HOUSTON Methodist
CLEAR LAKE HOSPITAL

Community Health Needs Assessment

2023

Houston Methodist Clear Lake Hospital | Nassau Bay, Texas

TABLE OF CONTENTS

About Houston Methodist **4**

Houston Methodist Clear Lake Hospital Profile **5**

Mission Statement *5*

Hospital Operation Data *5*

Network of Hospitals *6*

Introduction **7**

Checklist for Compliance **8**

Methodology **9**

Overview of Process 13

Defining the Houston Methodist Clear Lake Hospital Community **14**

Population Size *15*

Sex, Gender Identity & Sexual Orientation *16*

Age *17*

Language *18*

Race/Ethnicity *18*

Additional Minority Populations *19*

Household Income *20*

Educational Attainment *21*

Employment Status *22*

Insurance Status *23*

Uninsured *23*

Medicare *24*

Medicaid *25*

Affordable Care Act *26*

Poverty *26*

Homelessness *28*

Most Common Disease States: Houston Methodist Clear Lake Hospital Community **29**

Heart Disease *29*

Cancer *30*

Accidents *31*

Cerebrovascular Disease or Stroke *33*

Alzheimer's Disease *34*

Prioritized Needs of the Houston Methodist Clear Lake Hospital Community **36**

Increase access to primary care services to support prevention and management of chronic conditions *37*

Increase access to specialty care services to support chronic condition management *44*

Promoting healthy living behaviors to reduce chronic disease and substance development *51*

Increase access to mental health care services including treatment for substance use disorder *63*

Social Determinants of Health **86**

Conclusion **94**

Appendix **95**

Houston Methodist Leadership and Acknowledgments **96**

Community Input **97**

Community Resources **98**

References **113**

About Houston Methodist

Houston Methodist is one of the nation's leading hospital systems and academic medical centers. The hospital system consists of eight hospitals: Houston Methodist Hospital, its flagship academic hospital in the Texas Medical Center, six community hospitals and one long-term acute care hospital throughout the Greater Houston metropolitan area. Houston Methodist also includes a research institute; a comprehensive residency program; international patient services; freestanding comprehensive care; emergency care; imaging centers; and outpatient facilities. Houston Methodist employs more than 29,730 people, including 944 specialty care physicians, 184 primary care physicians, and 29 Advanced Practice Providers in over 45 locations.

System Hospital Facilities

- Houston Methodist Baytown Hospital
- Houston Methodist Clear Lake Hospital
- Houston Methodist Continuing Care Hospital
- Houston Methodist Hospital
- Houston Methodist Sugar Land Hospital
- Houston Methodist The Woodlands Hospital
- Houston Methodist West Hospital
- Houston Methodist Willowbrook Hospital

Houston Methodist: 2022	
Year Founded	1919
Hospital Facilities	8
Operating Beds	2,646
Operating Rooms	283
Affiliated Physicians	4,923
Employees	29,730

Mission Statement

To provide high quality, cost-effective health care that delivers the best value to the people we serve in a spiritual environment of caring in association with internationally recognized teaching and research.

Our Beliefs

Houston Methodist, a Christian organization established by the Texas Annual Conference of the United Methodist Church, exists to provide quality health care services. As it fulfills this purpose, Houston Methodist participates in the redeeming activity of God that makes the world a better place for all humankind. This health system is based on the belief that God can heal through the lives, actions and words of persons, regardless of various religious perspectives. Therefore, in all endeavors, Houston Methodist strives to treat everyone as a person of sacred worth and value, created by God.

Our I CARE Values

- **I**ntegrity: We are honest and ethical in all we say and do.
- **C**ompassion: We embrace the whole person and respond to emotional, ethical and spiritual concerns as well as physical needs.
- **A**ccountability: We hold ourselves accountable for our actions.
- **R**espect: We treat every individual as a person of worth, dignity and value.
- **E**xcellence: We strive to be the best at what we do and a model for others to emulate.

HOUSTON Methodist
CLEAR LAKE HOSPITAL

About Houston Methodist Clear Lake Hospital

Houston Methodist Clear Lake Hospital

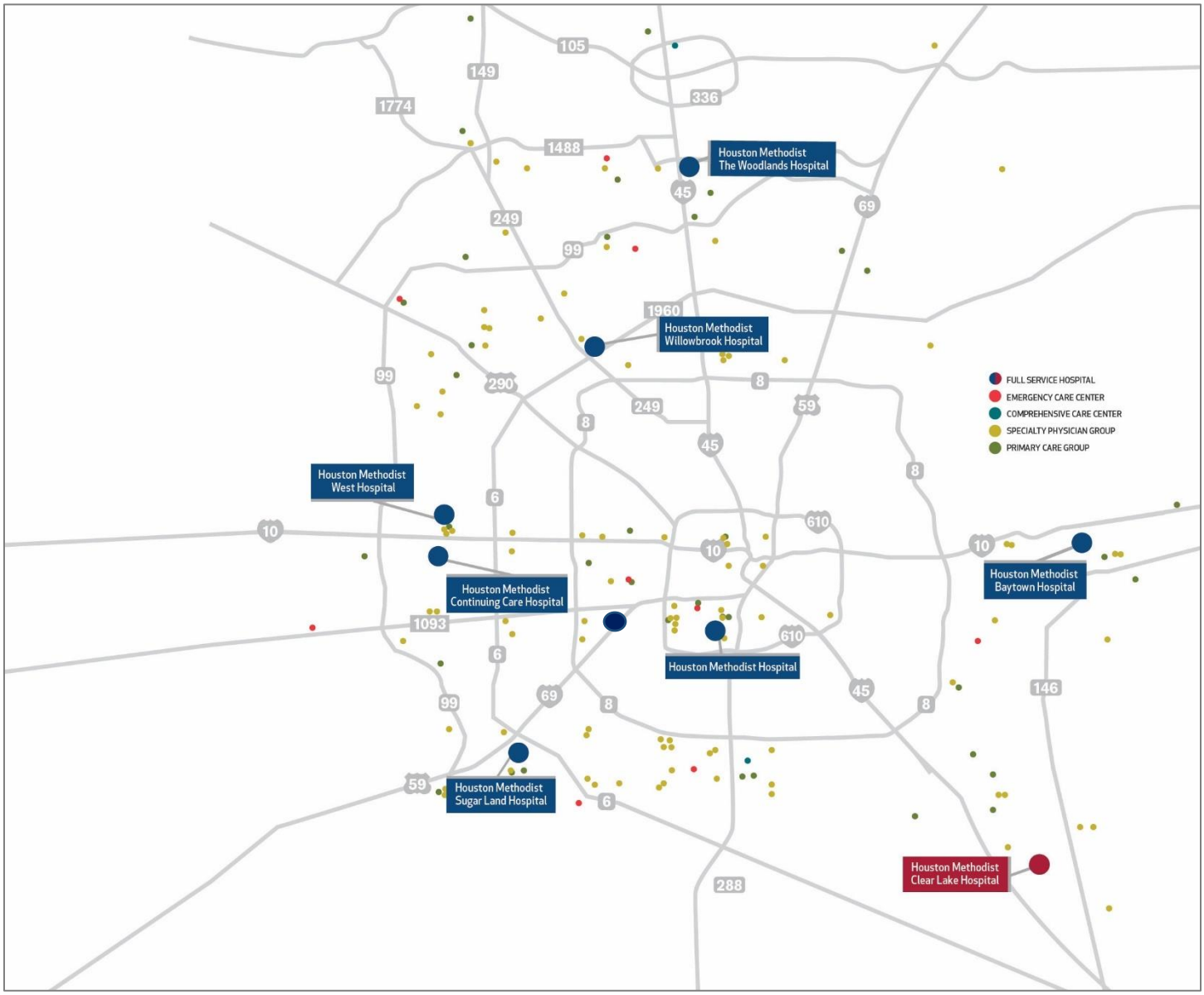
Houston Methodist Clear Lake Hospital brings all the expertise and compassionate care of the world-renowned Houston Methodist Health System to the Bay area. Located in Nassau Bay, across from the NASA Johnson Space Center, Houston Methodist Clear Lake Hospital offers innovative, high-quality, patient-centered care in a welcoming, healing environment.

Houston Methodist Clear Lake Hospital is a well-established leader in multiple service areas including cancer care, stroke care, orthopedic and sports medicine, and women's health, offering innovative treatment for many diseases and conditions including acute stroke and cardiac care. The hospital is an accredited Chest Pain Center by the Society of Cardiovascular Patient Care, and the Houston Methodist Clear Lake Hospital facility is certified Stroke Ready by Det Norske Veritas Healthcare.

Mission Statement
To provide high quality, cost-effective health care that delivers the best value to the people we serve in a spiritual environment of caring in association with internationally recognized teaching and research.

Houston Methodist Clear Lake Hospital	
Operating Beds	128
Operating Rooms	11
Affiliated Physicians	786
Employees	1,100
Admissions	6,693
Outpatient Visits	221,989
Emergency Room Visits	27,301
Births	744

* Data as of December 31, 2022



Houston Methodist Hospital
6565 Fannin St
Houston, TX 77030

Houston Methodist – Continuing Care Hospital
701 S. Fry Rd.
Katy, TX 77450

Houston Methodist West Hospital
18500 Katy Fwy.
Houston, TX 77094

Houston Methodist Baytown Hospital
4401 Garth Rd.
Baytown, TX 77521

Houston Methodist Sugar Land Hospital
16655 Southwest Fwy.
Sugar Land, TX 77479

Houston Methodist Willowbrook Hospital
18220 State Hwy. 249
Houston, TX 77070

Houston Methodist Clear Lake Hospital
18300 Houston Methodist Dr.
Houston, TX 77058

Houston Methodist The Woodlands Hospital
17201 Interstate 45 S.
The Woodlands, TX 77385

Community Health Needs Assessment

In 2010, Congress enacted the Patient Protection and Affordable Care Act that requires nonprofit hospitals to conduct a community health needs assessment (CHNA) and adopt an implementation strategy every three years. In addition, the state of Texas requires nonprofit hospitals to conduct a CHNA annually. In alignment with state and federal regulations, Houston Methodist conducted and completed a CHNA for each of its eight hospitals in relationship to each facility's surrounding communities.

The 2023 CHNA includes input from community leaders and stakeholders, and public health experts regarding perceived social and health care needs in the community. The input was obtained through a series of interviews conducted by the Houston Methodist Office of Community Benefits. The CHNA also includes information and data from a health survey of more than 1,300 individuals from around the Greater Houston community and a quantitative and qualitative analysis of publicly available data on social determinants of health and health outcomes. Through the assessment process, Houston Methodist has defined the following priorities, in ranking order, as:

- Increasing access to primary care services to support prevention and management of chronic conditions
- Increasing access to specialty care services to support chronic condition management
- Promoting healthy living behaviors to reduce chronic condition and substance use development
- Increasing access to mental health care services including treatment for substance use disorders.

This report will focus on the geographic areas primarily served by Houston Methodist Clear Lake hospital, touching on social determinants of health and health topics that can significantly impact the status of a healthy community. The assessment findings will help guide community benefit program planning to improve the health status of the Greater Houston area. The CHNA will also serve as the basis for implementation plan development for 2024.

CHECKLIST FOR COMPLIANCE

To comply with proposed IRS regulations as set forth in IRS Notice 501(r) based on final regulations released on December 29, 2014, a hospital must meet the following requirements with respect to a CHNA written report and implementation strategy. In conducting the CHNA, Houston Methodist Clear Lake Hospital agrees that the following requirements were met and therefore the hospital is in compliance with Affordable Care Act regulations:

- Describe the community served and how it was determined (e.g., geographic area served).
- Describe processes and methods used to conduct the CHNA.
- Describe the sources and dates of the data and other information used in the CHNA.
- Describe analytical methods applied to identify community health needs.
- Identify any information gaps that impact ability to assess the community's health needs.
- List all organizations with which hospital collaborated in conducting CHNA.
- Describe how hospital considered input from parties who represent broad interests of community served, input from person(s) with special knowledge of public health, input from federal, tribal, regional, state or local health departments and agencies, and input from leaders, representatives, or members of medically underserved, low-income, and minority populations in the community served by the hospital.
- Prioritized description of all the community health needs identified through the CHNA and the process/criteria used in prioritizing such needs.
- Describe existing health care facilities and other resources within the community available to meet the community health needs identified through the CHNA.
- Identify names, titles, and/or affiliations of individuals consulted. Those consulted must include individuals with special knowledge of or expertise in public health, representatives, or members of medically underserved, low-income, and minority populations, and populations with chronic disease.
- An evaluation of the impact of any actions that were taken, since the hospital facility finished conducting its immediately preceding CHNA, to address the significant health needs identified in the hospital facility's prior CHNA(s).

