

Weekly COVID-19 Epidemiological Update - Region of the Americas

Issue 36, published October 12, 2022

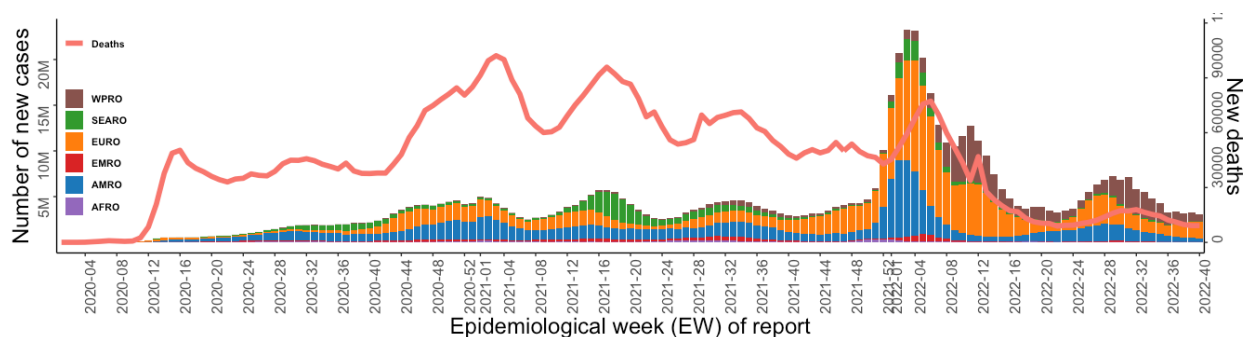
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Executive Summary

- **Since the onset of the pandemic** in 2020 and up to October 12, 2022, a cumulative total of approximately 619 million COVID-19 cases including about 6.5 million deaths were reported from all six WHO regions. During epidemiological week (EW) 40, cases increased in the EMRO (2.6%) while they decreased in the remaining five WHO regions (range: -38.7 - -14.4%). COVID-19 deaths decreased in all WHO regions except for WPRO (1.2%).
- **Globally**, approximately 3,013,899 new COVID-19 cases were reported in EW 40 (October 02, 2022-October 08, 2022) - a -7.4% decrease compared to EW 39 (September 25, 2022-October 01, 2022) (**Figure 1**). For the same period, 8,785 new COVID-19 deaths were reported globally – a -6.1% relative decrease compared the previous week.
- **In the region of the Americas**, 388,752 cases and 3,829 deaths were reported in EW 40 - a -14.6% decrease in cases and -3.5% decrease in deaths compared to the previous week.
- At the subregional level, COVID-19 cases decreased in all four subregions (range: -54.6 - -11.3%). COVID-19 deaths decreased in three subregions (range: -36.2 - -17.1%) while they increased in the South American subregion (71%).
- The overall weekly case notification rate for the region of the Americas was 38 cases per 100,000 population during EW 40 (44.5 the previous week). Between EW 40 and 39, the 14-day COVID-19 death rate was 7.6 deaths per 1 million population (7.7 the previous two weeks).
- Among 30 countries/territories in the region with available data, **COVID-19 hospitalizations** increased in 4 countries and territories (range: 1% - 100%) during EW 40 compared to the previous week. Among 21 countries and territories with available data, COVID-19 **ICU admissions** increased in 2 countries and territories (range: 3.1% - 14.3%).

Figure 1: COVID-19 cases and deaths by epidemiological week (EW) of report and WHO region. EW 4, 2020 - EW 40, 2022.

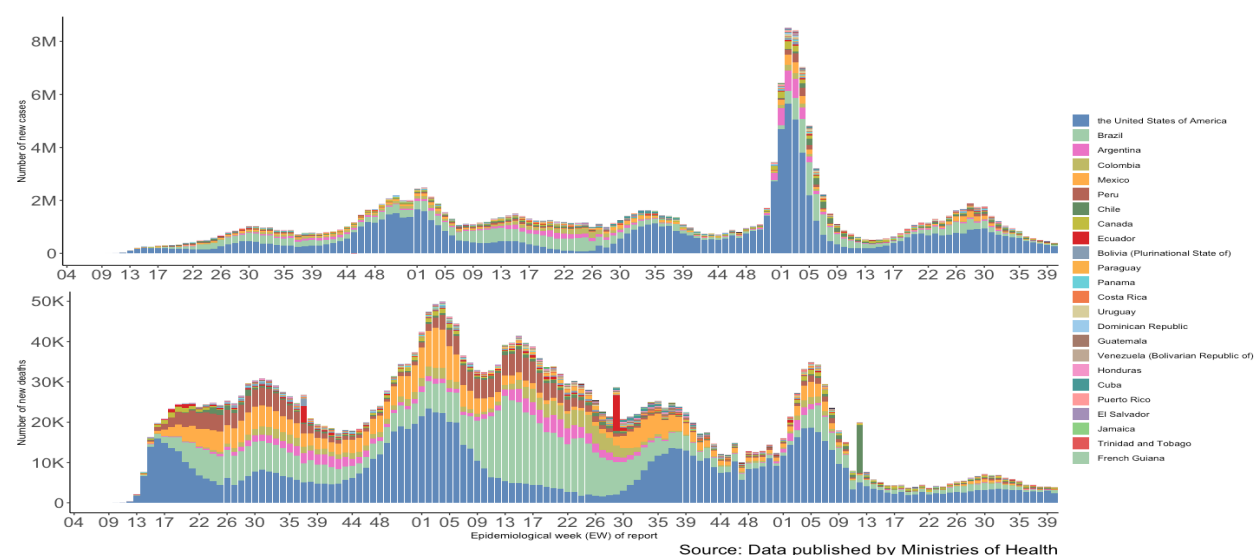


Source: Data from WHO COVID-19 Dashboard

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 - 40, 2022.



