

Executive Summary

- As of 13 April 2021, 136,115,434 confirmed cumulative cases of COVID-19 were reported globally, including 2,936,916 deaths, for which the Region of the Americas contributed 43% of cases and 48% of deaths.
- In the first trimester of 2021, the North and South American subregions contributed the highest proportion of cases and deaths, contributing 59% and 60% of cases and 39% and 38% of deaths, respectively.
- As of 13 April 2021, Aruba, Brazil, Canada, Costa Rica, French Guiana, Panama, Saint Martin, Suriname, and the United States of America have detected the three variants of concern (VOC).
- The number of pregnant and postpartum women with COVID-19 continues to increase, with 10% and 8% of additional cases and deaths, respectively, compared to the previous publication on March 11.
- Among indigenous peoples in 15 countries, 423,423 cases were reported, including 6,970 deaths.
- A total of 22 countries and territories have reported 4,960 cumulative confirmed cases of multisystem inflammatory syndrome in children and adolescents (MIS-C) temporally related to COVID-19, including 111 deaths.
- Regarding health workers, 20 countries have reported 1,773,169 cases, including 8,655 deaths.
- This document includes an analysis of the COVID-19 situation in Chile, highlighting the epidemic incidence and mortality curves at the national level, COVID-19 among older adults, and COVID-19 among children and adolescents.
- It is important to consider that COVID-19 vaccination is part of the measures to contain the pandemic, but without public health and social distancing measures, it does not by itself reduce the transmission of SARS-CoV-2.

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Context

On 31 December 2019, the People's Republic of China notified a cluster of pneumonia cases with unknown etiology, later identified on 9 January 2020 as a novel coronavirus by the Chinese Center for Disease Control and Prevention. On 30 January 2020, the World Health Organization (WHO) declared the outbreak a Public Health Emergency of International Concern (PHEIC). On 11 February 2020, WHO named the disease "coronavirus disease 2019 (COVID-19)," and the International Committee on Taxonomy of Viruses (ICTV) named the virus "severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)." On 11 March 2020, COVID-19 was declared a pandemic by the WHO Director-General, and on 31 July 2020, the WHO Director-General accepted the advice of the Emergency Committee, declaring that the COVID-19 pandemic continues to constitute a PHEIC, and issuing the temporary recommendations to States Parties under the International Health Regulations (IHR) (2005).¹ On 9 July 2020, the WHO Director-General announced the launch of the Independent Panel for Pandemic Preparedness and Response (IPPR), which will independently and comprehensively assess the lessons learned from the international health response to COVID-19.²

The sixth meeting of the Emergency Committee convened by the WHO Director-General under the International Health Regulations (2005) (IHR) regarding COVID-19 was held on Thursday, 14 January 2021³.

¹ Statement on the fourth meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of coronavirus disease (COVID-19). Available at: <https://bit.ly/3li7iOx>

² Independent evaluation of global COVID-19 response announced. Available at: <https://bit.ly/31hLJWp>

³ WHO. Statement on the sixth meeting of the International Health Regulations (2005) Emergency Committee regarding the coronavirus disease (COVID-19) pandemic. Available at: <https://bit.ly/36Xq2DY>

Global Situation Summary

Since the first confirmed cases of COVID-19 until 13 April 2021, a cumulative total of 136,115,434 confirmed cases of COVID-19 have been reported globally, including 2,936,916 deaths, representing a total of 19,378,997 additional confirmed cases and 343,631 additional deaths since the last PAHO/WHO Epidemiological Update on COVID-19⁴ published on 11 March 2021.

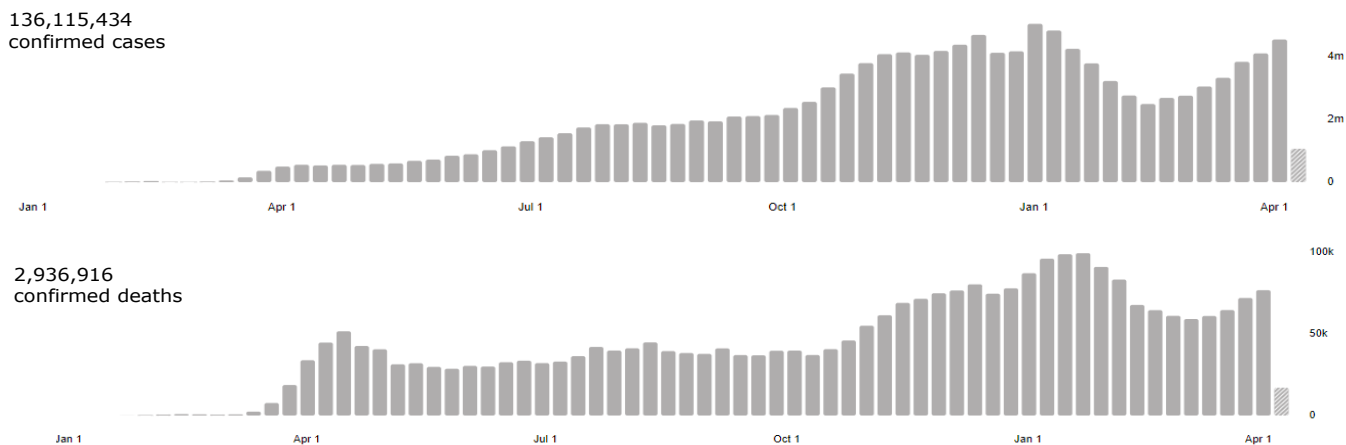
Of the total cumulative confirmed cases globally, the highest number of cases was reported the week of 4 January 2021 with 5,044,021 cases, which represented a weekly relative increase of 20.99% compared to the previous week. Regarding deaths, the highest number was observed during the week of 11 January 2021 with 96,031 reported deaths, representing a 10.21% relative increase compared to the previous week.

Following the week of 4 January 2021, the epidemic case curve showed a sustained decrease that was maintained for 6 weeks, then showed another weekly increase from the beginning of March to date. (**Figure 1**)

The trend should be observed with caution in the coming months, while social distancing measures, public health measures, and vaccination campaigns continue to be implemented with different approaches in each country and territory.

Regarding deaths, the epidemic curve shows a downward trend during the month of February 2021, then remained stable for 3 weeks in March and began to slightly increase each weekly until the beginning of April (**Figure 1**).

Figure 1. Distribution of global COVID-19 confirmed cases and deaths, by week. January 2020 to April 2021.



Source: WHO Coronavirus Disease (COVID-19) Dashboard. Data as of 13 April 2021. Available at: <https://covid19.who.int>. Accessed 13 April 2021 at 11:12 a.m.

⁴ PAHO/WHO. Epidemiological Update: Coronavirus disease (COVID-19). 11 March 2021, Washington, D.C.: PAHO/WHO; 2021. Available at: <https://bit.ly/3wOcgYW>

Situation Summary in the Region of the Americas

As of 13 April 2021, all 56 countries and territories in the Region of the Americas have reported a cumulative total of 58,571,081 confirmed cases of COVID-19, including 1,419,170 deaths⁵, since the detection of the first cases in the Region in January 2020.

Since the 11 March 2021 PAHO/WHO Epidemiological Update on COVID-19⁴ and as of 13 April 2021, 6,182,423 additional confirmed cases of COVID-19, including 161,007 additional deaths, have been reported in the Region of the Americas, representing an 11% increase in cases and deaths. During the same period, Bermuda, Bonaire, Curaçao, and Uruguay showed a >50% increase in the number of cases and deaths.

During the first trimester of 2021, a total of 20,343,021 confirmed cases, including 488,429 deaths, were reported in the Americas, with the subregions of North America⁶ and South America⁷ accounting for the highest proportion of cases (59% and 39%, respectively), while the Central America⁸ and the Caribbean and Atlantic Ocean Islands⁹ subregions accounted for 2% and 1%, respectively. During the same period, North America accounted for 60% of the reported deaths, followed by South America (38%) and Central America (1%) and the Caribbean and Atlantic Ocean Islands (1%). The highest number of cases and deaths in the Region were reported in January. (**Figure 2**).

