

Weekly COVID-19 Epidemiological Update - Region of the Americas

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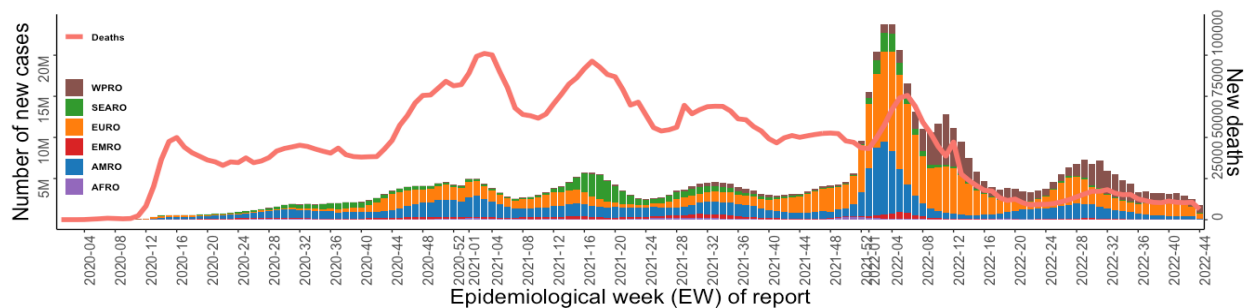
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Executive Summary

- **Since the onset of the pandemic** in 2020 and up to November 08, 2022, a cumulative total of approximately 630 million COVID-19 cases including 6.6 million deaths were reported from all six WHO regions. During epidemiological week (EW) 44, cases decreased in four WHO regions (range: -39 - -3.1%) while they increased in WPRO (9.9%) and SEARO (28.1%). Similarly, deaths decreased in four regions while they increased in WPRO (7.9%) and SEARO (535.3%).
- **Globally**, approximately 2,181,459 new COVID-19 cases were reported in EW 44 (October 30, 2022-November 05, 2022) - a -13% decrease compared to EW 43 (October 23, 2022-October 29, 2022) (**Figure 1**). For the same period, 9,504 new COVID-19 deaths were reported globally – a -10% relative decrease compared the previous week.
- **In the region of the Americas**, 372,002 cases and 3,407 deaths were reported in EW 44 - a -3.1% decrease in cases and -20.7% decrease in deaths compared to the previous week.
- At the subregional level, COVID-19 cases decreased all (range: -25.8 - -20.1%) but one subregion – North American subregion (3.6% increase), and deaths decreased in all four subregions (range: -27.4 - -11.4% decrease).
- The overall weekly case notification rate for the region of the Americas was 36.4 cases per 100,000 population during EW 44 (37.5 the previous week). Between EW 44 and 43, the 14-day COVID-19 death rate was 7.5 deaths per 1 million population (7.6 the previous two weeks).
- Among 26 countries/territories in the region with available data, **COVID-19 hospitalizations** increased in 10 countries and territories (range: 1.2% - 169.1%) during EW 44 compared to the previous week. Among 18 countries and territories with available data, COVID-19 **ICU admissions** increased in 7 countries and territories (range: 0.4% - 200%).

Figure 1: COVID-19 cases and deaths by epidemiological week (EW) of report and WHO region. EW 4, 2020 - EW 44, 2022.

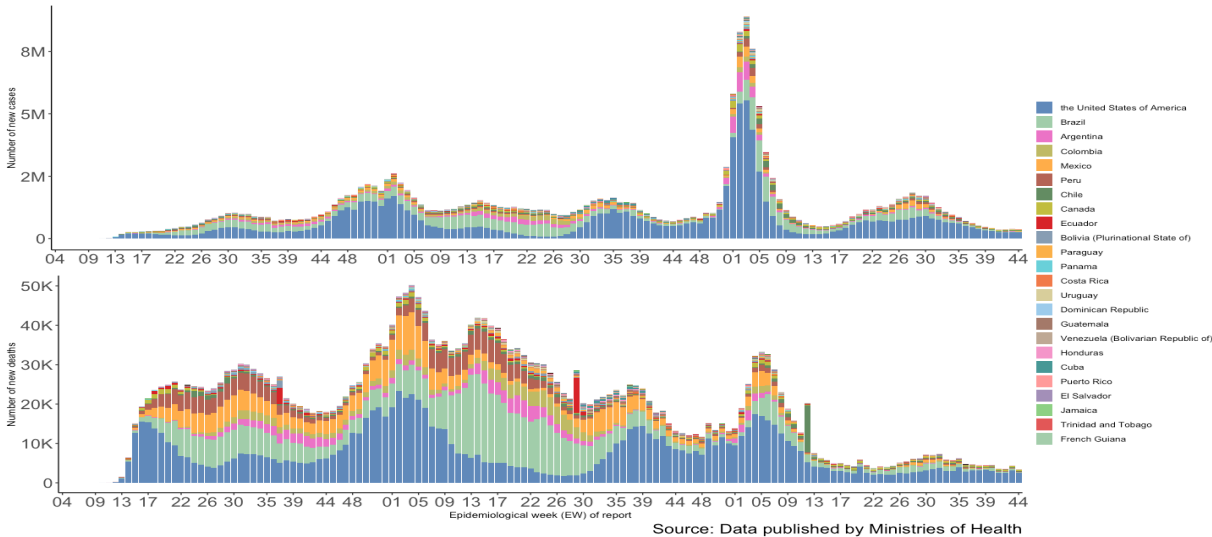


Source: Data from WHO COVID-19 Dashboard

Data are retro-adjusted every week and the numbers and percent changes of COVID-19 cumulative cases and deaths may not match with the previous COVID-19 weekly situational reports.

Region of the Americas - An overview

Figure 2: COVID-19 cases and deaths by epidemiological week (EW) of report and country/territory. Region of the Americas. EW 3, 2020 - 44, 2022.



