

To: Harris County Precinct Two Commissioner Adrian Garcia
From: Katie Short, Director; Amber Weed, Chief of Staff and Policy
Director; Amy Rose, Senior Analyst; Ramin Naderi, Analyst
CC: Mike Lykes, Kris Banks, and Michelle Galindo with Precinct Two;
Barbie Robinson, Gwen Sims, and Will Hudson with Harris County
Public Health
Date: September 14, 2021
Re: **Monthly Memo on COVID-19 Vaccine Distribution, September
2021**

EXECUTIVE SUMMARY

In January 2021, Precinct Two requested the Analyst's Office produce a monthly memo regarding the distribution of COVID-19 vaccinations in Harris County. This is the ninth memo of a standing monthly memo the Analyst's Office produces as the vaccine distribution continues to evolve at the federal, state, and local levels.

This memo provides an overview of the COVID-19 pandemic and vaccine distribution in Harris County. Key findings from the data in this memo include:ⁱ

- As of August 30, 2021, **48.2% (2,270,241) of individuals in Harris County were fully vaccinated.**
- As of August 30, 2021, **10.6% (498,460) of individuals in Harris County were partially vaccinated.**
- Between August 8, 2021 and August 30, 2021, **the percentage of individuals in Harris County vaccinated with at least one dose increased by 18.8% (from 2,330,136 to 2,768,701).**
- Between August 8, 2021 and August 30, 2021, **the percentage of individuals in Harris County fully vaccinated increased by 6.6% (from 2,129,163 to 2,270,241).**
- **Zip codes 77013 and 77090 have the fewest number of individuals per 100,000 residents fully vaccinated (31,406 and 33,237, respectively).**
- **Zip codes 77024 and 77002 have the greatest number of individuals per 100,000 residents fully vaccinated (92,749 and 96,588, respectively).ⁱⁱ**
- **The median of the median incomes of the fifteen Harris County zip codes with the fewest number of individuals per 100,000 residents fully vaccinated is \$41,804.**

ⁱ IMPORTANT NOTE: Not all data sums to totals reported. This is due to poor and inconsistent data reporting by providers, and because patients have not been required to disclose all demographic data. DSHS reports it is actively conducting county and provider-level analyses to identify if certain providers or areas are underreporting more than others for targeted data entry funding and training.

ⁱⁱ Zip code analysis excludes zip codes that report a greater number of residents vaccinated than the zip code's total population. This discrepancy is due to poor and limited data.

- The median of the median incomes of the fifteen Harris County zip codes with **the greatest number of individuals per 100,000 residents fully vaccinated is \$114,338.**
- The number of individuals fully vaccinated in Harris County varies by age group.
 - **74.6% (143,292) of individuals ages 75 and over are fully vaccinated;**
 - **74.9% (427,750) of individuals ages 60-74 are fully vaccinated;**
 - **68.2% (573,858) of individuals ages 45-59 are fully vaccinated;**
 - **56.0% (587,401) of individuals ages 30-44 are fully vaccinated; and**
 - **45.1% (540,390) of individuals ages 12-29 are fully vaccinated.**
- The number of individuals fully vaccinated in Harris County varies by race and ethnicity.
 - **28.9% (253,325) of individuals who identify as Black are fully vaccinated;**
 - **39.8% (809,139) of individuals who identify as Hispanic are fully vaccinated;**
 - **45.3% (615,218) of individuals who identify as White are fully vaccinated;**
 - **58.7% (194,635) of individuals who identify as Asian American/Pacific Islander are fully vaccinated; and**
 - **74.4% (5,437) of individuals who identify as American Indian/Alaskan Natives are fully vaccinated.**
- Between January 1, 2020 and August 30, 2021:
 - **All providers in Harris County administered a cumulative 5,414,868 COVID-19 PCR tests;ⁱⁱⁱ**
 - **There were 500,802 positive COVID-19 cases confirmed by a PCR test in Harris County; and**
 - **There were 5,324 confirmed COVID-19-related deaths in Harris County.**

The Analyst's Office acknowledges Harris County Public Health and the Harris County Office of Management and Budget for their significant contributions to this memo.

ⁱⁱⁱ PCR refers to the polymerase chain reaction or nucleic acid amplification tests commonly used to test for COVID-19.

INTRODUCTION

In January 2021, Precinct Two requested the Harris County Commissioners Court's Analyst's Office (the "Analyst's Office") produce a monthly memo regarding the distribution and administration of COVID-19 vaccinations in Harris County. This is the ninth memo of a standing monthly memo the Analyst's Office produces as the vaccine distribution continues to evolve at the federal, state, and local levels.

This memo includes data and analysis regarding COVID-19 testing, cases, deaths, and vaccine administration in Harris County. Precinct-level age, race, and ethnicity data are provided where available.

METHODOLOGY

Data utilized in this memo are from Harris County Public Health (HCPH); the Centers for Disease Control and Prevention (CDC); and Harris County's Applied Technologies Location Analysis and Statistics (ATLAS) System. Data reflect COVID-19 vaccine doses administered in Harris County by all providers from the beginning of the vaccine rollout, December 14, 2020, through August 30, 2021, and all testing, confirmed cases, and COVID-19-related death data from January 1, 2020 through August 30, 2021.

Prior to the ninth version of this memo, which was circulated on September 14, 2021, this memo presented data from all county providers and HCPH separately in Figures 4 and 5 and corresponding Tables 2 and 3. However, moving forward, this memo will represent the data as a combined total.

Data Collected from Harris County Public Health (HCPH)

The majority of data in this memo was sent to the Analyst's Office from HCPH, which analyzes vaccine data received by the Texas Department of State Health Services (DSHS) ImmTrac2 system. As the Local Health Authority for the County, HCPH also analyzes and receives testing, confirmed cases, and COVID-19-related death data from local health providers (including the City of Houston) and other sources. Income data provided by HCPH reflects American Community Survey, 2014-2018 Five-Year Estimates. HCPH data and/or analysts aided in the development of all tables and figures.

DSHS advised the following via email regarding the data available on ImmTrac2:

- Providers in Texas have up to 24-hours to report doses administered in ImmTrac2, and the dashboard is updated by 4:00 pm with data reported as of 11:59 pm the previous night. This means there could be as much as a 48-hour lag between when a dose is administered and when it appears on ImmTrac2.

Prior to the fifth version of this memo, which was circulated on June 3, 2021, this memo included updates and projections on vaccine allocations to the State of Texas or Harris County using DSHS data. However, as of May 10, 2021, DSHS announced it is no longer distributing weekly allocations of vaccine doses to providers due to a "sufficient

supply of vaccine.”^{iv} Due to this changed strategy of allocating vaccines, this memo no longer provides updates and projections on vaccine allocations to the State of Texas or Harris County.

In late summer 2021, discussion of the need for a third shot for select recipients of the two-dose vaccines started to evolve nationally, and individuals started to receive third doses. Currently, DSHS reportedly does not track administered third shots in the State of Texas. This will be resolved and reported in the next iteration of this memo.

Data Collected from Centers for Disease Control and Prevention (CDC)

The Analyst’s Office collected information on social vulnerability from the Centers for Disease Control and Prevention (CDC). Social vulnerability refers to a community’s capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters, such as tornadoes or disease outbreaks, to human-caused threats, such as toxic chemical spills.^v The Social Vulnerability Index (SVI) was created by the CDC and depicts the social vulnerability of communities, at the census tract level, within a given county. SVI groups fifteen census-derived factors into four themes that summarize the extent to which the area is socially vulnerable to disaster. The factors include economic data as well as data regarding education, family characteristics, housing, language ability, ethnicity, and vehicle access. Overall Social Vulnerability Index combines all the variables to provide a comprehensive assessment. SVI data aided with the development of Table 1.

Data Collected from Applied Technologies Location Analysis and Statistics (ATLAS)

The Analyst’s Office collected commissioner precinct zip code data from Harris County’s Applied Technologies Location Analysis and Statistics (ATLAS) System.

Data Collected from Harris County Office of Management and Budget

The Analyst’s Office collected commissioner precinct race and ethnicity data from the Harris County Office of Management and Budget.

NOTE: All analyses in this memo, except **Figure 3**, reflect *individuals fully vaccinated*, rather than *individuals with at least one dose*.

^{iv} Department of State Health Services (DSHS) COVID-19 Vaccine Allocations. Retrieved May 27, 2021, from <https://www.dshs.state.tx.us/coronavirus/immunize/vaccineallocations.aspx>

^v Centers for Disease Control (CDC) Social Vulnerability Index, a tool to identify socially vulnerable communities.

BACKGROUND

The spread of the novel coronavirus, the cause of COVID-19, began in the United States in early 2020. Since then, local health entities have tracked the testing, the number of confirmed positive cases, and deaths related to COVID-19.

