



Epidemiological Update

Increase of the Delta variant and its potential impact in the Region of the Americas

8 August 2021

In view of the increased circulation of the variant of concern (VOC) Delta in several countries within and outside the Region of the Americas, which in some areas is accompanied by an increase in hospitalizations, the Pan-American Health Organization / World Health Organization (PAHO / WHO) recommends reviewing preparedness plans and preparing for a possible increase in hospitalizations

Introduction

Since the initial identification of SARS-CoV-2, as of 5 August 2021, more than 2.6 million complete genomic sequences have been shared worldwide, providing visibility and public access to this information. The ability to monitor viral evolution, almost in real time, has a direct impact on the public health response to the COVID-19 pandemic, as it allows the identification of changes in epidemiological patterns, changes in virulence, or even a decrease in the preventive efficacy of vaccines, among other contributions.

Globally, several countries with an increase in cases and hospitalizations with the emergence of Variant of Concern (VOC) Delta can be observed (**Figure 1**), including Member States in the Americas with high vaccination coverage. With the VOC Gamma as the predominant variant in several countries and territories of the Americas, and the emergence of the identification of VOC Delta in these same countries and territories, in addition to other variants of interest (VOI) (**Figure 2**), such as Lambda, for example, exhorts the necessity to point out to the Member States of the region the importance of the preparatory process for the expansion of care capacity in the face of a potential increase in cases, hospitalizations, and deaths.

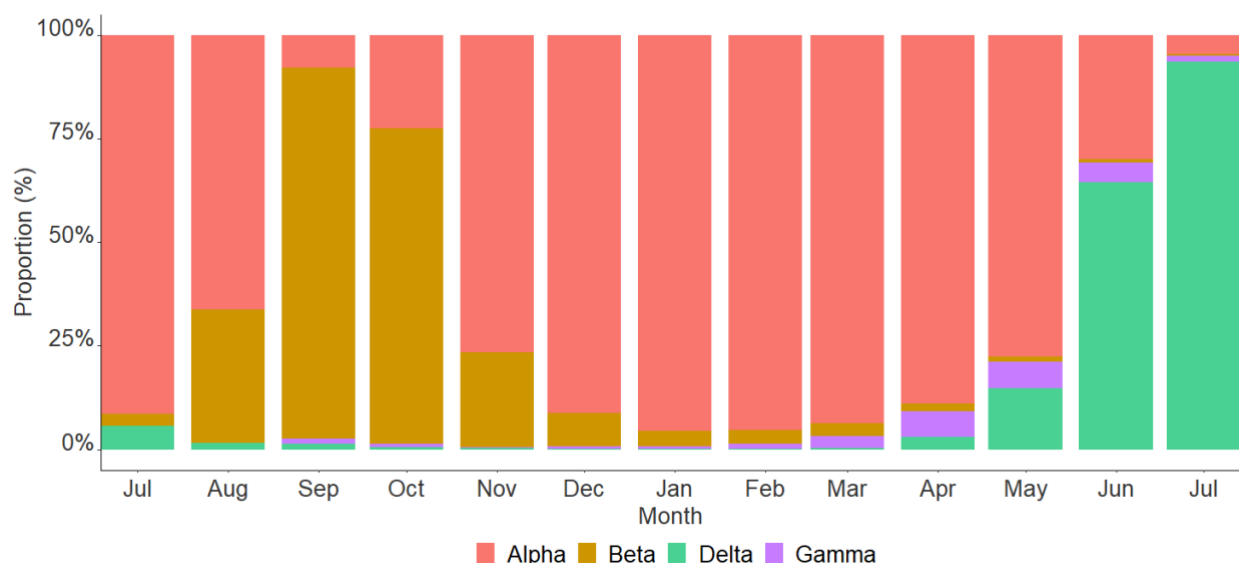
In July 2020, variant B.1.617.2 was first reported, which was subsequently designated as VOC Delta, with significant health damage, however, over 13 months later, it has been reported by 135 countries globally and 24 countries and territories in the Americas Region. It is worth noting that since April 2021, a global exponential increase in VOC Delta samples has been observed. In July 2021, a global predominance of VOC Delta was observed in almost 90% of the samples worldwide (**Figure 3**). Such predominance remains even after considering VOI in the analysis (**Figure 4**).