During EW 44, 372,002 new **COVID-19 cases** were reported in the region of the Americas - a relative decrease of -3.1% compared to previous week (**Figure 2**). The highest number of COVID-19 cases in the last week was reported from North America (288,337 cases, 3% increase) compared to the previous week. (**Table 1**). At the national level, the highest proportion of weekly COVID-19 cases was reported by the United States of America (266,104 new cases, 4.8% increase), followed by Chile (35,423 new cases, -15.5% decrease), Brazil (26,836 new cases, -35.5% decrease).

Table 1: Weekly change (%) in cases and deaths between EW 43 and EW 44 by subregion. Region of the Americas

Subregion	Total Cases	Total Deaths	Cases EW 43	Deaths EW 43	Cases EW 44	Deaths EW 44	% Change Cases	% Change Deaths
Caribbean and Atlantic Ocean Islands	4,242,175	35,334	7,753	35	6,086	31	-21.5%	-11.4%
Central America	4,015,312	53,625	7,725	34	5,730	29	-25.8%	-14.7%
North America	107,945,024	1,439,831	278,435	3,454	288,337	2,784	3.6%	-19.4%
South America	64,216,818	1,330,263	89,909	775	71,849	563	-20.1%	-27.4%

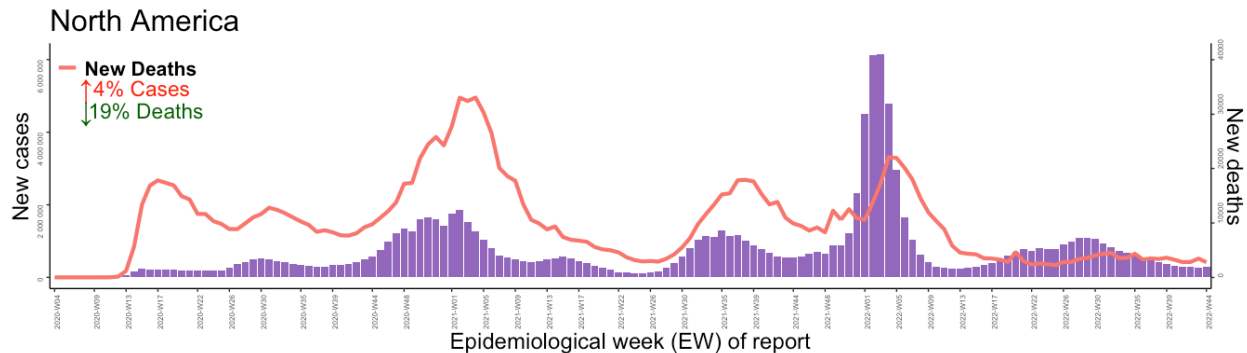
For the same period, 3,407 **COVID-19 deaths** were reported in the region of the Americas - a relative decrease of -20.7% compared to previous week (**Figure 2**). The highest number of COVID-19 deaths in the last week was reported from North America (2,784 deaths, -19% decrease) (**Table 1**). At the national level, the highest proportion of weekly COVID-19 deaths was reported by the United States of America (2,480 new deaths, -20.5% decrease), followed by Canada (293 new deaths, -7.9% decrease), and Brazil (252 new deaths, -54.4% decrease).

A summary of the COVID-19 trends for EW 44 by subregion is presented below.

North America

The overall trends for COVID-19 cases have slightly increased in North America as of EW 44. During EW 44, the United States of America reported a 4.8% increase in weekly cases (266,104 cases), while the two remaining countries in the subregion reported a decrease in cases – Canada (20,628 cases, -5.4 % decrease) and Mexico (1,605 cases, -39 % decrease) compared to the previous week.

Figure 3: COVID-19 cases and deaths by epidemiological week (EW). North America. Region of the Americas. EW 3, 2020 - EW 44, 2022.



For the same period, **weekly COVID-19 deaths** decreased by -19.4% (2,784 new deaths) in North America relative to the previous week. All three countries in the subregion reported a decline in weekly deaths – the largest decline in deaths being reported by Mexico (11 new deaths, -35.3% decrease), followed by the United States of America (2,480 new deaths, -20.5% decrease), and Canada (293 new deaths, -7.9% decrease).

During 44, among the two countries in North America with available data for **COVID-19 weekly hospitalizations and ICU admissions**, weekly hospitalizations and ICU admissions in the United States of America remained stable – reporting no substantial changes compared to the previous week – 3% increase in hospitalizations (n=27,625) and -1.5% decrease in ICU admissions (n=3,142). Similarly in Canada, there were no substantial changes in weekly hospitalizations (5,790 hospitalizations, 1.2% increase) while ICU admissions decreased by 6.6% (n=267) during EW 44 compared to the previous week.

The Omicron **variant of concern** (VOC) sub-lineages of BA.4 and BA.5 are predominant in all three countries in the subregion. In the United States of America, the proportion of the BA.5 subvariant has been gradually decreasing over the past two months – accounting for 39.2%, while the estimated proportions of BA.5 sub-lineages, BQ.1 and BQ.1.1, have been increasing over the past 6 weeks – accounting for 35.3% of sequences for the week ending on 5 November 2022¹. The BA.5 and BA.4 sub-lineages made up about 89.1% and 8.2% for the week of 16 October 2022 in Canada² and 92% and 4% as of EW 42 in Mexico, respectively.

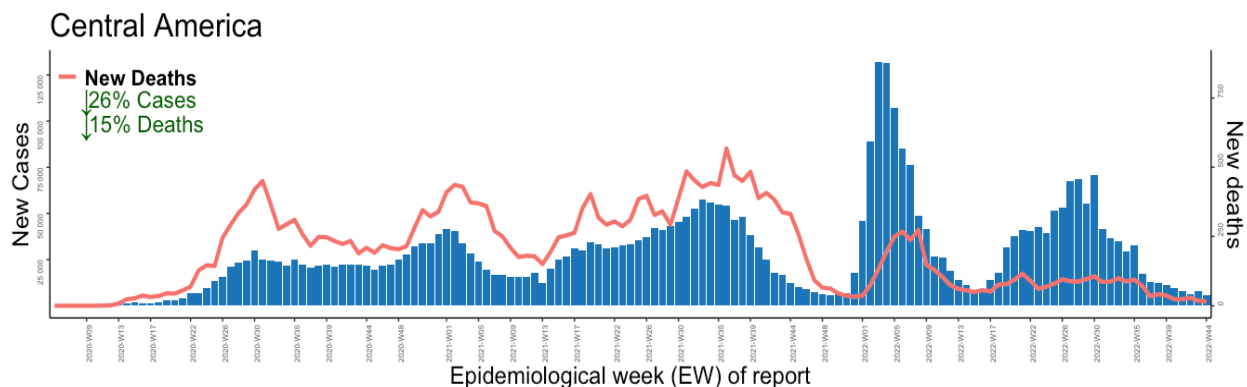
1 The United States Centers for Disease Control and Prevention (CDC). Variant Proportions. Accessed 8 November 2022. Available at: <https://bit.ly/3Obz8cT>

