

Weekly COVID-19 Epidemiological Update - Region of the Americas

Issue 41, published November 15, 2022

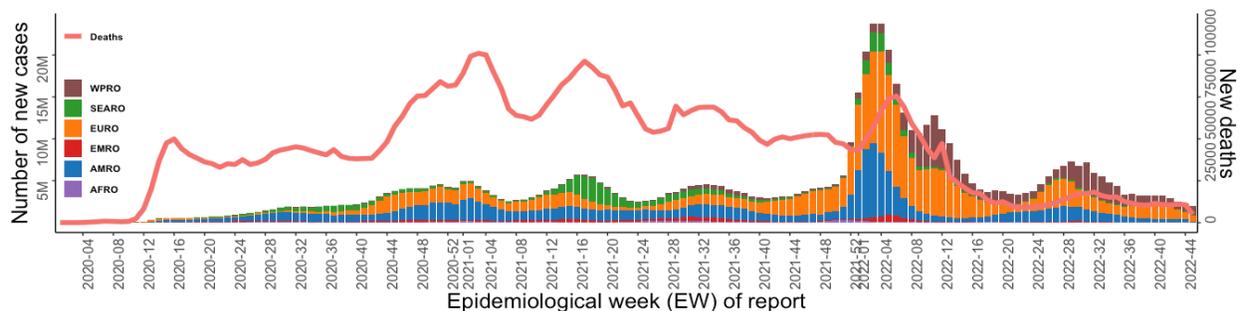
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Executive Summary

- **Since the onset of the pandemic** in 2020 and up to November 15, 2022, a cumulative total of approximately 632 million COVID-19 cases including about 6.6 million deaths were reported from all six WHO regions. During epidemiological week (EW) 45, cases decreased in three regions while they increased in AMRO (17.2%), WPRO (15.5%) and SEARO (15%). COVID-19 deaths decreased in four regions while they increased in WPRO (13.9%) and EMRO (7%).
- **Globally**, approximately 2,342,510 new COVID-19 cases were reported in EW 45 (November 06, 2022-November 12, 2022) – a 1.8% increase compared to EW 44 (October 30, 2022-November 05, 2022) (**Figure 1**). For the same period, 7,774 new COVID-19 deaths were reported globally – a -27.5% relative decrease compared the previous week.
- **In the region of the Americas**, 438,698 cases and 3,366 deaths were reported in EW 45 - a 17.2% increase in cases and -2.2% decrease in deaths compared to the previous week.
- At the subregional level, COVID-19 cases increased in all four subregions (range: 4.9 – 66.8%). Deaths increased in two subregions – South America (17.2%) and Central America (6.7%), while the remaining two subregions reported a decline – North America (-6%) and the Caribbean and Atlantic Ocean islands (-15.8%).
- The overall weekly case notification rate for the region of the Americas was 42.9 cases per 100,000 population during EW 45 (36.6 the previous week). Between EW 45 and 44, the 14-day COVID-19 death rate was 6.7 deaths per 1 million population (7.6 the previous two weeks).
- Among 27 countries/territories in the region with available data, **COVID-19 hospitalizations** increased in 6 countries and territories (range: 1% - 150%) during EW 45 compared to the previous week. Among 20 countries and territories with available data, COVID-19 **ICU admissions** increased in 5 countries and territories (range: 1% - 600%).

Figure 1: COVID-19 cases and deaths by epidemiological week (EW) of report and WHO region. EW 4, 2020 - EW 45, 2022.

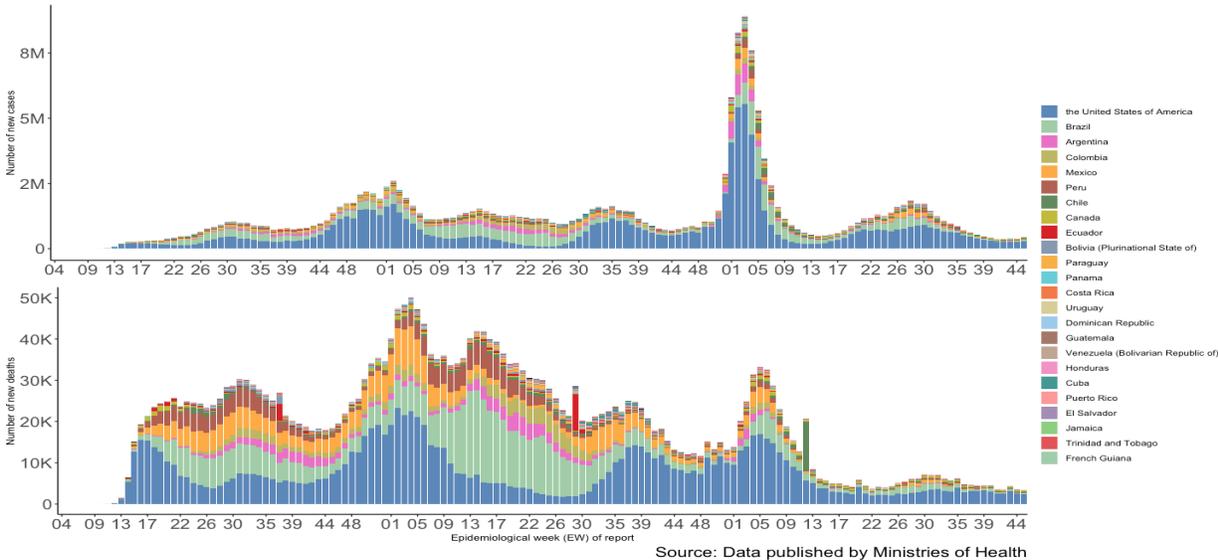


Source: Data from WHO COVID-19 Dashboard

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 - 45, 2022.



