

Weekly COVID-19 Epidemiological Update - Region of the Americas

Issue 38, published October 25, 2022

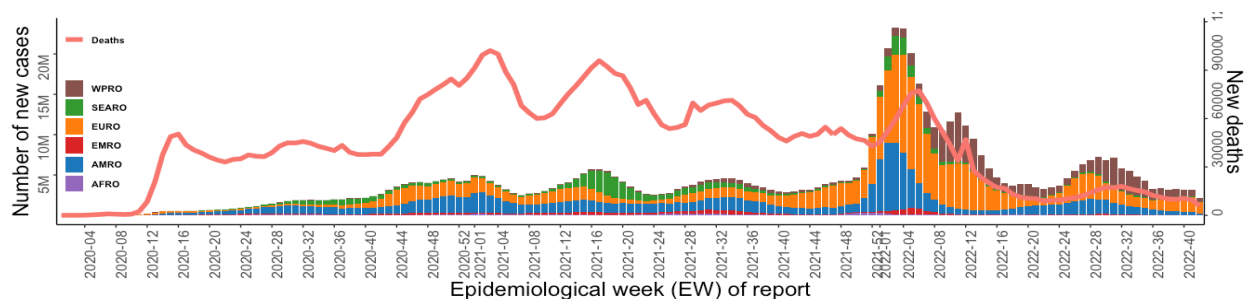
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- Executive summary including global overview
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Executive Summary

- **Since the onset of the pandemic** in 2020 and up to October 25, 2022, a cumulative total of 625.2 million COVID-19 cases including about 6.5 million deaths were reported from all six WHO regions. During epidemiological week (EW) 42, cases decreased in all WHO regions (range: -41.1 - -3.7%) except for AMRO (2.4%). Similarly, COVID-19 deaths decreased in all WHO regions (range: -72.1 - -1.1%) except for EMRO (11.9%).
- **Globally**, approximately 2,766,721 new COVID-19 cases were reported in EW 42 (October 16, 2022-October 22, 2022) - a -13.6% decrease compared to EW 41 (October 09, 2022-October 15, 2022) (**Figure 1**). For the same period, 8,761 new COVID-19 deaths were reported globally - a -12.1% relative decrease compared to the previous week.
- **In the region of the Americas**, 365,303 cases and 3,468 deaths were reported in EW 42 - a 2.4% increase in cases and -1.1% decrease in deaths compared to the previous week.
- At the subregional level, COVID-19 cases increased in one subregion - South America (21%) while they decreased in the remaining three subregions (range: -22.7 - -0.6%). COVID-19 deaths increased in two subregions - North America (0.8%) and Central America (20.5%) while they decreased in the remaining two subregions.
- The overall weekly case notification rate for the region of the Americas was 35.7 cases per 100,000 population during EW 42 (34.9 the previous week). Between EW 42 and 41, the 14-day COVID-19 death rate was 6.8 deaths per 1 million population (7.7 the previous two weeks).
- Among 29 countries/territories in the region with available data, **COVID-19 hospitalizations** increased in 7 countries and territories (range: 0.8% - 100%) during EW 42 compared to the previous week. Among 22 countries and territories with available data, COVID-19 **ICU admissions** increased in 7 countries and territories (range: 1.6% - 100%).

Figure 1: COVID-19 cases and deaths by epidemiological week (EW) of report and WHO region. EW 4, 2020 - EW 42, 2022.

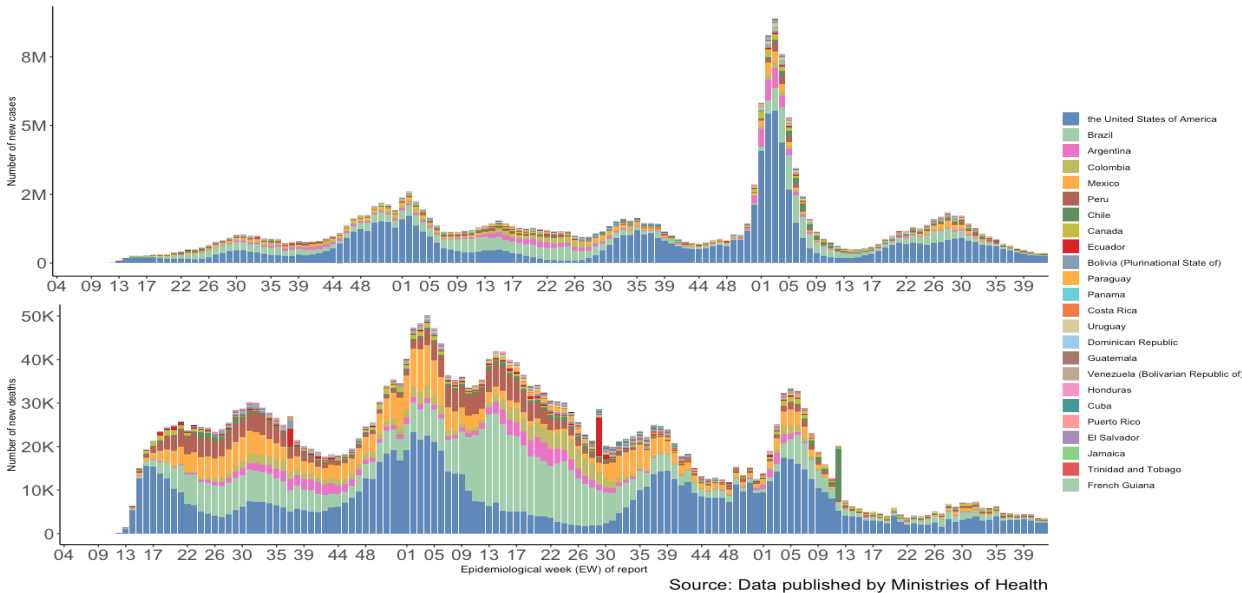


Source: Data from WHO COVID-19 Dashboard

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 - 42, 2022.