In December 2020, two-dose vaccines from two producers, Moderna and Pfizer-BioNTech, were authorized for emergency use by the US Food and Drug Administration (FDA). In February 2021, the FDA authorized Johnson & Johnson's (J&J) one-dose vaccine for emergency use. On August 23, 2021, the FDA granted full approval to the Pfizer-BioNTech vaccine for those 16 and older, with continued availability for those 12-15 years of age under emergency use authorization. The Pfizer-BioNTech vaccine is currently the only vaccine approved by the FDA not under emergency use authorization.^{vi}

From December 2020 to March 28, 2021, vaccines were made available for individuals in DSHS's Phase 1A (front-line healthcare workers and residents of long-term care facilities) and 1B (individuals ages 65+ and individuals ages 16+ with "at least one chronic medical condition that puts them at increased risk for severe illness from the virus that causes COVID-19").^{vii} ^{viii} On March 29, 2021, Texas expanded vaccine eligibility to all individuals age 16 and older. Beginning May 12, 2021, Texas expanded vaccine eligibility to all individuals age 12 and older. Currently, all vaccines are authorized for individuals age 18 and older; the Pfizer vaccine is authorized for individuals age 12 and older.^{ix} On August 12, 2021, the FDA amended the emergency use authorizations for the Moderna and Pfizer-BioNTech vaccines to allow for an additional third dose, a "booster," to be administered to immunocompromised individuals.^x

In late summer 2021, Harris County and the City of Houston launched separate cash card incentive programs for individuals to receive their first dose of vaccination. The Harris County program was launched on August 17, 2021, and offers \$100 cash cards to residents who receive their first dose of the COVID-19 vaccine between August 17 - September 14, 2021, at any authorized provider in the County.^{xi} Similarly, the City of Houston launched a cash card incentive program on August 26, 2021, stating that the first 20,000 individuals to get fully vaccinated at an eligible health department site would receive \$150 in the form of cash cards; \$100 cash card for their first dose, and an additional \$50 cash card for their second dose.^{xii}

^{vi} *FDA Approves First COVID-19 Vaccine.* (August 23, 2021). US Food and Drug Administration. Retrieved August 30, 2021 from <https://www.fda.gov/news-events/press-announcements/fda-approves-first-covid-19-vaccine>

^{vii} Department of State Health Services (DSHS) COVID-19 Vaccine Allocation Phase 1 Definition

^{viii} Department of State Health Services (DSHS) COVID-19 Vaccine Allocation Phase 1B Definition

^{ix} *COVID-19 Vaccine Information.* (n.d.). Texas Department of State Health Services. Retrieved May 27, 2021, from <https://dshs.texas.gov/covidvaccine/>

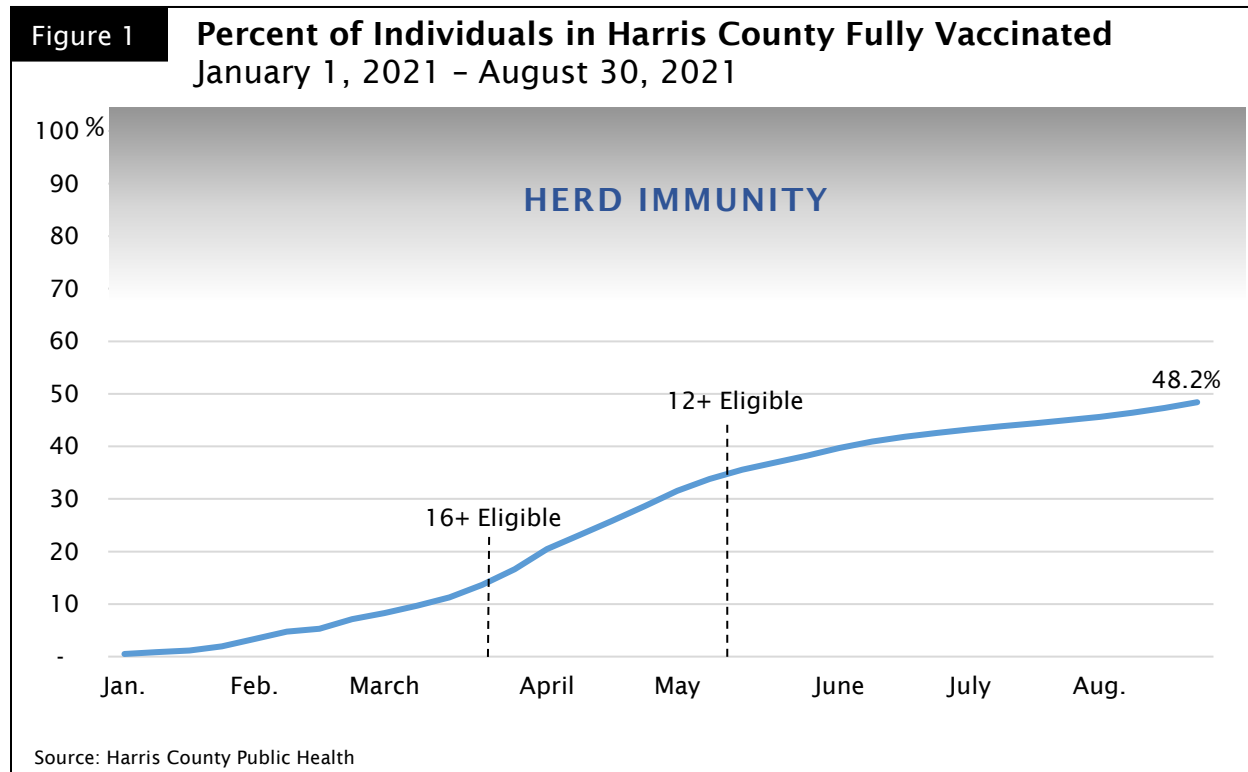
^x *FDA Authorizes Additional Vaccine Dose for Certain Immunocompromised Individuals.* (August 12, 2021). US Food and Drug Administration. Retrieved August 30, 2021 from <https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-authorizes-additional-vaccine-dose-certain-immunocompromised>

^{xi} *Ready Harris.* (n.d.). Retrieved September 8, 2021, from <https://www.readyharris.org/COVID-19-Incentive-Program>

^{xii} *Houston Health Department to provide up to \$150 in gift cards for COVID-19 vaccinations.* (n.d.). Retrieved September 8, 2021, from <https://www.houstontx.gov/health/NewsReleases/houston-health-department-to-provide-up-to-150-in-gift-cards-for-covid-19-vaccinations.html>

INDIVIDUALS IN HARRIS COUNTY FULLY VACCINATED

Figure 1 presents the percentage of Harris County individuals fully vaccinated between January 1, 2021 and August 30, 2021.^{xiii} This figure includes individuals vaccinated by Harris County Public Health (HCPH) and all other providers. HCPH reports countywide data regarding individuals fully vaccinated by week—the data presented below extends through the week of August 23 – August 30, 2021.



On March 29, 2021, as shown in **Figure 1**, Texas expanded vaccine eligibility to all individuals age 16 and older. Beginning May 12, 2021, Texas expanded vaccine eligibility to all individuals age 12 and older.

As of August 30, 2021, 48.2% (2,270,241) of all individuals in Harris County were fully vaccinated, meaning an individual has received both doses of either the Moderna or Pfizer vaccines or a single dose of the Johnson & Johnson vaccine.^{xiv} This reflects a 6.6% (from 2,129,163 to 2,270,241) increase from August 8, 2021 (the prior memo).

A total of 10.6% (498,460) of all individuals in Harris County were partially vaccinated as of August 30, 2021.^{xv}

^{xiii} Individuals who are partially vaccinated and individuals fully vaccinated are mutually exclusive, meaning individuals partially vaccinated only includes individuals who have received one vaccine dose of a two-dose shot (Pfizer or Moderna) and individuals fully vaccinated include individuals who have received either the Johnson & Johnson vaccine or two vaccine doses of Pfizer or Moderna.

^{xiv} Figure assumes Harris County's total population of 4,713,325, per American Community Survey 2019, 1 Year Estimates.

^{xv} Figure assumes Harris County's total population of 4,713,325, per American Community Survey 2019, 1 Year Estimates.

NUMBER OF INDIVIDUALS PER 100,000 RESIDENTS FULLY VACCINATED BY ZIP CODE

Table 1 presents the number of individuals per 100,000 residents fully vaccinated by zip code. The table also includes the median income, Social Vulnerability Index (SVI) score, and commissioner precinct for each zip code. Commissioner precinct boundaries do not align with zip code boundaries; some zip codes are in multiple precincts. Precincts are listed in order of the greatest to least percentage of zip code land mass within the precinct.

Social vulnerability describes a community's ability to prevent human suffering and financial loss in the event of a disaster (such as a hurricane or disease outbreak).^{xvi} SVI rankings are based on percentiles ranging from 0 to 1 (with higher values indicating greater vulnerability). SVI data is often presented using quartile classification. This analysis utilizes CDC's SVI classifications as follows: 0-0.25 (lowest vulnerability); 0.25-0.5 (moderate low); 0.50-0.75 (moderate high); and 0.75-1 (highest vulnerability).

Table 1 ranks zip codes within Harris County to show relative vulnerability in comparison to the rest of Harris County. The median of the median incomes of the fifteen Harris County zip codes with the **fewest number of individuals per 100,000 residents fully vaccinated is \$41,804**. The median of the median incomes of the fifteen Harris County zip codes with the **greatest number of individuals per 100,000 residents fully vaccinated is \$114,338**.^{xvii xviii}

This analysis excludes zip codes 77010, 77027, 77056, 77046, and 77030 because they report higher vaccinated populations than the reported zip code population. HCPH suggests that this is likely due to the low population relative to other zip codes, which means measured parameters are sensitive to bad data such as data entry errors, individuals using business addresses in lieu of a home residence, and other factors. For a full list of zip codes, see Appendix D.

^{xvi} Centers for Disease Control (CDC) SVI 2016 Documentation.

^{xvii} Note: This analysis excludes zip codes with vaccination rates higher than the reported zip code population. HCPH suggests that this is likely due to the low population relative to other zip codes, which means measured parameters are sensitive to bad data such as data entry errors, individuals using business addresses in lieu of a home residence, and other factors. For a full list of zip codes, see Appendix D.

^{xviii} Analysis excludes zip codes with small percentage of land mass in Harris County and zip code 77507, which has no income data available.

