

# Tackling Social Determinants of Health to Achieve Health Equity

## Investing in Health Care Access

In 2019, the Houston Methodist Office of Community Benefits conducted a Community Health Needs Assessment (CHNA) in compliance with the Patient Protection and Affordable Care Act. A CHNA was conducted and completed for each of Houston Methodist's eight hospitals in relationship to each facility's surrounding communities, which encompass the primary eight counties of Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery and Waller. The CHNA included input from community leaders and stakeholders, and public health experts regarding social and health care needs in the community. The input was obtained through a series of interviews executed by the Office of Community Benefits as well as surrounding Texas Medical Center organizations. The CHNA also included information and data from a survey of approximately 1,000 individuals from around the Greater Houston community and a quantitative and qualitative analysis of publicly available data on social determinants, health care conditions, and health outcomes.

Through the CHNA, Houston Methodist identified four health care priorities aimed at 1) increasing access to primary care services; 2) reducing barriers to accessing specialty care services; 3) promoting healthy living behaviors to reduce chronic disease development; and 4) increasing access to mental health care services. These four priorities led to the development of implementation plans tailored to the resources of each Houston Methodist facility to ensure Houston Methodist is working to actively address the identified and adopted health priorities. At [houstonmethodist.org/chna](https://houstonmethodist.org/chna), this report and the original implementation plans can be viewed in their entirety.

## Expanding to Invest in Social Determinants of Health

In 2020, the nationally reported incidents following the death of George Floyd, along with the social and health care disparities that were heightened due to the global COVID-19 pandemic, reignited the conversation on social inequities that are often driven by race and ushered in a renewed focus on social determinants of health. Social determinants of health (SDOH) are the conditions in which people are born, grow, live, work and age, including factors of socioeconomic

status, education, neighborhood and physical environment, employment, social support networks and access to health care. Addressing social determinants is important in the effort to reduce health disparities that are often rooted in social and economic disadvantages. Health inequities are systematic differences in the opportunities available to groups that support achieving optimal health, leading to unfair and avoidable differences in health outcomes.

In the fight to address health and social inequities, Houston Methodist has committed to investing \$25 million dollars toward social determinants of health in the Greater Houston community to be administered over five years. This investment is part of the overall focus on diversity, equity and inclusion within the health care system. While Houston Methodist will continue to prioritize health care access and general health education, it will expand its focus to combat the following most important social determinants uncovered in the 2019 CHNA process. They include, but are not limited to, housing, food security, economic opportunities, and strong educational systems which are categorized under the following **community priority health and social equity pillars** of:

- Supporting the Development of Healthy Neighborhoods for Underserved Communities
- Supporting Educational Access and Opportunities for Underserved Communities
- Supporting the Cultivation of Economic Opportunities for Underserved Communities

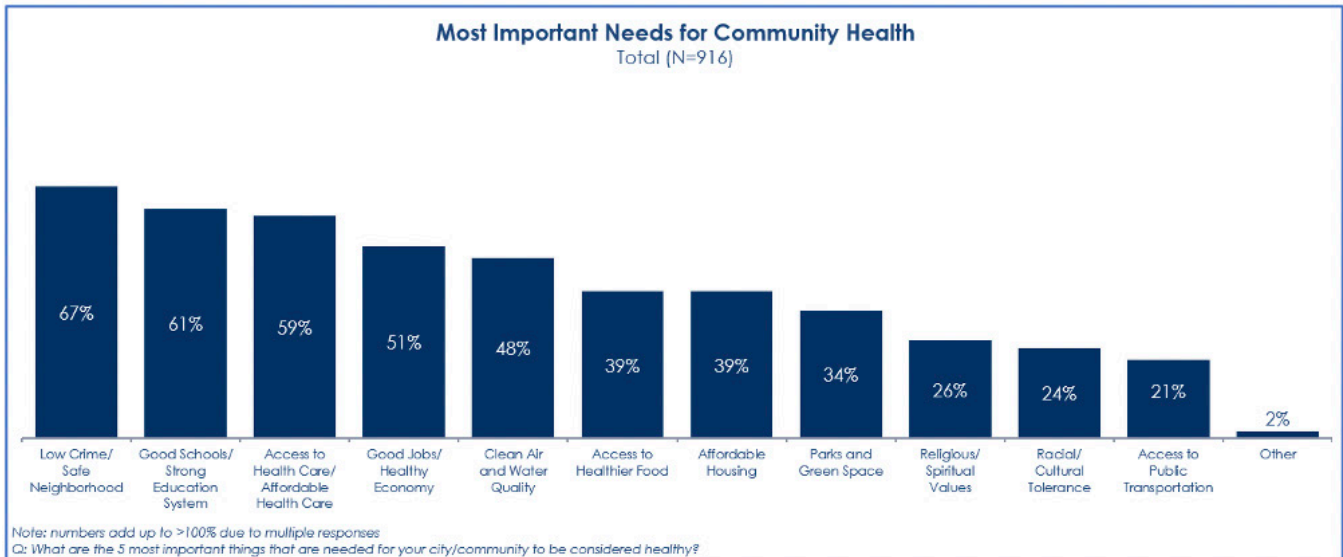
The following sections will outline the role the prioritized social determinants can play in health outcomes and the goals of the newly formed Houston Methodist Board Committee on Diversity, Equity & Inclusion to ensure Houston Methodist is making a measurable impact on the Greater Houston community and investing in the neighborhoods, groups, and causes that move our society closer to one that offers equitable opportunity for all. This document will draw comparisons between ZIP codes to emphasize the disparities that can exist within the neighborhoods with the lowest socioeconomic status to emphasize the greatest areas of



opportunity for support. Note, when persons are referred to as Latino, it is designed to include all races of Latin American descent, White/Non-Latino is designed to include those of European descent and Black/African American is designed to

include those of African descent. Visit the [Houston Methodist Diversity, Equity & Inclusion](#) page to learn about the five priorities of the diversity initiative.

Figure 1: 2019 Houston Methodist CHNA Community Survey Response

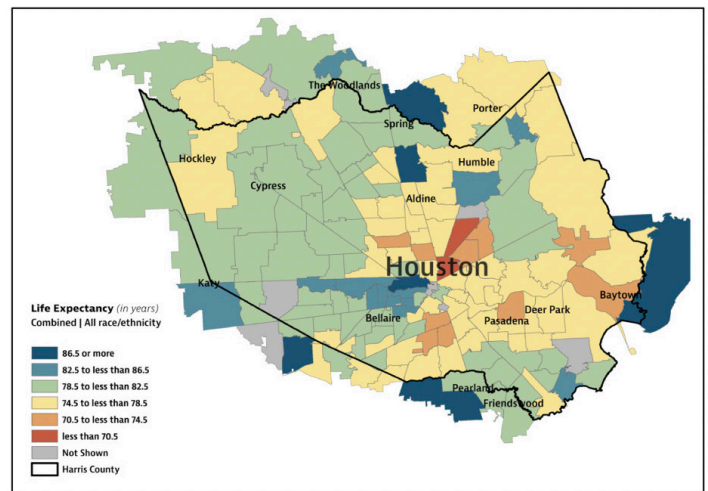


## Zip Codes Can Predict Health Outcomes

The ZIP code where a person resides can have a direct impact on a person’s overall health outcomes and, ultimately, the community’s mortality rates. In Harris County, the largest county in Texas and the county most served by Houston Methodist, life expectancy can be tied directly to a resident’s ZIP code. Life expectancy reflects the overall mortality level of a population and is one of the most frequently used health status indicators.<sup>1,2</sup> In the assessment of the community, it was determined the life expectancy in Texas varies by as much as 30 years with a statewide life expectancy of 78.5 years.<sup>4</sup> See Figure 2. While Harris County is comparable with an average life expectancy of 78.9 years, life expectancy varies greatly across ZIP codes in Harris County and can vary by up to 20 years, ranging from a low of 69.8 years to a high of 89.7 years.<sup>3</sup>

To further demonstrate how ZIP codes can create variation in life expectancy, one of the ZIP codes with the lowest life expectancy rates in Harris County is 77026, which is located in the Fifth Ward neighborhood. This ZIP code is one of the lowest-income ZIP codes in Houston and the average life expectancy of its residents is 69.8 years. That is well below the state average and lower than the overall county within which it resides. Less than 15 miles away from the 77026 ZIP code is 77019, located in the River Oaks neighborhood. River Oaks is considered one of the wealthiest neighborhoods in Houston. The life expectancy of this ZIP code is 84.9

Figure 2: Life Expectancy Map – Harris County



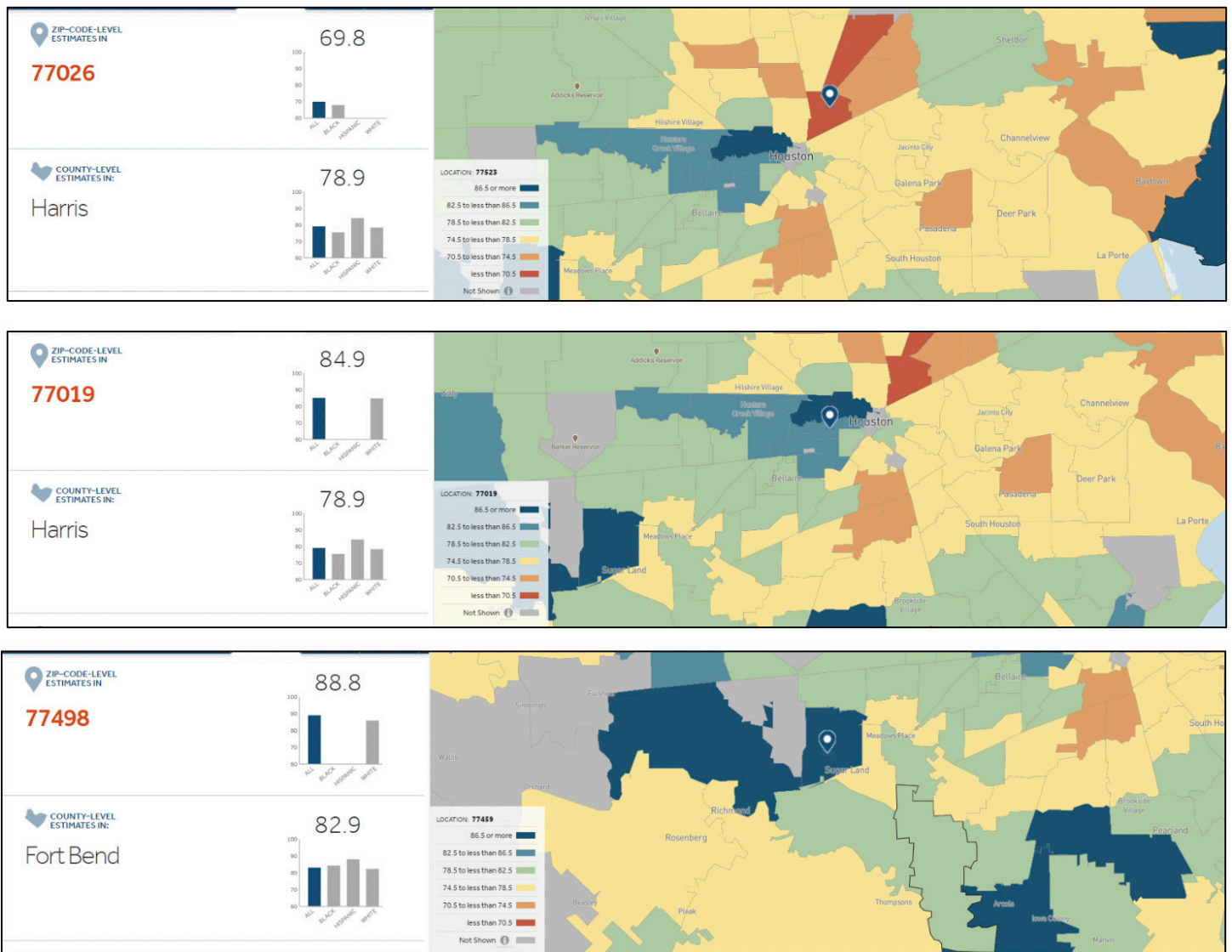
years. This represents a 15-year disparity in life expectancy. Because income levels can determine the community that a person is able to live in, and with that, can determine access to characteristics of a healthy neighborhood, it is worth noting the median household income of the 77019 neighborhood is \$117,367 versus \$29,393 for the 77026 neighborhood.<sup>5</sup> See Figure 3 for comparison of the two ZIP codes illustrated.

Fort Bend County has an average life expectancy of 82.9 years, well above state rates. One of the ZIP codes with the highest life expectancy within that county is the 77498 ZIP code that has an average life expectancy of 88.8 years.<sup>4</sup> An adjacent ZIP code in Fort Bend County is 77478, which has a lower than overall county life expectancy rate of 75.7, slightly lower than the state average. As this report will outline, educational attainment can determine income levels and one's ability to determine the neighborhood within which he/she lives. Therefore, it is worth noting, Fort Bend County, overall, has the highest educational attainment and income levels in the Houston Methodist service area compared to the other counties served. Montgomery County has an overall life expectancy of 79.7 years, with The Woodlands community (77381) having a higher than county and state life expectancy of 81.7.<sup>4</sup> For Montgomery County, the 77301 ZIP code in the

Conroe community has a lower than county life expectancy of 73.6. Chambers County's average life expectancy is 77.9; Galveston County's average life expectancy is 77.6; Brazoria County's average life expectancy is 79; and Liberty County has an average life expectancy age of 73.9, the lowest in the Houston Methodist service area and also the county with lowest income levels and educational attainment.<sup>6</sup>

The ZIP code in which a person resides can directly correlate to income levels, which ties into poverty rates. The following ZIP codes identified in Figure 4 were identified by the Houston State of Health as having the highest percentages of families living below the federal poverty line (FPL). The ability to access affordable health care, which contributes to longer and healthier living, is connected to income and employment status. See Figures 4 and 4A to view the top

Figure 3: Houston State of Health Life Expectancy Map by ZIP Code



Source: Houston State of Health Families Below FPL Map

**Figure 4a: Houston State of Health Percent of Families Below FPL in Harris County**

Zip Code	% Below FPL	Zip Code	% Below FPL	Zip Code	% Below FPL	Zip Code	% Below FPL	Zip Code	% Below FPL	Zip Code	% Below FPL
77060	37.31%	77074	31.64%	77080	24.89%	77028	23.55%	77016	21.20%	77547	18.53%
77081	36.10%	77051	31.54%	77520	16.15%	77021	22.86%	77067	20.75%	77031	18.36%
77032	35.27%	77029	30.10%	77050	16.12%	77078	22.74%	77048	20.69%	77504	18.20%
77036	34.86%	77022	29.92%	77083	15.04%	77014	22.73%	77502	20.67%	77063	18.02%
77026	34.18%	77003	28.83%	77012	24.74%	77035	22.58%	77088	20.27%	77071	17.63%
77011	34.14%	77091	28.13%	77506	24.67%	77086	21.99%	77015	20.02%	77017	17.60%
77020	33.88%	77033	27.81%	77038	24.46%	77099	21.77%	77055	19.59%	77075	17.56%
77039	33.50%	77037	27.27%	77072	24.35%	77587	21.64%	77042	19.50%	77045	17.07%
77076	33.05%	77087	25.94%	77023	24.18%	77061	21.40%	77090	18.89%	77530	16.19%
77093	31.65%	77092	25.14%	77009	24.03%	77013	21.24%	77004	18.73%	77520	16.15%

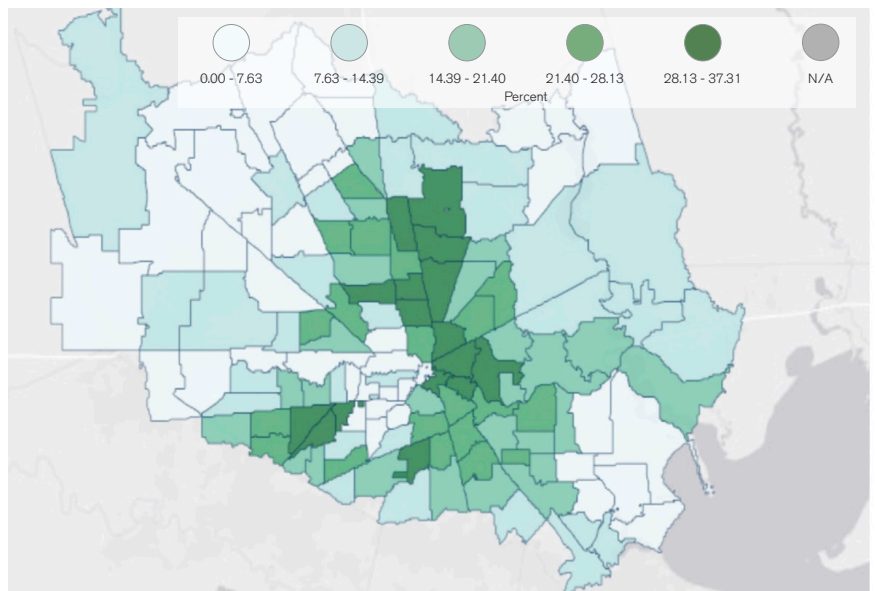
Source: Houston State of Health Families Below FPL Map

60 ZIP codes in Harris County with highest percentage of families living below the FPL. The overall average of families at or below the FPL in Harris county is 14.2%.<sup>7</sup> You will see the following ZIP code rates are well-above county rates. Of the most economically distressed ZIP codes identified in Harris County, many have a majority Black/African American and/or Latino population. Of note, the ZIP code with the highest percentage of families living below the poverty line in Baytown is 77520 (16.2%) and has a life expectancy of 73.7 years.

