
EDITORIAL

The Rising Incidence of SARS-CoV-2 Infection in the Greater Rio Grande Valley: Is the COVID-19 Pandemic Over?

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The first case of SARS-CoV-2 infection was reported in 2019 by the World Health Organization for a patient in Wuhan, China (1). In the United States, the first case was reported in January 2020 of a patient who had travelled from Wuhan China to Snohomish County, Washington (2). In the Hidalgo County, Rio Grande Valley, Texas the first confirmed patient with COVID-19 was treated on March 21, 2020. Globally since the identification of the first case in Wuhan China and as of July 28, 2022, over 574 million (approximately 7.2% of the world population) people have been diagnosed with COVID-19 and over 6.3 million people have died because of SARS-CoV-2 infection (Table 1). During the same period, over 91 million (approximately 27% of the population) people in United States were diagnosed as COVID-19 positive and over one (1) million people have died

(Table 1). In Texas with a population of over 29 million people, over 7.5 million (approximately 26% of the population) residents acquired SARS-CoV-2 infection and over 300,000 have died due to COVID-19 (Table 1).

The Greater Rio Grande Valley (G-RGV) in South Texas is comprised of eight counties (Hidalgo, Cameron, Webb, Starr, Willacy, Zapata, Jim Hogg, and Brooks) and according to the 2020 United States Census, it has a total population of over 1.6 million people (3). It is one of the most rapidly growing regions in the United States and enjoys the uniqueness of having over 90% of the population who are of Hispanic ethnicity (3). Since the identification of the first case of SARS-CoV-2 infection in March 2020 (Table 2), over 488,000 (approximately 29% of the

population) people in the G-RGV have been diagnosed positive with COVID-19 and over 7,600 people have died as a consequence of this infection (Table 2; 4).

The advent of COVID-19 mRNA vaccines in December 2020 positively impacted the outcome of SARS-CoV-2 infection both globally as well as in the United States (5, 6). As of July 27, 2022, over 229 million (approximately 67.2% of the population) people in the United States have been fully vaccinated, whereas during the same period over 50 million (approximately 91.8% of the population) people over the age of 65 years have been fully vaccinated (Figure 1). As of July 28, 2022, in Texas, over 17.8 million people have been fully vaccinated and over 7 million people have received at least one booster. Unfortunately, in the United States, only approximately 48% (over 107 million) people who qualify have received the first booster and only over 19 million (approximately 30.9%) people ≥ 50 years and over 13 million (approximately 37.8%) people ≥ 65 years who qualify have received the second booster (7). These observations are alarming considering the results of a recent study that was published in the journal Science which suggested that COVID-19 vaccine boosters provided adequate protection against Omicron sub-lineages (8).

This gradual decline in compliance with CDC recommendations for receiving primary and booster vaccinations and the concomitant lackadaisical approach to maintaining appropriate safety precautions are converging factors that are leading to an observed increase in infection from Omicron BA.4 and BA.5 sub-lineages. As depicted in Table 1 and 2, in the last 28 days, there is a marked increase in both the frequency of infection as well death from COVID-19. In the last 28 days, in United

States, over 27 million people have been infected with SARS-CoV-2 virus and during the same period over 55,000 people have died (Table 1). In Texas during the same period, over 300,000 people have been diagnosed as COVID-19 positive and 385 people have died (Table 1). Additionally, in the last 28 days in the G-RGV, over 22,000 people have been diagnosed with SARS-CoV-2 infection and 34 people have died because of COVID-19 (Table 2). ***It is noteworthy that positive home tests are not reported to the central registry thus it is highly likely that these numbers are not reflective of the actual incidence of SARS-CoV-2 infection in the community.***

From the evidence presented above, we conclude that the COVID-19 is still a pandemic and has the potential to cause more fatality if adequate measures are not taken promptly. We recommend that people seriously consider getting vaccinated and observe safety precautions to abate the incidence of SARS-CoV-2 infection, reduce the frequency of mutations, and minimize the attendant lethality.

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Conflict of Interest:

The authors have reported no conflict of interest

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TABLE 1: NUMBER OF COVID-19 POSITIVE CASES AND DEATHS AS OF THE START OF THE PANDEMIC AND IN THE LAST 28 DAYS*

Location	Population	Cases		Deaths	
		Total	Last 28 Days	Total	Last 28 Days
Globally	7.96 B	574.4 M (7.2%)	27.1 M	6,394,100	55,640
United States	329.5 M (4.1%)	91 M (27%)	3.5 M	1,028,998	11,850
Texas	29.4 M	7.5 M (26%)	0.3 M	88,859	395

*as of July 28, 2022 @ 16:00 hours

TABLE 2: NUMBER OF COVID-19 POSITIVE CASES AND DEATHS IN THE GREATER RIO GRANDE VALLEY, SOUTH TEXAS AS OF THE START OF THE PANDEMIC AND IN THE LAST 28 DAYS*

Location	Population	Cases		Deaths	
		Total	Last 28 Days	Total	Last 28 Days
Hidalgo	875,200	230,639	12,130	3,939	15
Cameron	424,180	118,034	6,049	2,053	14
Webb	277,681	101,784	2,378	1,042	4
Starr	64,266	21,531	737	366	0
Willacy	21,161	7,843	395	134	1
Zapata	14,172	3,963	134	55	0
Jim Hogg	5,184	3,128	243	22	0
Brooks	6,964	1,794	79	52	0

*as of July 28, 2022 @ 16:00 hours

FIGURE 1: COVID-19 VACCINATION IN THE UNITED STATES*

(Adopted from: https://covid.cdc.gov/covid-data-tracker/#vaccinations_vacc-people-additional-dose-totalpop)

Total Vaccine Doses	At Least One Dose	Fully Vaccinated	First Booster Dose	Second Booster Dose
	Fully Vaccinated* People		Count	Percent of US Population
Distributed 789,714,195				
Administered 603,693,871				
632.25k Children < 5 years of age with at least one dose since June 18, 2022				
107.9M People with a first booster dose**				
21.1M People with a second booster dose***				
	Total		223,245,563	67.2%
	Population ≥ 5 Years of Age		223,117,055	71.5%
	Population ≥ 12 Years of Age		214,403,926	75.6%
	Population ≥ 18 Years of Age		199,161,619	77.1%
	Population ≥ 65 Years of Age		50,361,456	91.9%

*as of July 27, 2022 @ 06:00 hours EST

**Fully Vaccinated: Having received two doses of primary vaccination of mRNA vaccine