Table 1

Number of Individuals Per 100,000 Residents Fully Vaccinated by Zip Code, Median Income, SVI, and Commissioner Precinct December 14, 2020 – August 30, 2021

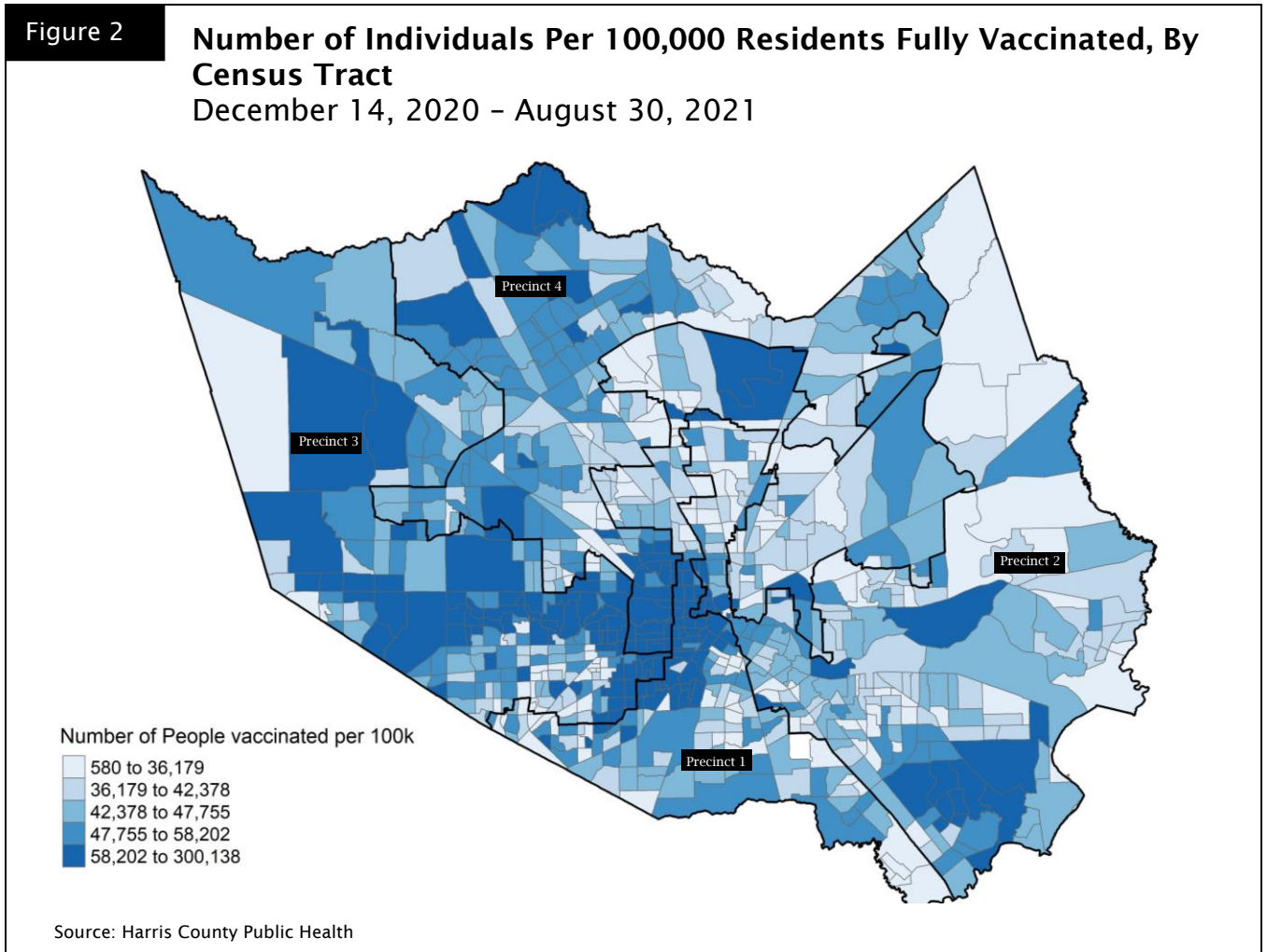
Zip Codes With Fewest Number of Individuals Per 100,000 Residents Fully Vaccinated				
Zip Code	Number Per 100k	Median Income	SVI	Commissioner Precinct(s)
77013	31,406	\$38,665	0.98	2,1
77090	33,237	\$39,808	0.70	1,4
77060	33,347	\$31,006	0.94	1,2,4
77067	33,819	\$43,282	0.79	4,1
77506	34,272	\$41,804	0.95	2
77336	35,391	\$68,596	0.30	2,4
77078	35,845	\$40,298	0.89	1,2
77081	35,894	\$33,502	0.81	3
77076	36,644	\$38,346	0.86	2,1
77050	36,707	\$48,500	0.71	1,2
77503	37,583	\$51,312	0.82	2
77562	37,678	\$59,792	0.63	2
77014	37,770	\$50,938	0.78	1,4
77039	38,122	\$36,769	0.73	2,1
77547	38,203	\$46,176	0.66	2,1
Zip Codes With Greatest Number of Individuals Per 100,000 Residents Fully Vaccinated				
Zip Code	Number Per 100k	Median Income	SVI	Commissioner Precinct(s)
77025	62,732	\$76,772	0.32	1,3
77003	64,672	\$72,295	0.61	2,1
77433	66,386	\$112,468	0.11	3
77401	66,452	\$193,950	0.03	3
77005	68,174	\$192,380	0.03	3,1
77389	69,179	\$126,473	0.14	4
77006	72,442	\$85,956	0.09	1
77094	73,841	\$178,354	NA	3
77059	73,902	\$139,163	0.05	2
77008	74,941	\$108,644	0.08	4,1
77007	79,390	\$125,653	0.01	4,1,2
77098	88,582	\$91,138	0.07	4,1,3
77019	89,043	\$116,207	0.09	4,1
77024	92,749	\$123,274	0.16	3,4
77002	96,588	\$71,369	0.42	1,2

■ Highest Vulnerability
 ■ Moderate High Vulnerability
 ■ Moderate Low Vulnerability
 ■ Lowest Vulnerability

Source: American Community Survey (ACS) 2018 5-year estimates downloaded from Harris County's Applied Technologies Location Analysis and Statistics (ATLAS), Centers for Disease Control (CDC), and Harris County Public Health (HCPH)

NUMBER OF INDIVIDUALS PER 100,000 RESIDENTS FULLY VACCINATED BY CENSUS TRACT

Figure 2 presents the number of individuals per 100,000 Harris County residents fully vaccinated by census tract.

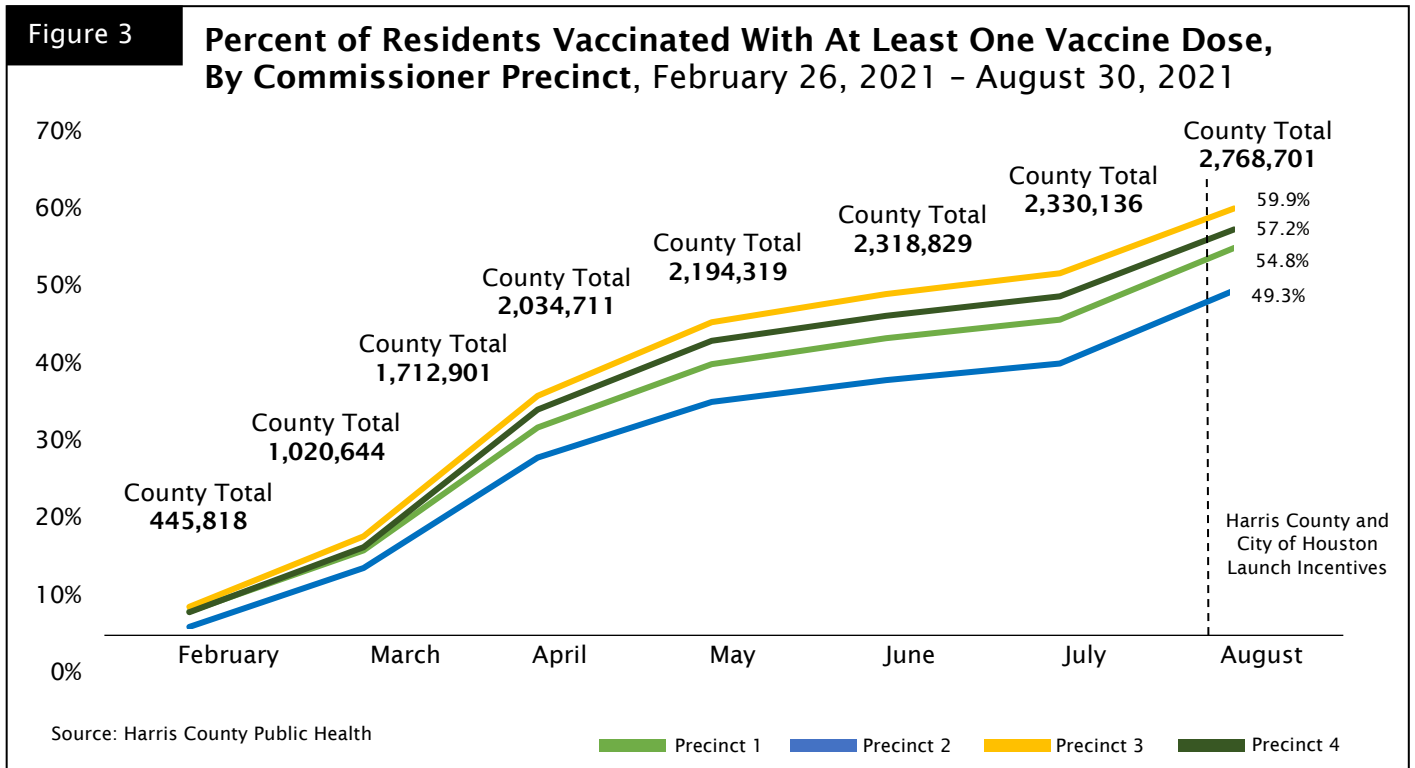


As of August 30, 2021, **48.2% (2,270,241) of Harris County residents were fully vaccinated**—58.9% of Harris County’s eligible population, individuals age 12 and older.^{xix}

^{xix} Figure assumes Harris County’s total population of 4,713,325, per American Community Survey 2019, 1 Year Estimates. Eligible individuals include individuals ages 12 and over, this population is estimated to be 3,852,215 in Harris County, per Analyst’s Office analysis of American Community Survey 2019, 1 Year Estimates.