During EW 45, 438,698 new **COVID-19 cases** were reported in the region of the Americas - a relative increase of 17.2% compared to previous week (**Figure 2**). The highest number of COVID-19 cases in the last week was reported from North America (304,266 cases, 4% increase) compared to the previous week. (**Table 1**). During EW 45, the highest proportion of weekly COVID-19 cases at the national level were reported by the United States of America (281,955 new cases, 6% increase), Brazil (59,135 new cases, 120.4% increase), Chile (46,640 new cases, 31.7% increase).

Table 1: Weekly change (%) in cases and deaths between EW 44 and EW 45 by subregion. Region of the Americas

Subregion	Total Cases	Total Deaths	Cases EW 44	Deaths EW 44	Cases EW 45	Deaths EW 45	% Change Cases	% Change Deaths
Caribbean and Atlantic Ocean Islands	4,277,145	35,372	6,722	38	7,790	32	15.9%	-15.8%
Central America	4,022,227	53,659	5,796	30	6,829	32	17.8%	6.7%
North America	108,248,269	1,442,537	290,107	2,811	304,266	2,642	4.9%	-6.0%
South America	64,336,871	1,330,894	71,849	563	119,813	660	66.8%	17.2%

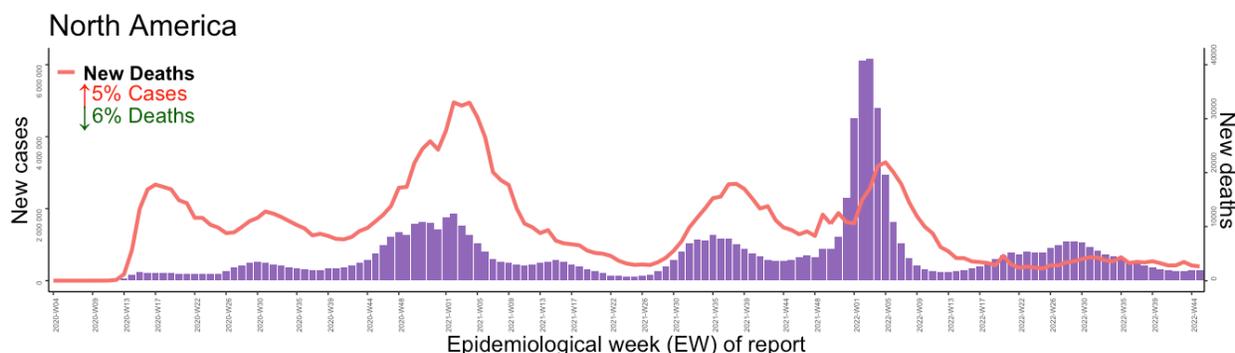
For the same period, 3,366 **COVID-19 deaths** were reported in the region of the Americas - a relative decrease of -2.2% compared to previous week (**Figure 2**). The highest number of COVID-19 deaths in the last week was reported from North America (2,642 deaths, -6% decrease) (**Table 1**). At the national level, the highest proportion of weekly COVID-19 deaths were reported by the United States of America (2,323 new deaths, -5.8% decrease), Brazil (324 new deaths, 28.6% increase), and Canada (309 new deaths, -5.5% decrease).

A summary of the COVID-19 trends for EW 45 by subregion is presented below.

North America

The overall trends for COVID-19 cases have slightly increased for the second consecutive week in North America. During EW 45, while Canada reported a 12.2% decrease in weekly cases (18,819 cases), the remaining two countries in the subregion reported an increase in weekly cases – the United States of America (281,955 cases, 6% increase) and Mexico (3,492 cases, 32.9% increase) 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 45, 2022.



For the same period, **weekly COVID-19 deaths** decreased by -6% (2,642 deaths) in North America during EW 45 relative to the previous week. All three countries in the subregion reported a decline in weekly deaths – the largest decline in deaths were reported by Mexico (10 new deaths, -47.4% decrease), followed by the United States of America (2,323 new deaths, -5.8% decrease), and Canada (309 new deaths, -5.5% decrease).

During 45, 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 (27,910 hospitalizations, 1% increase & 3,173 ICU admissions, 1% increase). Similarly in Canada, both weekly hospitalizations and ICU admissions slightly decreased – a 3.7% decrease in hospitalizations (n=5,576) and a 1.1% decrease in ICU admissions (n=264) during EW 45 relative 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 29.7%, while the estimated proportions of BA.5 sub-lineages, BQ.1 and BQ.1.1, have been increasing over the past 7 weeks – accounting for 44.2% of sequences for the week ending on 12 November 2022¹. The BA.5 and BA.4 sub-lineages made up about 89.1% and 6.2% for the week of 23 October 2022 in Canada² and 89.4% and 5.9% as of EW 42 in Mexico, respectively.