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Admittedly, this information regarding the variants must be evaluated with caution due to the possible biased representation of SARS-CoV-2 genomic sequencing data (GSD), with a higher contribution from high-income countries¹.

This bias should be considered when evaluating the graphs presented in this epidemiological update on the presence or absence of a particular variant in a location and its relative frequency. The presence of a variant does not necessarily mean its circulation in the community as it may be sporadic or travel-associated cases. In addition, not all countries share their data through the GISAID platform, and genetic sequencing capacity may differ from one country to another, which may explain the silence in signaling VOC or VOI circulating in their territories, and therefore negatively influence the ability to structure the system in its healthcare response.

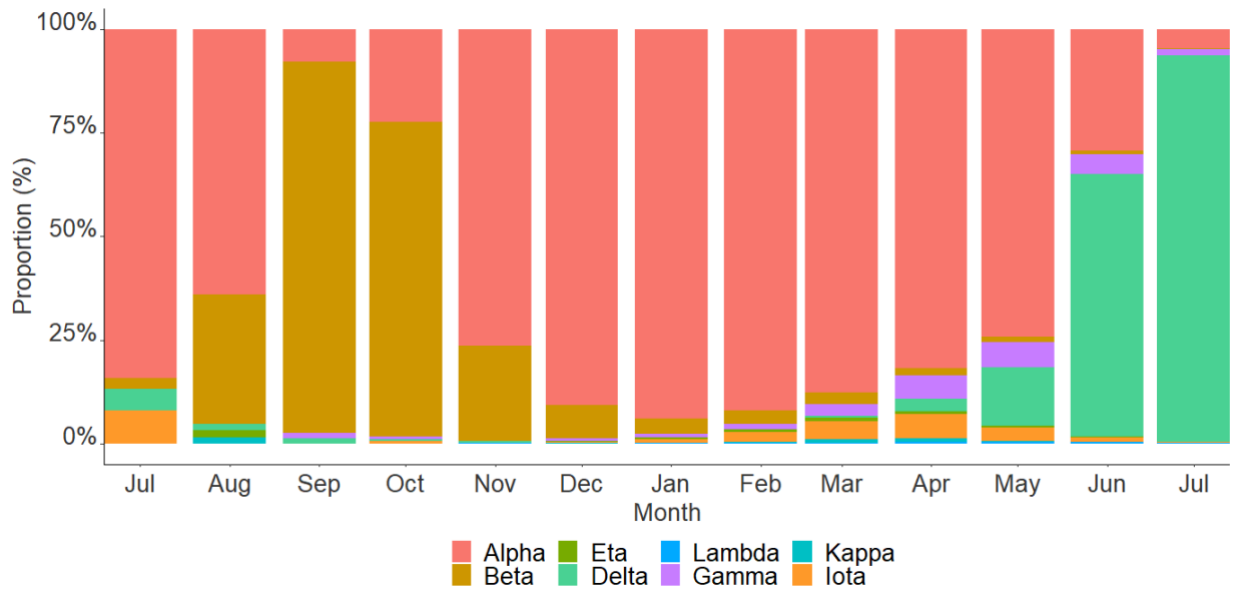
Figure 1. Global percentage distribution of variants of concern (VOC) from GISAID. July 2020 to July 2021



Source: GISAID. Available at: <https://bit.ly/3qA9nXI>. Accessed August 05, 2021.