⁵ Updated information on COVID-19, including situation reports, weekly press briefings, and the COVID-19 information system for the Region of the Americas is available at: <https://bit.ly/3kviqPD>.

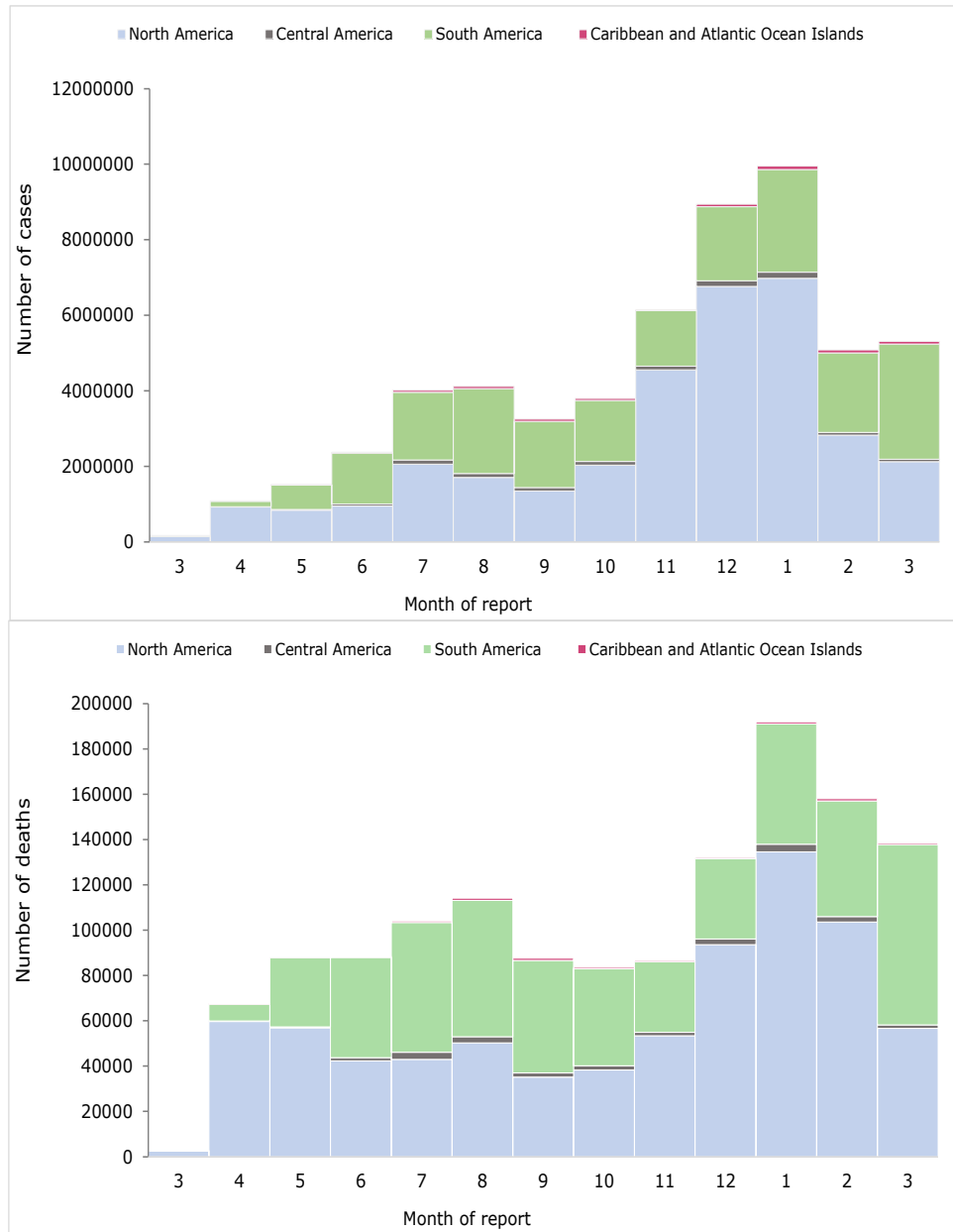
⁶ Canada, Mexico, and United States of America.

⁷ Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, and Venezuela.

⁸ Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama.

⁹ Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Bermuda, Bonaire, British Virgin Islands, Cayman Islands, Cuba, Curacao, Dominica, Dominican Republic, Falkland Islands, Grenada, Guadeloupe, French Guiana, Guyana, Haiti, Jamaica, Martinique, Montserrat, Puerto Rico, Saba, Saint Barthelemy, Saint Kitts and Nevis, Sint Eustatius, Saint Lucia, Saint Martin, Saint Pierre and Miquelon, Sint Maarten, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos, and the United States Virgin Islands.

Figure 2. Distribution of confirmed COVID-19 cases and deaths, by subregion and month of report. Region of the Americas, March 2020 until April 2021.



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

The following is a brief analysis of the epidemiological situation of COVID-19 in **Chile**¹⁰. Additional details of the epidemiological situation in Chile will be further presented in some sections of this Epidemiological Update.

The first case of COVID-19 in Chile was confirmed on 3 March 2020. Since then and until 6 April 2021, there have been 1,037,780 cumulative confirmed cases, including 23,734 deaths. As of 6 April 2021, 7,050,026 persons have been vaccinated with the first dose of a COVID-19 vaccine and 4,106,621 with a second dose; this represents vaccination coverage of 46% and 27%, respectively, in relation to the target population to be vaccinated (15,280,840).¹¹

For the analysis of COVID-19 cases and deaths in Chile in this Update, data published by the Government of Chile¹² and from the Chile Ministry of Health, Department of Health Statistics and Information (DEIS, per the acronym in Spanish)¹³ were used.

Population data was obtained from the population estimates of the National Institute of Statistics (INE, per the acronym in Spanish)¹⁴.

In order to determine whether the observed changes in temporal trends by epidemiological week (EW) were statistically significant, incidence and mortality rates per 100,000 population were analyzed using Joinpoint software¹⁵. The results are described below.

When analyzing the observed incidence rate, three waves are observed. The first wave occurs between EW 12 and EW 29 of 2020, with a peak in cases per 100,000 population observed in EW 23 of 2020. This is followed by a period of decline, with a plateau between EW 24 and EW 50 of 2020. A second wave of lesser magnitude and duration than the first, occurred between EW 51 of 2020 and EW 7 of 2021. A clear increase has been observed during the third wave, which began in EW 8 of 2021 and continues to date.

When modeling the weekly incidence rate curve, there is a smoothing of the curve, with a large increase between EW 12 and EW 30 of 2020, followed by a plateau maintained between EW 31 and EW 46 of 2020, then followed by the second wave starting in EW 47 of 2020 and with an upward trend until EW 13 of 2021.

Six periods of change in the modeled incidence rate curve were identified, 5 of which were statistically significant: the first occurred between EW 12 and EW 14 of 2020 with a weekly percent change (WPC) of 116.79% (statistically significant); the second between EW 14 and EW 17 of 2020 with a WPC of 9.9% (not statistically significant); the third between EW 17 and EW 23 of 2020

¹⁰ It should be noted that the analysis is carried out with the available data, which could have limitations, such as delay in the notification or in the loading of the data in the different systems; the differences in days between when the case starts symptoms, consults and the examination is requested, which influences the trend of the epidemic curves; in asymptomatic cases, the time difference between the collection of the sample and the result of the examination is delivered and the information loaded into the registry system. The different methodologies at the local level for contact traceability, which influences the ability to capture new cases, among other factors.

¹¹ Chile Ministry of Health. Available at: <https://bit.ly/3fXrLaW> and <https://bit.ly/2PHtJm>. Accessed 7 April 2021.