To further confirm the ZIP codes that may be experiencing the greatest health inequities, there is significant overlap in the ZIP codes outlined in Figure 4 and the communities selected for the Houston Complete Communities Initiative. See Figure 5. This initiative targets 10 neighborhoods that have been identified as having larger disparities driven by socioeconomic conditions. The 10 neighborhoods identified by the city-driven initiative are listed below and many encompass multiple ZIP codes, including the top 60 listed in the previous chart:

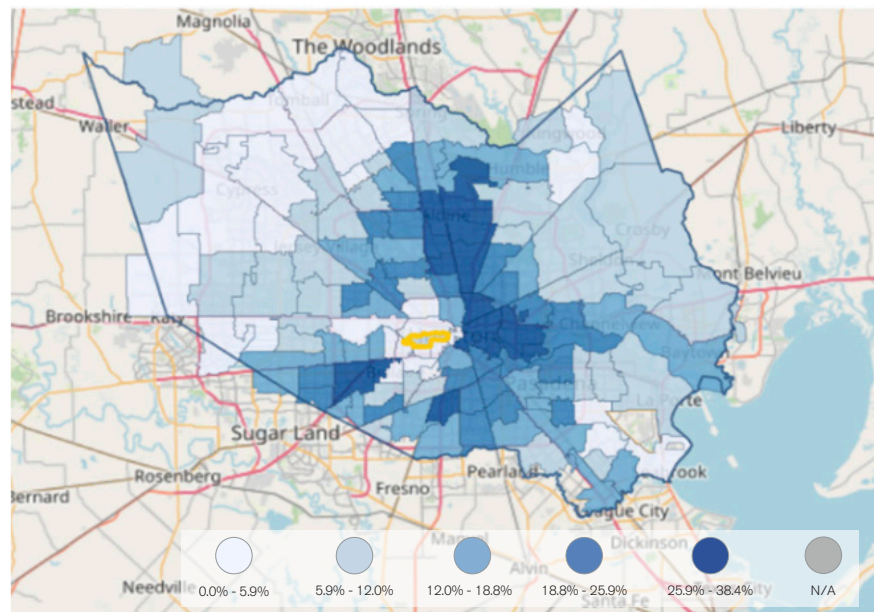
- Acres Homes
- Alief-Westwood
- Fort Bend Houston
- Gulfton
- Kashmere Gardens
- Magnolia Park
- Near Northside
- Second Ward
- Sunnyside
- Third Ward

**Figure 4b: Houston State of Health Percent of Families Below FPL in Harris County**



Source: Houston State of Health Families Below FPL Map

**Figure 5: Houston State of Health Complete Communities Map**



Source: Houston State of Health Families Below FPL Map

### The Link Between Mortality Rates, Income and Healthy Neighborhoods

In relationship to mortality rates, the social and economic features of neighborhoods have been linked with general health status, disability, birth outcomes, chronic conditions, health behaviors and other risk factors for chronic disease, as well as with mental health, injuries, violence and other important health indicators.<sup>4</sup> These same features have a correlation between living in a “less healthy” neighborhood and the racial and ethnic identities of a population.

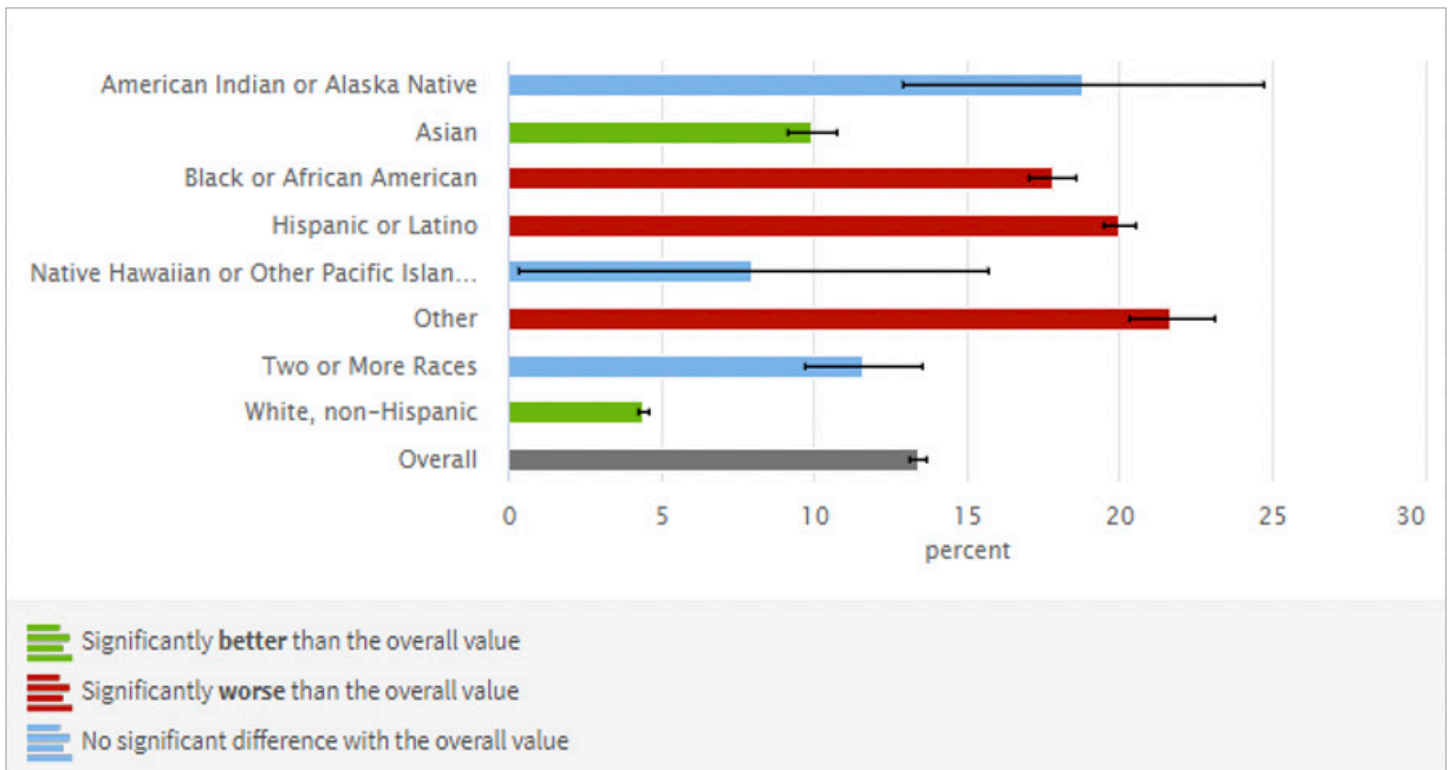
Black/African Americans and Latinos are more likely to experience poverty that determines the neighborhoods a person can live in and makes them more susceptible to negative health status indicators. Due to the higher likelihood of experiencing poverty, Black/African Americans and Latinos are more likely to live in areas with higher rates of crime and violence, unsafe air and water, food deserts, less greenspace and walkable environments, among other elements needed to thrive. In fact, the majority of the neighborhoods and communities identified in Figure 4 have a dominant Black/African American and/or Latino population. Per the latest poverty statistics on families living in poverty in Harris County, approximately 18% of Black/African Americans and 20%

of Latinos live at or below the poverty line. In comparison, approximately 4% of White/Non-Latinos live at or below the poverty line.<sup>8</sup> See Figure 6.

**Social Minority Spotlight: Senior Citizens and Poverty**  
Seniors (65+) who live in poverty are an especially vulnerable group due to increased physical limitations, medical needs and social isolation. Per the Houston State of Health, seniors often live on a fixed income from pensions, social security and other retirement plans. If this income is insufficient in the face of increasing prescription costs and other costs of living, most seniors have no way to supplement their income. In Harris County, 11.3% of seniors live below the FPL, with senior women (12.6%) more likely to live below the FPL than men (9.7%) and Black/African Americans (15.7%), Latinos (18.9%) and Asian (15.9%) seniors more likely to live below the FPL than White/Non-Latino (5.8%) seniors.<sup>9</sup>

In the following subsections, Houston Methodist will briefly outline how key factors of greenspace, nutritious food access, neighborhood safety levels and housing can help create or dismantle the goals of creating a healthy neighborhood and the minority populations that are more likely to be impacted by these determinants.

Figure 6: Living at or Below Poverty Line by Race/Ethnicity



Source: Houston State of Health Families Below FPL Map

## Components Needed to Build a Healthy Neighborhood

A healthy neighborhood has many characteristics, which can include low crime and violence, presence of greenspace, affordable quality housing, access to affordable nutritious food, and more. The presence of these elements can encourage healthy behaviors and cultivate overall positive physical and emotional well-being. Conversely, depending on where we live, our health may be adversely affected when the listed neighborhood characteristics are inadequate or not present. These social determinants can be driven by the inequities experienced due to lower income and employment status. This section will explore the elements that contribute to building a healthy neighborhood and the impact the absence of these characteristics can have on health.

### Presence of Greenspace and the Built Environment

#### Defining Greenspace

Inequitable access to greenspace can relate to health disparities or inequalities. Citing the 2019 NCBI article titled “The Relationship between Social Cohesion and Urban Green Space: An Avenue for Health Promotion,” greenspace refers to areas such as gardens, parks, greenways, and other areas with grass, trees, and/or shrubs.<sup>10</sup> They can be common areas where people gather for leisure, social activities and recreational purposes affording people the opportunity to engage with the outdoor environment. Another term that can be used to describe the limited access to greenspace is “nature-deprived communities.”

#### Correlation Between Physical Health and Greenspace

Some may not understand how the ability to access greenspace can impact health but access to this resource can encourage physical activity, which is key to healthy outcomes as well as positive mental health. Physical activity can lower the likelihood of obesity and other health conditions tied to unhealthy living behaviors. Obesity can lead to other serious conditions such as high blood pressure, diabetes and heart disease. In Harris County, 28% of adults reported they do not engage in any physical activities.<sup>11</sup> In comparison, 29% of respondents to the Houston Methodist 2019 CHNA Survey question, “How many hours on average do you exercise per week?” reported no physical activity per week.

In the Houston Methodist CHNA, 34% of respondents indicated parks and greenspace were needed for a healthy community. Interestingly, when those numbers were reviewed by race and ethnicity, only 15% of Black/African Americans felt greenspace was needed versus 41% of Latinos and 31% of White/Non-Hispanics. When comparing survey respondents to the Houston State of Health data, 63% of Black/African Americans report engaging in physical activity, which is less than any other group (Latino – 67.7%, and White/Non-Latino – 83.5%) and well below the Harris County average of 72%.<sup>12</sup> Though the Black/African Americans

surveyed are less likely to indicate parks and greenspace as needed for a healthy community, there could be a connection between attitudes of greenspace and obesity rates among the population. 83% of Black/African Americans in Harris County are considered overweight or obese, which is well above the overall overweight/obesity rate of 74% when all races are considered.<sup>12</sup> These health conditions can be increased due to unhealthy eating habits as well as less physical activity.

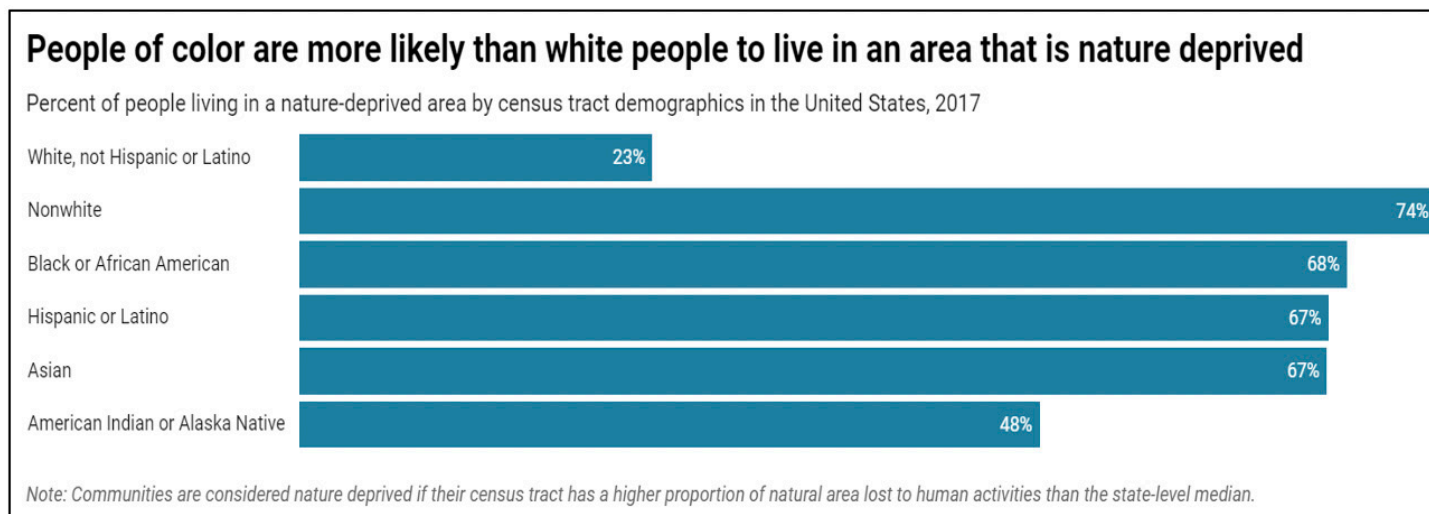
The most common personal barrier to a regular physical activity routine is lack of time. Work, family obligations and other realities of daily life often get in the way of intentions to be more active. However, many cite a lack of resources or equipment as a significant barrier to physical activity.<sup>13</sup> Per the second edition of the U.S. Department of Health and Human Services’ (health.gov) Physical Activity Guidelines for Americans, “individuals make the final choice about whether to be physically active, they can face challenges that make this choice more difficult. They may not know about — or have access to — safe places to be physically active, may live in communities not designed for activity, or may have chronic conditions or physical limitations that create additional barriers.”<sup>14</sup> Also, Texas Health and Human Services attributes environmental changes, such as urban sprawl, as a barrier to physical activity.<sup>16</sup>

