectively among under 15 years old. Although

[1] Show us the data: global COVID-19 wastewater monitoring effectors, equity, and gaps
[2] Capturing the SARS-CoV-2 infection pyramid within the municipality of Rotterdam using longitudinal sewage surveillance
[3] Omicron COVID-19 Case Estimates Based on Previous SARS-CoV-2 Wastewater Load, Regional Municipality of Peel, Ontario, Canada

global WHO COVID-19 database does not have the further age breakdown, the WHO clinical platform report, which analysed the data from 50 351 children and adolescents, found that infants having the highest mortality risk, comparable to that of adults aged 20-45 years.

- From January 2020 to November 2024, over 28.1 million COVID-19 hospitalizations were reported to WHO across 172 countries, about 5% of confirmed reported cases from the same countries. In 2020, weekly hospitalizations averaged 155 000, peaking at 526 000 in early 2021. Increased immunity from vaccinations and infections led to a decoupling of cases and hospitalizations in 2021. In 2022, weekly hospitalizations averaged 140 000 despite rising cases. By 2023, changes in surveillance and reduction in testing and number of countries reporting led to an average of 40 000 weekly hospitalizations, dropping to 13 000 in 2024.
- ICU admissions per 1000 hospitalizations have decreased from 245 in July 2021 to 69 by the end of 2023, rising to 191 in March 2024, then declining to 108 by November 2024. With limited reporting, it is difficult to interpret fluctuations in 2024. Deaths per 1000 hospitalizations also declined from 253 in June 2021 to 59 in August 2023, and further to 41 by November 2024.
- Post-COVID-19 condition (PCC), also known as 'long COVID,' continues to pose a substantial burden on health systems. At the present time with differences in case definitions used by Member States, limited studies and resources for PCC, it is challenging to estimate the incidence of PCC with high precision, but available data from multiple countries suggests that approximately 6% of symptomatic SARS-CoV-2 infections resulted in PCC.[4]
- While severe COVID-19 is a significant risk factor for PCC, over 90% of PCC cases arise following mild COVID-19 due to the large number of infections/re-infections over the past five years. Available evidence suggests that vaccination reduces the risk of developing PCC.[5]
- The COVID-19 vaccine rollout, starting in 2021, resulted in high-income countries initially having higher vaccination rates. By the end of 2023, 67% of the global population had a complete primary series and 32% had at least one booster dose, with significant coverage disparities. Only 5% of people in low-income countries received a booster compared to 49% of people in high-income countries. Among older adults, 83% had a complete primary series and 61% had a booster, and among health workers, 89% had a complete primary series and 31% had a booster.
- From January 2024, WHO shifted from measuring 'continuous' COVID-19 vaccination coverage since the start of the vaccine rollout to measuring annual uptake. Using the new monitoring approach, as of the end of the third quarter of 2024, 39.2 million people in 90 Member States (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.
- WHO updated a package of policy briefs designed to help countries formulate policies to manage COVID-19, particularly in high-risk and vulnerable populations, and to reduce morbidity, mortality and long-term sequelae.
- The WHO Global Coronavirus Network (CoViNet), expanded Global Influenza Surveillance and Response System (GISRS), the WHO Technical Advisory Group for Virus Evolution , and the Technical Advisory Group on COVID-19 Vaccine Composition (TAG-CO-VAC) are actively monitoring SARS-CoV-2 circulation, the genetic and antigenic evolution of SARS-CoV-2 variants, immune responses to SARS-CoV-2 infection and COVID-19

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

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

vaccination, and the performance of COVID-19 vaccines against circulating variants. In April 2024, TAG-CO-VAC recommended using a monovalent JN.1 lineage vaccine antigen to enhance neutralizing antibody responses. After reviewing the latest data in December 2024, TAG-CO-VAC advises retaining the use of a monovalent JN.1 lineage variant as the antigen in future formulations of COVID-19 vaccines.

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 19 December 2024)
- Forest Plots displaying results of COVID-19 VE studies (last updated 19 December 2024)
- Special focus WEU on interpreting relative VE (29 June 2022, pages 6-8)
- Neutralization plots (last updated 16 December 2024)
- WHO COVID-19 VE Resources/Immunization Analysis and Insights

Global overview

Data as of 10 November 2024

Evolution of the surveillance

It has been five years since the first reports of COVID-19. From the initial reports of cases in December 2019 and global response to reducing the spread through the use of public health and social measures the novel coronavirus, to caring for patients, the significant collective efforts to advance research and development, address mis-information and disinformation, to the development and distribution of vaccines, the global community has experienced and addressed unprecedented challenges and remarkable achievements, significantly reducing the impact of COVID-19 disease. WHO published the first situation report on COVID-19 on 21 January 2020, initially on a daily basis, then weekly and now monthly.

Changes to COVID-19 surveillance over the last five years have been consistent and expected, adapting to the changing landscape of the pandemic. During the early stage of the pandemic, surveillance efforts were comprehensive focusing on identifying cases, providing supportive clinical care, contact tracing to reduce onward spread. Most countries initially extensively used rt-PCR testing to detect cases. Increasing efforts, globally, in genomic surveillance was initiated to identify, evaluate and track mutations of SARS-CoV-2. The establishment of TAG-VE aided in WHO's work to conduct phenotypic and genotypic assessments of SARS-CoV-2 and publish risk evaluations for variants. This effort also worked (and continues to work) to identify and monitor variants of concern (VOC), variants of interest (VOI), and variants under monitoring (VUM). Since 2020, many Member States significantly expanded their testing capacity to include antigen tests to complement the PCR tests, leading to broader and more rapid testing, earlier clinical care, and enhanced contact tracing efforts around mid-2020. WHO established two streams for global COVID-19 surveillance reporting with data flowing from countries to WHO Regional Offices: reporting of cases and deaths as required by the International Health Regulations (IHR), and voluntary detailed reporting including age-sex disaggregation, hospitalizations, ICU admissions, cases and deaths of healthcare workers, and testing data (details in Annex 4).

Since 2020, countries also began and continue to report test positivity rates to GISRS from sentinel and systematic virological surveillance sites. SARS-CoV-2 test positivity rates from systematic virologic surveillance reflect the circulation of the virus in communities and is not as affected by reductions in disease surveillance, as other surveillance systems specifically established for COVID-19 in 2020. With the integration of SARS-CoV-2 into existing respiratory and infectious disease surveillance systems, more countries have started to report SARS-CoV-2 infections to the Global Influenza Surveillance and Response System (GISRS; now expanded GISRS to include SARS-CoV-2).

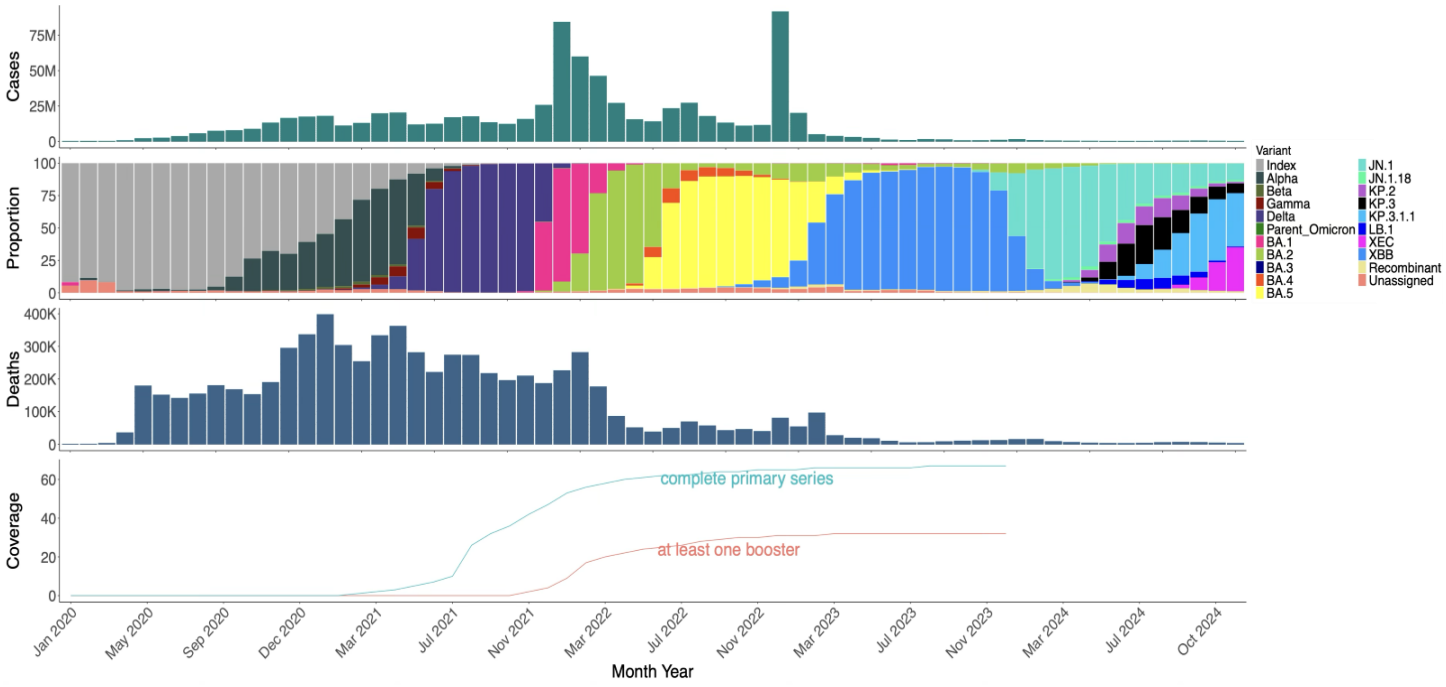
Global and national data on SARS-CoV-2 PCR percent positivity are available on WHO's integrated influenza and other respiratory viruses surveillance dashboard. In the first 45 weeks of 2024 141 countries (73% of Member States) reported over 20 million SARS-CoV-2 test results to GISRS from both sentinel and non-sentinel sites. However, the integration of SARS-CoV-2 into existing influenza and respiratory disease surveillance systems varies across regions. The proportion of countries reporting SARS-CoV-2 specimens at least once from sentinel or non-sentinel sites ranges from 41% in the Western Pacific Region to 96% in the European Region. Conversely, detailed severity surveillance information is more limited in the integrated surveillance. As of November 10 in 2024, 58 countries, representing 30% of the 194 Member States, provided SARI-specific test positivity rates.

In 2021, wastewater surveillance became an essential tool for early detection of COVID-19 surges through monitoring of the viral RNA in sewage to identify community-level transmission. Globally, an increasing number of jurisdictions have included wastewater samples into their COVID-19 surveillance. However, lack of standardization on indicators and inadequate funding remains some of the key challenges of implementing a strong global wastewater surveillance system SARS-CoV-2 and other respiratory diseases. Since 2022, a multi-pathogen surveillance approach has

expanded to cover other pathogens, leveraging on existing systems to monitor SARS-CoV-2 and other pathogens to improve efficiency and integration with clinical surveillance. According to estimates obtained from wastewater surveillance, circulation is approximately 2 to 19 times higher than identified and reported cases. [6],[7],[8] WHO is developing evidence-based guidance and to increase capacities for wastewater surveillance as part of a collaborative surveillance approach and recently published a guidance document on prioritization, implementation and integration of wastewater surveillance for one or more pathogens-including SARS-CoV-2.

Overview from January 2020 to November 2024

Figure 1. Global COVID-19 cases, proportions of circulating variants, deaths and vaccination coverage by 28-day intervals, as of 10 November 2024



From the start of the pandemic until 10 November 2024, over 776.8 million confirmed COVID-19 cases and over 7 million confirmed deaths were notified to WHO across 234 countries, areas and territories (Figure 1).

The weekly average number of confirmed COVID-19 cases increased from 414 000 in the first half of 2020 across 217 countries to 9.9 million in the first half of 2022 across 230 countries. Reported number of confirmed cases reached a peak in 2022 January with approximately 23.5 million confirmed cases per week (Figure 1). The average weekly number of cases started to decline in the second half of 2022 with over 7 million cases across 228 countries. In 2023, significant changes in surveillance strategies led to a reduction in testing and reporting, shifting the focus to disease burden indicators such as hospitalizations, ICU admissions, and deaths, as recommended by WHO.

By the first half of 2023, the average weekly number of cases reported was 1.3 million across 209 countries, declining to over 246 000 cases across 147 countries in the second half of 2023, and to over 70 000 cases across 129 countries

[6] Show us the data: global COVID-19 wastewater monitoring effectors, equity, and gaps
[7] Capturing the SARS-CoV-2 infection pyramid within the municipality of Rotterdam using longitudinal sewage surveillance
[8] Omicron COVID-19 Case Estimates Based on Previous SARS-CoV-2 Wastewater Load, Regional Municipality of Peel, Ontario, Canada

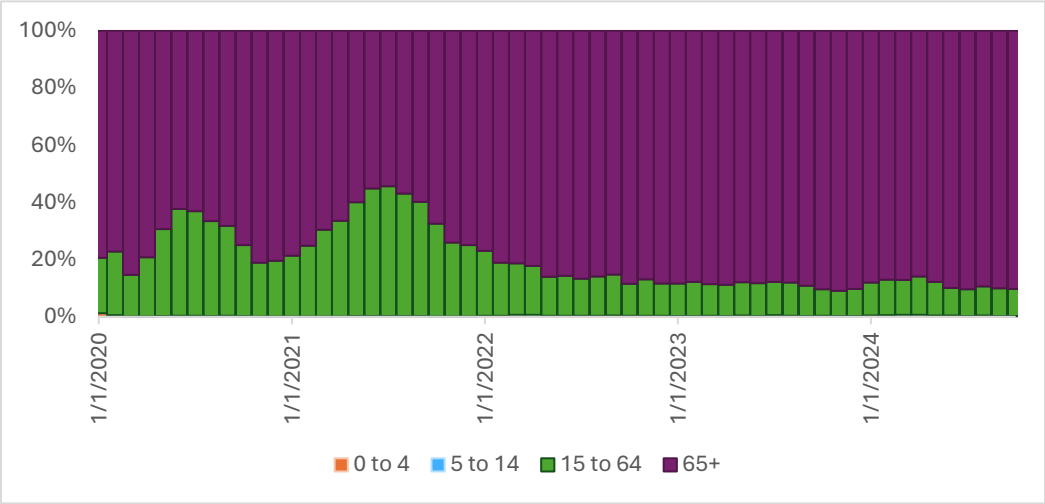
in the first half of 2024. The impact of COVID-19 varied by country depending on the circulating variants, national policies, capacities to respond and access to countermeasures. Annex 5 provides a detailed overview of the cumulative number of COVID-19 cases reported to the WHO by each country. Annex 6 provides a detailed overview of the cumulative number of COVID-19 deaths reported to the WHO by each country.

The majority (95%) of reported COVID-19 associated deaths were reported in 2020, 2021 and 2022. With increased population-level immunity from widespread circulation and infections and the introduction of vaccination in countries that had access to them, the number of deaths drastically decreased from the second half of 2022. The weekly average number of confirmed COVID-19 deaths increased from over 21 000 in the first half of 2020 across 182 countries to 78 000 in first half of 2021 across 203 countries. Reported number of confirmed deaths peaked in January 2021, with an average of over 99 000 deaths per week. The average weekly number of deaths began to decline in the second half of 2021 with over 56 000 deaths across 211 countries. By the end of 2021, the cumulative reported deaths were 5.49 million. However, the estimations of global excess mortality associated with COVID-19 by WHO indicated that the reported figures were an underestimate of the true death toll. The global excess mortality associated with COVID-19, encompassing both reported and unreported deaths directly attributable to the virus as well as deaths indirectly linked to the broader impact of the pandemic, estimated to be 14.91 million in the 24 months between 1 January 2020 and 31 December 2021, representing 9.49 million more deaths than those globally reported as directly attributable to COVID-19. Global excess mortality for 2022-2024 is in the process of being estimated by WHO (not yet available).

In the first half of 2022, the average weekly number of deaths reported was over 33 000 across 222 countries. In the second half of 2022 many countries stopped reporting COVID-19 associated deaths with over 13 000 deaths across 188 countries. By the first half of 2023, the average weekly number of deaths reported was over 8 000 across 149 countries, further declining to over 2 400 deaths across 77 countries in the second half of 2023, and to over 1 400 deaths across 71 countries in the first half of 2024. Annex 6 provides a detailed overview of the cumulative number of COVID-19 deaths reported to the WHO by each country.

Since 2020, many countries have consistently shared age-disaggregated COVID-19 death data with WHO. As a result, the WHO global COVID-19 database now includes age information for more than 4 million deaths (57% of the total reported deaths within the database), enabling a more detailed analysis of risk groups at the global level. The individuals aged 65 and over were most at risk of severe disease and death. From January 2020 to April 2022, the proportion of COVID-19 deaths in this age group fluctuated between 54% and 85%. From April 2022 to October 2024, an average of 88% of monthly deaths occurred in this population. Similarly, during the first two years of the pandemic, the proportion of deaths among those aged 15 to 64 reached 45% by mid-2021 but declined from the second half of 2021, in parallel with increased vaccination coverage, and stabilized around 11% from April 2022 to October 2024.

