



The Pan American Health Organization / World Health Organization (PAHO/WHO) shares updated information regarding the SARS-CoV-2 variants of concern (VOC) that circulate globally and specifically within the countries and territories of the Region of the Americas, including the recently identified VOC, Omicron.

PAHO/WHO recommends that Member States continue their efforts to increase vaccination coverage for COVID-19 and improve adherence to public health measures for reducing SARS-CoV-2 virus transmission. Likewise, Member States should continue to perform genomic sequencing of SARS-CoV-2 samples according to the regional genomic surveillance network guidelines, as well as continue to monitor changes in the incidence of COVID-19.

Introduction

Between December 2019 and 30 November 2021, more than 5.5 million complete SARS-CoV-2 genomic sequences have been shared worldwide through the GISAID¹ platform.

Genomic surveillance for SARS-CoV-2 provides information to monitor the evolution of the virus and contributes greatly to the public health response for the COVID-19 pandemic, as it allows for the identification of changes in epidemiological and virulence patterns and the ability to adjust virus transmission prevention strategies. Currently, in the Region of the Americas and globally, 5 variants of concern (VOC) have been identified: Alpha, Beta, Gamma, Delta, and most recently, Omicron; additionally, there are currently two variants of interest (VOI): Lambda and Mu (**Figures 1 and 2**).

As of 30 November 2021, among a total of 839,119 SARS-CoV-2 sequences from samples collected globally in the last 60 days that have been uploaded to the GISAID platform, 837,253 (99.8%) were identified as VOC Delta, 314 (<0.1%) as VOC Gamma, 160 (<0.1%) as VOC Alpha, 159 (<0.1%) as VOC Omicron, 14 (<0.1%) as VOC Beta, and <0.1% as other circulating variants (including VOI Mu and Lambda).

A heterogeneous distribution is observed at the subregional and national levels, most notably in some South American countries, where the dissemination of VOC Delta has been more gradual while other variants (e.g., Gamma, Lambda, and Mu) still account for a large proportion of reported sequences. In the Republic of South Africa, where VOC Omicron was first identified, a recent increase in the number of cases has been observed in multiple provinces, coinciding with the detection of this variant. Currently, all VOCs are circulating in the Republic of South Africa, with a predominance of VOC Omicron in the past two weeks.

¹ The GISAID initiative is a platform that promotes the rapid exchange of data for all influenza viruses and the coronavirus that causes COVID-19, worldwide. Available at: <https://www.gisaid.org/>

Since July 2020, when the Delta variant was first reported and until 30 November 2021, 181 countries worldwide (54 countries and territories within the Americas) have reported its detection. This variant has displaced other SARS-CoV-2 variants in a short period of time and is currently the predominant variant in most countries and territories worldwide (**Figure 1**), including in the Region of the Americas (**Figure 2**).

The detection of a new variant is not always accompanied by an immediate increase in cases; there are additional factors, such as increased exposure amongst unprotected people (by vaccines or non-pharmacological measures), that play an important role in transmission and consequently, an increase in cases and deaths as shown in **Figure 3**.

VOC Omicron

On 26 November 2021, with the advice of the WHO Technical Advisory Group on Viral Evolution (TAG-VE), the variant B.1.1.529 reported by the Republic of South Africa to WHO on 24 November 2021, was designated as VOC Omicron. This decision was based on evidence presented to the TAG-VE, indicating that Omicron has multiple mutations which could have an impact on its behavior (e.g., how easily it spreads or its potential immune escape). As of 30 November 2021, VOC Omicron has been reported by 25 countries in four WHO Regions globally, including 3 countries in the Region of the Americas (**Table 1**).

Regarding transmissibility, it is not yet clear whether VOC Omicron is more easily transmitted from person-to-person compared to other variants. Thus far, the incidence rate is known to have increased in areas affected by this variant in the Republic of South Africa; however, epidemiological studies are underway to understand whether this is due to VOC Omicron or other factors.

It is also unclear whether infection with VOC Omicron causes more severe disease compared to infections with other variants. According to preliminary information, there are increasing rates of hospitalization in South Africa, but this may be due to increasing overall numbers of people becoming infected rather than the result of infection specifically with VOC Omicron. There is currently no information to suggest that the symptoms associated with VOC Omicron are different from those caused by other lineages or variants. The initial cases were identified among college students (younger persons who tend to have milder illness) but understanding the level of severity of VOC Omicron could take several weeks.

