Weekly COVID-19 Epidemiological Update - Region of the Americas

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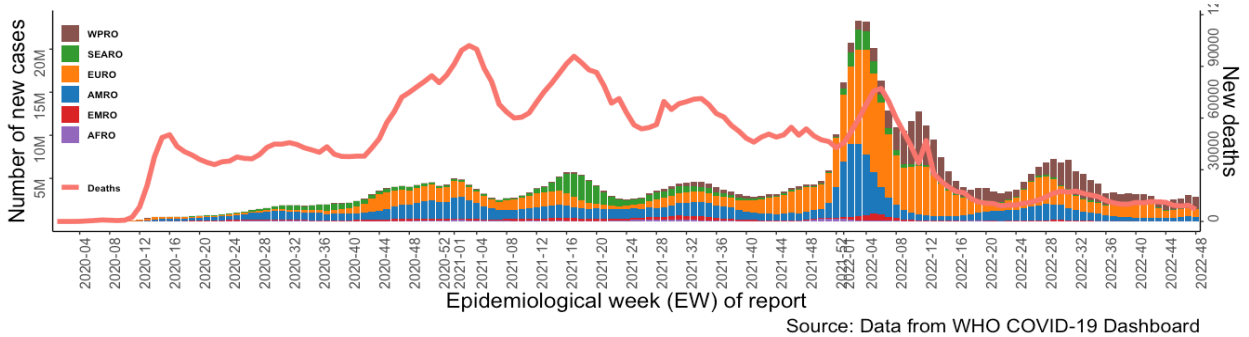
Contents:

Executive Summary

- **Since the onset of the pandemic** in 2020 and up to December 06, 2022, a cumulative total of approximately 641.7 million COVID-19 cases including about 6.6 million deaths were reported from all six WHO regions. During epidemiological week (EW) 48, cases decreased in four WHO regions while they increased in EURO (2.5%) and AMRO (14.3%). Deaths decreased in five regions while they increased in SEARO (2.6%).
- **Globally,** approximately 2,989,532 new COVID-19 cases were reported in EW 48 (November 27, 2022-December 03, 2022) - a -2.9% decrease compared to EW 47 (November 20, 2022-November 26, 2022) (**Figure 1**). For the same period, 7,871 new COVID-19 deaths were reported globally – a -16.2% relative decrease compared the previous week.
- **In the region of the Americas,** 650,313 cases and 3,051 deaths were reported in EW 48 - a 14.3% increase in cases and -20.9% decrease in deaths compared to the previous week.
- At the subregional level, COVID-19 cases increased in all four subregions (range: 0.2 – 57.4%). COVID-19 deaths increased in 2 subregions – Cental America (39.1%) and South America (9.6%) – while they decreased in North America (-30.6%) and Caribbean and Atlantic Ocean Islands (-17.9%)
- The overall weekly case notification rate for the region of the Americas was 63.6 cases per 100,000 population during EW 48 (55.6 the previous week). Between EW 48 and 47, the 14-day COVID-19 death rate was 6.8 deaths per 1 million population (6.8 the previous two weeks).
- Among 20 countries/territories in the region with available data, **COVID-19 hospitalizations** increased in 13 countries and territories (range: 8.3% - 220%) during EW 48 compared to the previous week. Among 17 countries and territories with available data, COVID-19 **ICU admissions** increased in 10 countries and territories (range: 1.7% - 400%).

Figure 1: COVID-19 cases and deaths by epidemiological week (EW) of report and WHO region. EW 4, 2020 - EW 48, 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.

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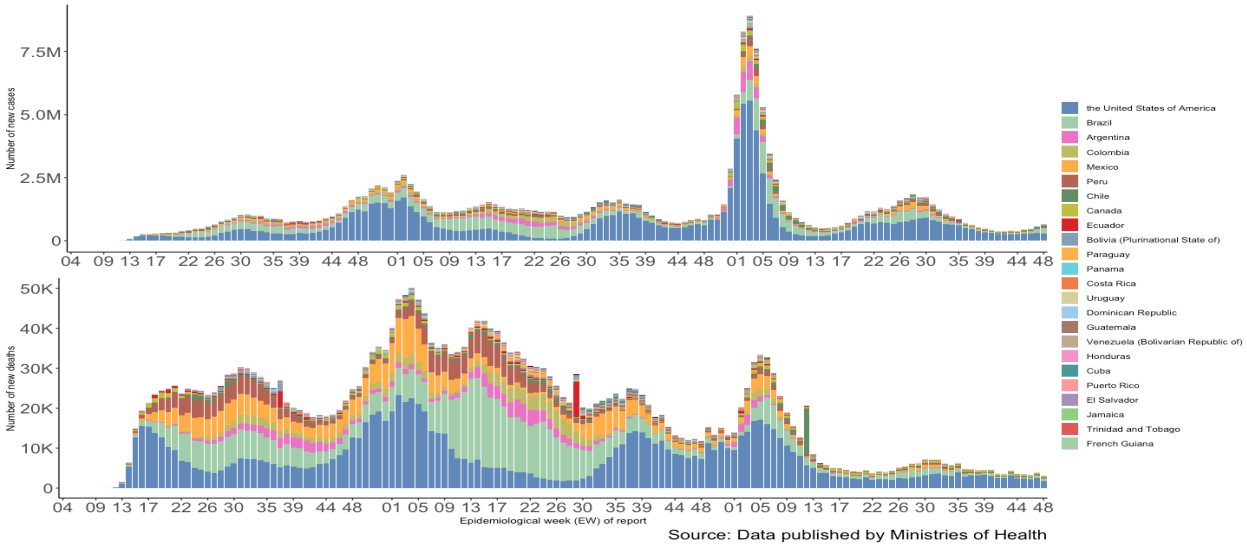
More information available at: https://paho-covid19-response-who.hub.arcgis.com/ & https://shiny.pahobra.org/wdc/

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 - 48, 2022.