2 Public Health Agency of Canada (PHAC). COVID-19 Epidemiological Update. Accessed 8 November 2022. Available at: <https://bit.ly/3bbFRFr>

Central America

In Central America, the overall **COVID-19 incidence** for the sub-region has decreased again, with 5,730 new cases being reported during EW 44 – a -25.8% decrease compared to the previous week (**Figure 4**).

Figure 4: COVID-19 cases and deaths by epidemiological week (EW). Central America. Region of the Americas. EW 6, 2020 - EW 44, 2022.



During EW 44, **COVID-19 weekly cases** increased in two countries in the subregion – Panama (838 new cases, 4.1% increase) and Costa Rica (2,703 new cases, 3.3% increase), while the remaining five countries and territories reported either a decline (n=4, range: -49.6 - -4.8% decrease) or no cases (n=1, El Salvador) relative to the previous week. The countries with the largest decline in cases this week included Guatemala (2,093 new cases, -49.6% decrease) and Belize (14 new cases, -17.6% decrease) compared to the previous week.

During EW 44, **weekly deaths** decreased by approximately -14.7% (29 new deaths) relative to the previous week (**Figure 4**). Only two countries in the subregion reported weekly deaths – Guatemala (19 new deaths, -5% decrease) and Costa Rica (10 new deaths, 11.1% increase), while the remaining countries and territories did not report any deaths during EW 44.

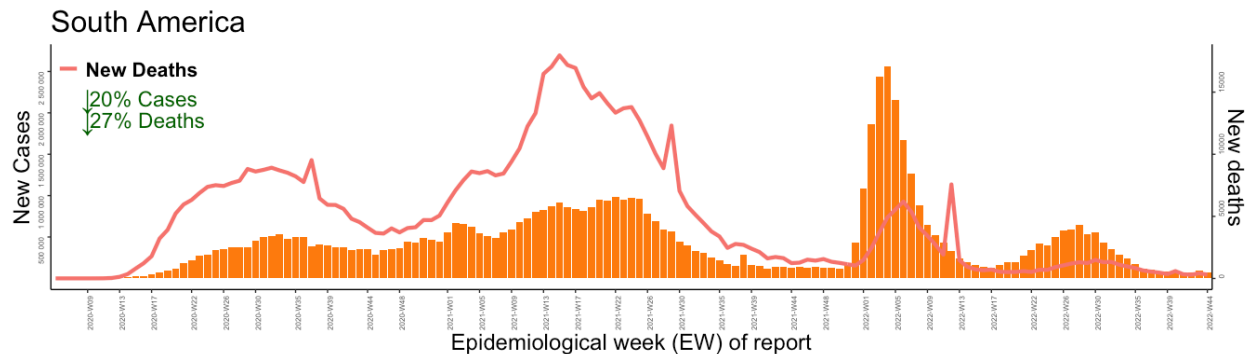
Among four countries/territories with available data for **weekly COVID-19 hospitalizations** in the Central American subregion, one country – Panama – reported an increase in weekly hospitalizations (n=71, 14.5% increase) while the remaining three countries and territories reported a decline in their weekly COVID-19 hospitalizations (range: -20 - -10.2% decrease). With regards to ICU admissions, all three countries and territories with available data for **weekly COVID-19 ICU admissions** reported no substantial changes during EW 44 compared to the previous week (range: 0 – 5.9% increase).

To date, Omicron lineages BA.4 and BA.5 have been reported from six of the seven countries and territories in the subregion respectively – Costa Rica, Panama, Guatemala, El Salvador, Nicaragua, and Belize.

South America

In South America, the overall **COVID-19 incidence** for the subregion has decreased by -20.1%, with a total of 71,849 new COVID-19 cases being reported during EW 44 compared to the previous week (**Figure 5**).

Figure 5: COVID-19 cases and deaths by epidemiological week (EW). South America. Region of the Americas. EW 3, 2020 - EW 44, 2022.



Out of the 10 countries and territories the sub-region, four countries and territories experienced an increase in cases during EW 44 (range: 2.1 – 142.3% increase). The highest relative increase in cases was observed from Peru (5,615 new cases, 142.3% increase), followed by Ecuador (910 new cases, 88.8% increase), and Colombia (616 new cases, 12.4% increase). The remaining six countries and territories reported a decline (range: -92.4 - -12.9% decrease), with the largest decline in cases being reported by Paraguay (25 new cases, -92.4% decrease), followed by Brazil (26836 new cases, -35.5% decrease), and Uruguay (659 new cases, -29.2% decrease).

During EW 44, a total of 563 **COVID-19 deaths** were reported in South America – a -27.4% decrease compared to the previous week. While Brazil reported a 54.4% decrease in weekly deaths (252 new deaths), the remaining countries and territories in the subregion reported an increase in weekly deaths (range: 16.7 – 166.7% increase). The largest proportion of reported deaths was reported by Chile (137 new deaths, 17.1% increase), followed by Peru (120 new deaths, 84.6% increase) compared to the previous week.