¹² Government of Chile. Official COVID-19 figures. Available at: <https://bit.ly/3fMQUPn> Accessed 6-7 April 2021.

¹³ Chile Ministry of Health, Department of Health Statistics and Information. Only UO7.1 confirmed COVID deaths. Available at: <https://tabsoft.co/3a99Me6>

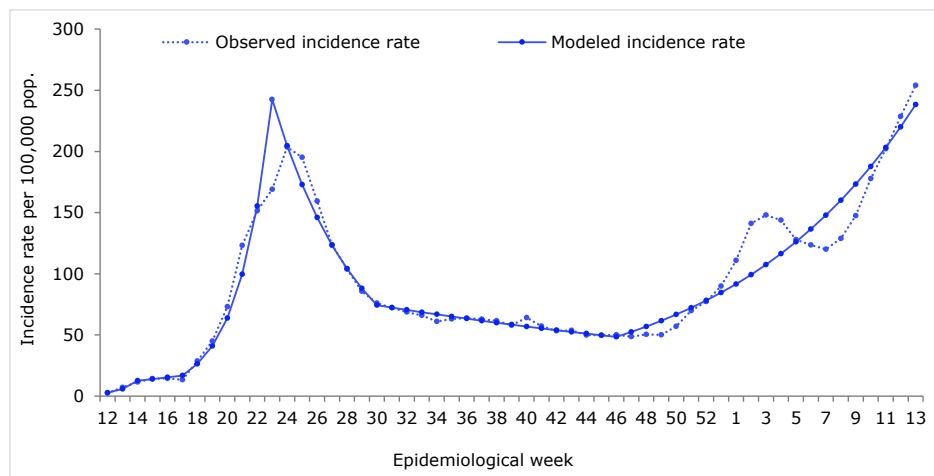
¹⁴ National Institute of Statistics (INE, per the acronym in Spanish). Available at: <https://bit.ly/2PC0mAW>

¹⁵ Joinpoint software. Available at: <https://surveillance.cancer.gov/joinpoint/>

with a WPC of 56.03% (statistically significant); the fourth between EW 23 and EW 30 of 2020 with a WPC of 15.54% (statistically significant); the fifth between EW 30 and EW 46 of 2020 with a WPC of -2.64% (statistically significant); and finally the sixth between EW 46 of 2020 and EW 13 of 2021 with a WPC of 8.29% (statistically significant).

In comparison with the changes that reflect an increase in the WPC, the one that occurred between EW 51 of 2020 and EW 7 of 2021 (second wave in the modeled curve), is of less magnitude than the previous increases; however, this should be interpreted with caution and monitored in the coming weeks to determine if the trend continues (**Figure 3**).

Figure 3. Modeled rate and observed incidence rate for COVID-19, by epidemiological week (EW). Chile, EW 12 of 2020 to EW 13 of 2021.



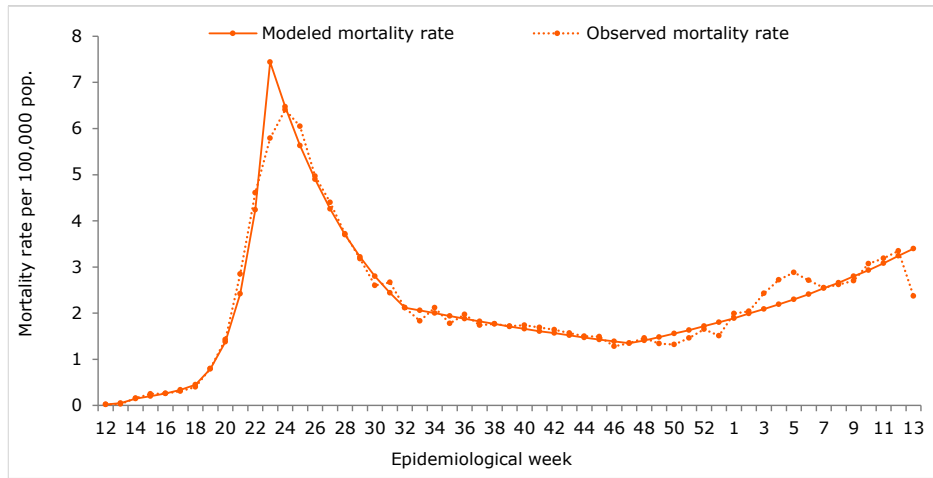
Source: Official COVID-19 data from the Government of Chile^{12, 13, 14} and analyzed by PAHO/WHO.

Regarding the mortality rate, the observed curve shows the first wave between EW 17 and EW 30 of 2020, with a peak in EW 24 of 2020. Subsequently, the curve presented a downward trend with isolated peaks, the most marked being those that occurred between EW 2 and EW 7 of 2021 and between EW 8 and EW 12 of 2021, none of which achieved either the magnitude or the duration of the first wave. There was a decrease between EW 12 and EW 13 of 2021; however, it may be due to the delay in reporting or other factors.

The modeled mortality rate curve is similar to the observed curve, though with a slight lag, showing an increase between EW 14 and EW 32 of 2020, with a sustained decline between EW 32 and EW 47 of 2020, and the start of a second sustained increase since EW 48 of 2020.

The analysis using Joinpoint indicates there were six periods of change, all of them statistically significant. The first between EW 12 and EW 14 of 2020 had a WPC of 207.05%; the second between EW 14 and EW 18 of 2020 with a WPC of 31.81%; the third between EW 18 and EW 23 with a WPC of 75.38%; the fourth between EW 23 and EW 32 with a WPC of 207.05%; the fifth between EW 32 and EW 47 with a WPC of -2.99%; and the last between EW 47 of 2020 and EW 13 of 2021 with a WPC of 5.0%. Unlike with the observed curve, there was no decrease between EW 12 and EW 13 of 2021 when modeling (**Figure 4**).

Figure 4. Modeled rate and observed mortality rate for COVID-19 by epidemiological week (EW). Chile. EW 12 of 2020 and EW 13 of 2021.

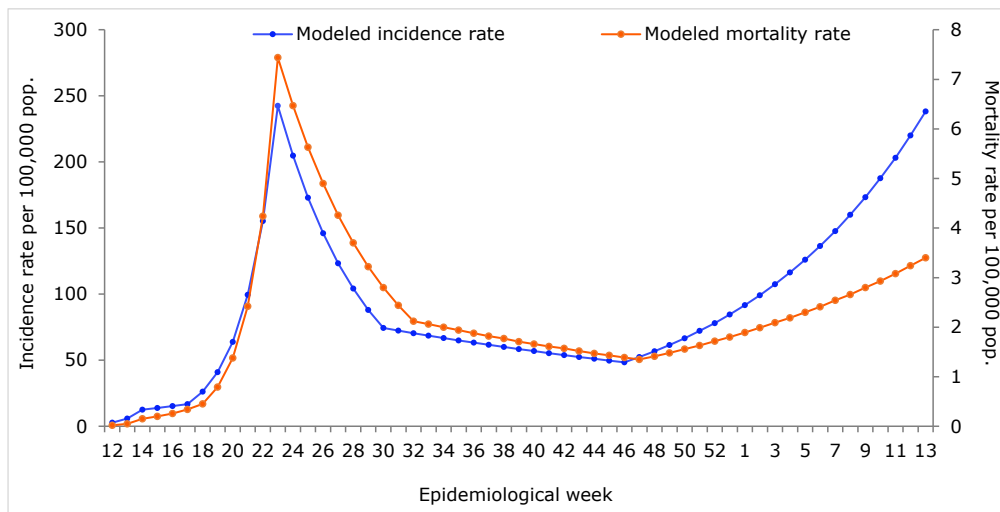


Source: Source: Official COVID-19 data from the Government of Chile^{12, 13, 14} and analyzed by PAHO/WHO.

The use of programs such as Joinpoint or similar to model trend curves is important for monitoring when changes are occurring or have occurred, taking into account the implemented measures that could have had an influence on those changes.