During EW 48, 650,313 new **COVID-19 cases** were reported in the region of the Americas - a relative increase of 14.3% compared to previous week **(Figure 2)**. The highest number of COVID-19 cases in the last week was reported from North America (321,384 cases, 0% change) compared to the previous week. **(Table 1)**. At the national level, the highest proportion of weekly COVID-19 cases were reported by the United States of America (296,333 new cases, -0.8% decrease), Brazil (188,043 new cases, 25.4% increase), Peru (61,929 new cases, 88.4% increase).

Table 1: Weekly change (%) in cases and deaths between EW 47 and EW 48 by subregion. Region of the Americas

Subregion	Total Cases	Total Deaths	Cases EW 47	Deaths EW 47	Cases EW 48	Deaths EW 48	% Change Cases	% Change Deaths
Caribbean and Atlantic Ocean Islands	4,284,219	35,557	9,032	56	14,218	46	57.4%	-17.9%
Central America	4,062,875	53,747	14,624	23	16,522	32	13.0%	39.1%
North America	109,186,853	1,449,881	320,666	2,898	321,384	2,010	0.2%	-30.6%
South America	65,055,020	1,333,342	224,704	879	298,189	963	32.7%	9.6%

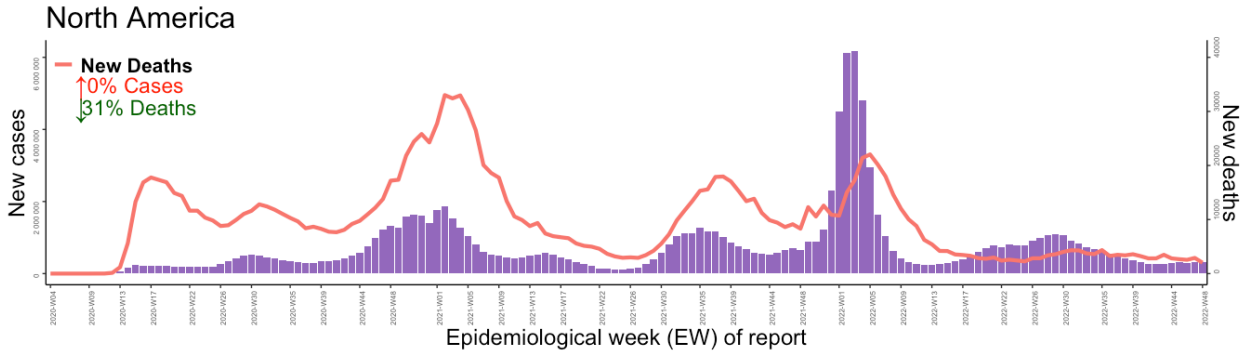
For the same period, 3,051 **COVID-19 deaths** were reported in the region of the Americas - a relative decrease of -20.9% compared to previous week **(Figure 2)**. The highest number of COVID-19 deaths was reported from North America (2,010 deaths, -31% decrease) **(Table 1)**. At the national level, the highest proportion of weekly COVID-19 deaths were reported by the United States of America (1,744 new deaths, -32.9% decrease), Brazil (632 new deaths, 18.1% increase), and Canada (228 new deaths, -18.9% decrease).

A summary of the COVID-19 trends for EW 48 by subregion is presented below.

North America

The overall trends for **COVID-19 cases** have plateaued in North America as of EW 48, with a total of 321,384 weekly cases (0.2% increase) being reported. During EW 48, Mexico reported a large increase in weekly cases (10,236 cases, 47.8 % increase) while the remaining two countries in the subregion did not report any substantial changes in weekly cases – reporting a slight decrease during EW 48 compared to the previous week – Canada (14,815 cases, -1.8% decrease) and the United States of America (296,333 cases, -0.8 % decrease).

Figure 3: COVID-19 cases and deaths by epidemiological week (EW). **North America.** Region of the Americas. EW 3, 2020 - EW 48, 2022.



For the same period, the overall trends for **weekly COVID-19 deaths** decreased by -30.6% in North America during EW 48 relative to the previous week. While Mexico reported a large increase in weekly deaths (38 deaths, 137.5% increase), the remaining two countries in the subregion reported a decline – the United States of America (1,744 new deaths, -32.9% decrease) and Canada (228 new deaths, -18.9% decrease) relative to the previous week.

During 48, among the two countries in North America with available data for **COVID-19 weekly hospitalizations and ICU admissions**, the United States of America reported a large increase in weekly hospitalizations (n=36,051, 23.7% increase) and ICU admissions (n=4,066, 16.4% increase) after 4-5 weeks of a stable period. In Canada, weekly hospitalizations remained stable (n=5,034, -1.3% decrease) while weekly ICU admissions increased by 15% (n=284) relative to the previous week.