During EW 42, 365,303 new **COVID-19 cases** were reported in the region of the Americas - a relative increase of 2.4% compared to previous week (**Figure 2**). The highest number of COVID-19 cases in the last week was reported from North America (278,376 cases, -0.6% decrease) compared to the previous week. (**Table 1**). During EW 42, the highest proportions of weekly COVID-19 cases were reported by the United States of America (255,116 new cases, -0.9% decrease), Chile (34,497 new cases, 37.9% increase), Brazil (34,180 new cases, 9.1% increase).

Table 1: Weekly change (%) in cases and deaths between EW 41 and EW 42 by subregion. Region of the Americas

Subregion	Total Cases	Total Deaths	Cases EW 41	Deaths EW 41	Cases EW 42	Deaths EW 42	% Change Cases	% Change Deaths
Caribbean and Atlantic Ocean Islands	4,226,320	35,225	6,066	45	4,692	32	-22.7%	-28.9%
Central America	4,002,224	53,564	7,943	44	6,273	53	-21.0%	20.5%
North America	107,368,407	1,435,611	279,925	2,803	278,376	2,825	-0.6%	0.8%
South America	64,051,620	1,328,886	62,765	615	75,962	558	21.0%	-9.3%

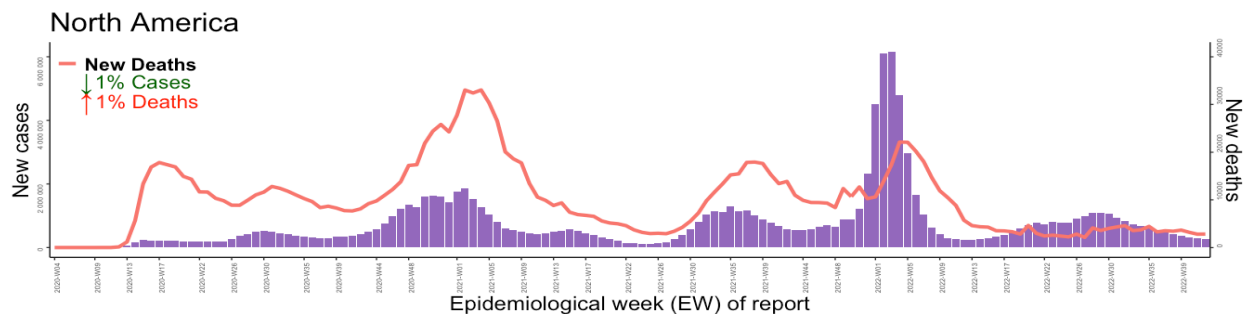
For the same period, 3,468 **COVID-19 deaths** were reported in the region of the Americas - a relative decrease of -1.1% compared to the previous week (**Figure 2**). The highest number of COVID-19 deaths in the last week was reported from the North American subregion (2,825 deaths, 0% decrease) (**Table 1**). At the national level, the highest proportions of weekly COVID-19 deaths were reported by the United States of America (2,538 new deaths, -0.4% decrease), Brazil (383 new deaths, 12.3% increase), and Canada (278 new deaths, 17.8% increase).

A summary of the COVID-19 trends for EW 42 by subregion is presented below.

North America

The overall trends for **COVID-19 cases** in North America remained stable, with a total of 278,376 new cases (-0.6% decrease) being reported during EW 42 as compared to the previous week. During EW 42, two countries reported a decline in weekly cases – Mexico (2,071 cases, -18.8 % decrease) and the United States of America (255,116 cases, -0.9% decrease) – while Canada reported a slight increase in cases (21,189 cases, 5.9 % increase) relative to the previous week. Please note that due to switching from daily to weekly reporting from 20 October 2022 onwards, the overall trends for the United States of America may differ from the previous reports.

Figure 3: COVID-19 cases and deaths by epidemiological week (EW). North America. Region of the Americas. EW 3, 2020 - EW 42, 2022.



For the same period, **weekly COVID-19 deaths** in the subregion increased by 0.8% (2,825 new deaths) relative to the previous week. The largest percent decrease in the subregion was observed in Mexico where there has been a 55.5% decrease observed in weekly deaths (9 deaths) during EW 42 compared to the previous week. The United States of America reported no substantial changes (2,538 new deaths, -0.4% decrease), while Canada reported a 17.8% increase in weekly deaths (278 new deaths) during EW 42 compared to the previous week.

During EW 42, among the two countries in North America with available data for **COVID-19 weekly hospitalizations and ICU admissions**, the United States of America reported no substantial changes in hospitalizations (n=26,829; 0.8% increase) including ICU admissions (n=3,219; 1.6% increase). Canada continued to report an increasing trend in weekly hospitalizations (n=5,666; 5.2% increase) including ICU admissions (n=277; 5.3% increase) during EW 42 compared to the previous week.

The Omicron **variant of concern** (VOC) sub-lineages of BA.4 and BA.5 are predominant in all three countries in the subregion. In the United States of America, the proportion of the BA.5 sub-lineages has been gradually decreasing over the past eight weeks while the estimated proportions of BA.5 subvariant, BF.7, BQ.1 and BQ.1.1, have been increasing over the past 3-4 weeks. The BA.5 and BA.4 sub-lineages made up about 85.5% (including 9.4% of BQ.1, 7.2% of BQ.1.1, and 6.7% of BF.7) and 11.7% (including 11.3% of BA.4.6) of sequences for the week ending on 22 October 2022 in the United States of America¹, 88.8% and 9.2% for the week of 2 October 2022 in Canada², and 91.5% and 7.6% as of EW 39 in Mexico, respectively.