Figure 2. Distribution of monthly global COVID-19 associated deaths by age groups, as of November 2024

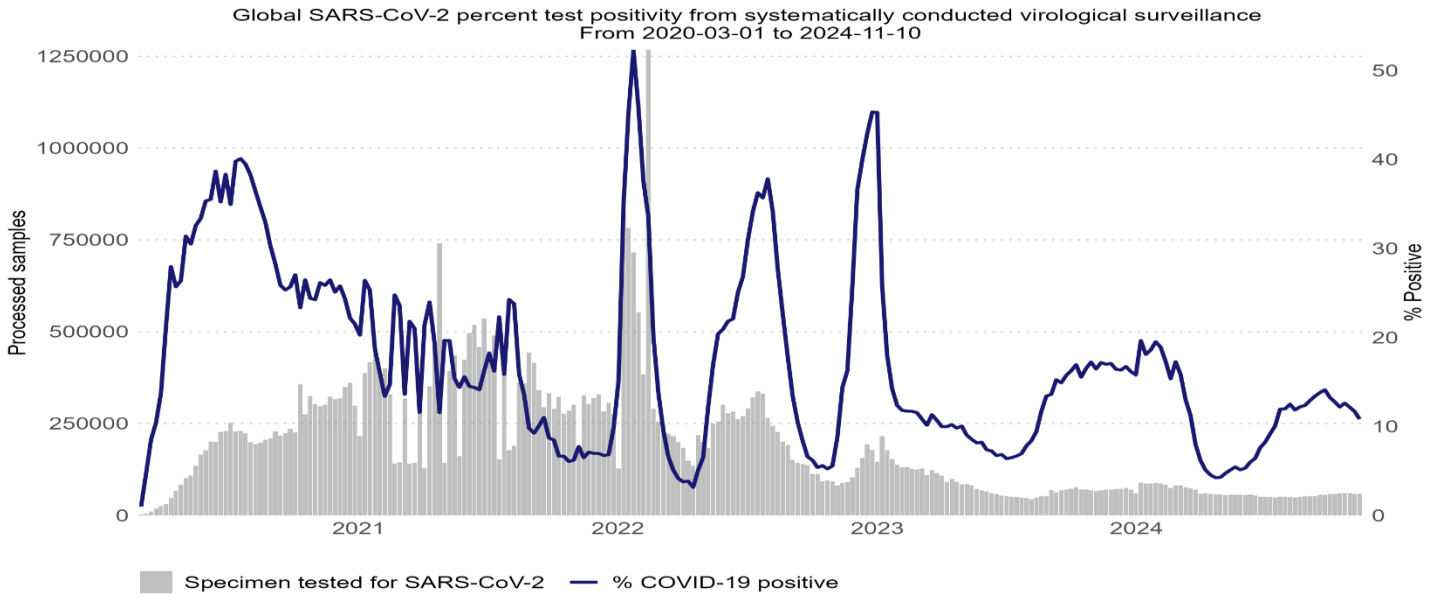


Children under 15 years old represent 0.2% (8528) of global reported deaths where age information is available. Among available data, those under five years old are the most affected by severe disease and death, with 60% of cumulative COVID-19 associated children deaths occurred in this age group. While the overall number of reported deaths among children under 15 has decreased, in line with reduction in overall deaths, the proportion of those under five has shown an increasing trend in 2023 and 2024 accounting for 68% and 75% of all deaths respectively among under 15 years old. Although global WHO COVID-19 database does not have the further age breakdown, the WHO clinical platform report, which analysed the data from 50 351 children and adolescents, found that infants having the highest mortality risk, comparable to that of adults aged 20-45 years.

It is important to note that the data presented in this report do not necessarily reflect the actual number of cases and deaths or the actual number of countries where cases and deaths are occurring, as several countries have stopped reporting or changed their frequency of reporting. 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

Figure 3. Weekly SARS-CoV-2 percent test positivity reported to FluNet from sentinel and systematic virological surveillance sites, from 05 January 2020 to 10 November 2024



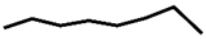
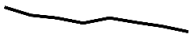
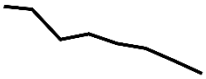
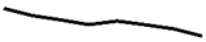
Source: Influenza and SARS-CoV-2 surveillance data from GISRS reported to FluNet; WHO

28 days from 14 October to 10 November 2024

SARS-CoV-2 test positivity rates reported through GISRS FluNet are shown in Figure 3. Globally, during the four-week reporting period (14 October to 10 November2024), the SARS-CoV-2 percent positivity decreased from 13.6% to 10.8%. During this period, on average 59 414 specimens per week were tested for SARS-CoV-2 from 99 countries that reported at least once (Table 1). At the regional level, during the reporting period (October 14 to November 10 2024), the highest SARS-CoV-2 activity was observed in the Region of the Americas (ranging from 13.6% to 11.8% across 20 countries), followed by the European Region (from 9.4% to 5.9% across 39 countries), the African Region (from 6.9% to 3.7% across 16 countries), the Western Pacific Region (from 5.3% to 3.7% across 7 countries), the South-East Asia Region (from 3.5% to 2% across 6 countries), and the Eastern Mediterranean Region (from 3.2% to 1.6% across 11 countries) (Table 1).

Ninety-nine 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, 13.1% (13/99) of countries reported an increase of more than 2.5% in weekly percent positivity. The top five largest increases in percent test positivity during the reporting period were reported from: Slovakia (from 0% to 19%), Uruguay (from 5.3% to 18.2%), Chile (from 0.7% to 6.7%), Estonia (from 0% to 5.9%), Russian Federation (from 0% to 5.3%), Greece (from 7.7% to 12.3%), Ukraine (from 1.5% to 6%), Israel (from 0% to 4.3%), Republic of Moldova (from 0% to 3.6%), Mongolia (from 3.2% to 6.5%), and Peru (from 0.1% to 2.9%). At the end of the reporting week ending on September 22, 2024, 14% (14/99) 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: Poland (30.8%), Argentina (23.3%), Switzerland (23%), Lithuania (20.8%), and Slovakia (19%).

Table 1. SARS-CoV-2 test positivity as conducted through systematic virological surveillance by WHO Region during four-week reporting period (14 October to 10 November 2024)

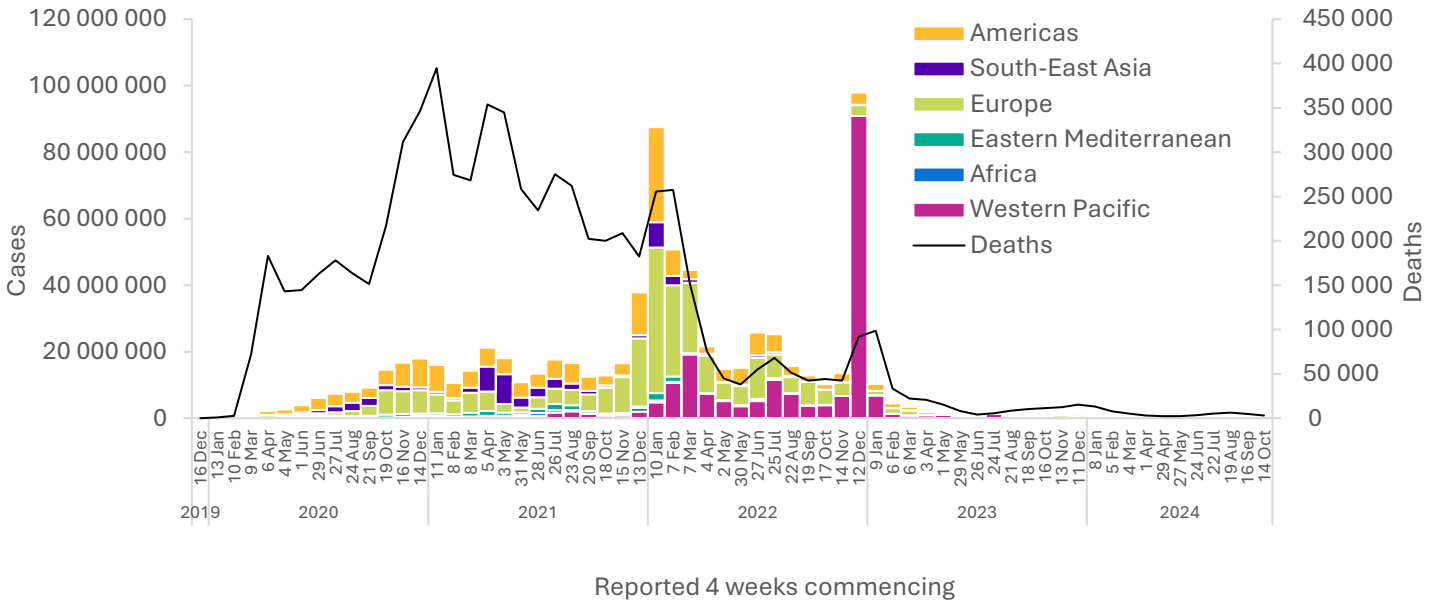
WHO Region	TPR trend for the past eight weeks¥	Number of countries reporting at least once	Weekly percent test positivity* (number of specimens tested)			
			2024-42	2024-43	2024-44	2024-45
Africa		18	4.7% (1603)	5.6% (1472)	6.9% (1495)	3.7% (1315)
Americas		20	13.6% (52 087)	13.0% (52 410)	12.5% (50 516)	11.8% (50 627)
Eastern Mediterranean		11	2.2% (927)	1.8% (857)	1.6% (938)	3.2% (981)
Europe		39	9.4% (4119)	8.9% (3825)	7.4% (3658)	5.9% (4416)
South-East Asia		6	2.1% (998)	3.3% (891)	3.5% (794)	2.1% (779)
Western Pacific		7	5.1% (708)	3.7% (710)	5.3% (704)	5.0% (827)
Global		101	**12.6% (60 442)**	**12.2% (60 165)**	**11.7% (58 105)**	**10.8% (58 945**

*¥From week 42 to week 45 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.*

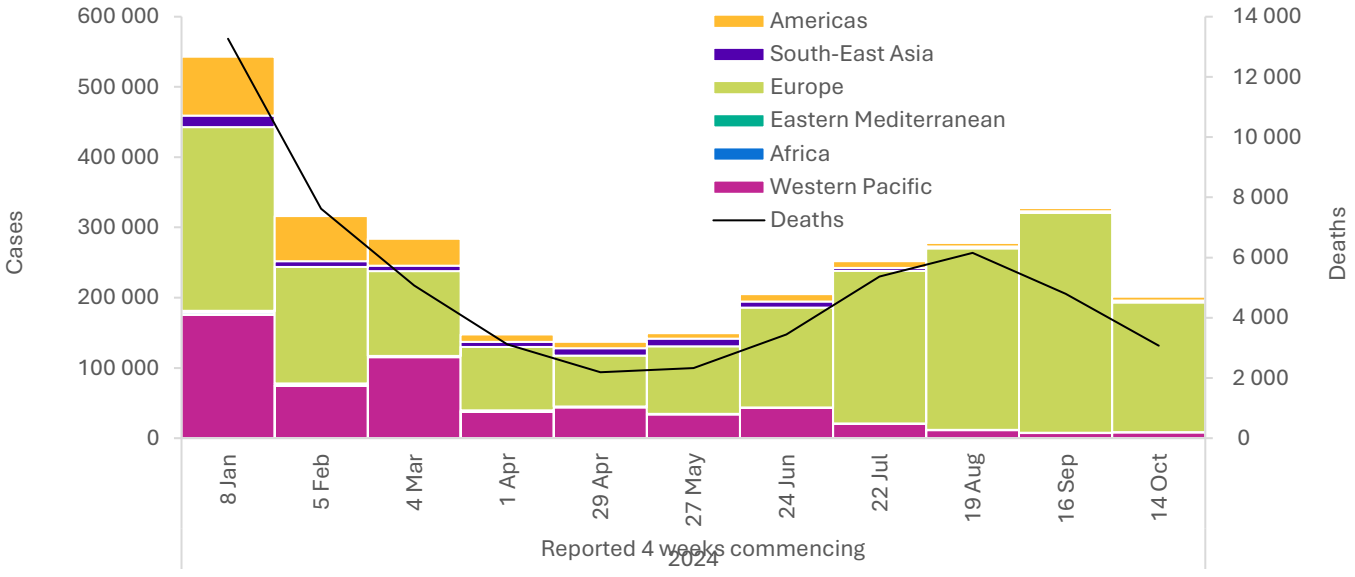
COVID-19 Morbidity and Mortality trends

Figure 4. COVID-19 cases and global deaths by 28-day intervals reported by WHO Region, as of 10 November 2024 (A); 5 February to 10 November 2024 (B)**

A



B



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

28 days from 14 October to 10 November 2024

Globally, the number of new weekly cases decreased by 39% during the 28-day period of 14 October to 10 November 2024 as compared to the previous 28-day period, with over 201 000 new cases reported (Figure 1, Table 1). The number of new weekly deaths decreased by 36% as compared to the previous 28-day period, with over 3 000 new fatalities reported. As of 10 November 2024, over 776 million confirmed cases and over 7 million deaths have been reported globally.

At the regional level, the number of newly reported 28-day cases increased across three of the six WHO regions: the Region of the Americas (+16%), the Western Pacific Region (+16%), and the South-East Asia Region (+29%); while case numbers decreased in two WHO regions: the European Region (-41%), and the African Region (-39%). The number of newly reported 28-day deaths decreased across three regions: the South-East Asia Region (-67%), the Region of the Americas (-41%), and the European Region (-11%). The African Region did not report any death during the period while death numbers increased in the Western Pacific Region (+17%).

At the country level, the highest numbers of new 28-day cases were reported from the Russian Federation (96 108 new cases; -29%), Czechia (14 568 new cases; -50%), Greece (12 543 new cases; -35%), Poland (10 816 new cases; -71%), and the United Kingdom (8966 new cases; -39%). The highest numbers of new 28-day deaths were reported from the United States of America (2236 new deaths; -42%), Russian Federation (209 new deaths; +51%), Sweden (177 new deaths; -12%), Greece (88 new deaths; -20%), Czechia (84 new deaths; -7%), and Poland (69 new deaths; +53%).

N.B. Reported cases do not accurately represent infection rates due to the reduction in testing and reporting globally. During this 28-day period, only 33% (77 of 234) and 12% (27 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.

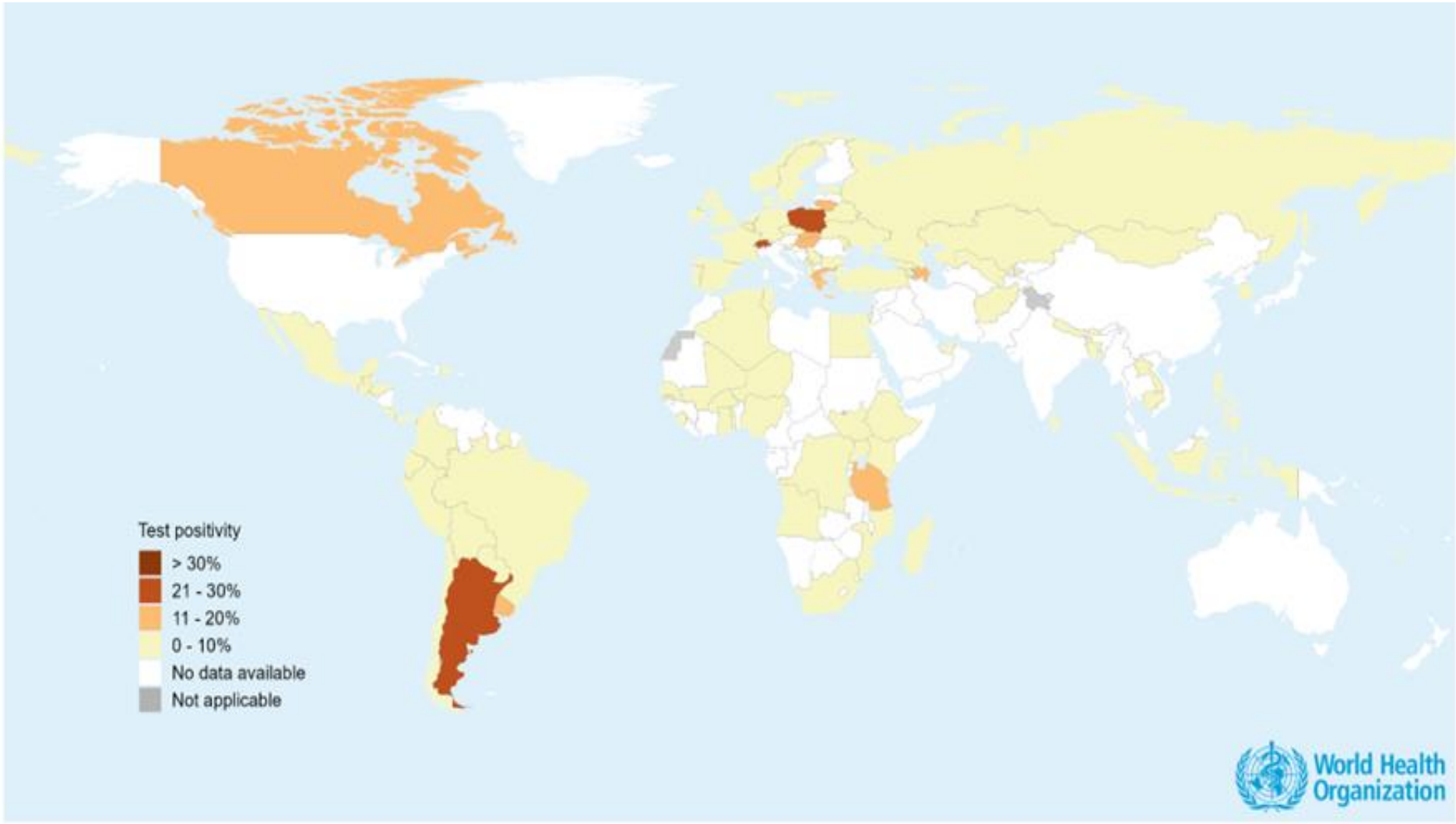
Table 2. Newly reported and cumulative COVID-19 confirmed cases and deaths by WHO Region, as of 10 November 2024**

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	184 500 (92%)	-41%	**280 619 757 (36%)**	749 (24%)	-11%	**2 277 477 (32%)**	35/61 (57%)	17/61 (28%)
Western Pacific	8 408 (4%)	16%	**208 585 708 (27%)**	34 (1%)	17%	**421 585 (6%)**	5/35 (14%)	2/35 (6%)
Americas	5 559 (3%)	16%	**193 310 299 (25%)**	2 281 (74%)	-41%	**3 040 032 (43%)**	14/56 (25%)	6/56 (11%)
South-East Asia	2 659 (1%)	29%	**61 322 712 (8%)**	7 (0%)	-67%	**808 855 (11%)**	6/10 (60%)	2/10 (20%)
Africa	328 (0%)	-39%	**9 584 113 (1%)**	0 (0%)	NA%	**175 531 (2%)**	17/50 (34%)	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	**201 454 (100%)**	**-39%**	**776 841 264 (100%)**	**3 071 (100%)**	**-36%**	**7 075 468 (100%)**	**77/234 (33%)**	**27/234 (12%)**

**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 5. SARS-CoV-2 percent test positivity from sentinel and systematic virological surveillance sites during the week ending on 10 November 2024



