

## Weekly COVID-19 Epidemiological Update - Region of the Americas

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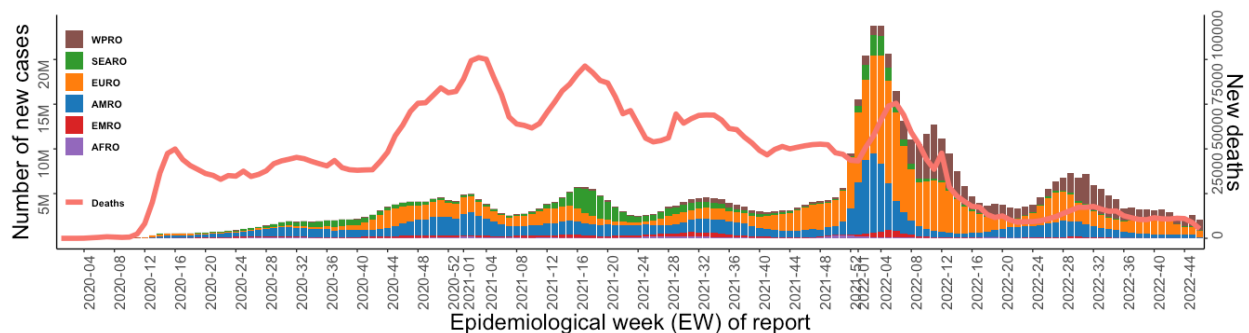
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### Executive Summary

- **Since the onset of the pandemic** in 2020 and up to November 22, 2022, a cumulative total of approximately 635.2 million COVID-19 cases including over 6.6 million deaths were reported from all six WHO regions. During epidemiological week (EW) 46, cases decreased in four regions while they increased in AMRO (4%) and SEARO (7.9%). COVID-19 deaths decreased in three regions while they increased in WPRO (1.3%), SEARO (13%), and AFRO (123.5%).
- **Globally**, approximately 2,500,612 new COVID-19 cases were reported in EW 46 (November 13, 2022-November 19, 2022) - a -2.4% decrease compared to EW 45 (November 06, 2022-November 12, 2022) (**Figure 1**). For the same period, 7,910 new COVID-19 deaths were reported globally – a -11.9% relative decrease compared the previous week.
- **In the region of the Americas**, 457,718 cases and 3,066 deaths were reported in EW 46 - a 4.0% increase in cases and -10.6% decrease in deaths compared to the previous week.
- At the subregional level, COVID-19 cases increased in all subregions (range: 8.5 – 30.3%) except for the North American subregion (-5%). COVID-19 Deaths increased in the Central American subregion (18.8%), while they decreased in the remaining three subregions (range: -57.5 - -7%).
- The overall weekly case notification rate for the region of the Americas was 44.8 cases per 100,000 population during EW 46 (43 the previous week). Between EW 46 and 45, the 14-day COVID-19 death rate was 6.4 deaths per 1 million population (6.7 the previous two weeks).
- Among 22 countries/territories in the region with available data, **COVID-19 hospitalizations** increased in 10 countries and territories (range: 1% - 100%) during EW 46 compared to the previous week. Among 15 countries and territories with available data, COVID-19 **ICU admissions** increased in 9 countries and territories (range: 1.5% - 200%).

**Figure 1:** COVID-19 cases and deaths by epidemiological week (EW) of report and WHO region. EW 4, 2020 - EW 46, 2022.

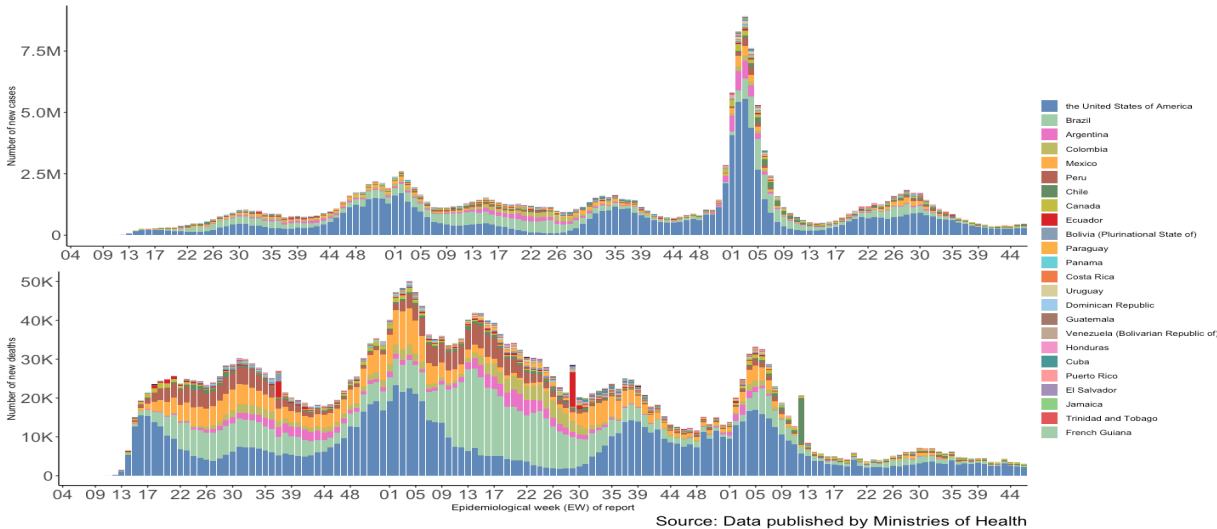


Source: Data from WHO COVID-19 Dashboard

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 - 46, 2022.