#### Disproportionate Greenspace Impact on Racial/Ethnic Minorities and Children

Poor and minority communities tend to have less access to greenspace, which can result in unequal access to the health benefits greenspace can bring. Lack of greenspace in these minority-majority communities can also be linked to the historical and discriminatory practice of redlining, which recent studies have shown also have a link to people living in “hotter” communities due to lack of tree cover, which can impact health. Redlining will be discussed more in the section discussing the connection between affordable housing and health equity. Lack of greenspace can also be referred to as “nature-deprived communities.” In the chart below, the disparity between races and cultures in terms of access to nature or greenspace is highlighted in Figure 7.<sup>16</sup>

Greenspace includes the presence of parks, which can stimulate physical activity among children. Per the National Recreation and Park Association (NRPA), children who live within two-thirds of a mile from a park with a playground are five times more likely to be a healthy weight. Time spent outside leads to higher levels of physical activity in children. Cited from the Journal of Attention Disorders, the NRPA outlines in its Parks & Healthy Kids article “a 20-minute walk in a park or other natural area can help children with attention deficit hyperactivity disorder focus better.”<sup>17</sup> Additionally, the United States Department of Health and Human Services’ Physical Activity Guidelines for Americans, 2nd Edition, outlines children who spend time outdoors

Figure 7: Percent of People Living in Nature-Deprived Communities by Race/Ethnicity



in natural environments experience improved health and cognitive functions, strong motor coordination, reduced stress, and enhanced social skills as well as having a demonstrable positive effect on school performance for students from low-income backgrounds.<sup>15</sup> The guidelines also cite one study that found “having more tree cover in a neighborhood could account for as much as a 13% variance in student outcomes; the study found the positive effect to be strongest in schools that faced the most external socioeconomic challenges.”<sup>15</sup>

#### Barriers to Walkable Spaces

Developing affordable and appropriate walkable communities, bike lanes, bike-share programs and other healthy transit options can help boost health. Even if a community has access to parks and outdoor space, the ability to navigate to these areas is contingent upon the ability to do so safely and easily, also known as walkability. Factors such as streets with higher levels of car traffic and living near freeways can play into walkability, but the presence of stray dogs can also serve as a barrier to accessing greenspace. In a 2016 Community Health Needs Assessments survey conducted by Houston Methodist, the presence of stray dogs was listed as a factor negatively impacting the community (14%).<sup>18</sup> Houston’s largest shelter, BARC, has estimated that more than a million stray animals are roaming the city.<sup>19</sup> Large numbers of stray dogs are linked to poverty. In poor communities and communities that have few veterinary services available, pets are much less likely to be sterilized. In a report provided by the Houston Chronicle, BARC indicated the community most impacted by strays is the Fifth Ward neighborhood. Per the agency, BARC is 40 times more likely to find a stray animal in Fifth Ward than River Oaks. As a reminder, the Fifth Ward neighborhood, which can also be represented by the 77026 ZIP code, has been identified as having one of the higher percentages of families living below the federal poverty line and having the lowest life expectancy rate. The development of “packs” of dogs can pose safety issues for people living in the communities, which can deter residents from engaging in outdoor activities such as walking, jogging and more.

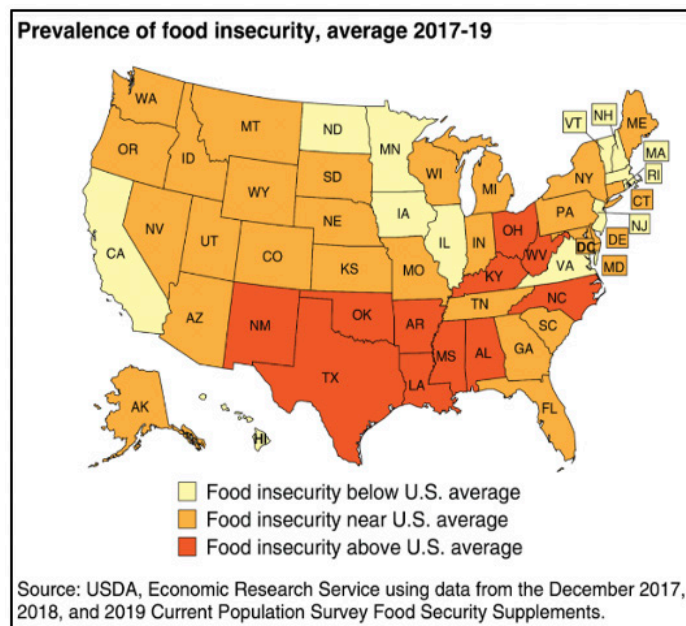
### Access to Nutritious Food

#### Defining Food Insecurity

Lack of access to nutritious foods are often characterized by the term food insecurity. As defined by the United States Department of Agriculture (USDA), food insecurity is a household-level economic and social condition of limited and uncertain access to adequate food that is associated with low incomes. Across the country, 10.5% (13.7 million) of U.S. households were food insecure at some time during 2019, with 19.1% of Black/African American households and 15.6% of Latino households experiencing food insecurity compared to White/Non-Latino households who had an average rate of 8% being food insecure.<sup>20</sup>

Texas is ranked as one of the 11 states with a food insecurity rate higher than the national average per the USDA (13.1%).<sup>21</sup> See Figure 8. Feeding America projected Texas’ rate will

Figure 8: Food Insecurity Prevalence in the United States



increase as a result of the economic downturn caused by the COVID-19 pandemic and are projecting the 2020 rate will be 18.6%.<sup>22</sup> Per a Kinder Institute for Urban Research report on Houston's food insecurity rates, it found Houston, prior to the COVID-19 pandemic, had an estimated 724,750 food-insecure individuals in the Greater Houston area with a food insecurity rate of 16.6%, which is 4 percentage points above the reported national average.<sup>23</sup> Per the Houston State of Health, Harris County has an estimated 14.8% of its population living food insecure and 21.2% of that being children.<sup>24</sup> Maintaining a healthy diet requires nutritious food to be affordable and accessible. People experiencing food insecurity often consume a nutrient-poor diet, which may contribute to the development of obesity, heart disease, hypertension, diabetes, and other chronic diseases. Food insecurity is driven by economic factors that can be tied to a person's ability to generate an income that can determine the neighborhoods within which one lives, thus determining health food access.

**Food Deserts**

Food accessibility is key to combatting food insecurity. Unfortunately, those living in rural areas and areas that are considered low-income areas are more like to reside in food deserts. Food deserts are "regions of the country that feature large proportions of households with low incomes, inadequate access to transportation, and a limited number of food retailers providing fresh produce and healthy groceries for affordable prices" as defined by the USDA. While there are many ways to measure food store access for individuals and neighborhoods, and many ways to define which areas are food deserts, most

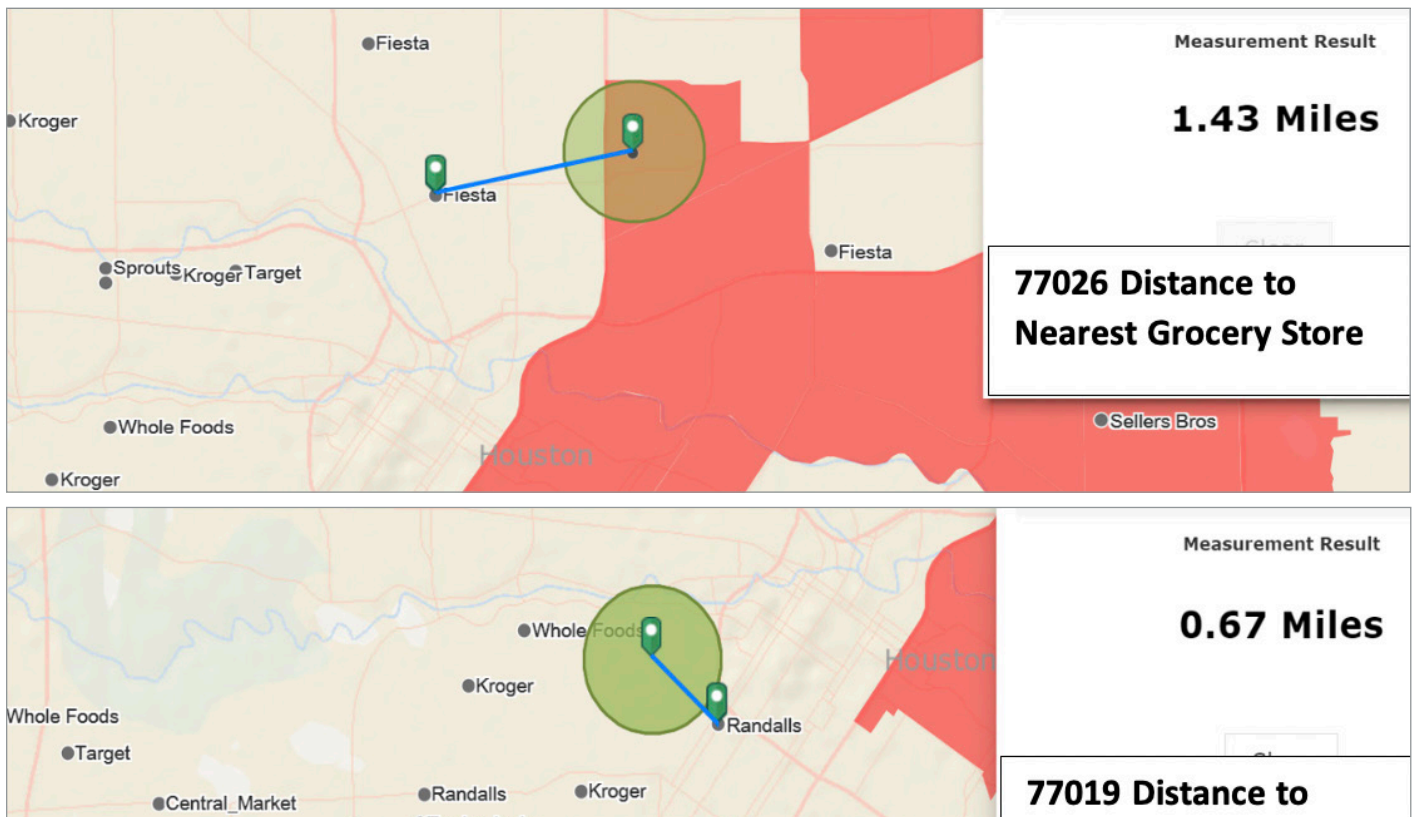
measures and definitions take into account the following indicators of access: accessibility to sources of healthy food; individual level resources that may affect accessibility; and neighborhood-level indicators of resources. In the United States, the average distance from households to the nearest grocery store is 2.19 miles. This distance not only negatively impacts individuals without a vehicle or access to convenient public transportation (21% of Houston Methodist survey respondents indicated transportation was an issue), it also makes it difficult for those who do not have food venues with healthy choices within walking distance. Altogether, these barriers limit access to foods that support healthy eating patterns. Over 500,000 Houstonians live in USDA-designated food deserts.<sup>21</sup>

To continue the comparison of two communities in Houston, using the UT School of Public Health Food Analysis Tool, the previously identified Fifth Ward ZIP code (77026) is considered to be located in a food desert, with the closest grocery store being approximately 1.4 miles with limited grocery store options within a 2-mile range versus the River Oaks neighborhood (77019), which has multiple options with the closest three stores being less than 1 mile. See Figure 9. The red indicates designated food desert territory. This can be problematic when transportation is limited, and the community has limited walkable spaces.<sup>25</sup>

**Children and Food Insecurity Impact**

It is projected by Feeding America in the 2020 article "The Impact of the Coronavirus on Local Food Insecurity," the child food insecurity rate of Texas will increase to 30.9%, up from

**Figure 9: Grocery Store Proximity Comparison**





21.6% in 2018.<sup>20</sup> Children not having access to nutritious food during this important developmental period can have adverse effects for a lifetime. Per Feeding America, in its 2018 brief titled Child Food Insecurity:

“Inadequate nutrition can permanently alter children’s brain architecture and stunt their intellectual capacity, affecting children’s learning, social interaction and productivity. Food-insecure women are more likely to experience birth complications than food-secure women. Children struggling with food insecurity may be at greater risk for stunted development, anemia and asthma, oral health problems and hospitalization. Overall, food insecurity is linked with poorer physical quality of life, which may prevent children from fully engaging in daily activities. At school, food-insecure children are at increased risk of falling behind their food-secure peers both academically and socially; food insecurity is linked to lower reading and mathematics test scores, and they may be more likely to exhibit behavioral problems, including hyperactivity, aggression and anxiety.”<sup>26</sup>

Further, as a result of the pandemic, many children who traditionally rely on school lunches for their daily meals face greater hunger threats due to schools requiring children to learn from home. In families where food is scarce, and the primary meal a child receives is at school, it enhances the widening disparities experienced as a result of the pandemic.

**Social Minority Spotlight: LGBT Community and Food Access**

Food insecurity impacts not just racial and ethnic minorities, but also social minorities such as members of the LGBT community. In a study conducted in 2016 by the Williams

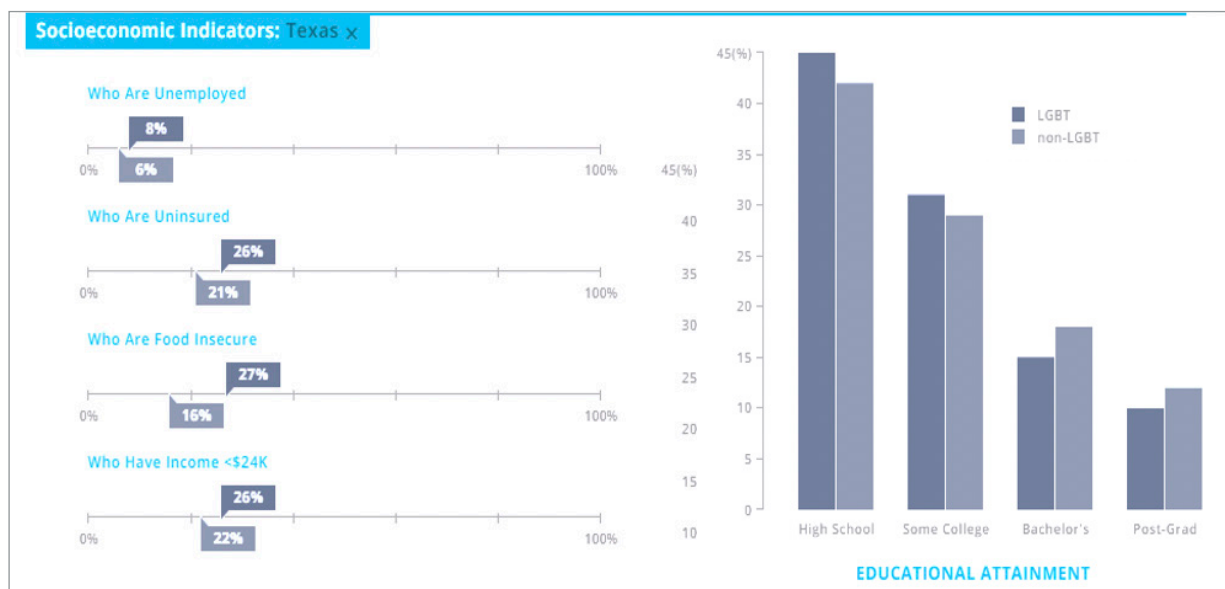
School at UCLA Law School, data from four major national surveys uncovered that the Texas LGBT food insecurity average rate is 27% compared to non-LGBT members (16%).<sup>27</sup> See below for additional findings and Figure 10 from the Williams School:

- Nationally, more than 25% of LGBT adults (about 2.2 million people) did not have enough money for food for themselves or their families, at some point in the last year. This was compared to 17% of non-LGBT adults.<sup>28</sup>
- Nationally, more than 25% LGBT adults aged 18-44 participated in SNAP, compared to 20% of non-LGBT adults in the same age group.<sup>26</sup>
- Nationally, food insecurity is disproportionately higher for racial and ethnic minorities within the LGBT community and is also higher for LGBT women in comparison to LGBT men. (42% of LGBT African Americans and 33% of LGBT Latinos were food insecure in the past year, in contrast to 28% of straight African Americans and 24% of straight Latinos. Among LGBT adults, 31% women went food insecure in the past year, relative to 22% of men).<sup>26</sup>

Regarding a more in-depth view provided by the Williams Institute on the LGBT socioeconomic indicators in Texas, the LGBT community within the state, Texas is comprised of approximately 858,000 identified LGBT adults, or 4.1% of adults who self-identify as LGBT. 40% are identified as White/Non-Latino, with more than half of identified LGBT adults in Texas being people of color, including 11% Black/African American, 39% Latino, 2% Asian Pacific Islander, 1% American Indian or Alaska Native, and 6% identifying as Other.<sup>29</sup>

Overall, food insecurity is driven by economic factors and disproportionately impacts communities of color, children and members of the LGBTQ community. Food insecurity is exacerbated when access to grocery stores is made more difficult due to lack of transportation. Even if grocery stores are

**Figure 10: LGBT Socioeconomic Indicators in Texas**



Source: The Williams Institute: LGBT Socioeconomic indicators in Texas.

within a walkable distance, the affordability factor comes into play when households are experiencing poverty.