METHODOLOGY

Process of Uncovering the Community's Needs and Prioritization

Houston Methodist conducted a CHNA targeting the Greater Houston area and honed-in on the unique needs of the communities surrounding each of its hospitals. This process supported the prioritization of community health needs that each of its hospitals will address. The CHNA process was executed through a series of steps including but not limited to surveying patients and community members living within the Metropolitan Statistical Area (MSA), interviewing public health experts and more. See below for an outline of the phased approach to identifying the most pressing concerns of the surrounding community.

Phase 1: Community Survey – Collecting the Feedback of Greater Houston

- **Developing Survey Questions**: The first step in developing the CHNA required the hospital system to understand what mattered most to the population surrounding its eight hospitals in Greater Houston. To do this, the Office of Community Benefits worked with leaders in public health and conducted secondary research to develop new and refine past survey questions that would help Houston Methodist gain insight into the top social and health priorities of the city. The survey consisted of 41 questions divided under the categories of:

    - Tell Us About Yourself
    - Tell Us About Your Health
    - Tell Us About Your Community and Social Experiences
    - Tell Us How You Feel

- **Distributing the Survey**: After the survey questions were developed, the surveys were distributed electronically and in hard copy form across the Greater Houston community. Hard copy surveys were distributed to 14 unique nonprofit agencies providing health care and social services to diverse populations primarily comprised of the underserved. The 14 unique agencies are outlined below.

    - AccessHealth
    - Christ Clinic
    - Community Assistance Center
    - El Centro de Corazón
    - Healthcare for the Homeless - Houston
    - Hope Clinic
    - Legacy Community Health
    - Lonestar Family Health Center
    - Memorial Assistance Ministries
    - Northwest Assistance Ministries
    - San José Clinic
    - Target Hunger
    - Vecino Health Centers
    - 100 Black Men of Metropolitan Houston

    In addition to the 14 nonprofits, hard copy surveys were distributed at the Houston Methodist Hospital due to the variety of patients and guests who come to the location from more than eight counties and were also distributed at Houston Methodist Baytown Hospital, Houston Methodist Clear Lake Hospital and Houston Methodist Willowbrook Hospital. Electronic surveys were emailed to more than 100 community organizations and posted on social networking sites to capture an uncontrolled group of respondents. Overall, the survey process yielded 1,319 respondents.

- **Target Survey Audience:** The survey was distributed with the purpose of capturing as many members of the community as possible, representing the diversity of Greater Houston. As a result:

    - 71% of respondents identified as belonging to a racial/ethnic minority group
    - 49% had a household income of $35,000 or less.
    - 72% identified as having some form of insurance with 28% being uninsured
    - 31% of respondent identified as being Male vs 66% female

  The feedback from the underserved community and general Greater Houston population served as the basis for interviews with community health leaders.

- **Survey Results Analyzed**: Survey responses were collected between February 24, 2022 and April 22, 2022. Once all responses were collected, Houston Methodist contracted an external market analysis agency to conduct simple analysis of the data to lay the foundation for the assessment. Survey results indicated community members opinions on the elements needed to build a health community. Selected questions can be seen below with the top answers across the respondent group:

Top 5 Answers to the Selected Survey Questions Relevant to Healthy Community

What are the most important factors for a "Healthy Community"?

1. Access to affordable health care
2. Access to healthier food
3. Good jobs/healthy economy
4. Access to mental health services
5. Affordable housing

What are the most important factors negatively impacting your community?

1. Drug abuse
2. Inability to access health care (including mental health care)
3. Lack of affordable housing
4. Violent crimes
5. Drunk driving

What are the primary health conditions negatively impacting your health?

1. High blood pressure
2. Overweight/obesity
3. Diabetes
4. High cholesterol
5. Vision related issues

What are the biggest barriers preventing you and/or your immediate family members from seeking medical treatment?

1. Unable to pay co-pay/too expensive
2. Difficulty in getting appointments when needed
3. Lack of insurance
4. Can't take time off from work
5. Long waits to see the doctor

What are the biggest barriers preventing you and/or your immediate family members from seeking medical treatment?

1. Affordability/too expensive
2. Lack of insurance
3. Difficulty in getting appointments when needed
4. Don't know how to find a mental health provider
5. Fear of what others would think

Phase 2: Community Leaders and Stakeholder Feedback

- **Selection of public health and community leaders with special knowledge, including leaders and representatives of medically underserved, low-income, and minority populations, and local and state health agencies:** Houston Methodist compiled a list of top health and community experts from around the Greater Houston community and state to support the stakeholder interview process. A set of key questions covering relevant health and social topics was developed. Experts and leaders were pulled from a variety of specialty areas, including but not limited to disease specialists, nonprofit leaders, policymakers and more. Those engaged were experts in their field and represented Federally Qualified Health Centers, Free/Charity Clinics, local governmental agencies, hospitals, multiservice agencies, faith-based organizations, higher education and more. Thirty-four subject matter experts and leaders provided input via an online survey and/or personal communication.

- **Selection of members of medically underserved, low income and minority populations:** The Office of Community Benefits received the primary input on the needs of the underserved community through the distribution of a survey within organizations that primarily served low income and/or minority groups to ensure a holistic understanding of needs were obtained.

Phase 3: Methodology to Prioritize

Houston Methodist evaluated the feedback from the 1,319 community survey respondents. The feedback of the community respondents was used as the foundation for developing in-depth survey questions which were posed to local public health leaders with an objective to support the prioritization of community needs. Through this process, and in consideration of the system's scope of service capabilities, the following categories represent the areas identified by the community and public health leaders as being of greatest importance for Houston Methodist to address: primary care access, mental health care access, specialty care access, promoting healthy living behaviors and decreasing incidence and prevalence of substance use disorders.

Public Health Experts: Through the survey results and the community leaders and stakeholder feedback, Houston Methodist identified the top health priorities and presented the four aforementioned health priorities to the Public Health Experts for feedback. The respondents ranked the priorities in order of importance as follows:

1. Increasing access to primary care services to support prevention and management of chronic conditions
2. Increasing access to specialty care services to support chronic condition management
3. Promoting healthy living behaviors to reduce likelihood of developing chronic conditions and substance use disorders
4. Increasing access to mental health care services including treatment for substance use disorders

Several key themes were mentioned by the respondents:

- **Social Determinants of Health.** In addition to access to care, stakeholders encouraged Houston Methodist to consider upstream factors that influence health such as housing, food insecurity, the economy, green space, safety and education. Transportation was commonly mentioned as a priority concern especially as it relates to patients traveling for medical care.

- **Access to Health Care.** Many respondents identified lack of access to health care as one of the top three health concerns for the communities they serve. They noted that although Houston has a substantial and well-respected health care infrastructure, there are residents who face challenges getting medical care. Barriers include lack of insurance, cost, lack of providers and inability to navigate health insurance and/or the health care system.

- **Substance Use.** Substance use disorders were also identified as an important concern in the community, and. like mental illness, one that is not limited to any particular demographic group. Respondents shared that substance use, including drug use and excessive alcohol consumption, are key factors negatively

impacting the community. As with mental health, respondents identified a lack of treatment services as a barrier to addressing this issue.

- **Mental Health.** Mental health was identified as a top concern for the community and one that has been a long-standing health issue. Findings from the community survey indicate that COVID-19 negatively impacted the mental health of community members. At the same time, community members are often unsure of how to access mental health care if needed. Untreated mental illness was linked to lack of access to care, limited services, cost barriers and stigma.

- **Obesity and Related Chronic Disease.** Obesity and related chronic diseases, including diabetes, hypertension and cardiovascular disease, were identified as a top health concern in Houston. Respondents named several factors that contribute to obesity and chronic disease in the community including lack of access to healthy food and opportunities for physical activity, poor lifestyle choices and lack of understanding about the causes and consequences of these health issues. Lower income individuals and children were seen as particularly vulnerable.

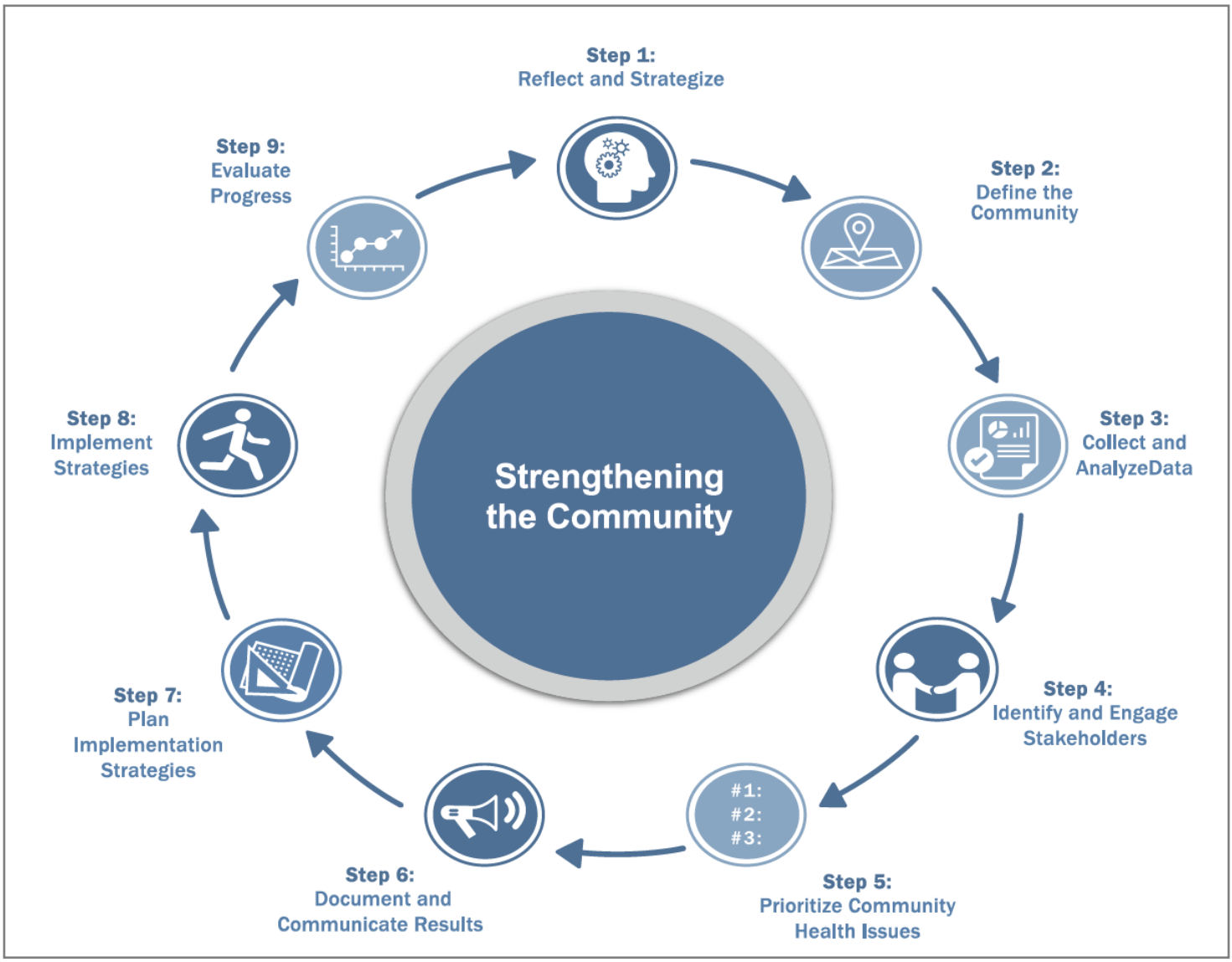
- **Other Health Concerns.** Other concerns identified by respondents, although not as prominent, were oral health, infectious and communicable diseases, asthma and cancer.