During EW 46, 457,718 new **COVID-19 cases** were reported in the region of the Americas - a relative increase of 4.0% compared to previous week (**Figure 2**). The highest number of COVID-19 cases in the last week was reported from North America (289,902 cases, -5% decrease) compared to the previous week. (**Table 1**). During EW 46 at the national level, the highest proportion of weekly COVID-19 cases were reported by the United States of America (274,067 new cases, -3.1% decrease), Brazil (91,297 new cases, 54.4% increase), Chile (39,013 new cases, -16.4% decrease).

**Table 1:** Weekly change (%) in cases and deaths between EW 45 and EW 46 by subregion. Region of the Americas

Subregion	Total Cases	Total Deaths	Cases EW 45	Deaths EW 45	Cases EW 46	Deaths EW 46	% Change Cases	% Change Deaths
Caribbean and Atlantic Ocean Islands	4,259,134	35,455	7,979	80	8,659	34	8.5%	-57.5%
Central America	4,031,259	53,693	6,829	32	8,898	38	30.3%	18.8%
North America	108,542,185	1,445,035	305,152	2,656	289,902	2,471	-5.0%	-7.0%
South America	64,511,853	1,331,453	120,130	663	150,259	523	25.1%	-21.1%

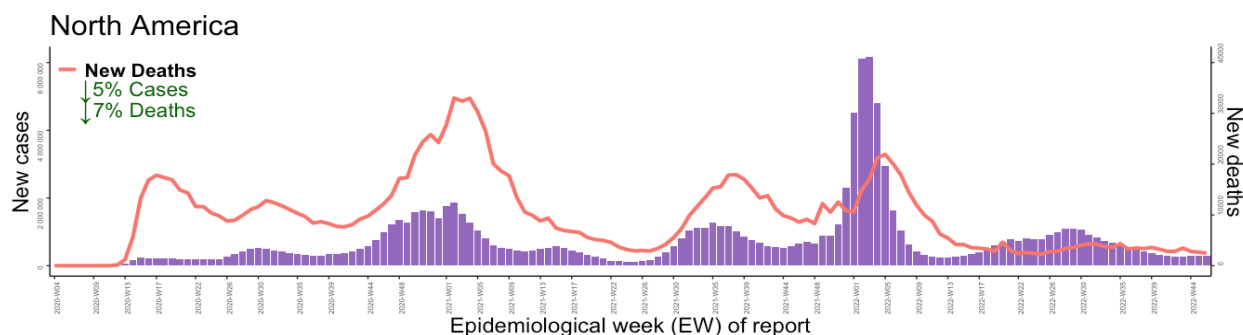
For the same period, 3,066 **COVID-19 deaths** were reported in the region of the Americas - a relative decrease of -10.6% compared to previous week (**Figure 2**). The highest number of COVID-19 deaths in the last week was reported from North America (2,471 deaths, -7% decrease) (**Table 1**). At the national level, the highest proportion of weekly COVID-19 deaths were reported by the United States of America (2,202 new deaths, -5.3% decrease), Canada (268 new deaths, -16.2% decrease), and Brazil (251 new deaths, -22.5% decrease).

**A summary of the COVID-19 trends for EW 46 by subregion is presented below.**

## North America

The overall trends for **COVID-19 cases** have plateaued in North America as of EW 46. All three countries in the subregion reported a decline in weekly cases during EW 46 as compared to the previous week. While Canada reported a 16.5% decline in weekly cases (n=15,697), the United States of America did not report any substantial changes during EW 46 (274,067 cases, -3.1% decrease). Please note that data for EW 46 for Mexico was not publicly available, resulting in a data artifact in percent changes in cases and deaths (138 cases, -96% decrease & 1 death, -90% decrease).

**Figure 3:** COVID-19 cases and deaths by epidemiological week (EW). **North America.** Region of the Americas. EW 3, 2020 - EW 46, 2022.



For the same period, the overall trends for **weekly COVID-19 deaths** have decreased for the third consecutive week – a decreased of -7.0% in deaths being reported in North America during EW 46 relative to the previous week. Canada reported a 16.2% decline (n=268), and the United States of America reported a 5.3% decrease (n=2,202) in weekly deaths during EW 46.

During 46, both two countries in North America with available data for **COVID-19 weekly hospitalizations and ICU admissions** reported no substantial changes compared to the previous week. Weekly hospitalizations and ICU admissions in the United States of America continued to remain stable – an 1% increase of weekly hospitalizations (n=28,193) and an 6.5% increase of weekly ICU admissions (n=3,379) relative to the previous week. Similarly, there were no substantial changes in hospitalizations in Canada – weekly hospitalizations decreased by 3.2% (n=5,395) while weekly ICU admissions increased by 1.5% (n=268) 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 two months – accounting for 24%, while the estimated proportions of BA.5 sub-lineages, BQ.1 and BQ.1.1, have been increasing over the past two months – accounting for 49.7% of sequences for the week ending on 19 November 2022<sup>1</sup>. The BA.5 and BA.4 sub-lineages made up about 90% (including 4.7% of BQ.1, 4.4% of BQ.1.1 and 6.4% of BF.7) and 4.7% the week of 30 October 2022 in Canada<sup>2</sup> and 89.4% and 5.9% as of EW 42 in Mexico, respectively.