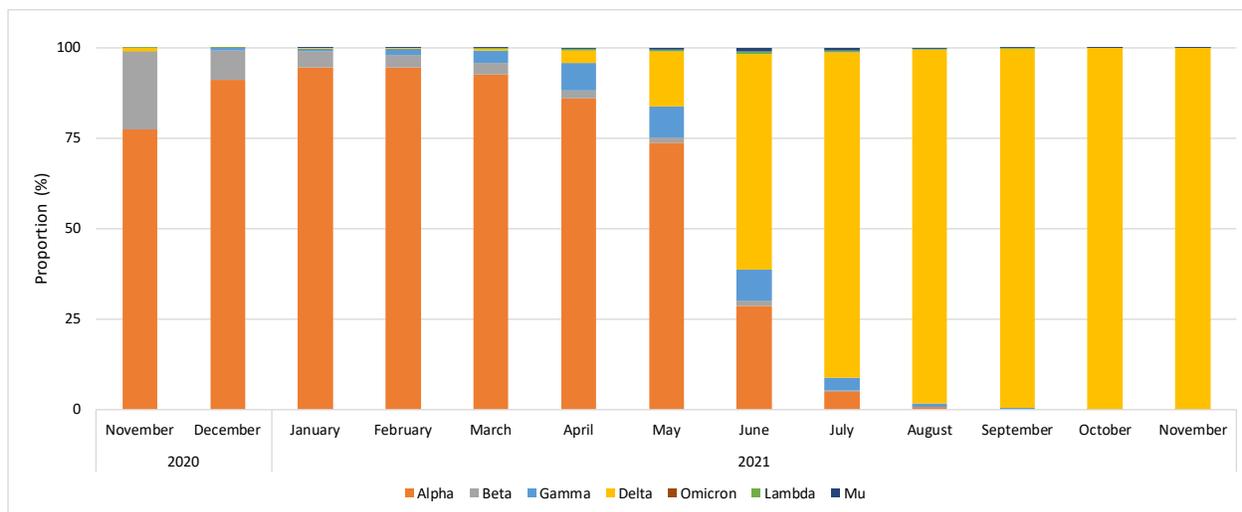
All SARS-CoV-2 variants, including the globally dominant VOC Delta, can cause serious illness or death, particularly for the most vulnerable people; therefore, prevention is always paramount.

Preliminary available data suggests that there may be an increased risk of re-infection with VOC Omicron (i.e., people who have previously had COVID-19 could be re-infected with VOC Omicron), compared to other VOC; however, current information is limited.

Regarding the effectiveness of vaccines, PAHO/WHO highlights that **the current COVID-19 vaccines continue to be effective in preventing the development of severe illness and death**. PAHO/WHO is working with technical partners to understand the potential impact of this variant on public health measures, including vaccines.

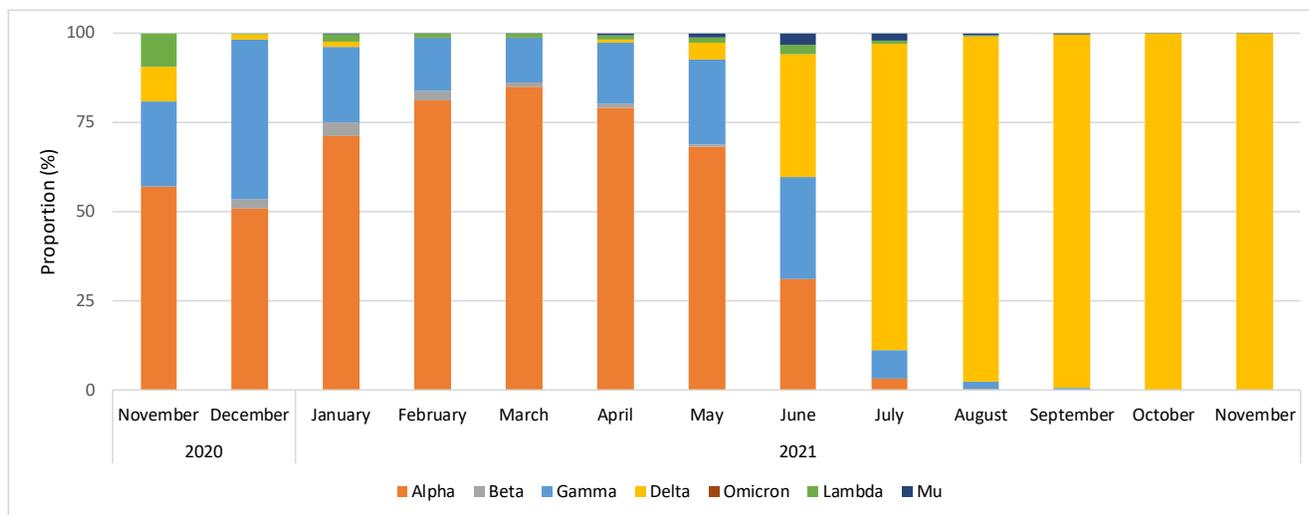
PAHO/WHO emphasizes that the current PCR tests that are widely used **continue to detect infections including infection by VOC Omicron as well as other variants**. Studies are underway to determine whether there is any impact on the performance of rapid antigen tests for the detection of VOC Omicron.