PERCENT OF RESIDENTS VACCINATED WITH AT LEAST ONE DOSE BY COMMISSIONER PRECINCT

Figure 3 demonstrates the growth in the percent of residents vaccinated *with at least one dose* per commissioner precinct from February 26, 2021 through August 30, 2021, for all four Harris County commissioner precincts.



Between February 26, 2021 and August 30, 2021, 58.7% (2,768,701) of individuals in Harris County were vaccinated with at least one vaccine dose.^{xx} There was a noticeable increase of 18.8% (from 2,330,136 to 2,768,701) between August 8, 2021 (the prior memo) and August 30, 2021, of individuals vaccinated with at least one dose.

In late summer 2021, Harris County and the City of Houston launched cash card incentive programs for individuals to receive their first dose of vaccination. The Harris County program was launched on August 17, 2021, and offers \$100 cash cards to residents who receive their first dose of the COVID-19 vaccine between August 17 – September 14, 2021, at any authorized provider in the County.^{xxi} Similarly, the City of Houston launched a cash card incentive program on August 26, 2021, stating that the first 20,000 individuals to get fully vaccinated at an eligible health department site would receive \$150 in the form of cash cards; \$100 cash card for their first dose, and an additional \$50 cash card for their second dose.^{xxii}

^{xx} Figure assumes Harris County's total population of 4,713,325, per American Community Survey 2019, 1 Year Estimates.

^{xxi} Ready Harris. (n.d.). Retrieved September 8, 2021, from <https://www.readyharris.org/COVID-19-Incentive-Program>

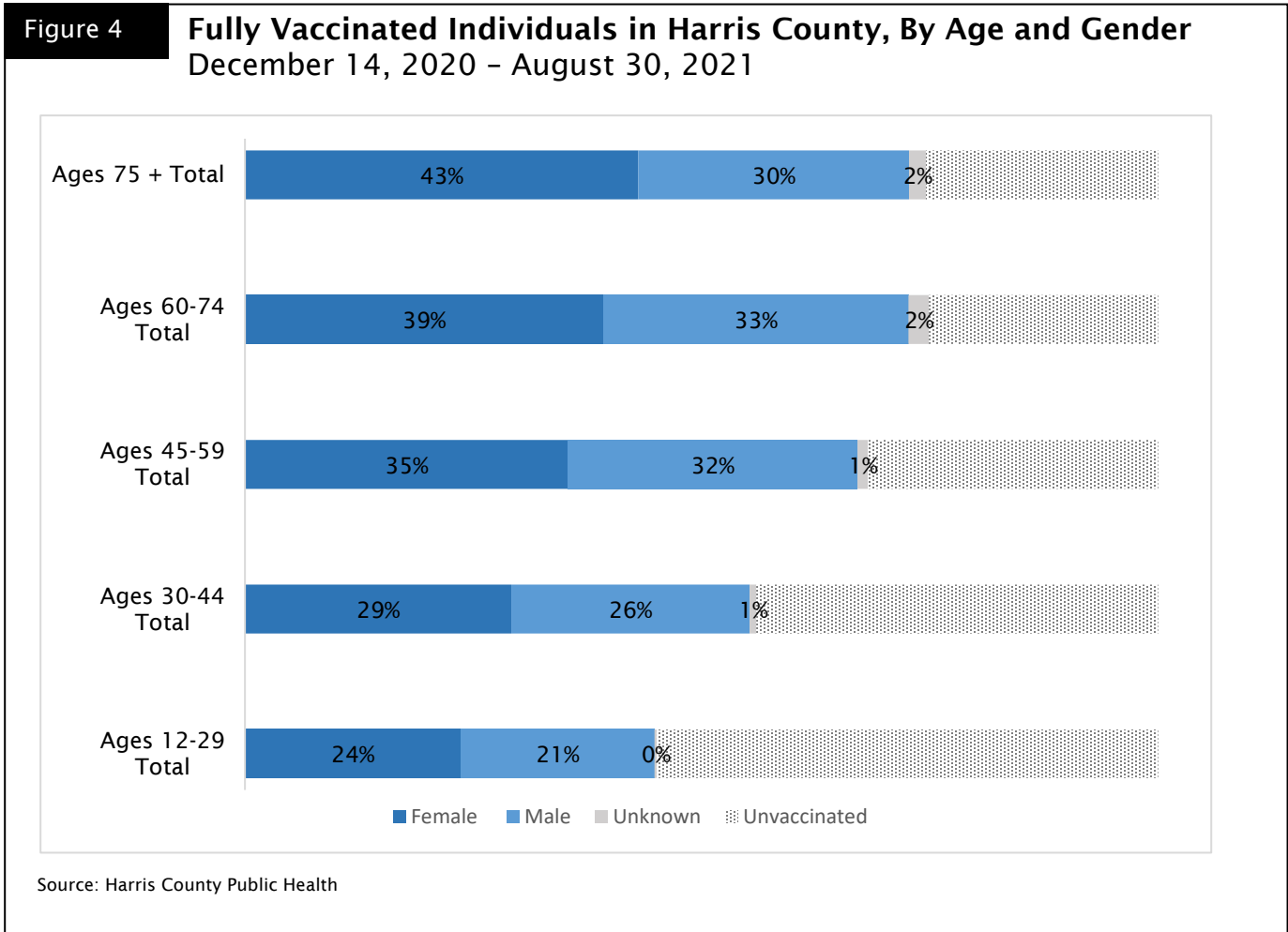
As of August 30, 2021:^{xxiii}

- **54.8% (630,329) of Precinct One residents** were vaccinated with at least one vaccine dose—a 19.8% increase over the prior memo;
- **49.3% (547,800) of Precinct Two residents** were vaccinated with at least one vaccine dose—a 23.1% increase over the prior memo;
- **59.9% (758,948) of Precinct Three residents** were vaccinated with at least one vaccine dose—a 15.9% increase over the prior memo; and
- **57.2% (691,645) of Precinct Four residents** were vaccinated with at least one vaccine dose—a 17.5% increase over the prior memo.

^{xxiii} Precinct totals do not sum to County total because 139,979 individuals have addresses that cannot be geo-coded into a Precinct.

FULLY VACCINATED INDIVIDUALS BY AGE AND GENDER

Figure 4 and **Table 2**, which follows, reflect all individuals fully vaccinated by all providers in Harris County by the individual's age and gender. Each bar for each age group represents the age group's total population within Harris County's population and reflects the percentage of individuals in each age group vaccinated by gender.



Of the individuals who are fully vaccinated by a Harris County provider, 53% (1,193,339) are female; 46% (1,042,904) are male; and 2% (36,448) are recorded as unknown gender.^{xxiv} As shown in **Figure 4**, individuals age 75 or older have the smallest percent of their age group who remain unvaccinated (25%), while individuals age 12-29 include the largest percent of their age group who remain unvaccinated (55%).

^{xxiv} Age and gender totals do not sum to the total number of fully vaccinated individuals due to some records having incomplete or incorrect data.

FULLY VACCINATED INDIVIDUALS BY AGE GROUP

Table 2 reflects all individuals fully vaccinated by all providers in Harris County by the individual's age group and includes the percentage of Harris County's total age group population vaccinated. For context, **Table 2** also includes the percentage of Harris County's total population by age group.

Table 2

Fully Vaccinated Individuals in Harris County by Age Group December 14, 2020 – August 30, 2021			
Age Group	Number of Individuals Vaccinated	Percentage of Age Group Vaccinated ^{xxv}	Percentage of Total County Population ^{xxvi}
75+	143,292	74.6%	5.0%
60-74	427,750	74.9%	14.8%
45-59	573,858	68.2%	21.8%
30-44	587,401	56.0%	27.2%
12-29	540,390	45.1%	31.1%

Source: Harris County Public Health

As shown in **Table 2**,

- 74.6% (143,292) of individuals ages 75 and over are fully vaccinated.
- 74.9% (427,750) of individuals ages 60-74 are fully vaccinated;
- 68.2% (573,858) of individuals ages 45-59 are fully vaccinated;
- 56.0% (587,401) of individuals ages 30-44 are fully vaccinated; and
- 45.1% (540,390) of individuals ages 12-29 are fully vaccinated.