During EW 40, 388,752 new **COVID-19 cases** were reported in the region of the Americas - a relative decrease of -14.6% compared to previous week (**Figure 2**). The highest number of COVID-19 cases in the last week was reported from the North American subregion (297,497 cases, -13% decrease) compared to the previous week. (**Table 1**). During EW 40, the highest proportion of weekly COVID-19 cases were reported by the United States of America (275,449 new cases, -14.2% decrease), Brazil (42,613 new cases, -11.4% decrease), Chile (21,425 new cases, -12.2% decrease).

Table 1: Weekly change (%) in cases and deaths between EW 39 and EW 40 by subregion. Region of the Americas

Subregion	Total Cases	Total Deaths	Cases EW 39	Deaths EW 39	Cases EW 40	Deaths EW 40	% Change Cases	% Change Deaths
Caribbean and Atlantic Ocean Islands	4,210,248	35,158	15,194	84	6,898	58	-54.6%	-31.0%
Central America	3,987,877	53,472	11,099	69	9,841	44	-11.3%	-36.2%
North America	106,793,482	1,427,251	344,114	3,171	297,497	2,629	-13.5%	-17.1%
South America	63,915,809	1,327,826	84,599	642	74,516	1,098	-11.9%	71.0%

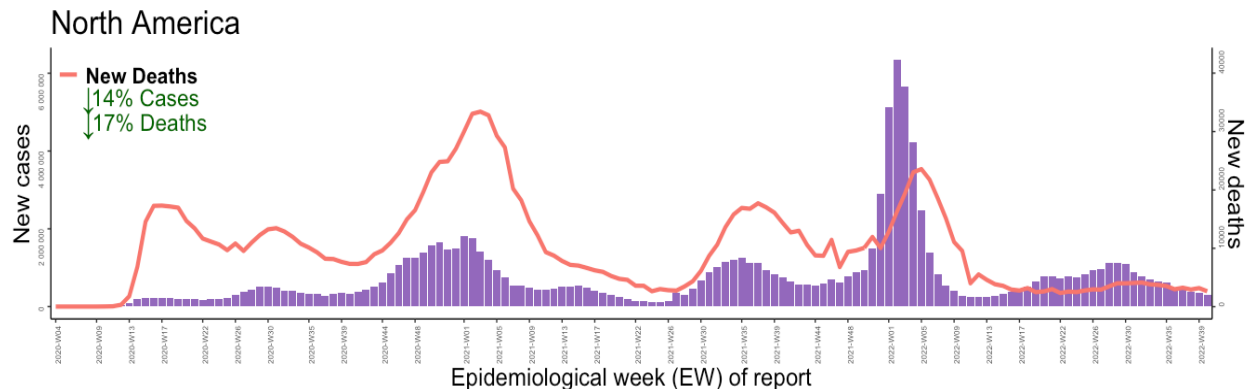
For the same period, 3,829 **COVID-19 deaths** were reported in the region of the Americas - a relative decrease of -3.5% compared to previous week (**Figure 2**). The subregion reporting the highest number of COVID-19 deaths in the last week was North America (2,629 deaths, -17% decrease) (**Table 1**). At the country level, the highest proportion of weekly COVID-19 deaths were reported from the United States of America (2,422 new deaths, -17.5% decrease), Brazil (767 new deaths, 168.2% increase), and Canada (173 new deaths, -10.4% decrease).

A summary of the COVID-19 trends for EW 40 by subregion is presented below.

North America

The overall trends for **COVID-19 cases** have continued decreasing in North America since mid-July 2022, with a total of 297,497 new cases being reported during EW 40. Two countries reported a decline in weekly cases – Mexico (2,966 cases, -34 %decrease) and the United States of America (275,449 cases, -14.2 % decrease) – while Canada have reported a slight increase for the second consecutive week (19,082 cases, 3.7 % increase) during EW 40 relative 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 40, 2022.



For the same period, **weekly COVID-19 deaths** have decreased by -17.1% in North America during EW 40 relative to the previous week. All three countries in the subregion reported a decline in deaths during EW 40. The largest decline in deaths were reported by Mexico (34 new deaths, -20.9% decrease), followed by the United States of America (2,422 new deaths, -17.5% decrease), and Canada (173 new deaths, -10.4% decrease) compared to the previous week.

During EW 40, among the two countries in North America with available data for **COVID-19 weekly hospitalizations and ICU admissions**, the United States of America continued to observe a decline in both hospitalizations (n=27,145; -4.7% decrease) and ICU admissions (n=3,276; -4.7% decrease). On the other hand, Canada has reported a slight increase for the second consecutive week in weekly hospitalizations (n=4,909; 2.4% increase) including ICU admissions (n=264; 3.1% increase) during EW 40 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. There were no substantial changes in the proportion of the BA.4 sub-lineages in all three countries compared to the previous week. In the United States of America, the proportion of the BA.5 sub-lineages have been decreasing over the past seven weeks while the proportion of BA.4.6 has been increasing for the same period. The BA.5 and BA.4 sub-lineages made up about 79.3% and 14.4% (including 13.6% of BA.4.6) of cases for the week ending on 1 October 2022 in the United States of America¹, 91% and 7.3% for the week of 18 September 2022 in Canada², and 92.9% and 4.3% as of EW 38 in Mexico, respectively.