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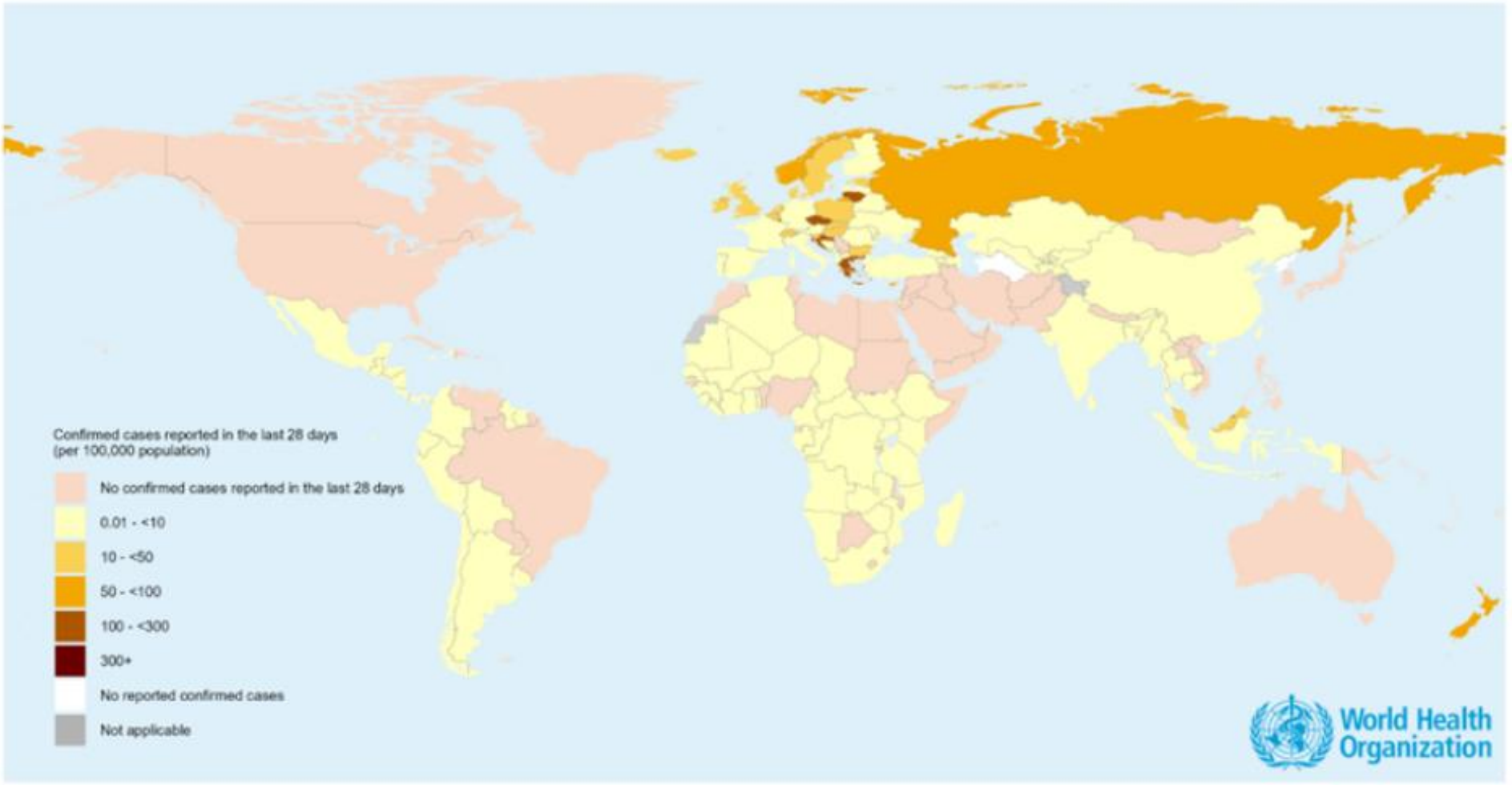
Data Source: World Health Organization, Global Influenza Surveillance and Response System (GISRS)

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

Figure 6. Number of confirmed COVID-19 cases reported over the last 28 days per 100 000 population, as of 10 November 2024**



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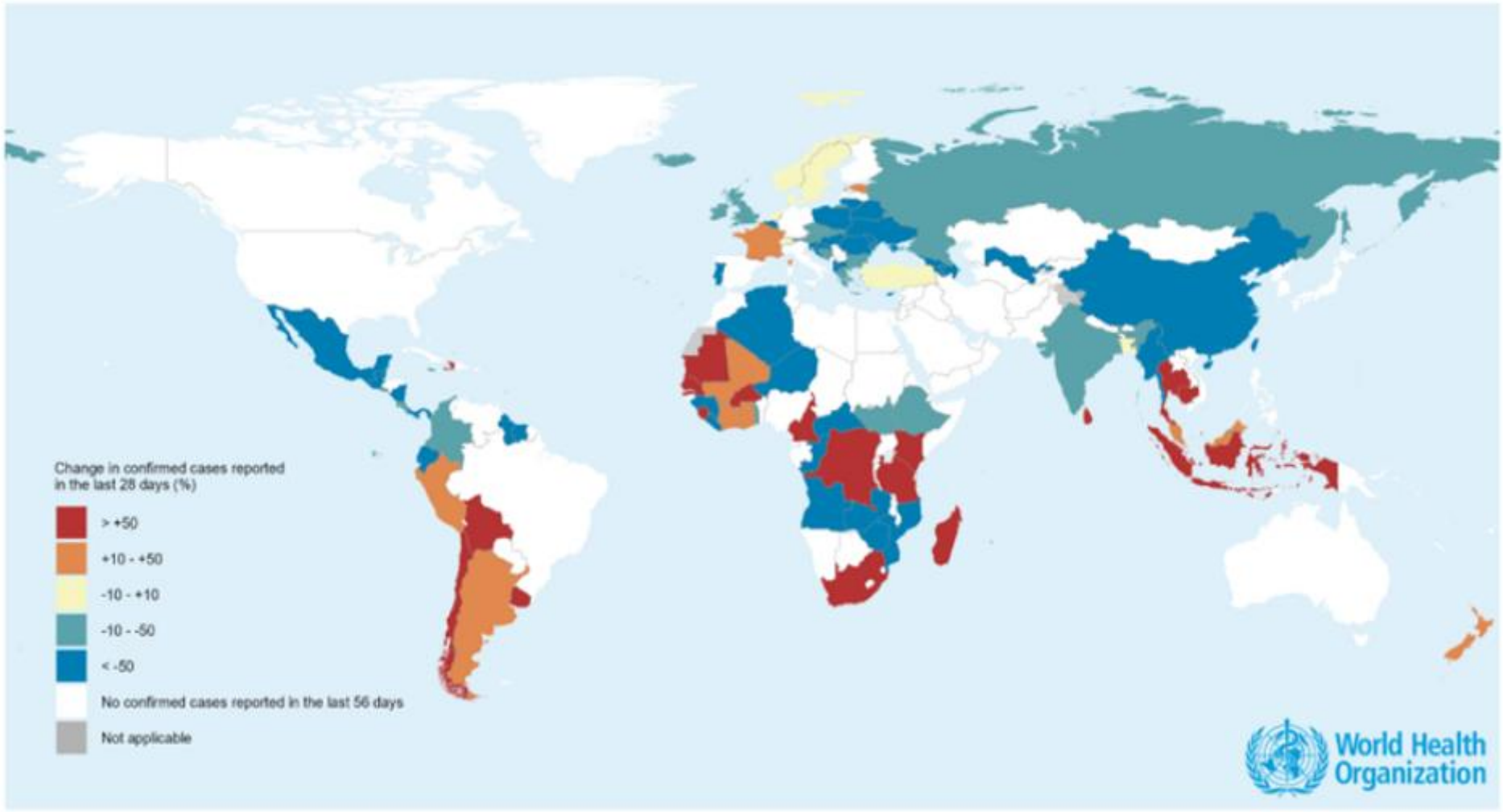
Data Source: World Health Organization, United Nations Population Division, EuroStat
Map Production: WHO Health Emergencies Programme

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

Figure 7. Percentage change in confirmed COVID-19 cases over the last 28 days relative to the previous 28 days, as of 10 November 2024**



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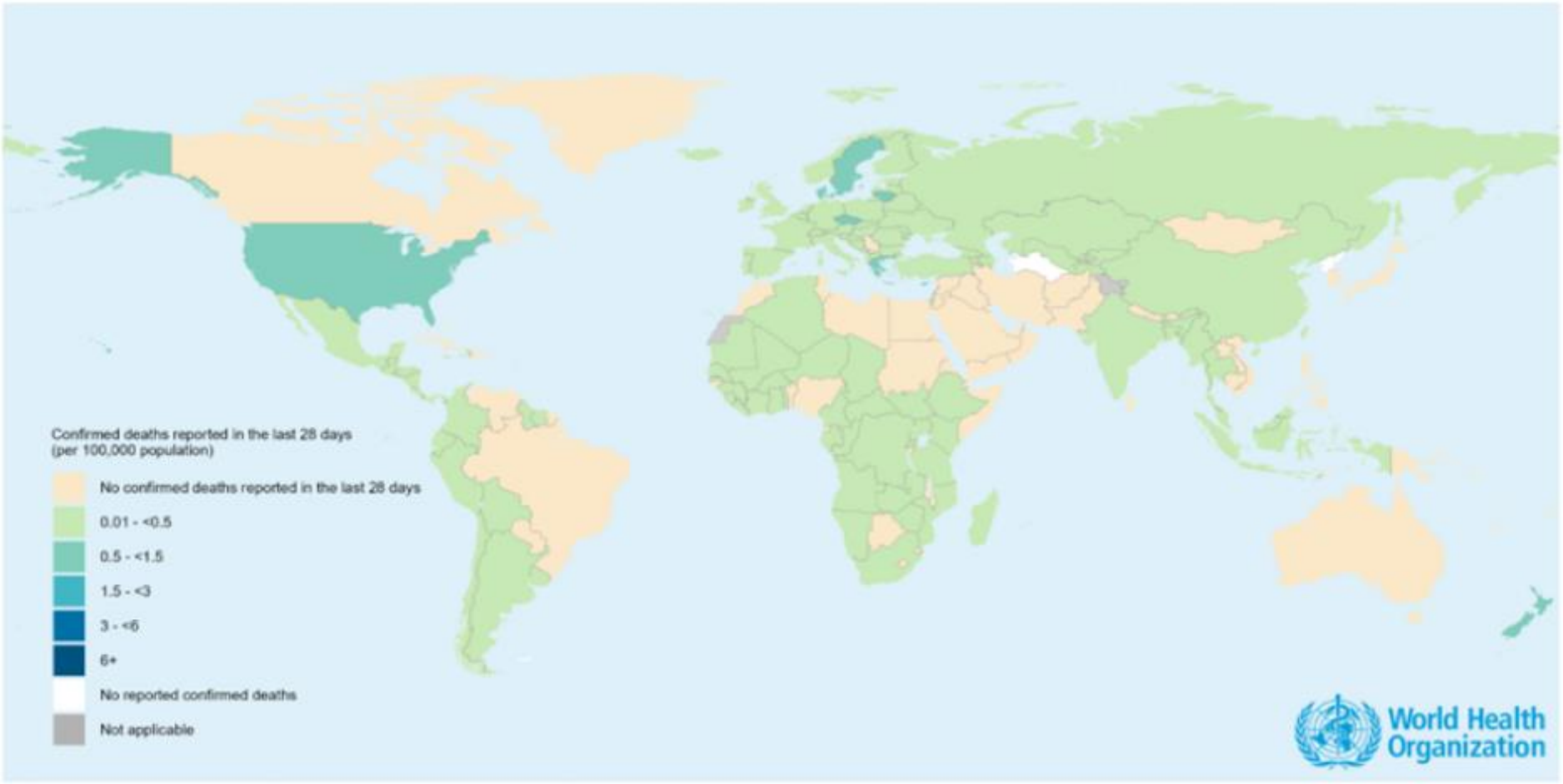
Data Source: World Health Organization
Map Production: WHO Health Emergencies Programme

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

Figure 8. Number of COVID-19 deaths reported over the last 28 days per 100 000 population, as of 10 November 2024 **



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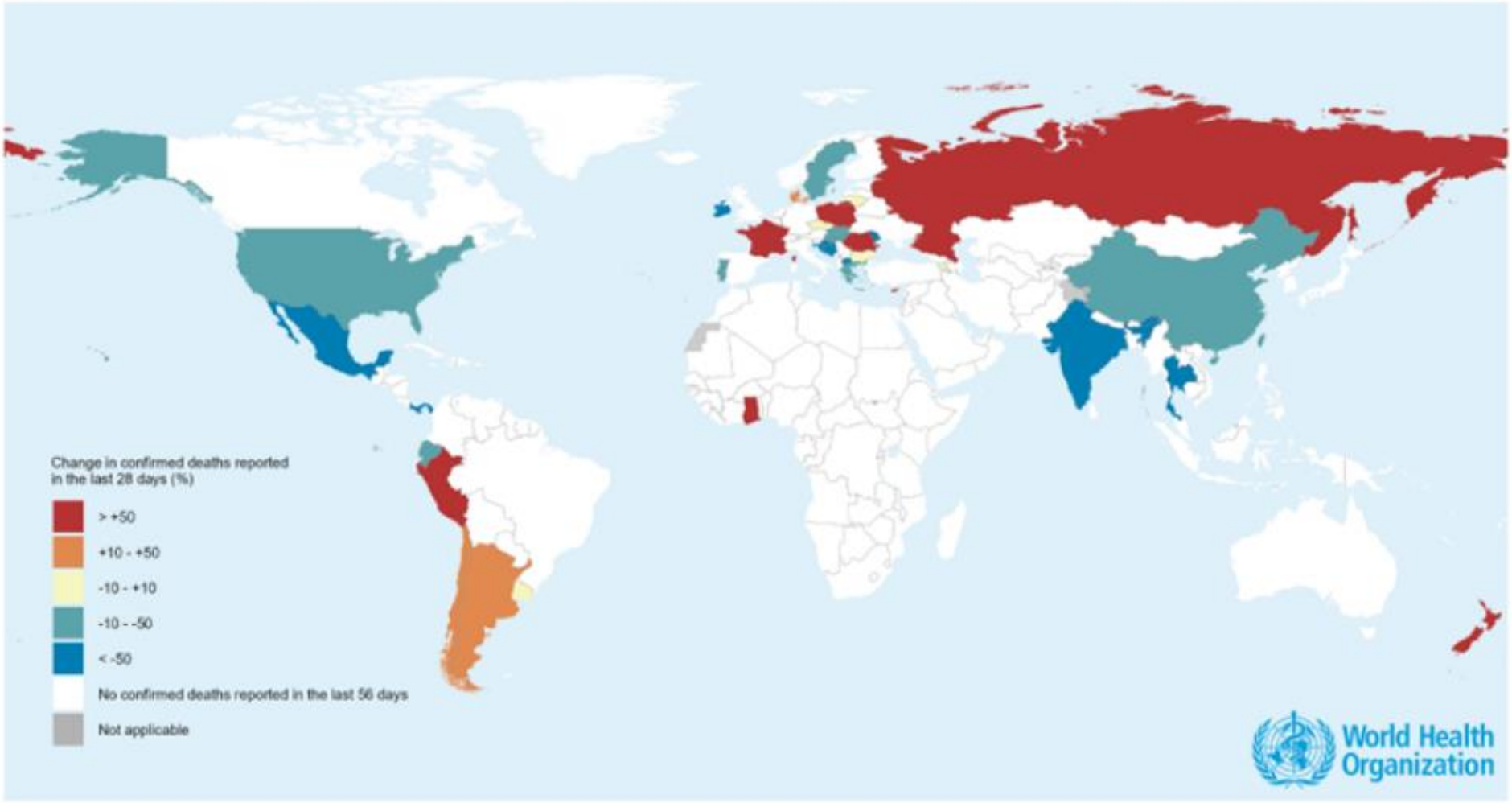
Data Source: World Health Organization, United Nations Population Division, EuroStat
Map Production: WHO Health Emergencies Programme

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

Figure 9. Percentage change in confirmed COVID-19 deaths over the last 28 days relative to the previous 28 days, as of 10 November 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

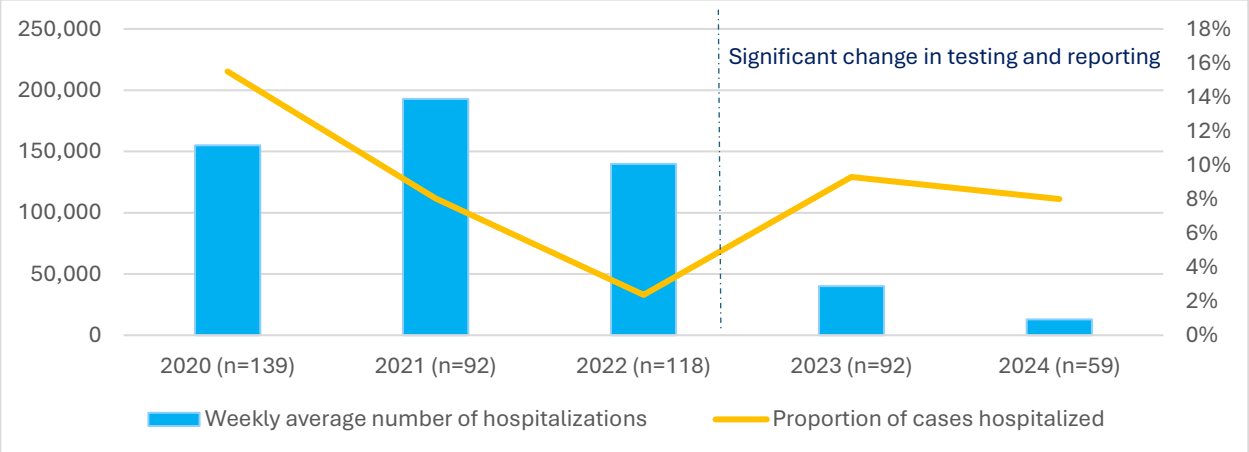
Overview from 5 January 2020 to 10 November 2024

Up to 10 November 2024, more than 28.1 million confirmed COVID-19 associated hospitalization were notified to WHO across 172 countries.

As SARS-CoV-2 spread globally in 2020, COVID-19 associated hospitalizations overwhelmed health care systems. In 2020, on average around 155 000 weekly hospitalizations were reported to WHO, compared to an average of 1 million weekly cases across 139 countries. In 2021, the weekly average number of cases and hospitalizations increased, and the highest peak of the weekly reported hospitalizations reached over 526 000 in the first week of 2021. As population level immunity increased from widespread community transmission and increasing vaccination efforts, a decoupling of cases and hospitalizations was observed. On average, over 193 000 weekly hospitalizations were reported to the WHO in 2021, compared to 2.4 million average weekly cases across 92 countries. However, at the end of 2021, Omicron VOC emerged and quickly became dominant worldwide, resulting in substantially increased transmission and increase in reported cases.

In 2022, although reported case numbers continued to rise, with over 5.9 million average weekly cases, reported COVID-19 associated hospitalizations were comparable to 2020 levels, with an average of around 140 000 weekly hospitalizations reported to the WHO across 118 countries. In 2023, surveillance and reporting changed significantly in many countries, with integration into existing sentinel surveillance systems and significant reductions in testing. On average, around 40 000 weekly hospitalizations were reported to WHO, compared to 800 000 average weekly cases across 92 countries. These numbers further decreased to 13 000 weekly hospitalizations and 50 000 weekly cases in 2024 across 59 countries, in parallel with the reduction in the number of reporting countries.

Figure 10. Weekly average number of hospitalizations per year and their proportions among cases in countries reporting both indicators.



From 2020 to 2022, there has been a steady decline in the percentage of reported COVID-19-related hospitalizations compared to confirmed cases, dropping from 16% to 2% (Figure 10). However, the observed increase in hospitalization rates to 8%-9% in 2023 and 2024 may be influenced by biases due to significant changes in surveillance strategies.