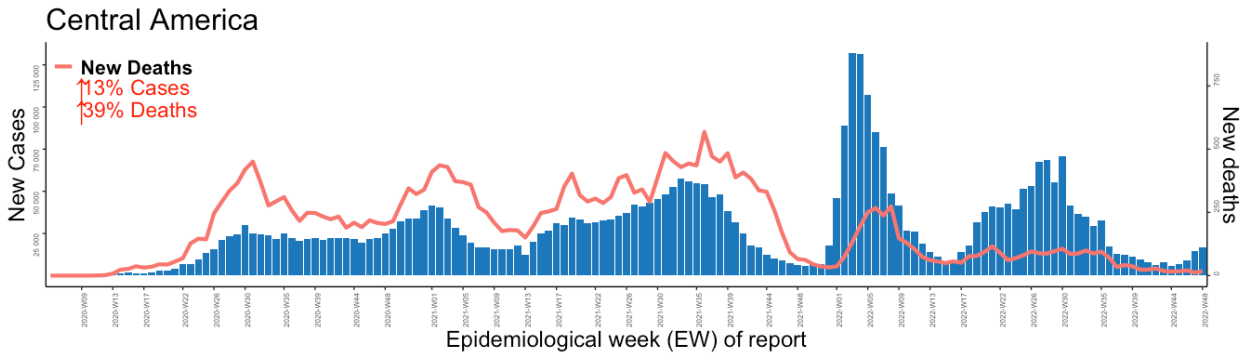
The Omicron **variant of concerns** (VOC) of BA.5 are predominant in all three countries in the subregion. In the United States of America, the proportion of the BA.5 subvariant has been gradually decreasing over the past three months – accounting for 13.8%, while the estimated proportions of BA.5 sub-lineages, BQ.1 and BQ.1.1, have been rapidly increasing over the past two months – accounting for 62.8% (31.9% and 30.9% respectively) of sequences for the week ending on 3 December 2022[1]. The BA.5 and BA.4 sub-lineages made up about 86.5% (including 4.6% of BQ.1, 10.2% of BQ.1.1 and 5.8% of BF.7) and 5% the week of 13 November 2022 in Canada[2] and 85.7% and 14.3% as of EW 44 in Mexico, respectively.

1 The United States Centers for Disease Control and Prevention (CDC). Variant Proportions. Accessed 6 Dec 2022. Available at: https://bit.ly/3Obz8cT
2 Public Health Agency of Canada (PHAC). COVID-19 Variants in Canada. Accessed 6 Dec 2022. Available at: https://bit.ly/3bbFRFr

Central America

In Central America, the overall **COVID-19 incidence** for the sub-region has been increasing for the past four consecutive weeks, with 16,522 new cases being reported during EW 48 – - a 13.0% increase 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 48, 2022.



During EW 48, **COVID-19 weekly cases** increased in all countries and territories in the subregion (range: 9.5 – 74.4% increase) with the exception of El Salvador which did not report any cases during EW 48. The countries with the largest proportion of reported cases this week included Panama (7,091 new cases, 10.2% increase), Guatemala (5,700 new cases, 11.8% increase), and Costa Rica (2,779 new cases, 9.5% increase).

For the same period, **weekly deaths** increased by approximately 39.1% relative to the previous week **(Figure 4)** with three out of the seven countries and territories reporting an increase (range: 12.5% – 100%) – Honduras (8 deaths, 100% increase), Costa Rica (8 deaths, 14.3% increase), and Guatemala (9 deaths, 12.5% increase). The remaining four countries and territories either did not report any deaths (n=3) or did not report any changes in weekly deaths – Panama (7 deaths, 0% change) relative to the previous week.

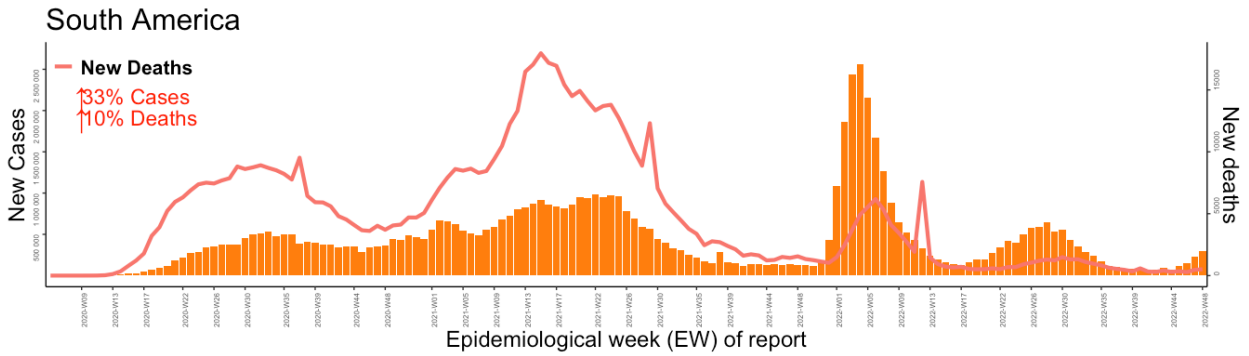
Among three countries/territories with available data for **weekly COVID-19 hospitalizations** in the Central American subregion, all the countries/territories reported an increase in their weekly COVID-19 hospitalizations – Honduras (32 hospitalizations, 220% increase), Panama (164 hospitalizations, 28.1% increase), and Costa Rica (95 hospitalizations, 11.8% increase). Among three countries and territories with available data for **weekly COVID-19 ICU admissions**, two countries and territories reported an increase – Honduras (3 ICU admissions, 100% increase) and Costa Rica (12 ICU admissions, 33.3% increase), while Panama reported a 33.3% decrease in ICU admissions (n=4) as compared to the previous week.

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 increased for the forth consecutive week – an increase of 32.7%, a total of 298,189 new COVID-19 cases, being reported during EW 48 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 48, 2022.