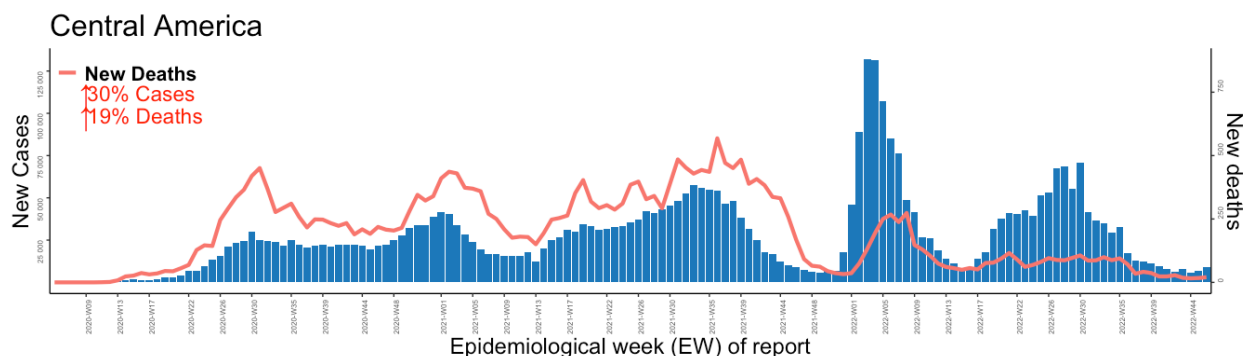
1 The United States Centers for Disease Control and Prevention (CDC). Variant Proportions. Accessed 22 November 2022. Available at: <https://bit.ly/3Obz8cT>

2 Public Health Agency of Canada (PHAC). COVID-19 Epidemiological Update. Accessed 22 November 2022. Available at: <https://bit.ly/3bbFRFr>

## Central America

In Central America, the overall **COVID-19 incidence** for the sub-region is on an upward trend for the second consecutive week – with 8,898 new cases being reported during EW 46 – a 30.3% 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 46, 2022.**



During EW 46, **COVID-19 weekly cases** increased in four countries and territories in the subregion (range: 3.4 – 126.2% increase) compared to the previous week. The countries with the largest proportion of reported cases this week included Panama (3,103 new cases, 126.2% increase), Guatemala (2,928 new cases, 3.4% increase), and Costa Rica (2733 new cases, 11.6% increase). The remaining three countries and territories in the subregion either reported a decline – Nicaragua (16 new cases, -5.9% decrease) and Honduras (102 new cases, -29.2% decrease) or did not report any new cases (El Salvador) during EW 46.

For the same period, **weekly deaths** increased by approximately 18.8% (n=38) relative to the previous week (**Figure 4**) with three out of the seven countries and territories reporting an increase (range: 20% – 100%). The countries with the largest proportion of reported deaths during EW 46 included Guatemala (20 new deaths, 33.3% increase) and Costa Rica (12 new deaths, 20% increase) compared to the previous week. While Panama reported a 33.3% decline in deaths (n=4), the remaining three countries and territories in the subregion did not report any deaths during EW 46.

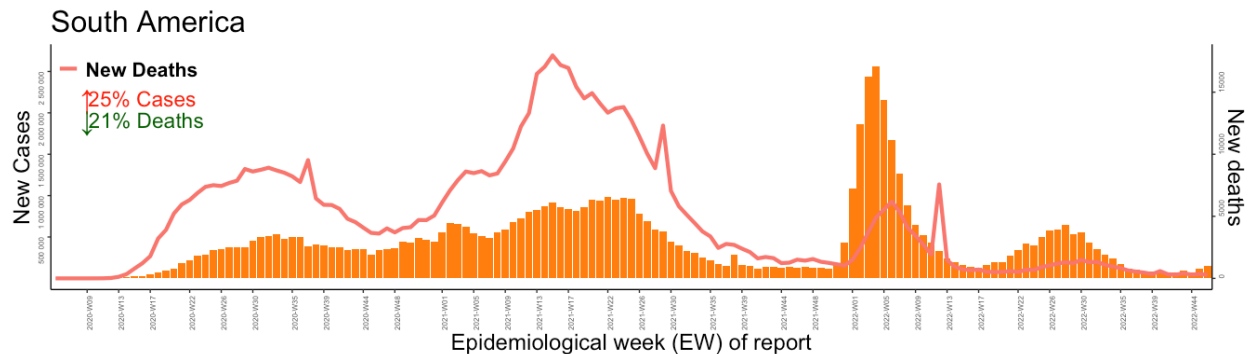
Among four countries/territories with available data for **weekly COVID-19 hospitalizations** in the Central American subregion, one country – Panama – reported a 29.3% increase in weekly hospitalizations (n=128), while the remaining three countries/territories reported either a decline (range: -33.3 - -12.8%) or remained the same. For the same period, all three countries and territories with available data for **weekly COVID-19 ICU admissions** reported a decline in weekly ICU admissions (range: -100 - -11.8% decrease) 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 by 25.1%, with a total of 150,259 new COVID-19 cases being reported during EW 46 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 46, 2022.**



Out of the 10 countries and territories the sub-region, seven experienced an increase in cases during EW 46 (range: 4.4 – 123.6% increase). The largest relative increase in weekly cases was reported from Bolivia (Plurinational State of) (407 new cases, 123.6% increase), followed by Venezuela (Bolivarian Republic of) (471 new cases, 119.1% increase), Brazil (91,297 new cases, 54.4% increase), and Argentina (2,206 new cases, 48.5% increase). The remaining three countries in the subregion reported a decline in weekly cases (range: -68.1 - -16.4% decrease) relative to the previous week.