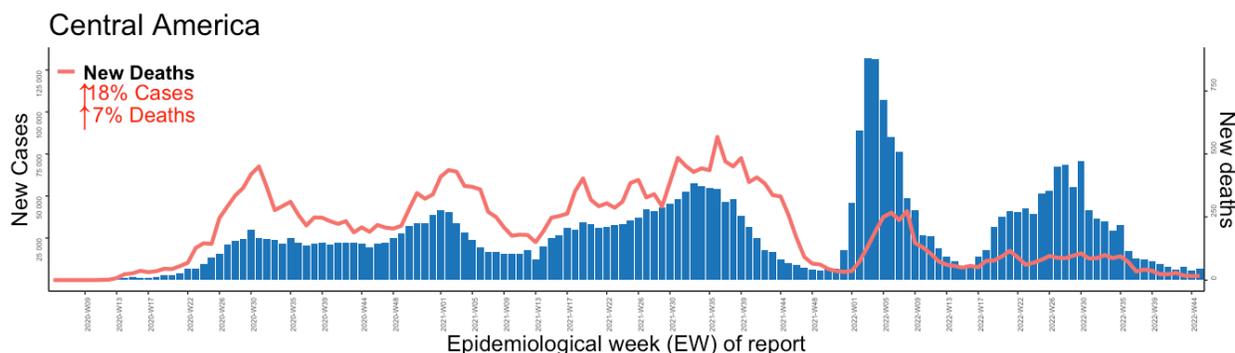
1 The United States Centers for Disease Control and Prevention (CDC). Variant Proportions. Accessed 15 November 2022. Available at: <https://bit.ly/3Obz8cT>

2 Public Health Agency of Canada (PHAC). COVID-19 Epidemiological Update. Accessed 15 November 2022. Available at: <https://bit.ly/3bbFRFr>

Central America

In Central America, the overall **COVID-19 incidence** for the sub-region has increased again with 6,829 new cases being reported during EW 45 – a 17.8% 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 45, 2022.



During EW 45, **COVID-19 weekly cases** increased in four countries in the subregion (range: 7.1 – 63.7% increase) compared to the previous week. The largest relative increase in reported cases this week included and Panama (1,372 new cases, 63.7% increase), followed by Guatemala (2,833 new cases, 35.4% increase), and Honduras (144 new cases, 12.5% increase). The remaining three countries and territories either did not report any cases (El Salvador) or reported a decline – Costa Rica (2,448 new cases, -9.4% decrease) and Nicaragua (17 new cases, -15% decrease) compared to the previous week.

During EW 45, **weekly deaths** increased by approximately 6.7% relative to the previous week (**Figure 4**) with one out of the seven countries and territories reporting an increase – Panama (6 new deaths, 100% increase). While Costa Rica (10 new deaths, 0%) and Honduras (1 death, 0%) did not report any changes in percent increase in deaths, Guatemala reported a 21.1% decline in deaths (15 new deaths) relative to the previous week. The remaining three countries and territories did not report any deaths during EW 45.

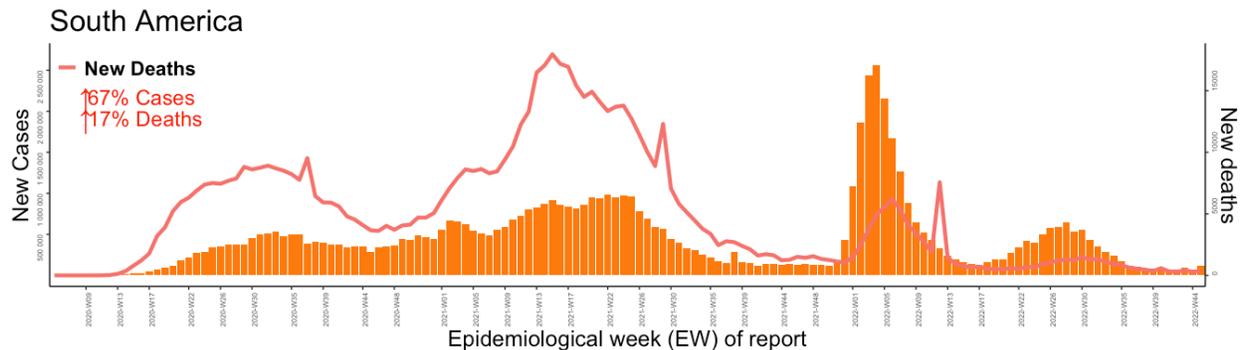
Among four and three countries/territories with available data for **weekly COVID-19 hospitalizations and weekly ICU admissions** in the Central American subregion respectively, one country – Panama – reported an increase in both weekly COVID-19 hospitalizations (n=99, 39.4% increase) and ICU admissions (n=7, 600% increase) during EW 45 relative to the previous week. The remaining three and two countries and territories in the subregion, respectively, reported a decline in both weekly hospitalizations (range: -50 - -3.1% decrease) and ICU admissions (range: - 50 - -5.6% decrease) during EW 45 relative 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 by 66.8%, primarily due to a big increase observed in Brazil and Peru, with a total of 119,813 new COVID-19 cases being reported during EW 45 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 45, 2022.



Out of the 10 countries and territories the sub-region, eight experienced an increase in weekly cases during EW 45 with the largest proportion of reported cases being reported by Brazil (59,135 new cases, 120.4% increase), followed by Chile (46,640 new cases, 31.7% increase), and Peru (9,800 new cases, 74.5% increase). The remaining two countries/territories reported a decline in weekly cases with the largest decline in cases being reported in Ecuador (443 new cases, -51.3% decrease), followed by Venezuela (Bolivarian Republic of) (215 new cases, -11.9% decrease).