Out of the 10 countries and territories the sub-region, nine countries and territories experienced an increase in cases during EW 48 with the largest proportion of reported cases being reported by Brazil (188,043 new cases, 25.4% increase), followed by Peru (61,929 new cases, 88.4% increase), and Chile (27,990 new cases, -16.9% decrease). The highest relative increase in weekly cases was observed in Argentina (12,609 new cases, 279.4% increase), followed by Paraguay (338 new cases, 263.4% increase), and Bolivia (Plurinational State of) (1,038 new cases, 137% increase) relative to the previous week.

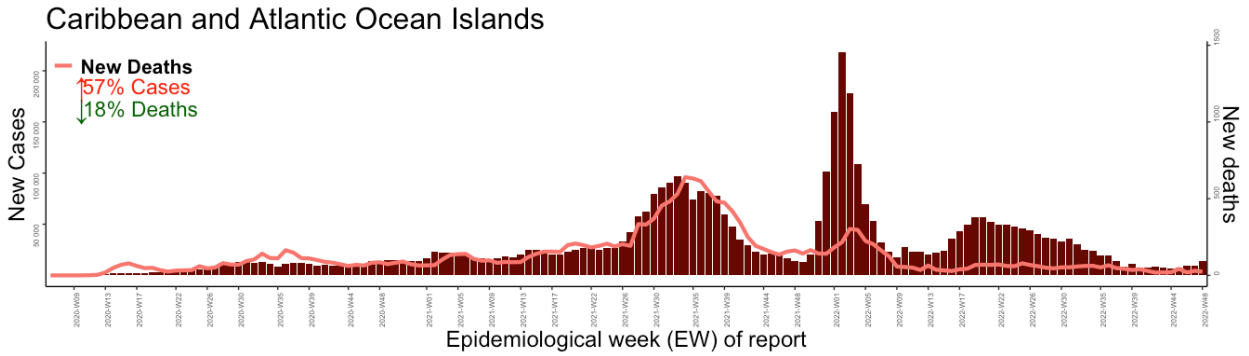
During EW 48, a total of 963 **COVID-19 deaths** were reported in South America – a 9.6% increase compared to the previous week. The largest proportions of reported deaths were observed from Brazil (632 new deaths, 18.1% increase), followed by Chile (186 new deaths, -3.1% decrease), and Peru (102 new deaths, -7.3% decrease). Four countries/territories in the subregion reported an increase in weekly deaths (range: 12.5 – 200% increase) while the remaining six countries/territories either reported a decline (n=4, range: -42.9 - -3.1% decrease) or remained the same (n=2) relative to the previous week.

Among three countries and territories in the subregion with data available for **COVID-19 weekly hospitalizations**, one country – Peru – reported an increase in weekly hospitalizations (n=476, 118.3% increase) while the remaining two reported a decline - Venezuela (Bolivarian Republic of) (86 hospitalizations, -3.4% decrease) and Chile (1,315 hospitalizations, -4.5% decrease). For the same period, two out of four countries and territories with data available for **COVID-19 ICU admissions** reported an increase in their weekly COVID-19 ICU admissions (range: 1.7 - 60% increase), while the remaining two did not report any substantial changes in ICU admissions (range: -1.4 – 0% change) relative to the previous week.

To date, Omicron lineage 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

Figure 6: COVID-19 cases and deaths by epidemiological week (EW). **Caribbean and Atlantic Ocean Islands.** Region of the Americas. EW 6, 2020 - EW 48, 2022.



In the Caribbean and Atlantic Ocean Islands sub-region, **COVID-19 weekly cases** increased by 57.4% compared to the previous week **(Figure 6)**. At the national level, cases increased in 12 out of the 34 countries and territories in the subregion (range: 2.2% - 132.9%) while they declined in 14 countries and territories (range: -100% - -1.4%). The remaining eight countries/territories did not report any substantial changes or did not report any cases during EW 48.

For the same period, **COVID-19 weekly deaths** decreased by -17.9% (46 deaths) in the subregion. Five observed a relative increase in their weekly deaths in EW 48 compared to the previous week – Puerto Rico (40 deaths, 29% increase), and the remaining four (1 death, 100% increase). Weekly deaths either declined (n=6, range: -100 - -66.7% decrease) or remained the same (n=23) relative to the previous week.