Phase 4: Secondary Data Collection

After priorities were selected, the Office of Community Benefits researched valid data sources used to support the identified priorities to supplement information collected from public health experts and community stakeholders. Any potential information gaps were addressed, incorporating national and state data when local county data was unavailable. A variety of sources were utilized including, but not limited to, the United States Census, Texas Department of State Health Services (DSHS), the Centers for Disease Control and Prevention, the World Health Organization, substance abuse and mental health resources and others. For a full list of data sources used in this report, please see the appendix.

Overview of Process

The process chart below details the steps taken by Houston Methodist to complete the CHNA and identify the community health priorities of focus for 2023.



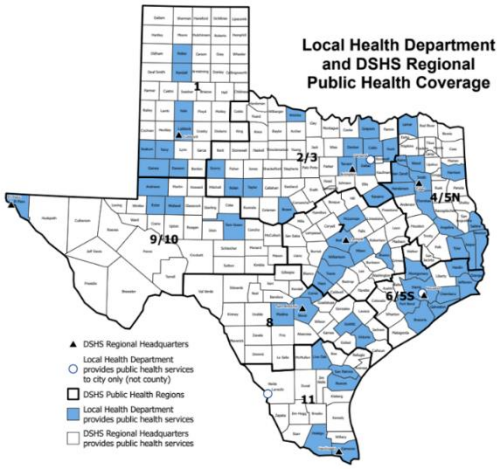
Driving Community Action

DEFINING THE HOUSTON METHODIST CLEAR LAKE HOSPITAL COMMUNITY

Approximately 30 million people live in Texas. Within Texas, the city of Houston is designated as the largest and most populous city in the southern United States and the state, as well as the fourth most populous city in the nation — trailing only New York, Los Angeles, and Chicago.[i] Currently, 24% of Texans reside in the Houston-The Woodlands-Sugar Land metropolitan statistical area (MSA).[ii] This MSA is comprised of the following nine counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery and Waller.[iii]

Additionally, of the 11 health service regions dividing the state, Houston Methodist Clear Lake Hospital serves communities residing in Region 6/5 South. Figure 1 displays the geographic location of the region.[iv]

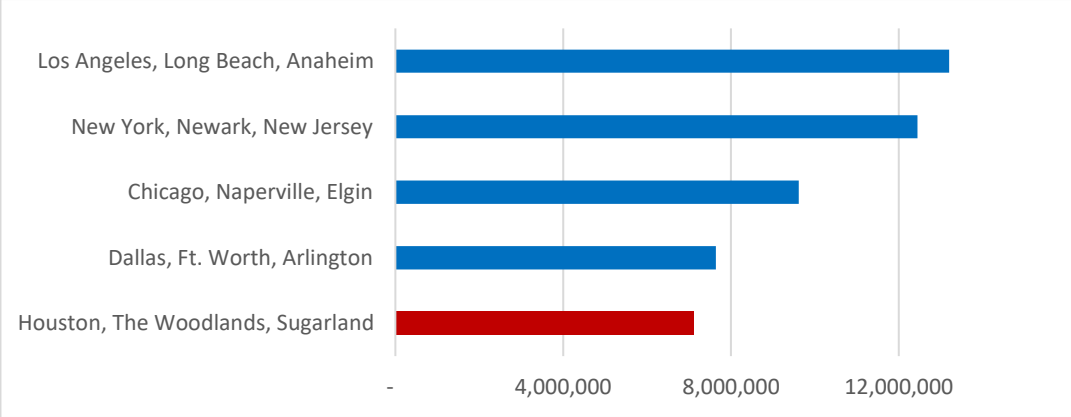
Figure 1. Texas Region 6/5 South Health Service Region



Source: Texas Department of State Health Services (2023)

The Houston-The Woodlands-Sugar Land MSA increased by 20% between 2010-20, equating to an addition of 1,191,000 residents since 2010.[v] This increase in population supports the MSA being ranked fifth largest in comparison to all metro areas in the nation, as seen in figure 2. The Houston-The Woodlands-Sugar Land MSA also ranks second in terms of numeric growth between 2010-19.[vi]

Figure 2. Population of the Largest Metro areas in the United States



Source: U.S. Census Bureau (2020)

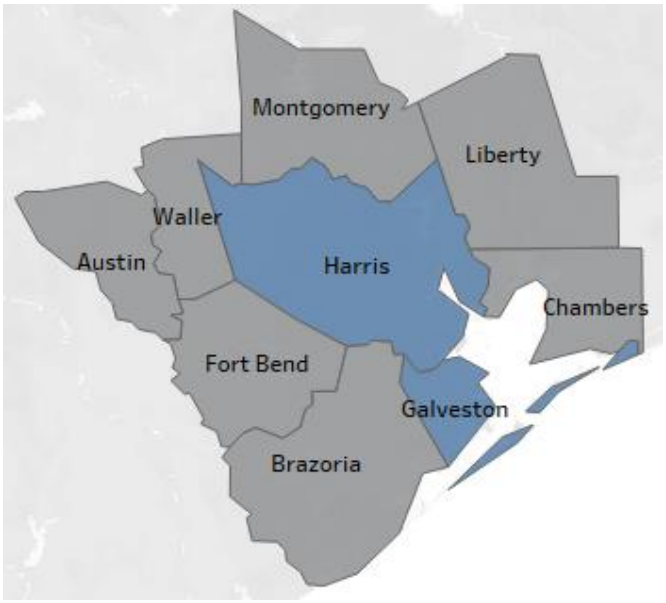
This report will refer to the entire Houston-The Woodlands-Sugar Land MSA as the MSA moving forward. Within the nine counties in the MSA, Houston Methodist Clear Lake Hospital primarily serves Harris and Galveston. Therefore, the focus will be placed on these counties and will refer to the two counties primarily served as the Houston Methodist Clear Lake Hospital community. Figure 3 displays the current geographic footprint of the Houston Methodist Clear Lake Hospital community.

Population Size

The Houston Methodist Clear Lake Hospital community spans 2,086.4 square miles of land and contains an estimated population of 5,138,030 residents. As the largest county in Texas and the county most served by Houston Methodist Clear Lake Hospital, Harris County accounts for an estimated 4.8 million of Houston Methodist Clear Lake Hospital community residents, equating to approximately 93% of the Houston Methodist Clear Lake Hospital community population.[vii] Galveston County accounts for 357,117 of Houston Methodist Clear Lake Hospital community residents, equating to 7% of the community population.[viii]

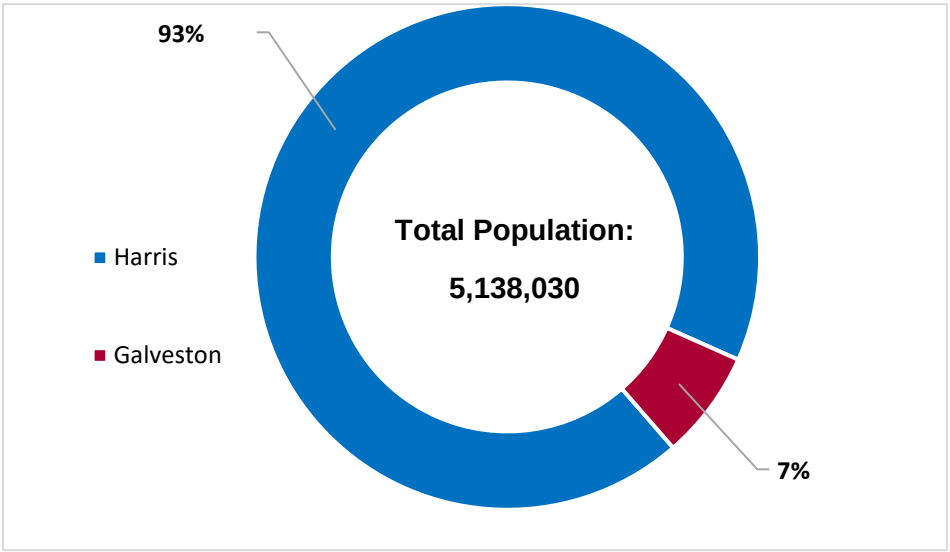
Galveston County experienced the greatest population growth in the Houston Methodist Clear Lake Hospital community between 2017-20, at a rate of 5%. The Houston Methodist Clear Lake Hospital community experienced a 4% population increase overall during this time period.[ix] See Figure 4 for a breakdown of the Houston Methodist Clear Lake Hospital community population by county.[x]

Figure 3. MSA Geographic Footprint



Source: U.S. Census Bureau (2022)

Figure 4. Houston Methodist Clear Lake Hospital Community Population by County

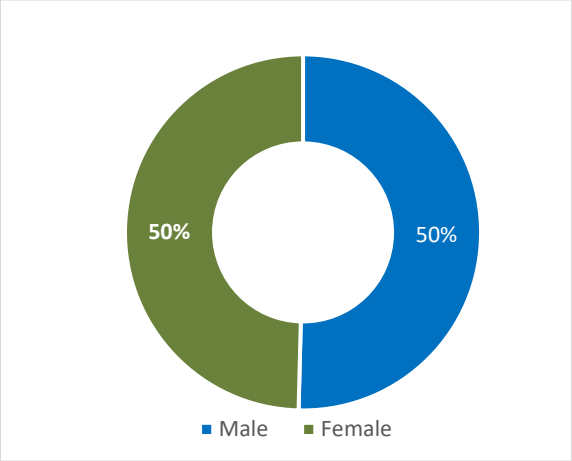


Source: U.S. Census Bureau (2022)

Sex, Gender Identity and Sexual Orientation

The term sex refers to the biological and physiological characteristics that define male and female.[xi] See Figure 5 for a breakdown of the MSA community by sex. The community is approximately equally represented by both sexes.

Figure 5. Houston Methodist Clear Lake Hospital Community by Sex



Source: U.S. Census Bureau (2022)

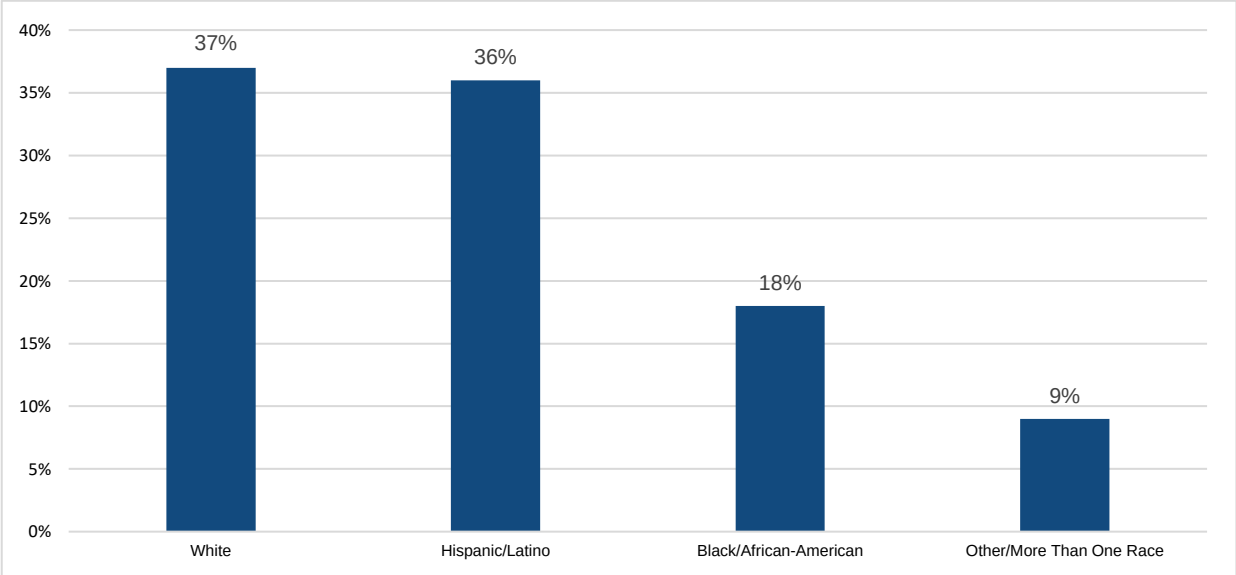
Gender Identity and Sexual Orientation Defined

The term gender identity is defined as one's innermost knowledge of their own gender. Many people identify as a man or a woman, but for others, gender identity does not fit into this gender binary. An individual's gender identity can be the same or different from their sex assigned at birth.[xii]

Sexual orientation is defined as an individual's physical, romantic and/or emotional attraction to another individual. Sexual orientations can include heterosexual (straight), lesbian, homosexual (gay), bisexual, asexual as well as other orientations. Some people may use different labels or none at all.[xiii] Those who do not identify as heterosexual often identify as being part of the Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual (LGBT+) community.