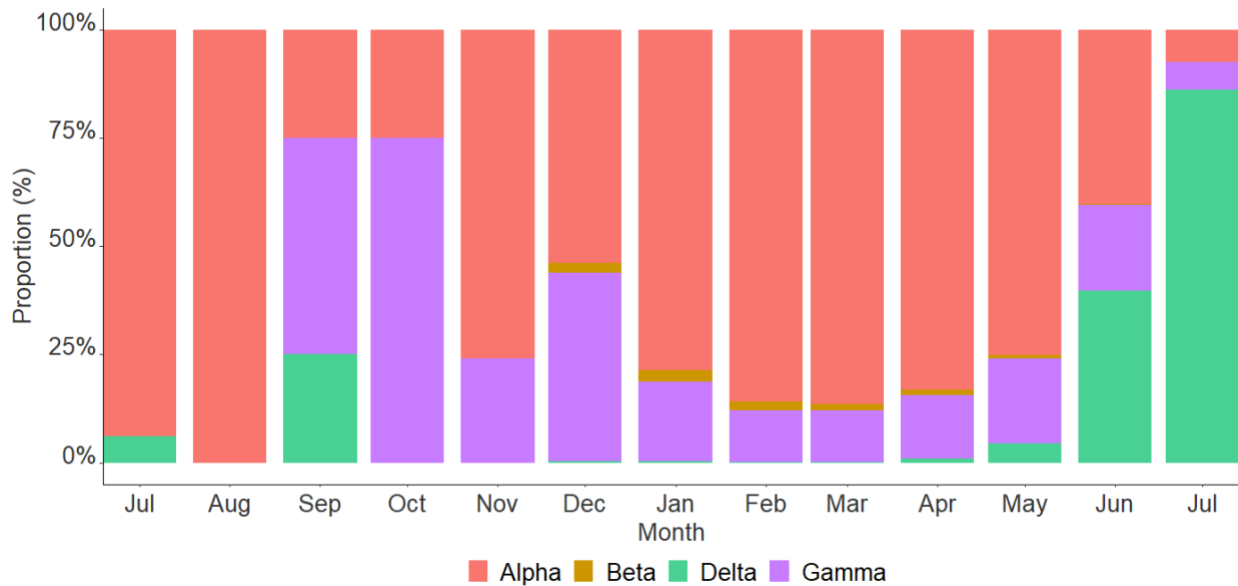
¹ WHO. SARS-CoV-2 genome sequencing for public health purposes. Interim guidance, 8 January 2021. WHO/2019-nCoV/genomic sequencing/2021.1. Available in English at: <https://bit.ly/38uAr0>

Figure 2. Global percentage distribution of variants of concern (VOC) and variants of interest (VOI) from GISAID. July 2020 to July 2021



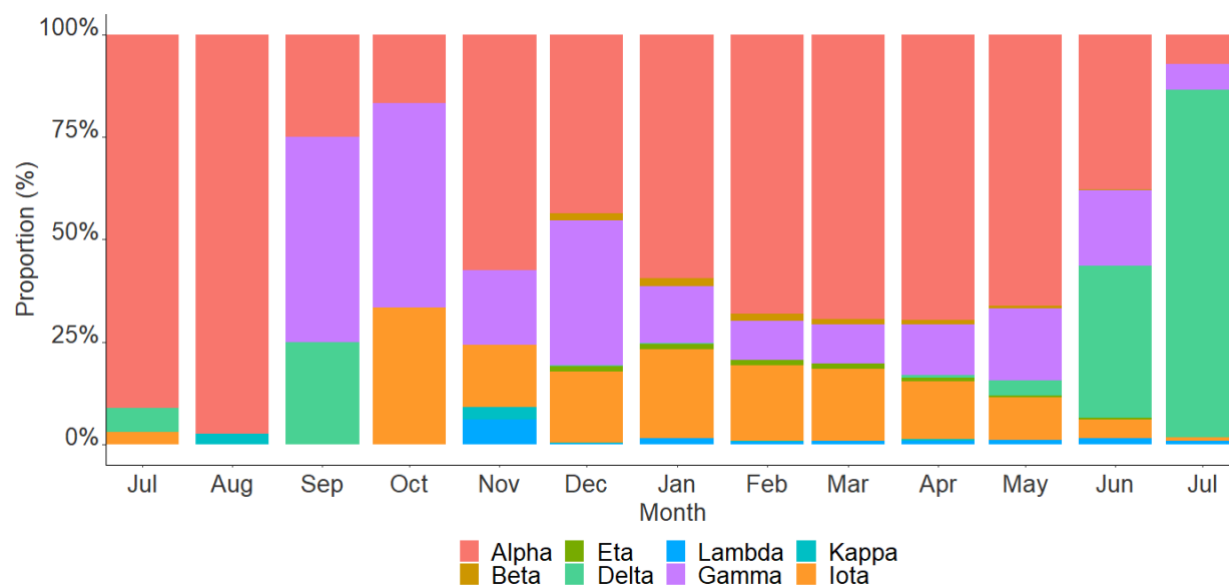
Source: GISAID. Available at: <https://bit.ly/3qA9nXI>. Accessed August 05, 2021.