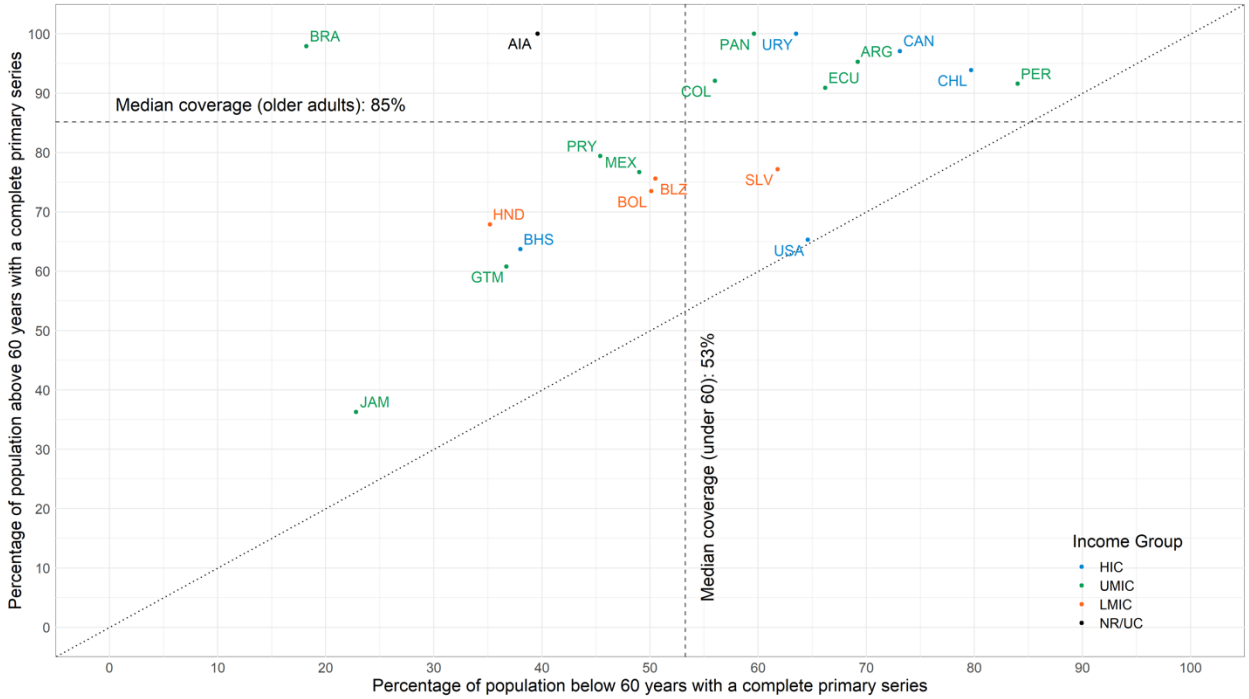
During EW 48, among 12 countries and territories with available data for **weekly COVID-19 hospitalizations**, eight countries and territories reported an increase in their weekly COVID-19 hospitalizations (range: 8.3 – 100% increase). The remaining countries did not report any changes (n=3, 0% change) or reported a decline – Martinique (48 hospitalizations, -9.4% decrease). Among eight countries and territories with data available for **COVID-19 ICU admissions**, four reported an increase in their weekly COVID-19 ICU admissions (range: 25 – 400% increase) while the remaining four either reported a decline (n=2, -100% decrease) or remained the same (n=2) relative to the previous week.

Notable increases in weekly cases in the subregion during EW 48 were observed in Puerto Rico (10,885 new cases, 132.9% increase), the United States Virgin Island (50 new cases, 92.3% increase), and Cuba (53 new cases, 71% increase) relative 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: Comparison of complete COVID-19 primary series coverage* between persons younger and older than 60 years in the Region of the Americas.** As of EW 48, 2022.



Among countries that report data disaggregated by age, complete COVID-19 primary series is reportedly higher in the older age groups (aged 60 years or older). Indeed, all countries are represented above the diagonal in the graph (**figure 7**).

Also, the median coverage rate for older adults is significantly higher than the rate reported for younger age groups: 85% for persons aged 60 or older and 53% for persons younger than 60.

Lastly, when disaggregating countries by income level***, we note that countries that report vaccination coverage rate for younger age groups that are above the median fall into the High Income (HIC) group (4 countries), Upper Middle Income (UMIC) group (5 countries) and Lower Middle Income (LMIC) group (1 country). Countries that report vaccination coverage rate for older age groups that are above the median fall into the High Income (HIC) group (3 countries), Upper Middle Income (UMIC) group (6 countries) and Not Registered or is Unclassified (NR/UC) group (1 country).

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* 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

** Data for 20 countries and territories that have reported in the past 3 months (i.e., since September 2022)

*** According to World Bank 2021-2022 Income Level Classification

Genomic surveillance

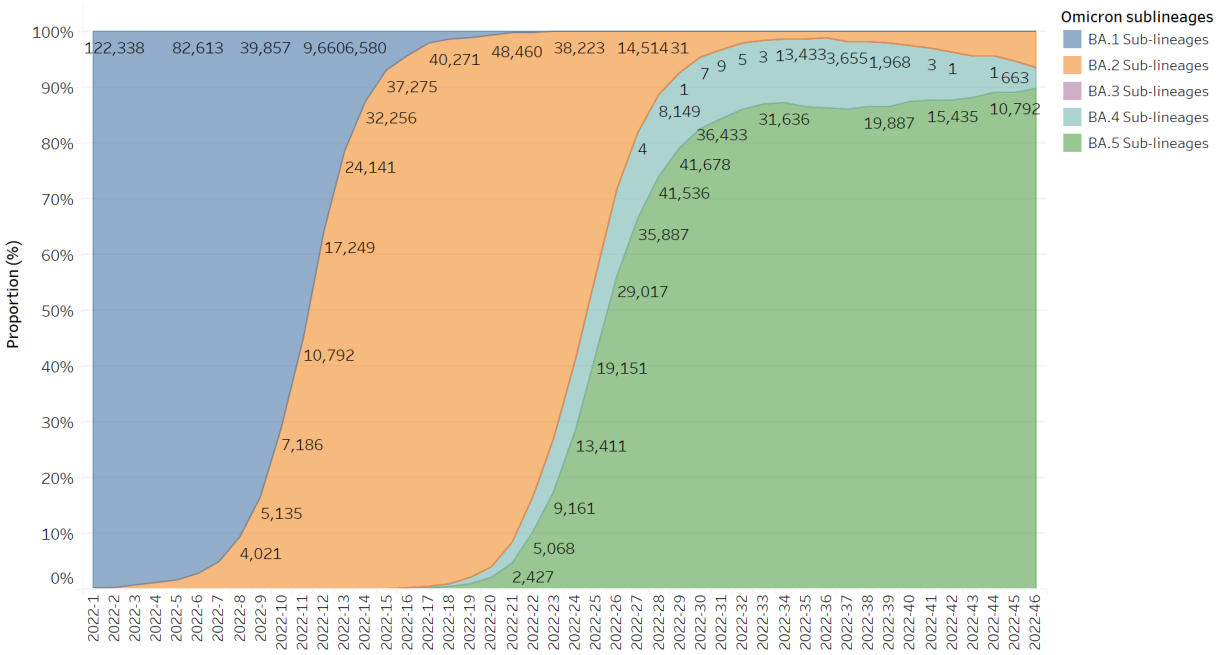
Through PAHO's Genomic Surveillance Regional Network and the work from the Member States, 486,575 full genome sequences of SARS-CoV-2 from Latin America and the Caribbean have been uploaded to the Global Initiative on Sharing All Influenza Data (GISAID) platform up to 5 December 2022.