The MSA has 3.5% of the adult population (18+) identifying as LGBT+.* With an MSA adult population of approximately 5.4M, the estimated LGBT+ population for the MSA is 189,000. Of LGBT+ adults in the MSA, 50% identify as male and 50% identify as female. The Race/Ethnicity categorizations of the LGBT+ population in the MSA include 37% White, 36% Hispanic/Latino, 18% Black/African-American, and the remaining as Other/More Than One Race. The average age in the MSA for the LGBT+ identifying population is 37.1 years, while the average age for Non-LGBT+ is 45.3 years. [xiv]

Figure 6. MSA LGBT Population by Race/Ethnicity

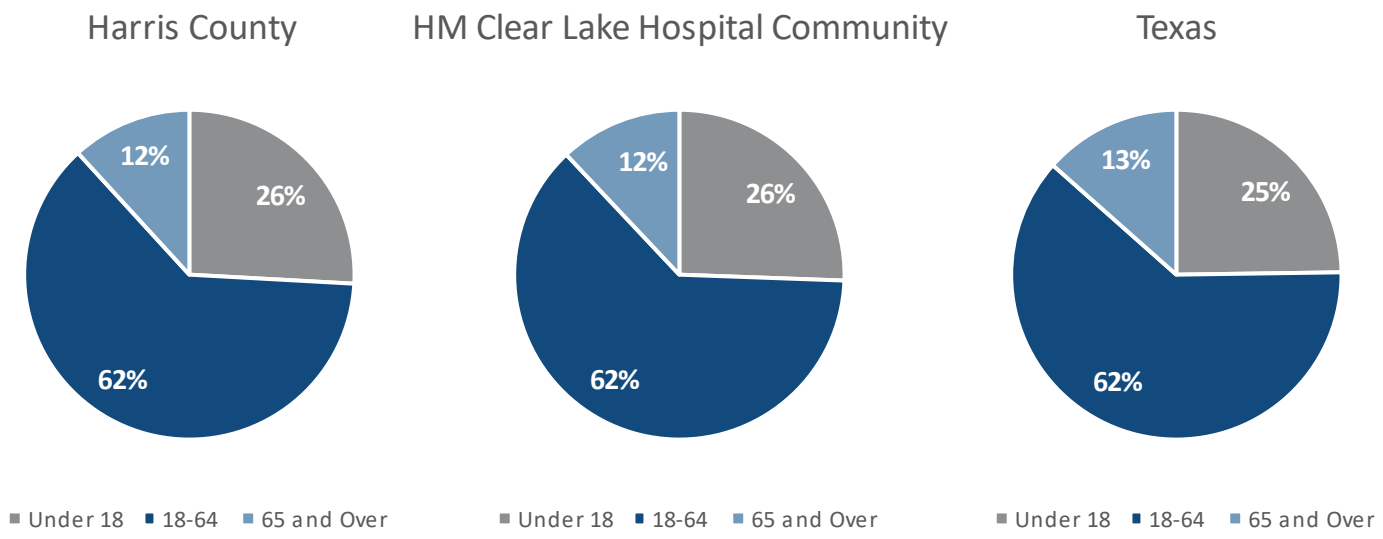


Source: UCLA School of Law Williams Institute (2021)

Age

Three major age groups comprise the Houston Methodist Clear Lake Hospital community: youth and adolescent population (Under 18 years), adult population (18-64 years), and senior population (65 years and over). Figure 7 shows the population distribution by age group across Harris County, the Houston Methodist Clear Lake Hospital community, and Texas.

Figure 7. Age Group Distribution Comparison



Source: U.S. Census Bureau (2022)

Youth and Adolescent Population: Under 18

The youth and adolescent population accounts for the second highest percentage of the Houston Methodist Clear Lake Hospital community (25.6%). This age group accounts for 25.7% of Harris County's population which is the largest county served by Houston Methodist Clear Lake Hospital. Galveston County has the smallest percentage of youth and adolescents at 23.4%. This age group accounts for 24.8% of the Texas population and 21.7% for the United States overall. Generally, there is a low percentage variability between the age groups included in this population among the counties. [xv]

Adult Population: 18-64

The adult population accounts for the highest percentage of the Houston Methodist Clear Lake Hospital community (62.4%). Harris County has an adult population of 62.5%. Galveston County has the smallest percentage of adults at 60.8%. Comparatively, the state of Texas and the United States' percentage of this age demographic is 61.8% and 61.0%, respectively.[xvi]

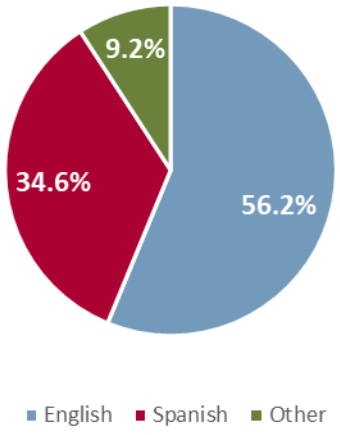
Senior Population: 65 and Over

The senior population currently accounts for 12.0% of the Houston Methodist Clear Lake Hospital community. While it accounts for the lowest percentage of the community, the senior population projects the highest percent growth of any cohort by 2030. In Harris County, the senior population accounts for 11.7% of the population. Galveston County has the greatest percentage of seniors at 15.8%. This age groups accounts for 13.4% of the state population and 16.4% of the United States population.[xvii]

Language

Houston ranks among the top cities in the United States in terms of language diversity. Within the Houston Methodist Clear Lake Hospital community, 43.8% of community members (five years and over) are speakers of a non-English language which ranks higher than the national average of 21.7%. Figure 8 shows the percentages of Houston Methodist Clear Lake Hospital community members who speak a language other than English at home, noting that Spanish is the most common non-English language spoken at 34.6%. The Other category (9.2%) includes Asian and Pacific Island languages such as Vietnamese and Chinese, and Other Indo-European languages such as Hindi-Urdu, French and Portuguese.[xviii, xix]

Figure 8. Houston Methodist Clear Lake Hospital Community Languages Spoken at Home



Source: U.S. Census Bureau (2022)

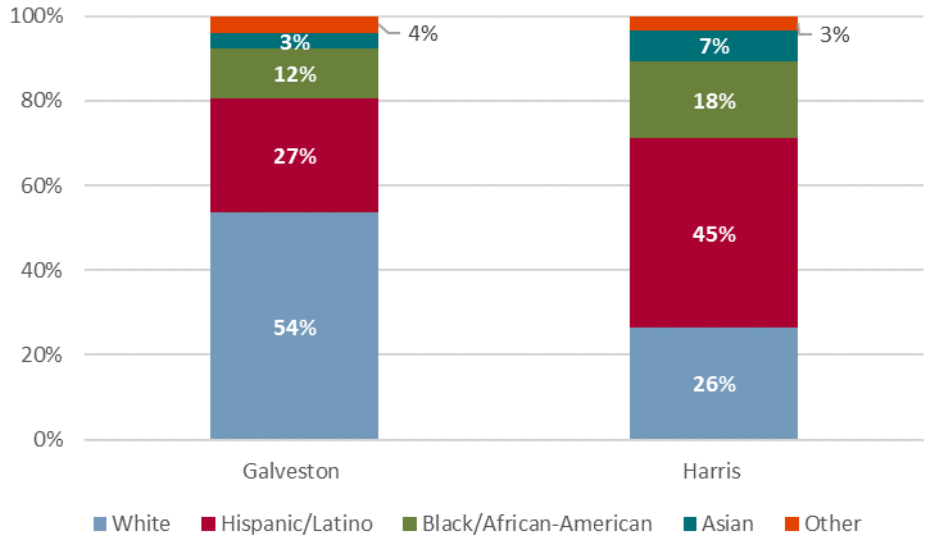
Race/Ethnicity

The Houston Methodist Clear Lake Hospital community is in one of the most ethnically diverse metropolitan regions in the nation, with Harris County maintaining a minority-majority city status due to a 45% Hispanic/Latino population in comparison to 26% White/non-Hispanic population. Within the Houston Methodist Clear Lake Hospital community, Galveston County ranks behind Harris County in terms of racial diversity with a 54% White/non-Hispanic population 27% Hispanic/Latino, 12% Black/African American, 3% Other and 4% Asian.[xx]

Over the last decade, the number of individuals reporting multiple races in the U.S Census has increased significantly. In fact, the Multiracial classification increased more than any other race, increasing from 2.9% of the population in 2010 to 5.2% of the population in 2020, in the United States. While some of the increase can be attributed to true demographic changes over the last decade, U.S. Census Bureau analysts note the observed change to be largely due to improvements within the census itself, including new questions, as well as data processing and coding updates [xxi]. In Texas, 6.9% of the population identified as more than one race, and 6.8% within the MSA population.

For the purposes of this report moving forward, Black includes the population of African-descent/non-Latino; White includes European-descent/non-Latino; Asian includes Asian-descent/non-Latino; the category of other encompasses the ethnic populations, including but not limited to, American Indian/Alaska Native, Native Hawaiian/other Pacific, and mixed race. Please see Figure 9 below for a breakdown of the racial populations by the counties served by Houston Methodist Clear Lake Hospital.

Figure 9. Racial Distribution by County



Sources: U.S. Census Bureau (2022)

Additional Minority Populations

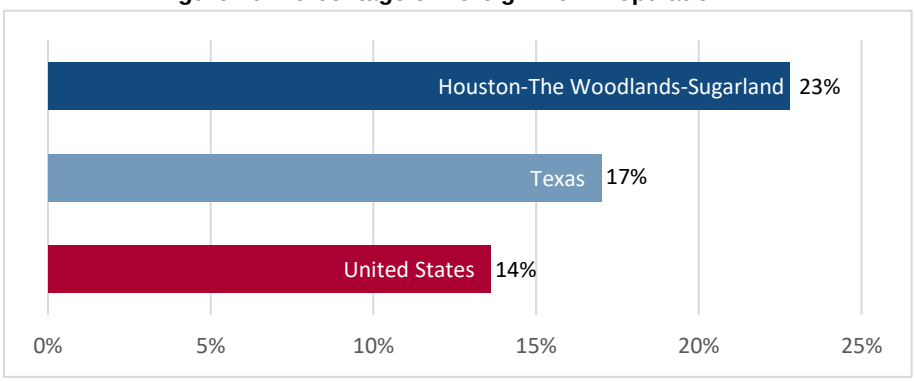
Refugees

According to the United Nations High Commissioner for Refugees (UNHCR), a United Nations agency, a refugee is "someone who has been forced to flee his or her country because of persecution, war or violence" (2022). Most individuals are unable to return to their home countries or cannot return due to a well-founded fear of persecution. The majority (68%) of individuals displaced come from Afghanistan, Myanmar, South Sudan, Syria and Venezuela.[xxii] In the first half of 2021, more than 84 million people were forcibly displaced across the world, including 26.6 million refugees. Since the passage of the Refugee Act in 1980, the United States has admitted more than 3.1 million refugees, with nearly 57,000 settling in Texas.[xxiii] More than 12,800 individuals have been resettled in Texas since October 2021. The majority of the arrivals (86%) were from Afghanistan who resettled through the Afghan Placement Assistance Program. Approximately nine percent were refugees from all over the world through the Reception and Placement Program, and the remaining five percent were Special Immigrant Visa Holders from Iraq and Afghanistan.[xxiv] Houston received half of the resettled individuals (6,500). An estimated 91% of the arrivals were through the Afghan Placement Assistance Program. Five percent were refugees in the Reception and Placement Program, and four percent were Special Immigrant Visa Holders. Approximately one-third of refugees are children.[xxv]

Immigrants

According to the Migration Policy Institute, an immigrant is "a person living in a country other than that of his or her birth". Another often-used term is international migrant.[xxvi] Over 3% (258 million) of the world's population are immigrants and the United States has more immigrants than any other country in the world. Over 45 million people living in the United States were born in another country. In Texas, 17% of the population is foreign born. The number is slightly higher in the Greater Houston

Figure 10. Percentage of Foreign-Born Population



Source: U.S. Census Bureau (2020)

Area with 23% of the population identifying as foreign born (figure 10).[xxvii] There are an estimated 11.7 million undocumented immigrants living in the United States. Of that, 1.6 million are estimated to live in Texas.[xxviii, xxix] Please note that these numbers are difficult to determine, and the estimates are likely higher since the U.S. Department of Homeland Security have not released updated figures in recent years.