Figure 1. Global percent distribution of SARS-CoV-2 variants of concern (VOC) and variants of interest (VOI) in GISAID. November 2020 to November 2021.



Source: GISAID. Available at: <https://bit.ly/3qA9nXI>. Accessed 30 November 2021.

Figure 2. Percent distribution of SARS-CoV-2 variants of concern (VOC) and variants of interest (VOI) in GISAID for countries/territories in the Region of the Americas. November 2020 to November 2021.



Source: GISAID. Available at: <https://bit.ly/3qA9nXI>. Accessed 30 November 2021.

Variants of concern (VOC) in the Region of the Americas

Between December 2020 and 30 November 2021, the 5 VOC have been detected in the Region of the Americas, 4 that have been previously detected and one recently identified, VOC Omicron (**Table 1**). According to recent studies, VOC Alpha, Beta, Gamma, and Delta are associated with increased transmissibility compared to ancestral variants, directly proportional to a potential increase in severe cases, as evidenced in the increase in hospitalization and mortality rates.

The Region of the Americas has contributed to the collection of genomic sequencing data through the COVID-19 Genomic Surveillance Regional Network^{2,3}, which is open to all countries in the Region through the national public health laboratories or equivalent public institutions. This network includes 7 regional sequencing laboratories (FioCruz-Brazil, the Chile Institute of Public Health, the Panama Gorgas Memorial Institute, the Mexico Institute of Epidemiological Diagnosis and Reference, the University of the West Indies in Trinidad, the Colombia National Institute of Health, and the United States Centers for Disease Control and Prevention) that provide external sequencing for participating laboratories of the network that do not have the capacity for sequencing⁴.

Table 1. Global summary of countries/territories reporting variant of concern (VOC) cases. As of 1 December 2021.

	WHO label				
	Alpha	Beta	Gamma	Delta	Omicron
Number of countries/territories reporting cases globally*	197	147	104	202	25
Number of countries/territories reporting cases in the Americas**	50	26	42	54	3

Note: * Global data correspond to the WHO COVID-19 Weekly Epidemiological Update, published on 30 November 2021. Available at: <https://bit.ly/3o8Blf3>

** Data as of 1 December 2021.

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

Sources: WHO COVID-19 Weekly Epidemiological Update, published on 30 November 2021. 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.

As of 30 November 2021, all 5 VOC have been detected in Canada and Brazil, while 4 VOC have been detected in Antigua and Barbuda, Argentina, Aruba, the Cayman Islands, Chile, Costa Rica, Curaçao, French Guiana, Guadeloupe, Guatemala, Martinique, Mexico, Nicaragua, Panama, Puerto Rico, Sint Maarten, Suriname, the United States of America, the United States Virgin Islands, and Uruguay.

² COVID-19 Genomic Surveillance Regional Network, available at: <https://bit.ly/3bu0qez>.

³ According to Resolution CD58.R9 - The COVID-19 pandemic in the Region of the Americas, "The 58th Directing Council resolves to request the Director to maintain the regional network for the surveillance of influenza and other respiratory viruses, and expand it by creating a regional genomic surveillance network;"

⁴ PAHO/WHO. Technical Note: Genomic characterization of SARS-CoV-2 and circulating variants in the Region of the Americas. Available at: <https://bit.ly/3pcS7sG>.

Table 2. Countries and territories that have reported SARS-CoV-2 variants of concern (VOC). Region of the Americas. As of 1 December 2021.