Figure 3. Percentage distribution of variants of concern (VOC) from GISAID in the Americas. July 2020 to July 2021



Source: GISAID. Available at: <https://bit.ly/3qA9nXI>. Accessed August 05, 2021.

Figure 4. Percentage distribution of variants of concern (VOC) and variants of interest (VOI) from GISAID in the Americas. July 2020 to July 2021.



Source: GISAID. Available at: <https://bit.ly/3qA9nXI>. Accessed August 05, 2021.

Variants of concern (VOC)

New nomenclature

The naming systems established by GISAID, Nextstrain, and Pango to name and track SARS-CoV-2 strains are and will continue to be used by scientists and in scientific research. However, to assist in public health discussions regarding variants, the World Health Organization (WHO) has convened a group of scientists from the Virus Evolution Working Group, the WHO COVID-19 reference laboratory network, representatives from GISAID, Nextstrain, Pango and other experts in virology, microbial nomenclature and communication from various countries and agencies to consider easy-to-pronounce, non-coding nomenclatures for VOI and VOC. Currently, this group of experts convened by the WHO has recommended the use of letters from the Greek alphabet. This avoids the stigmatization of using proper names of countries or geographic areas, and makes them easier and more practical for use by non-scientific audiences.

Globally, four of the SARS-CoV-2 variants (Alpha, Beta, Gamma and Delta) have been identified to date (**Table 1**), which have been classified by WHO as variants of concern, following convention of the WHO Working Group on the Evolution of SARS-CoV-2. Additionally, four variants of SARS-CoV-2 have been classified as variants of interest as of 4 August 2021 (**Table 2**).

Table 1. Currently designated variants of concern (VOC)

Variants of Concern (VOC)		
WHO label	Pango Lineage	Country and date of first identification
Alpha	B.1.1.7	United Kingdom (September/20)
Beta	B.1.351	South Africa (May/20)
Gamma	P.1	Brazil (November/20)
Delta	B.1.617.2	India (October/20)

Table 2. Currently designated variants of interest (VOI)

Variants of Interest (VOI)		
WHO label	Pango Lineage	Country and date of first identification
Eta	B.1.525	Multiple countries (December/20)
Iota	B.1.526	United States (November/20)
Kappa	B.1.617.1	India (October/20)
Lambda	C.37	Peru (December/20)

Factors considered for the operational definition of VOCs include:

- Increased transmissibility of damage caused by the change in epidemiology of COVID-19;
- Increased virulence or change in clinical presentation of the disease; or
- Decreased effectiveness of social distancing and public health measures or available diagnostics, vaccines, and therapies.

The operational definitions are periodically reviewed and updated as necessary².

Since December 2020, when the 4 VOCs were concomitantly recorded, until 4 August 2021, a significant increase in the number of countries and territories reporting the detection of one or more VOCs has been observed.

According to recent studies, VOCs Alpha, Beta, and Gamma are associated with increased transmissibility, potential greater severity, observed in increased hospitalization and mortality rates, when compared to ancestral variants.

Although more evidence needs to be gathered, it is important to consider that VOC Delta is associated with an even greater increase in transmissibility than has been observed for other

² WHO. Tracking SARS-CoV-2 variants. Available at: <https://bit.ly/36FXgQY>

variants. A recent study conducted in the United Kingdom estimated that the risk of hospital admission for COVID-19 was approximately doubled in those diagnosed with VOC Delta when compared to VOC Alpha, with the risk of hospitalization particularly increased in those with five or more relevant comorbidities; an impact to be considered on neutralizing antibody production and uncertainties about potential immune system escape. The reduction in vaccine effectiveness for the Delta variant compared to the Alpha variant was mostly marked for those who received only the first dose. This finding would support efforts to maximize two-dose vaccine coverage (see references section).