During EW 46, a total of 523 **COVID-19 deaths** were reported in South America – a -21.1% decrease compared to the previous week. Two countries in the subregion reported a decline – Colombia (19 new deaths, 58.3% increase) and Paraguay (3 deaths, 50% increase), while the remaining eight countries and territories reported a decline in weekly deaths (range: -66.7 - -6.2% decrease). The largest proportion of reported deaths was reported from Brazil (251 new deaths, -22.5% decrease), followed by Chile (182 new deaths, -6.2% decrease), and Peru (52 new deaths, -48.2% decrease).

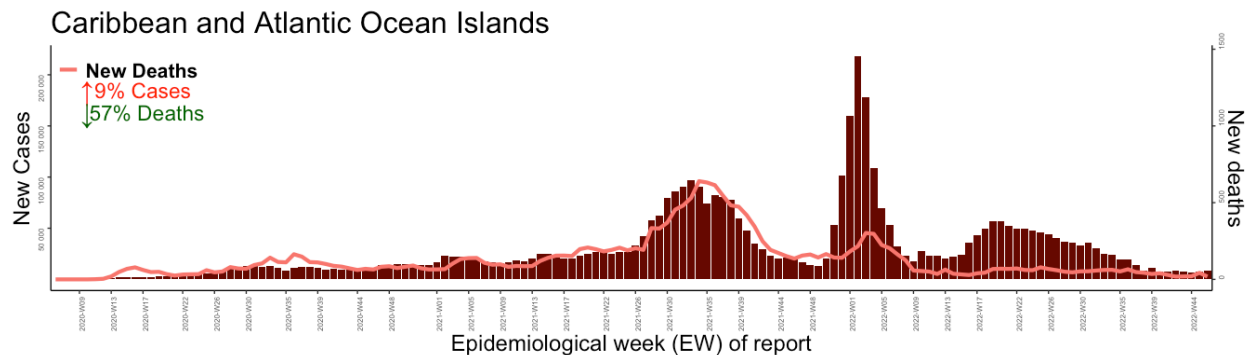
During EW 46, among three countries and territories in the subregion with data available for **COVID-19 weekly hospitalizations**, two reported an increase in their weekly COVID-19 hospitalizations – Chile (1,363 hospitalizations, 4.8% increase) and Peru (124 hospitalizations, 30.5% increase) relative to the previous week. 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 – Chile (143 ICU admissions, 10% increase) and Uruguay (10 hospitalizations, 150% increase), while the remaining the two countries did not report any substantial changes in ICU admissions (range: -5.4 - -1.7% decrease) 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

In the Caribbean and Atlantic Ocean Islands sub-region, **COVID-19 weekly cases** increased by 8.5% 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: 12.5% - 221.1%) while they either declined (n=14, range: -100% - -23.1%) or remained the same (n=8) in the remaining countries and territories.

**Figure 6: COVID-19 cases and deaths by epidemiological week (EW). Caribbean and Atlantic Ocean Islands. Region of the Americas. EW 6, 2020 - EW 46, 2022.**



For the same period, **COVID-19 weekly deaths** decreased by -57.5% (34 deaths) in the Caribbean and Atlantic Ocean Islands subregion. Four countries and territories observed an increase in weekly deaths (range: 20 – 200% increase). Weekly deaths either remained the same – Aruba (1 death, 0% change) – or declined in the remaining countries and territories of the subregion during EW 46 compared to the previous week.

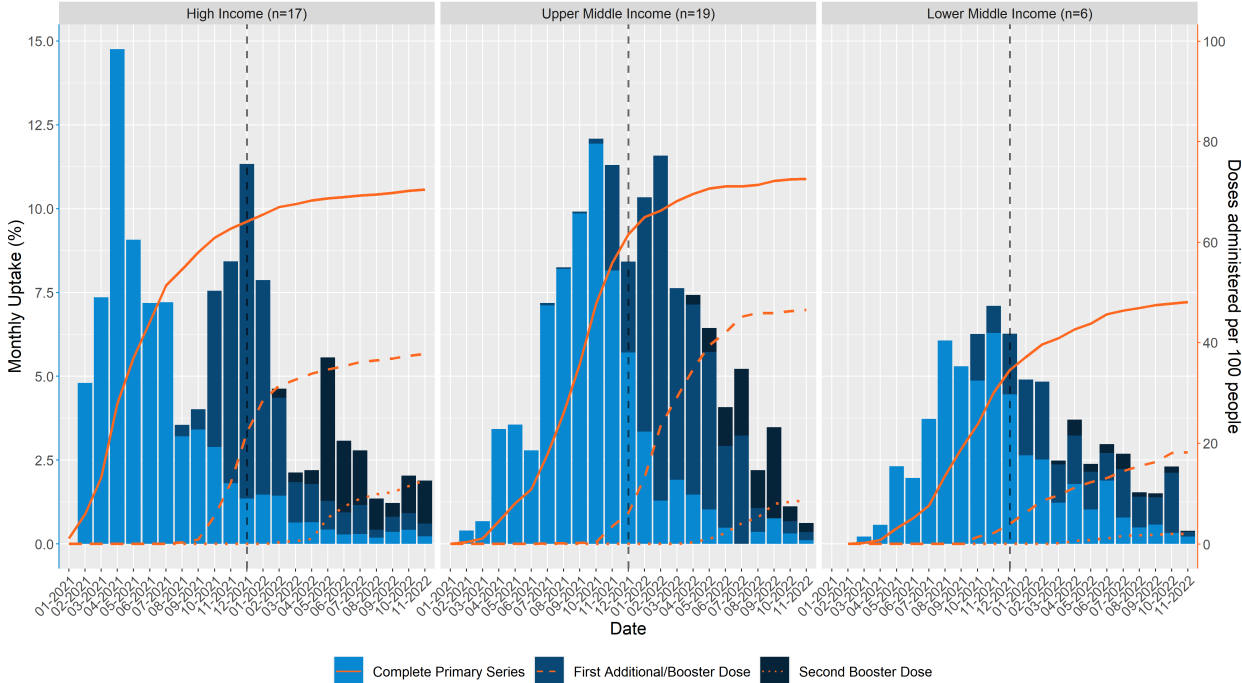
During EW 46, among 13 countries and territories with available data for **weekly COVID-19 hospitalizations**, six countries and territories reported an increase in their weekly COVID-19 hospitalizations (range: 10.5 – 100% increase) – with the largest increase being observed in French Guiana (10 hospitalizations, 100% increase), followed by Puerto Rico (179 hospitalizations, 17% increase). For the same period, among six countries and territories with data available for **COVID-19 ICU admissions**, five reported an increase in their weekly COVID-19 ICU admissions (range: 2-18 ICU admissions, 20 – 200% increase) while Guadeloupe reported a decline (2 ICU admissions, -71.4% decrease) compared to the previous week.