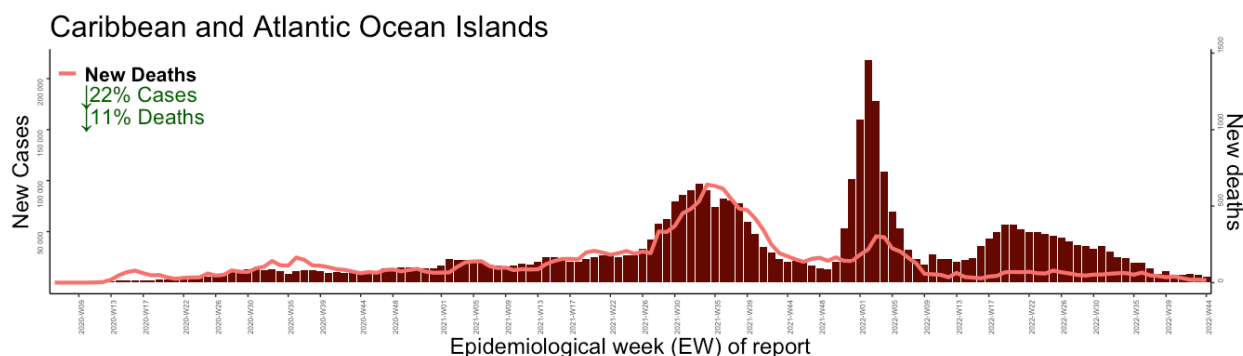
Among four countries and territories in the subregion with data available for **COVID-19 weekly hospitalizations**, one country – Chile – reported an increase of 8.3% in weekly COVID-19 hospitalizations (n=1,176), while the remaining three countries reported a decline as compared to the previous week (range: -23.7 - -3.8% decrease). For the same period, three countries out of five with data available for **COVID-19 ICU admissions** reported an increase in their weekly COVID-19 ICU admissions – the highest increase being reported from Chile (122 ICU admissions, 17.3% increase), followed by Uruguay (13 ICU admissions, 8.3% increase). The remaining two countries remained stable in weekly ICU admissions – Colombia (61 ICU admissions, -4.7% decrease) and Peru (82 ICU admissions, -7.9% decrease) as compared to the previous week.

To date, Omicron lineages BA.4 and BA.5 have been reported from eight out of the 10 countries in the subregion respectively – Argentina, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, and Venezuela (Bolivarian Republic of).

Caribbean and Atlantic Ocean Islands

In the Caribbean and Atlantic Ocean Islands sub-region, **COVID-19 weekly cases** have decreased for the third consecutive week by -21.5% (6,086 weekly cases) compared to the previous week (**Figure 6**). At the national level, cases increased in nine out of the 36 countries and territories in the subregion (range: 4.7% - 400%) while they declined in 15 countries and territories (range: -100% - -11.8%). The remaining 12 countries and territories did not report any cases during EW 44.

Figure 6: COVID-19 cases and deaths by epidemiological week (EW). **Caribbean and Atlantic Ocean Islands.** Region of the Americas. EW 6, 2020 - EW 44, 2022.



For the same period, **COVID-19 weekly deaths** decreased by -11.4% (31 deaths) in the Caribbean and Atlantic Ocean Islands subregion. Four out of 11 countries and territories that reported deaths between EW 43 and 44 observed an increase in weekly deaths (range: 100 – 200% increase), while the remaining seven either reported a decline (n=5, range: -100 - -25% decrease) or remained the same (n=2) – Puerto Rico (16 deaths) and Sint Maarten (1 death) compared to the previous week.

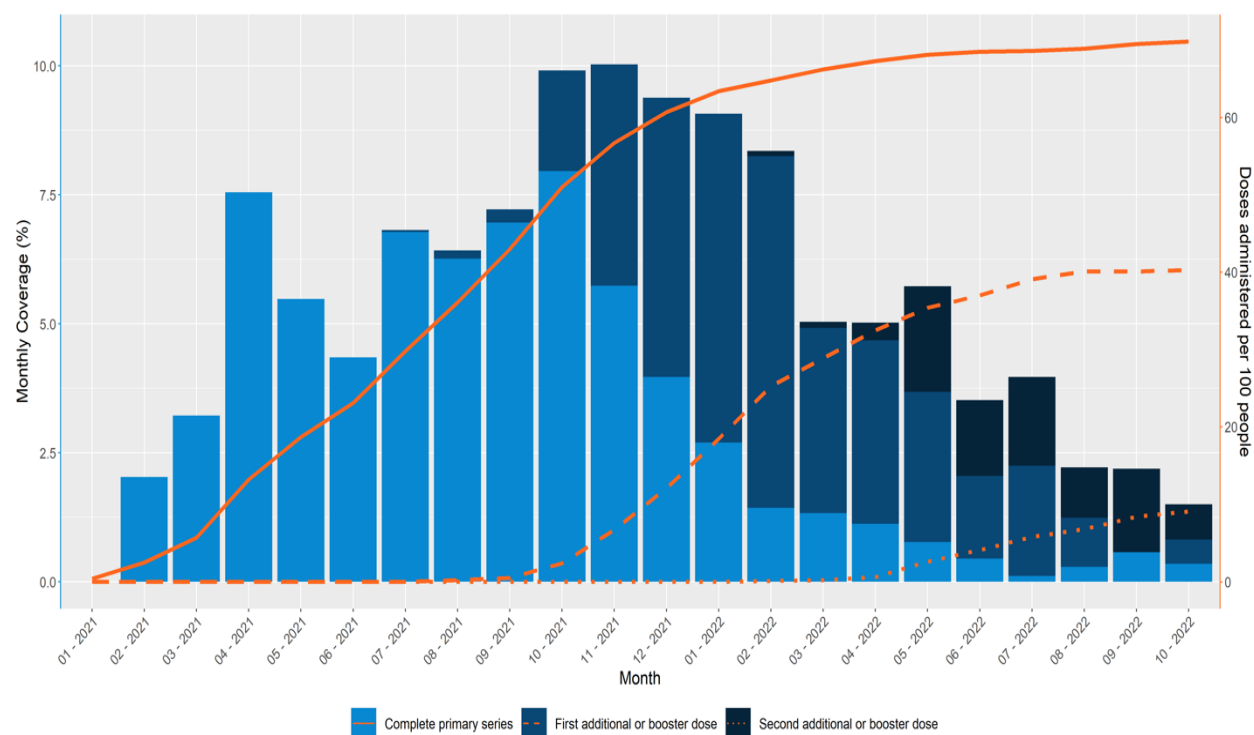
During EW 44, among 16 countries and territories with available data for **weekly COVID-19 hospitalizations**, six countries and territories reported an increase in their weekly COVID-19 hospitalizations (range: 9.1 – 83.3% increase). The largest relative increase was observed in Cuba (11 hospitalizations, 83.3% increase), followed by the Bahamas (14 hospitalizations, 27.3% increase), and Curaçao (5 hospitalizations, 25% increase) relative to the previous week. Among eight countries and territories with data available for **COVID-19 ICU admissions**, two reported an increase (range: 2-3 ICU admissions, 100 - 200% increase), three remained the same, and the remaining three countries and territories reported a decline in their weekly COVID-19 ICU admissions (range: -100 - -20% decrease) relative to the previous week.