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 (five Delta sequences distributed as follows: three in North America, one in South America, and one in the Caribbean; one Alpha sequence in North 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 DJ.x. The cumulative proportion of Omicron sequences collected in the Americas from November 2021 to date are: 45.1% of BA.1 (and BA.1 sublineages), 25.2% of BA.2 (and sublineages), <0.1% of BA.3 (and sublineages), 4.5% of BA.4 (and BA.4 sublineages), and 25.1% 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 94.2%, 94.9%, 97.0%, and 94.0% of the characterized samples in North America, the Caribbean, Central America, and South America, respectively.

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 18 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.**

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

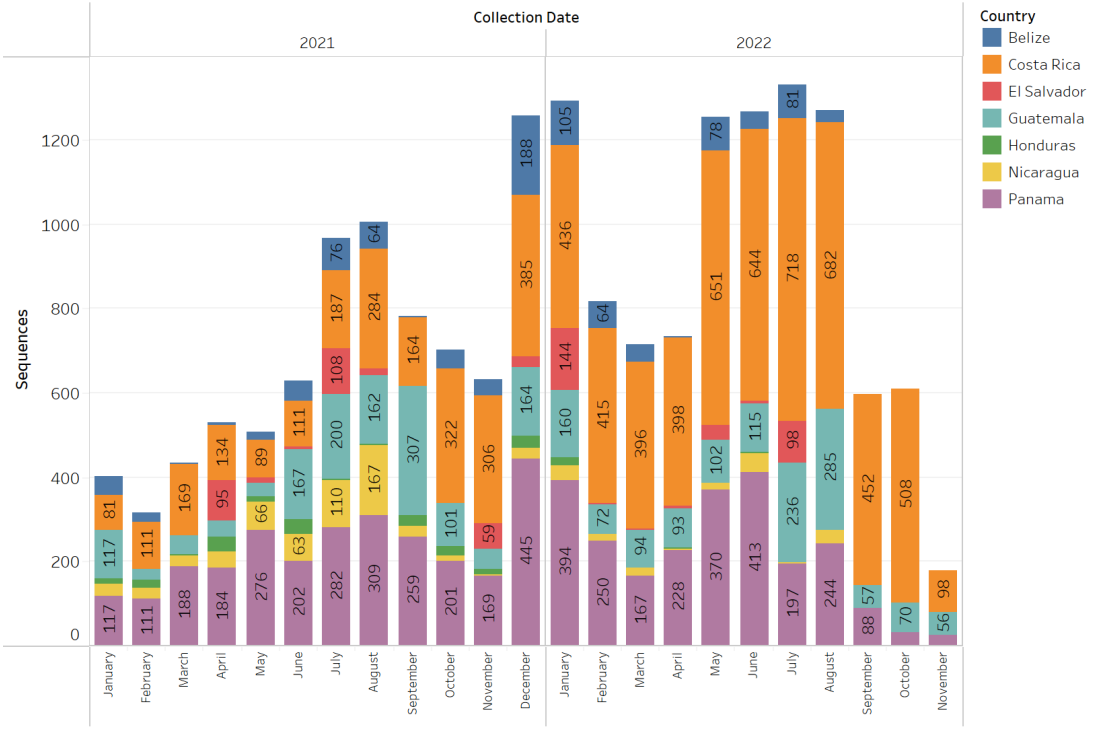


Source: GISAID

Spotlight: Sequencing and genomic surveillance in Central America

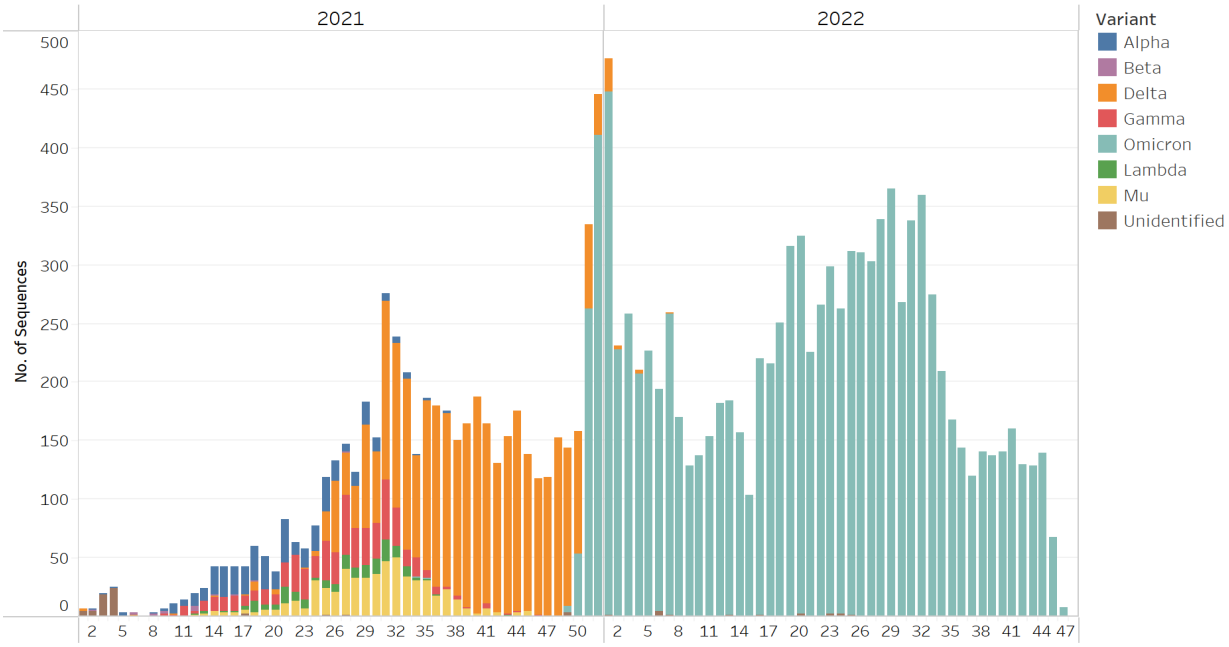
During the last 23 months (January 2021 to 3 December 2022), 18,206 whole genome sequences from Central American countries have been generated as part of the genomic surveillance systems (**Figure 9**). As in other subregions, Omicron is vastly predominant with no other "previously circulating" VOC/VOI detected in the past nine months (**Figure 10**). Since Omicron's first detection, BA.1 and BA.1 sublineages represent the majority (33.2%) of cumulative sequences, while BA.2 and BA.2 sublineages represent 26.3% of the cumulative sequences, and BA.3, BA.4, and BA.5 (with their respective sublineages) represent 0.2%, 8.8%, and 31.5% 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 (9 October to 3 December), BA.5 is the predominant sublineage (92.0%) while BA.4 and BA.2 account for 6.0% and 2.1% of the sequences, respectively. It is important to note that the majority of sequences for the eight-week period was contributed by Costa Rica (75.2%).