**Notable increases in weekly cases** in the subregion during EW 46 were observed in Guyana (61 new cases, 221.1% increase), followed by French Guiana (308 new cases, 175% increase), and Dominican Republic (490 new cases, 120.7% 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: COVID-19 Vaccination Uptake and Coverage\* (Complete Primary Series & Additional /Booster Doses) for the Americas\*\* by month and income level\*\*\*. Region of the Americas.**



Regarding Primary Series coverage, monthly uptake has remained approximately constant in High Income (HIC) countries for the past 6 months, averaging a 0.3% increase each month. For Upper Middle Income (UMIC) countries, this number has fluctuated in the past semester, with a monthly average of 0.4%, reaching a maximum 1% increase in May 2022. Lower Middle Income (LMIC) countries have maintained the highest average among the three income groups, with a 0.7% monthly increase in the past 6 months, and a maximum of 1.89% in June 2022. However, note that uptake has been below 1% since July 2022 for all income groups, showing that uptake for the Complete Primary Series has plateaued overall.

Regarding the First Additional/Booster dose offering, values have similarly plateaued. The HIC group shows a stark increase in coverage for this dose between the months of October 2021 to February 2022, while UMIC countries sustained this increase for longer, from October 2021 to August 2022. Thus, coverage for this dose in UMIC countries is, currently, 8.7 percentage points higher than HIC countries. In LMIC countries, uptake for this dose was more moderate, and has grown at a somewhat steady pace since October 2021.

\* 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 42 countries and territories.

\*\*\* Based on the World Bank 2021-2022 Income Level classification.

Regarding the application of Second Booster doses, countries in the HIC group showed high uptake between the months of May and July 2022. Values decreased afterwards but have once again increased in the last two months. Uptake for this dose had been increasing significantly in UMIC countries in the June through September 2022 period but has stalled significantly in the past two months. In LMIC countries, uptake for this dose has been slow overall, and has not yet surpassed 5% coverage. However, please note that only two of the six countries in this group have reported vaccinations for this dose.

## 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 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 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<sup>1</sup>. 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

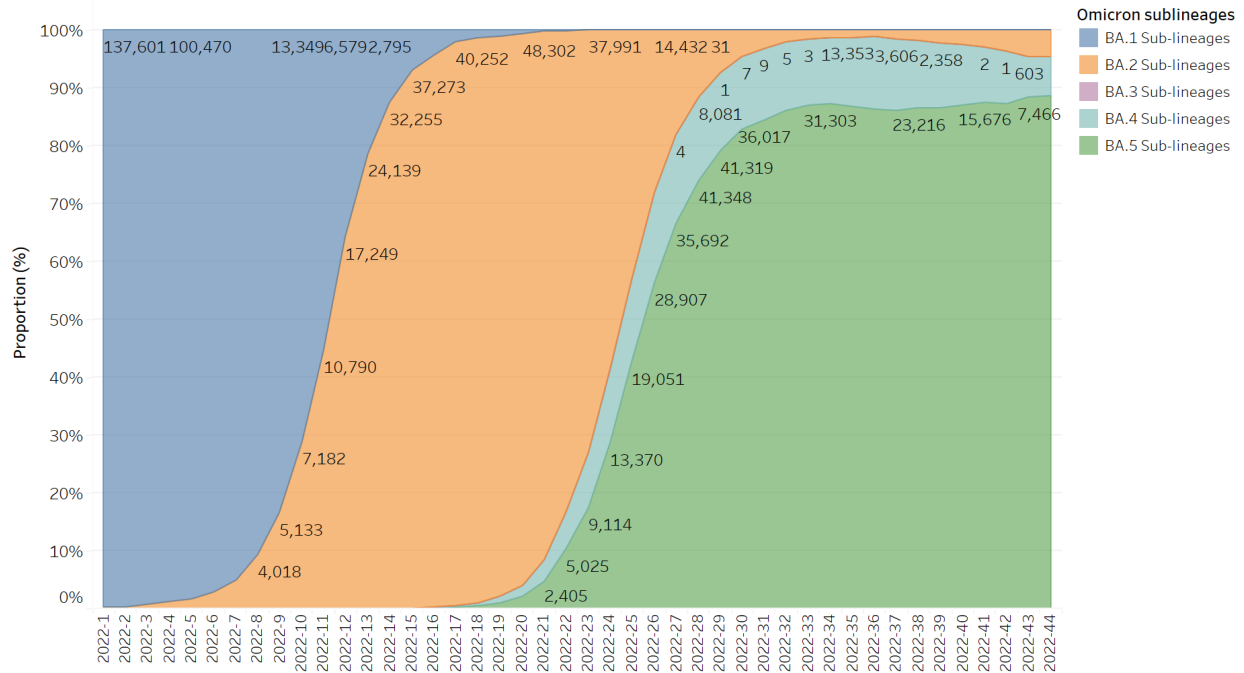
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<sup>1</sup> WHO. Tracking SARS-CoV-2 variants. Available at: <https://www.who.int/en/activities/tracking-SARS-CoV-2-variants/>



