CITY OF SAN ANTONIO
METROPOLITAN HEALTH DISTRICT

COVID-19 Monthly Epidemiological Report
July 2021

*Unless otherwise indicated, data for analyses in this report were extracted from Texas Health Trace on **08/09/2021** and include cases with event dates† through **07/31/2021**. Results are subject to change.*

Key Takeaways

Increase in New Cases & Positivity Rate

- Bexar County reported 15,183 new cases (plus a 905 case backlog), 1903 new COVID-19 associated hospitalizations, and 35 deaths.
- Positivity rate had a high of 19.9% in the last week of July— the highest positivity rate seen since the beginning of January 2021.

Hospitalizations and Deaths

- Hospitalizations increased through July, with an average of 833 patients per day.
- The average number in the ICU has also increased by 385% from the end of June 2021 to the end of July 2021.
- Total deaths through the end of July are 3,637. Case fatality is at 1.5%. The risk of death increases with age at COVID-19 onset, and is greater for males than females.

Breakthrough Cases

- Since the beginning of 2021, roughly 2% of cases, 2% of hospitalized COVID-19 cases, and about 1% of deceased cases were fully vaccinated.

I. Current Status and Overview of COVID-19 in Bexar County

During the five weeks that include July, Bexar County reported 15,183 new cases (plus a 905 case backlog), 1,903 new COVID-19 associated hospitalizations, and 35 deaths.

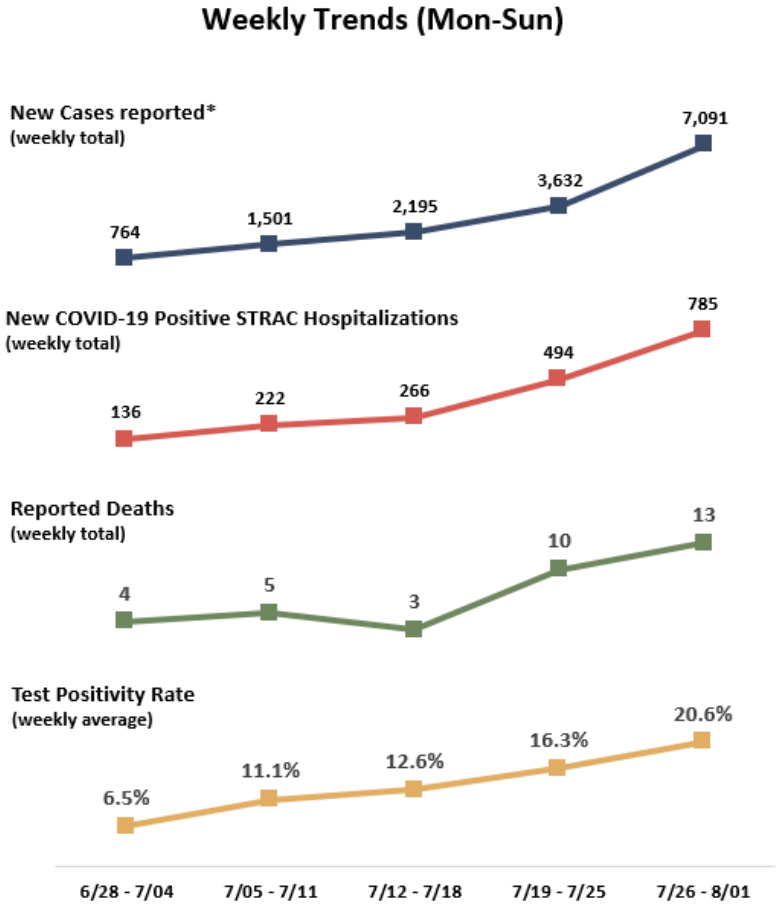
New cases reported during the calendar month of July were over four-fold those reported in June; similarly, hospitalizations reported during July were four times those of June. Deaths increased by 27%. Test positivity averaged 15.6%, compared to 2.0% for June.

Weekly newly reported cases increased over nine-fold, between the first and last weeks of July, almost doubling from fourth to fifth weeks.

Weekly new hospital admissions increased over 5-fold between the first and last weeks of the month.

Weekly reported deaths initially continued the stable numbers of June, then increased sharply in the last two weeks. Deaths rose over 3-fold between the first and last weeks of the month.

Weekly test positivity continued the increases of late June, rising over 3-fold between the first and last weeks of July to 20.6%, a rate not seen since the winter surge. Weekly test numbers increased 2.7-fold over the same period.



*Reported cases and deaths may have occurred anytime during the previous 14 days. Delayed reports of backlogged cases and deaths are not included in weekly totals.

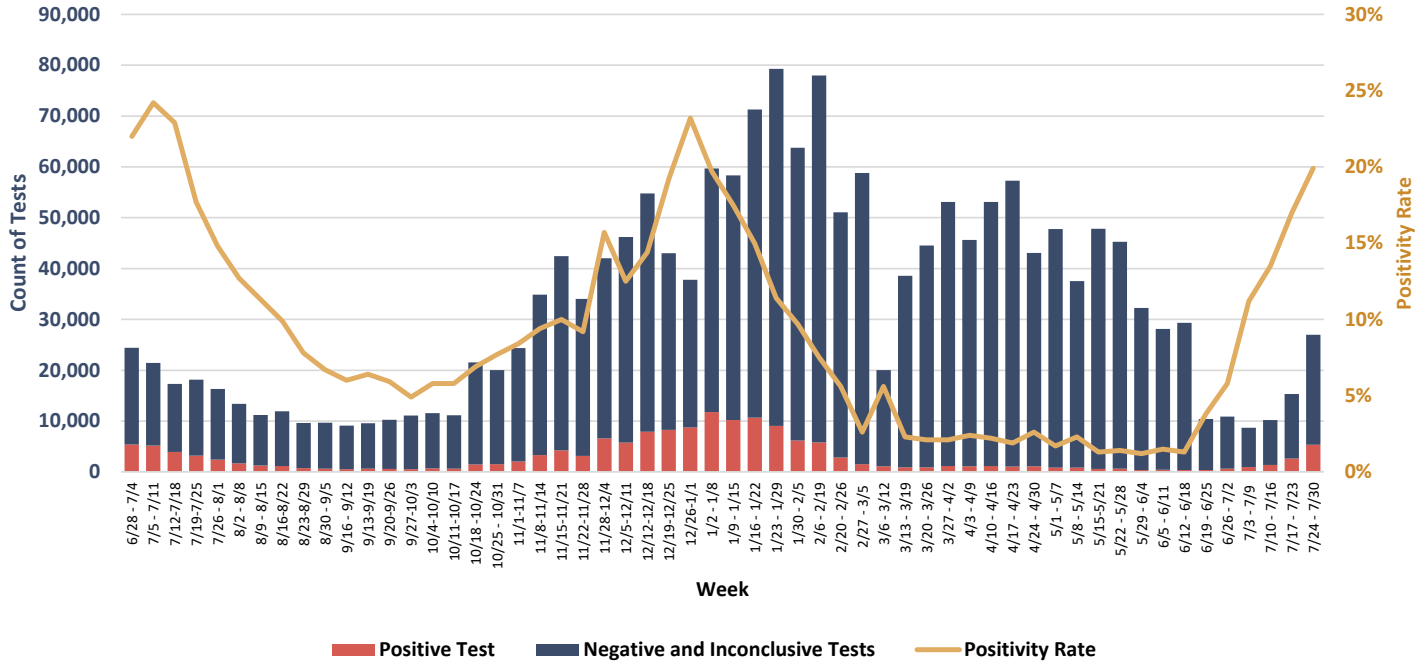
II. Testing & Positivity Rate

Bexar County's COVID-19 weekly test positivity rate increased in July, with a **high of 19.9%** in the last week-- **the highest positivity rate since the beginning of January 2021.** About 70,000 tests were processed over the month. The last week of the July had an over 170% increase in tests compared to the first three weeks of July.

Source: Aggregate Labs Report of labs conducting COVID-19 testing

Number of Tests and Positivity Rate by Week

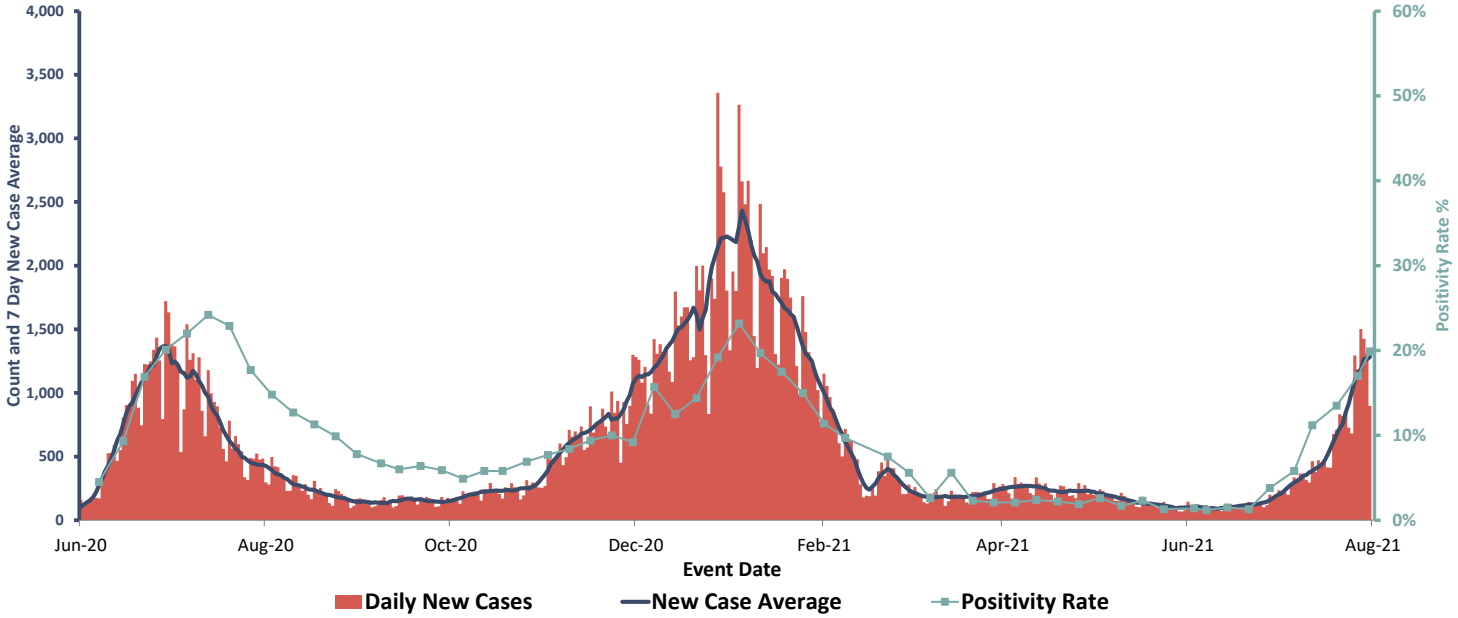
(June 28th, 2020- July 30th, 2021)



III. Trends & Demographic Characteristics among COVID-19 Cases

July 2021 demonstrated a **significant resurgence of COVID-19 in the community**. During the 2020 summer surge, cases had risen and peaked around 1,700 cases in approximately one month. When looking at the current surge, cases have increased to approximately 1,500 cases in a month and it remains to be seen whether a peak has been reached.