Table 3. Summary of countries/territories that have reported variants of concern (VOC) as of 4 August 2021.

	WHO Label			
	Alpha	Beta	Gamma	Delta
Number of countries/territories that have reported cases globally*	182	132	81	135
Number of countries/territories in the Americas that have reported cases**	46	20	32	24

Note:*Global data corresponds to the WHO COVID-19 Weekly Epidemiological Update. Published on 3 August 2021.³

**Data as of 4 August 2021.

Some countries/territories have reported more than one variant of concern (VOC).

Source: WHO. Covid-19 Weekly Epidemiological Update. Available at: <https://bit.ly/3v6e0Mi>.

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Regarding the situation in the Americas, as of 4 August 2021, 49 countries/territories have reported cases of VOC, which represents an increase in territories in the Americas region reporting VOCs. Below is the list of countries and territories of the Americas where the VOCs have been reported (**Table 4**).

Table 4. Countries and territories of the Americas that have reported variants of concern as of August 4, 2021.

³ WHO. Weekly epidemiological update of COVID-19. Published 3 August 2021. Available at: <https://bit.ly/3yB2nhS>.

Subregion	Country	B.1.1.7 (United Kingdom) Alpha	B.1.1.28.1 "P.1" (Brazil) Gamma	B.1.351 (South Africa) Beta	B.1.617.2 (India) Delta
North America	Canada	✓	✓	✓	✓
	Mexico	✓	✓	✓	✓
	United States of America	✓	✓	✓	✓
South America	Argentina	✓	✓	✓	✓
	Brazil	✓	✓	✓	✓
	Chile	✓	✓	✓	✓
	Colombia	✓	✓		✓
	Ecuador	✓	✓		✓
	Paraguay	✓	✓		✓
	Peru	✓	✓		✓
	Bolivia	✓	✓		
	Uruguay	✓	✓		
	Venezuela	✓	✓		
	Central America	Costa Rica	✓	✓	✓
Guatemala		✓	✓	✓	
Panama		✓	✓	✓	
Belize		✓			
Honduras		✓			
Caribbean and Atlantic Ocean	Aruba	✓	✓	✓	✓
	French Guiana	✓	✓	✓	✓
	Guadalupe	✓	✓	✓	✓
	Martinique	✓	✓	✓	✓
	Puerto Rico	✓	✓	✓	✓
	Suriname	✓	✓	✓	✓
	Barbados	✓	✓		✓
	Bonaire	✓	✓		✓
	Curaçao	✓	✓		✓
	British Virgin Islands	✓	✓		
	Cayman Islands	✓	✓		
	Dominican Republic	✓	✓		
	Haiti	✓	✓		
	Trinidad and Tobago	✓	✓		
	Turks and Caicos Islands	✓	✓		
	Sint Maarten	✓		✓	✓
	Antigua and Barbuda	✓		✓	
	Bermuda	✓		✓	
	Cuba	✓		✓	
	Saint Martin	✓		✓	
	Anguilla	✓			✓
	Bahamas	✓			
	Dominica	✓			
	Granada	✓			
	Jamaica	✓			
	Montserrat	✓			
	Saint Barthélemy	✓			
	Saint Lucía	✓			
	Guyana		✓		
	Saba				✓
United States Virgin Islands	✓			✓	

Data is provisional and subject to change as countries and territories make adjustments and analyses.

Source: Information shared by the International Health Regulations (IHR) National Focal Points (NFPs) or published on the websites of the Ministries of Health, Health Agencies, or similar, and reproduced by PAHO/WHO.

Guidelines for national authorities

Through this Epidemiological Update, the Pan-American Health Organization / World Health Organization (PAHO/WHO) encourages Member States to coordinate actions to prepare for a possible increase in cases of COVID-19 that may require hospital care for patients, including intensive care or other therapies. At the same time, we recommend to: (i) intensify genomic surveillance (ii) ensure timely publication of gene sequences produced on the GISAID platform (www.gisaid.org), (iii) and immediately notify the first detection of cases of variant of concern (VOC) infection according to the WHO document available at: <https://bit.ly/3sd4Psb>.