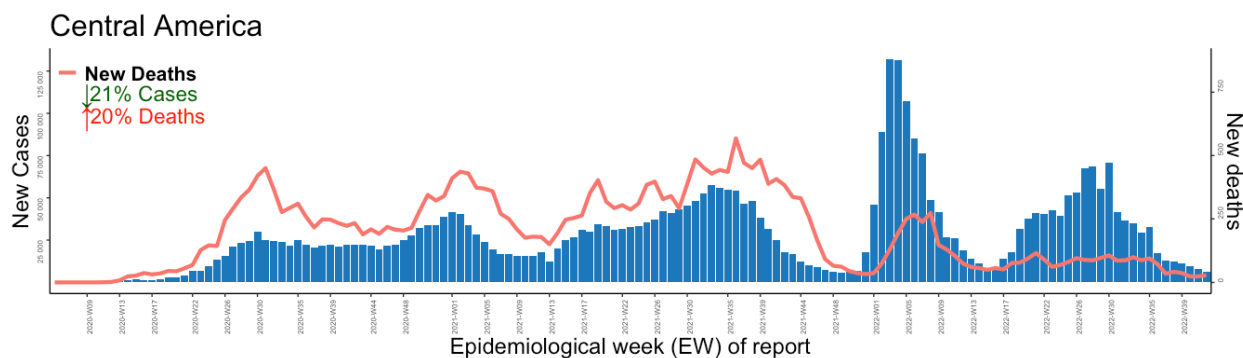
1 The United States Centers for Disease Control and Prevention (CDC). Variant Proportions. Accessed 25 October 2022. Available at: <https://bit.ly/3Obz8cT>

2 Public Health Agency of Canada (PHAC). COVID-19 Epidemiological Update. Accessed 25 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 seven consecutive weeks, with a total of 6,273 new cases being reported during EW 42 – a -21.0% 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 42, 2022.



During EW 42, **weekly cases** decreased in all countries and territories in the subregion (range: -54.1 - -10.7% decrease) except for El Salvador which did not report any new cases for EW 42. The countries with the largest decline in cases this week included Honduras (102 new cases, 54.1% decrease), Belize (17 new cases, -32% decrease), and Guatemala (2,998 new cases, -24.6% decrease).

For the same period, **weekly deaths** increased by approximately 20.5% relative to the previous week (**Figure 4**), primarily due to Honduras. In the subregion, two out of the seven countries and territories reported an increase – Honduras (30 deaths, 172.7% increase) and Belize (1 death, 100% increase). However, the percent increase in weekly deaths for Honduras is a result of a data artifact since the reported deaths included historical deaths that occurred in previous weeks from the region of Olancho.³

Among four countries/territories with available data for **weekly COVID-19 hospitalizations** in the Central American subregion, all countries/territories did not report any substantial changes in weekly hospitalizations (range: -10% decrease – 13.3% increase) during EW 42 compared to the previous week. In terms of ICU admissions, among three countries and territories with available data for **weekly COVID-19 ICU admissions**, two countries experienced a decline – Costa Rica (17 ICU admissions, -26.1% decrease) and Panama (2 ICU admissions, -71.4% decrease), while Honduras reported no changes in ICU admissions (1 ICU admission, 0%).

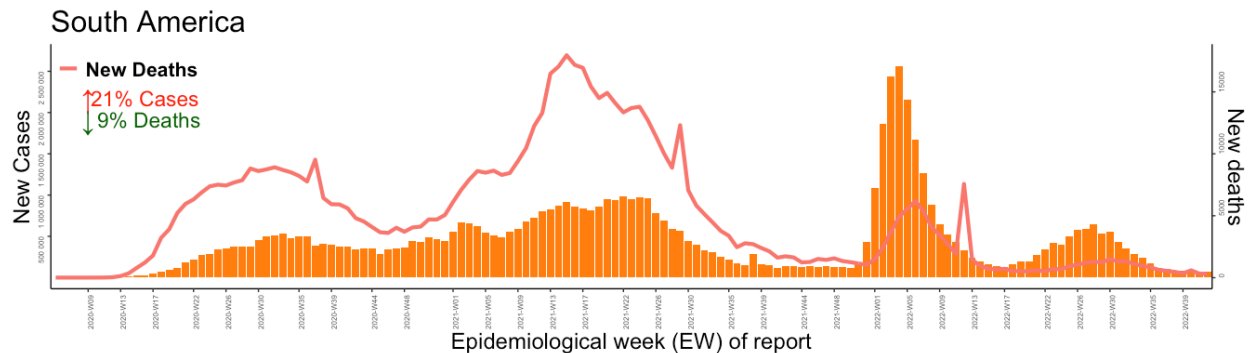
To date, Omicron lineages BA.4 and BA.5 have been reported from five and six of the seven countries and territories in the subregion respectively – Costa Rica, Panama, Guatemala, El Salvador, Nicaragua, and Belize (BA.5 only).

3 Secretaría de Salud Honduras. boletin covid 17-10-2022. Accessed 25 October 2022. Available at : <https://bit.ly/3sonz9v>

South America

In South America, the overall **COVID-19 incidence** for the sub-region has increased by 21%, with a total of 75,962 new COVID-19 cases being reported during EW 42 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 42, 2022.