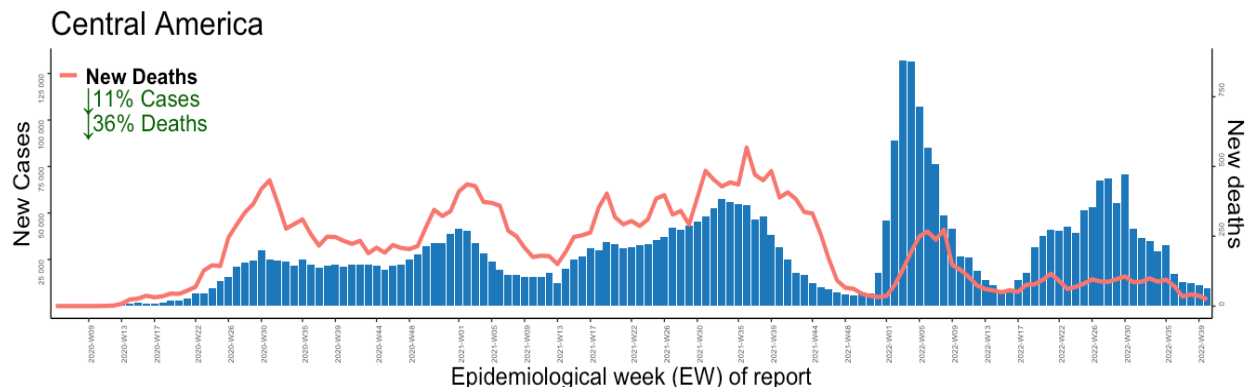
1 The United States Centers for Disease Control and Prevention (CDC). Variant Proportions. Accessed 12 October 2022. Available at: <https://bit.ly/3Obz8cT>

2 Public Health Agency of Canada (PHAC). COVID-19 Epidemiological Update. Accessed 12 October 2022. Available at: <https://bit.ly/3bbFRFr>

Central America

In Central America, the overall **COVID-19 incidence** for the sub-region has been on a downward trend for the past consecutive five weeks, with 9,841 new cases being reported during EW 40 – a -11.3% 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 40, 2022.



During EW 40, one country – Honduras – in the subregion experienced an increase in **weekly cases** (273 new cases, 396% increase). However, the percent increase in weekly cases for Honduras is a result of a data artifact since data for the complete EW 39 for Honduras were not publicly available. No cases have been reported from El Salvador during EW 40, and the remaining all countries and territories (n=5) in the subregion reported a decline in weekly cases during EW 40 compared to the previous week (range: -57.1 - -8.2% decrease). The largest decline in cases in the subregion included Belize (30 new cases, -57.1% decrease), Guatemala (4,248 new cases, -18.2% decrease), and Nicaragua (22 new cases, -12% decrease).

For the same period, **weekly deaths** decreased by approximately -36.2% relative to the previous week (**Figure 4**). Four countries and territories in the subregion reported a decline in weekly deaths (range: -100 - -38.3% decrease) during EW 40 while two countries and territories did not report significant changes in weekly deaths – Honduras (3 deaths, 200% increase) and El Salvador (1 death, 100% increase) compared to the previous week.

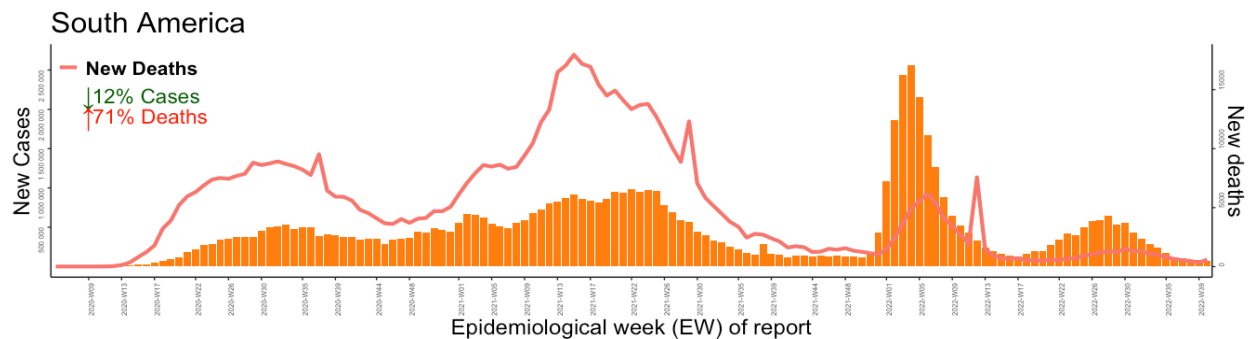
Among four countries/territories with available data for **weekly COVID-19 hospitalizations** in the Central American subregion, all countries/territories reported a decline in their weekly hospitalizations (range: -50 - -6.5% decrease) during EW 40 compared to the previous week. Similarly, in terms of **weekly COVID-19 ICU admissions**, all three countries with available data for ICU admissions reported a decline in ICU admissions during EW 40 – Panama (4 ICU admissions, -50% decrease), Costa Rica (27 ICU admissions, -15.6% decrease), and Honduras (2 ICU admissions, -33.3% decrease) compared to the previous week.

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

South America

In South America, the overall **COVID-19 incidence** for the sub-region has been on a downward trend – reporting a total of 74,516 new COVID-19 cases during EW 40 – a -11.9% decrease 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 40, 2022.



Out of the 10 countries/territories the sub-region, two countries experienced an increase in cases during EW 40 – Uruguay (1,117 new cases, 9.1% increase) and Paraguay (496 new cases – including 462 retroactively classified cases, 2.5% increase) compared to the previous week. The remaining eight countries and territories in the subregion reported a decline in weekly cases (range: -67.6 - -5.7% decrease) for the same period, with the largest decline in cases being reported by Venezuela (Bolivarian Republic of) (129 new cases, -67.6% decrease), followed by Argentina (2,239 new cases, -23.7% decrease), and Bolivia (Plurinational State of) (386 new cases, -19.6% decrease).