### Low Crime & Low Violence

The American Public Health Association (APHA) has deemed violence a public health issue and the prevention of violence is an important component of achieving equity in health and in communities. Violence can be classified as community or peer violence, suicide, intimate partner violence, bullying, workplace violence, elder abuse, child abuse, sexual abuse and trafficking, among others. The following excerpt from the APHA brief *Violence is a Public Health Issue: Public Health is Essential to Understanding and Treating Violence in the U.S.* demonstrates the link between violence and health outcomes:

“Every day in our nation, an average of 39 people are killed and 117 die by suicide; 180 more are shot and wounded, 27,400 are hurt by a partner or significant other, and 8,640 children are abused or neglected at the hands of someone they trust. In the United States, homicide is the third-leading cause of death among those 1 to 45 years of age, resulting in a loss of approximately half a million years of life before the age of 65 years. Violence affects all of us, with some groups impacted much more than others. For example, the homicide rate among Black male youths between 10 and 25 years old is nearly 20 times higher than the rate among White male youths.

Beyond direct injury, exposure to violence increases the risk of other medical illnesses, including asthma, hypertension, cancer, and stroke. Violence also contributes to psychiatric illness, including depression and post-traumatic stress disorder. In addition, those who are exposed to violence are more likely to sleep poorly, to smoke, and to become socially isolated, all added risk factors for early death. Negative health outcomes are also seen in statistics related to HIV, maternal health, and adoption of unhealthy behaviors such as alcohol and substance abuse.<sup>30</sup>

Healthy People 2020's crime and violence report indicates “violence can lead to premature death or cause nonfatal injuries. People who survive violent crime endure physical pain and suffering and may also experience mental distress and reduced quality of life.” Repeated exposure to crime and violence may also be linked to an increase in negative health outcomes which Healthy People goes on to cite a study from a 2016 report “Inequality and crime revisited: Effects of local inequality and economic segregation on crime” that found people who perceive their environment to be less safe from crime may also have higher body mass index scores and higher levels of obesity due to reduced physical activity.<sup>31</sup>

The 2019 Houston Methodist Community Health Needs Assessment uncovered the respondents who identified as Black/African American and Latino indicated that violence and a safe neighborhood were the number one element most

negatively impacting their communities at a rate of 54% and 49%, respectively, compared to the White/Non-Latino respondents (31%). Considering the two listed racial and ethnic minorities are the groups more likely than White/Non-Latinos to live in impoverished neighborhoods, which tend to have a higher violence and crime rate than other communities, it highlights the strong role addressing the social determinant could be playing on health outcomes.

### The Disproportionate Impact of Violence and Crime

The Prevention Institute articulates the disproportionate impact crime and violence have on neighborhoods and how poverty and lack of employment opportunities can foster violence and crime in communities. People who reside in low-income communities are more likely to be incarcerated for crimes, which then can limit employment opportunities, further perpetuating the negative cycle. It is worth noting, the impact of incarceration does not weigh as heavily on members of the White/Non-Latino community in terms of employment opportunities. Per the Prevention Institute on Violence and Health Equity, employers are more likely to hire a White/Non-Latino person with a felony conviction than a Black/African American with no felony convictions, even when applicants have otherwise comparable credentials.<sup>32</sup> The Prevention Institute further outlines:

The persistent removal of people from community to prison diminishes community members' economic, social, and political standing, and contributes to an increase in recidivism and future criminality. Mass imprisonment damages social networks, distorts social norm, destroys social citizenship, and increases child poverty. In addition, men and women are socialized in a violent prison subculture that can spread into communities upon their release, unless they have adequate support to make this adjustment. People returning to their neighborhoods after years of incarceration need access to adequate services, job training and economic opportunities that reinforce non-violent choices and behaviors.<sup>32i</sup>

Houston Methodist must also take into consideration the current state of the community in terms of the interaction of law enforcement in these neighborhoods that are disproportionately Black/African American and Latino and the role crime and violence can contribute toward poorer mental health. Mental health is a prevalent issue affecting 1 in 5 people in the country and is often the driving force behind many crimes. Per the International Bipolar Association, 25% of people who are shot and killed by police officers suffer from acute mental illness at the time of their death. Taking race into consideration, the National Association on Mental Illness (NAMI) states 1 in 3 Black people who need mental health support do not receive it and are more likely to be killed in a police interaction.<sup>34</sup> There is opportunity for neighborhoods and law enforcement to collaborate on creating an environment of trust and cultural competence, which promotes community engagement and education on mental health, which can help build the community of safety many are seeking.

Poverty, racism, and lack of educational and economic opportunities are among the fundamental determinants of poor health and lack of safety.<sup>35</sup> Mental health can be impacted by those same factors as well, which can exacerbate violence in the home. See additional statistics provided by the Prevention Institute:

- Homicide rates among 10-to-24-year-old Black/African American males (60.7 per 100,000) and Latino males (20.6 per 100,000) exceed that of white males in the same age group (3.5 per 100,000).<sup>32</sup>
- Areas of concentrated poverty that have low housing values and schools with low high-school graduation rates put residents at increased risk of death from homicide.<sup>32</sup>
- Living in poor U.S. neighborhoods puts Black/African American and White/Non-Latino women at increased risk for intimate partner violence compared to women who reside in areas that are not impoverished.<sup>32</sup>
- The higher the percentage of families living below the federal poverty level in a neighborhood, the higher the rate of child maltreatment.<sup>32</sup>

**Local Neighborhoods and Safety Perceptions**

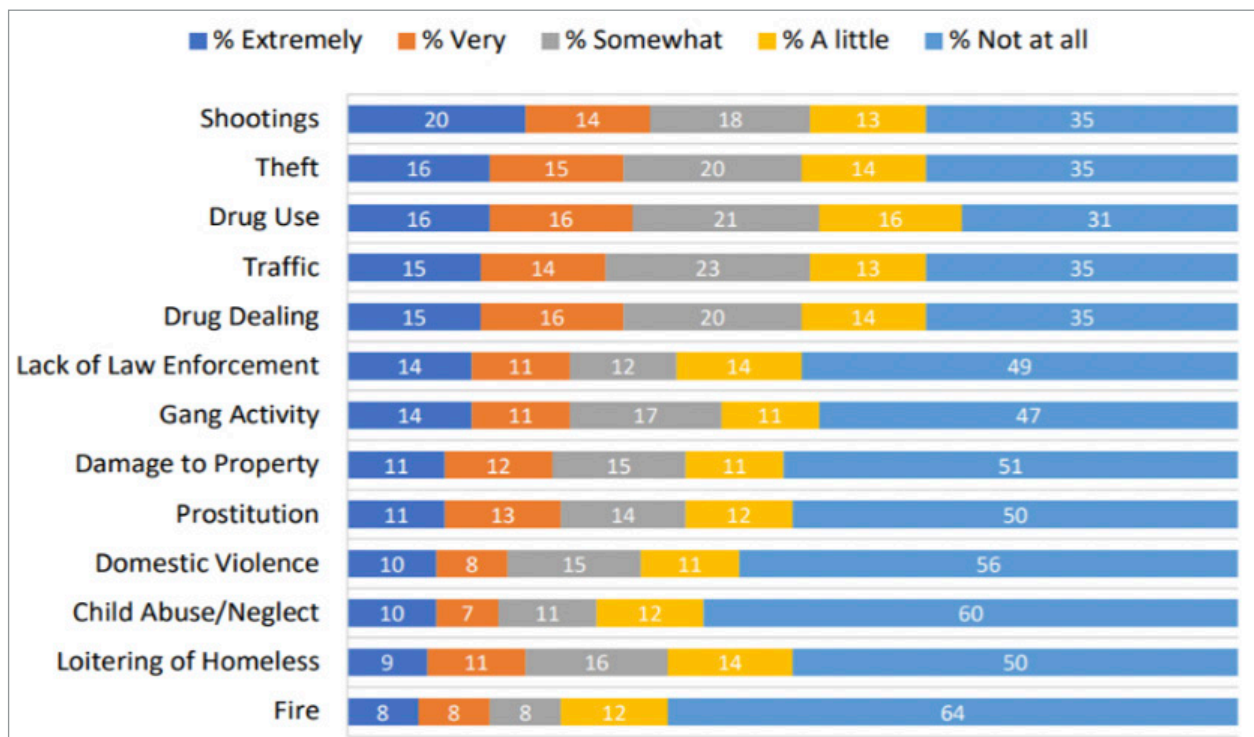
In a study published via a collaboration between Rice University’s Baker Institute for Public Policy, the Houston Area Urban League, the Robert Wood Johnson Foundation’s Interdisciplinary Research Leaders program, and Sunnyside and South Park leaders, a “Sunnyside Strong” survey was conducted in 2019 on the communities of Sunnyside and South Park neighborhoods, both dominant Black/African American communities with historical roots. Sunnyside and South Park are represented by the ZIP codes of 77051 and

77033, respectively. Both ZIPs are identified in the earlier sections as ZIP codes with highest percentage of families living below the FPL. More than a third of the residents surveyed had an annual household income of less than \$20,000. Pulled from the study (see Figure 11):

“Safety and Security Respondents were asked detailed questions about their level of concern regarding safety and security issues, and the survey results are displayed below. Respondents were most concerned about drug use, drug dealing, neighborhood shootings, traffic, and theft. Additional safety and security questions revealed that when walking alone in Sunnyside, residents generally felt safe in the daytime, but less than half of the respondents said the same about walking alone at night. In fact, more than three-quarters of the respondents reported limiting the places they go because they were afraid of crime; 45% only limited places they would go at night, and 31% limited places they would go during the day and night. Not many people reported having personally experienced violence or abuse (12%) or having witnessed a murder or shooting (15%), but most respondents had heard gunfire in the past year (84%) in their neighborhood. Residents of Sunnyside and South Park also reported a low level of trust in the Houston Police Department, with only 34% reporting “a great deal” or “quite a bit” of trust.<sup>36</sup>

Overall, there is opportunity to address elements that feed into communities experiencing higher rates of crime and violence to help build stronger fabrics of trust.

**Figure 11: Sunnyside Strong Survey Community Response on Types of Crime Most Impacting Community**



Source: Sunnyside Strong Survey

## Quality and Affordable Housing

Living within a home that is safe and affordable are both key elements to promote positive physical and mental health. In contrast, poor quality and inadequate housing can contribute to health problems such as chronic diseases and injuries, and can have harmful effects on childhood development. Homes that are not affordable also can exacerbate mental health issues due to the awareness of housing instability. Income level has a direct connection to home affordability, but historical housing practices designed to disadvantage racial and ethnic minorities have contributed to the disproportionate challenges faced in owning and renting in “healthy” neighborhoods, with elements of this disparity being rooted in the historical practice of redlining.

### Overview of Redlining and Its Impact

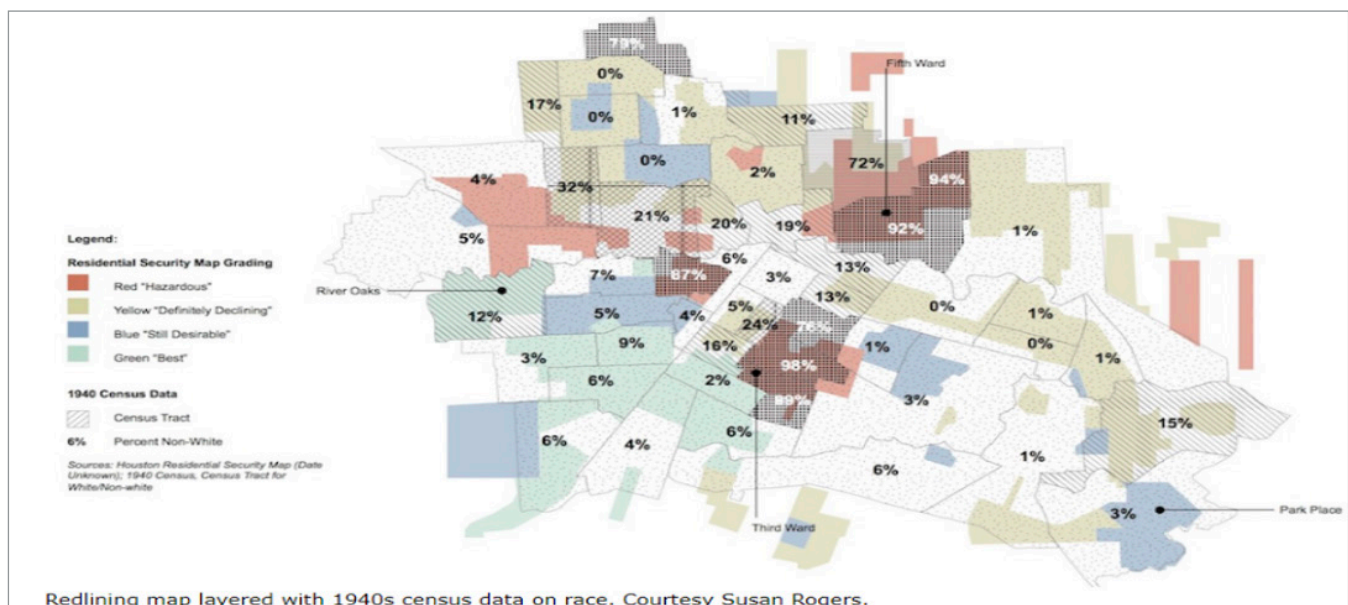
NPR details in “A Forgotten History of How the U.S. Government Segregated America” the process taken to address housing shortages that simultaneously resulted in an increase in housing and segregation of the neighborhoods. The story places emphasis on Richard Rothstein’s book “The Color of Law,” which focuses on housing policies that “mandated segregation,” with Rothstein noting “the Federal Housing Administration, which was established in 1934, furthered the segregation efforts by refusing to insure mortgages in and near African-American neighborhoods — a policy known as **redlining**.”<sup>37</sup> Redlining was a practice of the federal government to color-code maps to identify four tiers for housing loans, which also outlined desirability of land. Colorful lines were used to draw these maps. Neighborhoods coded with a green and blue line were considered the best, often representing an ethnically homogenous community with further development opportunity, or already fully developed. Those coded with a yellow line were starting to decline and showed higher prevalence of people living in the area who were deemed “undesirable.” Neighborhoods coded with a red line were considered hazardous due to a high number of Black/African Americans and other racial and ethnic minority groups, as well as often being close to undesirable locations.