N.B. Please note that the lack of reported data from certain countries to the WHO does not mean there are no COVID-19-related hospitalizations in those regions. The hospitalization data provided are preliminary and may be updated as new information becomes available. Additionally, there are delays in reporting hospitalization data. Data on hospitalizations include both incidental identification of SARS-CoV-2 infection among patients and hospitalizations directly caused by SARS-CoV-2 infection.

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 WHO 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 WHO to monitor deaths occurring among those hospitalized.

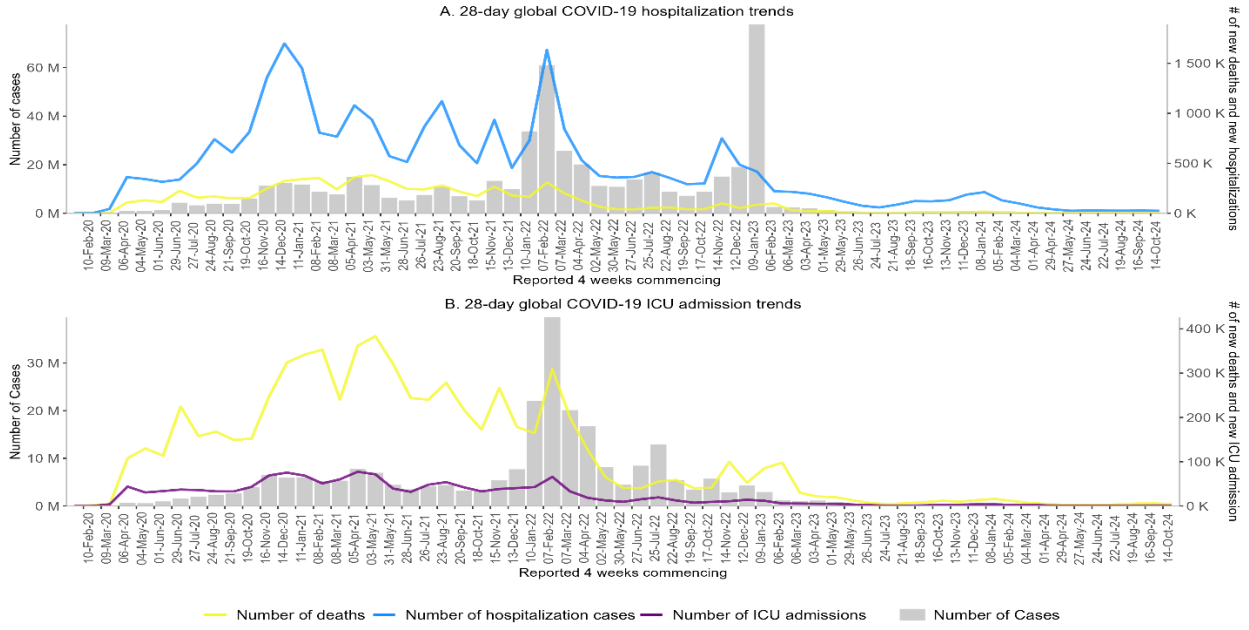
Overall, ICU admissions per 1000 hospitalizations have been decreasing since the peak in July 2021 when the rate was 245 per 1000 hospitalizations, dropping below 132 per 1000 hospitalizations at the beginning of 2022, and to less than 69 per 1000 hospitalizations by the end of 2023 (Figure 8). At the beginning of 2024, there was an increase ICU admissions per 1000 hospitalizations, rising to above 191 per 1000 hospitalizations in March, and declining to 108 per 1000 hospitalizations in early November 2024. Note that due to limited reporting, it is difficult to interpret this trend. 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 41 deaths per 1000 hospitalizations by early November 2024 (Figure 11).

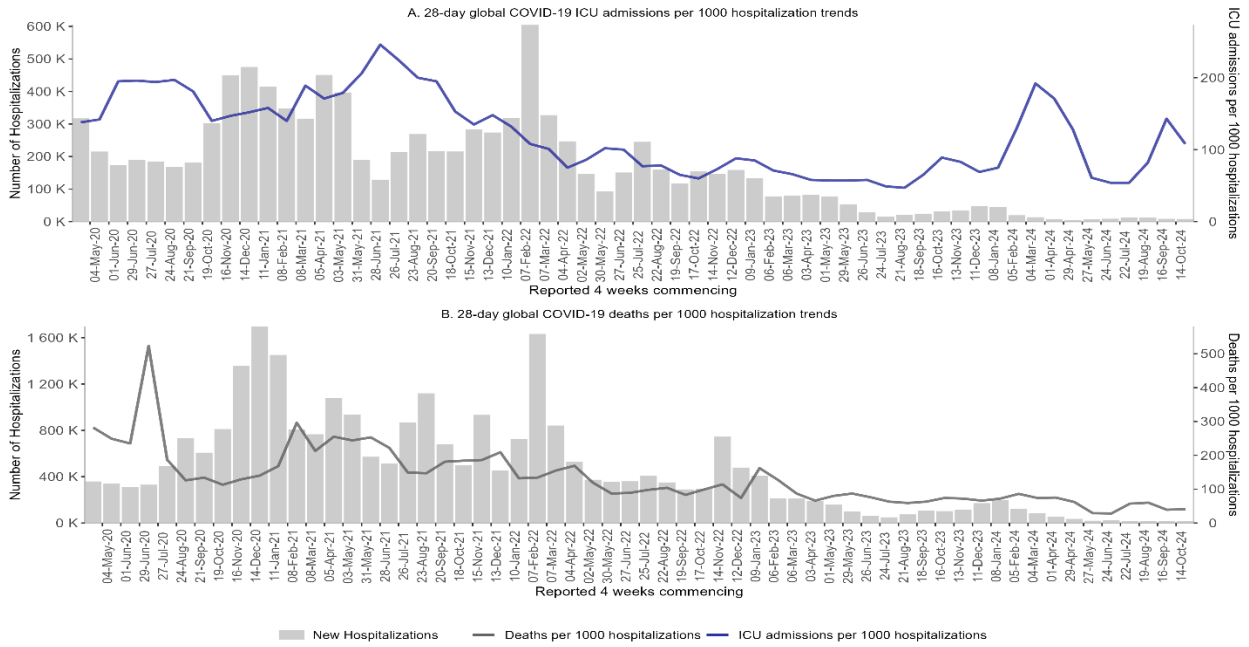
N.B. Please note that the causes for these trends cannot be directly interpreted from these data but likely include a combination of increases or decreases in infection-derived or vaccine-derived immunity, improvements in early diagnosis and clinical care, reduced strain on health systems, and other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

Figure 11. 28-day global COVID-19 hospitalization and ICU admission trends, from 10 February 2020 to 10 November 2024 (A); and COVID-19 ICU per 1000 hospitalization and death per 1000 hospitalization, from 4 May 2020 to 10 November 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.
Source: WHO COVID-19 Detailed Surveillance Dashboard

28 days from 14 October to 10 November 2024

At the global level, during the 28 days from 14 October to 10 November 2024, a total of 22 378 new hospitalizations and 872 new ICU admissions were reported from 46 and 34 countries, respectively. Among the countries reporting these data consistently over the current and past reporting period, there was overall a 15% and 24% decrease in new hospitalizations and ICU admissions, respectively, compared to the previous 28 days (16 September to 13 October 2024) (Tables 3 and 4). The European Region reported an increased in both 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 10 November 2024, 46 (20%) countries/territories 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 (20 countries; 36%), followed by the European Region (17 countries; 28%), South-East Asia Region (two countries; 20%), the Western Pacific Region (four countries; 11%), and the African Region (three countries; 6%). No country from the Eastern Mediterranean Region shared data during the period. The number of countries that consistently[9] reported new hospitalizations for the period was 40 (17%) (Table 3).

Among the 40 countries consistently reporting new hospitalizations, 10 (25%) countries registered an increase of 20% or greater in hospitalizations during the past 28 days compared to the previous 28-day period: Bosnia and Herzegovina (15 vs 5; >100%), Peru (43 vs 19; >100%), Uruguay (140 vs 63; >100%), Thailand (2014 vs 1159; 74%), Brunei Darussalam (26 vs 20; 30%), Chile (131 vs 101; 30%), Malaysia (268 vs 222; 21%), New Zealand (382 vs 325; 18%), Cyprus (89 vs 78; 14%), and Portugal (52 vs 46; 13). The highest numbers of hospitalizations were reported in the Russian Federation (9229), the United States of America (2596), and Greece (2203).

[9] "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, 14 October to 10 November 2024 compared to 15 September to 13 October 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%)	3	1/50 (2%)	0	N/A
Americas	20/56 (36%)	5357	20/56 (36%)	5357	-32%
Eastern Mediterranean	0/22 (<1%)	N/A[+]	0/22 (<1%)	N/A	N/A
Europe	17/61 (28%)	14 262	15/61 (25%)	13 896	-14%
South-East Asia	2/10 (20%)	2014	2/10 (20%)	2014	74%
Western Pacific	4/35 (11%)	742	3/35 (9%)	676	19%
Global	**43/234 (18%)**	**22 378**	**40/234 (17%)**	**21 943**	**-15%**

**Percent change is calculated for countries/territories 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 34 (15%) countries/territories 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 (13 countries; 21%), the Western Pacific Region (five countries; 14%), 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 11% (26 countries).

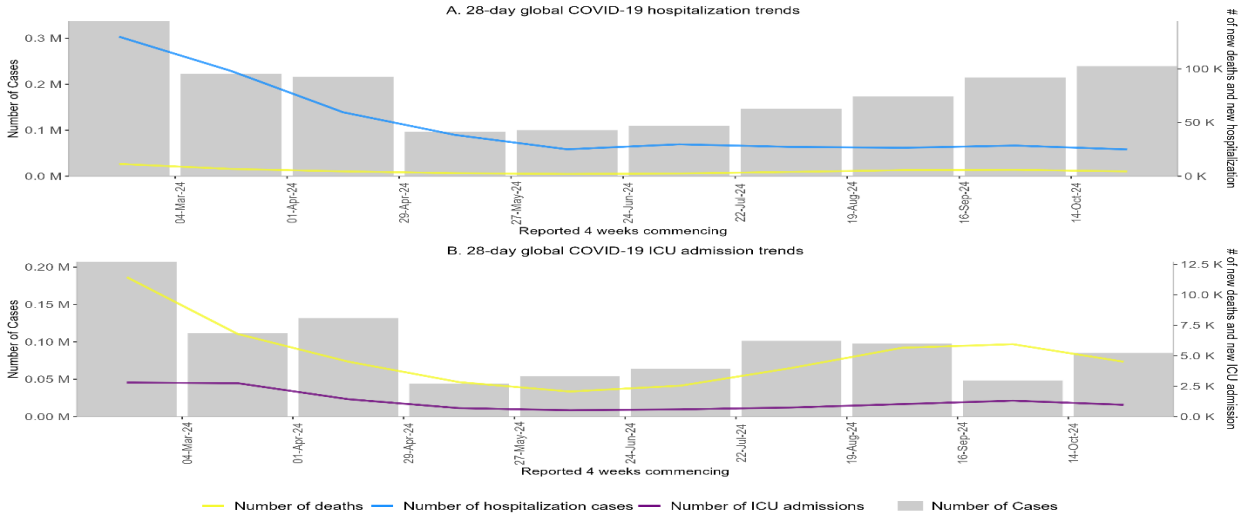
Among the 26 countries consistently reporting new ICU admissions, five (19%) countries showed an increase of 20% or greater in new ICU admissions during the past 28 days compared to the previous 28-day period: Uruguay (19 vs 7; >100%), Peru (4 vs 2; 100%), New Zealand (13 vs 8; 63%), Greece (39 vs 28; 39%), and Australia (35 vs 28; 25%). The highest numbers of ICU admissions were reported in Brazil (529), the (47), and Greece (39).

Table 4. Number of new ICU admissions reported by WHO regions, 14 October to 10 November 2024 compared to 16 September to 13 October 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%)	562	13/56 (23%)	562	-28%
Eastern Mediterranean	0/22 (<1%)	N/A[+]	N/A	N/A	N/A
Europe	13/61 (21%)	255	8/61 (13%)	151	-20%
South-East Asia	0/10 (<1%)	N/A	N/A	N/A	N/A
Western Pacific	5/35 (14%)	55	4/35 (11%)	52	24%
Global	**34/234 (15%)**	**872**	**26/234 (11%)**	**765**	**-24%**

**Percent change is calculated for countries/territories 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 12. 28-day global COVID-19 hospitalization and ICU admission trends, from 5 February 2024 to 10 November 2024



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.

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

Virus evolution and Variant circulation

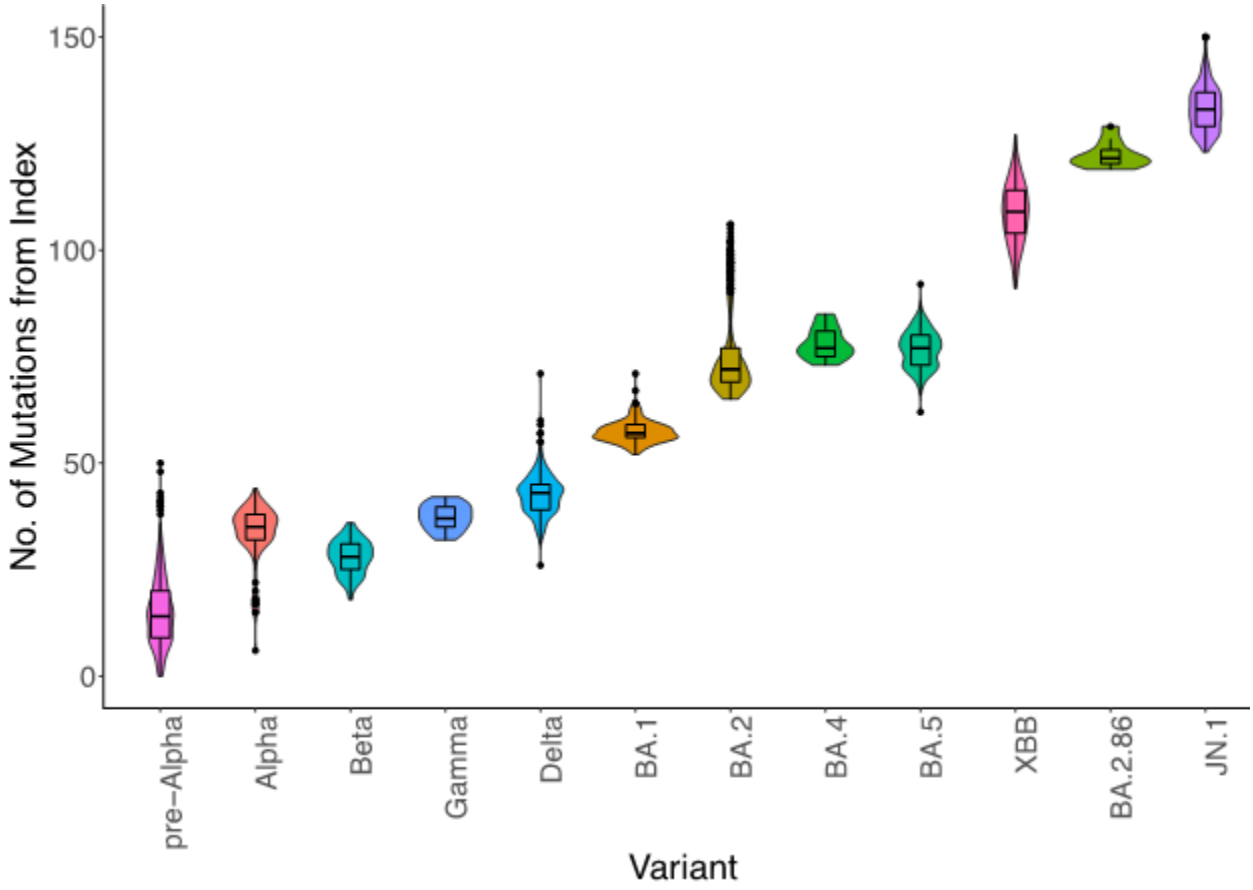


Figure 13. The number of amino acid substitutions from the index virus for each variant

All viruses change over time, including SARS-CoV-2, the virus that causes COVID-19. Such changes may affect the virus's properties such as transmission, the associated disease severity, or the performance of vaccines, therapeutic medicines, diagnostic tools, or other public health and social measures. Since the emergence of the COVID-19 pandemic, SARS-CoV-2 has undergone significant genetic evolution, leading to the emergence of multiple variants with distinct characteristics, Figure 13. By late 2020, variants concern such as Alpha (B.1.1.7), Beta (B.1.351), and Gamma (P.1) were identified, Figure 14, each exhibiting mutations that increased transmissibility and, in some cases, affected treatment and vaccine efficacy. The Delta variant of concern (B.1.617.2), first detected in India in October 2020, became globally dominant due to its heightened transmissibility.

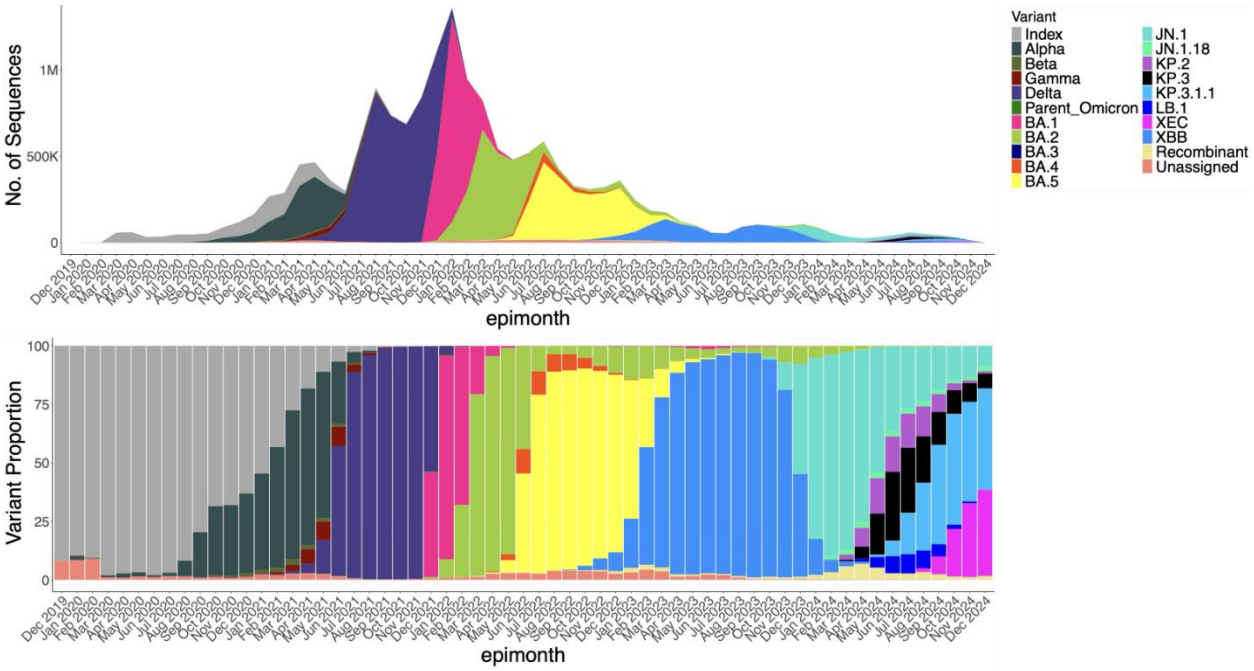


Figure 14: The number of SARS-CoV-2 sequences shared through the GISAID database, and variant proportions from December 2019 to December 2024.