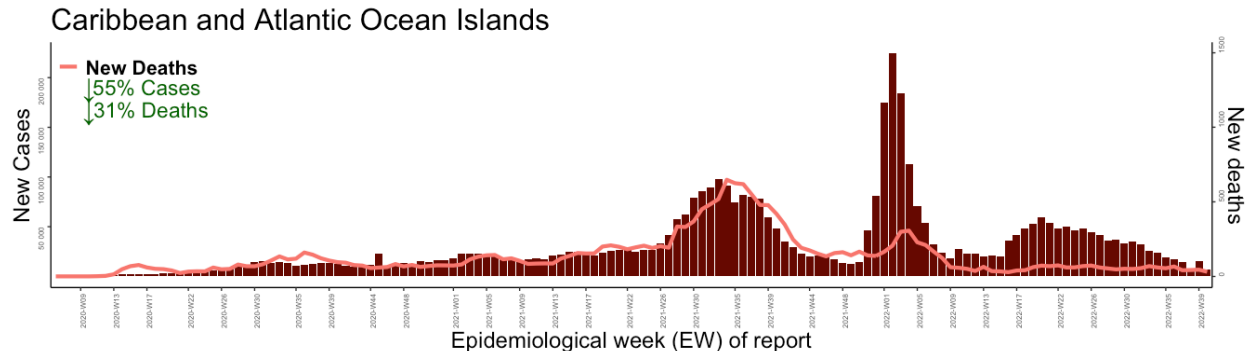
During EW 40, **COVID-19 weekly deaths** in the subregion have increased for the first time after 7 weeks of an increasing trend – a total of 1,098 COVID-19 deaths (71% increase) were reported in South America, primarily due to a large increase in deaths observed in Brazil. Three countries in the subregion reported an increase in deaths during EW 40 - The largest increase in deaths being reported by Brazil (767 new deaths, 168.2% increase), followed by Venezuela (Bolivarian Republic of) (4 new deaths, 100% increase), and Peru (152 new deaths, 17.8% increase). The remaining seven countries/territories reported a decline during EW 40 compared to the previous week (range: -100 - -3% decrease).

For the same period, among five countries and territories in the subregion with data available for **COVID-19 weekly hospitalizations**, three reported a decline (range: -50.9 - -3.5% decrease), while two countries did not report any substantial changes - Colombia (507 hospitalizations, -0.2% decrease) and Chile (1,258 hospitalizations, 1% increase) relative to the previous week. Similarly, one of the six countries and territories with data available for **COVID-19 ICU admissions** reported an increase – Uruguay (16 ICU admissions, 14.3% increase) – while the remaining four countries reported a decline (range: -23.9 - -3.4% decrease) 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

Figure 6: COVID-19 cases and deaths by epidemiological week (EW). Caribbean and Atlantic Ocean Islands. Region of the Americas. EW 6, 2020 - EW 40, 2022.



In the Caribbean and Atlantic Ocean Islands sub-region, **weekly cases** decreased by -54.6% and **(Figure 6)**. At the national level, cases increased in 11 out of the 34 countries and territories in the subregion (range: 2% - 106.4%) while it declined in 18 countries and territories (range: -100% - -25%). The remaining five countries and territories either did not report any changes or had not reported any cases during EW 40 compared to the previous week.

For the same period, **COVID-19 weekly deaths** decreased by -31.0% (58 deaths) compared to the previous week. Three countries and territories in the subregion observed a relative increase in their weekly deaths - Cayman Islands (2 deaths, 100% increase), Saint Lucia (12 deaths, 100% increase), and Trinidad and Tobago (17 deaths, 41.7% increase) during EW 40 compared to the previous week. Weekly deaths either remained the same (n=24) or declined in the remaining countries and territories of the subregion (n=7, range: -100 – -35.7% decrease).

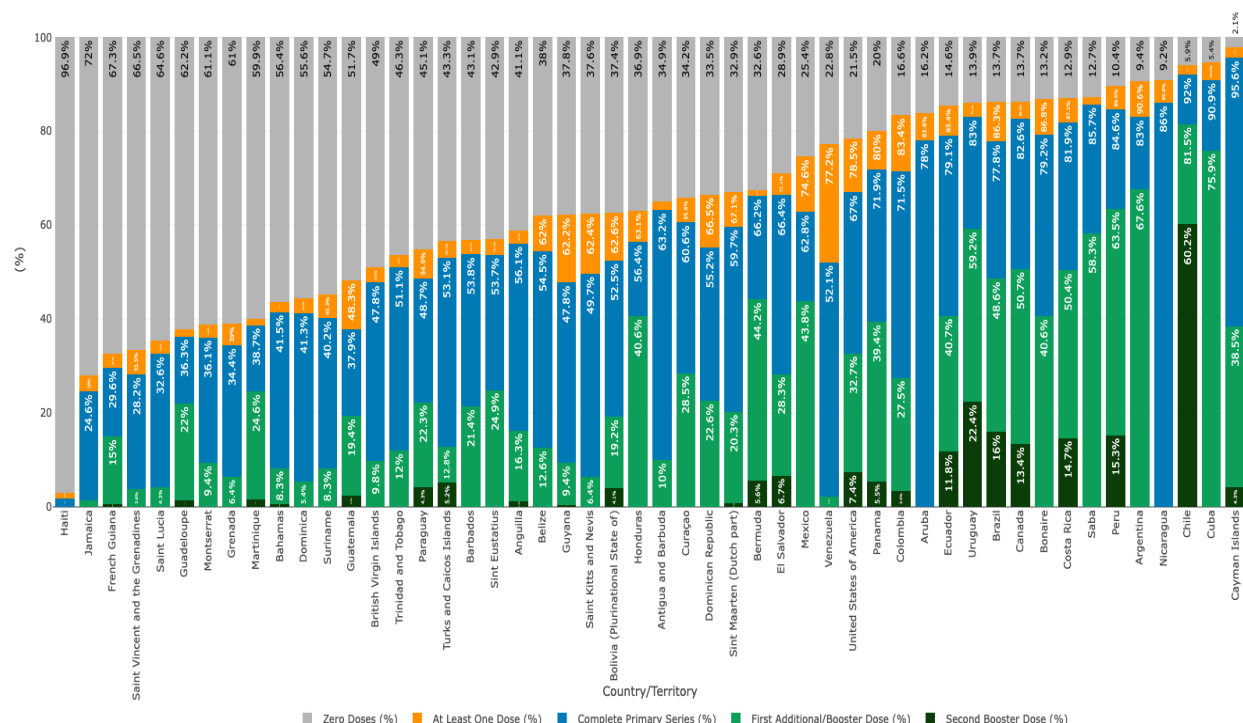
During EW 40, 19 countries and territories with available data for **weekly COVID-19 hospitalizations** reported either a decline (n=7, range: -89 - -8.3% decrease) or no substantial changes (n=12) in weekly hospitalizations compared to the previous week. Similarly, all 10 countries and territories with data available for **COVID-19 ICU admissions** either reported a decline (n=7, range: -100 - -12.9% decrease) or remained the same (n=3) during EW 40 compared to the previous week.