Out of the 10 countries and territories in the sub-region, eight experienced an increase in cases during EW 42 compared to the previous week (range: 9.1 – 66.5% increase). The largest proportion of reported cases was reported by Chile (34,497 new cases, 37.9% increase), followed by Brazil (34,180 new cases, 9.1% increase), and Argentina (2,082 new cases, 11.3% increase). The remaining two countries reported a decline in cases during EW 42 relative to the previous week – Ecuador (631 new cases, -5.1% decrease) and Bolivia (Plurinational State of) (264 new cases, -12% decrease).

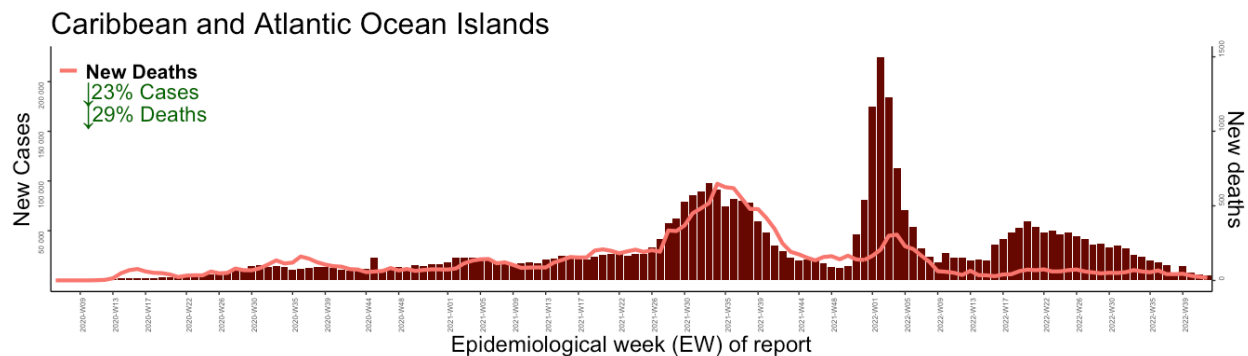
During EW 42, **COVID-19 weekly deaths** in the subregion have decreased by 9.3% with a total of 558 COVID-19 deaths being reported in South America compared to the previous week. Four countries and territories in the subregion reported an increase in weekly deaths (range: 12.3 – 100% increase). The largest proportion of the reported deaths was observed in Brazil (383 new deaths, 12.3% increase), followed by Chile (123 new deaths, 16% increase).

Among four countries and territories in the subregion with data available for **COVID-19 weekly hospitalizations**, three reported a decline (range: -7.2 - -1% decrease) while one country – Venezuela (Bolivarian Republic of) – reported a 9.8% increase in weekly hospitalizations (n=134) during EW 42 compared to the previous week. Similarly, for the same period, four out of five countries and territories with data available for **COVID-19 ICU admissions** reported a decrease in weekly ICU admissions (range: -14.8 - -4.2% decrease) while one country – Uruguay – reported no substantial changes in ICU admissions (n=14, 7.7% increase) 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 42, 2022.



In the Caribbean and Atlantic Ocean Islands sub-region, **weekly cases** decreased by -22.7% and compared to the previous week (**Figure 6**). At the national level, cases increased in nine out of the 36 countries and territories in the subregion (range: 10.7% - 190.9%) while it either declined (n=10, range: -100% - -12.5%) or remained the same (n=17) in the remaining 27 countries and territories.

For the same period, **COVID-19 weekly deaths** decreased by -28.9% (32 deaths) compared to the previous week. During EW 42, Four countries and territories in the subregion observed a relative increase in their weekly deaths (range: 1 - 2 deaths, 100% increase), four countries/territories reported a decrease (range: -100 - -30% decrease), and the remaining countries/territories remained the same or did not report any deaths compared to the previous week.

During EW 42, 18 countries and territories with available data for **weekly COVID-19 hospitalizations**, two countries/territories reported an increase in weekly hospitalizations – Guadeloupe (28 hospitalizations, 12% increase) and Martinique (41 hospitalizations, 7.9% increase), while remaining countries/territories either reported a decline (n=5, range: -50 - -1.2% decrease) or remained the same (n=11) in their weekly COVID-19 hospitalizations. Similarly, among nine countries and territories with data available for **COVID-19 ICU admissions**, three reported an increase (range: 66.7 – 100% increase), two reported a decline (range: -100 - -9.5% decrease), and the remaining countries/territories remained the same during EW 42 compared to the previous week.

Notable increases in weekly cases in the subregion during EW 42 were observed in Sint Maarten (32 new cases, 190.9% increase), Saint Pierre and Miquelon (10 new cases, 150% increase), Curaçao (28 new cases, 75% increase), and Suriname (27 new cases, 58.8% 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. Comparison of the COVID-19 vaccination uptake among persons aged 60 years or older, by income group* of the country of residence. The region of the Americas (n=16)** . As of EW 42, 2022.