Bexar County COVID-19 Cases by Event Date* and Positivity Rate



Average shown is a centered moving average calculated as t0 +/- 3 days

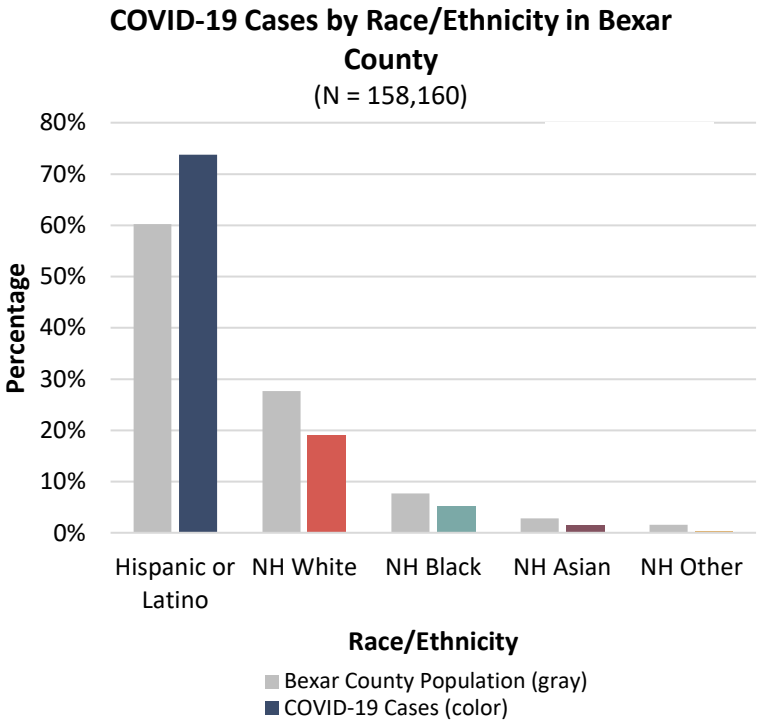
**Event date refers to either illness onset date (for symptomatic cases) or test collection date (for asymptomatic cases or when onset date not available). This differs from Reported Date.*

III. A. Race/Ethnicity Distribution of Cases

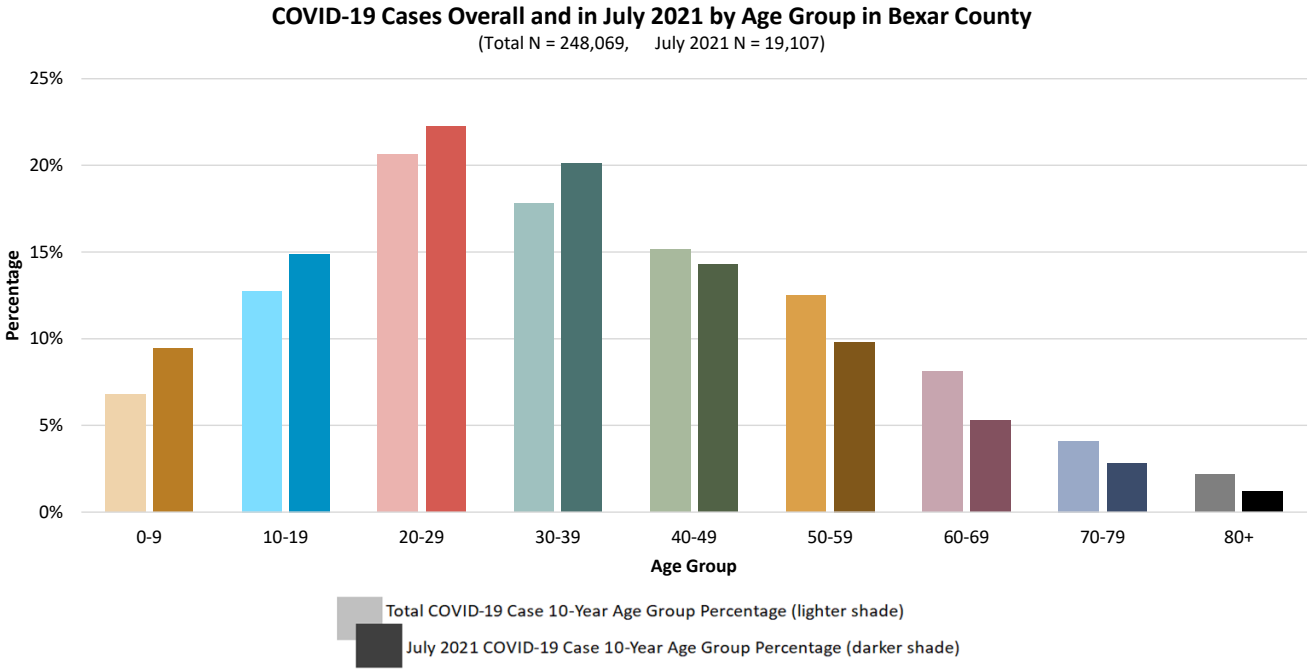
Among cases for whom race/ethnicity data are available (64%), **Hispanic individuals constitute the majority of COVID-19 cases in Bexar County**, and account for a larger proportion of cases than they do the general population of Bexar County. This pattern is persistent across age groups.

Notes:

1. Data on race and/or ethnicity are currently unavailable for about 38% of cases.
2. The number of Bexar County residents above is the ACS (5-yr) 2019 population estimate.
3. NH = Non-Hispanic

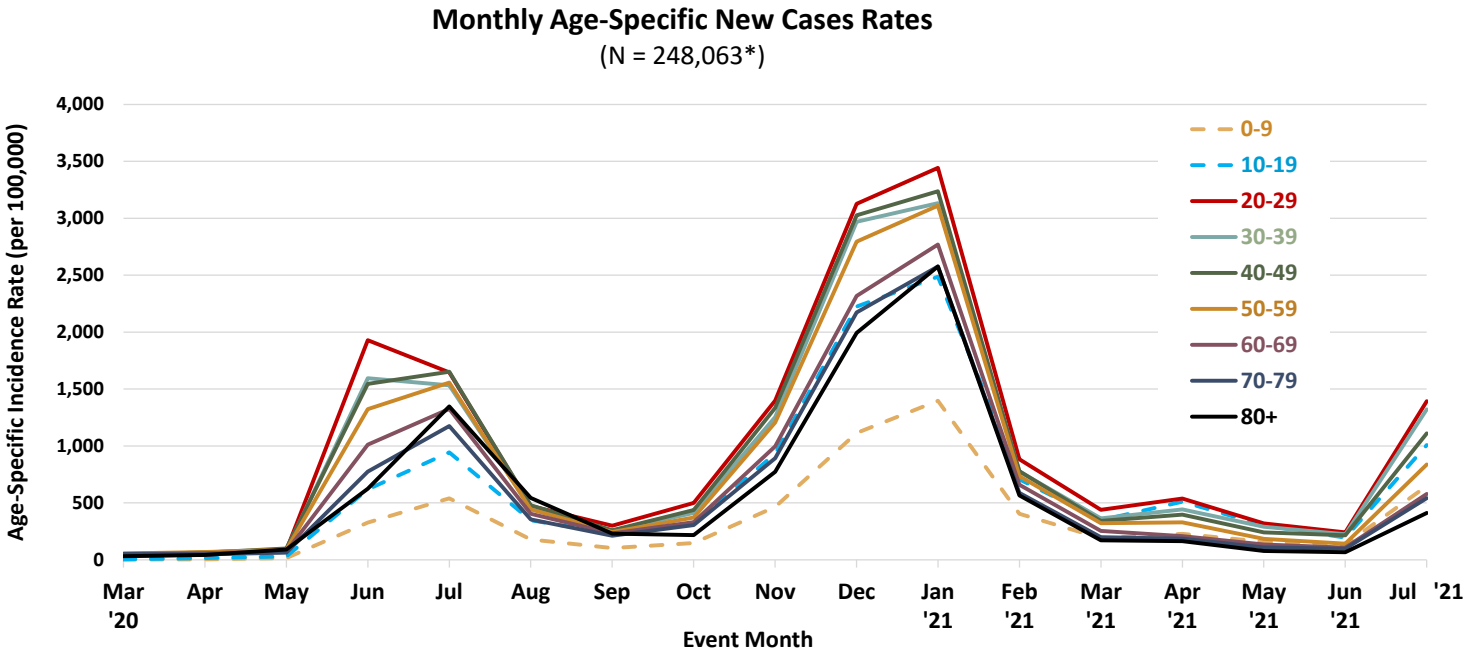


III. B. Age and Gender Distribution of Cases



Overall age group distributions of COVID-19 cases continue to show that cases aged 20-29 continue to make up the largest proportion of COVID-19 cases, at about 21% of all cases. This age group is followed by cases aged 30-39 years old, who make up approximately 18% of cases. During the month of July 2021, cases in age groups 0-9, 10-19, 20-29, and 30-39 made up a higher percentage of July 2021's cases than the overall pandemic average. This indicates that **the average age of cases in July 2021 (33 years) is lower than the average age of all COVID-19 cases during the pandemic (37 years).** The percentage of cases in age groups 40-49, 50-59, 60-69, 70-79, and 80+ are lower in July 2021 than overall during entirety the COVID-19 pandemic. Notable, COVID-19 cases aged 0-9 only make up 7% of total COVID-19 cases, but make up 9% of July 2021 cases, and cases aged 10-19 only make up 13% of total COVID-19 cases, but make up 15% of July 2021 cases.