Notable increases in weekly cases in the subregion during EW 40 were observed in Bermuda (66 new cases, 106.3% increase), Curaçao (22 new cases, 100% increase), United States Virgin Island (53 new cases, 55.9% increase), and Cayman Islands (148 new cases, 27.6% 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 coverage rate, by vaccine dose, for countries and territories in the Region of the Americas. As of EW 40, 2022.



A summary of the current vaccination coverage rate of each country or territory in the Americas is reported in **Figure 7**. The data are stratified by vaccine dose: "At least one dose", "Completed primary series", "First additional/booster dose" and "Second additional/booster dose". Also, the graph reports the proportion of individuals in the total population of each country or territory who have not yet received any doses of a COVID-19 vaccine (i.e., "Zero dose").

The coverage status varies considerable between countries/territories. While some countries report high drop-out rates between "At least one dose" and "Completed primary series" categories, others report high coverage rates with "First additional/booster dose" and "Second additional/booster dose". Of note, all countries report some portion of their population who remains unvaccinated.

Genomic surveillance

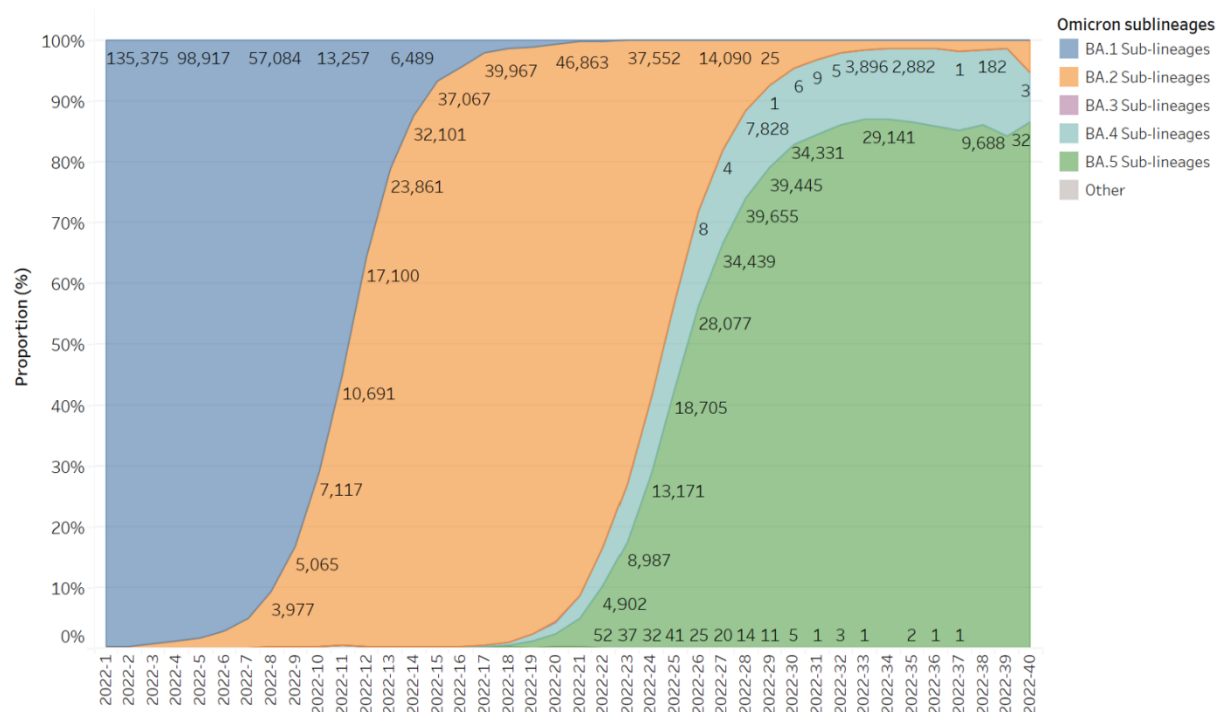
Through PAHO's Genomic Surveillance Regional Network and the work from the Member States, 460,499 full genome sequences of SARS-CoV-2 from Latin America and the Caribbean have been uploaded to the Global Initiative on Sharing All Influenza Data (GISAID) platform up to 10 October 2022.

After the introduction of the Omicron VOC in the Americas at the end of 2021, it has rapidly increased in prevalence and has been officially reported by 54 countries or territories. Omicron is

now predominant in all PAHO countries. In the past two months, only seven non-Omicron sequences have been detected (six Delta VOC and one Alpha VOC in North America, one Delta VOC in South America).