For example, it would be worthwhile to understand what strategies or factors were related to a decrease in the risk of acquiring COVID-19 between EW 30 and EW 46 of 2020 (between the end of July and the beginning of November) for which there was a WPC of -2.64% (statistically significant). The factors related to that period also had an impact on mortality rates, since between EW 32 and EW 47 of 2020, there was a WPC of -2.99% (statistically significant) (**Figure 5**).

Figure 5. Modeled COVID-19 incidence and mortality rates, by epidemiological week (EW). Chile. EW 12 of 2020 to EW 13 of 2021.



Source: Official COVID-19 data from the Government of Chile^{12, 13, 14} and analyzed by PAHO/WHO.

Epidemiological Highlights

I. SARS-CoV-2 Variants

The appearance of mutations is a natural and expected event within the evolutionary process of viruses. Since the initial genomic characterization of SARS-CoV-2, this virus has been divided into different genetic groups or clades. In fact, some specific mutations define the viral genetic groups (also called lineages) that are currently circulating globally. Due to various microevolution processes and selection pressures, some additional mutations may appear, generating differences within each genetic group (called variants). It is important to mention that the names of the clade, lineage, variant, etc., are arbitrary and do not correspond to an official taxonomic hierarchy.

Since the initial identification of SARS-CoV-2 until 13 April 2021, more than 1,086,614 complete genomic sequences have been shared globally through publicly accessible databases.

As of 13 April 2021, 38 countries and territories in the Americas have published a total of 187,705 SARS-CoV-2 genomes on the GISAID platform, collected between February 2020 and April 2021. The countries and territories that have contributed genome data are: Antigua and Barbuda, Argentina, Aruba, Belize, Bermuda, Bolivia, Brazil, the British Virgin Islands, Canada, the Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Curaçao, the Dominican Republic, Ecuador, El Salvador, Guadeloupe, Guatemala, French Guiana, Jamaica, Mexico, Panama, Peru, Puerto Rico, Saint Barthelemy, Saint Kitts and Nevis, Saint Lucia, Saint Martin, Saint Vincent and the Grenadines, Sint Eustatius, Suriname, Trinidad and Tobago, the United States of America, Uruguay, and Venezuela.

On 25 February 2021, the WHO provided proposed working definitions for SARS-CoV-2 variants of interest (VOI) and variants of concern (VOC) and the associated actions that WHO will take to support Member States and their national public health institutes and reference laboratories, along with recommended actions that should be taken by Member States. The document includes general and non-exhaustive guidance on the prioritization of variants of greatest public health relevance in the broader context of SARS-CoV-2 transmission, and public health response mechanisms and established social distance measures.

These definitions will periodically be reviewed and updated, as necessary. The full publication is available at: <https://bit.ly/2O173vt>

The list of SARS-CoV-2 variants, according to the WHO classification as of 13 April 2021, is available in **Table 1**.

Table 1. Variants of concern (VOC) and variants of interest (VOI), according to WHO classifications as of 13 April 2021.

SARS-CoV-2 Variants WHO classification	Pango lineage	First detected by
Variant of concern	Variant B.1.1.7	United Kingdom
	Variant B.1.351	South Africa
	Variant B.1.1.28.1	Brazil / Japan
Variant of interest	B.1.525	United Kingdom / Nigeria
	B.1.427/B.1.429	United States of America
	B.1.1.28.2, alias P.2	Brazil
	B.1.1.28.3, alias P.3	Philippines and Japan
	B.1.526 with E484K or S477N	United States of America
	B.1.616	France

Source: WHO. COVID-19 weekly epidemiological update. Published on 13 April 2021. Available at: <https://bit.ly/3v6e0Mi>

Globally, an increase in the number of reported VOC and VOI has been observed; however, this increase must consider the limitations related to surveillance systems or surveillance mechanisms, as well as the capacity of the countries and territories to sequence samples and differences in the selection of samples to be sequenced.

Table 2. Summary of the countries/territories reporting cases of variants of concern (VOC), as of 14 April 2021.

Summary	Name of the variant *		
	Variant B.1.1.7	Variant B.1.351	Variant B.1.1.28.1
Number of countries/territories reporting cases globally	132	82	52
Number of countries/territories reporting cases in the Americas	32	10	20

Note:

* Name of PANGO lineage

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

Source: WHO. COVID-19 weekly epidemiological update. Published on 13 April 2021. Available at: <https://bit.ly/3v6e0Mi>

Regarding the situation in the Americas, as of 14 April 2021, 36 countries/territories have reported the detection of VOC cases, representing 4 additional countries/territories since the 24 March 2021 PAHO/WHO Epidemiological Update on Variants of SARS-CoV-2 in the Americas¹⁶. As of 14 April 2021, the detection of all three VOC has been reported in Aruba, Brazil, Canada, Costa Rica, French Guiana, Panama, Saint Martin, Suriname, and the United States of America. (**Table 3**)

¹⁶ PAHO/WHO. Epidemiological Update: Variants of SARS-CoV-2 in the Americas. 24 March 2021, Washington, D.C.: PAHO/WHO; 2021. Available at: <https://bit.ly/3dWwMOv>

Table 3. Countries and territories reporting variants of concern (VOC) in the Region of the Americas, as of 14 April 2021.

Country	Variant B.1.1.7	Variant B.1.351	Variant B.1.1.28.1
Argentina	Yes	No	Yes
Aruba	Yes	Yes	Yes
Barbados	Yes	No	No
Belize	Yes	No	No
Bonaire	Yes	No	No
Brazil	Yes	Yes	Yes
Canada	Yes	Yes	Yes
Cayman Islands	Yes	No	No
Chile	Yes	No	Yes
Colombia	No	No	Yes
Costa Rica	Yes	Yes	Yes
Cuba	Yes	Yes	No
Curacao	Yes	No	No
Dominican Republic	Yes	No	No
Ecuador	Yes	No	Yes
French Guiana	Yes	Yes	Yes
Grenada	Yes	No	No
Guadeloupe	Yes	No	No
Guyana	No	No	Yes
Jamaica	Yes	No	No
Martinique	Yes	No	No
Mexico	Yes	No	Yes
Panama	Yes	Yes	Yes
Paraguay	No	No	Yes
Peru	Yes	No	Yes
Puerto Rico	Yes	No	Yes
Saint Barthélemy	Yes	No	No
Saint Lucia	Yes	No	No
Saint Martin	Yes	Yes	Yes
Sint Maarten	Yes	No	No
Suriname	Yes	Yes	Yes
Trinidad and Tobago	Yes	No	No
Turks and Caicos	Yes	No	No
United States of America	Yes	Yes	Yes
Uruguay	Yes	No	Yes
Venezuela	No	No	Yes

Note:

Adjustments were made to previously published data for French Guiana, Guadeloupe, and Martinique, as published in the France Public Health data dashboard. Available at: <https://bit.ly/3mKf4Su>

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

II. COVID-19 among older adults (≥60 years of age)

Vaccination campaigns against COVID-19 are advancing in most countries and territories of the Americas with different target populations, and most have considered older adults (≥60 years of age) among the top priority groups following health workers.

It remains too early to fully understand the impact of vaccinations among older adults, and results are expected in the coming months.

Regarding the epidemiological situation in **Chile**¹⁷, according to population estimates¹⁸, older adults represented 17% and 18% of the total national population in 2020 and 2021, respectively, while this group represented 10% of the total cumulative confirmed COVID-19 cases as of 6 April 2021¹⁹.

At the national level, a comparison of the incidence and mortality rates among older adults with the group of persons aged 59 years and under shows a similar pattern in the incidence trend, with a first peak in June 2020 and a second peak in March 2021; the younger population shows a higher risk.

In contrast, a comparison of the mortality rates between the two groups shows a large difference. Older adults have mortality rates ranging between 0.5 and 120.8 per 100,000 population and persons aged 59 years and under have mortality rates ranging between 0.0 to 4.5 per 100,000 population.