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



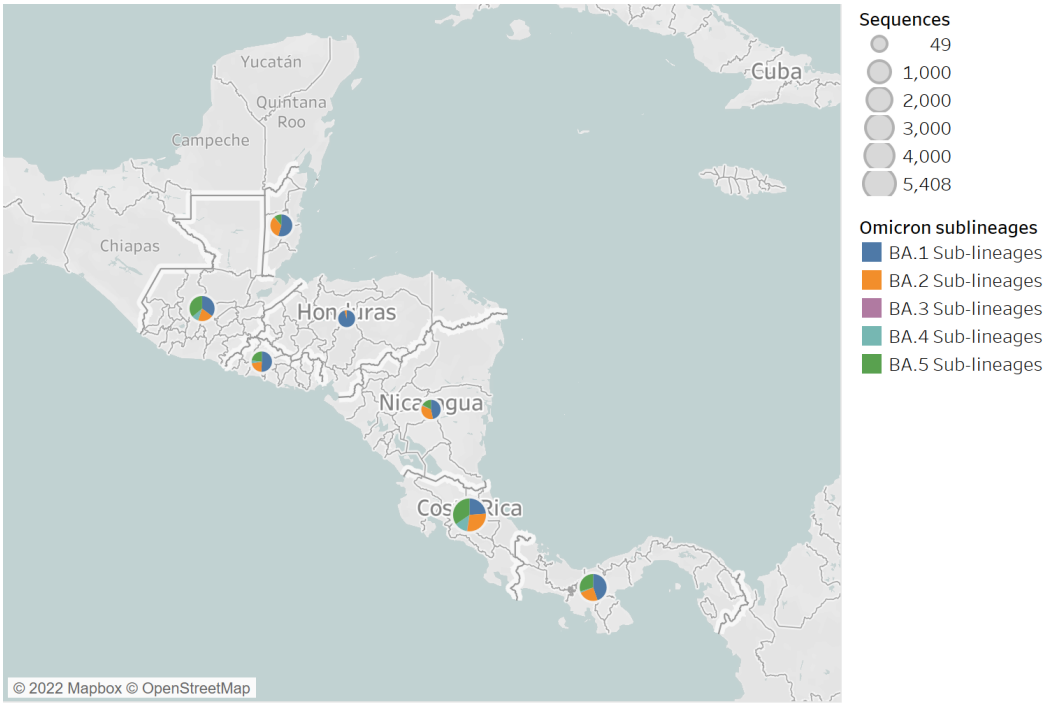
Source: GISAID

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



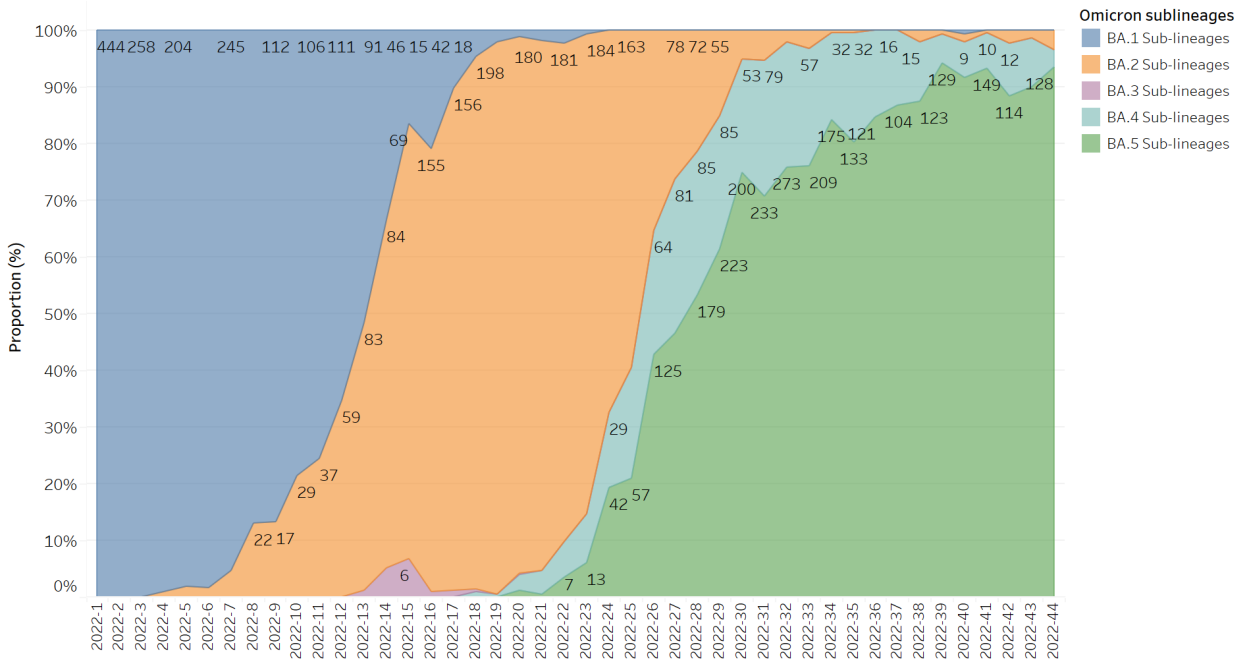
Source: GISAID
Country-specific data is available at: https://ais.paho.org/phip/viz/SARS_CoV2_variants_regional.asp

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



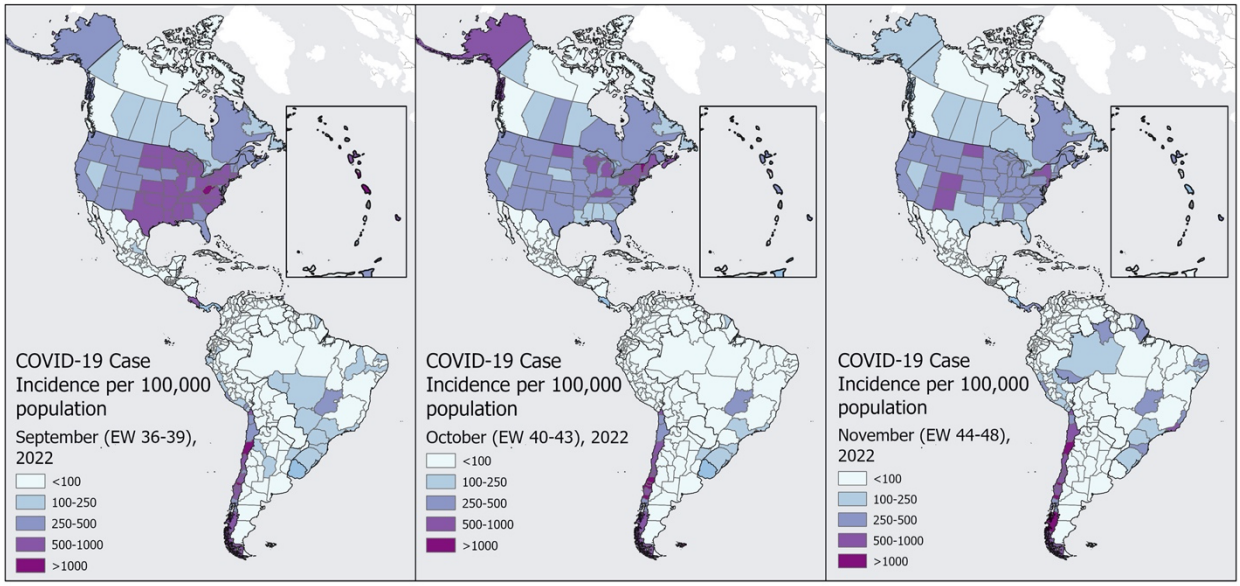
Source: GISAID

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



Source: GISAID

Annex 1. The maps of monthly COVID-19 case incidence rates per 100,000 population. The region of the Americas. From September to November 2022.



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0 1,000 2,000 4,000 km

This map (**Annex 1**) represents the COVID-19 case incidence per 100,000 population in the region of the Americas from September to November 2022.

In September, a moderately high COVID-19 case incidence was observed in some countries in the region. The highest incidence observed in the US and Canada in North America, and Costa Rica and Panama in Central America. The highest incidence was observed in Chile, Brazil, and Uruguay in South America, and Puerto Rico, Martinique, Guadeloupe, and Dominica in the Caribbean islands.

There seems to be a decline in new cases in October in these countries. The largest relative decrease was observed in the US, Brazil, Peru, Martinique, and Guadeloupe. Chile and Canada observed relatively high incidence rates in October 2022.

In November, an increase in case incidence rates was observed in Panama in Central America, and Chile and parts of Brazil (Rio de Janeiro) in South America. In North America and the Caribbean and Atlantic Ocean Islands, the overall incidence declined in November.