Omicron comprises the BA.1 to BA.5 sublineages (or subvariants), which are also subdivided into diverse sublineages based on additional mutations that slightly change the genomic profile but not enough to define a new Variant. These sublineages of BA.1 to BA.5 include those denominated as BC.x to BZ.x and CA.x to CG.x. The cumulative proportion of Omicron sequences collected in the Americas from November 2021 to date are: 49.0% of BA.1 (and BA.1 sublineages), 27.0% of BA.2 (and sublineages), <0.1% of BA.3 (and sublineages), 4.1% of BA.4 (and BA.4 sublineages), and 19.9% 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**). The proportion of BA.4 and in particular BA.5 continues to increase throughout the Region. Notably, in the past four weeks, the BA.4 and BA.5 (and sublineages) combined represent 98.1%, 92.3%, 98.5%, and 96.9% of the characterized samples in North America, the Caribbean, Central America, and South America, respectively. Recent increases in the proportion of BA.2.75 in North America and of BA.4.6 in all subregions have been noted. However, there is not (so far) sufficient evidence to infer increased severity or phenotypic impact in either of the sublineages, besides the already established for Omicron.

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



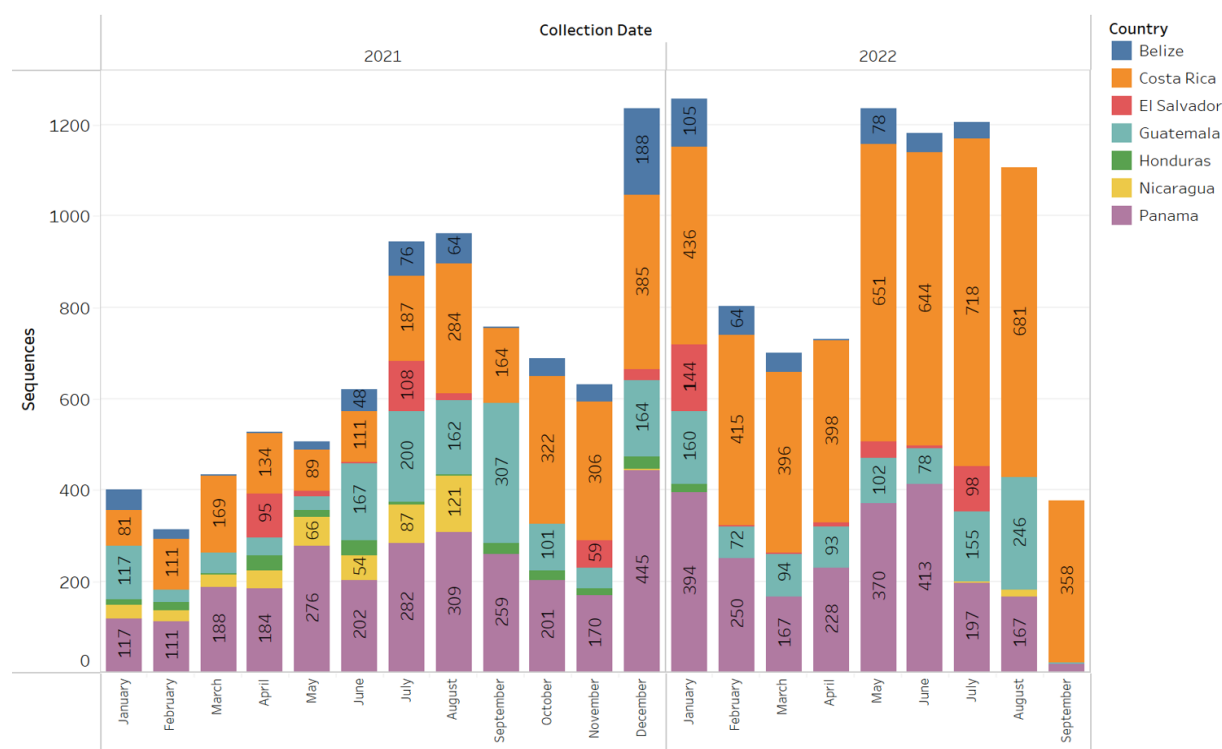
Source: GISAID

Spotlight: Sequencing and genomic surveillance in Central America

During the last 19 months (January 2021 to 8 October 2022), 16,603 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 (38.0%) of cumulative sequences, while BA.2 and BA.2 sublineages represent 29.3% of the cumulative sequences, and BA.3, BA.4, and BA.5 (with their respective sublineages) represent 0.2%, 9.1%, and 23.5% 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 (14 August to 8 October), BA.5 is the predominant sublineage (83.3%) while BA.2 and BA.4 account for 1.5% and 15.2% of the sequences, respectively. It is important to note that the majority of sequences for the 8-week period was contributed by Costa Rica (78%).