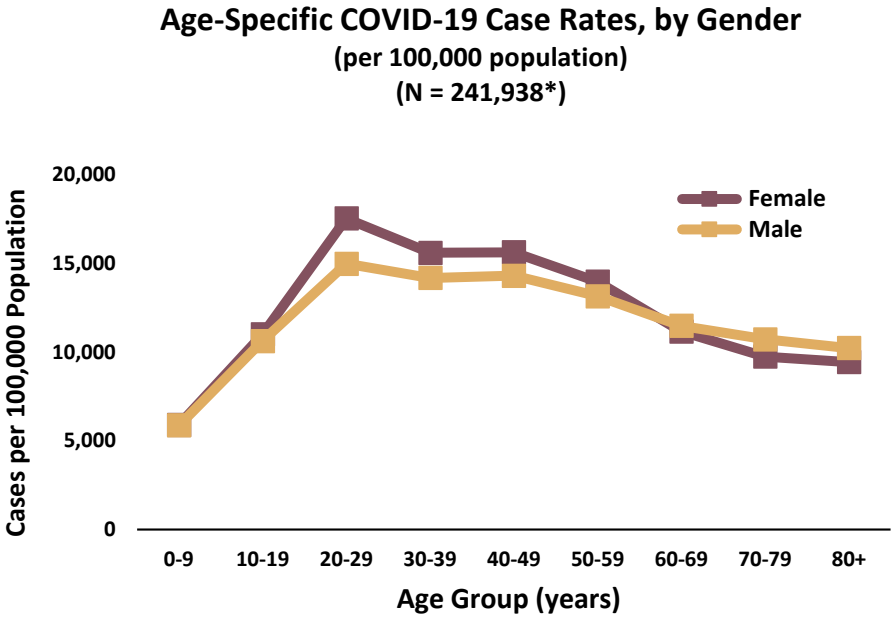
III. C. Age and Gender Distribution of Cases



Age-specific case rates† increased steeply between June '21 and July '21, approximately 5 to 6-fold in each age group. **In July '21**, the highest rates occured among young adults ages **20-29 years** (**red line**), followed in order by age groups **30-39** (**sage**), **40-49** (**dark green**), ages **10-19** (**turquoise dashes**), **0-9 years** (**beige dashes**), **50-59** (**solid beige**), **60-69** (**dark maroon**), **70-79** (**dark blue**), with the lowest rate among those age **80+** years of age (black). This is a different pattern than during the earlier surges, when children ages 0-9 years had the lowest rates.

Over the course of the pandemic, 12.7% of all residents are known to have had COVID-19. By age group, the percentages range from 6% of children ages 0-9, to 17% of young adults ages 20-29.

*Excludes 159 cases with age not available plus 6 cases diagnosed in February 2020 (0.1%).



*Excludes 6,290 cases (3.0%) for whom age and/or gender was not available.

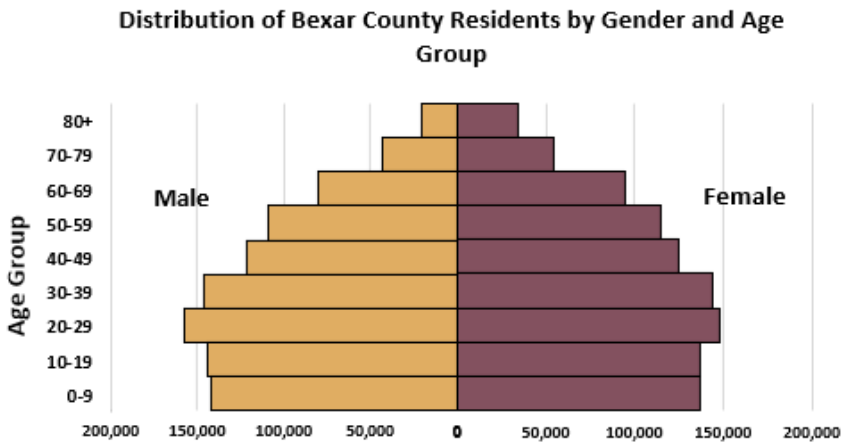
Age-specific rates† also demonstrates how **younger adults and women have had the highest rates** of COVID-19. This pattern has persisted throughout the pandemic. Observed disparities in case rates may be influenced by a combination of behavioral differences in regard to COVID-19 testing and risks of exposure to the coronavirus.

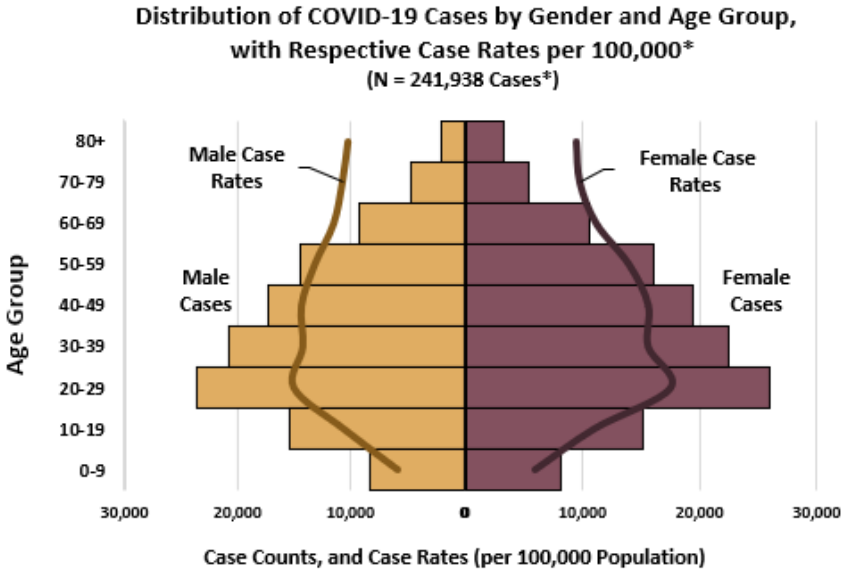
Through the end of July '21, COVID-19 the age-adjusted‡ case rates are 12,766 cases per 100,000 females and 11,972 cases per 100,000 males (females 7% higher than males). July itself added approximately 1,000 cases per 100,000 for each gender. The **overall age-adjusted case rate for the County is now 12,664 cases per 100,000 population, all cases combined.**

†Age-specific rates use the ACS (5-yr) 2019 population estimates for Bexar County.

‡Age-adjusted rates are weighted using the US Standard Population 2000.

IV. The Extent of COVID-19 in the Bexar County Population





*Excludes 6,290 cases (2.5%) for whom age and/or gender was not available.

The upper pyramid shows the distribution of Bexar County residents by age and gender.

The case pyramid (middle graph) shows the age distribution of all COVID-19 cases through July '21, for whom gender and age are available*. The **greatest numbers of cases have occurred among age group 20 -29 years:** 25,912 females and 23,573 males. The smallest numbers have occurred among oldest age group 80+ years: 3,223 females and 2,056 males. This general pattern has persisted throughout the pandemic.

Through the end of July '21, a total of 248,228 Bexar County residents are known to have had COVID-19. July itself added approximately 10,000 cases in each gender.

Age-specific case rates† (curved lines in lower graph, also shown on previous page) overlay the number of cases per 100,000 Bexar County residents of the same gender and age group, on the corresponding case number bars. The lowest case rates continue to be for young children (ages 0-9 years): about 5,900 cases per 100,000 population of each gender.

Conversely, young adults ages 20-29 have had the highest case rates, with 17,546 cases per 100,000 females and 14,991 cases per 100,000 males. For this age group the female case rate remains 17% greater than the male rate.

Overall, 12.7% (1 in 7.9) Bexar County residents are known to have had COVID-19. This includes 12.8 % of females, and 12.0% of males.

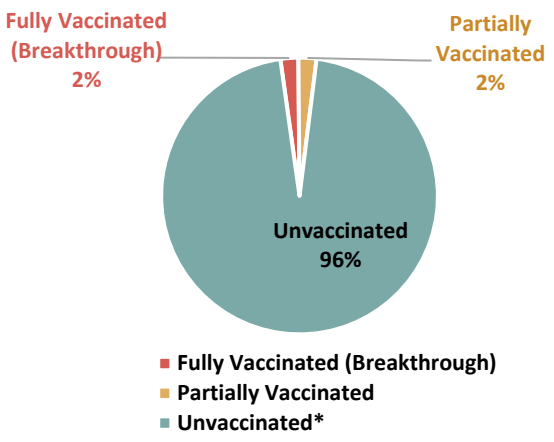
†Age-specific rates use the ACS (5-yr) 2019 population estimates for Bexar County.

*Gender and/or age data were not available for 6,290 cases (2.5%).

Of the 248,069* COVID-19 known cases since the pandemic began, through the end of July 2021, a total of 4,681 had been vaccinated: 2,409 partially vaccinated (one dose only, or less than two weeks since second dose), and 2,272 fully vaccinated breakthrough cases (at least two weeks since the second dose)**. These groups each comprise about 1% of all time cases.