These red-line areas had lower homeownership rates, older and/or lower quality housing and were often located in areas that were prone to lower environmental quality. Also, by having this red designation, neighborhoods were cut off from investments that contribute to neighborhoods/communities being able to thrive. In addition to cutting off neighborhoods from services and access to credit, the practice also depressed land values, making it easy for poorly regulated polluting industries to set up shop or continue to expand in neighborhoods that still are being impacted today. When maps of Texas cities are reviewed, dominant White/Non-Latino neighborhoods were rarely concentrated near industries, while communities of color tended to be situated near heavy polluters such as railroads, oil mills and refineries.

In January of 2020, the Houston Chronicle cited a 2018 study by the Environmental Protection Agency that revealed people of color, and especially people in poverty, were disproportionately exposed to car fumes, construction dust, ash, oil smoke and other air pollutants compared with white residents. The study also found that people of color are exposed to more pollution than they cause.<sup>38</sup> Being exposed to such pollutants have implications on physical health.

The historical practice of redlining helped contribute to the wealth disparities seen today, which feed into the income challenges Black/African American and Latino communities face through limiting racial and ethnic minorities’ ability to build wealth through homeownership, as well as limiting neighborhood choice. Susan Rogers, associate professor and director of the Community Design Resource Center at the University of Houston, reviewed Houston’s redlining map from the 1940s and demonstrated how some of Houston’s currently most underserved communities still fall within the original redlining designations; and the wealthiest neighborhoods, today, were in the green and yellow zones.<sup>39</sup> See Figure 12.

**Figure 12: Redlining Map from 1940s Overlay with Current Neighborhoods**



### Housing Costs

Housing is commonly considered to be “affordable” when a family spends less than 30% of its income to rent or buy a residence.<sup>40</sup> For comparison to the affordability gap, in the Houston State of Health it outlined 54.1% of residents living in the 77081 ZIP code pay 36% of their household income on rent.<sup>41</sup> See Figure 13 to review eight of the ZIP codes identified with the highest percentage of families living below the FPL to see the percentage of their household income going toward rent.

The Robert Wood Johnson Foundation’s (RWJF) article “How Does Housing Affect Health” states “a shortage of affordable housing limits families’ and individuals’ choices about where they live, often relegating lower-income families to substandard housing in unsafe, overcrowded neighborhoods with higher rates of poverty and fewer resources for health promotion.”<sup>36</sup> The lack of affordable housing can make meeting other needs, such as being able to afford health care or food, difficult for families. In the previously stated RWJF article, a study showed that low-income people with difficulty paying rent, mortgage or utility bills were less likely to have a usual source of medical care and more likely to postpone treatment and use the emergency room for treatment. Housing

costs have a major impact on a family’s ability to realize overall well-being and options become limited when income levels do not meet the levels that afford families the ability to make good healthy decisions about health and other basic needs.

The Economic Policy Institute estimates what it costs to live for a family of four in the Houston-The Woodlands-Sugar Land MSA, with two adults and two children, as being \$6,226 a month (\$74,718 annually) with \$1,066 going toward housing and \$718 for food, among other living needs. See Figure 14. The median annual household income of Harris County, located in the MSA, is \$51,140.<sup>43</sup> The Economic Policy Institute provides a Family Budget Calculator designed to measure the income a family needs to attain a modest yet adequate standard of living. The budgets estimate community-specific costs for 10 family types (one or two adults with zero to four children) in all counties and metro areas in the United States. It is designed to provide insight into the measure of economic security in the country.

As of November 2020, the median rent in Houston is \$902 for a one-bedroom apartment and \$1,073 for a two-bedroom, according to the study conducted by Apartment List focused on rental trends across Greater Houston. The study outlines a drop in rental prices despite the pandemic.<sup>44</sup> The median rent identified in the study for Baytown, a major service area for Houston Methodist, is the lowest at \$830 for a one-bedroom and the highest for a one-bedroom is in the Pearland area at \$1,330.<sup>40</sup>

Affordability and availability increase the housing challenges. Per the National Low Income Housing Coalition, in the U.S., for every 100 renter households classified as extremely low-income, just 35 rental units are both available and affordable. Per Habitat for Humanity International, globally, the housing affordability gap, meaning the difference between income available for housing and the market price of a standard housing unit in a region, amounts to nearly \$650 billion per year.<sup>41</sup>

**Figure 13: % of Households Paying 30 Percent or More on Rent**

ZIP Code	% Below FPL	% of Families Paying 30% or More on Rent
77060	37.31	59.6
77081	36.1	54.1
77032	35.27	63.4
77036	34.86	55.6
77026	34.18	55.7
77011	34.14	50.1
77020	33.88	59.9
77039	33.50	67.6

**Figure 14: Economic Policy Institute: Cost of Living by County**

metro area	Harris County, TX	Fort Bend County, TX	Montgomery County, TX	Liberty County, TX
HOUSING	\$1,038	\$1,387	\$1,180	\$873
FOOD	\$711	\$729	\$749	\$668
CHILD CARE	\$1,021	\$1,198	\$1,093	\$937
TRANSPORTATION	\$1,093	\$1,228	\$1,204	\$1,251
HEALTH CARE	\$924	\$964	\$964	\$964
OTHER NECESSITIES	\$706	\$854	\$778	\$622
TAXES	\$592	\$802	\$707	\$548
<b>Monthly Total</b>	<b>\$6,084</b>	<b>\$7,162</b>	<b>\$6,676</b>	<b>\$5,863</b>

Source: Economic Policy Institute – Family Budget Calculator: Houston-Sugar Land- The Woodlands MSA

Even when racial and ethnic minority groups are able to own or rent property, social inequities continue. In 2019, an analysis conducted by University of California at Berkeley researchers reviewing nearly 7 million 30-year mortgages found that Black and Latino applicants were charged higher interest — an average of nearly 0.08% — and heavier refinance fees when compared to White borrowers. That was in face-to-face transactions. When applying online or through an app, minorities still ended up paying more, though terms were slightly better than when borrowing in person.<sup>46</sup>

The difficulty in accessing affordable housing is more likely to lead to people living in unsafe conditions and homes with lower quality and can be worsened when systemic discriminatory practices are added to the equation.

### Housing Quality and Impact on Health

Housing quality refers to the physical condition of a person's home as well as the quality of the social and physical environment in which the home is located.<sup>47</sup> Aspects of housing quality include air quality, home safety, space per individual, and the presence of mold, asbestos, or lead. Housing quality is affected by factors like a home's design and age. Poor-quality housing is associated with various negative health outcomes, including chronic disease and injury and poor mental health. Healthy People 2030 confirms the quality of a home's neighborhood is shaped, in part, by how well individual homes are maintained, and widespread residential deterioration in a neighborhood can negatively affect mental health.<sup>43</sup>

If a person is owning or renting a home, the cost to maintain that home can make the question of affordability even bigger. Beyond the cost of purchasing or renting, the ability to maintain the home can determine the state of it. The general rule of thumb is homeowners should reserve 1% of the cost of the home for maintenance.<sup>48</sup> For renters, their monthly rent often encompasses maintenance costs, but not always. Even when maintenance is part of the rental cost, the maintenance process can be slow due to disengaged landlords. From a Federal Reserve report on the Economic Well-Being of U.S.

Households, roughly one-third of renters who contacted their landlords about repairs reported having moderate or substantial difficulty getting the problems fixed, and close to two-thirds of Black/African American and Latino renters reported having at least a little difficulty.<sup>49</sup> Many people, due to financial limitations, find themselves living in homes that begin to deteriorate due to inability to afford repair which can further contribute to the decline of the home and community, overall.

The Housing Matters Urban Institute Initiative reported on the findings from the Federal Reserve Bank of Philadelphia and PolicyMap, which conducted a nationwide survey on the cost to repair America's housing. The study found that nationally, 35.8% of occupied housing units needed at least one repair in 2017 and repair needs were most common among Native American households (47.7%), single mothers with children (46.8%), households living in manufactured housing (45.5%), and people living below the federal poverty line (42.9%). Latino, Black/African Americans, and renter households also reported high rates of repair needs (39.9%, 39.6%, and 39.5%, respectively).<sup>50</sup> The most common repair issues included cracks or holes in walls or ceilings (15.2%), roof leaks (14%), cracked or crumbling foundations (11.4%), and signs of roaches at least weekly in the past 12 months (10.2%).<sup>45</sup>

Homes that cannot be maintained can lead to environmentally unsafe conditions that can contribute to health conditions. For example, if a person is unable to afford to repair water damage from a leaking roof or pipes, the moisture in the home can support the growth of mites and mold, which can produce allergens that aggravate asthma and other preexisting chronic respiratory conditions. Housing Matters Urban Institute also outlines that residing in substandard housing is also associated with increased risks of depression and anxiety, and may have a particularly demoralizing impact on children.<sup>51</sup>

Safe and affordable housing can lead to better health outcomes overall and is an area that must be explored to address health equity.

## The Role of Educational Access & Opportunities on Health Equity

Educational attainment plays an important role in health by shaping opportunities, employment and income. Per Healthy People 2030, people with higher levels of education are more likely to be healthier and live longer. A study conducted by the Yale School of Medicine, in collaboration with the University of Alabama-Birmingham, found that levels of education, and not race, are the best predictors of longevity. This study was published in the American Journal of Public Health titled "Education, Race/Ethnicity and Causes of Premature Mortality Among Middle-Aged Adults in 4 US Urban Communities," and followed 5,114 Black/African Americans and White individuals over the course of 30 years. The rates of death among individuals in this group showed racial differences, with

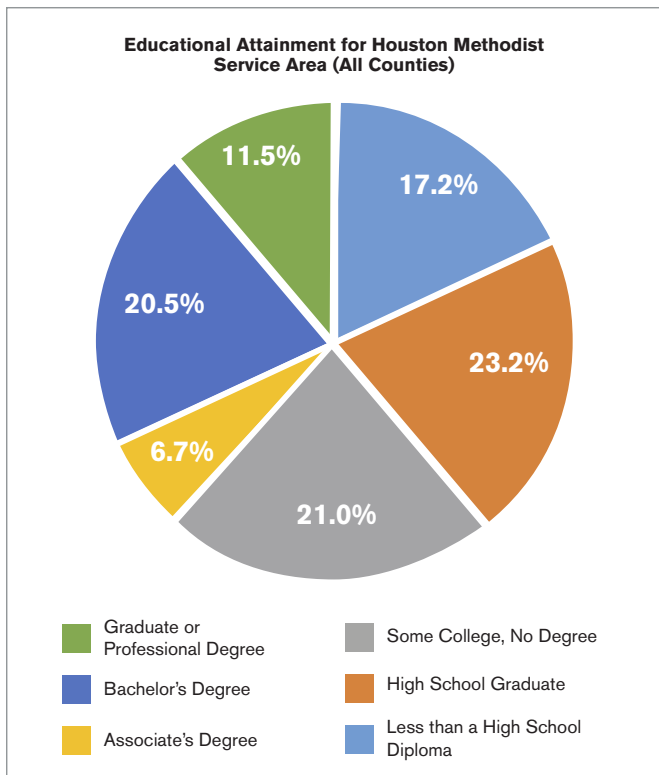
approximately 9% of Blacks dying at an early age compared to 6% of Whites.<sup>52</sup> There were also notable differences in rates of death by education level. Approximately 13% of participants with a high school diploma or less education died compared with only approximately 5% of college graduates.<sup>47</sup> The researchers noted, when looking at race and education at the same time, differences related to race all but disappeared: 13.5% of Black subjects and 13.2% of White subjects with a high school degree or less died during the course of the study. By contrast, 5.9% of Black subjects and 4.3% of Whites with college degrees had died. Overall, the study found that each educational step obtained led to 1.37 fewer years of lost life expectancy.<sup>47</sup> Not being able to graduate high school or go to college lowers the

likelihood for people to obtain high-paying jobs. The ability to obtain higher levels of income impact affordability of health care access and can disrupt people's ability to make healthy living decisions and/or live in healthy communities leading to health problems like heart disease, diabetes, and depression.<sup>49</sup>

The negative results of not being able to attain certain educational levels are driven by educational inequities that include the unequal distribution of resources such as school funding, qualified and experienced teachers, books, and technologies. The unequal distribution of such resources most often impact communities of color and others impacted by poverty and can hinder positive social mobility (the ability to move from one economic class to another).

Per the Houston Methodist CHNA conducted in 2019, educational attainment varies across counties within the Houston Methodist Hospital community. Among community members 25 years of age and older, 60% have pursued education beyond a high school diploma. Per Figure 16, Fort Bend County has the highest percentage of community members who possess a graduate or professional degree (17.1%) compared to the other counties in the community. It is important to note that Fort Bend County also has the highest household income average, which can correlate with educational attainment, and it has the highest life expectancy rate of counties most served. Liberty County has the highest percentage of members who did not receive a high school diploma (22.9%) as well as the lowest household income average and lowest life expectancy rate of the counties served by Houston Methodist.