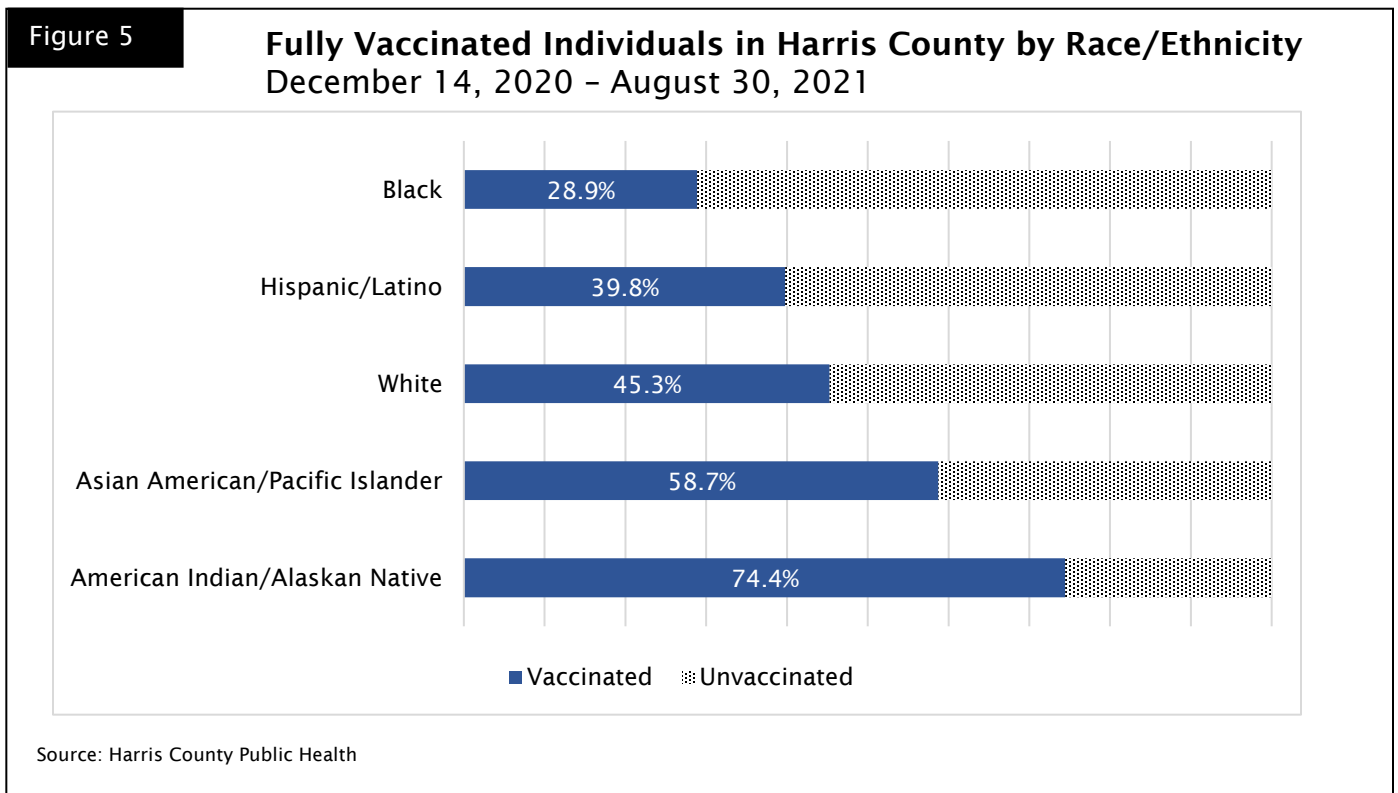
^{xxv} Reflects the number of individuals in the age group who are fully vaccinated. Previous versions of this memo reflected the total age group fully vaccinated as a percentage of all individuals vaccinated.

^{xxvi} Age group populations from American Community Survey 2019 data. Age group 12-29 is estimated by the Analyst's Office due to data limitations.

PERCENTAGE OF FULLY VACCINATED INDIVIDUALS BY RACE AND ETHNICITY

Figure 5 and **Table 3**, which follows, reflect the percentage of individuals in Harris County who are fully vaccinated by all providers in Harris County by race and ethnicity.^{xxvii}

Each bar for each race or ethnicity group represents the race or ethnicity group's total population within Harris County's population and reflects the percentage of individuals in each race and ethnicity group vaccinated.



As shown in **Figure 5**, individuals who identify as Black in Harris County have the smallest vaccinated population at nearly 29% (71% are unvaccinated or vaccinated with only one dose), followed by individuals who identify as Hispanic or Latino at nearly 40%.

^{xxvii} Note: Prior to February 4, 2021, providers were not required to report race and ethnicity when reporting doses to the Texas Department of State Health Services (DSHS) because vaccine recipients are allowed to decline disclosing their race and ethnicity to a provider.

FULLY VACCINATED INDIVIDUALS BY RACE AND ETHNICITY

Table 3 reflects the race and ethnicity of individuals in Harris County who are fully vaccinated by all providers in Harris County.^{xxviii} For context, **Table 3** also includes the percentage of Harris County’s total population by race and ethnicity.

Previous versions of this table in past memos reflected the total number of individuals by race and ethnicity fully vaccinated as a percentage of all individuals vaccinated — this iteration now shows the percentage vaccinated within a given race or ethnicity.

Table 3

Fully Vaccinated Individuals in Harris County by Race/Ethnicity December 14, 2020 – August 30, 2021			
Race/Ethnicity	Number of Individuals Vaccinated	Percentage of Race/Ethnicity Group Vaccinated	Percentage of Total Population
White	615,218	45.3%	28.9%
Hispanic/Latino	809,139	39.8%	43.3%
Other/Unknown	238,947	NA	0.3%
Black	253,325	28.9%	18.7%
Asian American/ Pacific Islander	194,635	58.7%	7.1%
Multi-racial	156,239	NA	1.6%
American Indian/ Alaskan Native	5,437	74.4%	0.2%

Source: Harris County Public Health

As shown in **Table 3**,^{xxix}

- 28.9% (253,325) of individuals who identify as Black are fully vaccinated;
- 39.8% (809,139) of individuals who identify as Hispanic are fully vaccinated;
- 45.3% (615,218) of individuals who identify as White are fully vaccinated;
- 58.7% (194,635) of individuals who identify as Asian American/Pacific Islander are fully vaccinated; and
- 74.4% (5,437) of individuals who identify as American Indian/Alaskan Native are fully vaccinated.

^{xxviii} Note: Prior to February 4, 2021, providers were not required to report race/ethnicity when reporting doses to Texas Department of State Health Services (DSHS) because vaccine recipients are allowed to decline disclosing their race/ethnicity to a provider.

^{xxix} Note: The percentage of Harris County’s total race and ethnicity group population that is vaccinated for Other/Unknown and Multi-racial is unavailable because there are more vaccinated individuals identifying as Multi-racial and Other/Unknown than the total population estimate of both groups in Harris County’s 2018 ACS population data.

INDIVIDUALS FULLY VACCINATED BY RACE AND ETHNICITY AND COMMISSIONER PRECINCT

Table 4 reflects the race and ethnicity of individuals in Harris County who are fully vaccinated by providers in Harris County by Commissioner Precinct. For context, **Table 4** also includes the percentage of each Commissioner Precinct's total population by race and ethnicity.