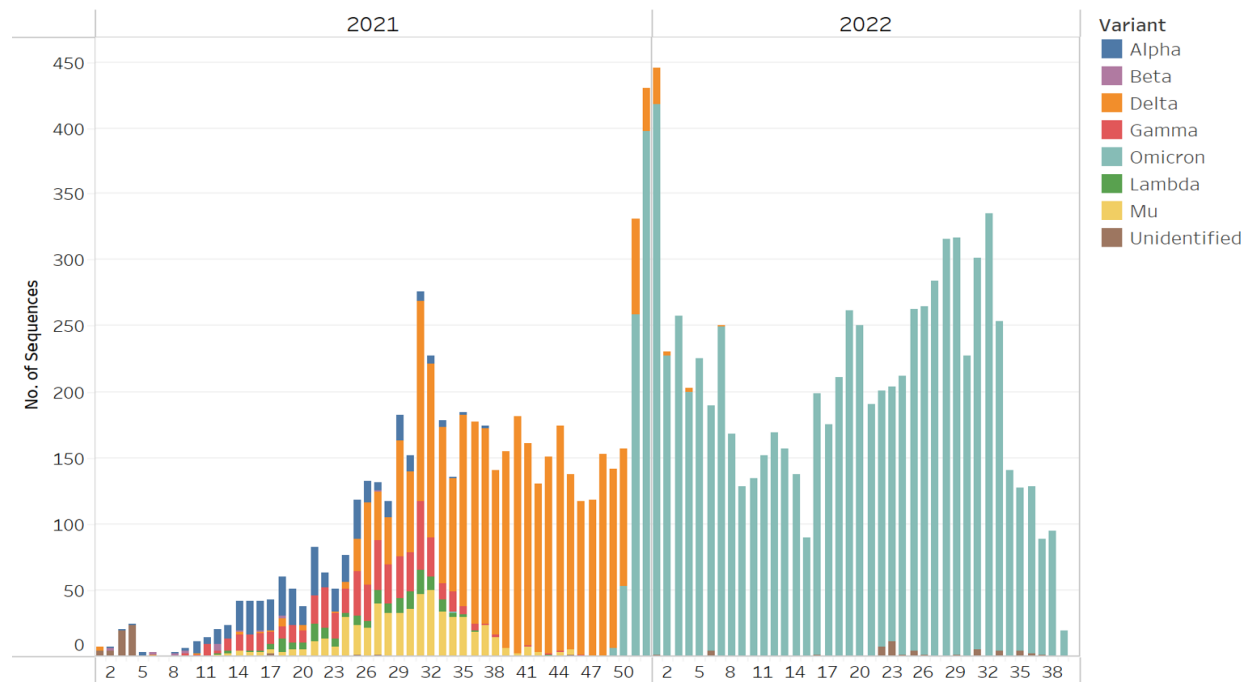
It is important that all countries at PAHO region continue the collection of representative samples for sequencing and to maintain COVID-19 appropriate genomic surveillance.

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



Source: GISAID

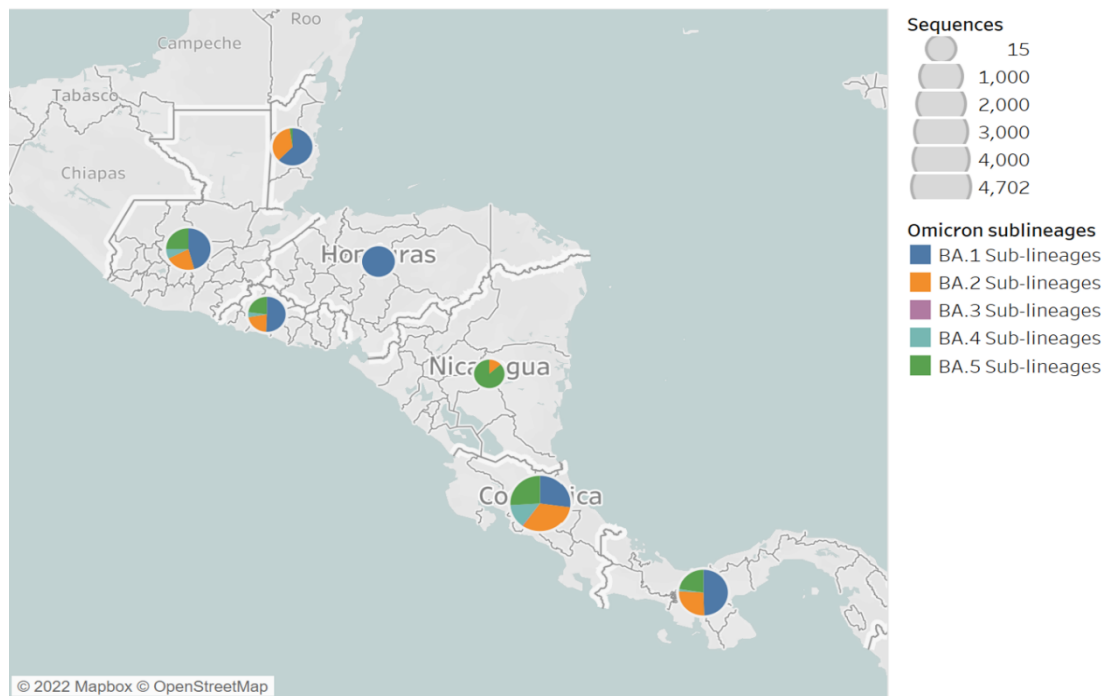
Figure 10. Variants detected and reported by the Countries in Central America (January 2021-October 2022)