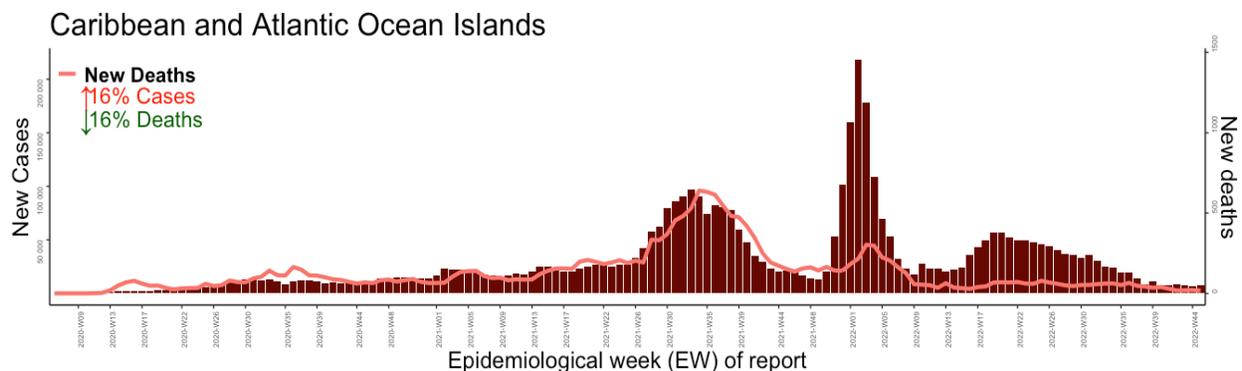
During EW 45, a total of 660 **COVID-19 deaths** were reported in South America – a 17.2% increase compared to the previous week. Four countries in the subregion reported an increase in weekly deaths (range: 28.6% – 200% increase) with the largest proportion of reported deaths being reported from Brazil (324 new deaths, 28.6% increase), followed by Chile (194 new deaths, 41.6% increase) compared to the previous week. The remaining six countries/territories reported a decline (range: -92.9% – -7.7% decrease) with the largest decrease in deaths reported by Ecuador (1 new death, -92.9% decrease), followed by Uruguay (3 new deaths, -62.5%) and Paraguay (2 new deaths, -60%).

Among four countries and territories in the subregion with data available for **COVID-19 weekly hospitalizations**, two reported a decline (range: -80.1 – -15.6% decrease) while one country – Chile – reported a slight increase in weekly hospitalizations (1,300 hospitalizations, 10.5% increase) during EW 45 relative to the previous week. Similarly for the same period, three out of four countries and territories with data available for **COVID-19 ICU admissions** reported a decline in their weekly COVID-19 ICU admissions (range: -69.2 – -2.4% decrease) while one country – Chile – reported an increase (130 ICU admissions, 6.6% increase).

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 45, 2022.



In the Caribbean and Atlantic Ocean Islands sub-region, **COVID-19 weekly cases** increased by 15.9% compared to the previous week (**Figure 6**). At the national level, cases increased in 12 out of the 36 countries and territories in the subregion (range: 8.9% - 216.7% increase), while they either declined (n=15, range: -100% - -2.2% decrease) or remained the same in the remaining countries and territories during EW 45 compared to the previous week.

For the same period, **COVID-19 weekly deaths** decreased by -15.8% (32 deaths) compared to the previous week. Three countries and territories in the subregion observed a relative increase in their weekly deaths during EW 45 compared to the previous week (range: 25% - 100% increase). Weekly deaths either remained the same (n=27) or declined in the remaining countries and territories of the subregion (range: -100% – -57.1% decrease).

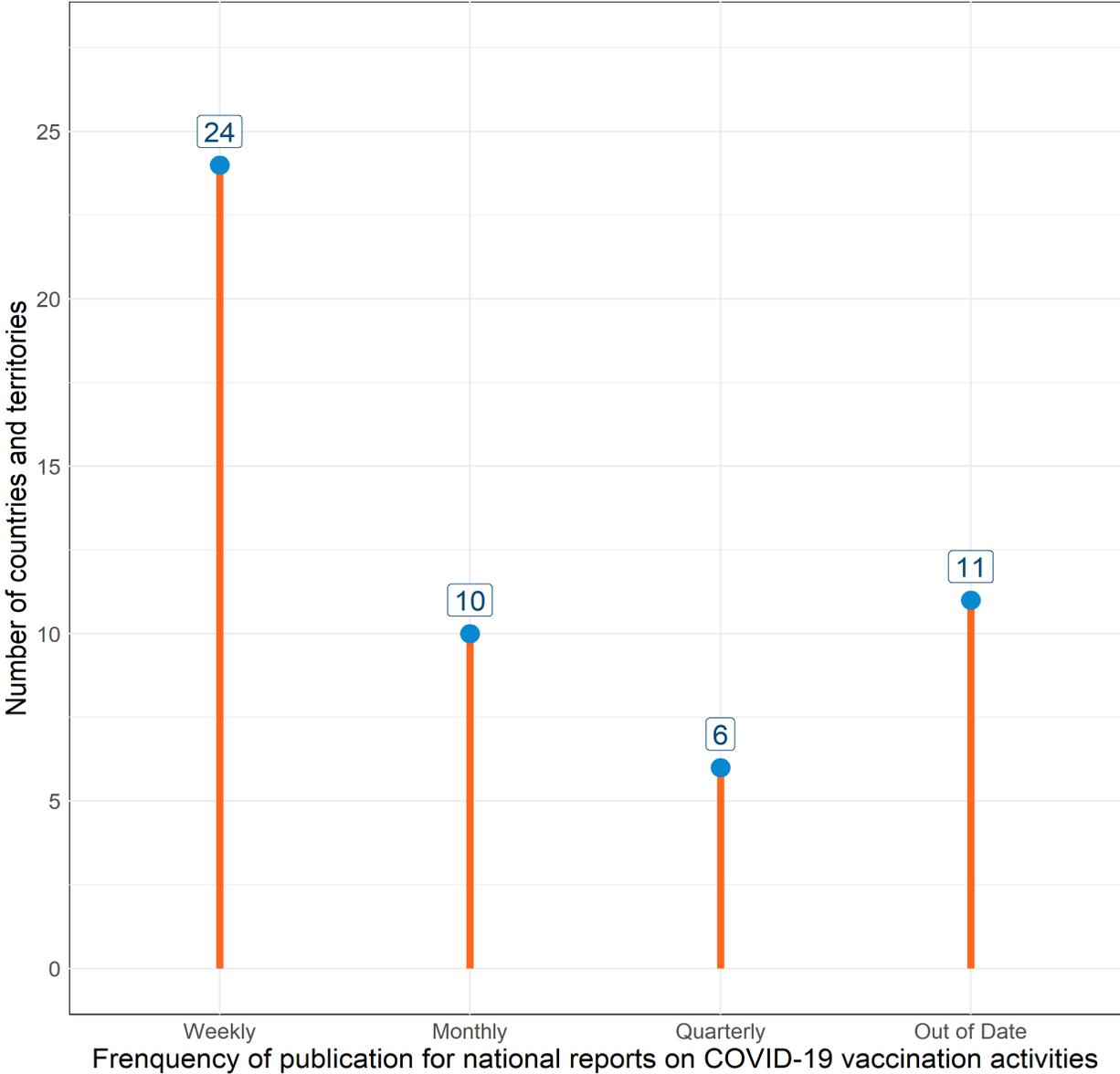
During EW 45, among 17 countries and territories with available data for **weekly COVID-19 hospitalizations**, three countries and territories reported an increase in their weekly COVID-19 hospitalizations (range: 16.7% - 150% increase) – the highest increase in deaths being reported from Cuba (19 hospitalizations, 72.7% increase), followed by Guadeloupe (42 hospitalizations, 16.7% increase). The remaining countries/territories either reported a decline (n=12, range: -100% - -6% decrease) or remained the same in their weekly COVID-19 hospitalizations. Similarly, among nine countries and territories with data available for **COVID-19 ICU admissions**, one reported an increase in weekly COVID-19 ICU admissions – Puerto Rico (15 ICU admissions, 25% increase) – while the remaining countries/territories either reported a decline (n=5, range: -100% - 33.3% decrease) or did not report any substantial changes during EW 45 compared to the previous week.