Notable increases in weekly cases in the subregion during EW 44 were Saint Lucia (15 new cases, 400% increase), Suriname (43 new cases, 59.3% increase), and the United States Virgin Island (69 new cases, 38% increase) compared to the previous week.

To date, Omicron lineages BA.4 and BA.5 have been reported from 18 and 17 out of 34 countries and territories in the subregion, respectively, including the overseas territories of France, the Netherlands, the United Kingdom, and the United States of America. However, these trends should be interpreted with caution due to the presence of differences in sequencing capacity and sampling strategies between countries and territories.

Immunization

Figure 7: Monthly coverage* increase for COVID-19 vaccinations. The Region of the Americas. Between January 2021 and October 2022.



The graph (**Figure 7**) shows the monthly coverage increase for COVID-19 vaccinations in the region of the Americas between January 2021 and October 2022. The continuing decline in vaccination reporting from countries – coupled with falling monthly vaccination rates – has affected the overall coverage values reported for the Region of the Americas. Although the region reported an increase in monthly primary series vaccination rate in August and September 2022 (the first since October 2021), data for October 2022 report yet another decline. This trend may be due to the reduced number of countries and territories that report COVID-19 vaccination data to PAHO. Indeed, the frequency of reporting has slowed down significantly: an average of 30 countries/territories reported their data in October 2022, compared to an all-time high of 50 countries in October 2021. Furthermore, the uptake of the second additional dose has now declined to the same levels as the coverage for primary series or first additional dose.

* Based on the United Nations (UN) Population Prospects for 2021 and projections from the United States (US) Census Bureau for countries with 100,000 or fewer inhabitants

Genomic surveillance

Through PAHO's Genomic Surveillance Regional Network and the work from the Member States, 475,344 full genome sequences of SARS-CoV-2 from Latin America and the Caribbean have been uploaded to the Global Initiative on Sharing All Influenza Data (GISAID) platform up to 8 November 2022.

The Omicron variant of concern (VOC) was introduced in the Americas at the end of 2021, and it rapidly replaced Delta VOC and other lineages throughout the Region. Omicron has been officially reported by 54 countries or territories and has been predominant in all PAHO countries since the beginning of 2022. In the past two months, very few sequences from “previously circulating” VOCs have been detected in the Region (four Delta and one Alpha in North America, and one Delta in South America).

Omicron comprises the BA.1 to BA.5 sublineages (or subvariants), which are in turn subdivided into diverse sublineages based on additional mutations that slightly change the genomic profile. These sublineages of BA.1 to BA.5 include those denominated as BC.x to DF.x. The cumulative proportion of Omicron sequences collected in the Americas from November 2021 to date are: 46.9% of BA.1 (and BA.1 sublineages), 25.9% of BA.2 (and sublineages), <0.1% of BA.3 (and sublineages), 4.4% of BA.4 (and BA.4 sublineages), and 22.8% BA.5 (and BA.5 sublineages). Although BA.1 accounts for the majority of cumulative sequences, BA.2 became predominant in all subregions between weeks 12 and 15 of 2022, and BA.4 and BA.5 became predominant between weeks 25 and 34 (**Figure 8**). Since then, the proportion of BA.4 and in particular BA.5 has stabilized throughout the Region. Notably, in the past four weeks, the BA.4 and BA.5 (and sublineages) combined represent 96.6%, 98.0%, 99.2%, and 97.4% of the characterized samples in North America, the Caribbean, Central America, and South America, respectively.