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)

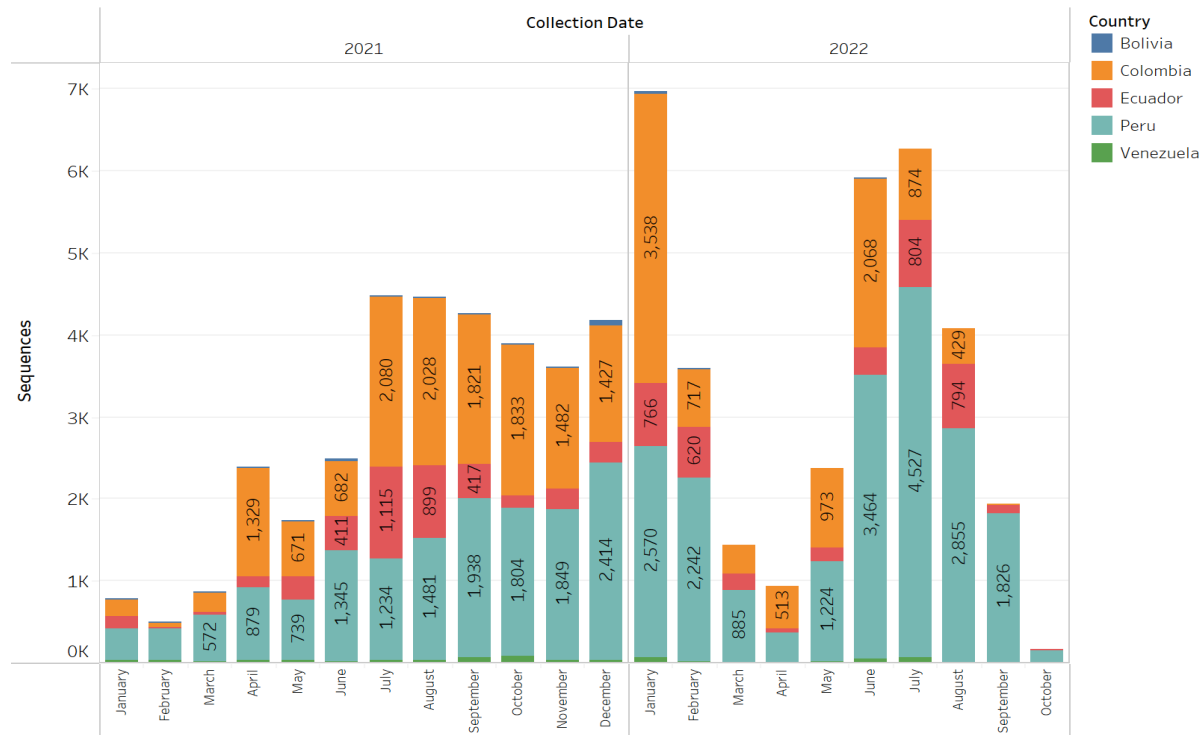


Source: GISAID

### Spotlight: Sequencing and genomic surveillance in the Andean Region

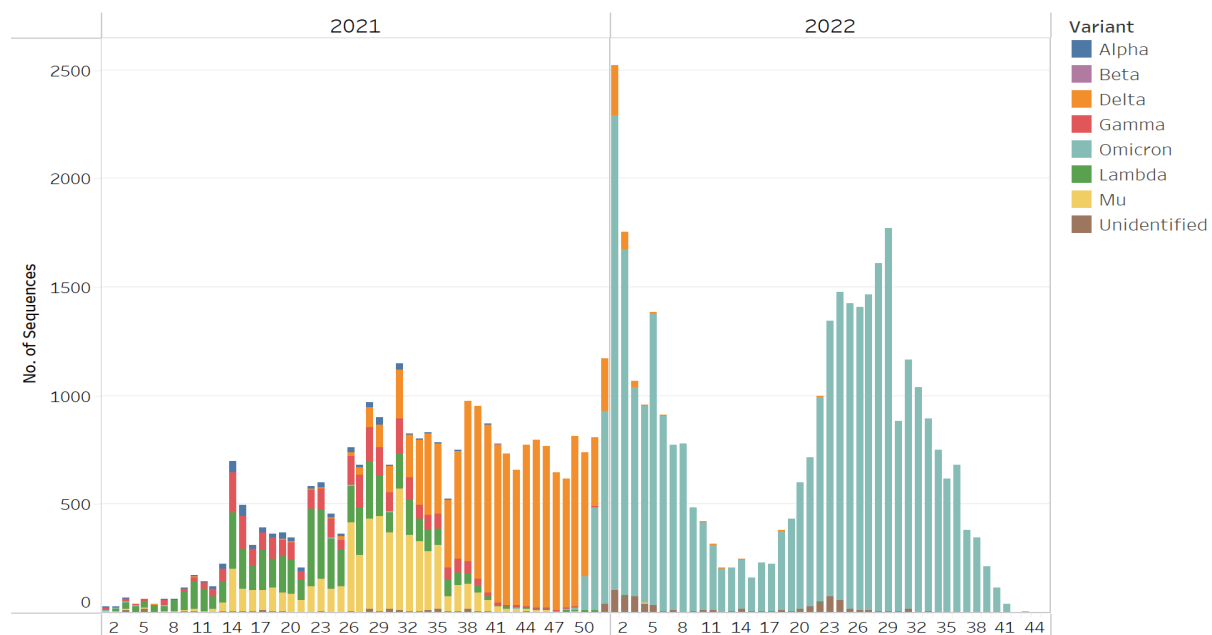
During the last 23 months (January 2021 to 12 November 2022), 67,154 whole genome sequences from Andean countries (Bolivia, Colombia, Ecuador, Peru, and