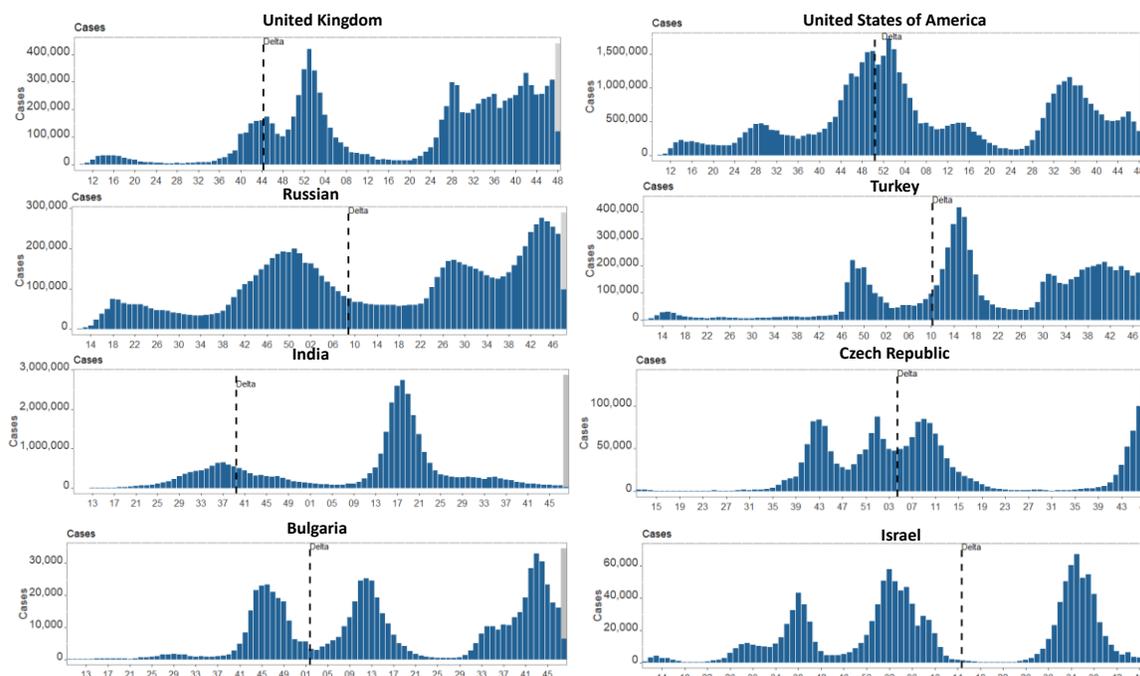
Subregion	Country	Alpha	Beta	Gamma	Delta	Omicron
North America	Canada	✓	✓	✓	✓	✓
	Mexico	✓	✓	✓	✓	
	United States of America	✓	✓	✓	✓	✓
South America	Argentina	✓	✓	✓	✓	
	Bolivia (Plurinational State of)	✓		✓	✓*	
	Brazil	✓	✓	✓	✓	✓
	Chile	✓	✓	✓	✓	
	Colombia	✓		✓	✓	
	Ecuador	✓		✓	✓	
	Paraguay	✓		✓	✓	
	Peru	✓		✓	✓	
	Uruguay	✓	✓*	✓	✓*	
	Venezuela (Bolivarian Republic of)	✓		✓	✓	
Central America	Belize	✓		✓	✓	
	Costa Rica	✓	✓	✓	✓	
	El Salvador	✓		✓	✓	
	Guatemala	✓	✓	✓	✓	
	Honduras	✓		✓	✓	
	Nicaragua	✓*	✓*	✓*	✓*	
	Panama	✓	✓	✓	✓	
Caribbean and Atlantic Ocean Islands	Anguilla	✓			✓	
	Antigua and Barbuda	✓	✓	✓	✓	
	Aruba	✓	✓	✓	✓	
	Bahamas	✓		✓	✓	
	Barbados	✓		✓	✓	
	Bermuda	✓	✓		✓	
	Bonaire	✓		✓	✓	
	British Virgin Islands	✓		✓	✓	
	Cayman Islands	✓	✓	✓	✓	
	Cuba	✓	✓		✓*	
	Curaçao	✓	✓*	✓	✓	
	Dominica	✓			✓*	
	Dominican Republic	✓		✓	✓	
	Falkland Islands (Malvinas)	✓*	✓*			
	French Guiana	✓	✓	✓	✓	
	Grenada	✓			✓	
	Guadeloupe	✓	✓	✓	✓	
	Guyana			✓	✓	
	Haiti	✓		✓	✓	
	Jamaica	✓			✓	
	Martinique	✓	✓	✓	✓	
	Montserrat	✓		✓	✓	
	Puerto Rico	✓	✓	✓	✓	
	Saba				✓	
	Saint Barthélemy	✓			✓	
	Saint Kitts and Nevis				✓*	
	Saint Lucia	✓			✓	
	Saint Martin	✓	✓		✓*	
	Saint Pierre and Miquelon				✓*	
	Saint Vincent and the Grenadines			✓	✓	
Sint Maarten	✓	✓	✓	✓		
Suriname	✓	✓	✓	✓		
Trinidad and Tobago	✓		✓	✓		
Turks and Caicos Islands	✓		✓	✓		
United States Virgin Islands	✓	✓*	✓	✓		