Figure 15: Educational Attainment



Source: American Community Survey (2013-17)

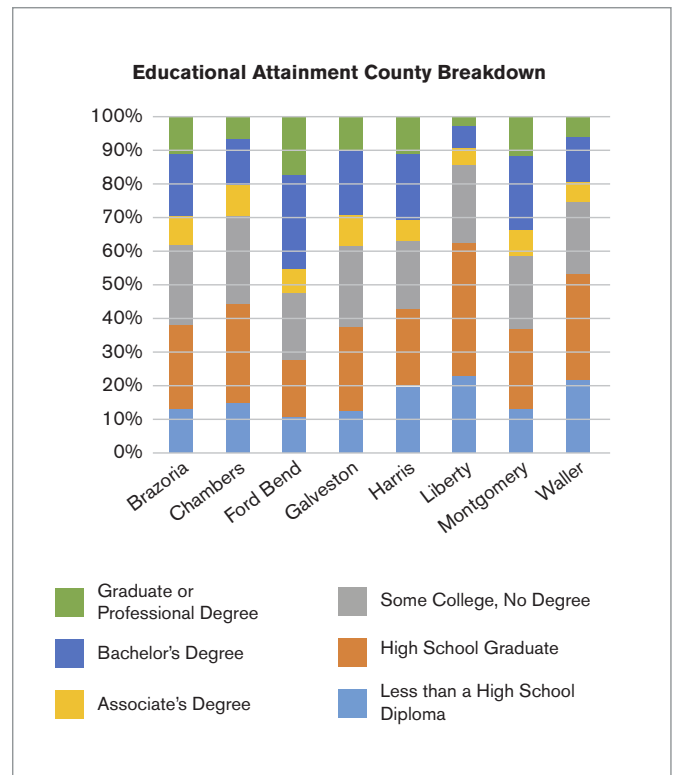
Educational attainment can vary by ZIP codes. Pulled from the Houston State of Health, in Harris County, 19.3% of residents 25 years of age or older have not obtained a high school diploma, which is above the state rate of 17.28%.<sup>53</sup> In comparison, when looking at identified ZIP codes with the highest percentage of families living below the FPL, you can see how income plays into educational attainment. See Figure 17. The ZIP code identified with the highest percentage of families living below the FPL is 77060. See additional examples of how eight of the ZIP codes identified compare when looked at for high school diploma or higher. You will see all are well below the overall county rate:

Figure 17: % of Residents with Less than High diploma

Zip Code	% Below FPL	% of Families Paying 30% or More on Rent	% of Population 25+ years with less than high school diploma
77060	37.31	59.6	45.2
77081	36.1	54.1	34.8
77032	35.27	63.4	33.2
77036	34.86	55.6	37.2
77026	34.18	55.7	36.4
77011	34.14	50.1	52.4
77020	33.88	59.9	43.9
77039	33.50	67.6	51.5

Source: Houston State of Health 2020

Figure 16: Educational Attainment by County



Source: American Community Survey (2013-17)

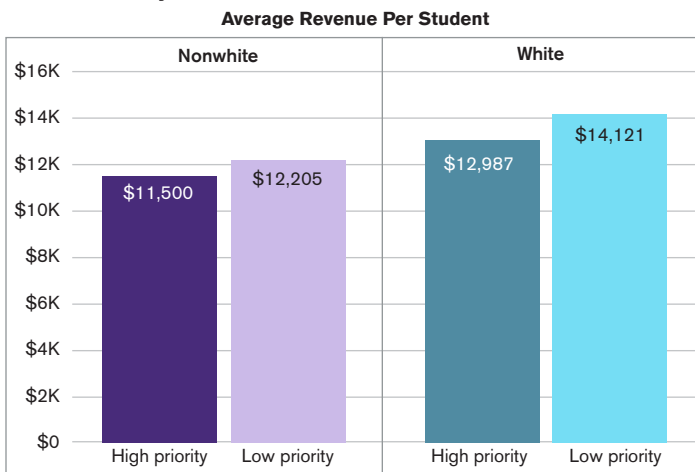
### Unequal Distribution of School Funding

According to Healthy People 2030, children from low-income families, children with disabilities, and children who routinely experience forms of social discrimination — like bullying — are more likely to struggle with math and reading which are all factors that make children less likely to graduate from high school or go to college.<sup>54</sup> However, children's ability to achieve a high-quality education are hindered due to some children living in places with poorly performing schools. These low-performing schools can attribute some of their challenges to lack of resources.

Schools in racial and ethnic minority-dominant communities receive less governmental funding to provide equitable educational resources. Per a 2019 report released by EdBuild, a New Jersey-based research and advocacy group that focuses on school funding, overwhelmingly white school districts received \$23 billion more than predominantly non-White school districts in state and local funding in 2016, despite serving roughly the same number of children.<sup>55</sup> The funding gap is largely the result of the reliance on property taxes as a primary source of funding for schools.

As outlined in the previous section, homeownership is a greater challenge for racial and ethnic minorities, particularly those living in lower income neighborhoods. Communities in overwhelmingly White areas tend to be wealthier, and school districts' ability to raise money depends on the value of local property and the ability of residents to pay higher taxes. Per EdBuild, while state budgets gave heavily non-White districts slightly more money per student than they gave overwhelmingly White districts, in many states it was not enough to erase the local gaps.<sup>56</sup> The chart outlines these disparities in Figure 18. Nationally, students in poor non-White districts receive substantially less money than even their poor White peers. Poor White school districts receive about \$150 less per student than the national average, yet they are still receiving nearly \$1,500 more than poor non-White school districts. Further, per the EdBuild study, in Texas, predominantly non-White school districts in Texas have 7% less funding on average than predominantly White school districts.

**Figure 18: Average Revenue Per Student by Race & Poverty Level Nationally**



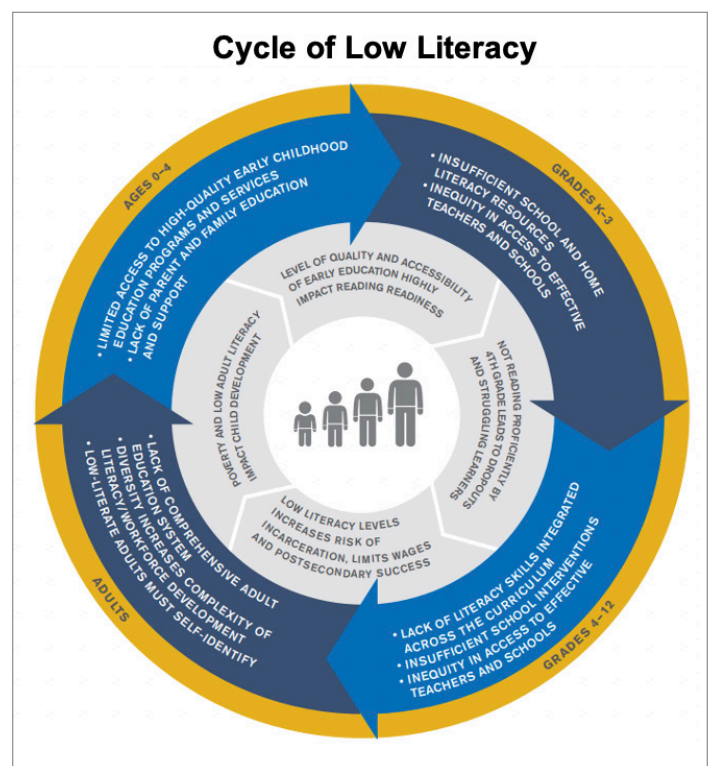
Source: EdBuild 2019

### Literacy

The Barbara Bush Foundation on Literacy defines literacy as the ability to read, write, speak clearly and think critically, and is considered a fundamental skill necessary for success in school, work and life.<sup>56</sup> The Barbara Bush Literacy Foundation is a nonprofit organization in Houston, Texas, focused on promoting the importance of literacy. The agency conducted an assessment in 2014 to uncover the literacy gaps in the city and determined the following key elements on literacy at the time with a key finding being that there is greater opportunity to help children before they enter the third grade:

- 60% of Houston's children did not possess the reading-readiness skills expected upon entering kindergarten.<sup>51</sup>
- 1 in 5 adults in Houston is considered functionally illiterate, unable to manage daily activities and employment tasks that require reading skills beyond a basic level in any language.<sup>51</sup>
- Research has shown that third-grade reading proficiency is not only related to future school success, such as graduation rates and college readiness levels, but is also related to dropout and incarceration rates with 1 in 4 Houston third-graders failing to meet the minimum satisfactory academic performance level on the state reading assessment.<sup>51</sup>
- Third-graders from economically disadvantaged homes scored 19% lower in reading than their non-economically disadvantaged peers.<sup>51</sup>
- Among adults at the lowest level of literacy proficiency nationally, 43% live in poverty. In contrast, among adults with strong literacy skills, only 4% live in poverty. Studies have shown adults with low literacy skills tend to have poorer

**Figure 19: Cycle of Literacy and the Impact by Age**



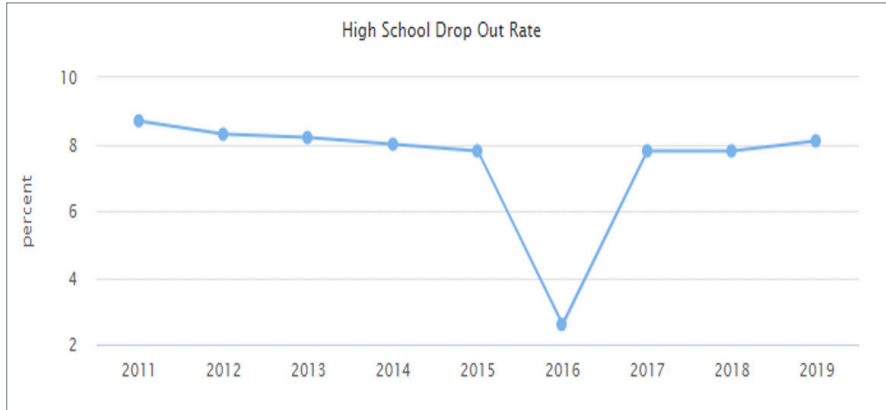
Source: Barbara Bush Literacy Foundation



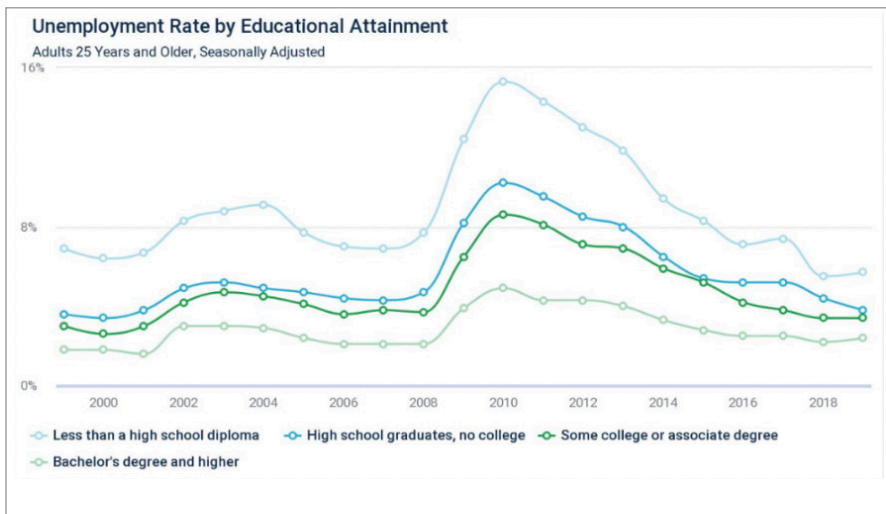
health, limited job opportunities, and difficulty supporting themselves, much less their families.<sup>51</sup>

- Children who live in poverty have heard 30,000,000 fewer words than their affluent peers.<sup>51</sup>

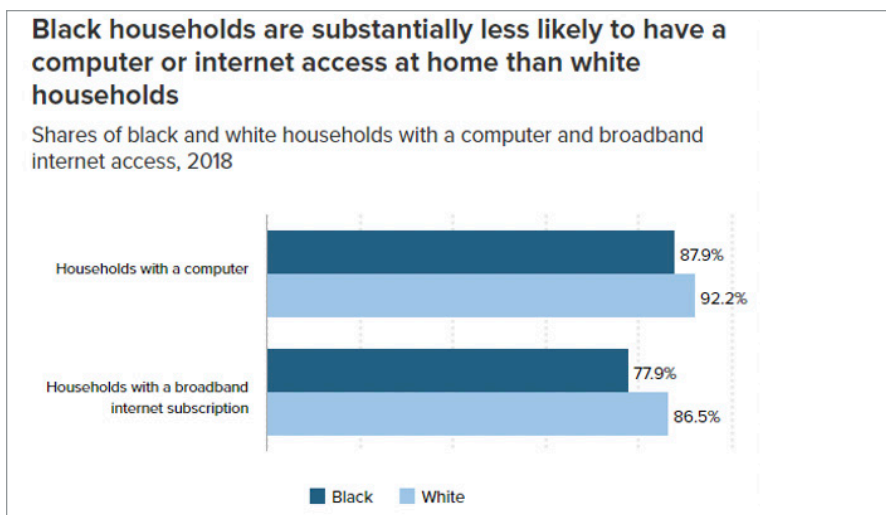
**Figure 20: Harris County High School Drop Out Rates (2011 – 2019)**



**Figure 21: Unemployment Rate by Educational Attainment – Harris County**



**Figure 22: Technology Access Nationally**



**Education Disparities on Life Outcomes Quick Facts**

Education has an impact on all aspects of a person's life. See below for quick statistics on how educational attainment can impact long-term health and economic outcomes:

- The lower the educational attainment level, the higher likelihood of unemployment. For 2019, in Houston, adults 25 years and older who have a high school diploma have an average unemployment rate of 3.8% vs. people with a bachelor's degree or higher at 2.4%.<sup>57</sup> See Figure 20:
- High school dropouts are more likely than people who finish high school to lack the basic skills required to function in an increasingly complicated job market and society. Adults with limited education levels are more likely to be unemployed, on government assistance, or involved in crime. In Harris County, 8.1% of students dropped out of high school in 2019. The overall Texas rate is 1.9%.<sup>53</sup>

**The impact of the Pandemic on education**

The COVID-19 pandemic has deepened already existing educational disparities, with Black/African American and Latino children suffering disproportionately from the shift in format. Per the Kinder Institute's recent survey on the impact the pandemic has had on Houston-area families, it found the shift to virtual learning uncovered about 1 in 10 households with children did not have Wi-Fi or internet access, and more than 2 in 10 families reported not having a device that can be used to do homework.<sup>59</sup> The lack of access to the technology required to participate in remote learning further exacerbates the educational access issues putting already marginalized groups further behind. Black/African Americans were less likely to have access to a computer than their White counterparts; 4% fewer black households than white households have a computer in the home; and 10% fewer have a broadband internet subscription. See Figure 22. This racial disparity in computer and internet access is often referred to as the digital divide.<sup>58</sup>

## The Role of Economic Opportunities on Health Equity

The ability to live in a healthy community is rooted in educational attainment, which can determine job opportunities and, as a result, income levels. The ability to obtain a livable wage can impact a person’s ability to afford health insurance, healthy food, quality housing and more. However, the ability to obtain livable wages can be hampered when people have a history of incarceration, when education is disrupted or limited, and when large numbers of companies only offer job opportunities that do not consider technical skills and certifications. This section will briefly explore the economic disparities that exist that contribute to people’s ability to live in healthy neighborhoods and can be a result of, or exacerbated by, educational disparities. We will also discuss how wages impact health care access and affordability.

### Employment and Communities People Reside Within

The economic challenges have been exacerbated as a result of the economic downturn driven by the COVID-19 pandemic. The pandemic further highlighted the economic disparities that existed in the country. For example, the Urban Institute estimated how many low-income jobs were lost by workers living in each census tract or were at risk when stay-at-home orders were put in place in early 2020. The agency estimated

54,849 jobs were lost in Harris County, 6,054 jobs lost in Montgomery County, 7,565 jobs lost in Fort Bend County, 4,444 jobs lost in Galveston County, 800 jobs lost in Liberty County, 406 jobs lost in Chambers County, and 3,682 jobs lost in Brazoria County.<sup>60</sup> The Urban Institute, in collaboration with the Kinder Institute, estimated at the start of the pandemic, some of Harris County’s hardest-hit areas for COVID-19-related job loss were neighborhoods that already had a high concentration of residents considered to be the working poor.