In November 2021, the Omicron variant (B.1.1.529) was identified in Botswana and South Africa, reported by South Africa and characterized by a high and unprecedented number of mutations in the spike protein, which enhanced its ability to evade immune responses. With its significantly increased transmissibility, it changed in virulence compared to Delta, and ongoing vaccination efforts at the time, Omicron led to significant public health challenges due to the simultaneous peaks around the world. Omicron rapidly diversified into subvariants, including BA.1, BA.2, and BA.5, each contributing to successive waves of infection worldwide. By 2023, recombinant subvariants including XBB and its descendant XBB.1.5 emerged, combining genetic material from different lineages, further complicating the viral landscape. In the second half of 2023, a BA.2 descendent lineage BA.2.86 emerged, which gave rise to JN.1 that is currently the most prevalent SARS-CoV-2 variant globally. As of December 2024, KP.3.1.1 is the most prevalent JN.1 descendent lineage, but whose prevalence is beginning to decline, followed by XEC whose prevalence is on the increase. Despite its increased transmissibility and immune evasion capabilities, JN.1 has not been associated with increased virulence, and public health indicators remain stable.

In June 2020, WHO established the Virus Evolution Working Group to monitor SARS-CoV-2 variants, evaluate genetic and phenotypic changes and their impact on countermeasures. The group was later formalized by WHO into the Technical Advisory Group on SARS-CoV-2 Virus Evolution (TAG-VE). With the emergence of SARS-CoV-2 variants that posed increased risks to global public health, TAG-VE characterized some of these variants as variants of concern (VOCs), variants of interest (VOIs) and variants under monitoring (VUMs) to prioritize global monitoring and research, and to inform and adjust the COVID-19 response. To track these variants, WHO assigned simple, easy-to-say Greek labels for key variants, for example Alpha, Beta, Delta and Omicron. With the ever-changing SARS-

CoV-2 variant landscape, WHO regularly updates its variant tracking system and working definitions of the VOCs, VOIs and VUMs in tandem.

WHO developed a SARS-CoV-2 variant risk-evaluation framework to facilitate the regular assessment of public health risks posed by emerging variants, using both available evidence and the confidence level in that information[10]. Leveraging the multidisciplinary expertise of the TAG-VE, WHO has routinely published risk evaluation documents for VOIs, and more recently for a VUM. Although the risk evaluation framework primarily targets emerging SARS-CoV-2 variants and lineages, it is also proving adaptable for other emerging pathogens capable of human-to-human transmission.

Over the past 28 days (14 October to 10 November 2024), 24 086 SARS-CoV-2 sequences were shared through GISAID, marking a 32.7% decrease from the previous 28-day period. Of the shared sequences, 0.1% were from AFR, 52.8% from AMR, 0.1% from EMR, 36.4% from EUR, 0.2% from SEAR, and 10.3% from WPR. WHO is currently tracking one Variant (VOI), JN.1, and six JN.1 descendant lineages (VUMs): JN.1.18, KP.2, KP.3, KP.3.1.1, LB.1, and XEC. During this 28-day period, XEC exhibited an increase in prevalence, rising from 21.3% to 28.4%. In contrast, JN.1 declined from 14.3% to 13.1%, JN.1.18 from 1.5% to 1.3%, KP.2 from 2.8% to 1.5%, KP.3 from 10.2% to 7.7%, KP.3.1.1 from 46.4% to 45.6%, and LB.1 from 1.8% to 1.9%. The public health risk posed by XEC, relative to other circulating variants, has been assessed as low. Although its prevalence is increasing, XEC remains a VUM as it does not currently meet the criteria for classification as a VOI.

Table 5. Weekly prevalence of SARS-CoV-2 VOIs and VUMs, week 42 to week 45 of 2024

Lineage*	Countries§	Sequences§	2024-42	2024-43	2024-44	2024-45
VOIs						
JN.1	146	297567	14.3	14.0	12.3	13.1
VUMs						
KP.2	87	34120	2.8	2.7	1.4	1.5
KP.3	77	57488	10.2	9.2	8.5	7.7
KP.3.1.1	65	69415	46.4	45.7	47.6	45.6
JN.1.18	100	8293	1.5	1.6	1.2	1.3
LB.1	83	16701	1.8	1.2	1.0	1.0
XEC	52	16486	21.3	23.6	26.8	28.4
Recombinant	147	495176	1.5	1.7	1.0	1.2
Unassigned	68	4103	0.0	0.0	0.0	0.0
Others	119	37181	0.2	0.2	0.2	0.3

The evolution of SARS-CoV-2 underscores the need for continuous genomic surveillance, as the virus's capacity for genetic diversification poses ongoing risks for the emergence of variants that may challenge current therapeutic, vaccine, and other public health strategies. Understanding these evolutionary dynamics remains critical to mitigating the pandemic's impact.

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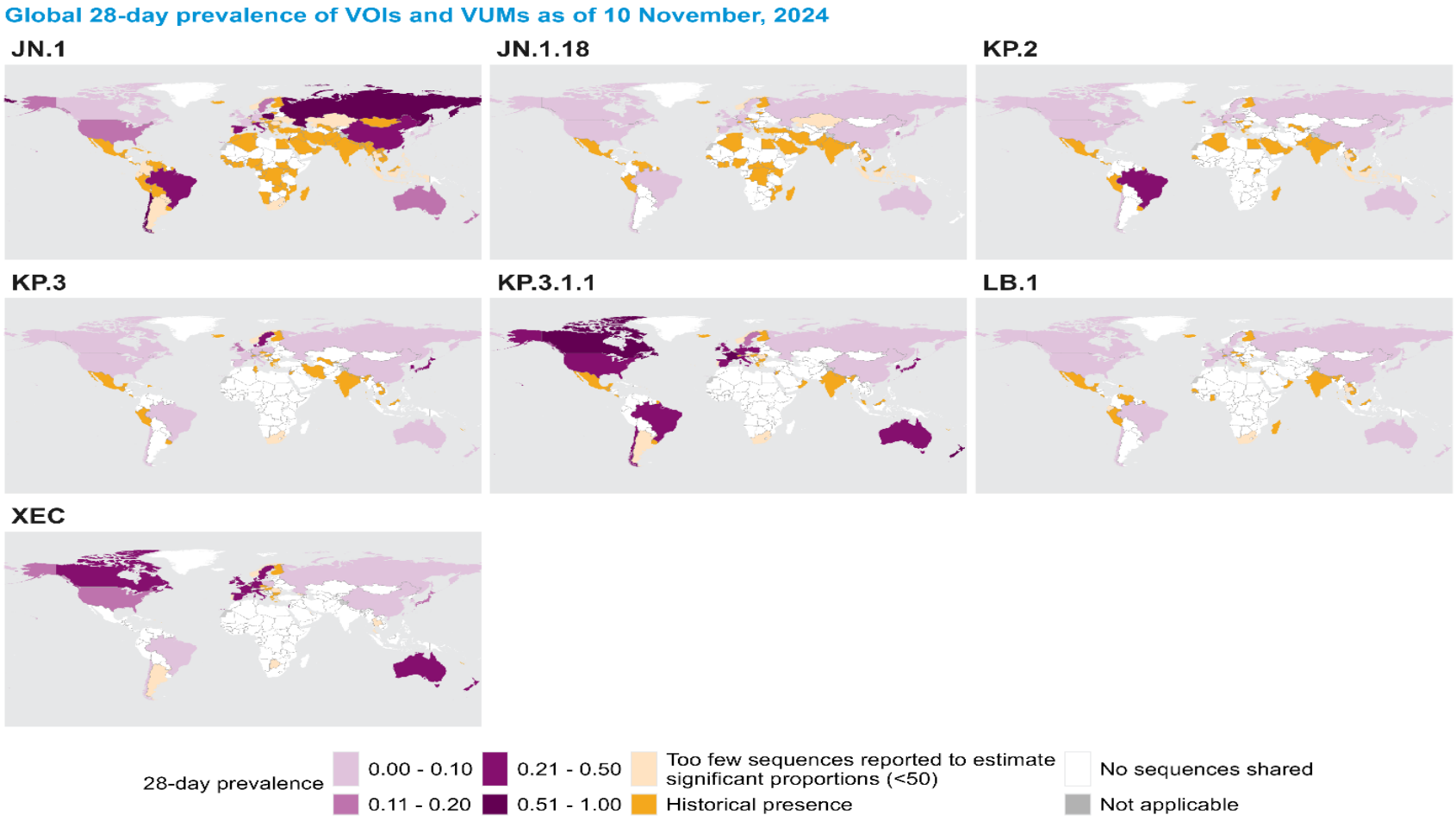
Additional resources

- 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 15. Global 28-day prevalence of VOI (JN.1) and VUMs (JN.1.18, KP.2, KP.3, KP.3.1.1, LB.1, and XEC), 14 October to 10 November 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 202

COVID-19 Vaccination Updates

The COVID-19 vaccine rollout has changed substantially since the vaccines first became available and were introduced in 2021. In the earliest stages of the roll-out, important disparities in the uptake of COVID-19 vaccines quickly became evident, with coverage levels rising much more quickly in high and upper-middle income countries than those in lower-middle- and lower-income ones. At the time, this was due in majority to inequal access to COVID-19 vaccines, as wealthy countries were able to buy large quantities of doses, while others were forced to wait. By the end of 2021, high-income countries had administered nearly 14 times as many doses per 100 population as low-income countries had.

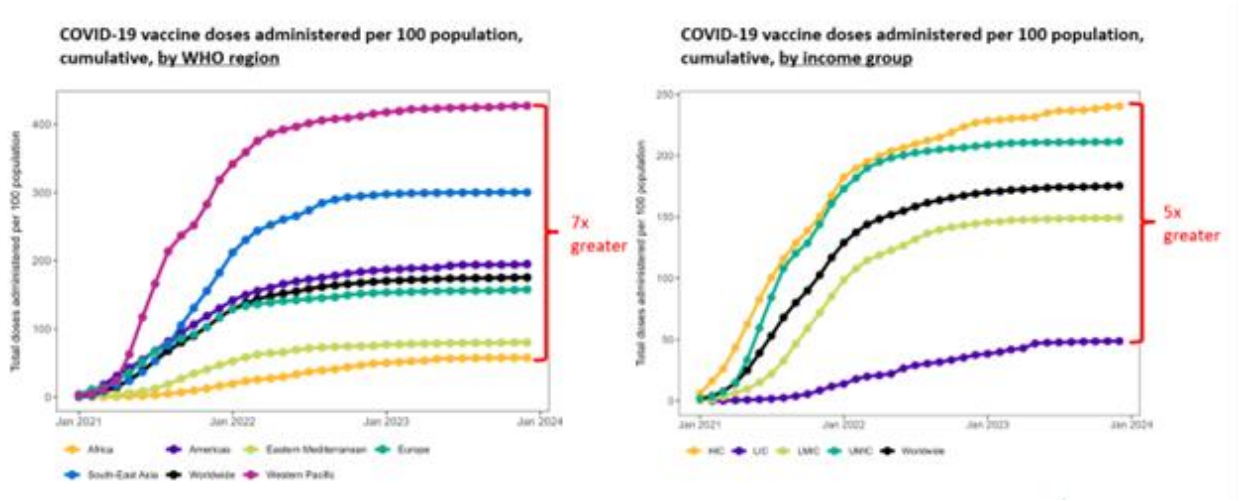


Figure 16: COVID-19 vaccine doses administered per 100 population, cumulative for the period 2021-2023, by WHO region and income group

During this early phase of the roll-out, daily vaccination rates, estimates of the number of doses administered per day, were essential for understanding country-level absorption capacity. Using these measures, it was possible to identify the countries that were performing well and those that were experiencing difficulty, whether due to limited, irregular supply, service delivery challenges, insufficient delivery funding, or other factors. This allowed for the provision of targeted support to identify and address specific implementation challenges. In general, the peak daily vaccination rates for high- and upper middle- income countries were greater in magnitude and occurred earlier than they did for lower-middle- and lower-income countries. This means that high- and upper-middle-income countries were generally able to scale their vaccine rollouts more quickly and were able to reach more of their population each day with COVID-19 vaccines than were lower-middle- and lower-income ones. While this was in part due to the access challenges mentioned above, this also reflected the state of national systems to administer vaccines to non-children groups, the traditional focus of most immunization programmes.

By early 2022, as greater proportions of national populations had been vaccinated with one or more doses, indicators of coverage became increasingly important to understanding progress in vaccination the world's population. Now, they are the essential indicators to understand COVID-19 vaccine programme

performance and population-level protection against COVID-19. By the end of 2023, 67% of the total global population had received a complete primary series of a COVID-19 vaccine, and 32% had received at least one booster dose. In older adults, across the Member States having reported at least once (n = 158), 83% had received a complete primary series and 61% had received at least once booster dose by the end of 2023. In health and care workers across the Member States having reported at least once (n = 143), 89% had received a complete primary series and 31% had received at least one booster dose for the same period. Variations in coverage were present across regions and income strata in all population groups. Only 5% of the general population in LICs received at least one booster dose, as compared to 49% in HICs. This divide was also seen in booster uptake among older adults, with 4% having received at least one booster in LICs, as compared with 94% in HICs. While less pronounced, variations in uptake also existed between regions, especially with regards to booster uptake. Generally, the AFR, EMR, and SEAR regions featured lower coverage levels than the other regions.

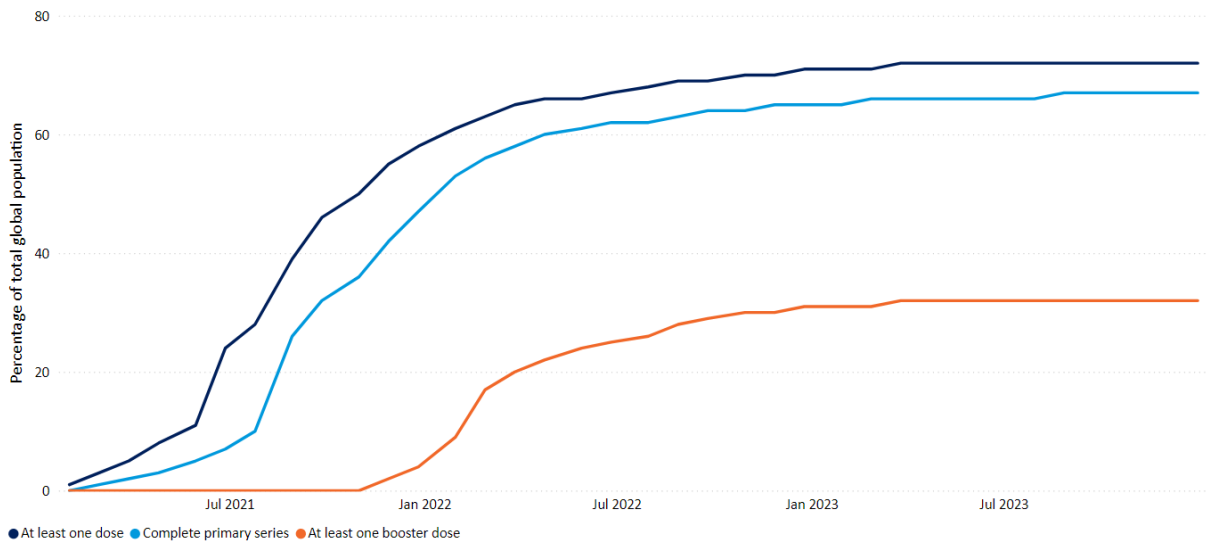


Figure 17: Percentage of total global population with at least one dose, with a complete primary series, and with at least one booster dose, cumulative for the period 2021-2023

From January 2024, WHO shifted from measuring 'continuous' COVID-19 vaccination coverage since the start of the vaccine rollout to measuring annual uptake. This change was made to reflect the (i) shifts in policy recommendations towards targeting high-risk groups and (ii) increasing evidence demonstrating time since last dose received is a more important indicator of vaccine-induced protection than the number of doses received. As such, previous measures of COVID-19 vaccination coverage were frozen as of end of December 2023 and measures of uptake were reset upon transition to the new indicators. This shift also marks the clear entry of the vaccine rollout into a new phase: the phase of COVID-19 vaccine integration and routinization.

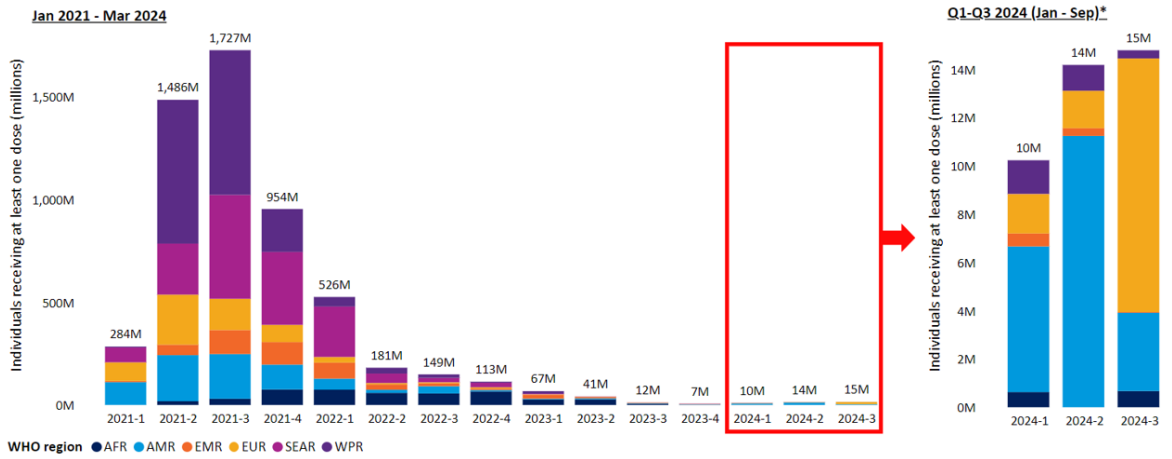


Figure 18: Individuals having received at least one COVID-19 vaccine per quarter across reporting WHO Member States by WHO region

COVID-19 vaccine uptake in high-risk groups has been low so far in 2024. Using the new monitoring approach, as of the end of the third quarter of 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 311.3K more health and care workers than as of end of quarter 2.