Note: The data are provisional and subject to change, as the countries and territories make their adjustments and retrospective analysis.

* The sequence is not yet available in an international repository.

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, or published on the GISAID platform, and reproduced by PAHO/WHO.

Figure 3. Distribution of COVID-19 cases by epidemiological week in selected countries and their relationship with identification of the VOC Delta. 2020-2021.



Source: Data shared to WHO by the countries and reproduced by PAHO / WHO. Available at: <https://covid19.who.int/>

Guidance for national authorities

PAHO/WHO urges Member States to strengthen strategies to increase complete vaccination coverage for COVID-19, especially amongst high-risk populations, as well as to reinforce non-pharmaceutical prevention and protection measures such as physical distancing, use of individual masks, hand washing, use of antiseptic solutions (e.g., soap and water, alcohol-based gel, liquid alcohol disinfectant, etc.). These measures remain effective in reducing the transmission of all SARS-CoV-2 variants.

PAHO/WHO reiterates to Member States the need to: (i) intensify genomic surveillance; (ii) **ensure the immediate publication of genomic sequences produced on the GISAID platform** (www.gisaid.org); and (iii) immediately report the first detection of infections identified as a variant of concern (VOC), according to the following WHO document: <https://bit.ly/3sd4Psb>.

Additionally, PAHO/WHO maintains its recommendations previously published through the PAHO/WHO Epidemiological Updates and Alerts related to COVID-19, available at <https://bit.ly/3pgXyqC>. In the context of the VOC Ómicron, PAHO/WHO share with the Member States the WHO advice for international traffic in relation to the SARS-CoV-2 Omicron variant (B.1.1.529) published on 30 November 2021 (available at <https://bit.ly/3laHi39>) and the recommendations for the detection and diagnosis of SARS-CoV-2 in the context of the circulation of the omicron variant of concern published on 30 November 2021 (available at <https://bit.ly/3lc35r7>)

Future changes in VOC and VOI classifications should be noted.

<p align="center">Surveillance, rapid response teams, and case investigation</p> <p align="center"></p>	<p align="center">Clinical management</p> <p align="center"></p>
<p>WHO resources available at: https://bit.ly/30zimCi</p> <p>PAHO/WHO resources available at: https://bit.ly/36Dji3B</p>	<p>WHO resources available at: https://bit.ly/3li6wQB</p> <p>PAHO/WHO resources available at: https://bit.ly/3sadTxQ</p>
<p align="center">Laboratory</p> <p align="center"></p>	<p align="center">Infection prevention and control</p> <p align="center"></p>
<p>WHO resources available at: https://bit.ly/3d3TJ1g</p> <p>PAHO/WHO resources available at: https://bit.ly/3oD2Qen</p>	<p>WHO resources available at: https://bit.ly/3d2ckuV</p> <p>PAHO/WHO resources available at: https://bit.ly/3nwyOaN</p>
<p align="center">Critical preparedness and response</p> <p align="center"></p>	<p align="center">Travel, Points of entry, and border health</p> <p align="center"></p>
<p>WHO resources available at: https://bit.ly/3ljWHBT</p> <p>PAHO/WHO resources available at: https://bit.ly/36Dji3B</p>	<p>WHO resources available at: https://bit.ly/3ivDivW</p> <p>PAHO/WHO resources available at: https://bit.ly/36Dji3B</p>
<p align="center">Schools, workplaces, & other institutions</p> <p align="center"></p>	<p align="center">Other resources</p>
<p>WHO resources available at: https://bit.ly/3d66iJO</p> <p>PAHO/WHO resources available at: https://bit.ly/36Dji3B</p>	<p>WHO resources available at: https://bit.ly/33zXgRQ</p> <p>PAHO/WHO resources available at: https://bit.ly/36Dji3B</p>