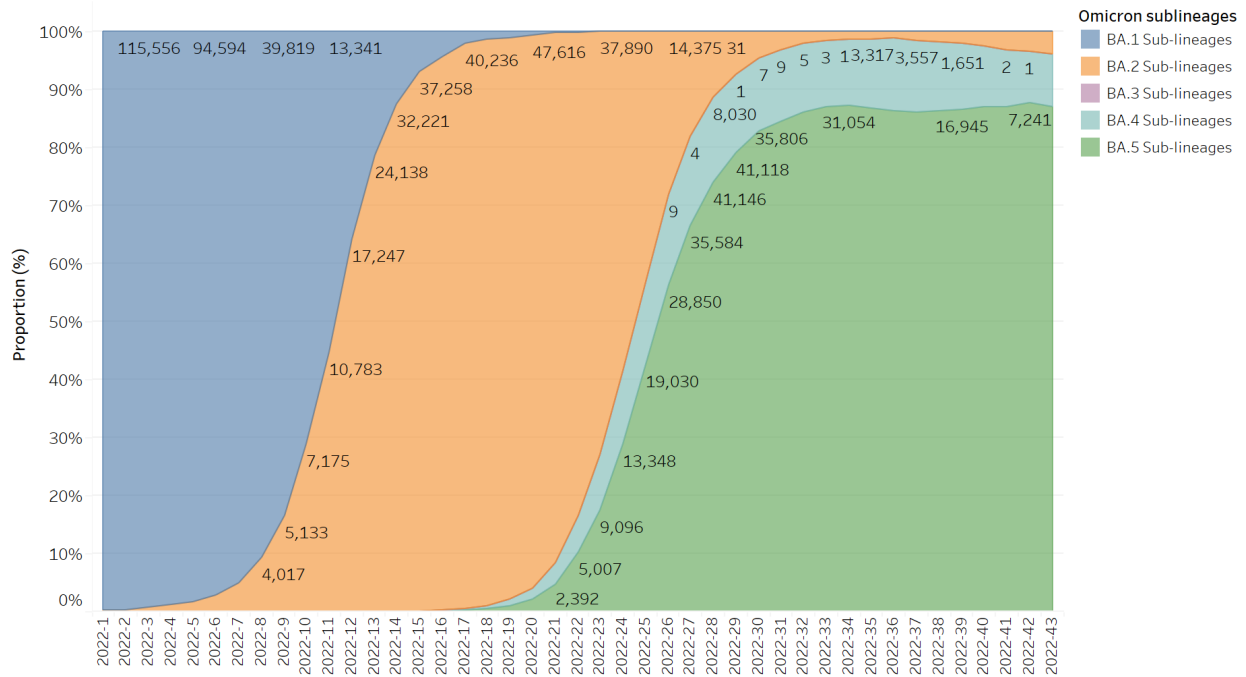
Recent increases in the proportion of specific Omicron sublineages have been noted in the Region. These include BA.2.75, BA.4.6, and BQ.1 (a BA.5 sublineage). These sublineages, along with others that have been circulating in other locations have been included in the WHO list of Omicron subvariants under monitoring¹. However, current available evidence suggests that their overall phenotype does not diverge sufficiently from other Omicron sublineages to warrant the designation of new variants of concern.

It is important to note that the number of SARS-CoV-2 sequences deposited in GISAID by PAHO Member States has been decreasing significantly for the past 14 weeks. This decrease, which is also observed in other regions, increases the risk of bias in the estimates and reduces our collective ability for timely identification of new emerging lineages.

In this context, **PAHO strongly encourages all countries in the Region to continue collecting representative samples for sequencing and to maintain appropriate COVID-19 genomic surveillance.**

¹ WHO. Tracking SARS-CoV-2 variants. Available at: <https://www.who.int/en/activities/tracking-SARS-CoV-2-variants/>

Figure 8: Proportions of VOC Omicron sublineages identified by the countries in the Region of the Americas (January-October 2022)