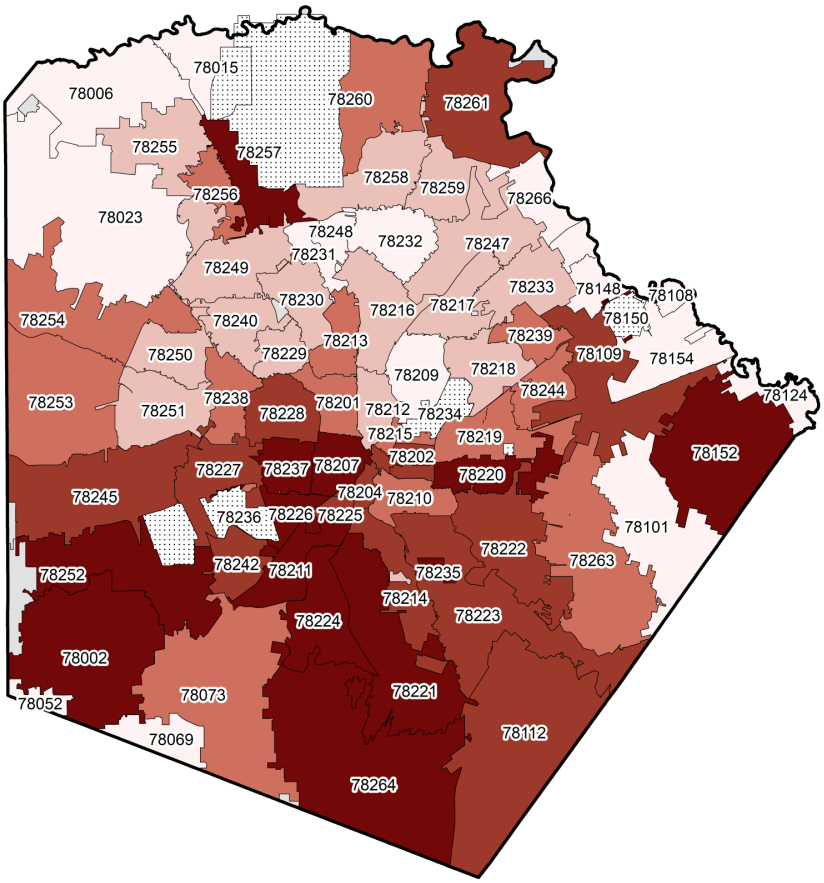
Since few new cases with onset of COVID-19 in December had previously been vaccinated (125 partially vaccinated, and one fully vaccinated), it is helpful to restrict the data to just 2021. Since Jan 1st, 2021, Bexar County has had 108,482 known new cases. Of these, 2,284 new were partially vaccinated at the time of COVID-19 onset, and 2,271 were fully vaccinated, each comprising 2% of all cases during 2021.

COVID-19 Cases by Vaccination Status, Since Jan 01, 2021 (N=108,482)



*Unvaccinated includes number of those with unknown and not vaccinated at the time of analysis.

COVID-19 Case Rate per 100,000 Population

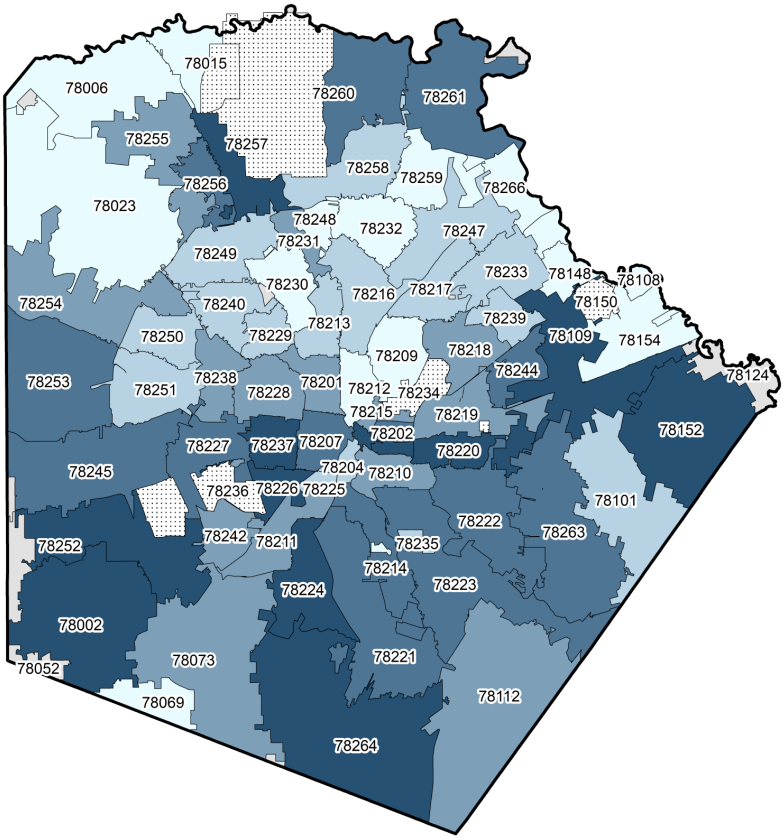


COVID-19 Case Rate per 100,000 Population

- 65 - 8,255
- 8,256 - 11,172
- 11,173 - 13,389
- 13,390 - 15,215
- 15,216 - 57,903
- Data Suppressed due to counts <5
- Military Bases

The **geographic distribution of total COVID-19 case rate by zip code continues to show the highest rates of infection have generally been in the southern portion of Bexar County.** The overall COVID-19 case rates range from 65 per 100,000 population to 57,903 per 100,000 population.

July 2021 COVID-19 Case Rate per 100,000 Population

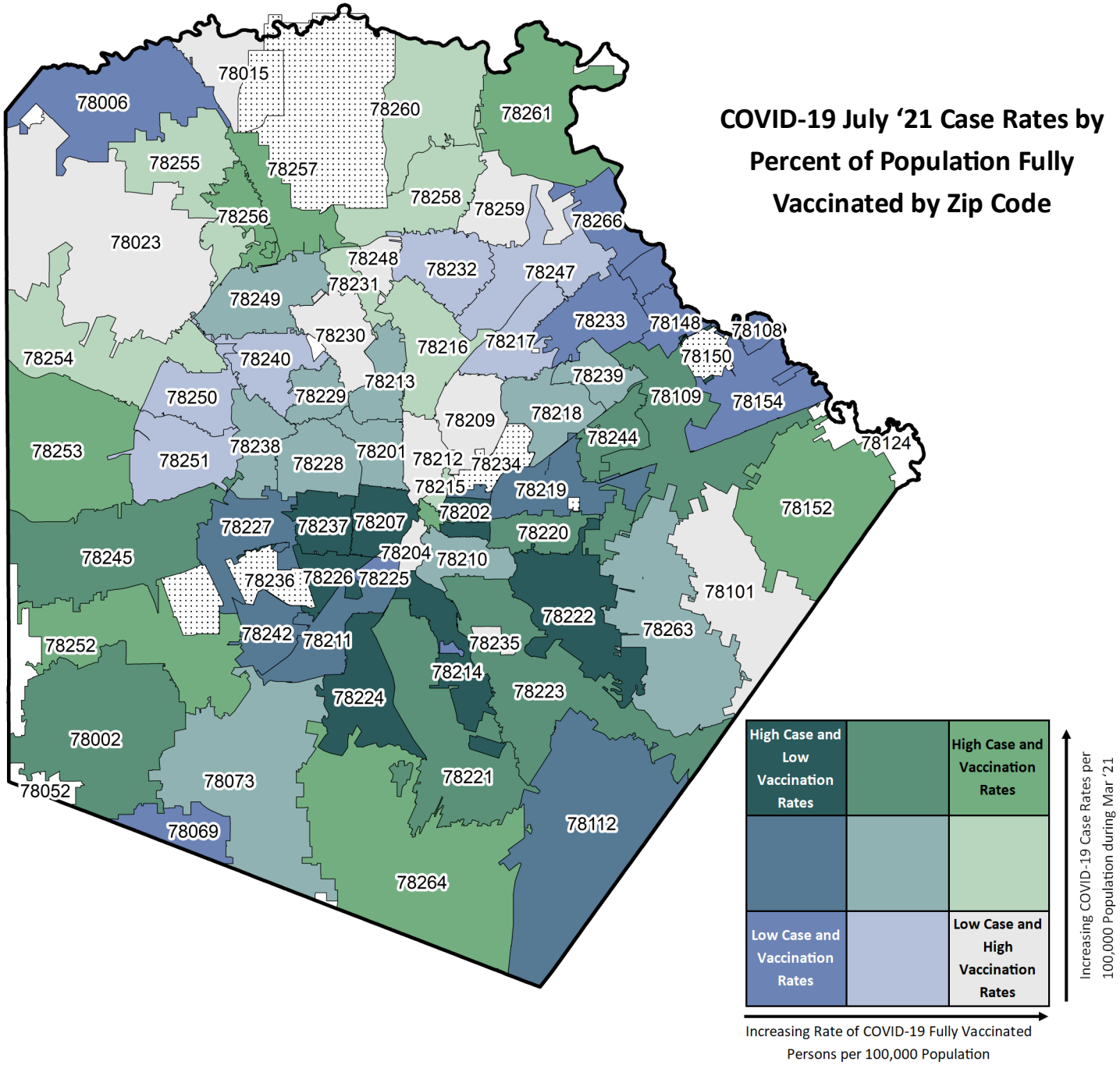


For the month of July 2021, the highest rates of new COVID-19 infections occurred in the southwestern, far southern and eastern portions of Bexar County. **New monthly case rates ranged from 18 cases per 100,000 population to 18,919 cases per 100,000 population during the month of July 2021.**

July 2021 COVID-19 Case Rate per 100,000 Population

- 18 - 712
- 713 - 851
- 852 - 1,078
- 1,079 - 1,272
- 1,273 - 18,919
- Data Suppressed due to counts <5
- Military Bases

Data Source: SAMHD COVID-19 case data through 08/09/2021, event dates through 07/31/2021; U.S. Census, ACS 2019 5-year Population Estimates, Table S0101.



This maps shows the geographic distribution by zip code of COVID-19 case rates by 100,000 population during the month of July 2021 (based on Event Date) and the cumulative rate of COVID-19 fully vaccinated persons per 100,000 population. Both rates are divided into low, medium, and high rate categories.