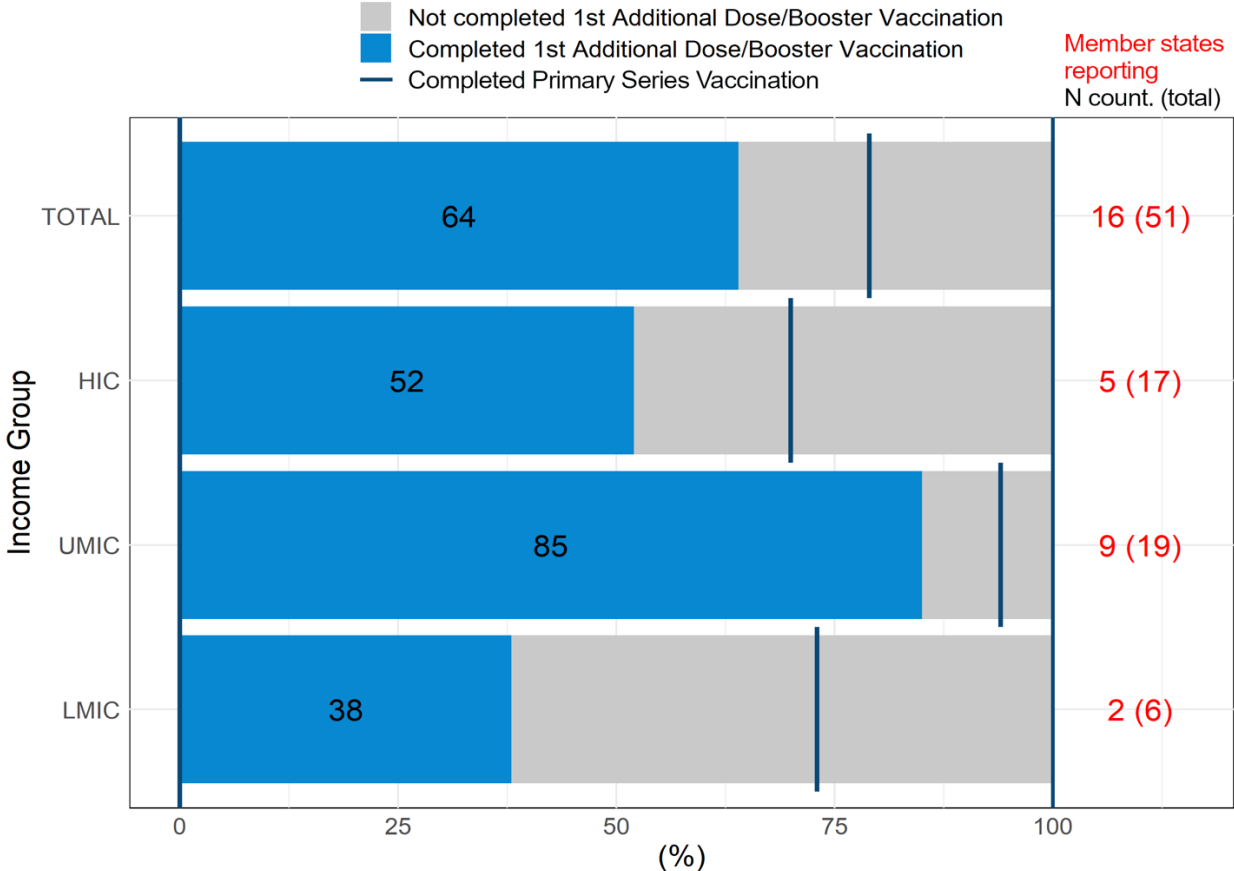


Figure 7 compares the COVID-19 vaccination uptake*** among persons aged 60 years or older, by income group of the country of residence. The dark blue like represents the vaccination coverage rate in this population, while the blue area represents the proportion of this population who received at least one additional/booster dose of COVID-19 vaccine.

The coverage gaps between the rate of the Complete Primary Series and the rate of the 1st Additional/Booster Dose are highest in Lower Middle Income (LMIC) and High Income (HIC) countries and territories. The Upper Middle Income (UMIC) countries report the highest coverage rates for both measures, as well as the smallest gap between the two.

* Based on the World Bank 2021-2022 Income Level Classification
 ** Data for 16 countries and territories that have reported since August 2022.
 *** 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

Declining data completeness and timeliness on vaccination rates are among the strongest limitations to this analysis. To facilitate interpretation, besides each income group we included the number of countries and territories that reported data for this age group since August 2022. Note that all numbers are marked in red to underscore that only half of countries for each group reported data.