Intellectual and Developmental Disabilities

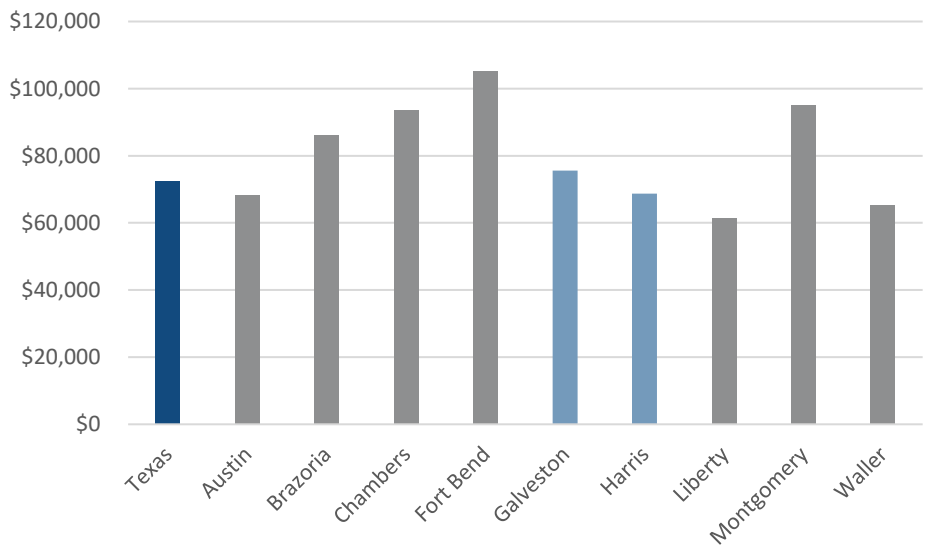
According to the Eunice Kennedy Shriver National Institute of Child Health and Human Development, intellectual and developmental disabilities (IDD) are typically present at birth and affect an individual's physical, intellectual and/or emotional development. These disabilities and/or disorders can affect different body parts or systems which include the nervous system (brain, spinal cord, speech difficulties), sensory system (human senses, interpretation of these senses), metabolism (how the body uses food for energy and growth) and also can be degenerative (seem typical but have disruptions in skills and abilities). An example of some IDD types are Down syndrome, fragile X syndrome and autism spectrum disorders.[xxx]

Approximately 6.5 million people in the United States have an intellectual disability, the most common developmental disability, and more than 500,000 Texans have an IDD[xxxi]. Texas consistently ranks 50th in the nation for promoting independence for people with IDD. Funding for IDD services in Texas is almost 50% less than the national average. Due to gaps in Census data, local statistics are not available, but it is estimated 115,000 individuals in the Greater Houston Area have an IDD.[xxxii]

Household Income

Household income is a measure of the combined incomes of all individuals sharing a place of residence and is a useful indicator of an area's standard of living. Household income is also used to evaluate a person's status in relationship to designated poverty thresholds. Currently, the median household income in Texas is $72,284. Houston Methodist Clear Lake Hospital community serves primarily Harris and Galveston Counties. Harris County has a median income ($68,706) lower than the state's, while Galveston County has a median income ($75,565) higher than both the state and Harris county.[xxxiii] See Figure 11 for median household income.

Figure 11. Median Household Income for MSA Counties

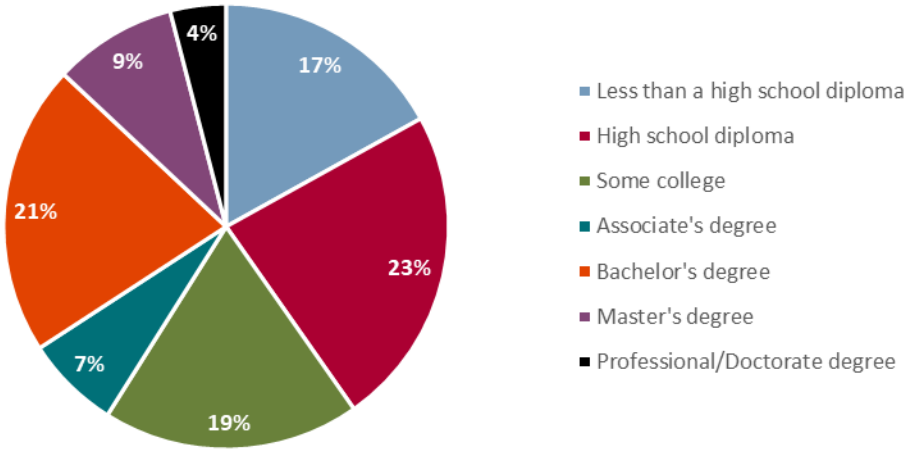


Source: U.S. Census Bureau (2022)

Educational Attainment

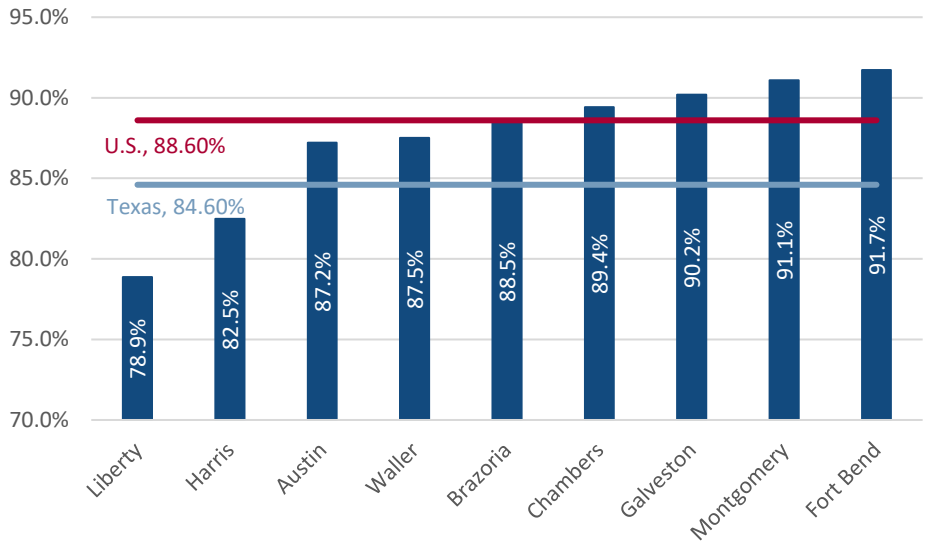
Educational attainment varies across counties within the Houston Methodist Clear Lake Hospital community.[xxxiv] Among community members 25 years of age and older, 83% have received a high school diploma and/or higher education; 7% have received an Associate's degree, and 34% have completed a bachelor's or Graduate/professional degree. Figure 12 shows the breakdown by educational attainment. Educational attainment is also an indicator of one's earning potential throughout their lifetime. Figure 13 shows the percentage of people over the age of 25 with at least a high school diploma for each of the counties in the MSA compared against the average for Texas of 84.6% and the average for the U.S. of 88.6%.[xxxv]

Figure 12. Educational Attainment
Houston Methodist Clear Lake Hospital Community



Source: U.S. Census Bureau (2022)

Figure 13. Educational Attainment
At Least A High School Diploma

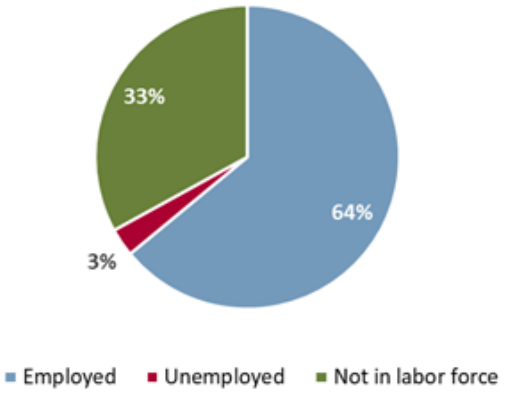


Source: U.S. Census Bureau (2022)

Employment Status

In 2022, over 2.5 million people in the Houston Methodist Clear Lake Hospital community were in the labor force, which is 64% of individuals above the age of 16. Three percent of the population experienced unemployment. Unemployment is defined as individuals who do not have a job, have been actively searching for one in the prior four weeks and are able to work. The remaining 33% is not in the labor force, which consists mainly of students, retired workers, those opting out of labor force, seasonal workers who are not working, institutionalized people, and people doing only incidental unpaid family work. Figure 14 shows the employment status of those who are working or unemployed. [xxxvi]

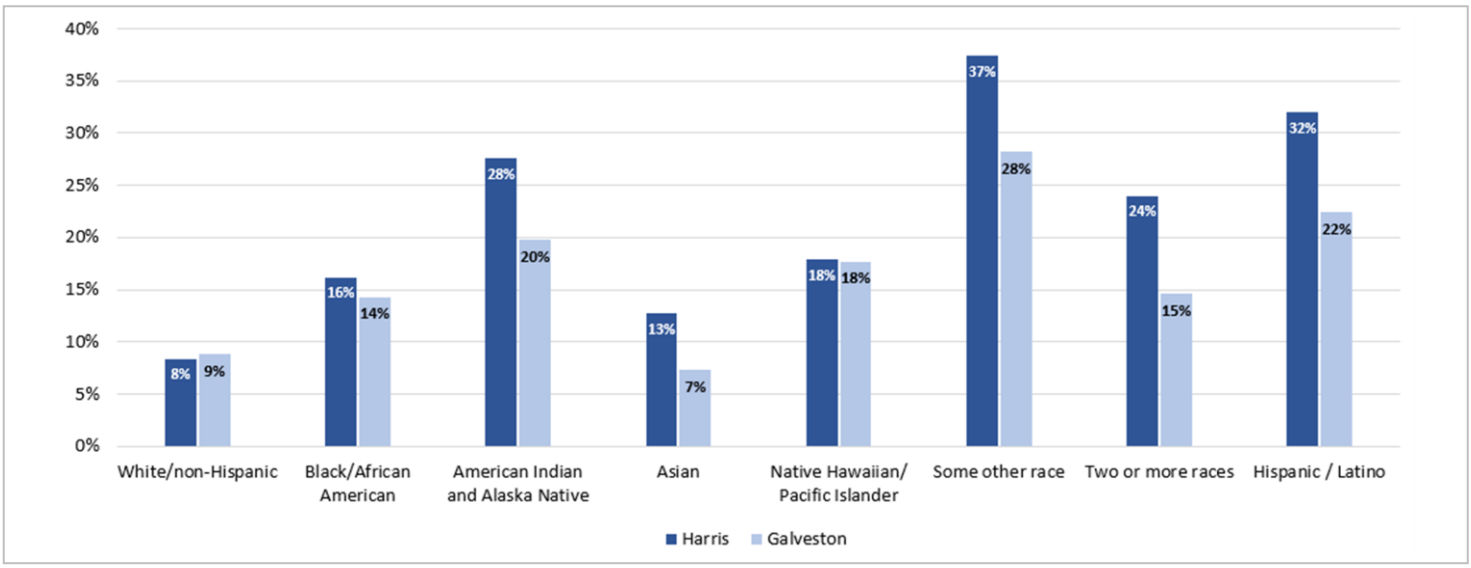
Figure 14. Employment Status
Houston Methodist Clear Lake Hospital Community



Source: U.S. Census Bureau (2022)

The unemployment rate varies by race and ethnicity. Black/African Americans and American Indian/Alaska Native racial groups have the highest unemployment rate in the Houston Methodist Clear Lake Hospital community.[xxxvii] Figure 15 shows the employment status by race and ethnicity.