Zip codes shaded **dark teal** indicate they are in the highest third of new COVID-19 case rates, as well as in the lowest third of rates for fully vaccinated persons. **Zip codes with the lowest rates of fully vaccinated persons and the highest rates of monthly COVID-19 cases tend to be closest to downtown San Antonio.** Conversely, those zip codes shaded **solid grey** indicate they are in the lowest third of new COVID-19 case rates for the month, and the highest third for rates of fully vaccinated persons. **Zip codes with the highest rates of fully vaccinated persons and the lowest rates of monthly COVID-19 cases tend to be north of downtown San Antonio and in the far northern portions of Bexar County.**

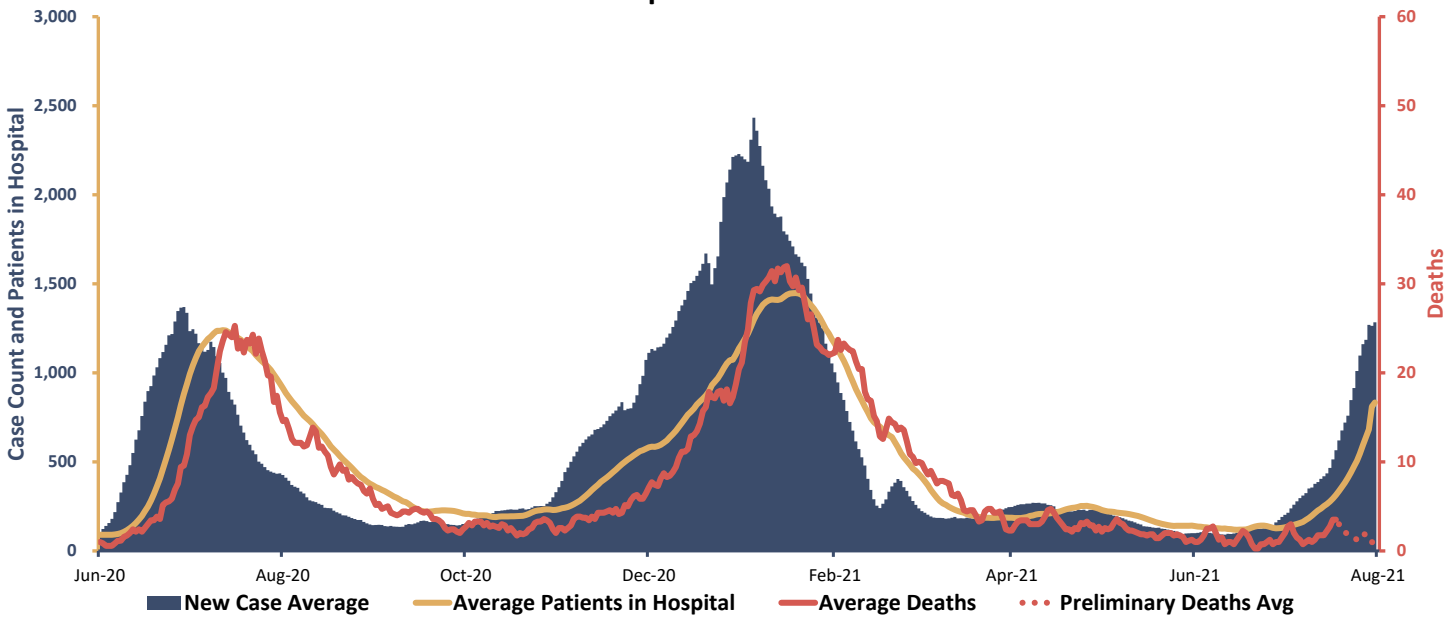
Data Source: SAMHD COVID-19 Database, as of 08/09/2021; U.S. Census Bureau, ACS 2019 5-Year Estimates, Table S1701

V. Hospitalizations and Deaths among COVID-19 Cases

V. A. Hospitalizations

Numbers of cases and hospitalizations saw a **significant increase in July 2021**. The new case average at the end of July rose to **1,284 cases per day compared to the 100 cases per day seen during early June 2021**. During the first surge, where hospitalizations rose about 14 days after cases, this surge shows a decrease in that time to about 10 days. The average patients in area hospitals rose to **833* patients per day during July**. Deaths have shown a slight increase, however the death data for the last two weeks of July are considered preliminary as death certificates make their way to Metro Health for confirmation.

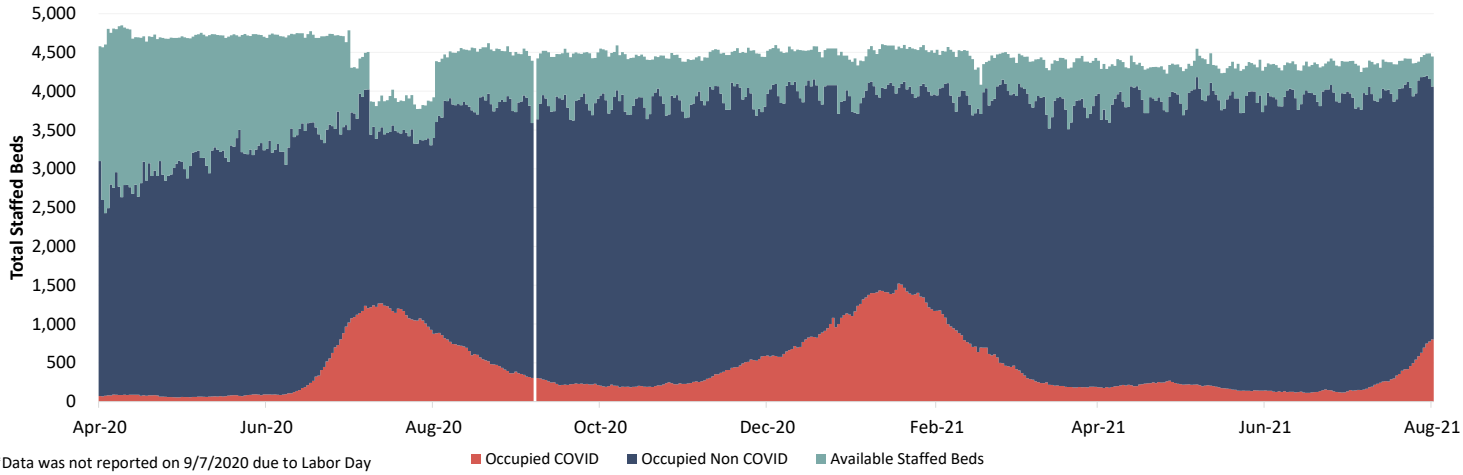
Bexar County Cases by Event Date,
STRAC COVID-19 Hospitalizations and Date of Death



Data Source: COVID-19 Daily Surveillance Data Public– STRAC Data, pulled on 08/09/2021
*Average shown is a centered moving average calculated as t0 +/- 3 days

In July, COVID+ occupancy (coral) demonstrated a significant increase to 775 beds per day, a 501% increase from June 2021 (129 beds per day)**.** Available (unoccupied) staffed beds (**teal**) made up about 7% of total staffed beds at the end of July. Non-COVID+ occupancy (**navy)** decreased by 12% to an average of 3,358 beds per day in July.

STRAC Hospital Capacity



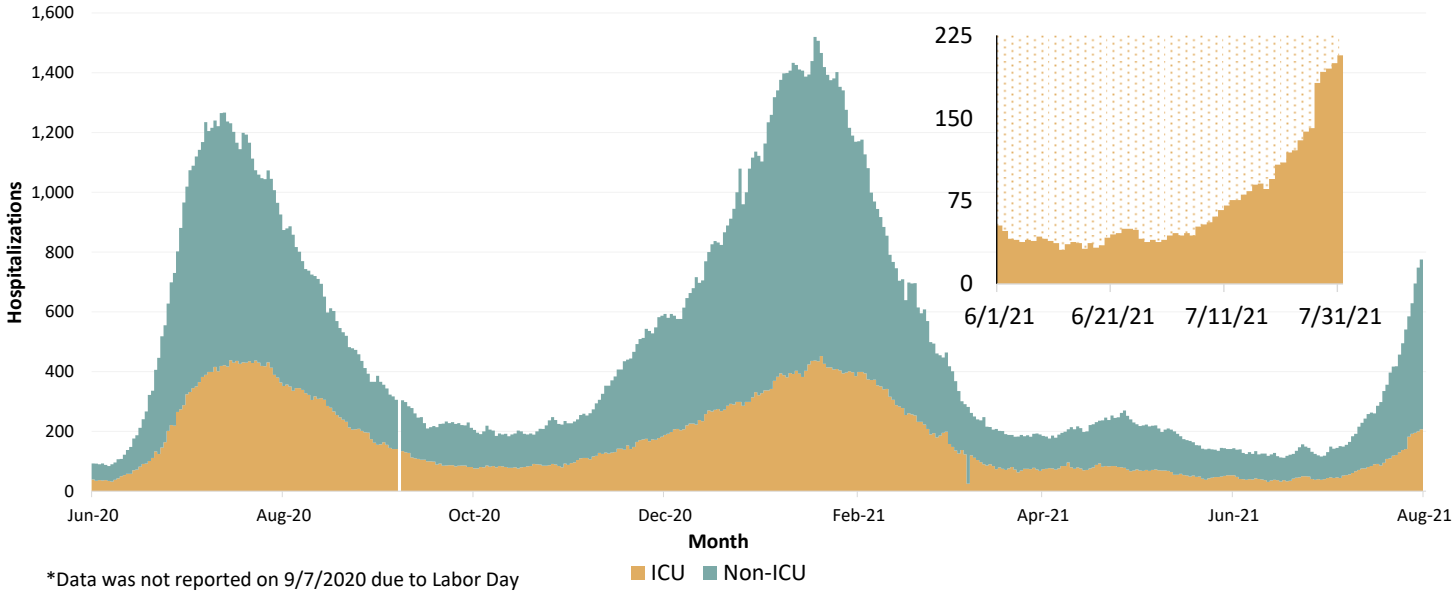
*Data was not reported on 9/7/2020 due to Labor Day

Data Source: COVID-19 Daily Surveillance Data Public– STRAC Data, pulled on 08/09/2021.
*General and specialty hospitals in Bexar county designated by the Southwest Texas Regional Advisory Council as part of the local trauma/emergency healthcare system. Includes hospitals in the Baptist, Christus, Methodist, SW General, University, BAMC and VAMC systems treating COVID+ patients.

As COVID+ patients in area hospitals increases**, the average number in the ICU has also increased by 385%* from the end of June 2021** (41 patients per day) **to the end of July 2021** (199 patients per day). However, the average percentage of COVID+ patients admitted to the ICU was 31%, similar to June 2021**.**

Note: Patients typically stay several days in the hospital, especially in the ICU.