Just as mortality rates can be tied to the ZIP code in which residents reside, employment levels can provide insight into the economic challenges being faced by a community/ neighborhood. Per the Houston State of Health, the overall unemployment rate in Texas is 5.63% and Harris County is above the state average at 6.31%.<sup>61</sup> See Figure 23 for a snapshot of the state of employment by the previously identified ZIP codes with the highest percentage of families living below the FPL in Harris County:

### How Employment Impacts Access

Tying back into the ZIP codes identified earlier, the average wage by the eight ZIP codes identified as having the greatest percentage of families living below the FPL are below. As a

**Figure 23: Unemployment Rates for 16+ by ZIP code**

ZIP Code	% Below FPL	% of Families Paying 30% or More on Rent	% of Population 25+ years with less than high school diploma	% Unemployment Rate 16+
77060	37.31	59.6	45.2	8.76
77081	36.1	54.1	34.8	3.83
77032	35.27	63.4	33.2	11.4
77036	34.86	55.6	37.2	7.7
77026	34.18	55.7	36.4	10.28
77011	34.14	50.1	52.4	8.19
77020	33.88	59.9	43.9	9.59
77039	33.50	67.6	51.5	5.11

Source: Houston State of Health 2020

**Figure 30: Median Household Income Across Identified ZIP Codes in Harris County**

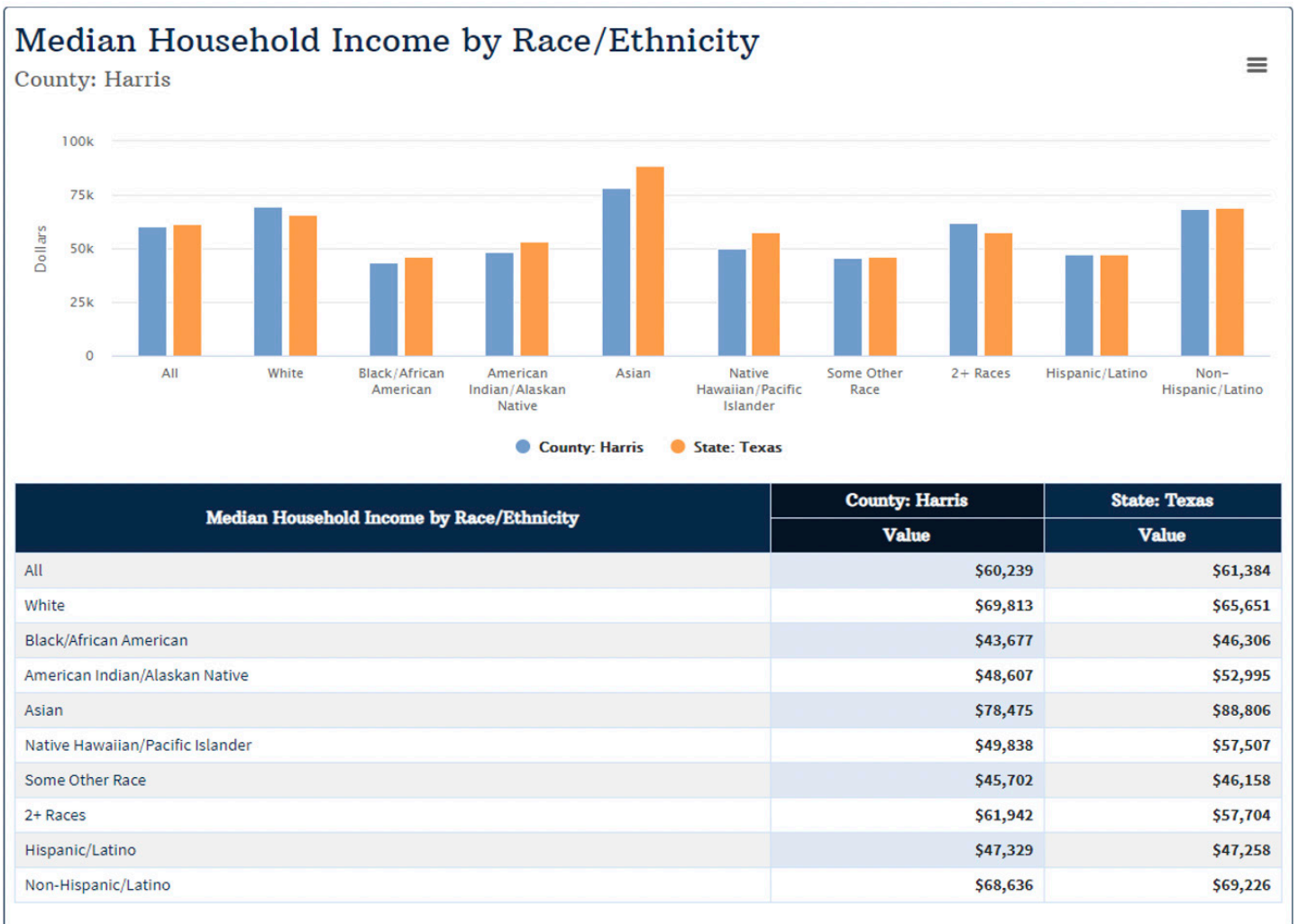
ZIP Code	% Below FPL	% of Families Paying 30% or More on Rent	% of Population 25+ years with less than high school diploma	% Unemployment Rate 16+	Median Household Income (\$)
77060	37.31	59.6	45.2	8.76	\$30,342
77081	36.1	54.1	34.8	3.83	31,196
77032	35.27	63.4	33.2	11.4	31,137
77036	34.86	55.6	37.2	7.7	30,632
77026	34.18	55.7	36.4	10.28	29,393
77011	34.14	50.1	52.4	8.19	30,682
77020	33.88	59.9	43.9	9.59	30,187
77039	33.50	67.6	51.5	5.11	36,347

Source: Houston State of Health 2020

reminder from the State of Health Report, the median household income for Harris County is \$60,239, the average unemployment rate for Harris County is 6.31%. The percent of families living below the FPL in Harris County is 14.2%. This information shows how economic opportunity feeds into other aspects of life. Median household income reflects the relative affluence and prosperity of an area. Areas with higher median household incomes are likely to have more educated residents and lower unemployment rates. Higher employment rates lead to better access to health care and better health outcomes, since many families get their health insurance through their employer. Areas with higher median household incomes also have higher home values and their residents enjoy more disposable income.<sup>5</sup>

For Harris County, the median household varies by race with the Asian population having the highest median household income in the county and state, followed by White/Non-Latino. In comparison, the lowest median household income in the county is represented by the Black/African American population. See Figure 31.

Figure 31: Median Household Income by Race/Ethnicity



### How Economic and Employment Disparities Impact Health Equity

The challenges of securing employment that brings livable wages can decrease access to health care services. Latinos and Black/African American workers and their families are more likely to experience higher poverty, lower incomes, and lower wages than their white non-Latino counterparts. These realities have a significant impact on health outcomes that have been highlighted in the pandemic. Those most susceptible to getting the virus were those in front-line roles but also those with underlying health conditions, which Black/African Americans and Latinos experience at higher rates than other races and ethnicities. In fact, Black/African Americans and Latinos were more likely to die from COVID-19 than any other race in the country.

The mortality rate of COVID-19 varies by race and ethnicity. See Figure 32, which illustrates these statistics provided via the APM Research Lab’s report “COVID-19 Deaths Rates by Race.”<sup>62</sup> According to this report: 1 in 875 Black Americans has died (or 114.3 deaths per 100,000); 1 in 925 Indigenous Americans has died (or 108.3 deaths per 100,000); 1 in 1,275 Latino Americans has died (or 78.5 deaths per 100,000); 1

in 1,325 Pacific Islander Americans has died (or 75.5 deaths per 100,000); 1 in 1,625 White Americans has died (or 61.7 deaths per 100,000); 1 in 2,100 Asian Americans has died (or 47.6 deaths per 100,000).

Per the Houston State of Health, prior to the pandemic, Harris County reports 24.3% of residents not being able to afford to see a doctor but the disparities arise when viewed by race and gender. Black/African Americans (28.7%) and Latinos (33%) were more likely to report the inability to afford to see a doctor in comparison to White/Non-Latinos (9%). Women (29.21%) were less likely to afford to see a doctor than men (19.1%). Adults (18-64) with health insurance in Harris County were 72.5% overall (27.5% without), with White/Non-Latino adults more likely to have health insurance at 88.3%, followed by Asians (87%), Black/African Americans (77.8%) and Latinos (56.3).<sup>62</sup>

When viewing health insurance access by census, you can see the areas of Pasadena, Baytown and the city of Houston come in at a lower rate. These areas also have a higher number of ZIP codes within them that host higher percentages of families living below the FPL.

Figure 32: Adults with Health Insurance by Race/Ethnicity

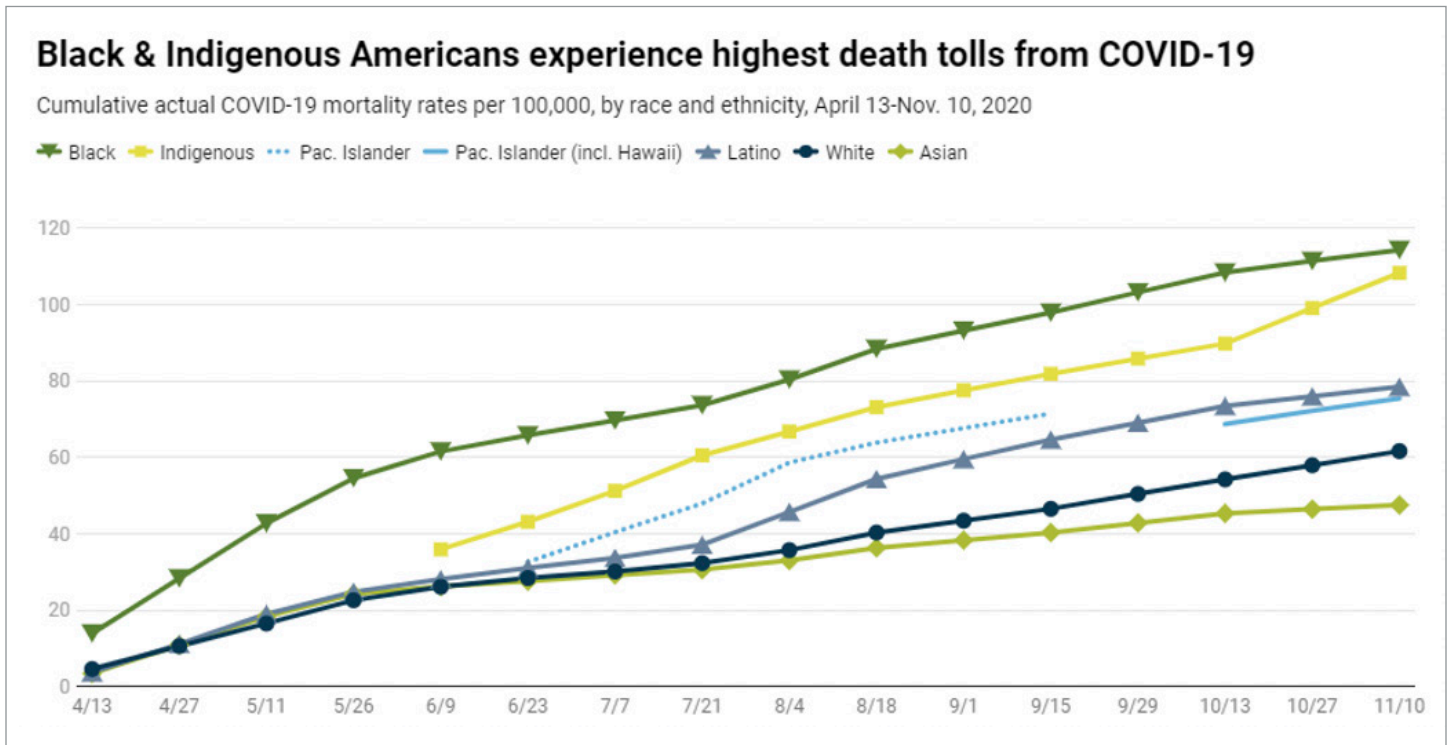
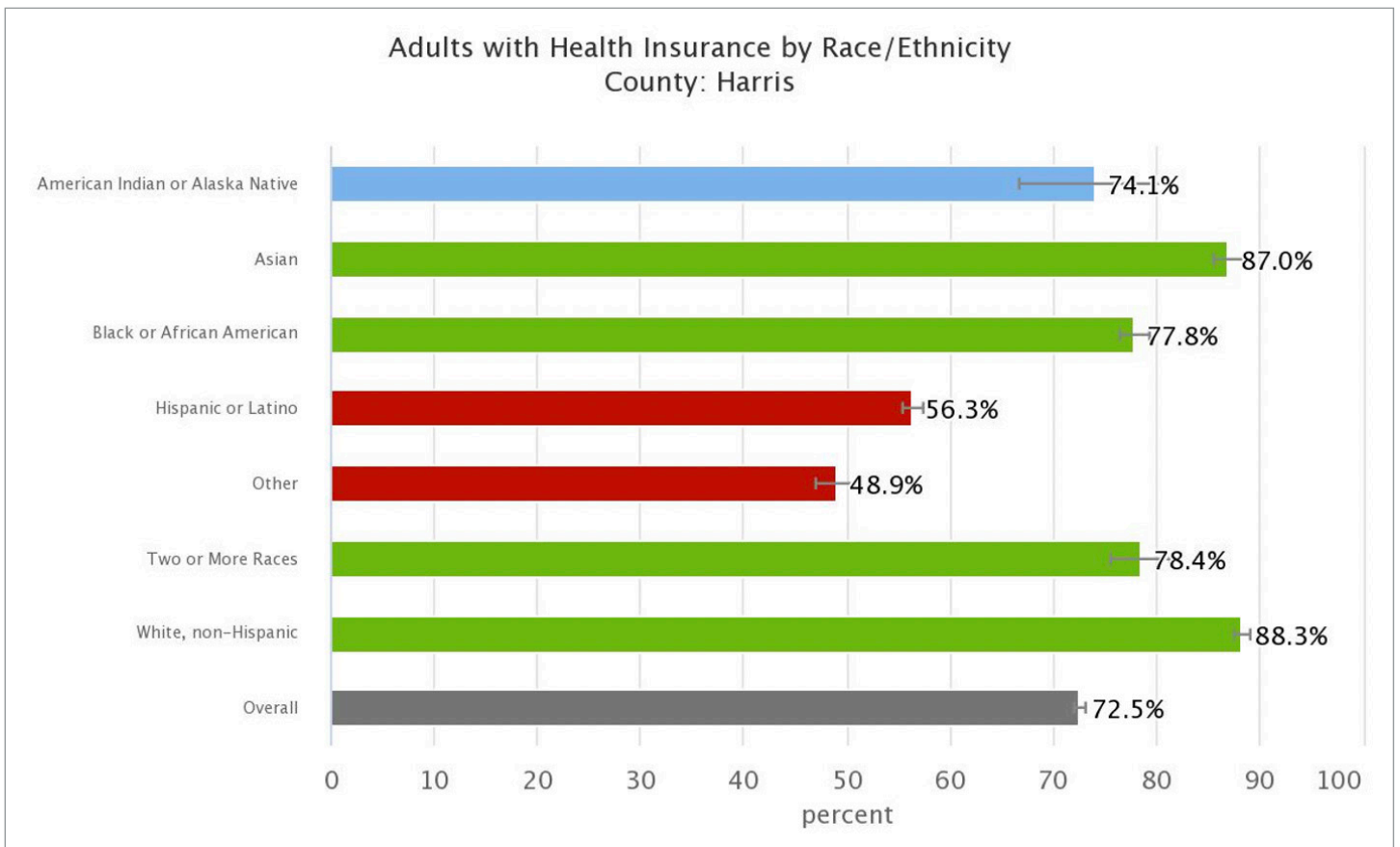
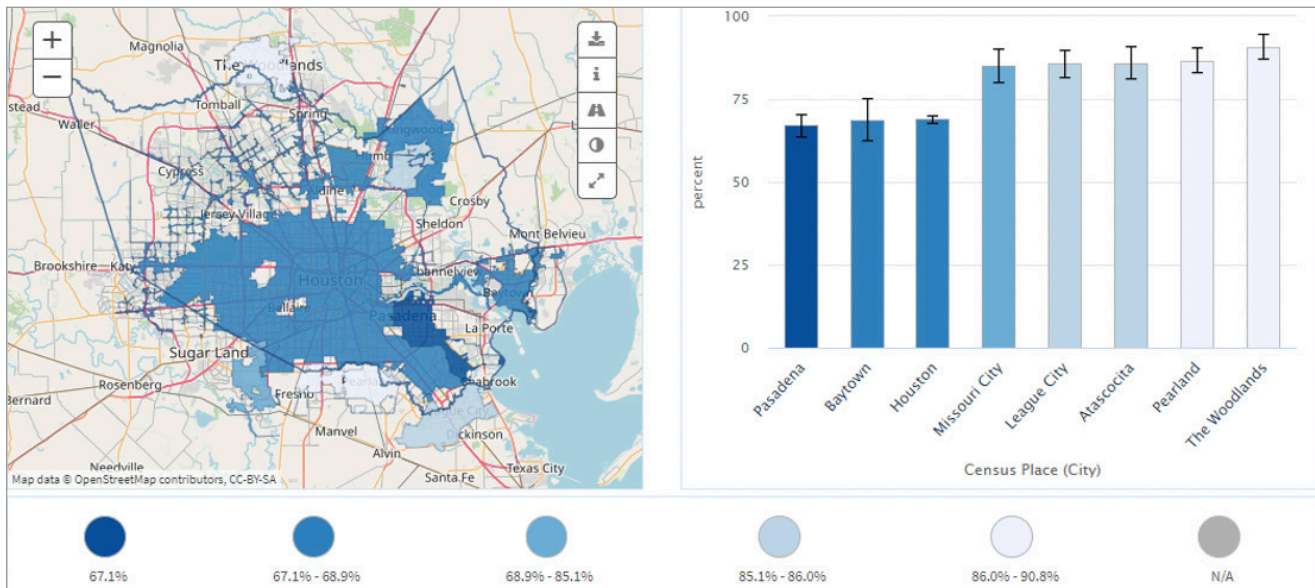