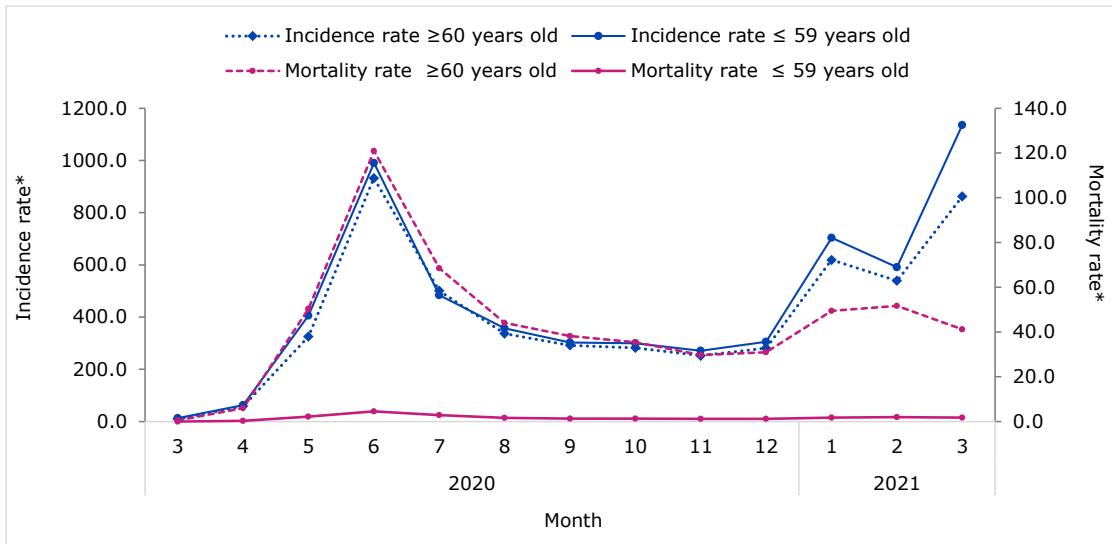
The observed epidemic mortality rate curve among older adults shows a similar trend to that of the incidence rate between March and December 2020, but with a different trend in January 2021, and with a decrease in March (**Figure 6**); the data should be interpreted with caution. Modeling of this data with Joinpoint showed a change point in May 2020, with a monthly percent change of -5.72% (not statistically significant).

¹⁷ To analyze the limitations related to the data, as previously mentioned (see footnote #10), is necessary to consider also those related to the availability of data on sex and age of cases and deaths. In addition, it should be noted the different ways in which older adults adhere or not adhere to public health measures and social distancing measures, which were not considered in this analysis of the crude data.

¹⁸ Population projections from the National Institute of Statistics. Available at: <https://bit.ly/2PC0mAW>

¹⁹ Government of Chile. Official COVID-19 data. Available at: <https://bit.ly/3fMQuPn>

Figure 6. Monthly age-specific incidence and mortality rates of COVID-19 among older adults (≥ 60 years) and people 59 years and younger. Chile. March 2020 to March 2021.



Note:

* Rates per 100,000 population.

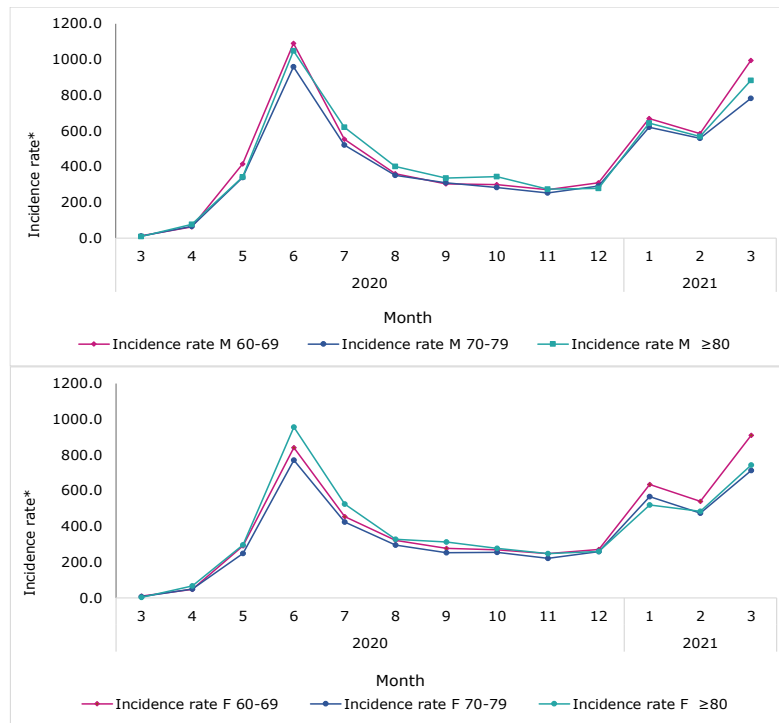
Source: Official COVID-19 data from the Government of Chile^{12, 13, 14} and analyzed by PAHO/WHO

When disaggregating the incidence rates of the elderly into three age subgroups and analyzing the trend between March 2020 and March 2021, males and females between 70 to 79 years of age have a lower risk than the other two subgroups (60 to 69 years and ≥ 80 years). Among the subgroups, both males and females aged 60 to 69 years have had the highest risk of becoming ill in the past three months (**Figure 7**).

In this preliminary analysis, it is likely too early to conclude that there is a downward trend in incidence rates among people aged ≥ 60 years, a group prioritized for vaccination, since the beginning of February. However, when reviewing the risk of death, the trend shows a change, with a decrease observed between February and March of 2021, both in males and females aged ≥ 80 years. This should be carefully interpreted in light of other factors that could have had an impact on the reduction in the risk of death.

Of note, during the period analyzed (March 2020 to March 2021), mortality rates for both sexes increased with age (**Figure 8**).

Figure 7. Age-specific incidence rates of COVID-19 among older adults (≥60 years), by month and sex. Chile. March 2020 to March 2021.



Note:

M: Male, F: Female

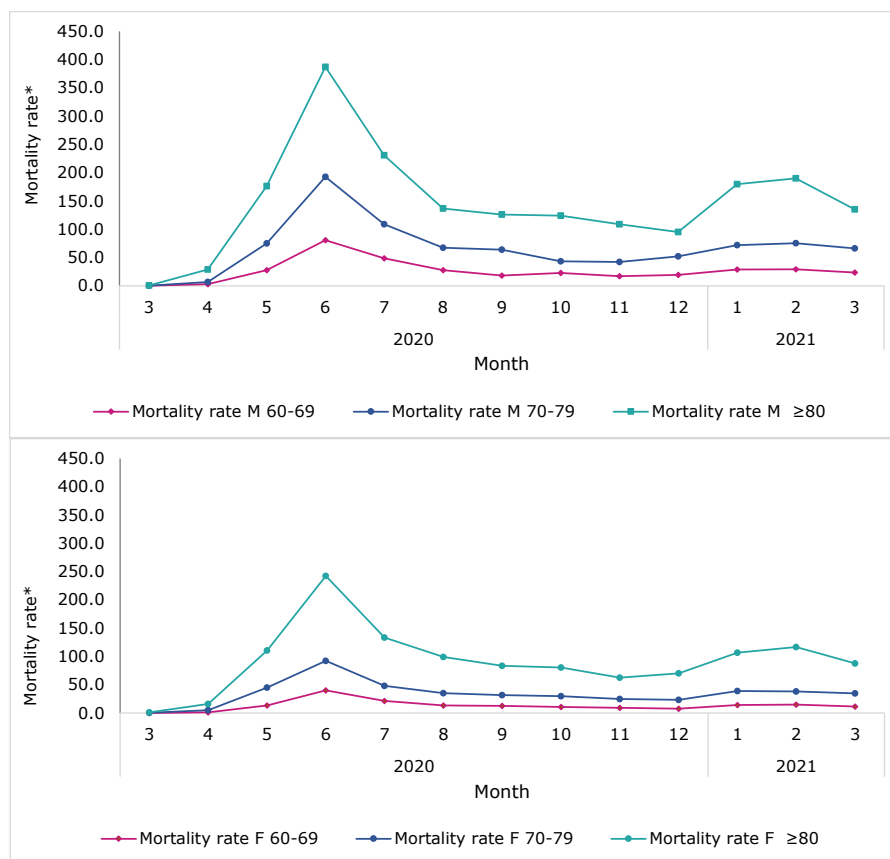
* Rates per 100,000 population.