Notable increases in weekly cases in the subregion during EW 45 were observed in Guyana (19 new cases, 216.7% increase), Cuba (26 new cases, 160% increase), and French Guiana (112 new cases, 124% increase).

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. Periodicity of COVID-19 vaccination reports to PAHO for all countries and territories. In the Region of the Americas. As of EW 45, 2022.



As has been indicated in previous PAHO weekly updates on COVID-19 vaccination in the Region of the Americas, availability of data has been severely impacted by a reduction in frequency of reporting by countries and territories in the Region. This is shown in **Figure 7**, which displays a summary of the periodicity of reports. Note that 16 countries or territories are now reporting on a monthly or quarterly basis, while 11 (those under the "Out of Date" category) have stopped updating their COVID-19 vaccination information according to their usual update schedules. Therefore, only 24 countries and territories remain updating information at least once a week.

Genomic surveillance

Through PAHO's Genomic Surveillance Regional Network and the work from the Member States, 477,178 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 15 November 2022.

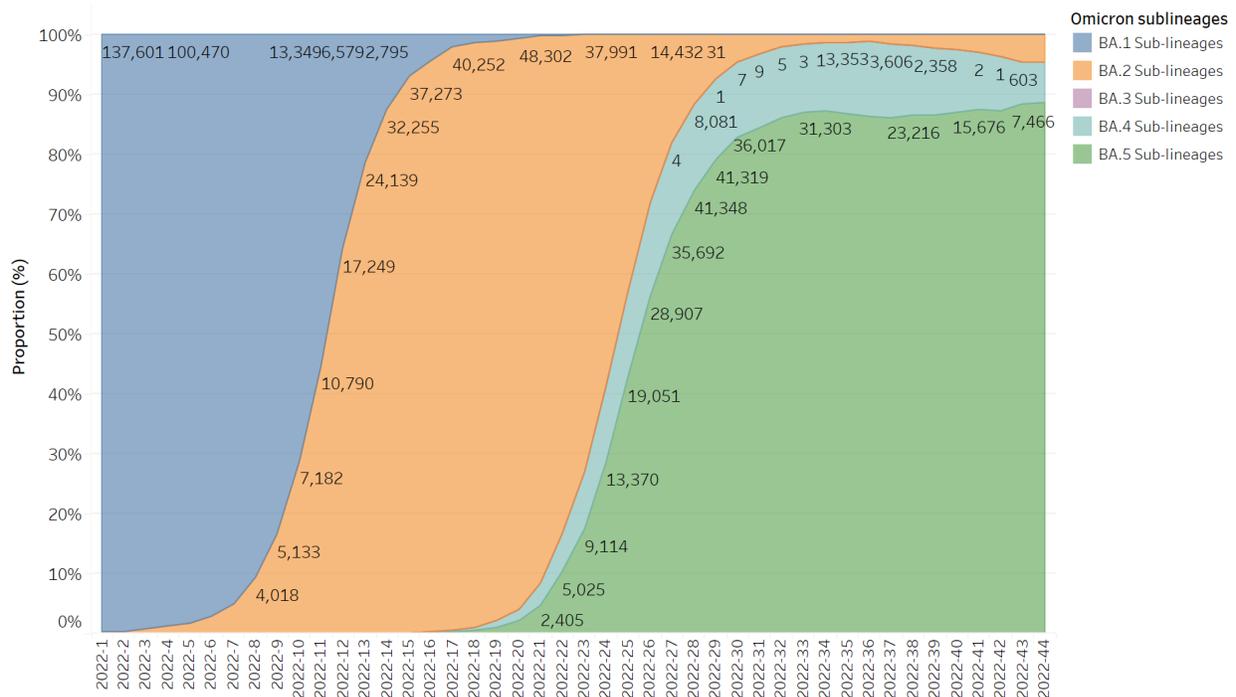
The Omicron variant of concern (VOC) was introduced in the Americas at the end of 2021, and it rapidly replaced Delta VOC and other lineages throughout the Region. Omicron has been officially reported by 54 countries or territories and has been predominant in all PAHO countries since the beginning of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