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 AMR and EUR regions and in high- and upper middle-income income groups was greater than in other regions and income groups. In older adults, uptake rates in EUR (5.1%) and AMR (3.6%) were considerably higher than in other regions, all between 0.0-0.3% uptake. Also in older adults, HICs had an uptake rate of 4.3%, as compared with 0.5% in LICs. In health and care workers, again, the uptake in AMR (2.8%) and EUR (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 UMICs and HICs featuring uptake rates of 2.1% and 0.6%, respectively, as compared with 0.3% and 0.1% in LICs and LMICs, respectively.

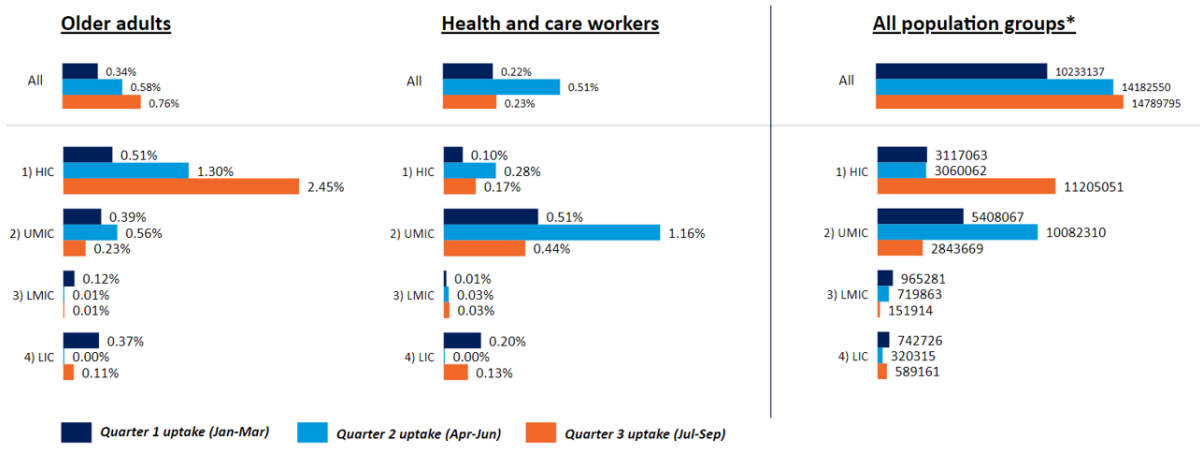


Figure 19: COVID-19 vaccine uptake in older adults, health and care workers, and all population groups, during the Q1-Q3 2024 period, by income group

During the third quarter of 2024, 53 WHO Member States (MS) reported at least once on current national COVID-19 vaccination policies for at least one population group. Among those 53 MS, 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 MS 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 MS reporting not recommending vaccination in these groups, respectively.

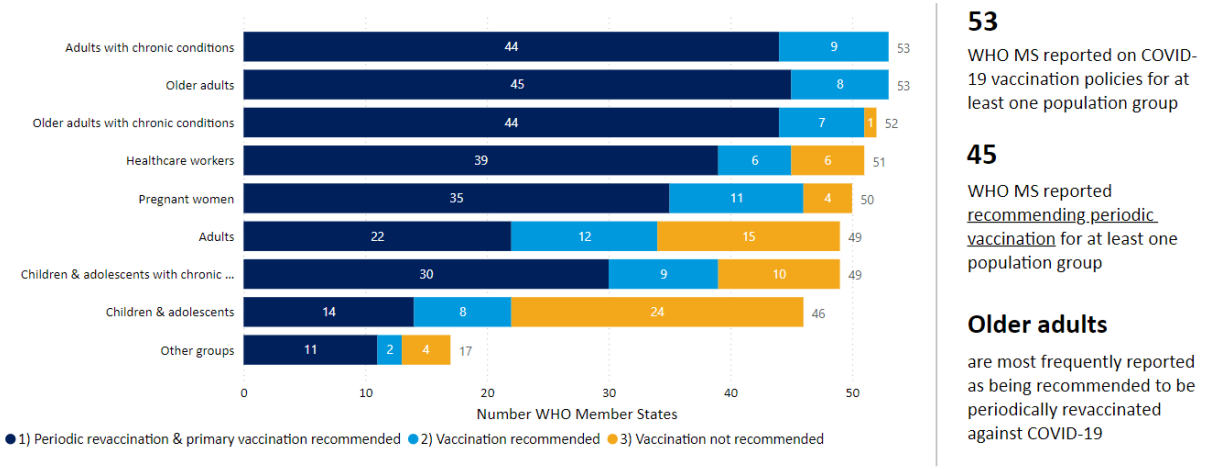


Figure 20: National policies on COVID-19 vaccination and periodic re-vaccination per population group, as reported during Q3 2024

Now, we enter the sixth year of the pandemic, after four years of weekly, monthly, and then quarterly updates to COVID-19 vaccination data, the collection, analysis, and dissemination of COVID-19 vaccination data will now fully integrate with the routine system for monitoring vaccination coverage at the global-level. Moving forward, COVID-19 vaccination data will be collected on an annual basis through the WHO-UNICEF Joint Reporting Form on Immunization (JRF). Final 2024 COVID-19 vaccination figures will therefore be collected from March-June 2025 and released in early July with the other immunization data collected through the JRF.

Post-acute and long-term health effects of SARS-CoV-2 infection

Estimates from 2022 suggest that 6.2% of individuals (95% CI 2.4% - 13.3%) with symptomatic acute SARS-CoV-2 infection have post COVID-19 condition (PCC), also called 'long COVID' by some, characterized by new or persistent symptoms that last for weeks or months following the initial episode.[11] Most cases are reported after mild acute illness, with females more frequently affected (OR, 1.56; 95% CI, 1.41-1.73).[10],[11] Higher rates of PCC were observed in individuals who were hospitalized. In contrast, lower rates were noted among those who had received prior vaccination. Symptoms are hugely diverse, but the most frequent symptom clusters occur around shortness of breath, fatigue, and cognitive problems.[12] The pathophysiology of PCC is still not fully understood, although abnormalities of multiple organs are described, and several hypotheses are suggested including immune dysregulation, autoimmunity, and microvascular blood clotting, among others.[13]

While unreliable infection rates remain challenging, so does the uncertainty around the rates and relative risk of PCC globally, although recent rates of PCC after acute infection appear to be lower than those earlier in the pandemic. However, with continued high levels of transmission, there is a risk of a high number of PCC cases even if the number of severe cases of COVID-19 has decreased.

In addition to symptoms and functional impairment after the acute phase of COVID-19, medical events involving multiple organ systems occur with increased frequency after acute COVID-19 illness. These include, but are not limited to, cardiovascular and neurological events (such as stroke), and kidney and lung impairments. Subsequent reinfections with SARS-CoV-2 are associated with higher hazards and excess burden of these conditions.[14]

The therapeutic landscape for PCC is still very limited, but there is a considerable global effort in trials of novel approaches. People experiencing persistent limitations in function, or a protracted course of PCC will require person-centred, comprehensive and multidisciplinary rehabilitation services delivered in collaboration with primary care practitioners and several medical specialties. WHO has established clinical

[10] Tsampasian, V. *et al.* Risk Factors Associated with Post-COVID-19 Condition: A Systematic Review and Meta-analysis. *JAMA Intern Med* **183**, (2023).
[11] Natarajan, A. *et al.* A systematic review and meta-analysis of long COVID symptoms. *Syst Rev* **12**, (2023).
[12] O'Mahoney, L. L. et al. The prevalence and long-term health effects of Long Covid among hospitalised and non-hospitalised populations: A systematic review and meta-analysis. EClinicalMedicine 55, 101762 (2023).
[13] Davis, H. E., McCorkell, L., Vogel, J. M. & Topol, E. J. Long COVID: major findings, mechanisms and recommendations. *Nature Reviews Microbiology 2023 21:3* **21**, 133–146 (2023).
[14] Kahlert, C. R. et al. Post-Acute Sequelae After Severe Acute Respiratory Syndrome Coronavirus 2 Infection by Viral Variant and Vaccination Status: A Multicenter Cross-Sectional Study. Clinical Infectious Diseases 77, 194–202 (2023).

case definitions for post COVID-19 condition in adults and in children. WHO's Living guideline on clinical management has 16 recommendations for rehabilitation in patients with PCC. WHO is developing clinical practice guidelines for management of people with post COVID-19 condition based on new evidence generated by the international medical research community and first responders. The Guideline Development Group is made up of global experts, frontline providers and patient partners. WHO collaborates on a monthly webinar with research and practice updates on post COVID-19 condition which is attended by healthcare providers and patients globally. The WHO remains committed to learning more about the medium and long-term outcomes for people with post COVID-19 condition, and most importantly delivering both treatments and knowledge which helps people's lives.

Health care impact over time and current

The COVID-19 pandemic has had a profound impact on health delivery and healthcare systems globally. The pandemic extensively disrupted routine healthcare delivery such as routine vaccination, outpatient and inpatient care among others, leading to delays in diagnostics, elective surgeries and other non-COVID-19-related treatments[15]. According to Joint WHO and UNICEF vaccination data, 73 countries reported a substantial decline (i.e., a decline of 5 percentage point or more in 2020 and/or 2021 compared to 2019) in routine coverage during the pandemic compared to pre-COVID-19.

Health infrastructures such as hospitals, clinics, laboratories and many other related-facilities were severely stretched by surges in COVID-19 cases leading to shortages of admission space to hospitalize cases that needed intensive care, highlighting the significant strain this had and the need to strengthen healthcare infrastructure and promote systems that strengthen resilience while the pandemic exacerbated health inequities, especially in low- and middle-income countries, highlighting the need for more equitable healthcare systems for marginalized populations.

While the implementation of public health and social measures such as movement restrictions, lockdowns, wearing of masks, physical distancing were aimed at reducing the spread of the virus, these measures also had significant social, economic and mental health impacts. The pandemic has resulted in an increase in the number of mental health conditions, particularly anxiety and depression According to a WHO scientific brief, anxiety and depression increased by 25% in the first year of the pandemic. Addressing these issues has become an important aspect that many health systems have prioritized to address.

While COVID-19 continues to circulate, evolve, infect, cause severe cases and PCC around the globe, the impact on health care systems is far less than observed during the peak of the pandemic from 2020-2022.

[15] COVID-19: Impact of the pandemic on healthcare delivery

WHO regional overviews

Morbidity and mortality trends and SARS-CoV-2 test positivity from systematic virologic surveillance

African Region

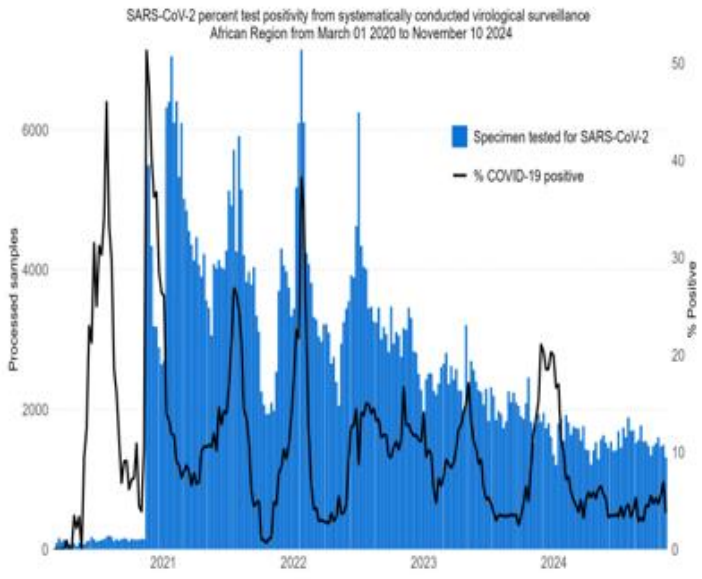
SARS-CoV-2 test positivity conducted through systematic virological surveillance in the African Region witnessed multiple peaks driven by the waves. The test positivity rate peaked at 51% during the second wave late 2021 and has been declining over the years reaching 20% at the end of 2023 during the winter wave. Cumulatively, over 617 000 samples have been tested for SARS-CoV-2 across 21 countries who reported at least once since the pandemic. This represents 1% of the cumulative global samples processed. Testing has been declining over the years, from over 216 000 samples in 2021, the highest testing, to more than 122 000 at the end of 2023. From January 2024, the test positivity rate in the region has been below 10% from 70 607 processed samples across 21 countries who submitted this data at least once.

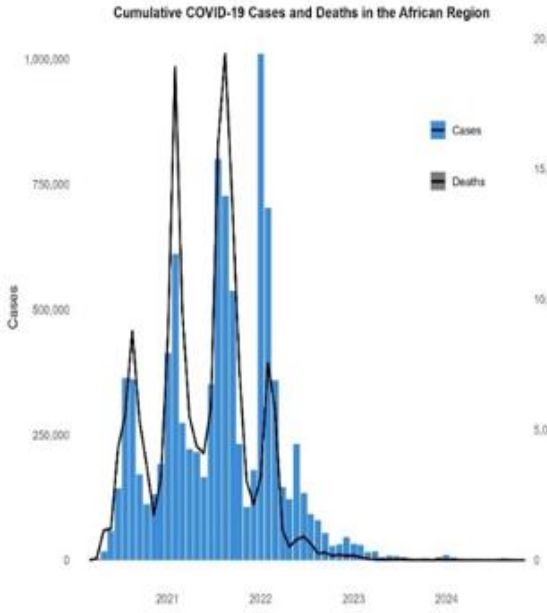
The weekly percent test positivity in the Region changed from 4.7% to 3.7% across 16 countries who reported at least once during the four-week period. No country reported an increase of more than 2.5% in percent test positivity during the four-week reporting period. No country showed elevated SARS-CoV-2 activity (10% or more) in the final week. During the reporting period, the weekly average number of specimens tested was 1471.

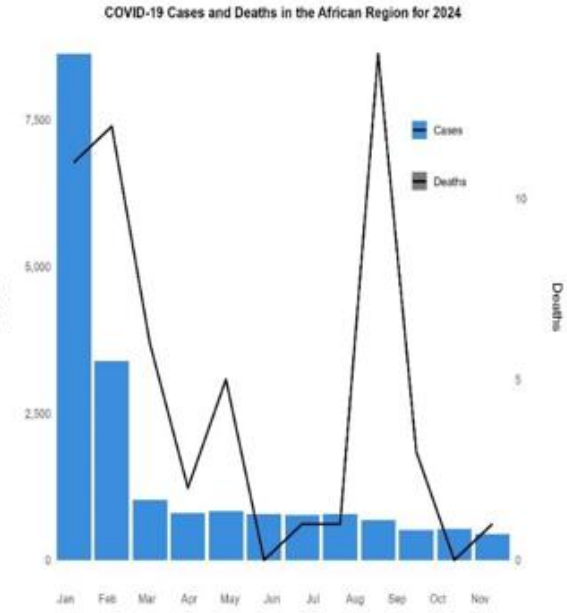
Cumulatively, the African Region reported about 9.6 million cases across 50 countries who reported at least once since the beginning of the pandemic. This represents 1% of the cumulative reported global cases. COVID-19 cases in the region have declined by 99% since the pandemic, decreasing from 5.4 million in 2021 to 12 578 as of 2024-W45. The number of countries reporting these data has also been declining since the pandemic, from 49 in 2020 to 39. Note that these data represent the countries who have submitted data to WHO at least once and should be interpreted cautiously. In terms of fatalities due to COVID-19, the region reported 175 532 deaths, representing 2.5% of the total global deaths, with deaths also declining by 99%, from over 112 000 in 2021 to just 52 deaths as of 2024-W45 across 49 countries who reported at least once since the beginning of the pandemic to 2024.

During the past 28 days (14 October to 10 November), the Region reported over 328 new cases, a 39% decrease as compared to the previous 28-day period. Nine (18%) of the 50 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in the United Republic of Tanzania (45 vs nine new cases; +400%), Senegal (four vs one new cases; +300%), Cameroon (10 vs three new cases; +233%), Sierra Leone (two vs one new cases; +100%), Democratic Republic of the Congo (four vs three new cases; +33%), South Africa (eight vs six new cases; +33%), Burkina Faso (nine vs seven new cases; +29%), Côte d'Ivoire (six vs five new cases; +20%), and Mali (six vs five new cases; +20%). The highest numbers of new cases were reported from Mauritius (170 new cases; 13.4 new cases per 100 000; -48%), the United Republic of Tanzania (45 new cases; <1 new case per 100 000; +400%), and Ghana (39 new cases; <1 new case per 100 000; -53%).

The number of new 28-day deaths in the Region remained stable% as compared to the previous 28-day period, with no new deaths reported. No deaths have been 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

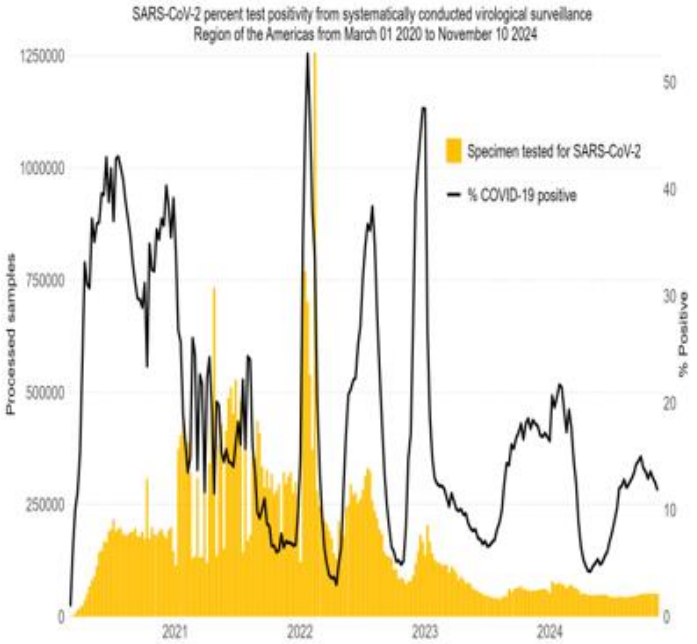
SARS-CoV-2 test positivity conducted through systematic virological surveillance in the Region of the Americas has witnessed multiple peaks since the pandemic with the highest reported in January 2022 at 53% and has been declining over the years to 16% at the end of 2023. Cumulatively, over 42.8 million samples have been tested for SARS-CoV-2 across 24 countries who reported at least once since the pandemic. This represents 91.5% of the cumulative samples processed. The highest tests by any WHO region. SARS-CoV-2 testing has been declining, from over 16.7 million when it peaked in 2021 to over 3.9 million at the end of 2023. From January 2024 to 2024-W45, the test positivity rate in the region has been below 10% from 70 607 processed samples across 21 countries who submitted this data at least once.