Source: Official COVID-19 data from the Government of Chile^{12, 13, 14} and analyzed by PAHO/WHO

The incidence curves in Chile help to understand that vaccination by itself does not directly influence the reduction of COVID-19 transmission; it is necessary for the population to continue to adhere to social distancing and public health measures.²⁰

²⁰ WHO press conference on coronavirus disease (COVID-19), 26 March 2021. Available at: <https://bit.ly/3s4V9hW>

Figure 8. Age-specific mortality of COVID-19 among older adults (≥ 60 years), by month and sex. Chile. March 2020 to March 2021.



Note:

M: Male, F: Female

* Rates per 100,000 population.

Source: Official COVID-19 data from the Government of Chile^{12, 13, 14} and analyzed by PAHO/WHO.

III. COVID-19 during pregnancy

Although researchers continue to advance the knowledge base related to COVID-19 among pregnant women, helping to close existing knowledge gaps related to the impact of SARS-CoV-2 infection on the final outcome of pregnancy; accordingly, it is necessary to continue collecting information to contribute to that knowledge base.

The following highlights data provided by three countries in the Americas, Chile²¹, Colombia²², and Mexico²³, regarding the gestational period when the infection with SARS-CoV-2 occurred. In Colombia, half of the COVID-19 cases among pregnant women occurred during the third

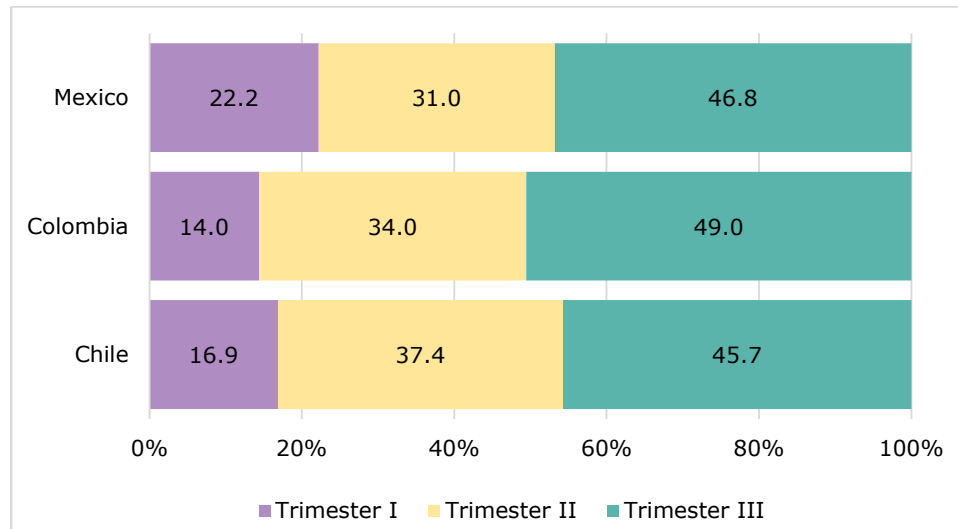
²¹ Chile Ministry of Health. Epidemiological Department. Epidemiological description of COVID-19 among pregnant women. Chile, EW 10 of 2020 to EW5 of 2021. Available at: <https://bit.ly/31Vaedz>

²² Colombia National Institute of Health. Available at: <https://bit.ly/3d1ZmPg>

²³ Mexico Secretariat of Health. Weekly epidemiological report on pregnant and postpartum women, suspected with COVID-19. EW 13 of 2021. Available at: <https://bit.ly/3s1qklb>

trimester, while in Chile and Mexico, this figure is slightly lower. In all three countries, approximately one-third of the cases became infected during the second trimester (**Figure 9**).

Figure 9. Cumulative proportion of pregnant women positive for SARS-CoV-2 infection, by trimester of pregnancy. Chile, Colombia, and Mexico, 2021.



Source: Data published by the Ministry of Health of Chile, the National Institute of Health of Colombia and the Secretariat of Health of Mexico and reproduced by PAHO / WHO.

While information on the risk of pregnant women presenting with a more serious manifestation of COVID-19 has been disseminated, it would be worthwhile to understand the factors that contributed to almost half of them becoming infected during the third trimester.

Since the first reported cases of COVID-19 in the Americas and until 13 April 2021, there have been a total of 191,900 SARS-CoV-2 infections among pregnant women, including 1,102 deaths (0.57% case-fatality rate), reported in 23 countries/territories for which information was available (**Table 4**).

Compared to the data presented in the 11 March 2021 PAHO/WHO COVID-19 Epidemiological Update⁴, this represents 19,348 additional cases and 85 additional deaths. During the same period, the highest relative increases in cumulative confirmed cases occurred in Cuba, Ecuador, and Paraguay, while for deaths, the highest relative increase was observed in Mexico. It is worth noting the high case fatality rate (10.28%) observed in the Dominican Republic (**Table 4**).

Table 4. COVID-19 during pregnancy, by country. Region of the Americas. January 2020 to 13 April 2021*.

Country	Number of pregnant women positives for SARS-CoV-2	Number of deaths among pregnant women positives for SARS-CoV-2	Case fatality rate (%)
Argentina	10,467	46	0.44
Bahamas	30	1	3.33
Bolivia	1,764	31	1.76
Belize**	103	2	1.94
Brazil	5,381	289	5.37
Chile	9,764	5	0.05
Colombia	8,327	63	0.76
Costa Rica	393	3	0.76
Cuba&	648	0	0.00
Dominican Republic	360	37	10.28
Ecuador	2,145	29	1.35
El Salvador	272	9	3.31
Guatemala	1,834	22	1.20
Haiti	79	4	5.06
Honduras	28	N/A	N/A
Mexico ^{&}	15,329	331	2.16
Panama ^{&}	2,264	12	0.53
Paraguay	996	2	0.20
Peru ^{&}	46,524	114	0.25
Suriname	50	0	0.00
United States of America	84,629	95	0.11
Uruguay	124	0	0.00
Venezuela	389	7	1.80
Total	191,900	1,102	0.57

Note:

N/A: Data not available.

*13 April 2021 corresponds to the date of the most recent report received by PAHO/WHO; there may be differences in the dates that each country provided the last report to PAHO/WHO or published the report. Preliminary data subject to change based on retrospective investigation.

** No update since the 11 March 2021 PAHO/WHO Epidemiological Update on COVID-19⁴

& Corresponds to pregnant and postpartum women

Source: Latin American Center for Perinatology/Women's Health and Reproductive Health (CLAP/SMR) and information shared with PAHO/WHO by IHR National Focal Points (NFPs) or published on the websites of the Ministries of Health, health agencies, or similar and reproduced by PAHO/WHO.

IV. COVID-19 among indigenous populations

Since January 2020 until 13 April 2021, there have been 423,423 confirmed cases of COVID-19, including 6,970 deaths, reported among indigenous populations in 15 countries in the Region of the Americas for which information was available (**Table 5**). Compared to the data in the 11 March 2021 PAHO/WHO Epidemiological Update on COVID-19⁴, this represents 30,777 additional confirmed cases including 1,365 deaths.

In comparison with previous PAHO/WHO Epidemiological Update, the highest increase in cases and deaths was observed in Bolivia.

Table 5. Cumulative number of confirmed cases and deaths of COVID-19 among indigenous populations in the Region of the Americas. January 2020 to 13 April 2021*.