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: 46.3% of BA.1 (and BA.1 sublineages), 25.7% of BA.2 (and sublineages), <0.1% of BA.3 (and sublineages), 4.4% of BA.4 (and BA.4 sublineages), and 23.5% 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 X1). 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 95.8%, 98.7%, 95.9%, and 96.2% 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 monitoring. 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 15 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.**

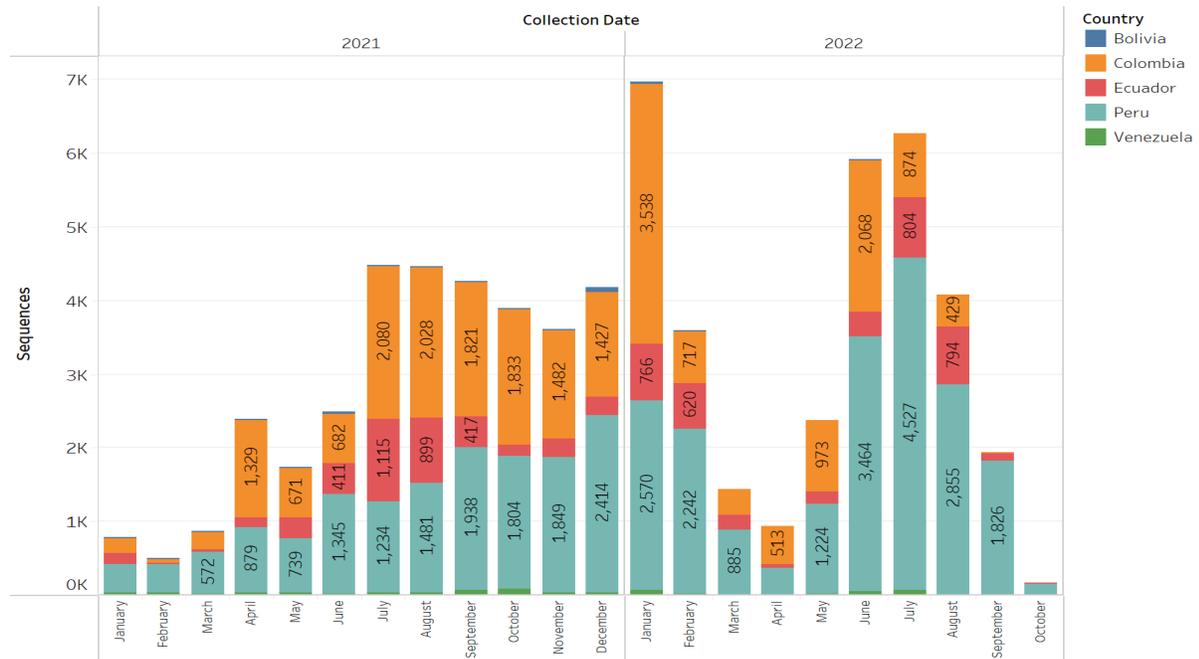
Figure 8: Proportions of VOC Omicron sublineages identified by the countries in the Region of the Americas (January-October 2022)



Spotlight: Sequencing and genomic surveillance in the Andean subregion

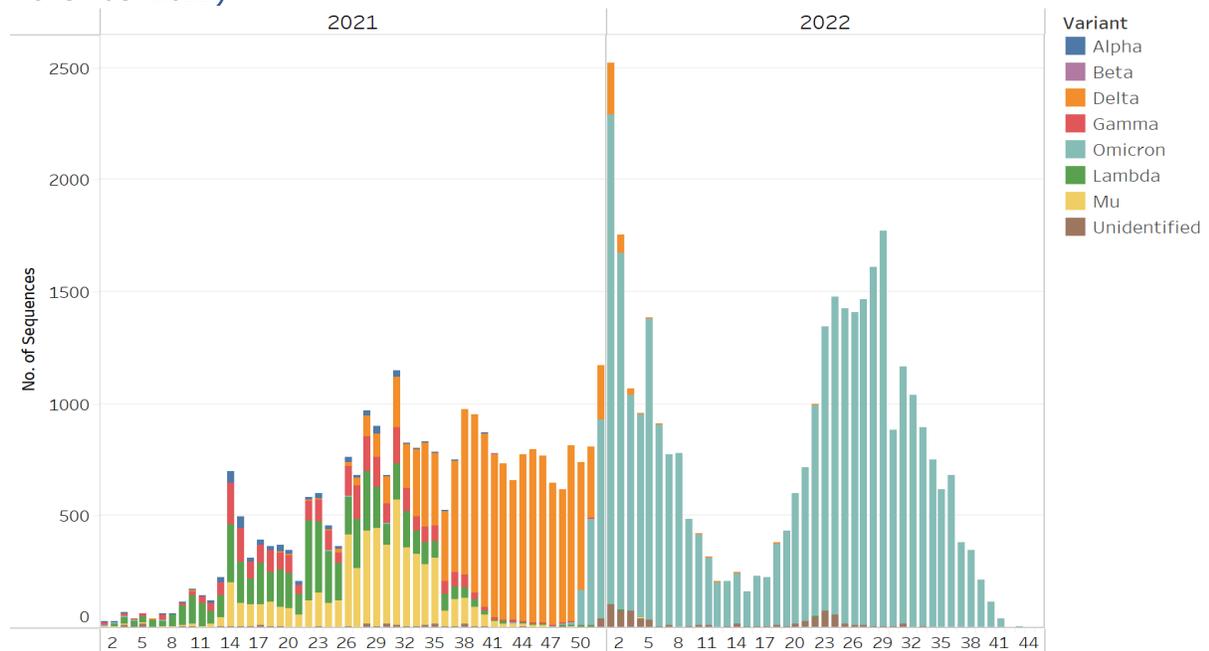
During the last 23 months (January 2021 to 12 November 2022), 67,154 whole genome sequences from Andean countries (Bolivia, Colombia, Ecuador, Peru, and Venezuela) have been generated as part of the genomic surveillance systems (**Figure 9**). As in other subregions, Omicron is vastly predominant with no other “previously circulating” VOC/VOI detected in the past 24 weeks (**Figure 10**). Since Omicron’s first detection, BA.1 and BA.1 sublineages represent the majority (37.6%) of cumulative sequences, while BA.2 and BA.2 sublineages represent 21.7% of the cumulative sequences, and BA.3, BA.4, and BA.5 (with their respective sublineages) represent 0.10%, 11.3%, and 29.3% 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 (18 September to 12 November), BA.5 is the predominant sublineage (76.0%) while BA.4 and BA.2 account for 22.8% and 1.12% of the sequences, respectively. It is important to note that the majority of sequences (94.5%) for the eight-week period was contributed by Peru (**Figure 9**).