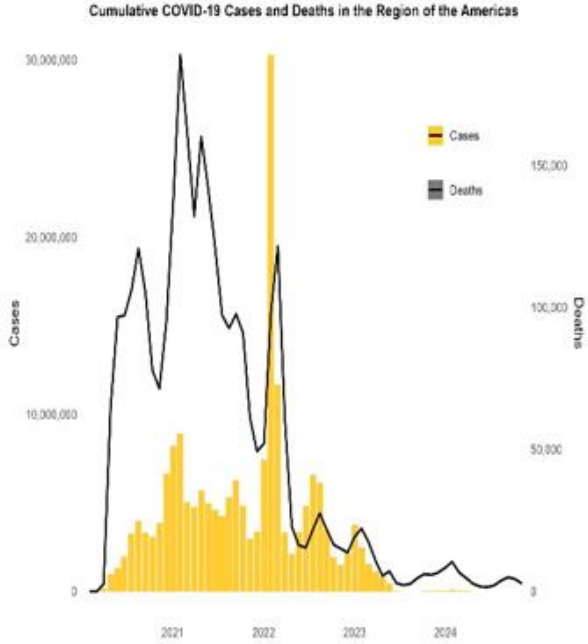
The weekly percent test positivity changed from 13.6% to 11.8% across 20 countries who reported at least once during the four-week period. Three countries reported an increase of more than 2.5% in percent test positivity during the four-week reporting period: Uruguay (from 5.3% to 18.2%), Chile (from 0.7% to 6.7%), and Peru (from 0.1% to 2.9%). Three countries showed elevated SARS-CoV-2 activity (10% or more) in the final week: Argentina (23%), Uruguay (18%), and Brazil (11%). During the reporting period, the weekly average number of specimens tested was 51 410.

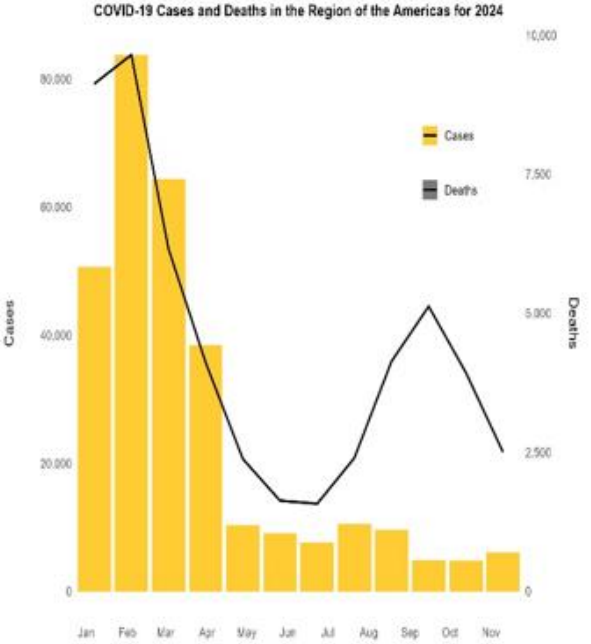
Cumulatively, the Region of the Americas reported over 193 million cases across all 56 countries who reported at least once since the beginning of the pandemic. This represents 25% of the cumulative global cases. COVID-19 cases in the region have declined by 99% since the pandemic, decreasing from the highest reported of 81.1 million in 2022 to 273 048 as of 2024-W45. The number of countries reporting these data has also been declining since the pandemic, from 56 in 2020 to 26. Note that these data represent the countries who have submitted data to WHO at least once and should be interpreted cautiously. In terms of COVID-19 fatalities, the region reported over 3 million deaths, representing 43% of the total global deaths, with deaths declining by 97%, from 1.4 million in 2021 to 46 389, across 55 countries who reported at least once since the beginning of the pandemic.

During the past 28 days (14 October to 10 November), the Region reported over 5559 new cases, a 16% increase as compared to the previous 28-day period. Five (9%) 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 Haiti (40 vs 10 new cases; +300%), Turks and Caicos Islands (13 vs eight new cases; +62%), Chile (1 614 vs 1 073 new cases; +50%), Uruguay (216 vs 149 new cases; +45%), and Argentina (3 241 vs 2 443 new cases; +33%). The highest numbers of new cases were reported from Argentina (3241 new cases; 7.2 new cases per 100 000; +33%), Chile (1614 new cases; 8.4 new cases per 100 000; +50%), and Uruguay (216 new cases; 6.2 new cases per 100 000; +45%).

The number of new 28-day deaths in the Region decreased by 41% as compared to the previous 28-day period, with 2281 new deaths reported. The highest numbers of new deaths were reported from the United States of America (2236 new deaths; <1 new death per 100 000; -42%), Chile (25 new deaths; <1 new death per 100 000; +25%), and Argentina (11 new deaths; <1 new death per 100 000; +10%).







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

Updates from the Region of the Americas

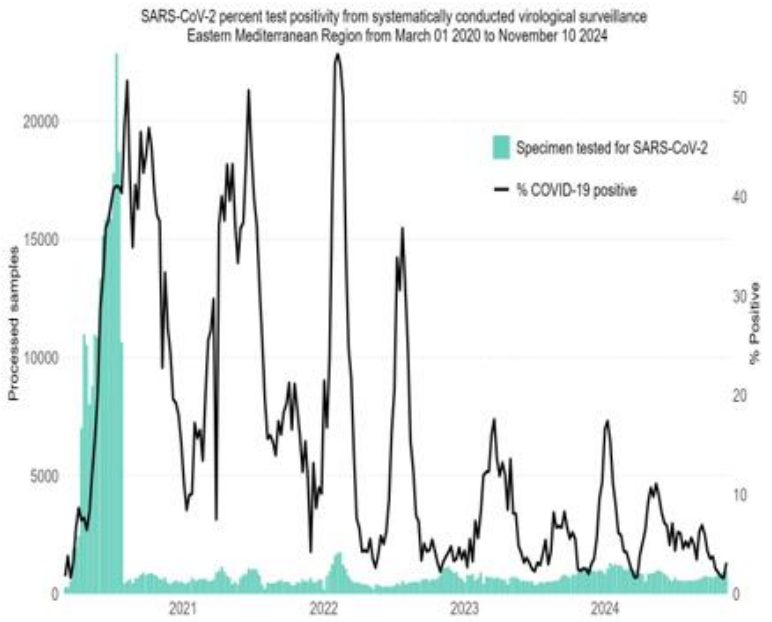
Eastern Mediterranean Region

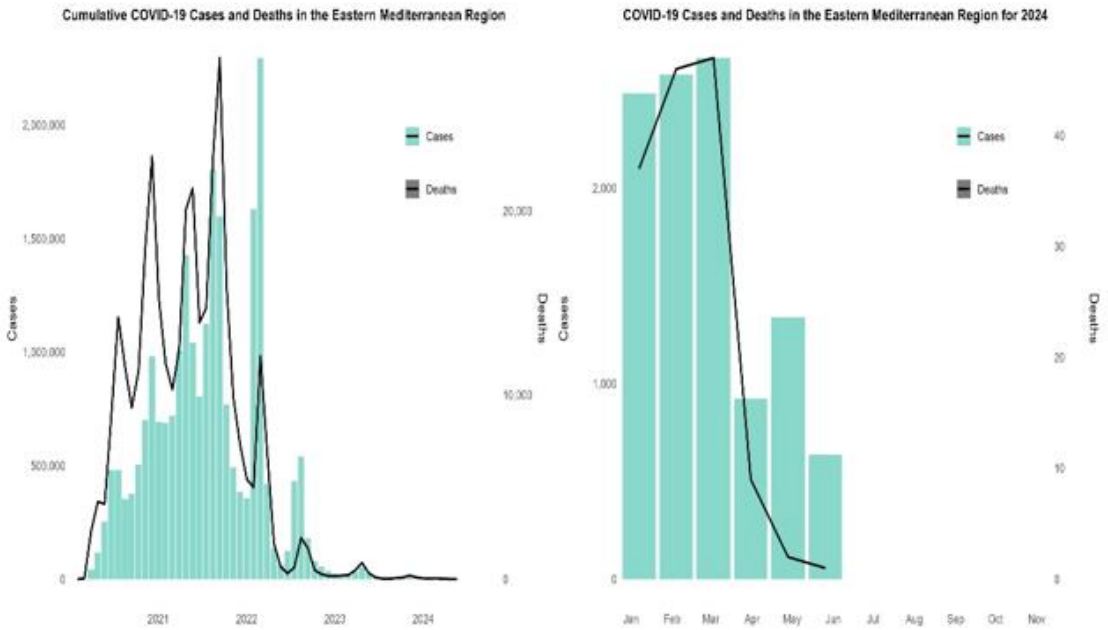
SARS-CoV-2 test positivity conducted through systematic virological surveillance in the Eastern Mediterranean Region has witnessed multiple peaks since the pandemic with the highest rate reported in February 2022 at 54% during the peak of the pandemic and has been declining over the years to around 17% at the end of 2023. Cumulatively, about 380 000 samples have been tested for SARS-CoV-2 across 12 countries who reported at least once since the pandemic. This represents 0.8% of the cumulative global samples processed. Testing in the region has been declining, from over 236 000 in 2020 to under 40 000 at the end of 2023. From January 2024 to 2024-W45, the test positivity rate in the region declined from 17% during the 2023 November-December wave to below 10% from around 380 000 processed samples across 12 countries who submitted this data at least once.

The weekly percent test positivity in the Region changed from 2.2% to 3.2% across 11 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 and elevated activity (10% or more) during the four-week reporting period. During the reporting period, the weekly average number of specimens tested was 925.

Cumulatively, the Eastern Mediterranean Region reported over 23. 4 million cases across all 22 countries who reported at least once since the beginning of the pandemic. This represents 3% of the cumulative global cases. COVID-19 cases in the region have declined by over 99% since the pandemic, decreasing from the highest reported of over 12.2 million in 2021 to 8789 as of 2024-W45. The number of countries reporting this data has also been declining since the pandemic, from 22 in 2020 to only four. Note that these data represent the countries who have submitted data to WHO at least once and should be interpreted cautiously. In terms of COVID-19 fatalities, the region reported over 350 000 deaths, representing about 5% of the cumulative global deaths, with deaths declining by over 99%, from over 194 000 in 2021 to just 100 across 22 countries who reported at least once since the beginning of the pandemic.

The Region has not reported data for cases and deaths since June 2024.





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

Updates from the Eastern Mediterranean Region

European Region

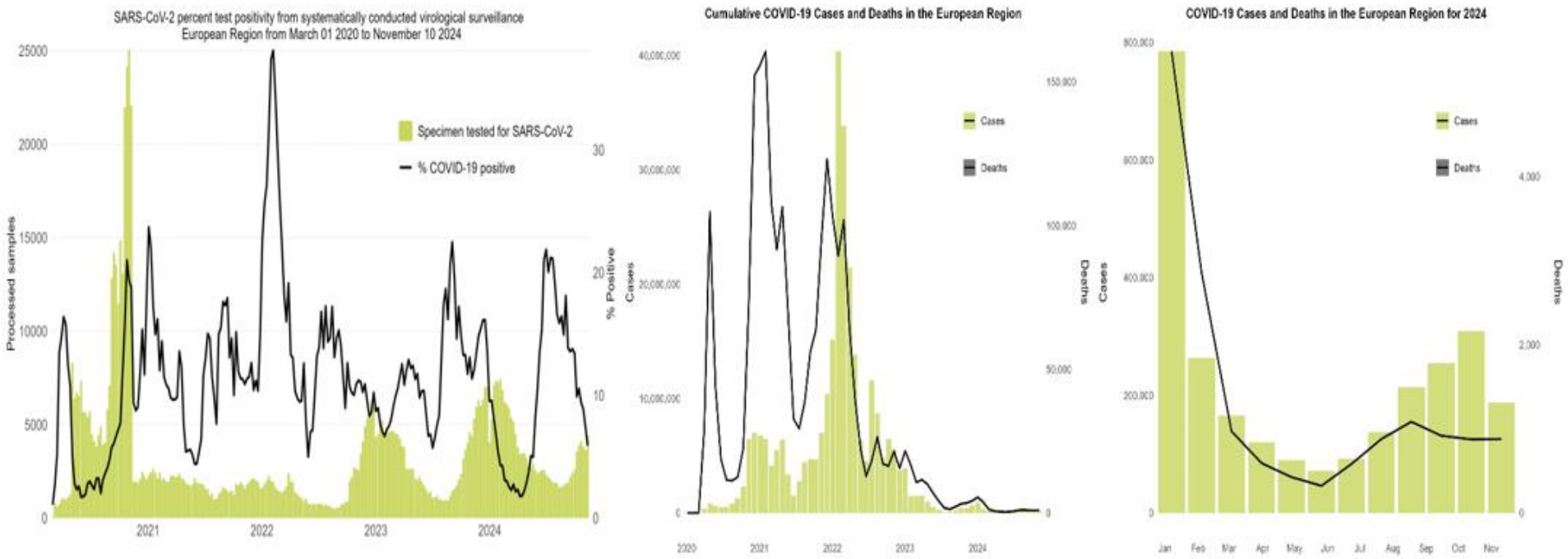
SARS-CoV-2 test positivity conducted through systematic virological surveillance in the European Region has witnessed multiple waves since the pandemic with the highest rate reported in February 2022 at 38% during the peak of the pandemic and has been declining over the years to around 10% at the end of 2023. Cumulatively, over 827 000 samples have been tested for SARS-CoV-2 across 44 countries who reported at least once since the pandemic. This represents 1.8% of the cumulative global samples processed. Testing in the region has been declining, from over 298 000 in 2020 to under 180 000 at the end of 2023. From January 2024 to 2024-W45, the test positivity rate in the region increased, reaching 21% in June during the summer wave from around 2% in April and has been below 10% from more than 164 000 processed samples across 44 countries who submitted this data at least once.

The weekly percent test positivity from systematically conducted virological surveillance in the Region changed from 9.4% to 5.9% across 39 countries who reported at least once during the four-week period. Seven countries reported an increase of more than 2.5% in percent test positivity during the four-week reporting period: Slovakia (from 0% to 19.05%), Estonia (from 0% to 5.88%), Russian Federation (from 0% to 5.26%), Greece (from 7.69% to 12.28%), Ukraine (from 1.52% to 6.03%), Israel (from 0% to 4.29%), and Republic of Moldova (from 0% to 3.57%). Ten countries showed elevated SARS-CoV-2 activity (10% or more) in the final week: Poland (31%), Switzerland (23%), Lithuania (21%), Slovakia (19%), Azerbaijan (14%), Greece (12%), Hungary (12%), Sweden (11%), Slovenia (10%), and Germany (10%). During the reporting period, the weekly average number of specimens tested was 4004.

Cumulatively, the European Region reported over 280.6 million cases across all 61 countries who reported at least once since the beginning of the pandemic. This represents 36% of the cumulative global cases. COVID-19 cases in the region have declined by over 98% since the pandemic, decreasing from the highest reported of over 165.1 million in 2022 to 2.0 million as of 2024-W45. The number of countries reporting these data has also been declining since the pandemic, from 61 in 2022 to 43. Note that these data represent the countries who have submitted data to WHO at least once and should be interpreted cautiously. In terms of COVID-19 fatalities, the region reported over 2.2 million deaths, representing 32% of the total global deaths, with deaths declining by over 98%, from over 1.0 million in 2021 to 11 675 across 60 countries who reported at least once since the beginning of the pandemic.

During the past 28 days (14 October to 10 November), the Region reported over 184 000 new cases, a 41% decrease as compared to the previous 28-day period. One (2%) 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 Estonia (650 vs 490 new cases; +33%). The highest numbers of new cases were reported from the Russian Federation (96 108 new cases; 65.9 new cases per 100 000; -29%), Czechia (14 568 new cases; 136.2 new cases per 100 000; -50%), and Greece (12 543 new cases; 117 new cases per 100 000; -35%).

The number of new 28-day deaths in the Region decreased by 11% as compared to the previous 28-day period, with 749 new deaths reported. The highest numbers of new deaths were reported from the Russian Federation (209 new deaths; <1 new death per 100 000; +51%), Sweden (177 new deaths; 1.7 new deaths per 100 000; -12%), and Greece (88 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 European Region

South-East Asia Region

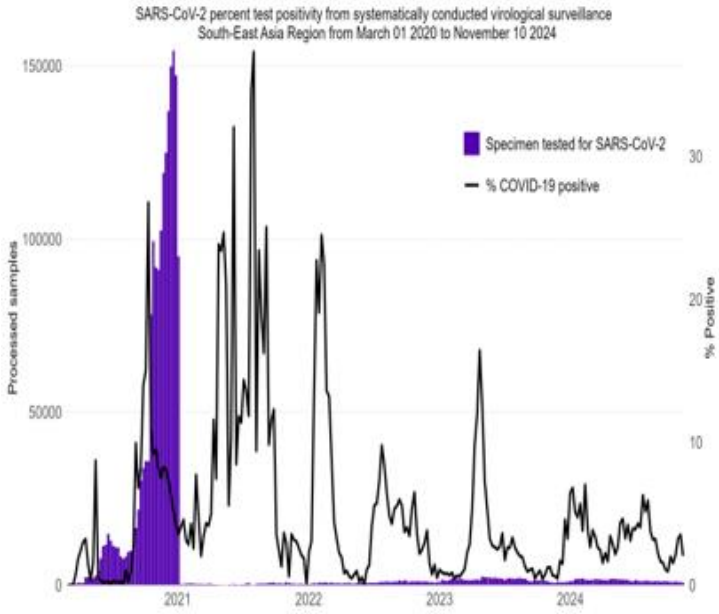
SARS-CoV-2 test positivity conducted through systematic virological surveillance in the South-East Asia Region has witnessed multiple waves since the pandemic with the highest rate reported in August 2021 at 37% during the peak of the pandemic and has been declining over the years to around 6% at the end of 2023. Cumulatively, over 1.9 million samples have been processed for SARS-CoV-2 across eight countries who reported at least once since the pandemic. This represents 4.1% of the cumulative global samples processed. Testing in the region has been declining, from over 1.7 million in 2020 to more than 80 000 at the end of 2023. From January 2024 to 2024-W45, the test positivity rate in the region has been largely stable, reaching 6% during the summer wave with observed slight decline thereafter, of below 5% from more than 60 000 processed samples across seven countries who submitted this data at least once.

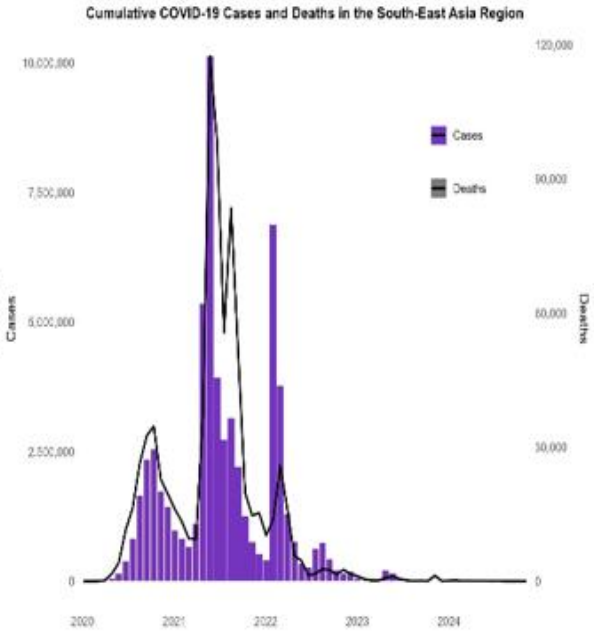
The weekly percent test positivity in the Region changed from 2.1% to 2.1% across six countries who reported at least once during the four-week period. No country reported an increase of more than 2.5% in percent test positivity during the four-week reporting period. One country showed elevated SARS-CoV-2 activity (10% or more) in the final week: Indonesia (10%). During the reporting period, the weekly average number of specimens tested was 865.