Country	Number of confirmed cases of COVID-19	Number of deaths
Bolivia	11,668	270
Brazil	46,374	637
Canada	25,688	298
Chile	40,745	703
Colombia	40,059	1,269
Ecuador	5,153	206
Guatemala**	11,710	454
Guyana**	95	6
Mexico**	16,682	2,427
Panama**	5,807	102
Paraguay	286	27
Peru	26,509	514
Suriname	557	29
United States of America	191,229	N/A
Venezuela	861	28
Total	423,423	6,970

Note:

N/A: data not available

*13 April 2021 corresponds to the date of the most recent report received by PAHO/WHO; there may be differences in the dates that each country provided the last report to PAHO/WHO or published the report. Preliminary data subject to change based on retrospective investigation.

** No update since the 11 March 2021 PAHO/WHO Epidemiological Update on COVID-19⁴.

Source: Data provided by the International Health Regulations (IHR) National Focal Points (NFPs) or published by the Ministries of Health, Institutes of Health, indigenous organizations, or similar and reproduced by PAHO/WHO.

V. COVID-19 among children and adolescents

Since the beginning of the pandemic, it has been understood that children and adolescents have a lower risk of illness and death from COVID-19 compared to other age groups. As well, it has been recognized that children and adolescents are being affected mainly by the measures taken to control the transmission of the virus. These indirect effects include the negative consequences of schools closures, restrictions on the movement of people which limit opportunities for play and relationships with family and friends, the loss of work and income that also affect the mental health of caregivers and consequently the relationships between children and their caregivers, and the alteration of health and social protection service functions, among others. The number of studies documenting the magnitude of these effects on the health, development, and learning of children and adolescents is growing²⁴.

The evidence available thus far suggests that children and adolescents are less susceptible to SARS-Cov-2 infection and also transmit the virus less frequently than adults. When they acquire

²⁴ UN Sustainable Development Group. Policy Brief: The Impact of COVID-19 on children. April 2020. Available at: <https://bit.ly/38r1JbH>

infection, they are generally asymptomatic and, when they do get sick, they usually have mild illness with symptoms similar to other common illnesses in these ages. Within the 0-19 age group, studies suggest that susceptibility and transmission are lower among children under 5 years of age than among older children and adolescents.^{25,26,27,28,29}

The following is an analysis of the incidence and mortality rates among children and adolescents in **Chile**³⁰.

In an analysis of COVID-19 among children and adolescents between March 2020 and March 2021 in Chile, among both sexes, adolescents aged 15 to 19 years presented the highest risk of illness compared to the other age groups during this period. In all age groups of children and adolescents and in both sexes, an increasing trend has been observed during the last three months (**Figure 10**), with higher risks than those observed in the previous months. It remains important to continue monitoring trends among these age groups, considering that they are not eligible for vaccination.

Special attention should be paid to any occurrence of changes in clinical patterns: from a mild and asymptomatic disease to presentations of greater concern or severity. For example, the observed increase in cases of multisystem inflammatory syndrome among children and adolescents (MIS-C) temporally related to COVID-19. Between EW 1 to EW 13 of 2021, 50 MIS-C cases were reported, including 2 deaths. This figure corresponds to one-third of the total MIS-C cases notified between EW 10 to EW 53 of 2020 (152 cases, including 2 deaths).

Of the total cumulative MIS-C cases reported in Chile (203 cases, including 4 deaths), 58% are male and by age group, 41% are 0-4 years, 33% are 5-9 years, 23% are 10-14 years, and 2% are 15-19 years old.

Regarding mortality from COVID-19 in children and adolescents in Chile, between March 2020 and 6 April 2021, 67 deaths were reported, of which 39 were females and 28 males. There is no clear trend in mortality rates to date.

²⁵ Gaythorpe, K. A., Bhatia, S., Mangal, T., et al. Children's role in the COVID-19 pandemic: a systematic review of early surveillance data on susceptibility, severity, and transmissibility. Imperial College London. 3–26. <https://doi.org/10.25561/84220>

²⁶ Viner, R. M., Mytton, O. T., Bonell, C., et al. Susceptibility to SARS-CoV-2 Infection among Children and Adolescents Compared with Adults: A Systematic Review and Meta-Analysis. *JAMA Pediatrics*, 175(2), 143–156. <https://doi.org/10.1001/jamapediatrics.2020.4573>

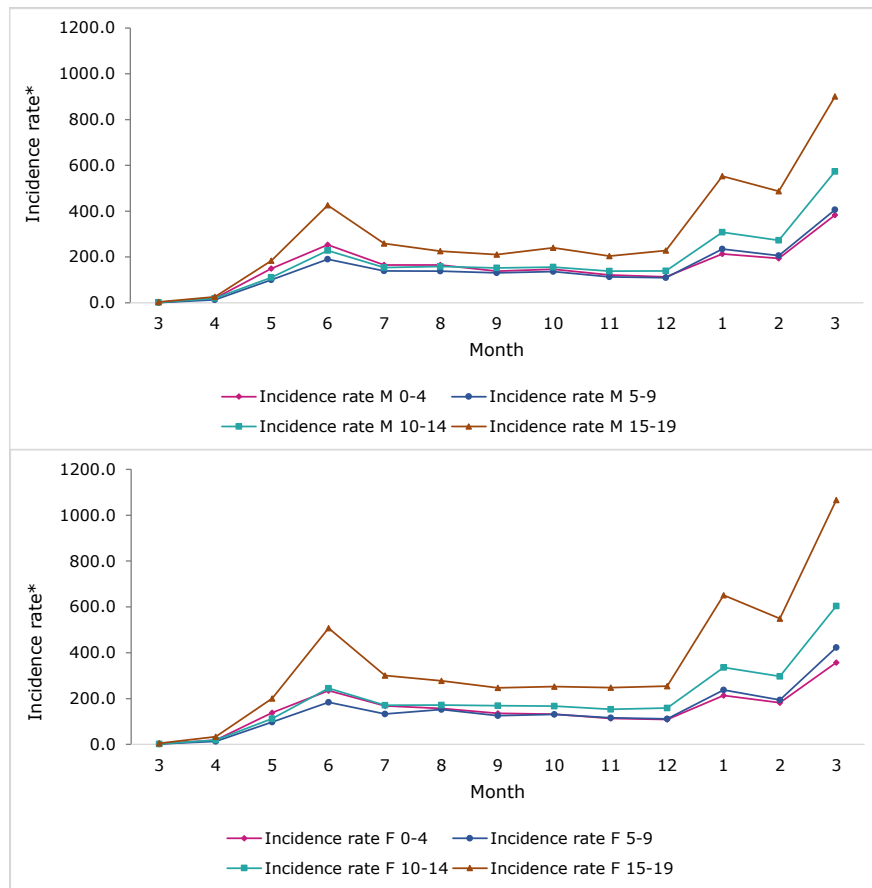
²⁷ Viner, R. M., Russell, S., Saullé, R., et al. Impacts of school closures on physical and mental health of children and young people: a systematic review. *MedRxiv*, 2021.02.10.21251526. <https://doi.org/10.1101/2021.02.10.21251526>

²⁸ Davies, N.G., Klepac, P., Liu, Y. et al. Age-dependent effects in the transmission and control of COVID-19 epidemics. *Nat Med* 26, 1205–1211 (2020). <https://doi.org/10.1038/s41591-020-0962-9>

²⁹ Leidman E, Duca LM, Omura JD, Proia K, Stephens JW, Sauber-Schatz EK. COVID-19 Trends Among Persons Aged 0–24 Years — United States, March 1–December 12, 2020. *MMWR Morb Mortal Wkly Rep* 2021; 70:88–94. DOI: <http://dx.doi.org/10.15585/mmwr.mm7003e1>

³⁰ To the limitations related to the data, previously mentioned (please see the footnote #10), there are added those related to the availability of data on sex and age of cases and deaths. Additionally, factors related to school closings and the ability of children and adolescents to adhere or not adhere to public health measures and social distancing measures must be considered, which were not considered in this crude analysis of the data.