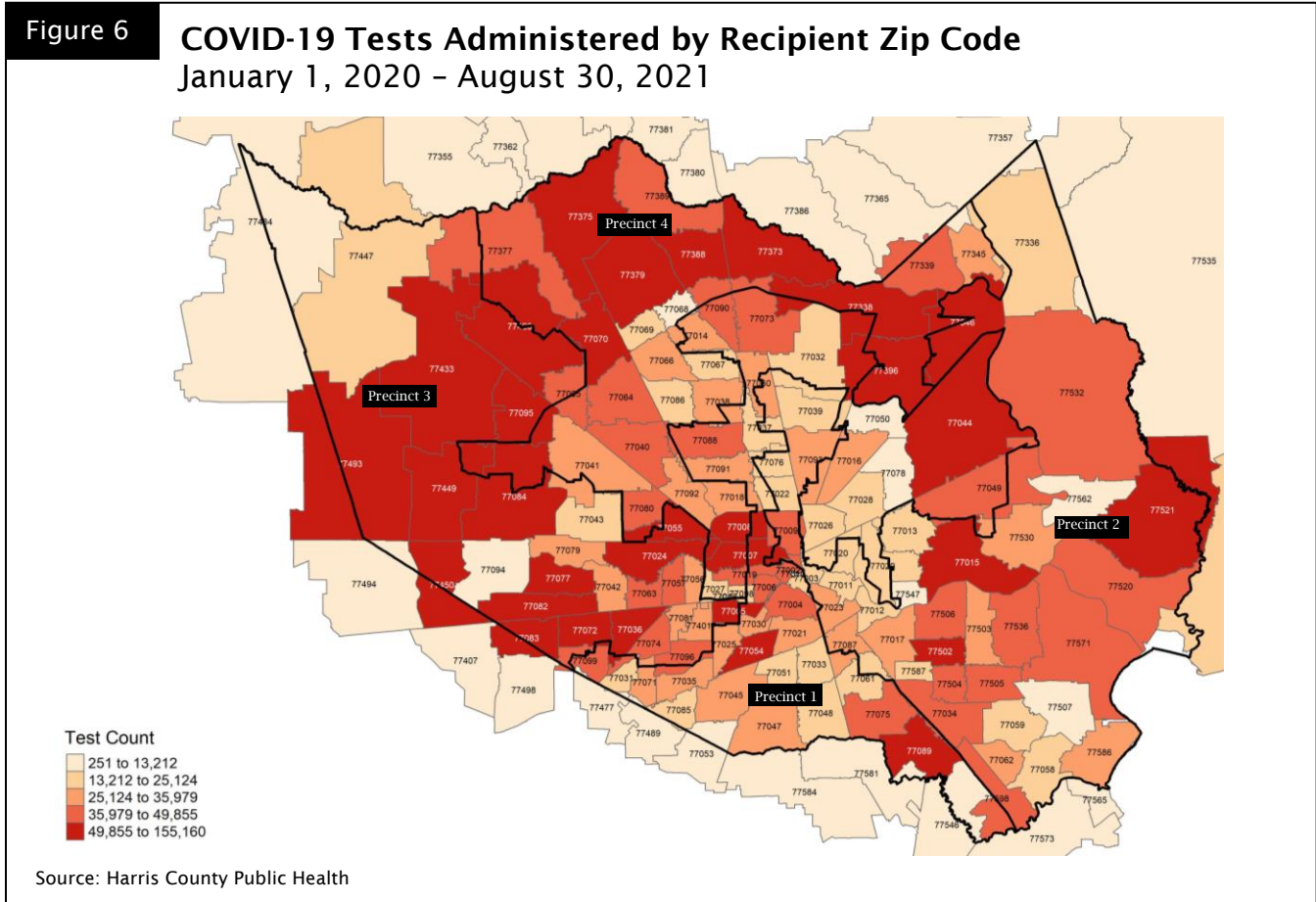
Table 4

Fully Vaccinated Individuals in Harris County by Race/Ethnicity, By Commissioner Precinct			
December 14, 2020 - August 30, 2021			
Race/Ethnicity	Number of Individuals Vaccinated	Percentage of Precinct's Vaccinated Population	Percentage of Total Precinct Population
Precinct 1			
White	93,331	18.2%	17.1%
Hispanic/Latino	182,890	35.6%	41.3%
Other/Unknown	51,744	10.1%	0.2%
Black	107,227	20.9%	34.5%
Asian Am./Pacific Islander	37,071	7.2%	5.4%
Multi-racial	40,305	7.8%	1.4%
Am. Indian/Alaskan Native	1,184	0.2%	0.1%
Precinct 2			
White	111,539	25.2%	26.5%
Hispanic/Latino	228,129	51.5%	60.8%
Other/Unknown	36,376	8.2%	0.1%
Black	24,945	5.6%	8.8%
Asian Am./Pacific Islander	18,746	4.2%	2.5%
Multi-racial	22,585	5.1%	1.2%
Am. Indian/Alaskan Native	834	0.2%	0.1%
Precinct 3			
White	194,950	31.0%	36.0%
Hispanic/Latino	191,593	30.0%	34.8%
Other/Unknown	61,768	10.0%	0.3%
Black	55,340	9.0%	15.0%
Asian Am./Pacific Islander	80,533	13.0%	11.8%
Multi-racial	47,148	7.0%	1.9%
Am. Indian/Alaskan Native	1,703	0.0%	0.2%
Precinct 4			
White	195,202	34.1%	37.9%
Hispanic/Latino	175,426	30.6%	37.0%
Other/Unknown	54,861	9.6%	0.3%
Black	53,422	9.3%	15.5%
Asian Am./Pacific Islander	52,004	9.1%	7.5%
Multi-racial	40,146	7.0%	1.6%
Am. Indian/Alaskan Native	1,501	0.3%	0.2%

Sources: Harris County Public Health, Harris County Office of Management and Budget

COVID-19 TESTS BY ZIP CODE

Figure 6 reflects the total number of COVID-19 polymerase chain reaction (PCR) tests administered to Harris County residents by all providers in Harris County by zip code, and **Table 5** reflects the number of COVID-19 PCR tests administered by the commissioner precinct.^{xxx}



Between January 1, 2020 and August 30, 2021, providers in Harris County **administered 5,414,868 COVID-19 tests**. For a full list of tests administered by recipient zip code, see Appendix A.^{xxxi}

Table 5

COVID-19 Tests Administered, by Commissioner Precinct and for Harris County, January 1, 2020 – August 30, 2021

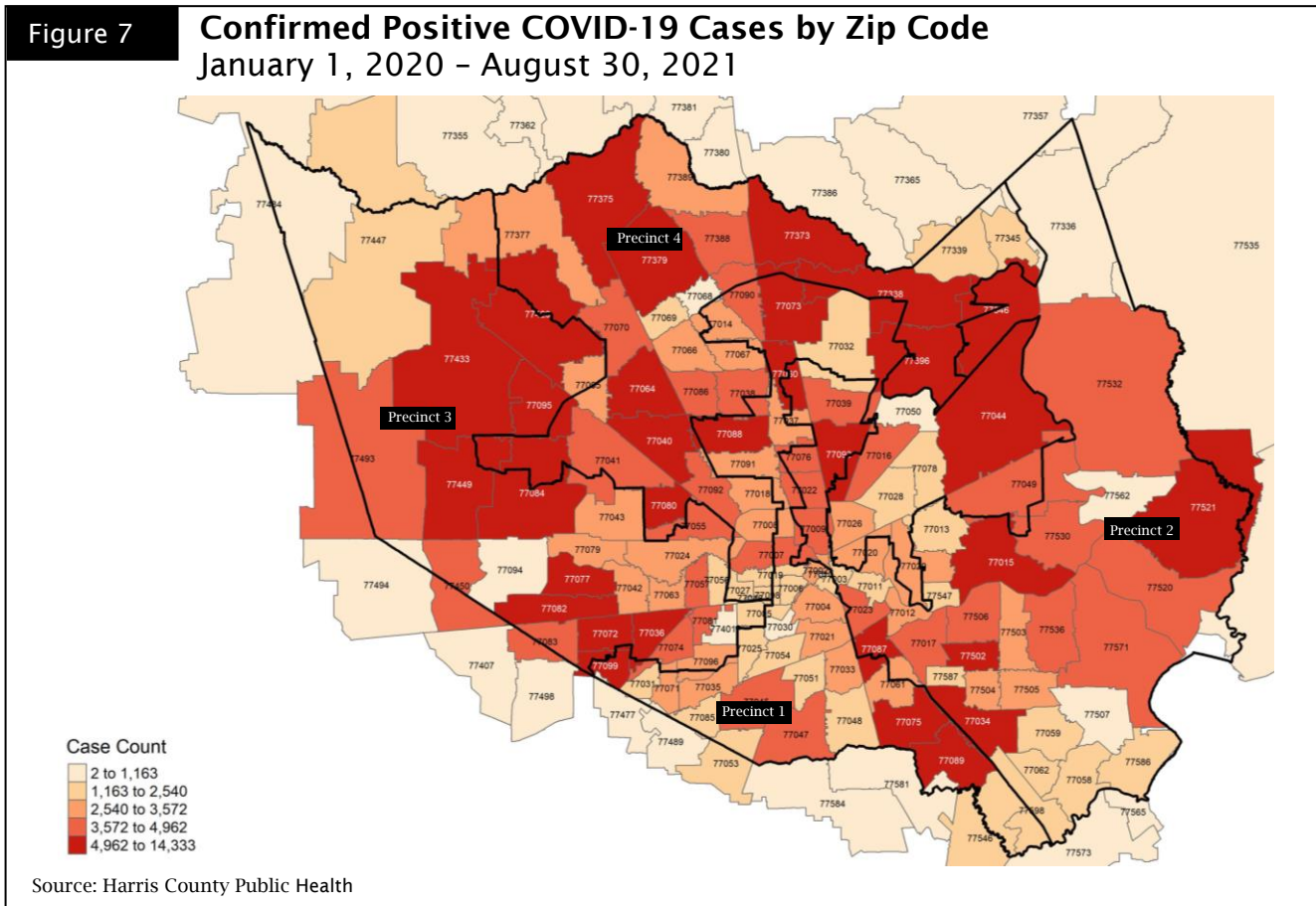
Precinct 1	Precinct 2	Precinct 3	Precinct 4	Total Tests
1,232,481	1,176,943	1,360,505	1,328,672	5,414,868

^{xxx} PCR refers to the polymerase chain reaction tests commonly used to test for COVID-19.

^{xxxi} Precinct totals do not sum to Total Tests because 316,267 tests administered have addresses that cannot be geo-coded into a Precinct.

CONFIRMED POSITIVE COVID-19 CASES BY ZIP CODE

Figure 7 reflects the total number of COVID-19 positive cases confirmed by a PCR test in Harris County, reported by zip code and **Table 6** reflects the number of positive COVID-19 cases by commissioner precinct.^{xxxiii}



Between January 1, 2020 and August 30, 2021, there were **500,802 confirmed positive cases of COVID-19** in Harris County. For a full list of positive cases by zip code, see Appendix B.^{xxxiii}

Table 6

Confirmed Positive Cases by Commissioner Precinct and for Harris County, January 1, 2020 – August 30, 2021

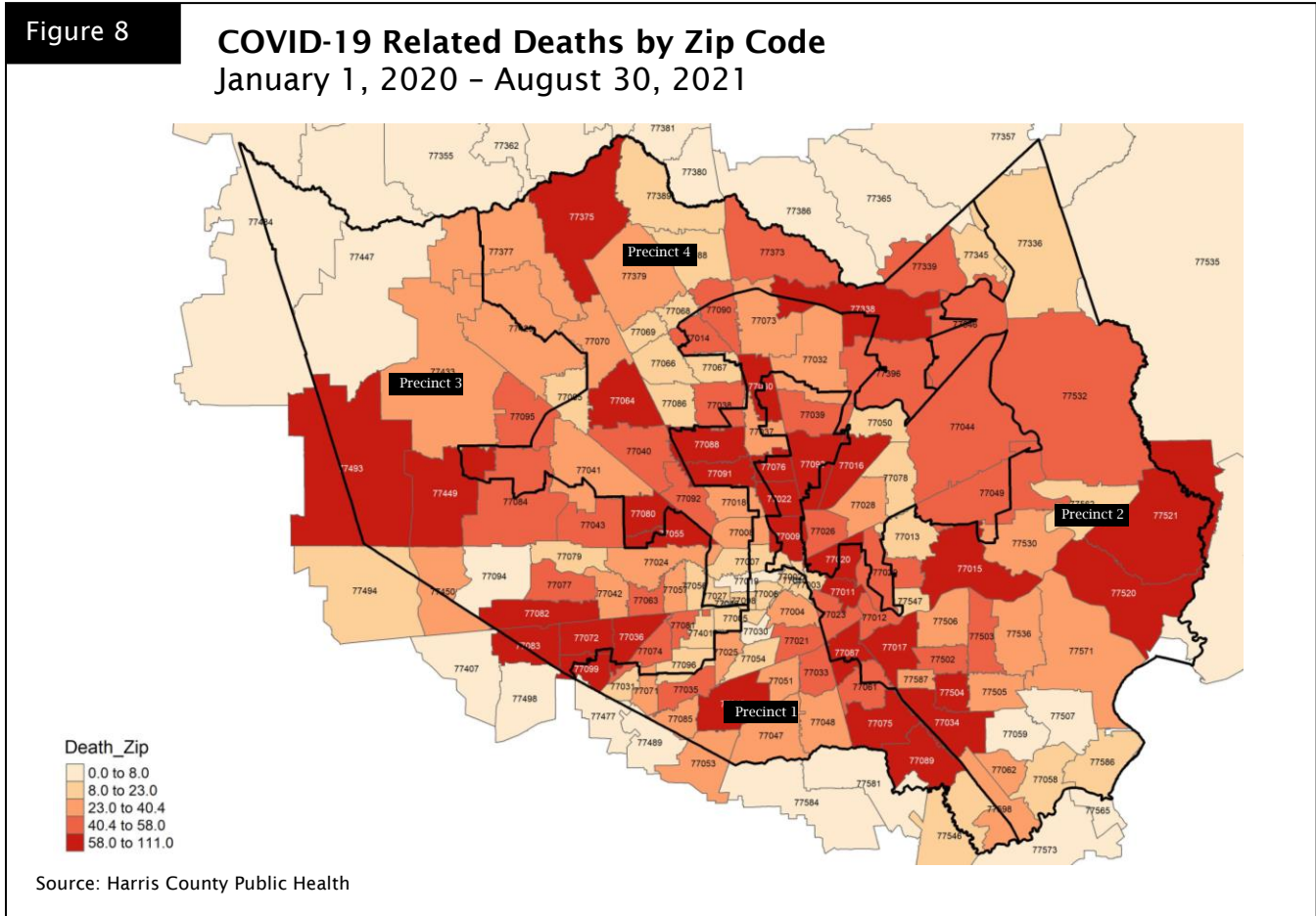
Precinct 1		Precinct 2		Precinct 3		Precinct 4		County	
Number of Cases	% of Precinct Population	Number of Cases	% of Precinct Population	Number of Cases	% of Precinct Population	Number of Cases	% of Precinct Population	Number of Cases	% of County Population
132,573	11.5%	125,176	11.3%	118,254	9.3%	118,102	9.8%	500,802	10.6%