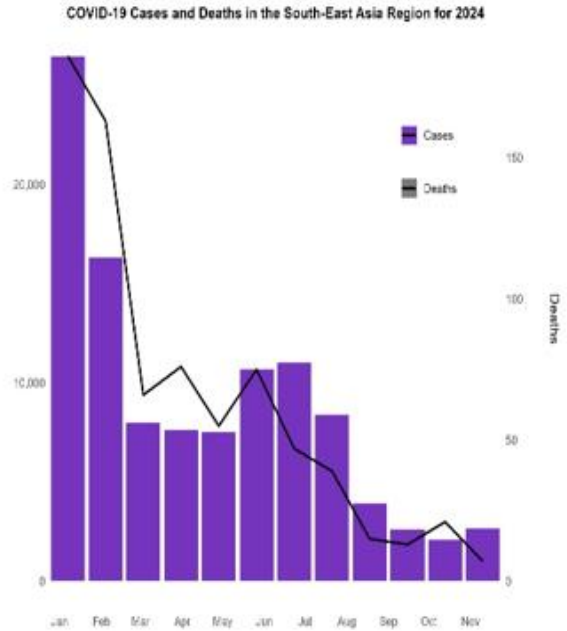
Cumulatively, the South-East Asia Region reported over 61.3 million cases across 10 countries who reported at least once since the beginning of the pandemic. This represents 8% of the cumulative global cases. COVID-19 cases in the region have declined by over 99% since the pandemic, decreasing from the highest reported of over 32.9 million in 2021 to 88 647 million as of 2024-W45. The number of countries reporting these data has also been declining since the pandemic, from 10 in 2022 to six. Note that these data represent the countries who have submitted data to WHO at least once and should be interpreted cautiously. In terms of COVID-19 fatalities, the region reported over 808 000 deaths, representing 11% of the total global deaths, with deaths declining by over 99%, from 536 307 in 2021 to 638 across 10 countries who reported at least once since the beginning of the pandemic.

During the past 28 days (14 October to 10 November), the Region reported 2659 new cases, a 29% increase as compared to the previous 28-day period. Two (18%) of the 11 countries for which data are available reported increases in new cases of 20% or greater, with the highest proportional increases observed in Indonesia (165 vs 48 new cases; +244%), and Thailand (2 014 vs 1 159 new cases; +74%). The highest numbers of new cases were reported from Thailand (2014 new cases; 2.9 new cases per 100 000; +74%), India (398 new cases; <1 new case per 100 000; -45%), and Indonesia (165 new cases; <1 new case per 100 000; +244%).

The number of new 28-day deaths in the Region decreased by 67% as compared to the previous 28-day period, with 7 new deaths reported. The highest numbers of new deaths were reported from India (4 new deaths; <1 new death per 100 000; -69%), and Thailand (3 new deaths; <1 new death per 100 000; -62%).







Source: *Influenza and SARS-CoV-2 surveillance data from GISRS reported to FluNet; WHO Updates from the South-East Asia Region*

Western Pacific Region

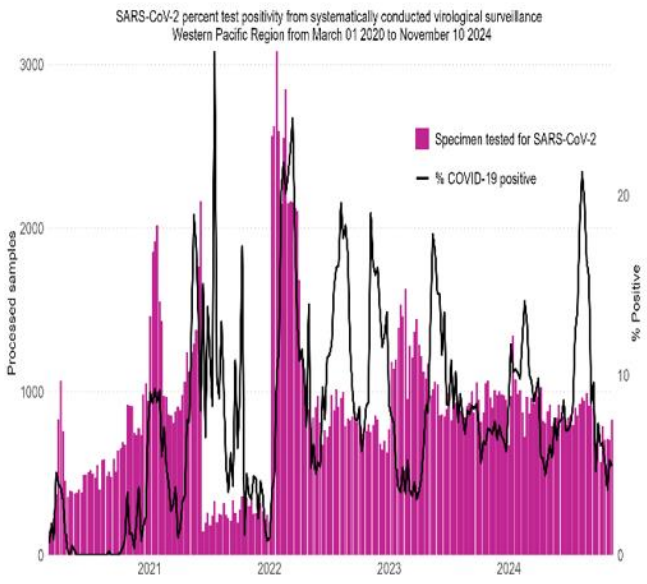
SARS-CoV-2 test positivity conducted through systematic virological surveillance in the Western Pacific Region has witnessed multiple peaks since the pandemic with the highest rate reported in July 2021 at 28% during the peak of the pandemic and has been declining over the years to around 8% at the end of 2023. Cumulatively, over 221 000 samples have been processed for SARS-CoV-2 across 10 countries who reported at least once since the pandemic. This represents 0.5% of the cumulative global samples processed. Testing in the region has been declining, from over 63 000 in 2022 to more than 54 000 at the end of 2023. From January 2024 to 2024-W45, the test positivity rate in the region has been largely unstable, rising to 21% in August during the summer wave thereafter declining to below 10% from about 40 000 processed samples across eight countries who submitted this data at least once.

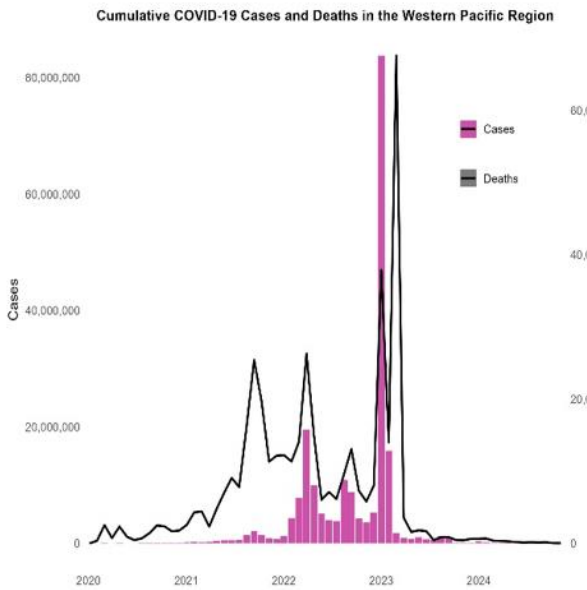
The weekly percent test positivity in the Region changed from 5.1% to 5.0% across 7 countries who reported at least once during the four-week period. One country reported an increase of more than 2.5% in percent test positivity during the four-week reporting period: Mongolia (from 3.23% to 6.52%). No 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 737.

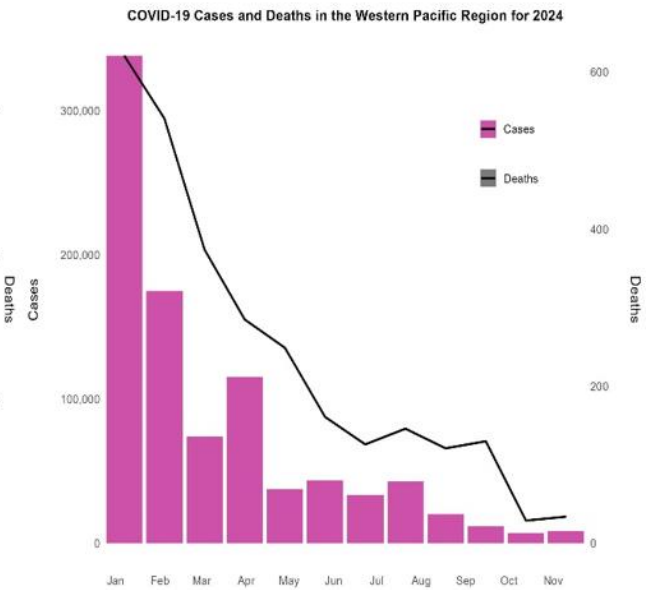
Cumulatively, the Western Pacific Region reported over 208 million cases across its 35 countries who reported at least once since the beginning of the pandemic. This represents 27% of the cumulative global cases. COVID-19 cases in the region have declined by over 99% since the pandemic, decreasing from the highest reported of over 171.2 million in 2022 to 621 285 as of 2024-W45. The number of countries reporting this data has also been declining since the pandemic, from 35 in 2022 to 21. Note that these data represent the countries who have submitted data to WHO at least once and should be interpreted cautiously. On COVID-19 fatalities, the region reported over 421 000 deaths, representing 6% of the total global deaths, with deaths declining by over 99%, from over 167 000 in 2022 to 2420 across 12 countries who reported at least once since the beginning of the pandemic.

During the past 28 days (14 October to 10 November 2024), the Region reported over 8408 new cases, a 16% 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 (3633 vs 2768 new cases; +31%), and New Zealand (4117 vs 3282 new cases; +25%). The highest numbers of new cases were reported from New Zealand (4117 new cases; 85.4 new cases per 100 000; +25%), Malaysia (3633 new cases; 11.2 new cases per 100 000; +31%), and Brunei Darussalam (369 new cases; 84.3 new cases per 100 000; -21%).

The number of new 28-day deaths in the Region increased by 17% as compared to the previous 28-day period, with 34 new deaths reported. The highest numbers of new deaths were reported from New Zealand (26 new deaths; <1 new death per 100 000; +86%), and China (8 new deaths; <1 new death per 100 000; -47%).







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.

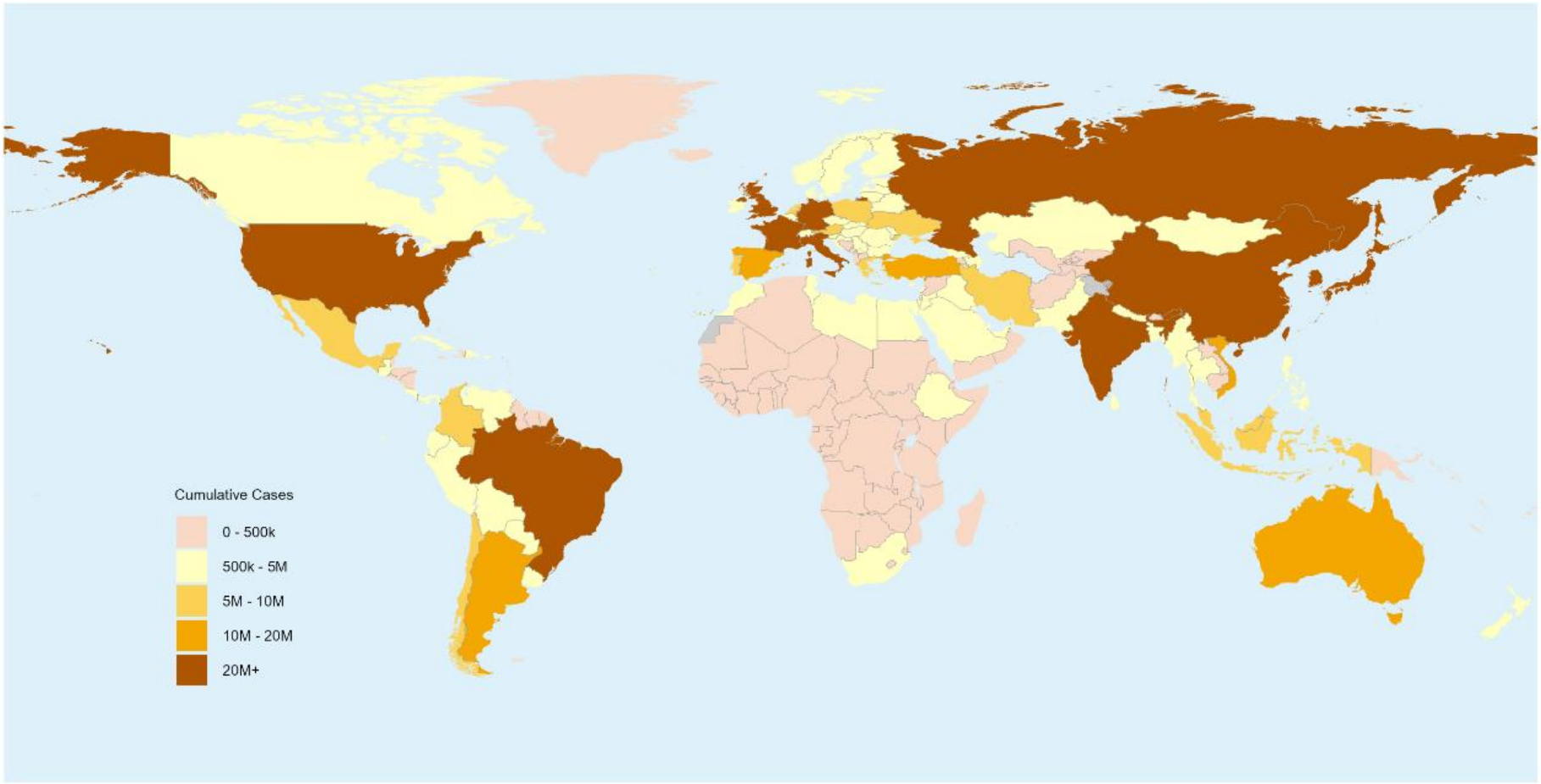
Annex 4: Surveillance/Reporting systems and data collection and flow architecture

Two streams of surveillance reporting have been implemented by WHO for the global surveillance of COVID-19: 1) mandatory reporting of cases and deaths reported through the IHR mechanism and 2) a voluntary and a more detailed reporting of cases and deaths including age-sex disaggregation, hospitalizations, ICU admissions and cases and deaths of healthcare workers, and testing. However, following the lifting of PHEIC on 5 May 2023, changes in reporting requirements by Member States was made with the publication of an Addendum to Public health surveillance for COVID-19 interim guidance on 25 August 2023. The addendum outlined a minimum set of surveillance indicators required to be reported by Member States. These indicators include new confirmed cases, new confirmed deaths, age-disaggregated deaths, new admissions to hospital for COVID-19 treatment, new admissions to ICU, and number of people tested (NAAT or Ag-RDT).

Since 2023, the priority and focus has been on monitoring the severity/burden and circulation of SARS-CoV-2 virus through integrating COVID-19 surveillance into existing influenza surveillance systems, a sustainable approach to enhance public health monitoring and response.

Also, SARS-CoV-2 testing from sentinel sites are collected by the Global Influenza Programme via RespiMart database unto the Global Influenza Surveillance and Response System (GISRS). Output views are available to be visualized in the Global COVID-19 Dashboard that was launched in December 2023 and in GISRS dashboards.

Annex 5. Cumulative number of confirmed COVID-19 cases reported, from January 2020 to 10 November 2024



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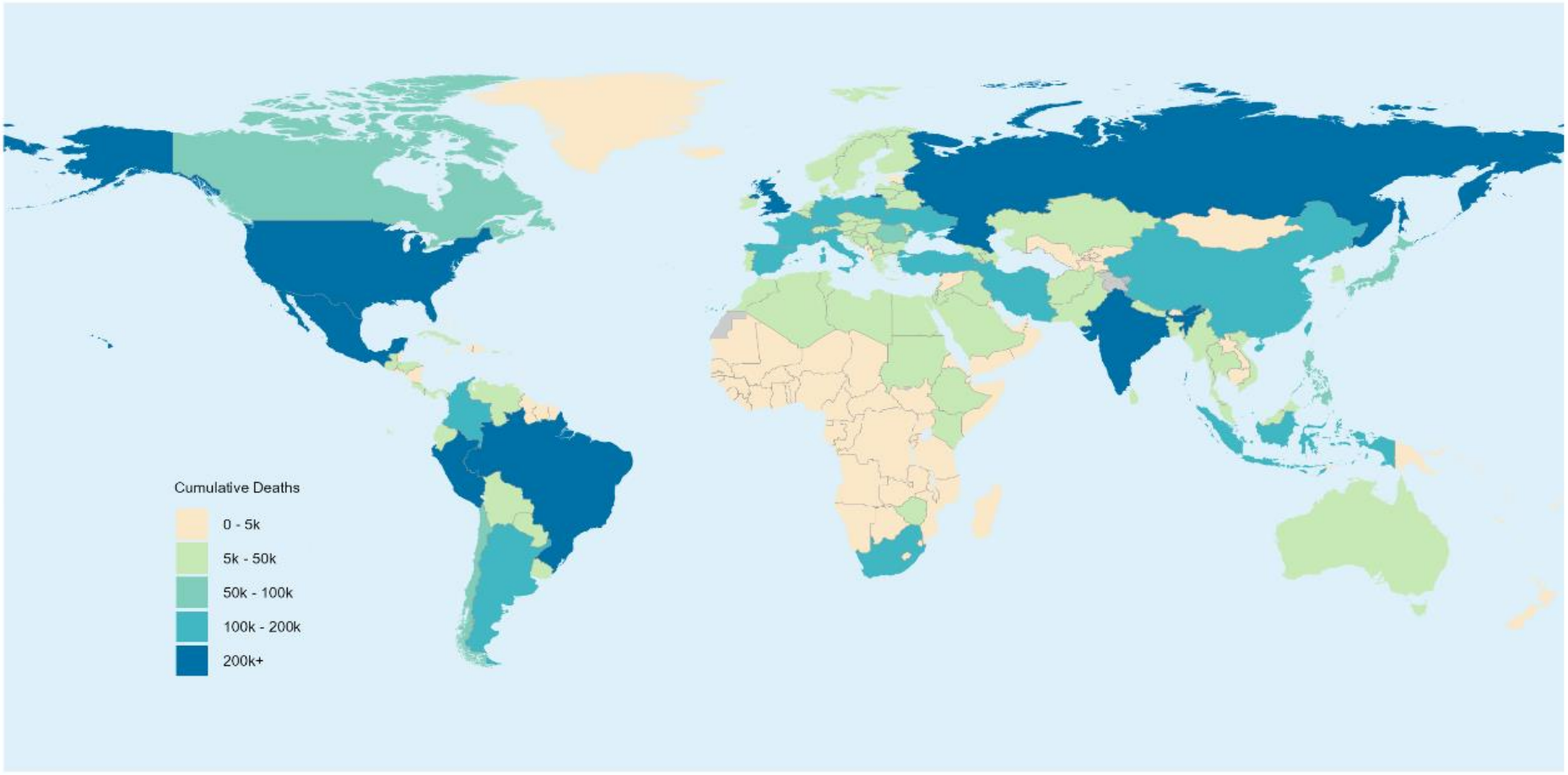
Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

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

Annex 6. Cumulative number of confirmed COVID-19 deaths reported, from January 2020 to 10 November 2024



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