Figure 10. Age-specific incidence rates of COVID-19 among children and adolescents between 0 to 19 years of age. Chile, March 2020 to March 2021.



Note:

M: Male, F: Female

Source: Official COVID-19 data from the Government of Chile^{12, 13, 14} and analyzed by PAHO/WHO.

Multisystem inflammatory syndrome in children and adolescents (MIS-C³¹) temporally related to COVID-19

Various reports and scientific publications, from different places worldwide, have described groups of children and adolescents requiring admission to intensive care units (ICU) with a multisystem inflammatory condition with some features similar to those of Kawasaki disease and toxic shock syndrome. Based on the available evidence, WHO has provided the case definition of this syndrome, called multisystem inflammatory syndrome (MIS) in children and adolescents temporally related to COVID-19, available at: <https://bit.ly/2RBZzqr>

Although MIS-C occurs relatively infrequently, these cases present important challenges for health systems.

³¹ MIS-C It is specified in the acronym that refers to cases of Multisystemic Inflammatory Syndrome in children and adolescents, for which the C is added, for children, to differentiate it from cases of Multisystemic Inflammatory Syndrome in adults.

In the Region of the Americas, since June 2020, PAHO/WHO began active surveillance of MIS-C cases, inviting Member States to share minimum epidemiological surveillance variables allowing for the characterization of MIS-C in the Region.

Between mid-May 2020 and 14 April 2021, a cumulative total of 4,960 confirmed cases of MIS-C temporally related to COVID-19, including 111 deaths, have been reported in 22 countries/territories of the Region of the Americas (**Table 6**).

Since the 11 March 2021 PAHO/WHO Epidemiological Update on COVID-19⁴ to 13 April 2021, one additional territory has reported confirmed MIS-C cases (2 cases in Saint Martin). Furthermore, there were an additional 855 confirmed cases reported, including 13 deaths. During this same period, 23 countries and territories have officially reported to PAHO/WHO that they have not detected cases of MIS-C.

As the numbers of cases of MIS-C increase, it is important that each country/territory characterizes the cases³² in order to contribute to closing the gaps in information, particularly related to clinical management and response measures.

³² WHO. Case Report Form for suspected cases of multisystem inflammatory syndrome (MIS) in children and adolescents temporally related to COVID-19. Available at: <https://bit.ly/3cTmrUF>

Table 6. Distribution of cumulative confirmed cases and deaths of multisystem inflammatory syndrome in children and adolescents (MIS-C) temporally related to COVID-19 in the Region of the Americas, by country/territory. May 2020 to 14 April 2021*.

País/Territorio	Número de casos confirmados	Número de defunciones confirmadas
Argentina	127	1
Barbados	2	1
Brasil	846	54
Bolivia	1	1
Canadá	76	0
Chile	203	4
Costa Rica	30	0
Colombia	5	2
Cuba	4	0
Ecuador	10	0
El Salvador	19	0
Estados Unidos de América	3.313	36
Guadalupe	4	0
Guatemala	2	0
Guayana Francesa	1	0
Honduras	2	0
Panamá	81	2
Paraguay	68	5
Perú	1	0
República Dominicana	134	5
San Martín	2	0
Trinidad y Tabago	29	0
Total	4.960	111

Note:

*14 April 2021 corresponds to the date of the most recent report received by PAHO/WHO; there may be differences in the dates that each country provided the last report to PAHO/WHO or published the report. Preliminary data subject to change based on retrospective investigation.

Sources: Data provided by the International Health Regulations National Focal Points or published by the Ministries of Health, Institutes of Health, or similar health agencies and reproduced by PAHO/WHO.

The following is a brief description of the epidemiological situation of MIS-C in the Americas.

Of the total number of reported cases for which data on age and sex were available (n=4,662), 29% were aged 0 to 4 years, 34% aged 5 to 9 years, 26% aged 10 to 14 years, and 11% aged 15 to 19 years (the United States of America includes 20-year-olds in this age group). Regarding the distribution by sex, 59% of the cases were male.

Among 109 fatal cases for which data on age and sex were available, 39% were aged 0 to 4 years, 20% aged 5 to 9 years, 15% aged 10 to 14 years, and 27% aged 15 to 19 years, and 51% were male.

VI. COVID-19 among health workers

While 2021 has deservedly been designated as the International Year of Health and Care Workers to recognize and thank the unwavering dedication of these workers in fighting the COVID-19 pandemic³³, the number of cases and deaths in this population unfortunately continues to increase. However, a preliminary study³⁴ on mRNA vaccines against COVID-19 applied to this population group has shown high efficacy in preventing SARS-CoV-2 infection, regardless symptom status.

According to available information provided by 21 countries in the Americas, a cumulative total of 1,773,169 confirmed cases of COVID-19, including 8,655 deaths, have been reported among health workers between January 2020 and 13 April 2021 (**Table 7**).

Table 7. Distribution of cumulative confirmed cases and deaths of COVID-19 among health workers in the Region of the Americas. January 2020 to 13 April 2021*.

Country	Number of confirmed cases of COVID-19	Number of deaths
Argentina	78,806	472
Bahamas	336	3
Bolivia	21,410	421
Brazil	753,089	656
Chile	52,241	102
Colombia	53,788	251
Costa Rica**	7,974	25
Ecuador	11,696	118
El Salvador**	6,609	72
Dominican Republic	751	19
Guatemala**	9,141	84
Haiti	808	1
Jamaica	678	3
Mexico	229,458	3,534
Panama**	7,925	123
Paraguay	10,148	104
Peru	57,901	1,001
Suriname	396	0
United States of America	462,905	1,538
Uruguay	5,431	7
Venezuela**	1,678	121
Total	1,773,169	8,655

Note:

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** No update since the 11 March 2021 PAHO/WHO Epidemiological Update on COVID-19⁴

Source: Data provided by the IHR National Focal Points (NFPs) or published by the Ministries of Health, Institutes of Health, or similar health agencies and reproduced by PAHO/WHO.


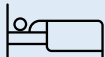





³³ WHO. Year of the Health and Care Workers 2021. Available at: <https://bit.ly/3cflEfp>

³⁴ Thompson MG, Burgess JL, Naleway AL, et al. Interim Estimates of Vaccine Effectiveness of BNT162b2 and mRNA-1273 COVID-19 Vaccines in Preventing SARS-CoV-2 Infection Among Health Care Personnel, First Responders, and Other Essential and Frontline Workers — Eight U.S. Locations, December 2020–March 2021. *MMWR Morb Mortal Wkly Rep* 2021;70:495–500. DOI: <http://dx.doi.org/10.15585/mmwr.mm7013e3> Available at <https://bit.ly/2PUAL6r>

Guidance for national authorities

PAHO/WHO continues to reiterate and update recommendations to support all Member States on management and protection measures for COVID-19 and reiterates the recommendations included in the PAHO/WHO Epidemiological Alerts and Updates on COVID-19 available at: <https://www.paho.org/en/epidemiological-alerts-and-updates>.

The following are guidance, scientific reports, and other resources published by PAHO/WHO and WHO.

<p style="text-align: center;">Surveillance, rapid response teams, and case investigation</p> <p style="text-align: center;"></p>	<p style="text-align: center;">Clinical management</p> <p style="text-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 style="text-align: center;">Laboratory</p> <p style="text-align: center;"></p>	<p style="text-align: center;">Infection prevention and control</p> <p style="text-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 style="text-align: center;">Critical preparedness and response</p> <p style="text-align: center;"></p>	<p style="text-align: center;">Travel, Points of entry, and border health</p> <p style="text-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 style="text-align: center;">Schools, workplaces, & other institutions</p> <p style="text-align: center;"></p>	<p style="text-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>

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