Sources of information

1. GISAID Initiative is a platform that promotes the rapid exchange of data for all influenza viruses and the coronavirus that causes COVID-19, worldwide. Accessed 30 November 2021. Available at: <https://www.gisaid.org/>
2. ANVISA **Brazil**. ANVISA reports on the preliminary identification of two cases of the Omicron variant in the national territory. 30 November 2021. Available at: <https://bit.ly/3G35liE>
3. Public Health Agency of **Canada**. Statement from Minister Duclos on the first cases of the Omicron variant of concern in Canada. 28 November 2021. Available at: <https://bit.ly/3G4B0Qr>
4. Ontario Province Ministry of Health in **Canada**. Ontario Confirms First Two Cases of Omicron Variant press release. 28 November 2021. Available at: <https://bit.ly/3xLDFM7>
5. **United States** CDC. First Confirmed Case of Omicron Variant Detected in the United States. Available at: <https://bit.ly/3l9IPHD>
6. PAHO/WHO. Detection and diagnosis of SARS-CoV-2 in the context of the circulation of the omicron variant of concern. 30 November 2021. Available at: <https://bit.ly/3lc35r7>
7. WHO. COVID-19 Weekly Epidemiological Update. 30 November 2021. Available at: <https://bit.ly/3dlLYoJ>
8. WHO. Advice for international traffic in relation to the SARS-CoV-2 Omicron variant (B.1.1.529). 30 November 2021. Available at: <https://bit.ly/3laHi39>
9. WHO. Update on Omicron. 28 November 2021. Available at: <https://bit.ly/3EewE97>
10. WHO. Enhancing Readiness for Omicron (B.1.1.529): Technical Brief and Priority Actions for Member States. 28 November 2021. Available at: <https://bit.ly/3rkBpKE>
11. WHO. SARS-CoV-2 Variants, Working Definitions and Actions Taken. Updated 28 November 2021. Available at: <https://bit.ly/3rxypLb>
12. WHO. Classification of Omicron (B.1.1.529): SARS-CoV-2 Variant of Concern. 26 November 2021. Available at: <https://bit.ly/3G3eyr4>
13. Statement from the African Centers for Disease Control and Prevention regarding the new variant of the SARS-COV-2 virus B.1.1.529. 26 November 2021. Available at: <https://bit.ly/3FY7Hz6>
14. Department of Health of the Republic of South Africa. Presentation: What we know and what we don't know about the Omicron variant - Salim S. Abdool Karim, FRS. 29 November 2021. Available at: <https://bit.ly/3o8HDvh>
15. Department of Health of the Republic of South Africa. Recording: Report on the evolution of the vaccination program and COVID-19. 25 November 2021. Available at: <https://bit.ly/3lmDCBy>

16. WHO. Guidance for surveillance of SARS-CoV-2 variants: Interim guidance. 9 August 2021. Available at: <https://bit.ly/3xDatXw>
17. WHO. SARS-CoV-2 genomic sequencing for public health goals: Interim guidance. 8 January 2021. Available at: <https://bit.ly/38uAr0>
18. WHO. Genomic sequencing of SARS-CoV-2: a guide to implementation for maximum impact on public health. 8 January 2021. Available at: <https://bit.ly/3sd4Psb>
19. WHO. Diagnostic testing for SARS-CoV-2. Interim Guidance. 11 September 2020. Available at: <https://bit.ly/32GnWCu>
20. PAHO/WHO. COVID-19 Genomic Surveillance Regional Network. Available at: <https://bit.ly/3bu0qez>
21. National Institute of Infectious Diseases of Japan. Available at: <https://bit.ly/3q8BxZH>
22. Ministry of Health, Labor and Welfare of Japan, Press Release. Available at: <https://bit.ly/3bu2qU7>
23. WHO. Risk assessment tool to inform mitigation measures for international travel in the context of COVID-19. 16 December 2020. Available at: <https://bit.ly/35uzMy4>
24. Risk assessment tool to inform mitigation measures for international travel in the context of COVID-19: annex to: Considerations for implementing a risk-based approach to international travel in the context of COVID-19, 16 December 2020. Available at: <https://bit.ly/3dczH5P>
25. WHO. COVID-19 diagnostic testing in the context of international travel. 16 December 2020. Available at: <https://bit.ly/39l6dAp>