^{xxxiii} PCR refers to the polymerase chain reaction tests commonly used to test for COVID-19.

^{xxxiii} Precinct totals do not sum to Total Positive Cases because 6,697 confirmed positive cases have addresses that cannot be geo-coded into a Precinct.

CONFIRMED COVID-19 RELATED DEATHS BY ZIP CODE

Figure 8 reflects the total number of confirmed COVID-19-related deaths in Harris County by zip code and **Table 7** reflects the number of COVID-19-related deaths by commissioner precinct.



Between January 1, 2020 and August 30, 2021, there were **5,324 confirmed COVID-19-related deaths** in Harris County. For a full list of deaths by zip code, see Appendix C.^{xxxiv}

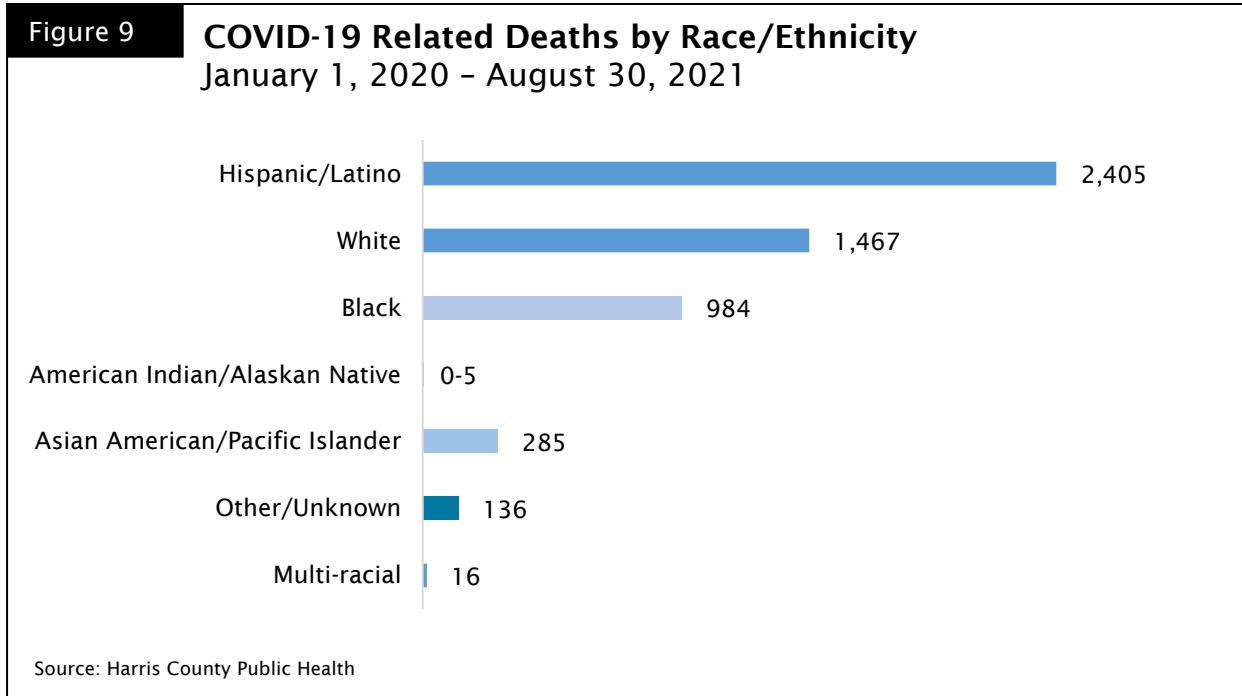
Table 7

COVID-19 Related Deaths by Commissioner Precinct and for Harris County, January 1, 2020 - August 30, 2021									
Precinct 1		Precinct 2		Precinct 3		Precinct 4		County Total	
Number of Deaths	% of Precinct Population	Number of Deaths	% of Precinct Population	Number of Deaths	% of Precinct Population	Number of Deaths	% of Precinct Population	Number of Deaths	% of County Population
1,567	0.14%	1,565	0.14%	1,154	0.09%	988	0.08%	5,324	0.11%

^{xxxiv} Precinct totals do not sum to Total Deaths because 50 deaths have addresses that cannot be geo-coded into a precinct.

COVID-19 RELATED DEATHS BY RACE AND ETHNICITY

Figure 9 reflects the total number of confirmed COVID-19-related deaths in Harris County by race and ethnicity.^{xxxxv}



Of the 5,296 individuals in Harris County who died of a COVID-19-related death between January 1, 2020 and August 30, 2021:^{xxxxvi}

- **45.2% (2,405) identified as Hispanic**, and for context, 42.9% of County residents identify as Hispanic;
- **27.6% (1,467) identified as White**, and for context, 29.6% of County residents identify as White;
- **18.5% (984) identified as Black**, and for context, 18.6% of County residents identify as Black;
- **0.1% (0-5) identified as American Indian or Alaskan Native**, and for context, 0.2% of County residents identify as American Indian or Alaskan Native;
- **5.4% (285) identified as Asian or Pacific Islander**, and for context, 7.0% of County residents identify as Asian, Pacific Islander, or Native Hawaiian;
- **2.6% (136) were recorded as Other/unknown race and ethnicity**; and
- **0.3% (16) identified as Multi-racial**, and for context, 1.5% of County residents identify as Two or More Races.

^{xxxxv} Race and ethnicity totals do not sum to Total Precinct Deaths because 28 deaths do not have race and ethnicity data available.

^{xxxxvi} County-level race and ethnicity data are derived from US Census Bureau 2018 Population Estimates.

APPENDIX A

Total COVID-19 Tests Administered by Zip Code Ordered by Tests Administered, January 1, 2020 – August 30, 2021							
Zip Code	Tests Administered	Zip Code	Tests Administered	Zip Code	Tests Administered	Zip Code	Tests Administered
77565	251	77029	17,081	77079	34,457	77339	49,775
77362	276	77011	17,317	77047	34,618	77015	49,974
77381	284	77003	17,637	77041	34,653	77502	50,232
77382	343	77069	17,741	77045	34,740	77008	50,808
77380	475	77523	18,354	77530	34,916	77072	50,985
77354	733	77058	18,560	77087	34,991	77024	51,683
77477	898	77587	19,472	77503	35,405	77054	51,786
77355	922	77026	19,488	77025	35,508	77070	52,641
77507	1,053	77059	20,283	77035	35,648	77055	52,941
77535	1,182	77447	21,160	77093	35,827	77388	53,562
77489	1,193	77098	22,839	77042	35,905	77044	54,901
77386	1,224	77067	23,148	77504	35,998	77036	55,591
77010	1,331	77048	24,120	77019	36,614	77082	56,308
77581	1,638	77039	24,189	77532	36,766	77007	58,526
77357	1,668	77022	24,247	77065	37,300	77338	60,705
77498	1,790	77086	24,253	77080	37,371	77089	61,828
77365	2,450	77020	24,342	77006	37,963	77077	63,529
77046	2,452	77027	24,742	77034	38,323	77373	65,230
77584	2,515	77061	24,880	77075	38,333	77083	72,139
77407	2,656	77076	25,017	77096	38,674	77521	73,398
77573	2,839	77043	25,019	77074	38,877	77375	75,979
77494	3,351	77030	25,543	77505	38,965	77450	76,311
77050	3,762	77062	25,905	77073	39,488	77396	86,767
77546	5,172	77091	26,120	77057	40,433	77346	88,464
77094	9,500	77038	26,902	77520	40,658	77095	91,577
77562	10,054	77060	27,613	77090	41,091	77379	92,967
77068	10,197	77021	28,349	77506	41,118	77084	101,836
77547	10,983	77023	28,386	77002	41,286	77429	105,308
77484	12,296	77016	28,441	77049	42,596	77005	117,577
77078	12,947	77092	28,484	77063	42,729	77433	123,242
77031	13,389	77014	29,065	77004	43,353	77449	155,160
77013	13,408	77066	29,377	77009	44,347		
77336	13,681	77071	29,477	77099	44,518		
77037	15,076	77586	30,236	77040	44,931		
77028	15,310	77017	31,737	77377	45,012		
77012	15,532	77345	31,867	77536	46,952		
77032	16,101	77018	32,270	77389	47,228		
77033	16,678	77081	32,741	77064	47,649		
77051	16,872	77401	33,067	77088	48,402		
77085	16,966	77056	33,620	77571	48,841		