Figure 15. Employment Status by Race & Ethnicity
Houston Methodist Hospital Clear Lake Hospital community



Source: U.S. Census Bureau (2016-20)

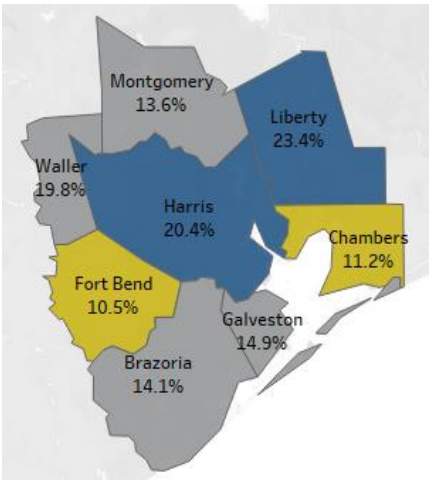
Insurance Status

Uninsured in Texas and Greater Houston

In Texas, over 4.7 million (17%) people are uninsured across all age groups, making it the leading state for those without insurance coverage. Figure 16 shows the percentage of uninsured in the Greater Houston Area. Liberty and Harris Counties have the highest uninsured rates at 23.4% and 20.4% respectively. Chambers and Fort Bend Counties have the lowest percentages at 11.2% and 10.5%.[xxxviii]

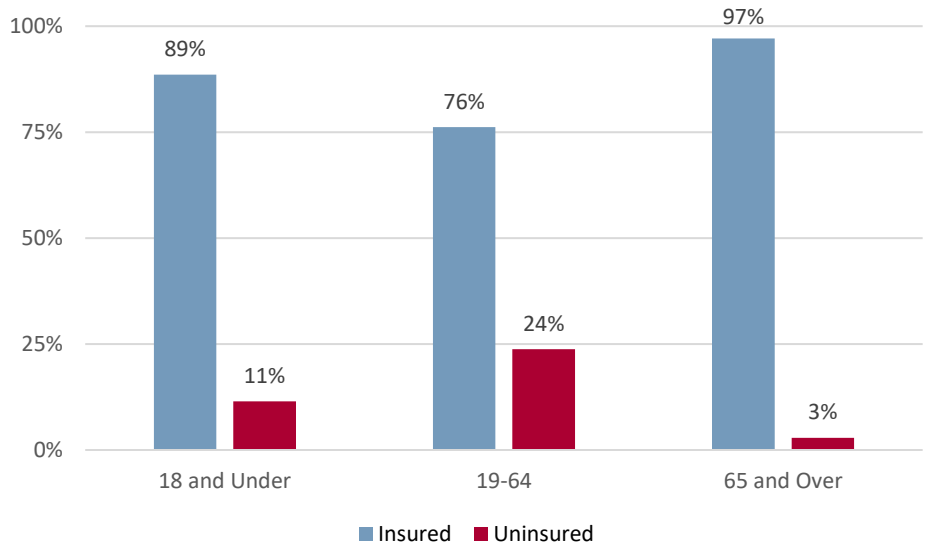
Figure 17 shows the breakdown of those who are uninsured by age for the greater Houston area. Residents between the ages of 19-64 have the highest percentage of uninsured at 24%. The Senior population (age 65 and over) has the lowest percentage of uninsured at 3%. Children 18 years and under have 11% of their population without insurance. [xxxix]

Figure 16. Uninsured by County



Source: U.S. Census Bureau (2022)

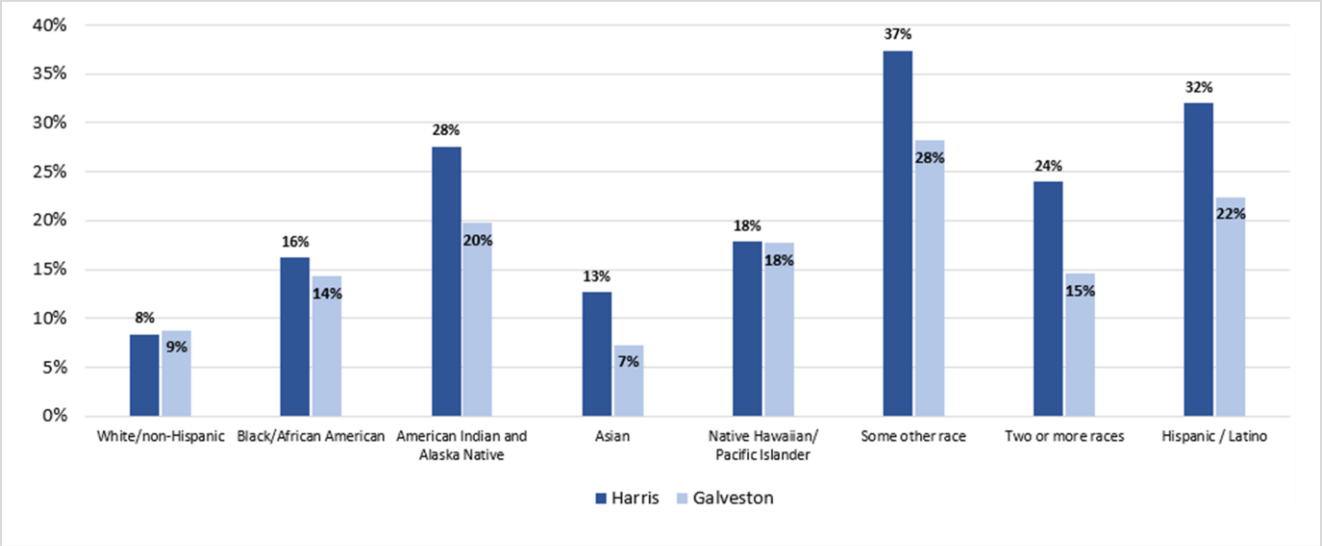
Figure 17. Uninsured by Age for Greater Houston Area



Source: U.S. Census Bureau (2022)

Uninsured rate also varies by race and ethnicity. Among the uninsured in the Houston Methodist Clear Lake Hospital community, 27% were American Indian/Alaskan, 18% were Native Hawaiian and Pacific Islander, 16% were Black/African American, 13% were Asian and 8% were White/non-Hispanic. Figure 18 shows the percentage of uninsured by race and ethnicity in the Houston Methodist Clear Lake Hospital community. Thirty-two percent of those who identify as Hispanic/Latino are uninsured.

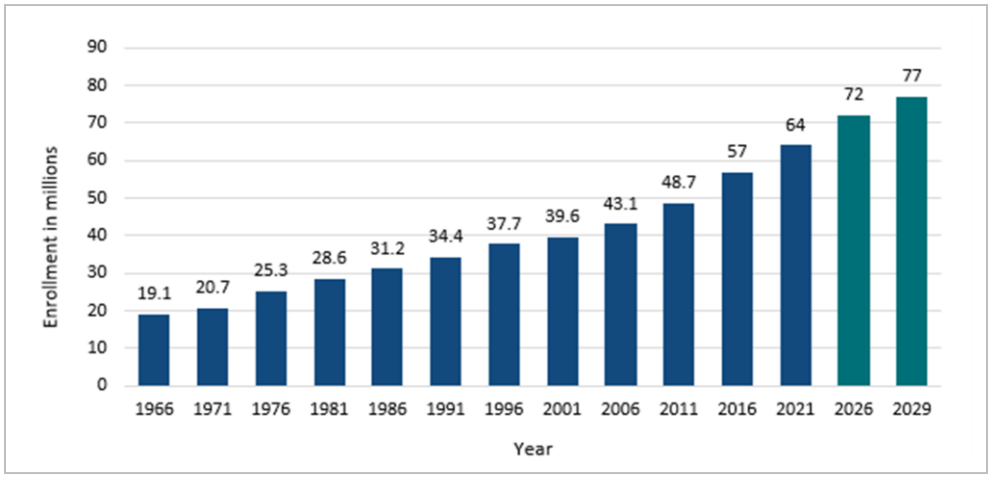
Figure 18. Uninsured Individuals within each Race & Ethnicity: Houston Methodist Clear Lake Hospital community



Source: U.S. Census Bureau (2016-20)

Medicare Coverage in Texas and Greater Houston Medicare is a national health insurance program that benefits not only seniors age 65 and older, but also those with disabilities and end-stage disease states. Those eligible for the program can enroll in a Traditional Medicare plan or a Medicare Advantage (MA) plan. Between 2021-29, enrollment in Traditional Medicare is projected to increase an average of 1.5 million beneficiaries *per year.* Figure 19 shows enrollee growth from inception to 2029.[xl] Additionally, Medicare spending is expected to grow at an average of 7.2% over 2021-30, with rates decreasing after this period to 4.3% as baby boomers are no longer enrolling.[xli]

Figure 19. National Medicare Enrollment Projections



Source: The Commonwealth Fund

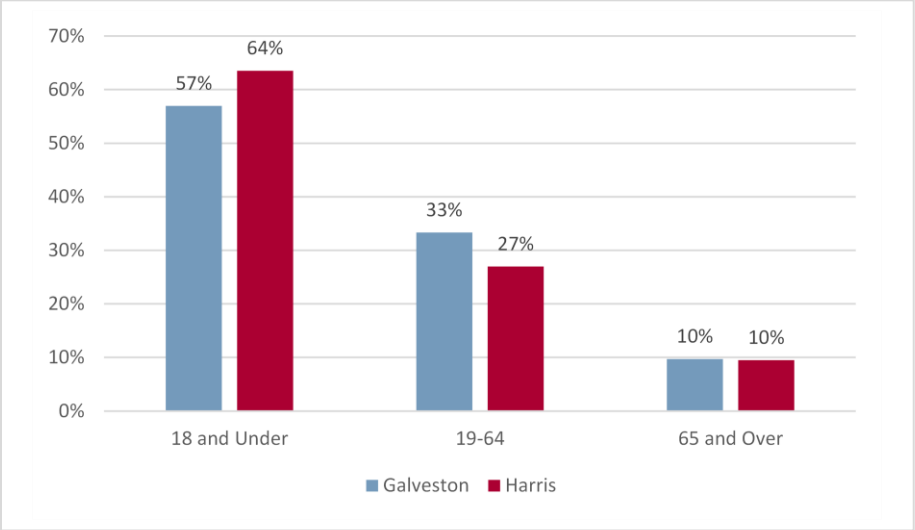
Medicare advantage plans differ from traditional Medicare in that it is a bundled service provided by private insurance companies that offers supplemental benefits which are not available in traditional plans such as dental, medications, vision, gym memberships, transportation, meal service, etc. Enrollees may be required to seek physicians and hospitals that are in their network. Medicare advantage plans have experienced rapid growth in the last 10 years, increasing from 26% in 2012 to 42% in 2021 and covers more than 24 million beneficiaries.[xlii] In 2022, 567,796 individuals in Harris County were enrolled in Medicare which includes 91%

of those who are over the age of 65. Galveston County had a slightly higher percentage of people over 65 enrolled (94%) with a total of 58,145 individuals of all ages.[xliii]

Medicaid Coverage in Texas and Greater Houston

Medicaid is another important form of health coverage upon which millions of Americans depend, including eligible low-income adults, children, pregnant women, elderly adults and people with disabilities. Figure 20 shows the percentage of those covered by Medicaid in the Houston Methodist Clear Lake Community. Sixty-three of those 18 years of age and under are covered by Medicaid in Texas, followed by 28% of individuals between ages 19-64 and 9% were 65 years or older. In the Houston Methodist Clear Lake Hospital community, 19% of the total population received Medicaid coverage (967,008 individuals). In Harris County, 64% of the population covered by Medicaid is 18 and under, 27% were 19-64, and 10% were 65 and over.