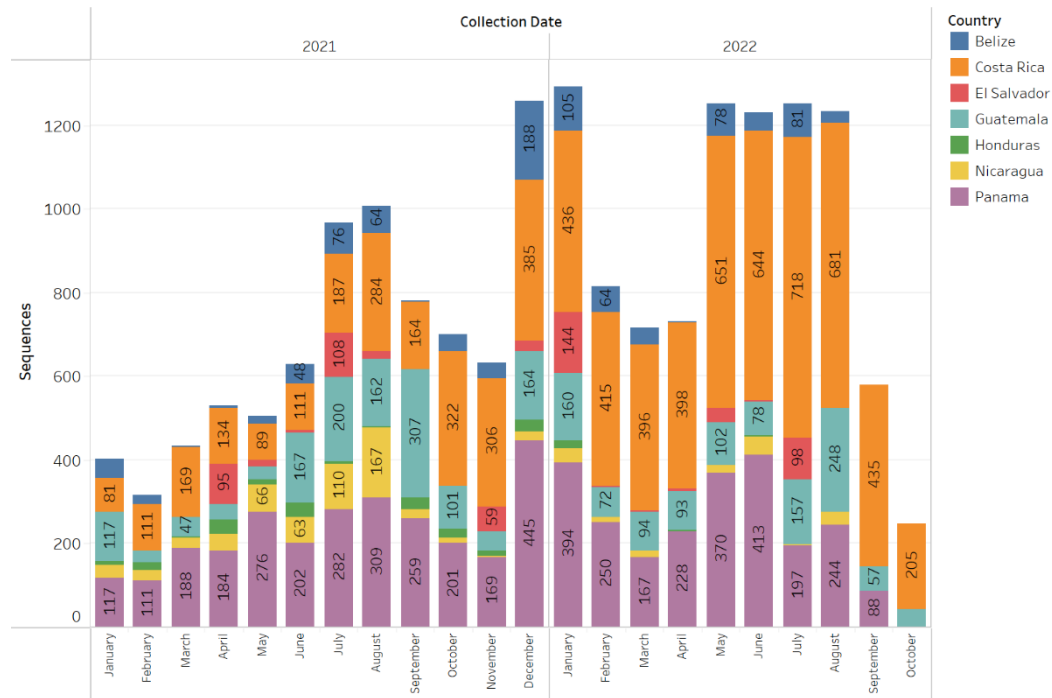


Source: GISAID

Spotlight: Sequencing and genomic surveillance in Central America

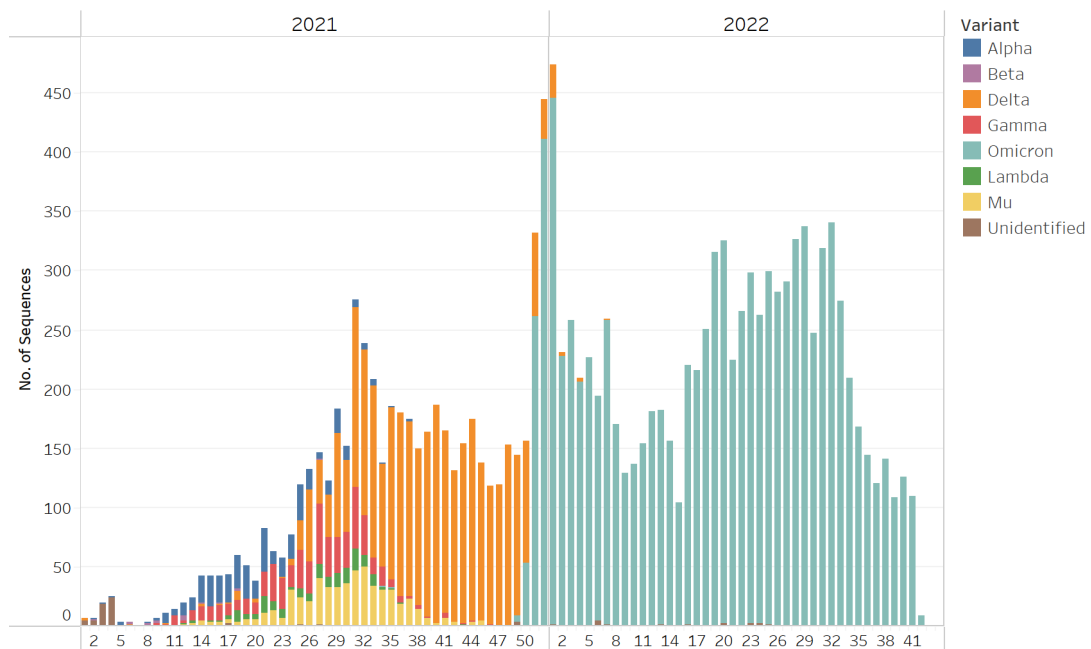
During the last 23 months (January 2021 to 5 November 2022), 17,494 whole genome sequences from Central American countries have been generated as part of the genomic surveillance systems (**Figure 9**). As in other subregions, Omicron is vastly predominant with no other “previously circulating” VOC/VOI detected in the past 8 months (**Figure 10**). Since Omicron’s first detection, BA.1 and BA.1 sublineages represent the majority (35.6%) of cumulative sequences, while BA.2 and BA.2 sublineages represent 27.8% of the cumulative sequences, and BA.3, BA.4, and BA.5 (with their respective sublineages) represent 0.2%, 8.7%, and 27.7% of cumulative sequences, respectively (**Figure 11**). However, BA.1 was progressively replaced by BA.2 in weeks 10 to 19, and the proportion of BA.4 and BA.5 have been increasing since week 19 (**Figure 12**). When focusing on the past eight weeks (14 August to 8 October), BA.5 is the predominant sublineage (89.9%) while BA.4 and BA.2 account for 8.8% and 1.1% of the sequences, respectively. It is important to note that the majority of sequences for the eight-week period was contributed by Costa Rica (78.8%).

Figure 9. Number of sequences generated monthly by countries in Central America (January 2021- November 2022)



Source: GISAID

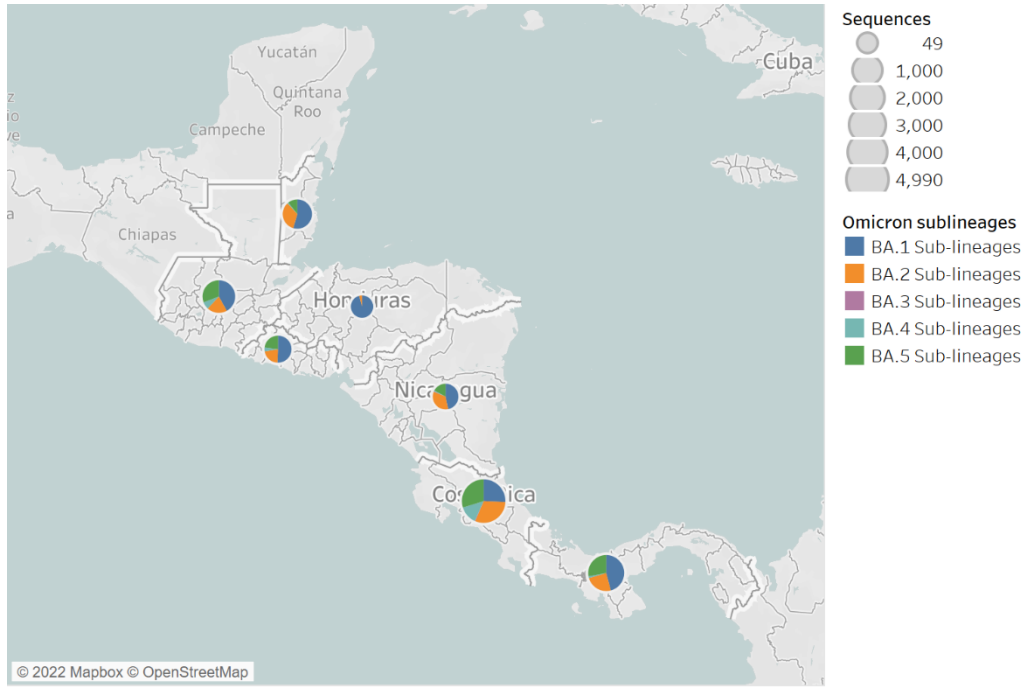
Figure 10. Variants detected and reported by the countries in Central America (January 2021- November 2022)