Source: GISAID

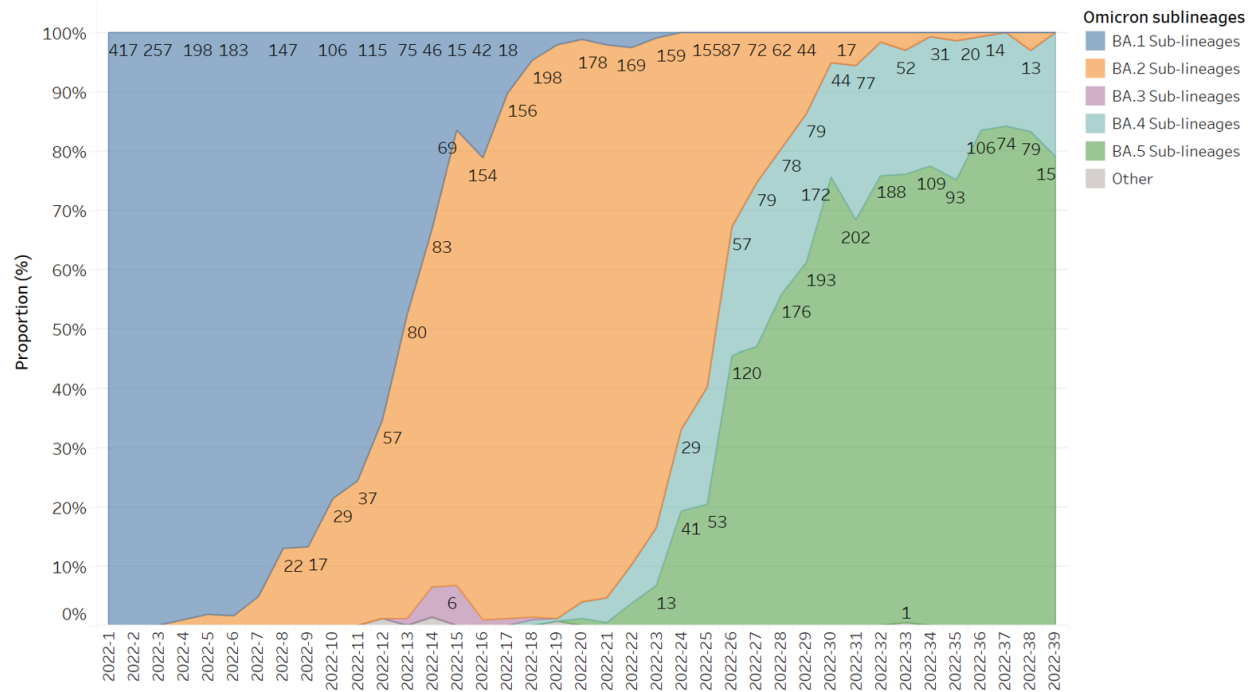
Country-specific data is available at: https://ais.paho.org/phi/viz/SARS_CoV2_variants_regional.asp

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



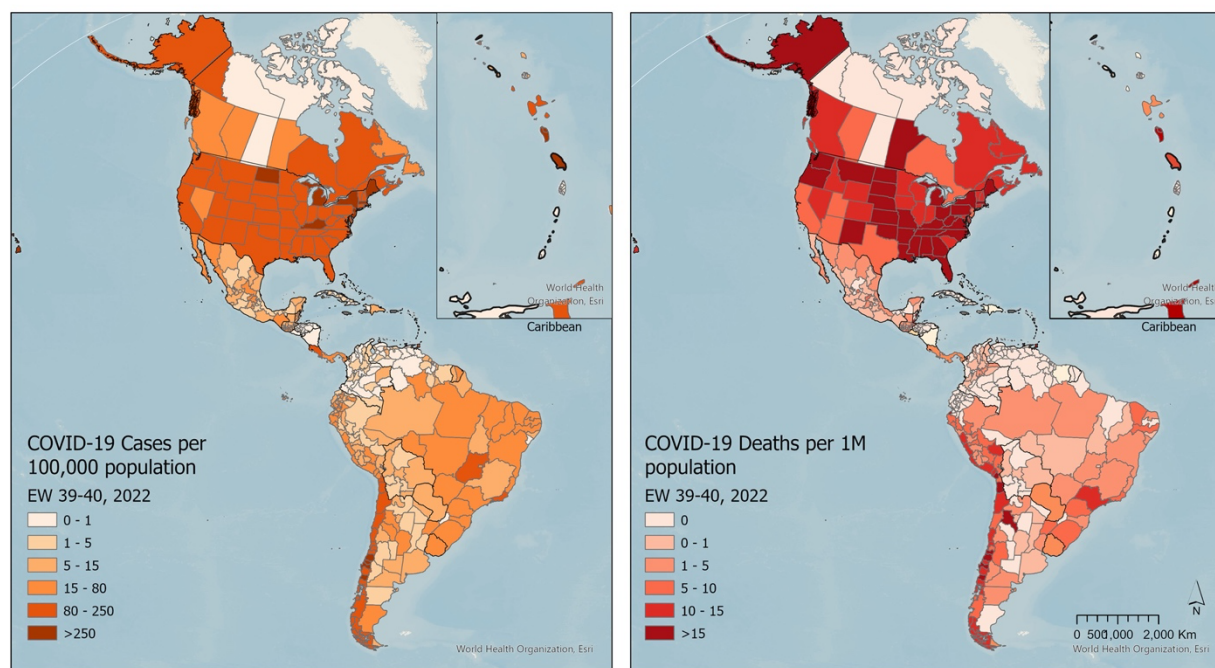
Source: GISAID

Figure 12. Distribution of VOC Omicron sublineages identified by the countries in Central America (January - October 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 39 and 40, 2022.



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 39 and 40, 2022. At the regional level, incidence and mortality have been decreasing in the past two weeks, compared to the previous two weeks.

At the sub-regional level, trends in incidence have also been declining compared to the previous two weeks in all sub-regions except the Caribbean sub-region. The largest relative decrease in incidence was observed in the North America subregion. In the United States of America, most states reported between 80-250 cases per 100,000 population while a few states reported more than 250 cases per 100,000 population. Incidence rates declined in Mexico compared to the previous two weeks but slightly increased in Canada. In all Central American countries/territories, incidence rates declined compared to the previous two weeks. In South America, overall incidence declined in all countries of the sub-region except in Chile and Paraguay. Incidence rates were above 850 cases per 100,000 in several regions in Chile. In the Caribbean, most sub-national territories reported below 80 cases per 100,000 over the past 2 weeks.

The highest mortality rates (>15 deaths per million population) were observed in Canada (mainly in the province of Ontario), the United States (mid and south-eastern parts), Peru, Chile, Argentina, and Dominica. Overall mortality rates decreased in all four subregions in the region of the Americas.