STRAC ICU and Non-ICU COVID-19 Patients in Bexar County Hospitals

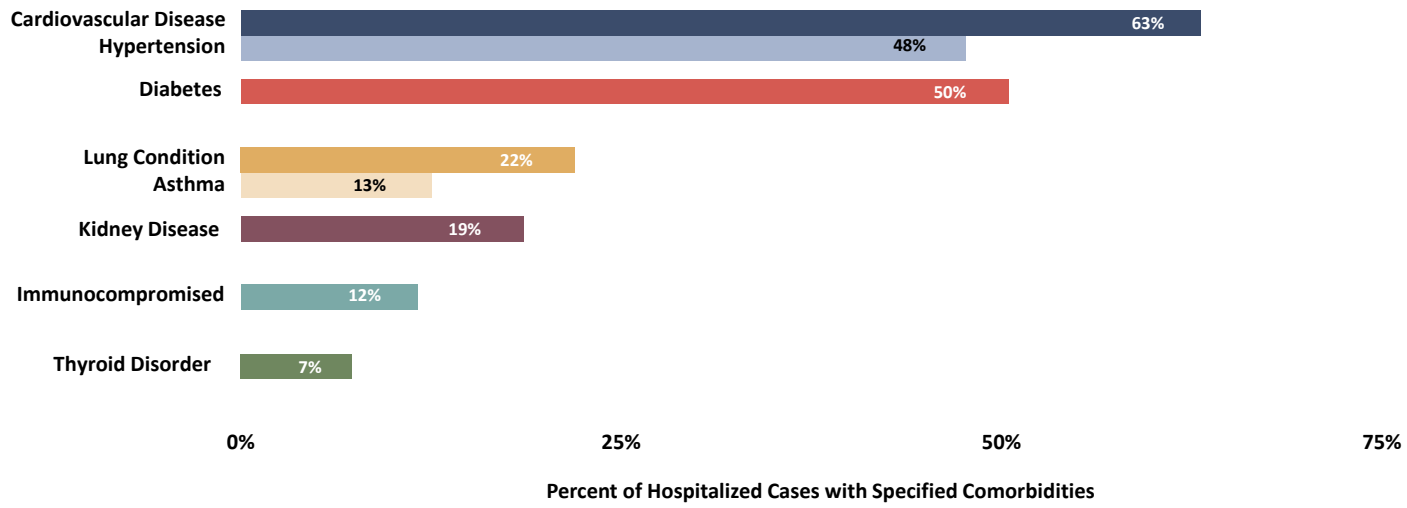


*Data was not reported on 9/7/2020 due to Labor Day

Data Source: COVID-19 Daily Surveillance Data Public– STRAC Data, pulled on 08/09/2021

Hospitalized Cases with Specified Comorbidities

(N=6,567*)

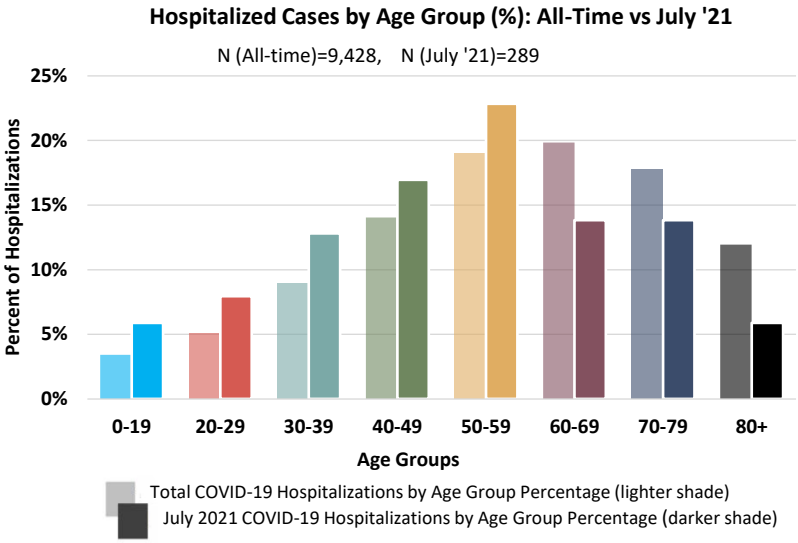


Data including **the presence of at least one of the specified comorbidities associated with poor COVID-19 outcomes were available for 70% of the hospitalized cases** (N=6,567). Among these cases with at least one comorbidity, **cardiovascular disease (63%)** was the most prevalent (hypertension specifically reported for 48%), followed by **diabetes (50%).**

Note: For the purposes of this report, hypertension is included in the category "cardiovascular disease", and also shown separately to highlight conditions of special interest. Similarly, asthma is included in "lung condition", and shown separately.

*Excludes 2,861 (30%) hospitalized cases not reported to have at least one of these specific comorbidities associated with poor COVID-19 outcome, or for whom such comorbidity data were not available.

V. B. Hospitalization and Age



To date, **9,428** individuals have been hospitalized due to COVID-19: July 2021 saw the addition of **289** new hospitalizations.

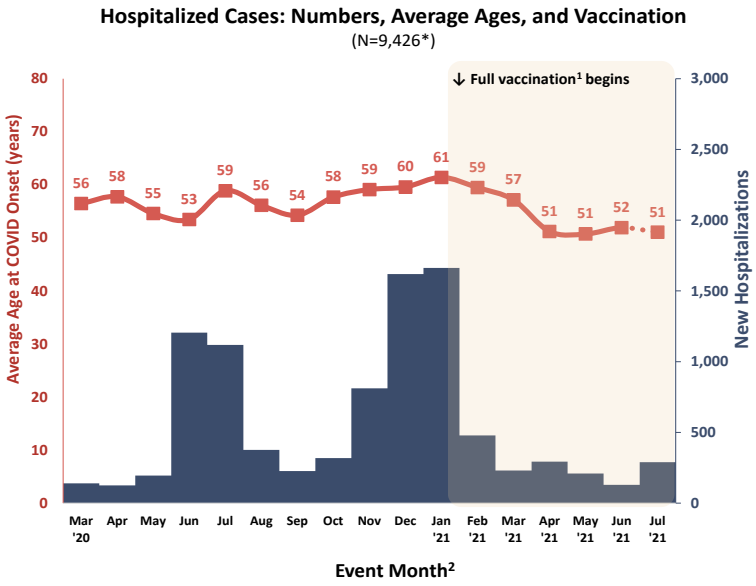
Throughout the pandemic, the three age groups that contributed the greatest percentages of all hospitalized cases were 50-59, 60-69, and 70-79. However, **hospitalization trends among younger age groups saw an increase** during the month of July '21 when compared to all COVID-19 hospitalizations reported among the same age group (Feb '20-July "21). The month of July also saw a **decline in hospitalizations among those ages 60-69, 70-79, and 80+** when compared to all COVID-19 hospitalizations among the same age group throughout the pandemic.

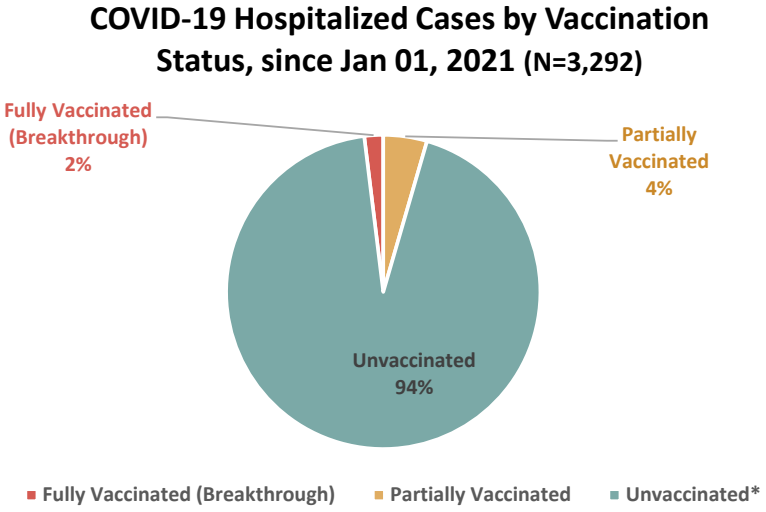
The **average age of hospitalized cases has recently declined, from 61 years in Jan '21, to 51 years** in April and May'21, and 52 years in June '21.

Starting in April '21, **almost half (46%) of all hospitalized cases have been younger than age 50**.

The decline in average age coincides with availability of vaccination[1]. Full vaccination began among older individuals in the latter part of Jan '21, and was gradually extended to younger ages. San Antonio began vaccinating children age 12 and older on May 13th, 2021.

NOTES:
The dotted line indicates that July data may be incomplete at time of analysis.
[1]A person is considered fully vaccinated two weeks after the second vaccine dose of 2-dose regimen, or two weeks after receiving a single shot of a 1-dose regimen.
[2]Event date is the date of first positive test, or symptom onset (if available). This is not the date of hospitalization.





Since the pandemic began, 9,443 cases have been hospitalized due to COVID-19. Of these, **216 had been vaccinated**: 152 partially and 64 fully vaccinated, comprising 2% of all hospitalized cases combined. Restricting to hospitalized cases with COVID-19 onset **since Jan 1st 2021, 148 had been partially vaccinated and 64 fully vaccinated (4% and 2% respectively).**

*Unvaccinated includes number of those with unknown and not vaccinated at the time of analysis.

V. C. Deaths

Through July '21, a total of 3,637 cases have died due to COVID-19. As the pyramid graph shows, these deaths have occurred primarily among older persons. **Whereas the average age at COVID-19 onset is 37 years, the average age of deceased cases is 71 years** (age 69 for males, 72 for females). To date, **55% of all deaths have occurred among cases 70 years of age and older**.

Among persons 80+ years of age who have COVID-19, the risk of death (case fatality) is 24% for males, and 17% for females. Overall, 1.5% of all known COVID-19 cases among Bexar County residents have died due to this disease (1.8 deaths per 100 male cases of all ages, and 1.2 deaths per 100 female cases). Although more COVID-19 cases have occurred among women than men, males continue to account for more than half of all deaths of known gender (56%).