Venezuela) have been generated as part of the genomic surveillance systems (**Figure 9**). As in other subregions, Omicron is vastly predominant with 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

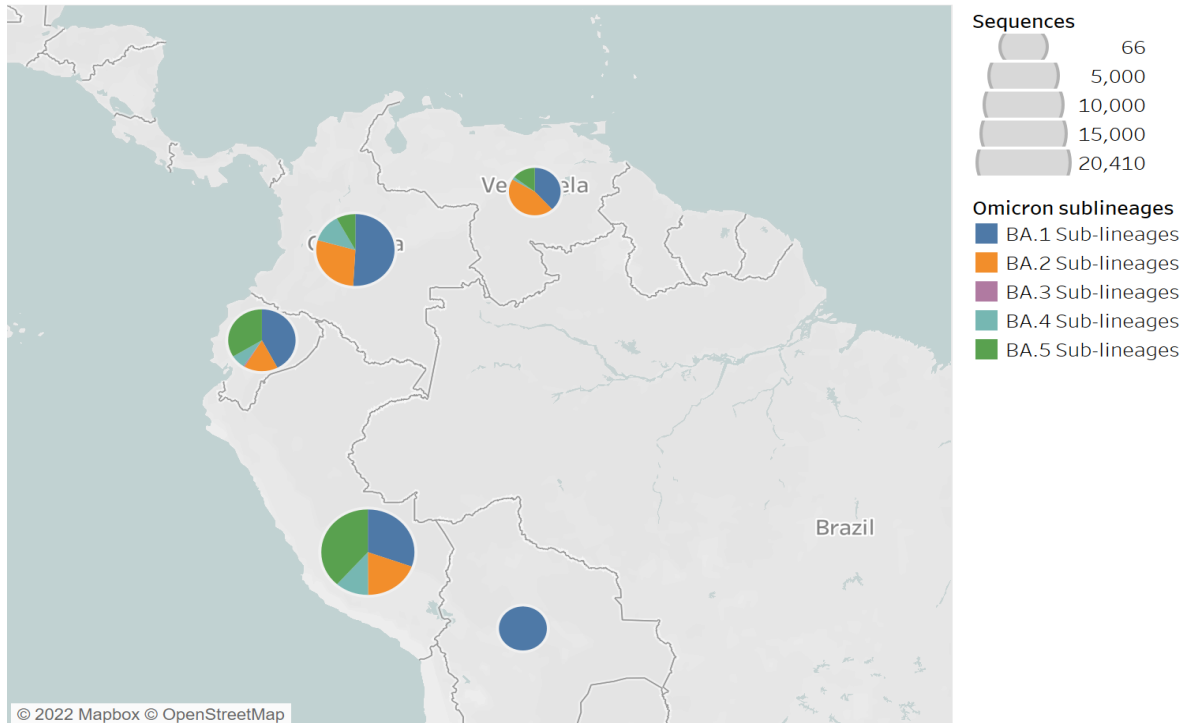
**Figure 10.** Variants detected and reported by countries in the Andean subregion (January 2021–November 2022)