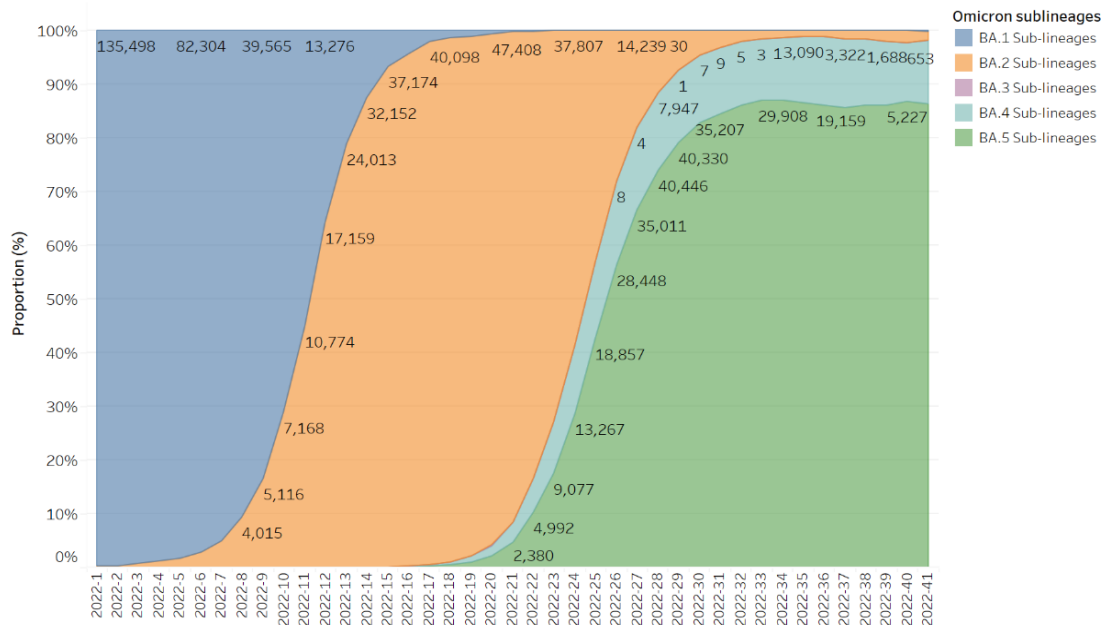
Genomic surveillance

Through PAHO's Genomic Surveillance Regional Network and the work from the Member States, 469,579 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 25 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 five non-Omicron sequences have been detected (three Delta VOC and one Alpha VOC in North America, and 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 CU.x. The cumulative proportion of Omicron sequences collected in the Americas from November 2021 to date are: 47.9% of BA.1 (and BA.1 sublineages), 26.6% of BA.2 (and sublineages), <0.1% of BA.3 (and sublineages), 4.2% of BA.4 (and BA.4 sublineages), and 21.2% 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 97.7%, 98.0%, 98.3 %, and 99.0% 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 changes in severity or vaccine effectiveness for either of the sublineages, besides the already established for Omicron. Finally, XBB, a new recombinant between BA.2.10.1 and BA.2.75 sublineages, has been recently identified and added to the list of Omicron subvariants under monitoring. Currently, XBB has mainly been detected in India and Singapore. In the Region, it has been detected in the United States (46 sequences), Canada (10 sequences) and Argentina (one sequence).

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



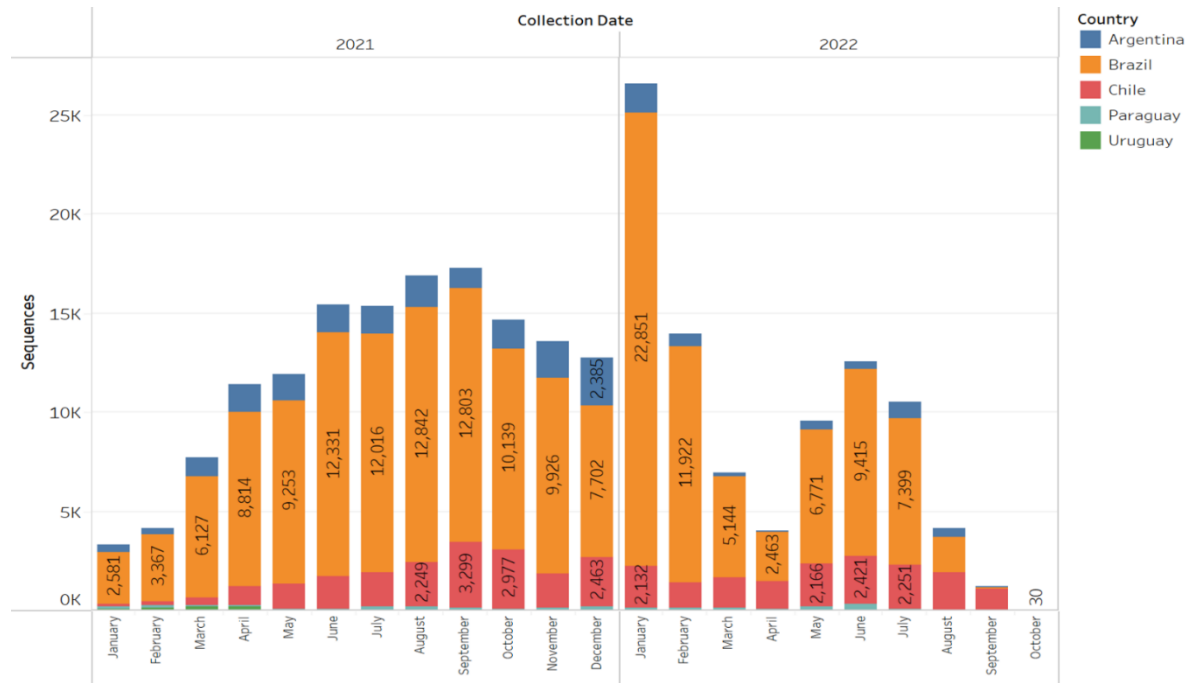
Source: GISAID

Spotlight: Sequencing and genomic surveillance in the Southern Cone

During the last 22 months (January 2021 to 25 October 2022), 233,376 whole genome sequences from the Southern Cone countries (Argentina, Brazil, Chile, Paraguay, and Uruguay) have been generated as part of the genomic surveillance systems (**Figure 9**). As in other subregions, Omicron is vastly predominant and there have been no “previously circulating” VOC/VOI detected in the past six weeks (**Figure 10**). Since Omicron’s first detection, BA.1 and BA.1 sublineages represent the majority (56.1%) of cumulative sequences, while BA.2 and BA.2 sublineages represent 18.8% of the cumulative sequences, and BA.3, BA.4, and BA.5 represent <0.01%, 8.1%, and 16.9% of cumulative sequences, respectively (**Figure 11**). However, BA.1 was progressively replaced by BA.2 in weeks 12 to 18, and BA.2 is being replaced by BA.4 and BA.5 since week 22 (**Figure 12**). When focusing on the past eight weeks, BA.5 is the predominant sublineage (67.9%) while BA.4 and BA.2 account for 31.0% and 1.1% of the sequences, respectively. In the same period, BA.1 represented only 0.1% of the sequences and BA.3 was not identified. It is important to note that the majority of sequences for the eight-week period was contributed by Brazil (75.1%).