APPENDIX B

Total COVID-19 Confirmed Positive Cases by Zip Code Ordered by Positive Cases, January 1, 2020 – August 30, 2021

Zip Code	Positive Cases	Zip Code	Positive Cases	Zip Code	Positive Cases	Zip Code	Positive Cases
77362	2	77005	1,549	77014	3,281	77081	4,751
77382	2	77546	1,567	77067	3,295	77388	4,791
77381	3	77058	1,637	77065	3,329	77049	4,912
77355	3	77031	1,717	77033	3,350	77070	4,957
77565	4	77006	1,793	77377	3,353	77060	4,969
77354	6	77056	1,891	77042	3,366	77064	4,976
77535	7	77051	1,943	77503	3,395	77082	4,984
77386	17	77078	1,974	77066	3,410	77080	5,049
77357	18	77013	1,990	77020	3,412	77077	5,107
77380	21	77586	2,029	77091	3,436	77040	5,127
77573	21	77019	2,047	77035	3,545	77075	5,178
77498	40	77025	2,075	77389	3,563	77087	5,236
77010	54	77339	2,083	77063	3,569	77034	5,265
77365	55	77054	2,129	77057	3,573	77338	5,296
77407	62	77062	2,132	77047	3,644	77502	5,441
77507	66	77028	2,166	77092	3,675	77073	5,591
77584	79	77032	2,217	77041	3,688	77099	5,743
77523	105	77587	2,268	77086	3,705	77375	6,005
77581	131	77598	2,361	77022	3,738	77044	6,133
77046	163	77085	2,458	77039	3,767	77072	6,163
77477	218	77048	2,464	77532	3,794	77373	6,340
77484	288	77011	2,531	77023	3,831	77093	6,376
77050	471	77018	2,577	77016	3,871	77521	6,667
77494	504	77029	2,578	77038	3,908	77088	6,693
77094	684	77004	2,595	77450	3,909	77095	6,794
77489	774	77002	2,596	77007	3,936	77089	6,886
77562	988	77037	2,631	77536	4,004	77396	6,977
77336	1,027	77021	2,745	77571	4,137	77015	7,157
77068	1,036	77043	2,759	77045	4,177	77346	7,367
77401	1,095	77012	2,794	77090	4,189	77036	7,453
77030	1,138	77505	2,810	77530	4,275	77379	7,455
77059	1,180	77096	2,816	77009	4,346	77429	7,652
77098	1,192	77026	2,849	77074	4,358	77433	9,211
77547	1,335	77071	2,881	77083	4,423	77084	12,539
77003	1,346	77061	2,935	77076	4,502	77449	14,333
77345	1,354	77024	2,952	77017	4,560		
77447	1,426	77504	2,971	77520	4,577		
77069	1,495	77008	3,108	77055	4,744		
77027	1,532	77079	3,142	77506	4,749		

APPENDIX C

Total Confirmed COVID-19 Related Deaths by Zip Code Ordered by Number of Deaths, January 1, 2020 – August 30, 2021

Zip Code	COVID Deaths	Zip Code	COVID Deaths	Zip Code	COVID Deaths	Zip Code	COVID Deaths
77362	0-5	77494	11	77018	30	77081	56
77382	0-5	77336	11	77450	31	77023	57
77381	0-5	77345	12	77047	33	77502	57
77355	0-5	77546	13	77571	33	77091	58
77565	0-5	77389	13	77598	35	77060	58
77354	0-5	77547	14	77530	35	77075	59
77535	0-5	77056	15	77057	36	77504	60
77386	0-5	77065	15	77506	36	77034	60
77357	0-5	77003	16	77070	36	77375	60
77380	0-5	77079	16	77433	36	77064	61
77573	0-5	77013	17	77028	38	77076	63
77498	0-5	77066	17	77004	38	77011	64
77010	0-5	77388	17	77061	41	77017	65
77365	0-5	77562	18	77090	41	77045	66
77407	0-5	77078	18	77039	42	77015	66
77507	0-5	77058	19	77038	42	77016	69
77584	0-5	77086	20	77044	42	77083	69
77523	0-5	77031	21	77021	43	77080	69
77046	0-5	77096	21	77092	43	77020	70
77477	0-5	77067	22	77077	44	77099	72
77484	0-5	77025	23	77043	46	77521	73
77094	0-5	77032	23	77026	47	77009	74
77447	0-5	77536	23	77033	48	77055	74
77581	6	77379	23	77029	49	77082	76
77489	6	77051	24	77014	49	77089	76
77030	6	77071	25	77532	50	77093	77
77059	7	77429	25	77373	50	77022	80
77019	7	77587	26	77339	51	77087	82
77050	8	77024	26	77074	51	77338	87
77401	8	77041	26	77049	51	77520	88
77027	8	77505	27	77040	52	77088	88
77005	8	77377	27	77012	53	77036	98
77068	9	77062	28	77503	53	77072	105
77098	9	77085	28	77035	53	77449	111
77006	9	77048	28	77396	53		
77007	9	77008	28	77084	53		
77069	10	77042	28	77095	55		
77586	10	77073	28	77346	55		
77054	10	77037	29	77063	56		

APPENDIX D

Number of Individuals Per 100,000 Residents Fully Vaccinated and Social Vulnerability Index (SVI), Ordered by Residents Vaccinated, December 14, 2020 – August 30, 2021^{xxxvii}

Zip Code	Per 100k Rate	SVI	Zip Code	Per 100k Rate	SVI	Zip Code	Per 100k Rate	SVI	Zip Code	Per 100k Rate	SVI
77013	31,406	0.98	77031	41,526	0.64	77029	47,264	0.88	77450	57,567	0.18
77090	33,237	0.70	77028	41,947	0.84	77071	47,661	0.68	77041	57,907	0.31
77060	33,347	0.94	77396	41,966	0.51	77047	47,968	0.55	77089	58,484	0.47
77067	33,819	0.79	77536	42,132	0.44	77040	48,109	0.55	77077	58,556	0.29
77506	34,272	0.95	77521	42,288	0.64	77011	48,115	0.96	77375	58,594	0.45
77336	35,391	0.30	77504	42,379	0.88	77055	48,127	0.68	77054	61,870	0.26
77078	35,845	0.89	77012	42,393	0.99	77070	48,196	0.49	77079	62,343	0.27
77081	35,894	0.81	77035	42,555	0.74	77064	48,221	0.47	77025	62,732	0.32
77076	36,644	0.86	77080	42,562	0.83	77085	48,472	0.60	77003	64,672	0.61
77050	36,707	0.71	77020	42,751	0.89	77084	49,071	0.36	77433	66,386	0.11
77503	37,583	0.82	77338	42,831	0.58	77082	49,183	0.54	77401	66,452	0.03
77562	37,678	0.63	77021	42,885	0.74	77449	49,236	0.36	77005	68,174	0.03
77014	37,770	0.78	77075	42,945	0.61	77388	49,395	0.13	77389	69,179	0.14
77039	38,122	0.73	77502	43,131	0.89	77346	49,528	0.12	77006	72,442	0.09
77547	38,203	0.66	77086	43,283	0.78	77586	49,620	0.18	77094	73,841	NA
77520	38,321	0.82	77022	43,413	0.97	77044	49,835	0.41	77059	73,902	0.05
77093	38,372	0.97	77073	43,509	0.50	77377	50,351	0.24	77008	74,941	0.08
77532	38,743	0.37	77045	43,537	0.84	77095	50,424	0.23	77007	79,390	0.01
77091	38,773	0.92	77092	43,750	0.75	77429	50,456	0.06	77098	88,582	0.07
77061	38,775	0.70	77004	43,778	0.53	77345	51,142	0.05	77019	89,043	0.09
77036	38,961	0.93	77373	43,804	0.30	77069	51,751	0.22	77024	92,749	0.16
77033	39,006	0.93	77042	44,815	0.38	77068	52,179	0.43	77002	96,588	0.42
77051	39,045	0.80	77015	45,081	0.76	77083	53,148	0.53	77010	108,005	0.02
77016	39,226	0.89	77505	45,354	0.24	77018	53,692	0.48	77027	110,470	0.01
77598	39,629	0.57	77087	45,439	1.00	77096	54,026	0.39	77056	140,767	0.14
77088	39,861	0.77	77017	45,461	0.66	77379	54,453	0.21	77046	156,289	0.10
77037	39,862	0.69	77099	45,563	0.80	77062	54,587	0.19	77030	171,723	0.28
77026	39,964	0.94	77066	45,792	0.59	77043	54,749	0.52			
77034	40,025	0.67	77065	45,849	0.43	77032	55,098	0.99			
77571	40,439	0.38	77049	46,171	0.63	77058	55,479	0.46			
77530	40,812	0.59	77048	46,245	0.85	77339	55,592	0.32			
77587	40,980	0.91	77072	46,328	0.87	77057	56,030	0.34			
77074	41,108	0.86	77023	46,561	0.76	77009	56,566	0.62			
77038	41,157	0.50	77063	47,165	0.57	77447	57,153	0.45			

^{xxxvii} Table excludes data for zip codes with unavailable population data.



The Harris County Commissioners Court's Analyst's Office provides the Harris County Commissioners Court members with objective, nonpartisan, and timely fiscal and policy analysis related to the efficiency and effectiveness of various County operations.

This memo was prepared by Ramin Naderi, Analyst and Amy Rose, Senior Analyst.

Commissioners Court's Analyst's Office
1115 Congress Street, 6th Floor
Houston, Texas 77002

Main: (832) 927-6900
Email: info@ccaohctx.net