Source: GISAID

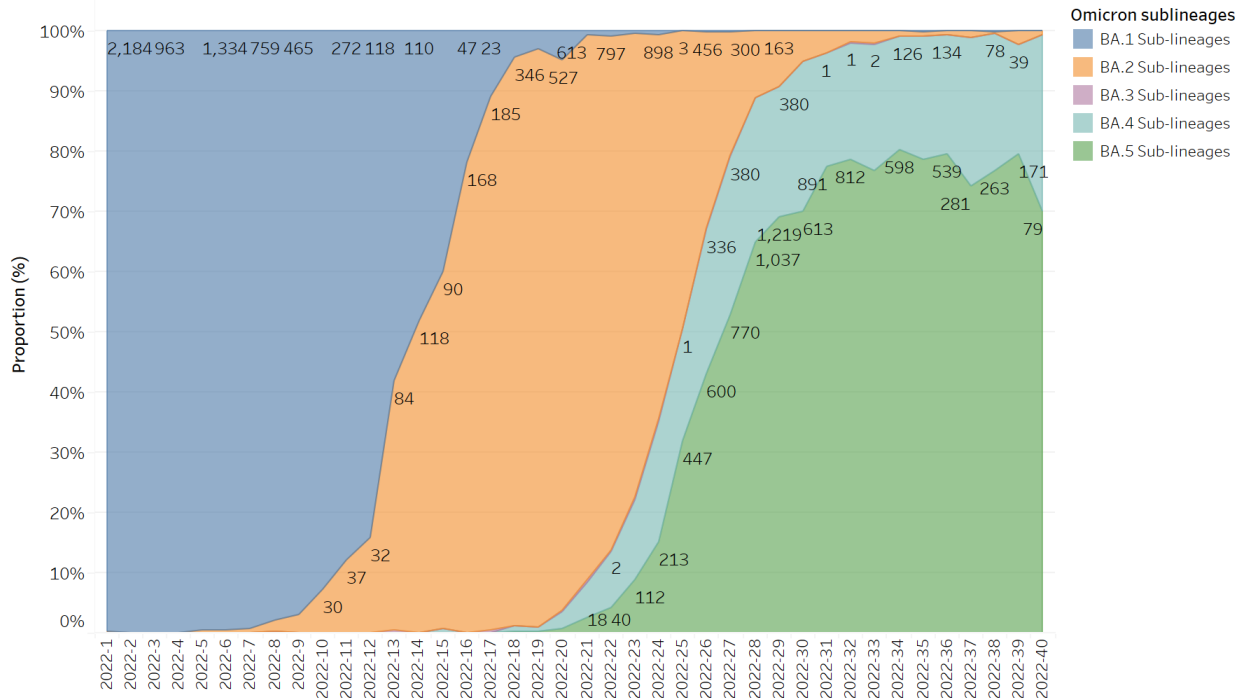
Country-specific data is available at: [https://ais.paho.org/hip/viz/SARS\\_CoV2\\_variants\\_regional.asp](https://ais.paho.org/hip/viz/SARS_CoV2_variants_regional.asp)

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



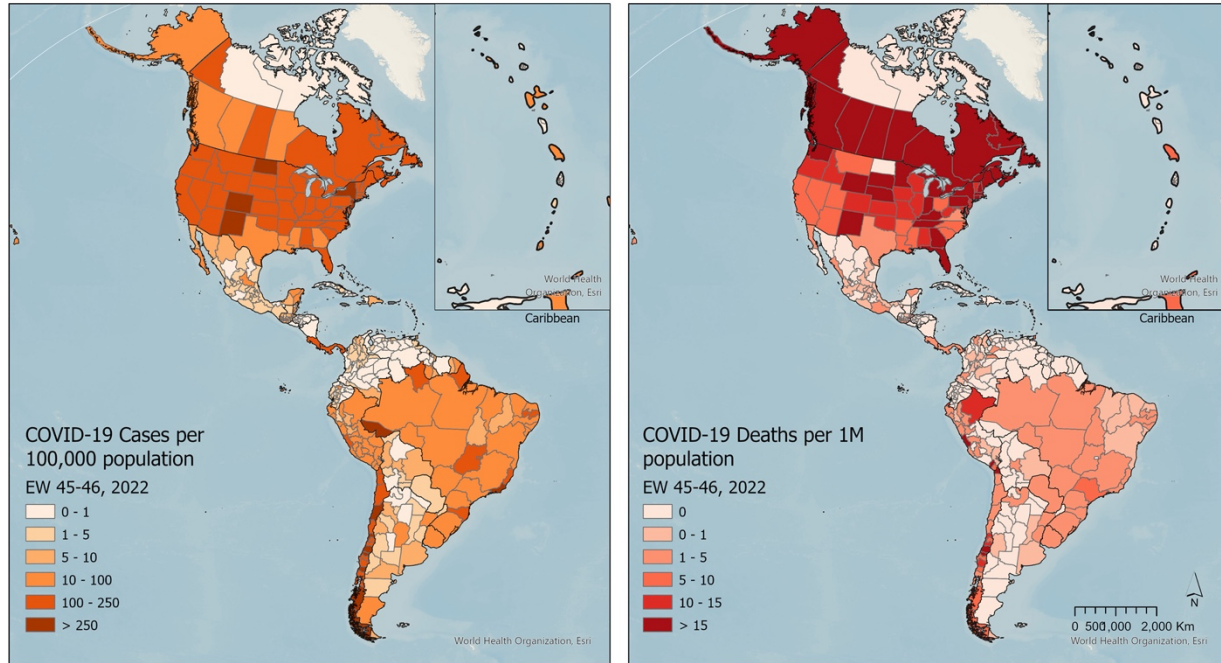
Source: GISAID

**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 45 and 46, 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 45 and 46, 2022.

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

In North America, parts of the US (North Dakota, Colorado, New Mexico, New York, and New Jersey) presented the highest incidence rates. High mortality rates were observed mostly in the north-eastern states in the US, and in most areas in Canada.

In Central America, the highest incidence rates were observed in Costa Rica and Panama, and mortality rates continue to be low in the sub-region. Meanwhile, in South America, in most regions of Chile, and the states of Acre and Rio de Janeiro in Brazil reported high incidence rates. Some parts of Perú (Lima and Moquegua), and Chile (Arica y Parinacota, Maule, and Nuble), showed some of the highest mortality rates in the sub-region.

In the Caribbean countries and territories, the overall incident and mortality rates were low compared to the rest of the sub-regions.

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.