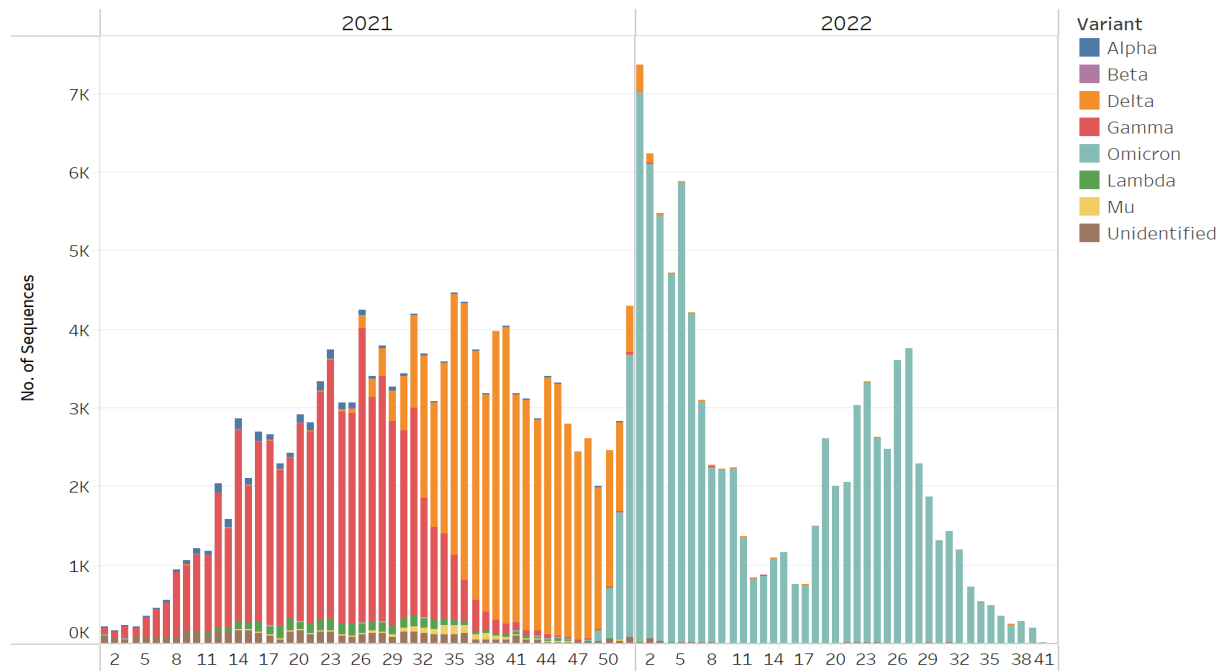
It is important that all countries at PAHO region continue the collection of representative samples for sequencing and to maintain COVID-19 appropriate genomic surveillance.

Figure 9. Number of sequences generated monthly by countries in the Southern Cone (January 2021- October 2022)



Source: GISAID

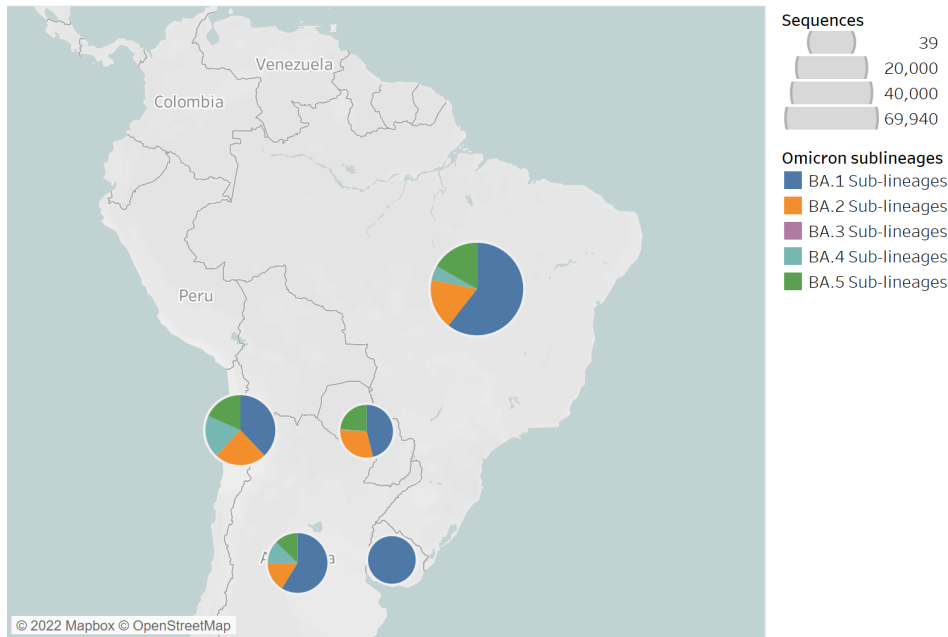
Figure 10. Variants detected and reported by the countries in the Southern Cone (January 2021- October 2022)