Source: GISAID

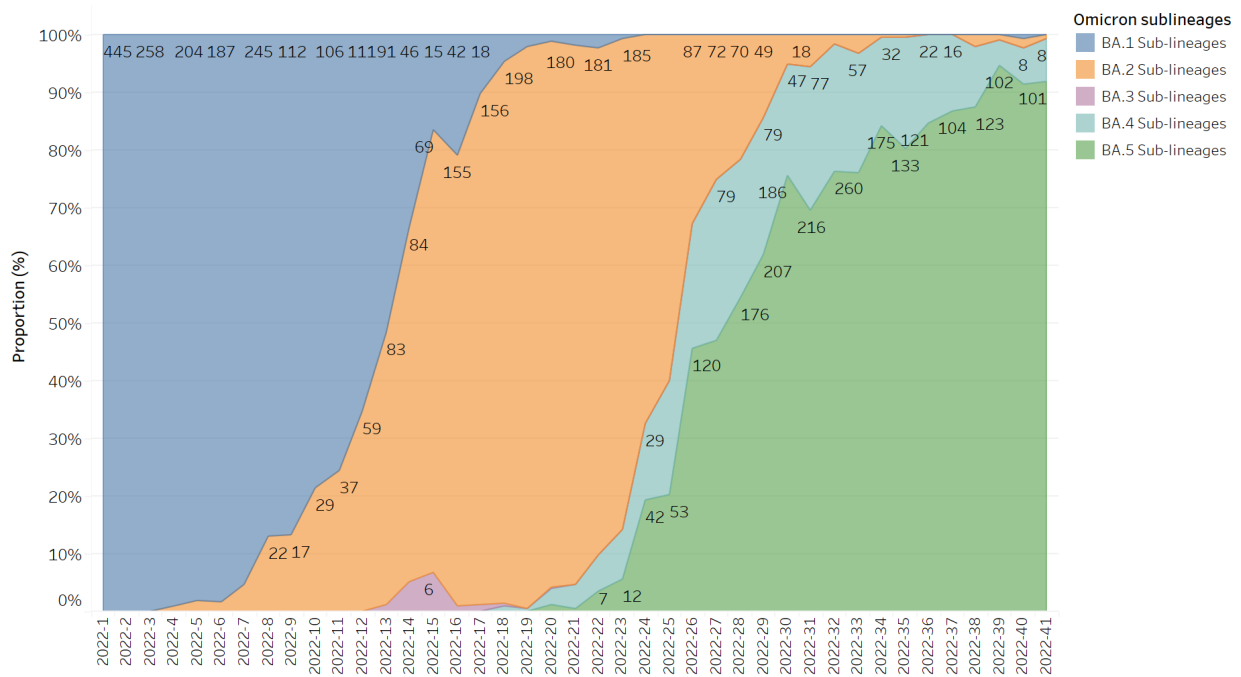
Country-specific data is available at: https://ais.paho.org/phi/viz/SARS_CoV2_variants_regional.asp

Figure 11. Distribution of Omicron sublineages identified by the countries in Central America (November 2021-November 2022)



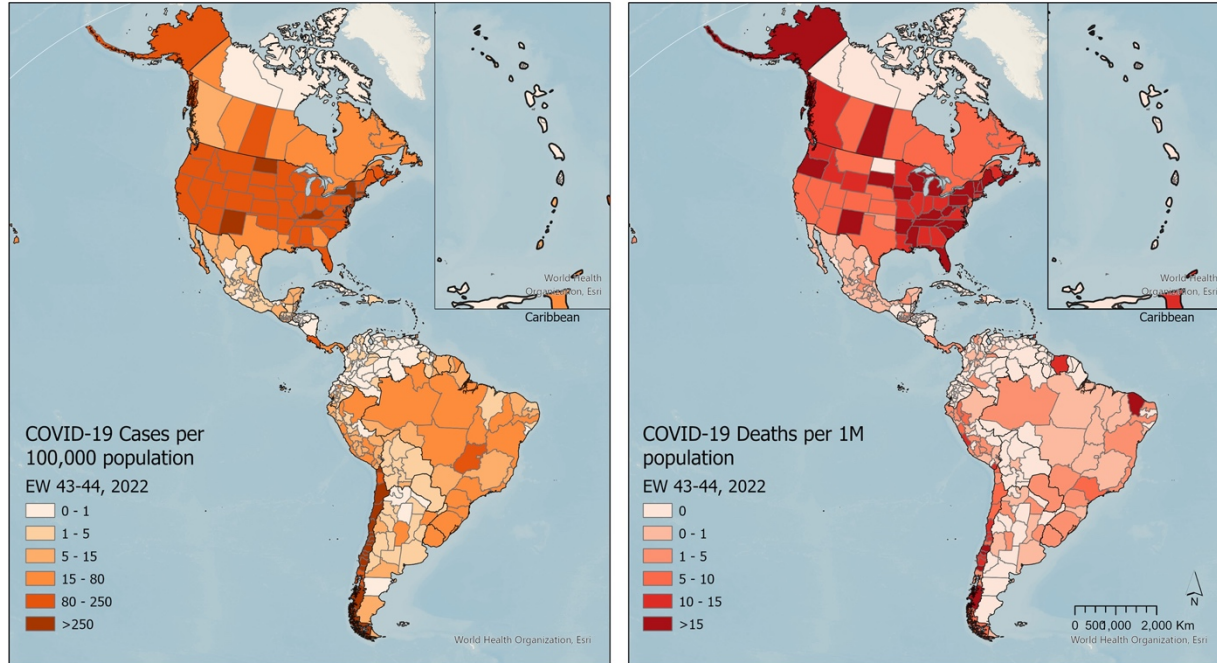
Source: GISAID

Figure 12. Distribution of VOC Omicron sublineages identified by the countries in Central America (January-November 2022)



Source: GISAID

Annex 1. COVID-19 incidence rate per 100,000 population and COVID-19 mortality rate from per 1 million population. Region of the Americas. Between EW 43 and 44, 2022.



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The maps (**Annex 1**) represent the COVID-19 incidence rates per 100,000 population and the mortality rates from COVID-19 per 1 million population in the Region of the Americas reported in EW 43 and 44, 2022.

The highest case incidence was observed in the USA, Canada, Chile, some parts of Brazil, and Costa Rica, while the highest mortality was seen in the USA, Canada, Chile, Suriname, Trinidad and Tobago, and some parts of Brazil and Peru.

In North America, parts of the US (North Dakota, New Mexico, Kentucky, New York, New Jersey, Massachusetts, and Rhode Island), and Canada (Prince Edward Island) showed the highest incidence rates. High mortality rates were observed mostly in the eastern states and Alaska in the US, and in the province of Saskatchewan in Canada.

In Central America, a continued decline in cases and deaths was seen, while in South America, Chile continued to report the high incidence in cases. Some parts of Peru (Tacna and Lima), the south and central regions of Chile, and Ceara in Brazil showed some of the highest mortality rates in the subregion.

In the Caribbean territories, Puerto Rico presented the highest incidence rate in the sub-region, while Suriname, Trinidad and Tobago, and some parts of Puerto Rico showed high mortality rates.

Data are retro-adjusted every week and the numbers and percent changes of COVID-19 cumulative cases and deaths may not match with the previous COVID-19 weekly situational reports.