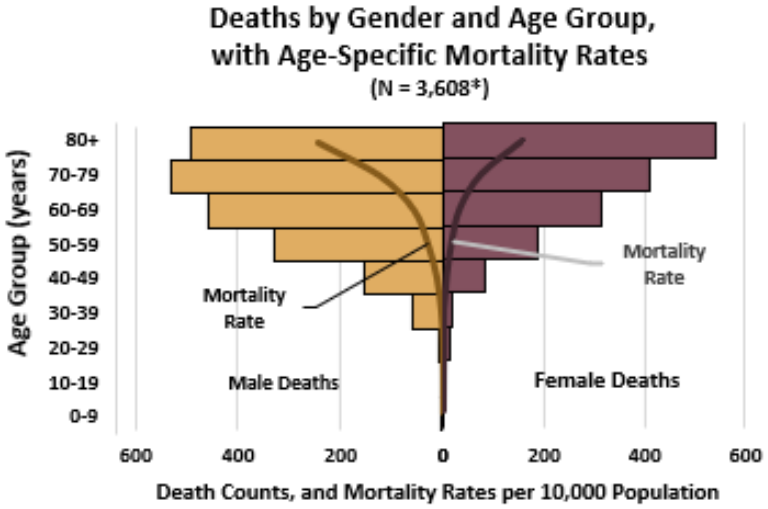
Age-specific mortality rates† (curved lines on both graphs) also show that **males have higher rates of death compared to females**, in every age group 30-39 years and older. This pattern has persisted throughout the pandemic.

Age-adjusted rates‡ are now 255 per 100,000 males, and 154 per 100,000 females. The overall rate, including persons for whom gender is not available (N=29), is **199 deaths per 100,000 population**.

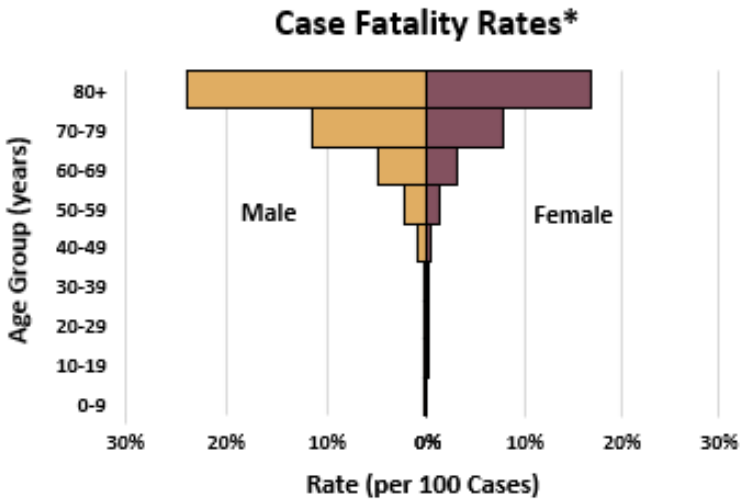
Full vaccination of older individuals began in the later part of January '21. Since Jan '21, the **average age of deceased cases has declined from 72 years, to 67 years** in June '21 (July '21 data are incomplete).

†Age-specific rates use ACS 5-yr 2019 gender-specific population estimates for Bexar County.

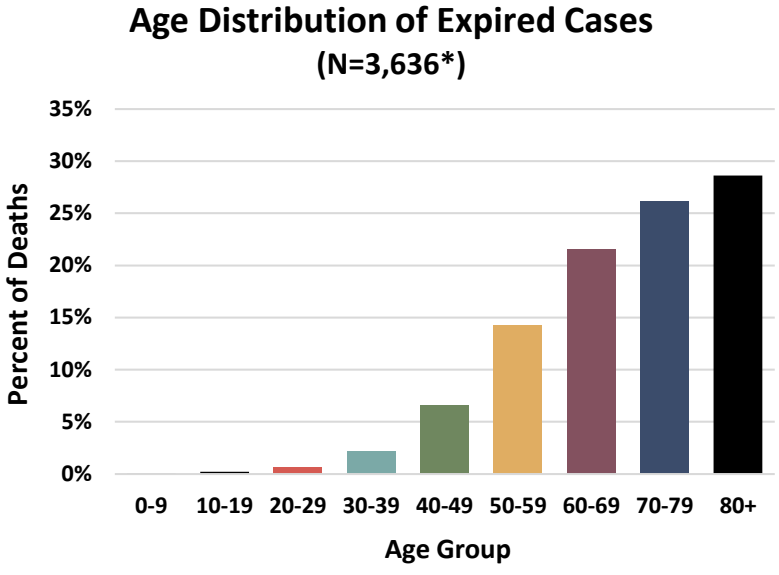
‡Age-adjusted rates use the ACS 5-yr 2019 gender-specific population estimates for Bexar County and the US Standard Population 2000 weights.



*Excludes 29 cases (0.8%) for whom gender and/or age are unavailable.



* N = 3,608 Deaths among 241,938 Cases. Excludes 29 Deaths (0.8%) and 6,131 Cases (2.5%) for whom gender and/or age are unavailable.



* Excludes one death with age not available.

Over half (55%) of all deaths due to COVID-19 have occurred to cases ages 70 years of age and older.

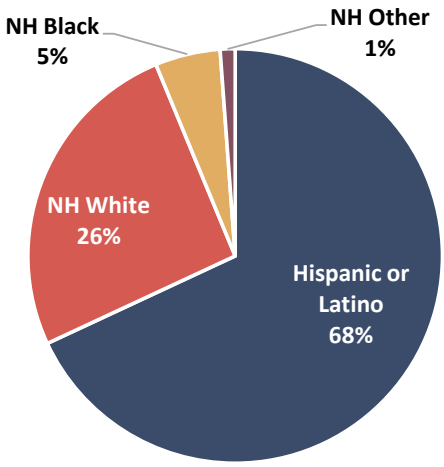
Deaths among children and young adults are rare, combined accounting for fewer than 1% of all deaths.

Of the COVID-19 related deaths with race/ethnicity data available, **Hispanic or Latino individuals continue to account for 68% of the deaths,** compared to 60% of the Bexar County population identifying as Hispanic or Latino†.

*Excludes 371 deceased cases (10%) for whom race and ethnicity data are not available.
†Age-specific rates use ACS 5-yr 2019 gender-specific population estimates for Bexar County.
‡Age-adjusted rates use the ACS 5-yr 2019 gender-specific population estimates for Bexar County and the US Standard Population 2000 weights.

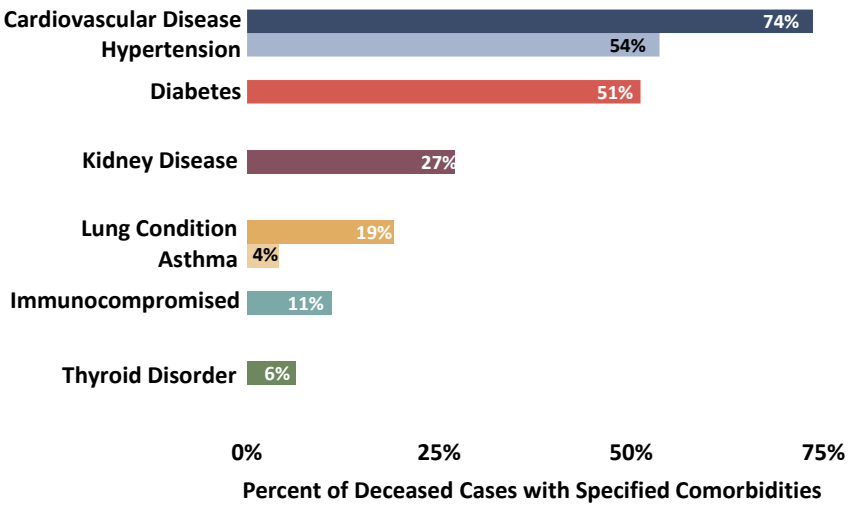
Deaths by Race and Ethnicity

(N=3,266*)



Deceased Cases with Specified Comorbities

(N=2,651*)



Data **including the presence of at least one of the specified comorbidities associated with poor COVID-19 outcomes were available for 73% of deceased cases** (N=2,651).

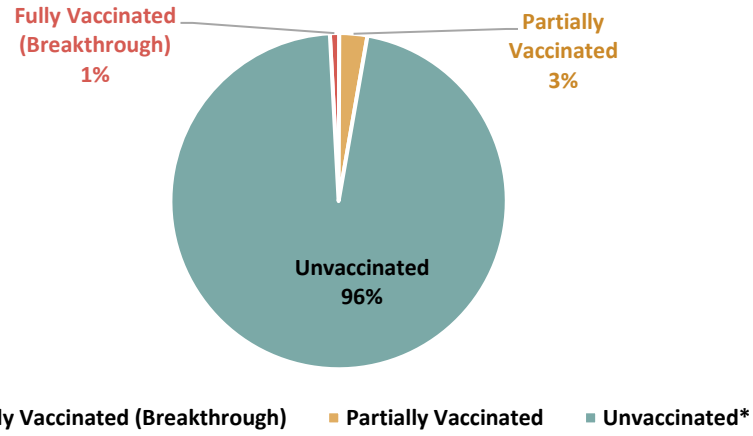
Among deceased cases with at least one comorbidity, **cardiovascular disease (74%)** was the most prevalent, followed by **diabetes (51%).**

Note: For the purposes of this report, hypertension is included in the category "cardiovascular disease", and also shown separately to highlight conditions of special interest. Similarly, asthma is included in "lung condition", and shown separately.

*Excludes 986 (27%) deceased cases not reported to have at least one of these specific comorbidities associated with poor COVID-19 outcomes, or for whom data pertaining to these comorbid conditions.