Figure 9. Number of sequences generated monthly by countries in the Andean subregion (January 2021–November 2022)



Source: GISAID

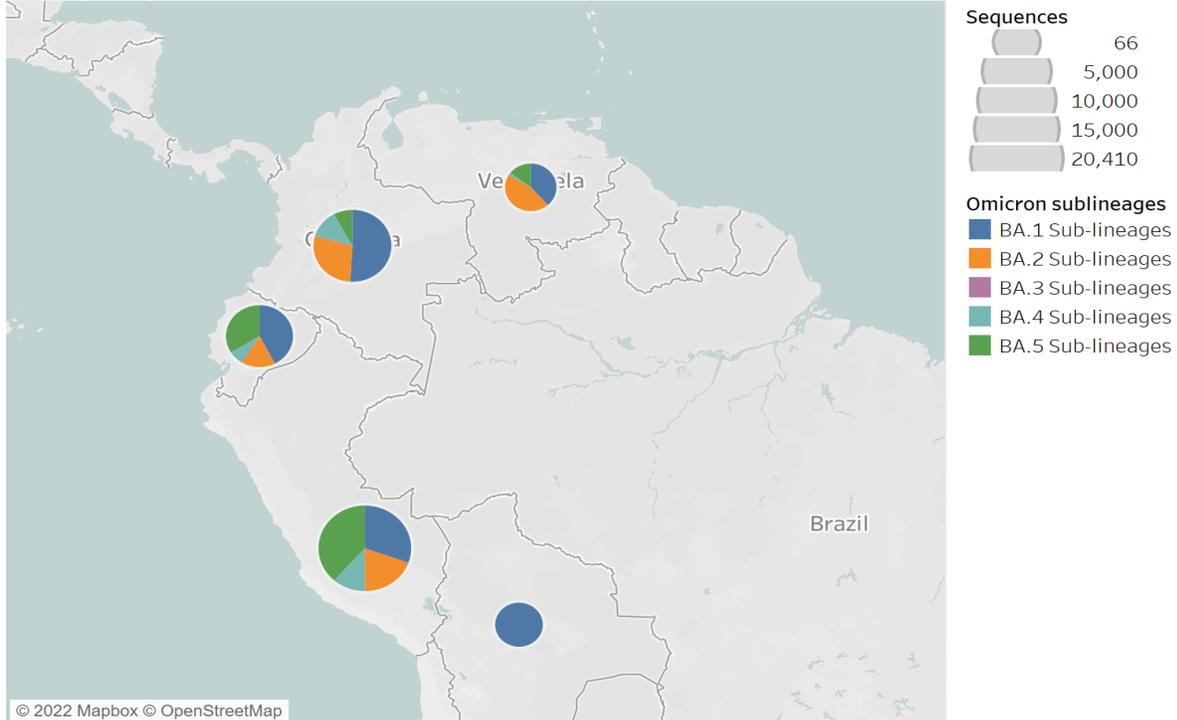
Figure 10. Variants detected and reported by countries in the Andean subregion (January 2021–November 2022)