Figure 33: Adults with Health Insurance by Race/Ethnicity



Source: American Community Survey (2018) www.houstonstateofhealth.com

Figure 34: Adults with Health Insurance by Census

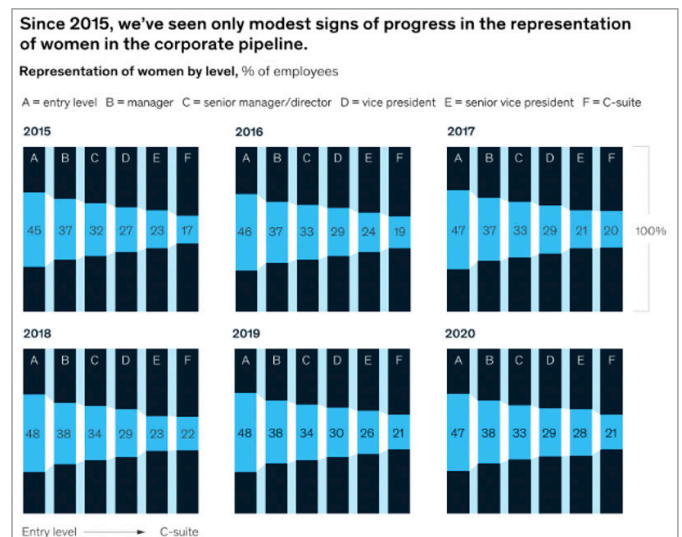


**General Disparities in Economic Opportunities Quick Facts**

Below is a quick snapshot of the disparities that exist in terms of economic opportunity when race, ethnicity, and gender minority statuses are taken into consideration on a national level. The McKinsey report, “Women in the Workplace 2020” provides unique insight as well as recent findings from the Economic Policy Institute covering disparities due to COVID-19:

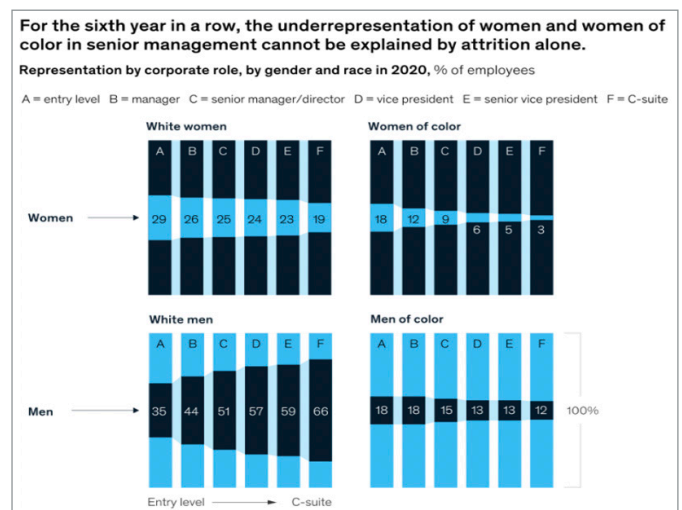
- Women Have Less Job and Earning Opportunities:** Per the McKinsey report, women are less likely to be hired into entry-level jobs than men, even though they currently earn more bachelor’s degrees and have the same attrition rate. As employees move up the corporate ladder, the disparity increases; 79 women are promoted to manager, compared to every 100 men.<sup>64</sup>
- Less Women in C-Suite:** Per the McKinsey report, women have less representation the higher up the ranks they go, with 21% of women being represented at the C-Suite level. This representation shrinks further when race is taken into consideration.<sup>57</sup> See Figures 24 and 25.
- Women of Color Most Impacted Financially by COVID19:** Per the McKinsey report, during the pandemic, women —especially women of color — are more likely to have been laid off or furloughed during the COVID-19 crisis, stalling their careers and jeopardizing their financial security.<sup>57</sup>
- Hiring Practices Limit Black/African Americans:** Employers are more likely to hire a White person regardless of levels of educational attainment.<sup>58</sup> See Figure 27.
- COVID-19 Impacted Communities of Color Economically More:** Per the Economic Policy Institute, Black/African American women experienced higher rates of unemployment, followed by Black men and then White women, but less than Latinos, who experienced the greatest unemployment impact due to COVID-19. Also, Black Americans are more likely than other races to be front-line workers, which could have contributed to the higher rates of COVID-19 deaths.<sup>58</sup> See Figure 26.

Figure 24: Women Representation by Level



Source: Women in the Workplace 2020, Leanin.Org and McKinsey, 2020

Figure 25: Women Representation by Level and Race/Ethnicity



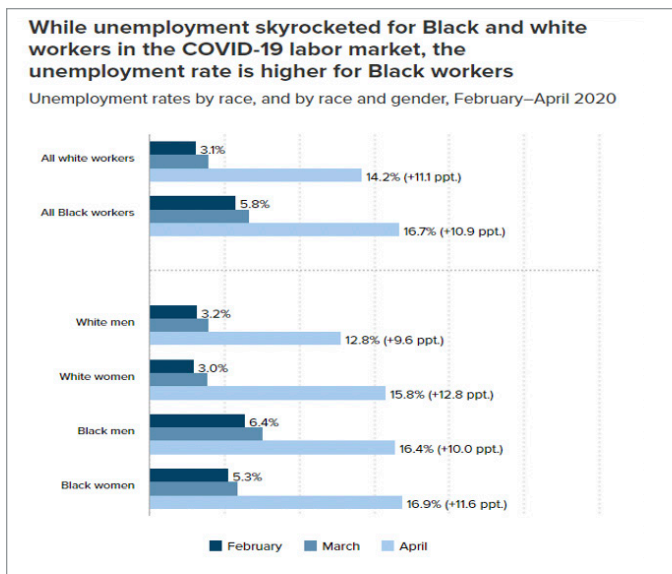
Source: Women in the Workplace 2020, Leanin.Org and McKinsey, 2020

- **Racial Income Gap:** Per the Economic Policy Institute, the difference in median household incomes between White and Black Americans has grown from about \$23,800 in 1970 to roughly \$33,000 in 2018. Median Black household income was 61% of median white household income in 2018.
- **Educational Attainment and Wage Disparities by Race:** Per the Economic Policy Institute, Black/African Americans are more likely to make less money than their White and Latino counterparts regardless of level of education attained. Both Black/African Americans and Latinos make less than the White population regardless of educational attainment.<sup>58, 66</sup> See Figures 28 and 29.
- **Disparities in Employment Opportunity After Incarceration:** Per the Economic Policy Institute, Racial

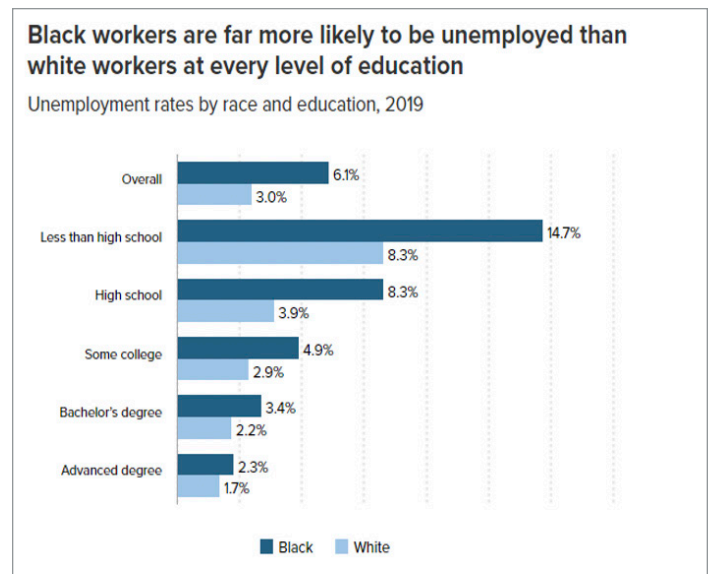
and ethnic minorities are disproportionately incarcerated, which can limit their ability to obtain employment after release, which can further enhance the cycle of poverty. Opportunity after incarceration has a disproportionate impact on outcomes with employers more likely to hire a white person with a felony conviction than an African American with no felony convictions, even when applicants have otherwise comparable credentials.<sup>67</sup>

The pandemic has made the need for access to health care even greater and the lack of wages and jobs has further limited people's ability to afford to health care. When income is limited, people are forced to prioritize, and many opt to maintain housing and will prioritize food, often leaving health care last.

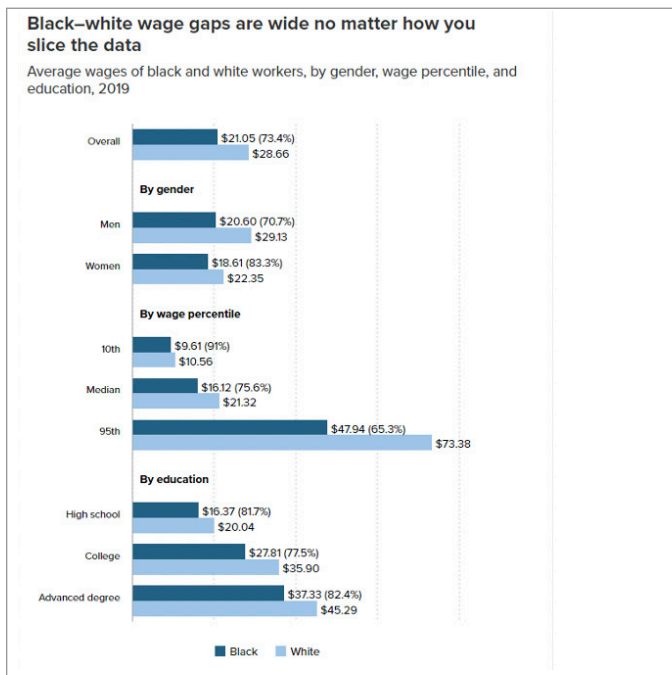
**Figure 26: National Unemployment During Pandemic (Black and White)**



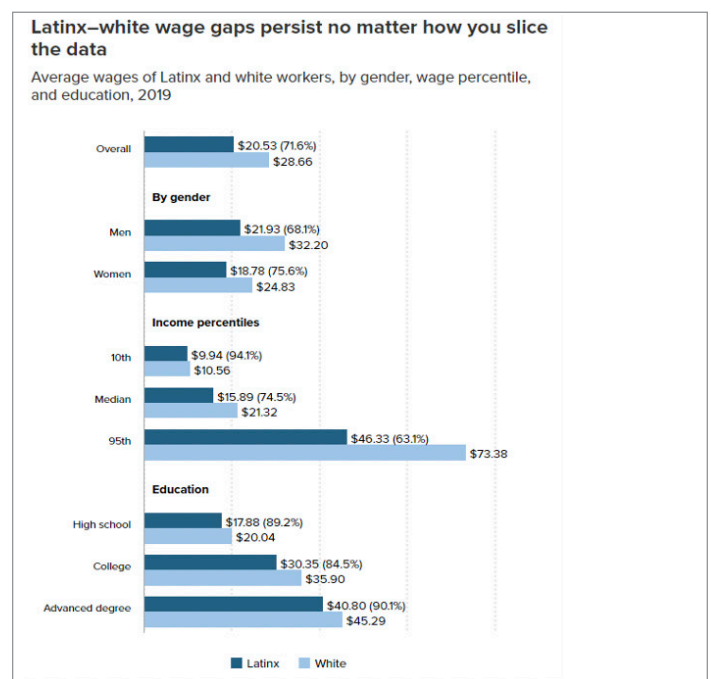
**Figure 27: National Unemployment by Education Level (Black and White)**



**Figure 28: National Wage Gap (Black and White)**



**Figure 29: National Wage Gap (Latino and White)**



## Summary: The Role Social Determinants of Health Play in Well-Being

The social determinants of health described play a role in the health outcomes of a community. For many, lack of access to quality education can be considered the catalyst for the degradation of a person's ability to earn livable wages which better position a person to live in an overall healthy community or neighborhood. There is no one solution to addressing the disparities described but there are elements that local agencies can take into consideration as they work to develop their community plans to improve the well-being of a society that include, but are not limited to:

- **Social Inclusion:** Social inclusion is vital to helping people feel a part of their community. Many people may feel excluded due to factors associated with the legal system, discriminatory or stigmatizing attitudes, beliefs, or perceptions aimed toward people based on social identity, which may be derived from gender, age, location, occupation, race, ethnicity, religion, citizenship status, disability, sexual orientation and gender identity, among other factors. Exclusion robs individuals of dignity, security, and the opportunity to lead a better life. Unless the root causes of structural exclusion and discrimination are addressed, supporting sustainable inclusive growth and rapid poverty reduction will be challenging.<sup>68</sup> Programs designed to bring traditionally marginalized groups together for a common cause and/or purpose, while empowering them to rise above obstacles, are important to consider when enacting change.
- **Working to Build Healthy Neighborhoods:** The ZIP code in which a person resides can be a determining factor in one's health outcomes. Organizations should be looking at the various elements that contribute to creating healthy communities by addressing the role access to healthy food can play in overall outcomes; the role the lack of greenspace plays in promoting healthy living behaviors; the lack of affordable and quality housing made available to people who may have limited incomes; and more.
- **Supporting Access to Quality Education:** A person's life outcomes can be determined as early as third grade. As a recap, research has shown that third-grade reading proficiency is not only related to future school success, such as graduation rates and college readiness levels, but is also related to dropout and incarceration rates. Organizations should be looking at ways to improve early childhood education to mitigate negative outcomes while also looking at initiatives that help youth course-correct toward graduating high school and possibly progressing to college, which can help improve the likelihood of obtaining jobs later in life with livable wages.
- **Offering Economic Opportunities for Minority Populations:** The challenges of securing employment that brings livable wages can decrease access to health care services. Latinos and Black/African American workers and their families are more likely to experience higher poverty, lower incomes, and lower wages than their White non-Latino counterparts. Also, women are more likely to have difficulty in attaining equitable wages in the workplace. Organizations should be looking at ways to help create more economic opportunity through various ways such as job training, job creation, and other initiatives designed to help bridge the economic gaps discussed in this brief.

## NOTES

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