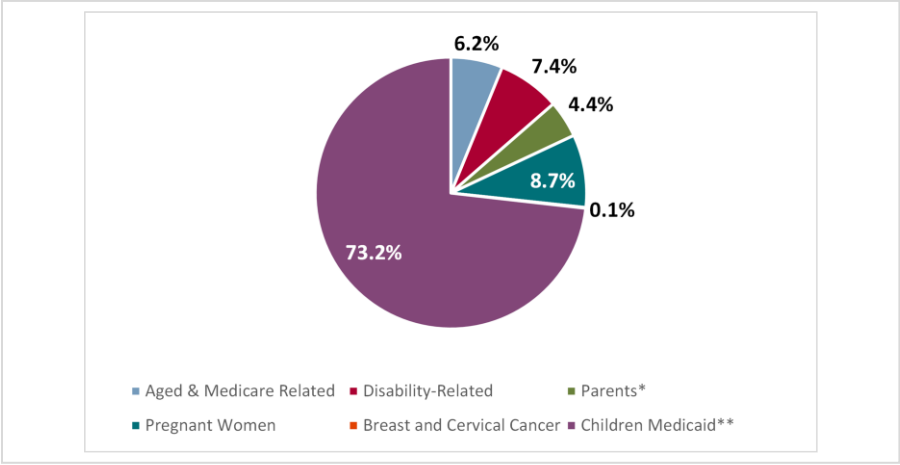
Figure 20. Medicaid Distribution by Age and County



Source: U.S. Census Bureau (2022)

Children's Health Insurance Program (CHIP) provides low-cost medical coverage to children who fall outside of Medicaid eligibility. [xliv] Figure 21 shows the 2022 Medicaid caseload by risk group for the Houston Methodist Clear Lake Hospital Community.[xlv] Children's Medicaid was nearly three-quarters of the caseload followed by those covered for disability related issues, aged & Medicare related, pregnant woman and parents.

Figure 21. Medicaid Caseload by Risk Group
Houston Methodist Clear Lake Hospital community



Source: Texas Health & Human Services (2022)

Texas has experienced one of the largest increases in Medicaid even though the state did not expand its coverage. According to Houston Public Media, the COVID-19 public health emergency, which is a federal declaration that expands funding, resources and emergency powers, has made exceptions to allow Americans to maintain their Medicaid coverage if they are no longer able to meet state requirements to stay in the program.[xlvi] These exceptions include children who have aged out of eligibility, families whose household income no longer allows them to qualify, women who were pregnant at the beginning of the pandemic or adult individuals who no longer have a dependent in the same household).[xlvii]

Nearly 300,000 of those living in the Houston and Beaumont regions have been able to keep these health benefits during the pandemic due to these exceptions.[xlviii] As of mid-October 2022, the Department of Health and Human Services has renewed this declaration for an additional 90 days.[xlix]

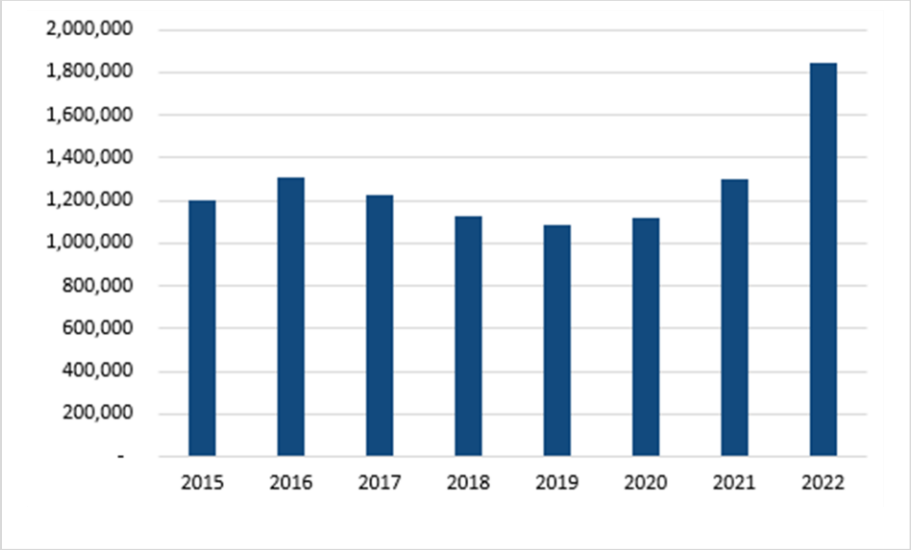
Affordable Care Act

The Affordable Care Act (ACA), implemented in 2010, aims to make affordable health insurance available to more people via a marketplace exchange and through expanded provisions that support access. The ACA is comprised of 10 titles that are each dedicated to a different aspect of the United States health care system. The law has 3 primary goals:[l]

- Make affordable health insurance available to more people
- Expand the Medicaid program to cover all adults with income below 138% of the FPL
- Support innovative medical care delivery to lower the costs of health care

According to Episcopal Health Foundation, Texas had a record number of enrollees in ACA health insurance in 2022.[li] As Figure 22 depicts, during the 2022 open enrollment, more than 1.8 million Texans opted into a health insurance plan through the ACA Marketplace, a 42% increase when compared to enrollment from 2021. The increase was due to the federal American Rescue Plan which allowed more Texans to be eligible for financial assistance. This plan, which was passed in March 2021, provides additional relief to address the continued impact of COVID-19 towards the economy, public health, state/local governments, individuals, and businesses.[lii]

Figure 22. Texas ACA Enrollees



Source: Episcopal Health Foundation

Poverty

In health care, poverty guidelines are commonly used to determine financial eligibility for certain programs and benefits. For example, income between 100% and 400% of the poverty level qualifies individuals for premium tax credits in all states. Income below 138% qualifies individuals for Medicaid based only on income (in states with expanded Medicaid coverage).[liii] Table 1 shows the 2022 poverty guidelines.[liv] The identified levels vary based on the number of persons per household and the household's income in terms of the percent of the poverty level.

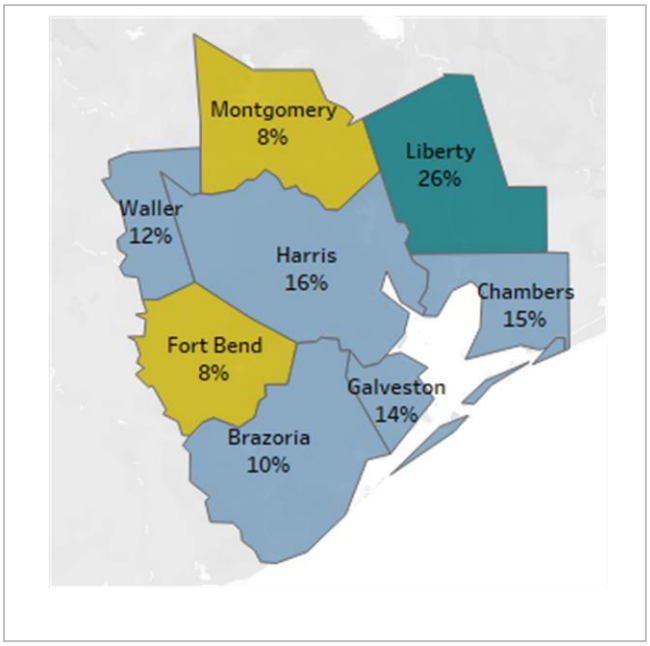
Table 1. 2022 National Poverty Guidelines

Household/ Family Size	Poverty Guidelines for 2022 (48 Contiguous States & D.C.)							
	100%	133%	138%	150%	200%	250%	300%	400%
1	$13,590	$18,075	$18,754	$20,385	$27,180	$33,975	$40,770	$54,360
2	$18,310	$24,352	$25,268	$27,465	$36,620	$45,775	$54,930	$73,240
3	$23,030	$30,630	$31,781	$34,545	$46,060	$57,575	$69,090	$92,120
4	$27,750	$36,908	$38,295	$41,625	$55,500	$69,375	$83,250	$111,000
5	$32,470	$43,185	$44,809	$48,705	$64,940	$81,175	$97,410	$129,880
6	$37,190	$49,463	$51,322	$55,785	$74,380	$92,975	$111,570	$148,760
7	$41,910	$55,740	$57,836	$62,865	$83,820	$104,775	$125,730	$167,640
8	$46,630	$62,018	$64,349	$69,945	$93,260	$116,575	$139,890	$186,520

Source: U.S. Department of Health and Human Services

Thirteen percent of those who reside in Texas live in poverty, ranking it the 13th state (out of 50) with the highest poverty rate. Mississippi is ranked the highest (18.7%) while New Hampshire is ranked the lowest (7%).[lv] Within the Houston Methodist Clear Lake Hospital community, approximately 16% of the population live in poverty in the Harris County area (more than 780,000 residents). In Galveston County, over 48,000 residents (14%) live in poverty. Figure 23 shows the percentage of residents living in poverty by county; based on U.S. Census data and determined by poverty thresholds. For the MSA, Fort Bend and Montgomery Counties have the lowest percentage of population living at or below poverty at 8%. Brazoria, Chambers, Galveston, Harris, and Waller Counties have double-digit poverty rates, while Liberty County is the highest at an astounding 26%.[lvi]

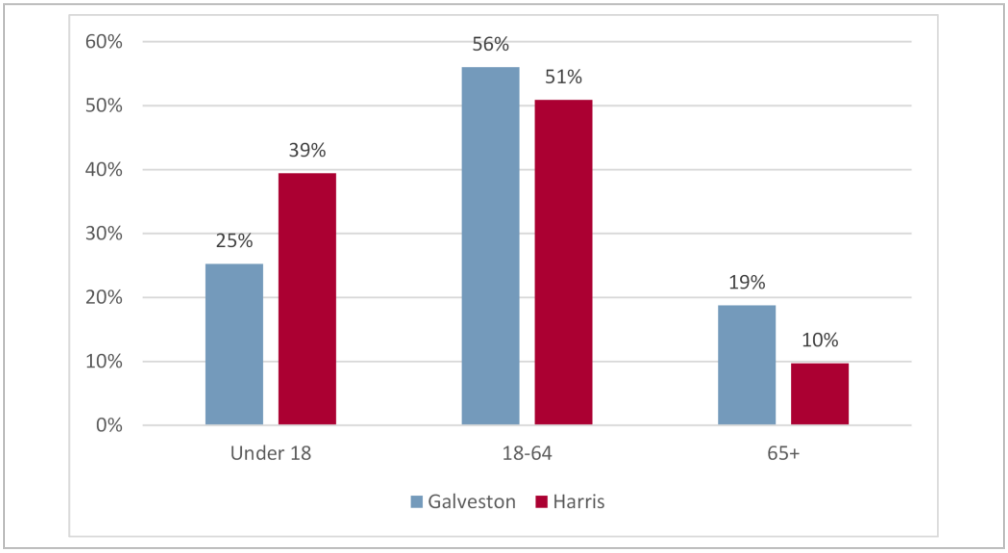
Figure 23. Residents Living in Poverty



Source: U.S. Census Bureau (2022)

Disparities in poverty exist across geography and age. In the Houston Methodist Clear Lake Hospital community, residents from Harris and Galveston Counties have a distribution across age as depicted in Figure 24. Of the people that live at or below poverty, the largest group is the 18-64 range. The Under 18 population has the second most people at or below poverty and the elderly has the least.