Source: GISAID

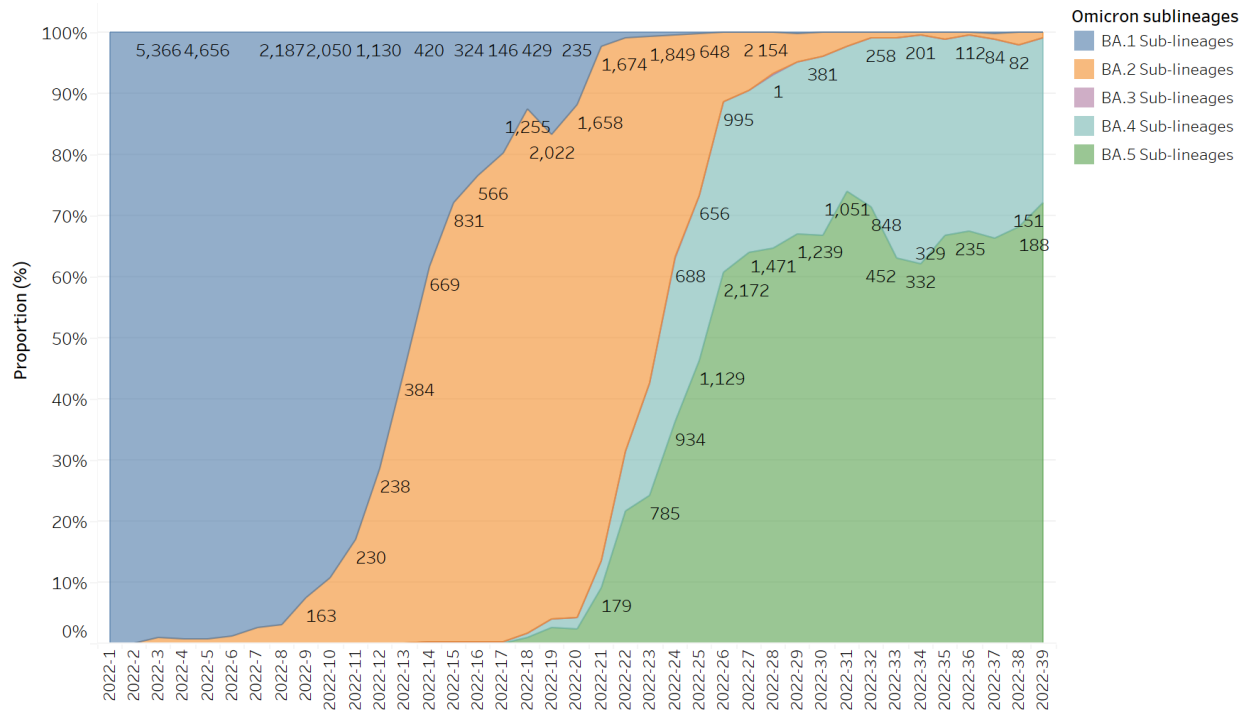
Country-specific data is available at: https://ais.paho.org/phi/viz/SARS_CoV2_variants_regional.asp

Figure 11. Distribution of Omicron sublineages identified by the countries in the Southern Cone (November 2021–October 2022)



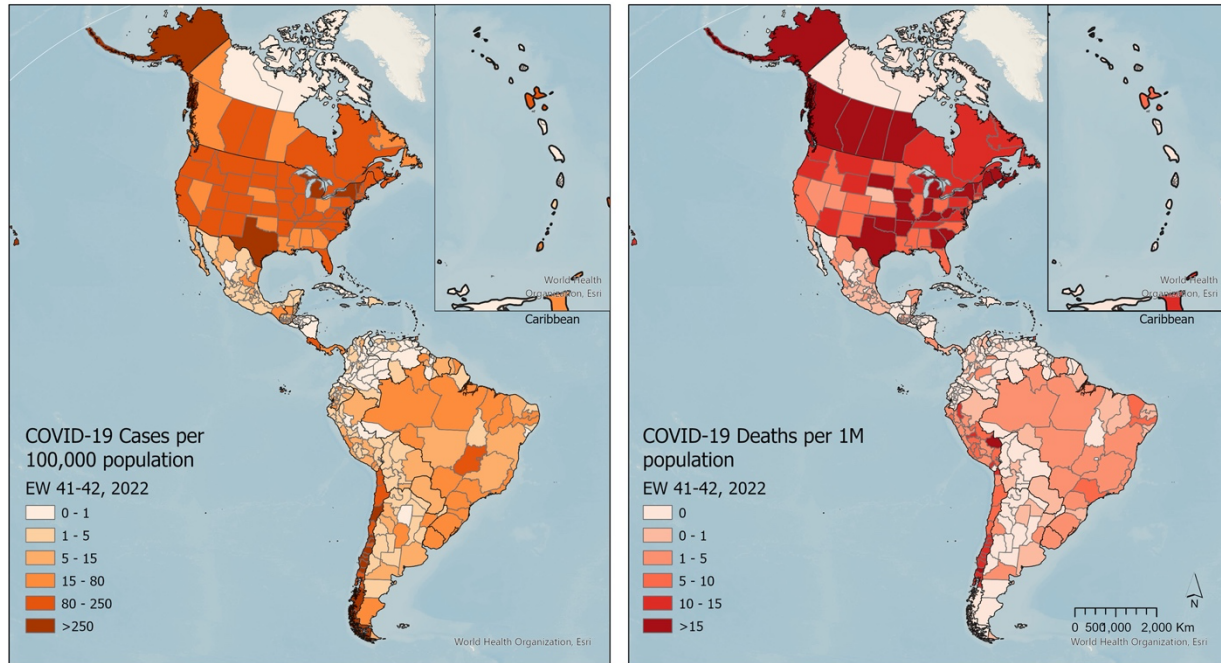
Source: GISAID

Figure 12. Proportion of VOC Omicron sublineages in the Southern Cone subregion (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 41 and 42, 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 41 and 42, 2022.

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

In North America, some parts of the US (Alaska, Texas, Michigan, New York and Vermont), and Canada (Quebec, Ontario, Saskatchewan, Alberta, Prince Edward Island, Nova Scotia, and New Brunswick) had the highest incidence rates. High mortality rates were observed in the north-eastern and central states, and Alaska in the US, and in most parts of Canada.

In Central America, cases and deaths have continued declining, while in South America, Chile continued to report a high number of cases. Some parts of Peru (Madre de Dios, Amazonas, Moquegua, Pasco), and the north and central regions of Chile observed some of the highest mortality rates in the sub-region.

In the Caribbean islands, Puerto Rico showed the highest number of new cases and deaths, and Guadeloupe showed the highest incidence rate in the sub-region during EW 41-42. In terms of mortality, both Trinidad and Tobago and Guadeloupe show high mortality rates in the subregion.