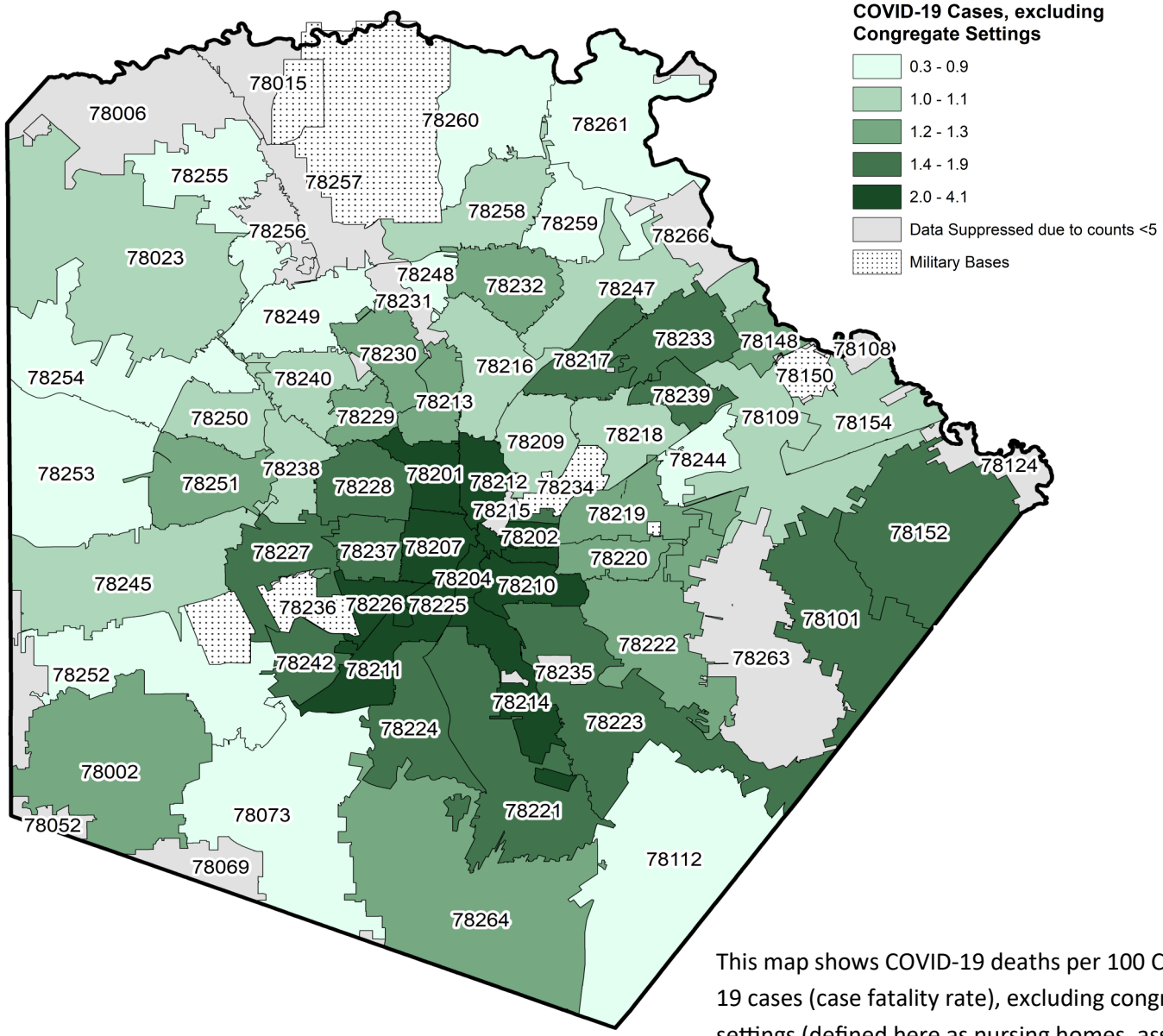
Of the 3,637 COVD-19 related deceased cases since the pandemic began, 44 had received at least one dose of vaccine: 33 were partially vaccinated, and 11 had been fully vaccinated. None had COVID-19 onset on or after Jan 1st 2021. **Together, they comprise 1% of all deceased cases, and 3% and 1% respectively of deceased cases with onset during 2021.**

COVID-19 Deceased Cases by Vaccination Status, since Jan 01, 2021 (N=1,226)



*Unvaccinated includes number of those with unknown and not vaccinated at the time of analysis.

COVID-19 Case Fatality Rate by Zip Code
(Excluding Congregate Settings)

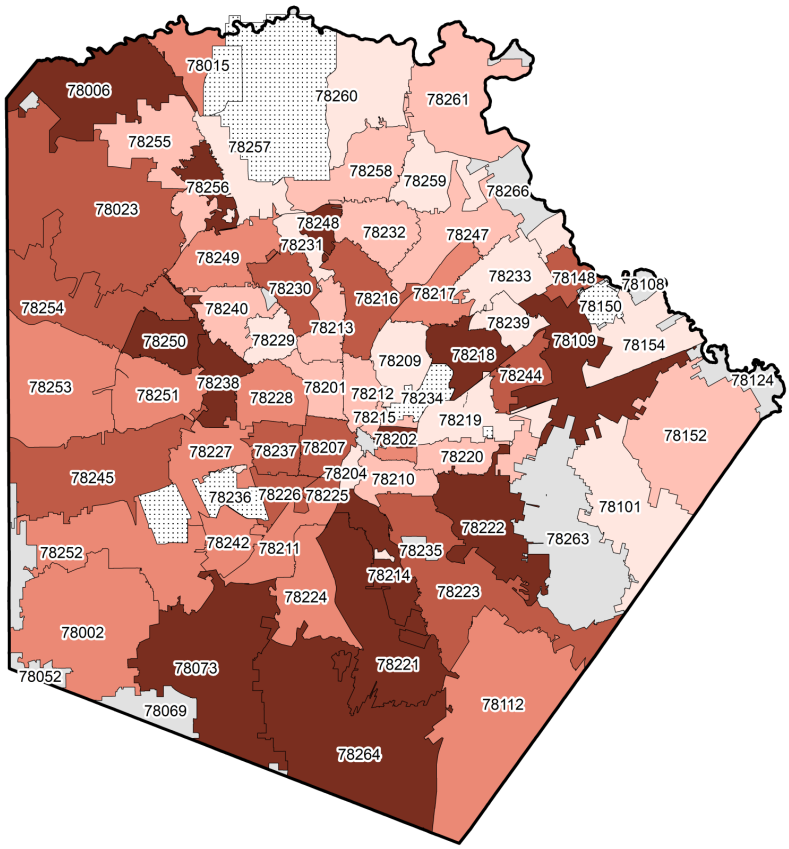


Source: SAMHD COVID-19 case data up to 08/09/2021, event dates through 07/31/2021

This map shows COVID-19 deaths per 100 COVID-19 cases (case fatality rate), excluding congregate settings (defined here as nursing homes, assisted living facilities, jails, homeless shelters, rehabilitation facilities, and military barracks). **The geographic distribution continues to show the highest non-congregate setting case fatality rates have occurred in zip codes closest to downtown San Antonio.** This spatial distribution has remained consistent over time.

VI. Percent Change of COVID-19 Cases, June-July 2021

Percent Change in COVID-19 Cases from June '21 to July '21 by Zip Code

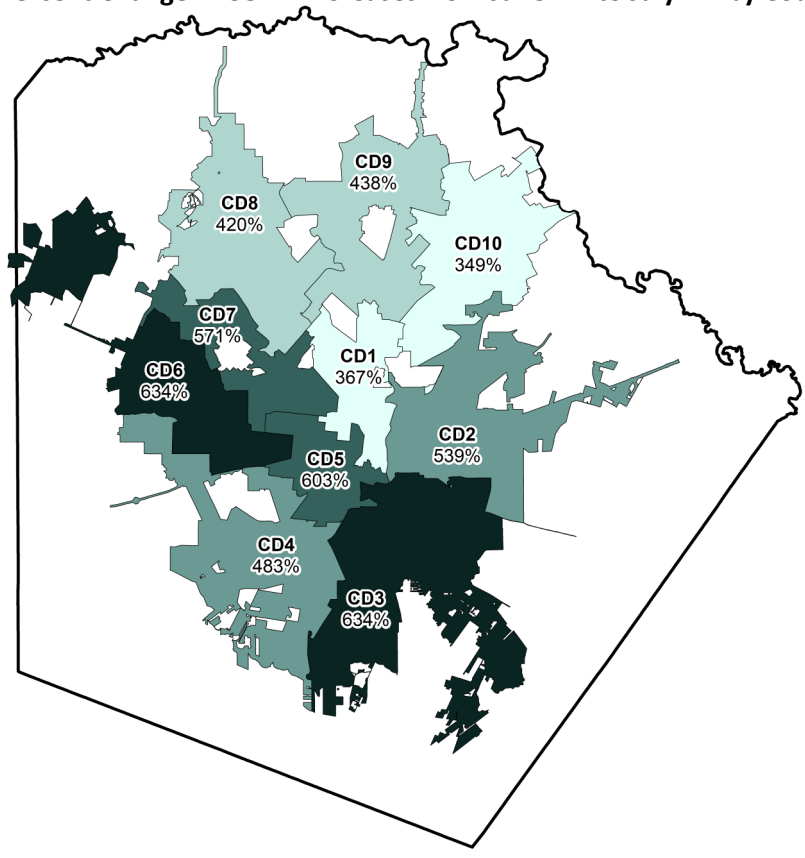


During the month of July 2021, every zip code saw a percent increase in new COVID-19 cases compared to June 2021. Several zip codes in the southern portion of Bexar County saw percent increases ranging from 644% to 1,100%. The percent increase in newly reported COVID-19 infections during the month of July 2021 compared to June 2021 corresponds to the current surge observed in Bexar County.

Percent Change in COVID-19 Cases from June 2021 to July 2021

- 216% - 327%
- 328% - 447%
- 448% - 553%
- 554% - 643%
- 644% - 1,100%
- Data Suppressed due to counts <5
- Military Bases

Percent Change in COVID-19 Cases from June '21 to July '21 by Council District



The map to the left depicts the percent change in COVID-19 cases from June 2021 to July 2021 by City of San Antonio Council District. In comparison to June 2021, **every council district saw a percent increase in newly diagnosed COVID-19 cases**, ranging from around 350% to over 630% in July 2021. Council Districts 3 and 6 both saw the largest increase of approximately 634% more COVID-19 cases in July than in June 2021. **The City of San Antonio as a whole saw a 497% increase in new COVID-19 cases in July 2021 compared to June 2021.**