In view of the potential increase in cases and hospitalizations related to the circulation of VOC Delta, it is necessary to maximize efforts to extend full vaccination coverage, especially in high-risks population, as well as to reinforce non-pharmacological prevention and protection measures, such as physical distancing, the use of individual face masks, the use of antiseptic solutions (i.e. soap and water, alcohol-gel, and liquid alcohol in disinfectant concentration, etc.). These measures continue to be effective in reducing transmission of this and all variants.

The capacity of mobilization of specialized care does not only go through the purchase of equipment, it is also necessary to remember the mobilization or remobilization of teams of health professionals who are trained, and that the services pay attention to the establishment of logistics, flow, use of technologies for provision of care, in addition to the purchase, supply, and monitoring of the use of personal protection equipment, stocks of medicines, medications used in ICUs, and hospital oxygen. Moreover, the processes of preventive maintenance and repair of equipment and the management of hospital waste must be implemented.

The detection of SARS-CoV-2 variants is dependent on each country's capacity to implement genomic surveillance, since March 2020, PAHO/WHO has been supporting countries to strengthen this surveillance within the framework of the COVID-19 Regional Genomic Surveillance Network (<https://bit.ly/3xAb76u>). PAHO/WHO invites Member States to participate and remain in this Network and to carry out sequencing, according to the Network's recommendations and technical planning. This Network is aligned with WHO guidelines to develop coverage for performing sequencing globally at a high level, to ensure genomic surveillance can detect and monitor virus evolution worldwide and feed into evidence-based decision-making processes.

Listed below are a number of guides, scientific reports, and other resources published by PAHO/WHO.

Additionally, PAHO/WHO has maintained the recommendations published through the COVID-19 Epidemiological Alerts and Updates published to date, available at: <https://bit.ly/3fHpr7i>. However, note the changes in the classification of VOC and VOI.

Listed below are several guidelines, scientific summaries and other resources published by PAHO/WHO.

<p>Surveillance, rapid response teams and case investigation</p> 	<p>Clinical management</p> 
<p>The documents are available in English at: https://bit.ly/30zjmCj.</p> <p>The documents are available in Spanish at: https://bit.ly/2SyV6Mg and https://bit.ly/33AsZCL.</p>	<p>The documents are available in English at: https://bit.ly/3li6wQB.</p> <p>The documents are available in Spanish at: https://bit.ly/2SyV6Mg and https://bit.ly/3i8IJIR.</p>
<p>Laboratory</p> 	<p>Prevention and infection control</p> 
<p>The documents are available in English at: https://bit.ly/3d3TJ1g</p> <p>The documents are available in Spanish at: https://bit.ly/2SyV6Mg and https://bit.ly/2LgllNX</p>	<p>The documents are available in English at: https://bit.ly/3d2ckuV</p> <p>The documents are available in Spanish at: https://bit.ly/2SyV6Mg and https://bit.ly/3oARxDH</p>
<p>Clinical preparedness and response</p> 	<p>Travel, points of entry, and border health</p> 
<p>The documents are available in English at: https://bit.ly/3ijWHBT</p> <p>The documents are available in Spanish at: https://bit.ly/2SyV6Mg and https://bit.ly/3i5rNN6.</p>	<p>The documents are available in English at: https://bit.ly/3ivDivW</p> <p>The documents are available in Spanish at: https://bit.ly/2SyV6Mg and https://bit.ly/3i5rNN6</p>
<p>Schools, workplaces, and other institutions.</p> 	<p>Other Resources</p>
<p>The documents are available in English at: https://bit.ly/3d66iJO</p> <p>The documents are available in Spanish at: https://bit.ly/2SyV6Mg and https://bit.ly/3i5rNN6</p>	<p>The documents are available in English at: https://bit.ly/33zXgRQ</p> <p>The documents are available in Spanish at: https://bit.ly/2SyV6Mg and https://bit.ly/3i5rNN6</p>

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