Source: GISAID

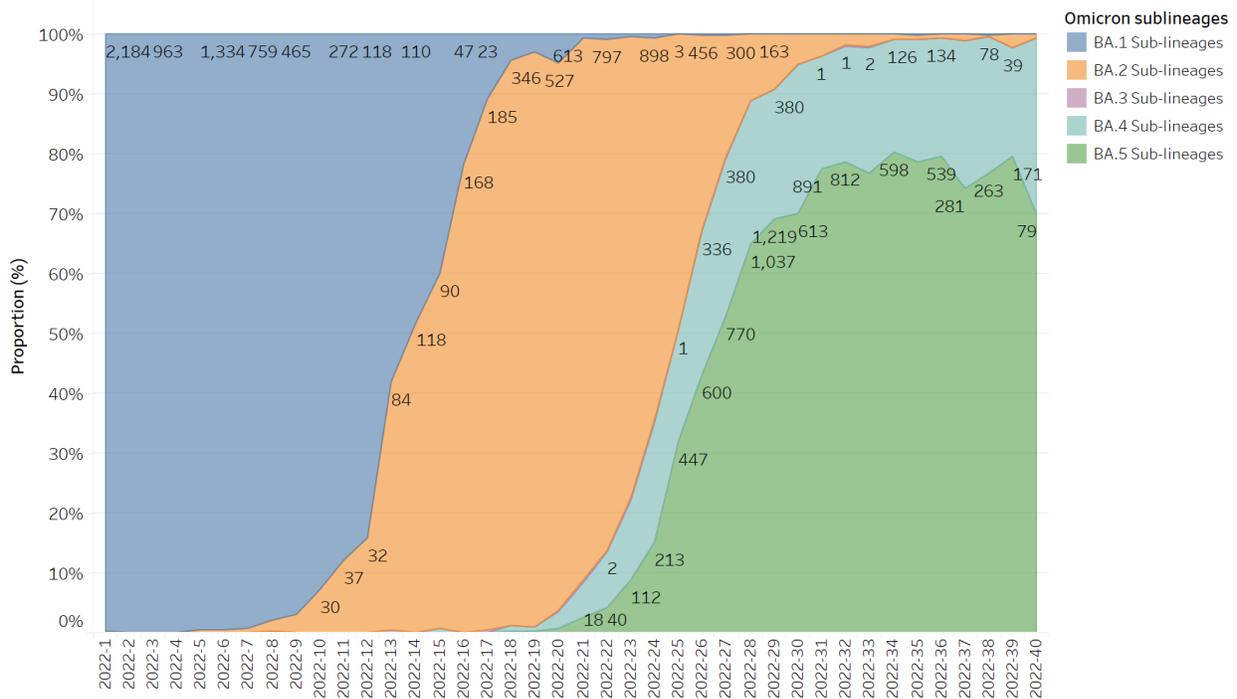
Country-specific data is available at: https://ais.paho.org/hip/viz/SARS_CoV2_variants_regional.asp

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



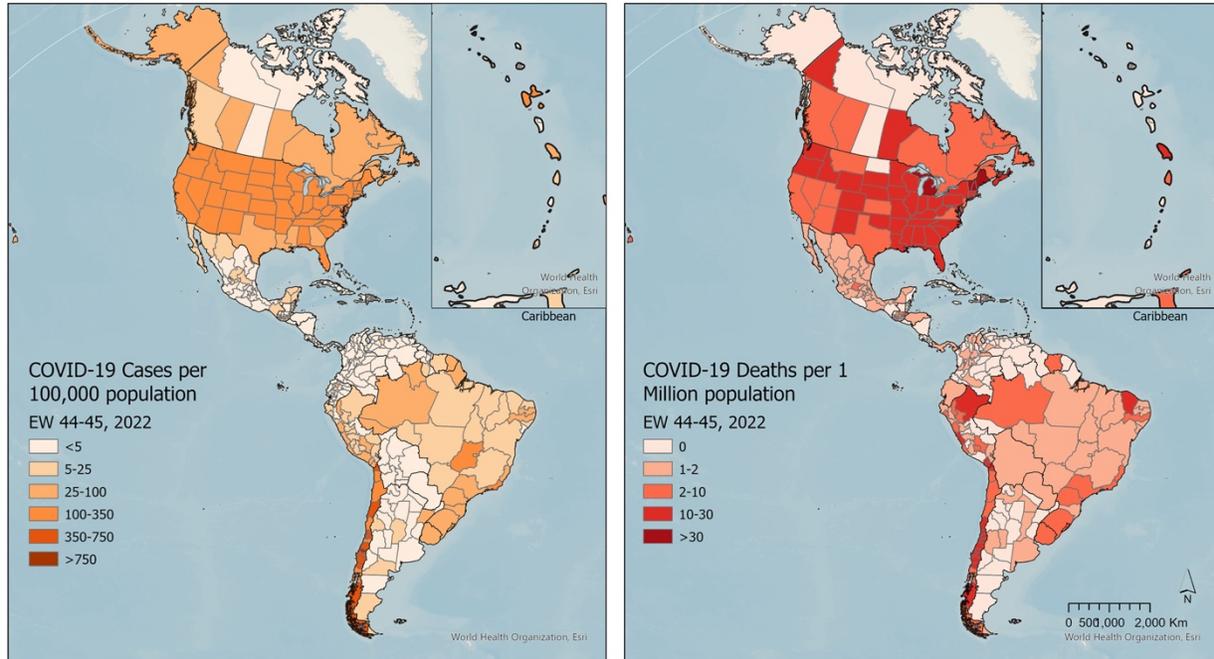
Source: GISAID

Figure 12. Proportion of VOC Omicron sublineages in the Andean subregion (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 44 and 45, 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 44 and 45, 2022.

The highest case incidence was observed in Chile, while the highest mortality was seen in the United States of America, Canada, Chile, Martinique, Barbados, and some parts of Brazil and Peru.

In North America, most of the states in the United States of America showed the highest incidence rates in the sub-region. High mortality rates were observed mostly in the north-eastern states in the US, and in the provinces of Yukon, Manitoba, Prince Edward Island, and Nova Scotia in Canada.

In Central America, a continued decline in cases and deaths was seen, while in South America, Chile continued to report a high number of cases in most of its regions. Some parts of Perú (Loreto, Lima, Tacna, and Moquegua), most regions of Chile, and Ceara in Brazil showed moderately high mortality rates in the sub-region.

In the Caribbean and Atlantic Ocean Islands, Guadeloupe presented the highest incidence rate in the subregion, while Barbados and Martinique showed the 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.