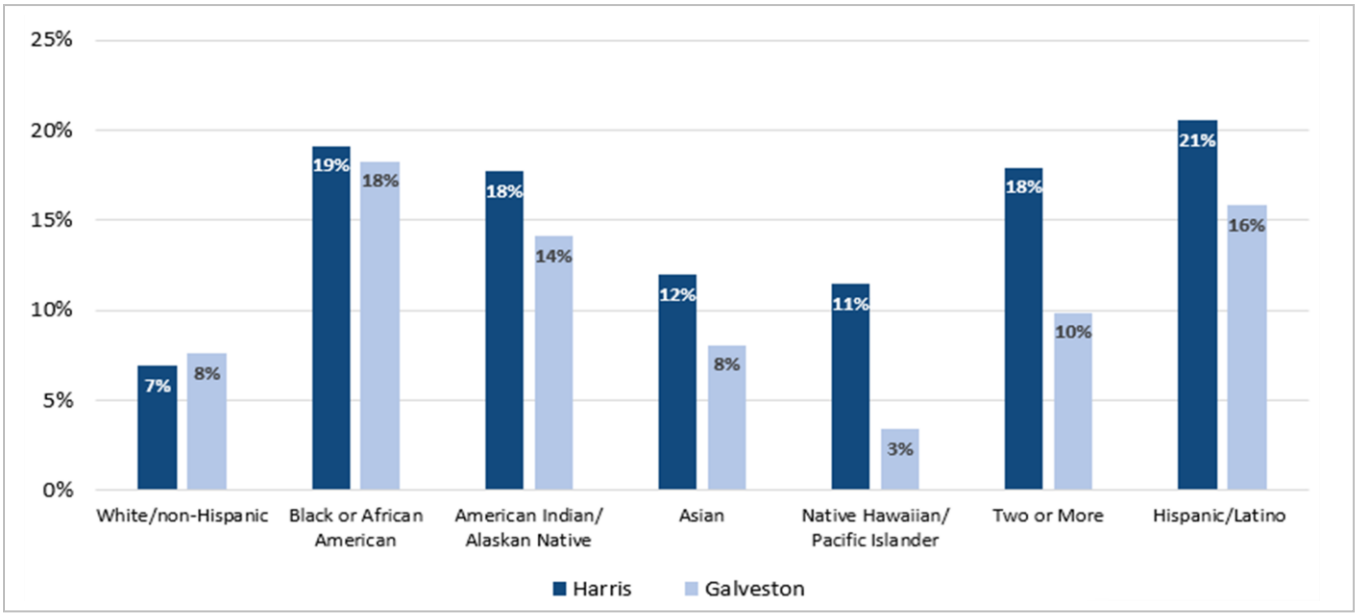
Figure 24. Distribution of Residents Living in Poverty Across Age Groups



Source: U.S. Census Bureau (2022)

Figure 25 shows the percentage of those within each racial group who live below the federal poverty. The racial groups that have the highest averages of people living below poverty identify as Black/African American (19%), American Indian and Alaskan (18%), Asian (12%), Native Hawaiian/Pacific Islander (11%), and White/non-Hispanic (7%). Over 425,000 Hispanics/Latinos who reside in the Houston Methodist Clear Lake Hospital community live below the FPL. This represents 20% of Hispanics/Latinos that live in the area and 9% of the community's total population.

Figure 25. Residents Within Each Racial and Ethnic Group Who Live Below Poverty



Source: U.S. Census Bureau (2016-20)

Homelessness

According to the National Alliance to End Homelessness, the MSA has over 3,100 people homeless on every given night. That is equal to 5 people per 10,000 in the area. The U.S. Department of Housing and Urban Development (HUD) states that more than 326,000 people experienced sheltered homelessness in 2021. In Texas, over 27,000 people experienced homelessness on a given night in 2020, with half being unsheltered. Table 2 shows the breakdown of those in the MSA who are homeless on a given night and whether they resided in a shelter or not. [lvii]

Table 2. Individuals Experiencing Homelessness

Sheltered	1,622
Unsheltered	1,502
Total	3,124

Most Common Disease States – Houston Methodist Clear Lake Hospital community

Six in 10 adults in the United States lives with a chronic disease; four out of 10 have two or more. The most common chronic diseases in the U.S. are heart disease, cancer, chronic lung disease, stroke, diabetes, Alzheimer's disease, and chronic kidney disease.[lviii] Without proper health care coverage, many are not able to seek routine care due to limited health care access which can result in a late diagnosis of these chronic diseases. Many of these chronic diseases lead to fatalities, especially when left untreated. In Texas, the top 10 causes of death are heart disease, cancer, accidents, stroke, chronic lower respiratory disease, Alzheimer's disease, diabetes, chronic liver disease/cirrhosis, kidney disease and suicide.[lix] Table 3 shows the top 10 causes of death in Texas.[lx]

Table 3. Top 10 Causes of Death in Texas
1. Heart Disease
2. Cancer
3. Accidents
4. Stroke
5. Chronic Lower Respiratory Disease
6. Alzheimer's Disease
7. Diabetes
8. Chronic liver disease/cirrhosis
9. Kidney disease
10. Suicide

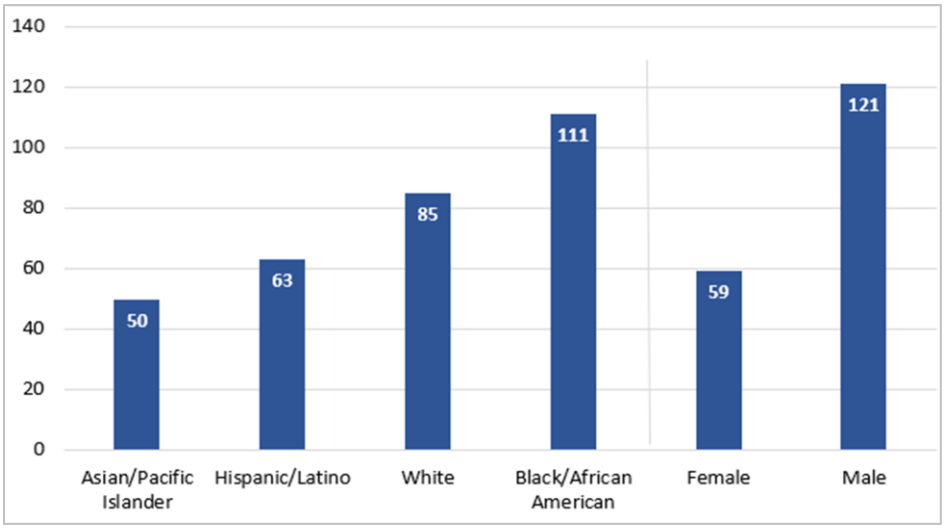
Source: Texas Dept. of Health & Human Services

Chronic diseases continue to be the leading cause of death in Harris county.[lxi] Nearly 72% of the population in Harris county are overweight or obese, which is a leading risk factor for most chronic diseases. Being overweight or obese affects quality of life and puts individuals at risk for developing many diseases, especially heart disease, stroke, diabetes, and cancer.[lxii] Harris county is the largest county served by Houston Methodist Clear Lake. Because 45% of Houston Methodist Clear Lake Hospital community members come from this service area, the following top 5 causes of death of heart disease, cancer, accidents, cerebrovascular disease, and Alzheimer's disease will pertain primarily to this region to provide a snapshot of chronic disease prevalence.

Heart Disease

Heart disease is the leading cause of death in the United States, killing over 928,000 people in 2020.[lxiii] It is

Figure 26. Deaths by Race, Ethnicity, and Gender: Harris County (per 100,000 population)



Source: Houston – State of Health (2018-20)

the leading cause of death in both Harris and Galveston counties [lxiv]. According to the Harris County Public Health, heart disease caused over 30,000 deaths between 2016-20[lxv]. It is the leading cause of death for both men and women as well as Black/African American and White/non-Hispanic. Figure 26 shows the deaths per 100,000 population by race and gender, respectively, for coronary heart disease, in Harris County. Coronary heart disease is the most common type of heart disease in the United States.[lxvi]

Heart disease is usually caused by a condition called atherosclerosis, caused by plaque build-up in the arteries. This condition narrows the arteries, decreasing blood flow. This can increase the possibility of a

blood clot, which stops the blood flow completely and causes a heart attack.[lxvii] Some health conditions such as high blood pressure, hypertension, high cholesterol, diabetes, and obesity can increase the risk of heart disease.

According to American Heart Association's journal, Circulation, treatment and control of cardiovascular risk factors is lower in the uninsured population, even when diagnosed. This same population is at the greatest risk of being uninsured. Lack of insurance hinders the delivery of optimal cardiovascular care.[lxviii] In the Greater Houston Area, hypertension was one of the top reasons for provider visits at local federally qualified health centers (FQHC) in 2020.[lxix] These health centers serve a low-income population that has limited access to health care services and for a vast majority of the patients, lack health insurance.

Cancer

Cancer is the second leading cause of death in both Harris and Galveston counties.[lxx, lxxi] Although there are many types of cancers, all cancers are due to abnormal cell growth. Normal cells grow, divide and then die so that new cells may form. Cancer cells do not die, but rather continue to grow in abnormal ways, often invading other tissues. The spreading of cancer is called metastasis, and the different types of cancers are named based on where the cancer cells first originated, such as in the lungs or brain.[lxxii] Table 4 shows the projected top five cancer deaths by gender in Texas for 2023.[lxxiii]

Table 4. Estimated Cancer Deaths by Gender: Texas, 2023

Female			Male		
Type of Cancer	**Estimated Deaths**	**% of Total**	**Type of Cancer**	**Estimated Deaths**	**% of Total**
Lung & Bronchus	4,518	21%	Lung & Bronchus	5,855	24%
Breast	3,471	16%	Prostate	2,397	9.8%
Pancreas	1,662	8%	Colon & Rectum	2,028	8.8%
Colon & Rectum	1,620	7%	Liver & Bile Duct	1,998	7.6%
Ovary	1,068	5%	Pancreas	1,819	6.7%

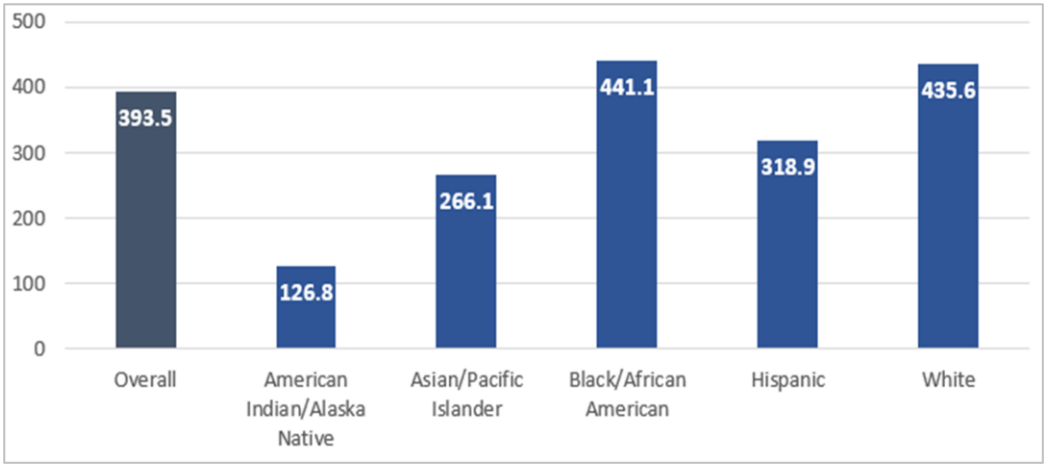
Source: TX Department of State Health (2022)

Over 27,000 deaths in Harris County were due to cancer between 2016-20. The incidence rates in the county are highest among Black/African American and White/non-Hispanic populations. Incidence rates are also higher among males.

Harris County Public Health reported that the most common cancers in the county are breast, colorectal, prostate, and lung cancer. With the exception of prostate cancer, White/non-Hispanic and Black/African Americans in Harris County have comparable incidence rates across the remaining types of cancer. However, mortality rates amongst Black/African Americans is higher for each type of cancer represented above. In Texas, 19% of Black/African Americans live below the federal poverty line as compared to 13% of White/non-Hispanic.

According to the American Cancer Society, lower economic status and less access to medical care are major reasons for the

Figure 27: Incidence Rates by Race & Ethnicity: Harris County (per 100,000 population)

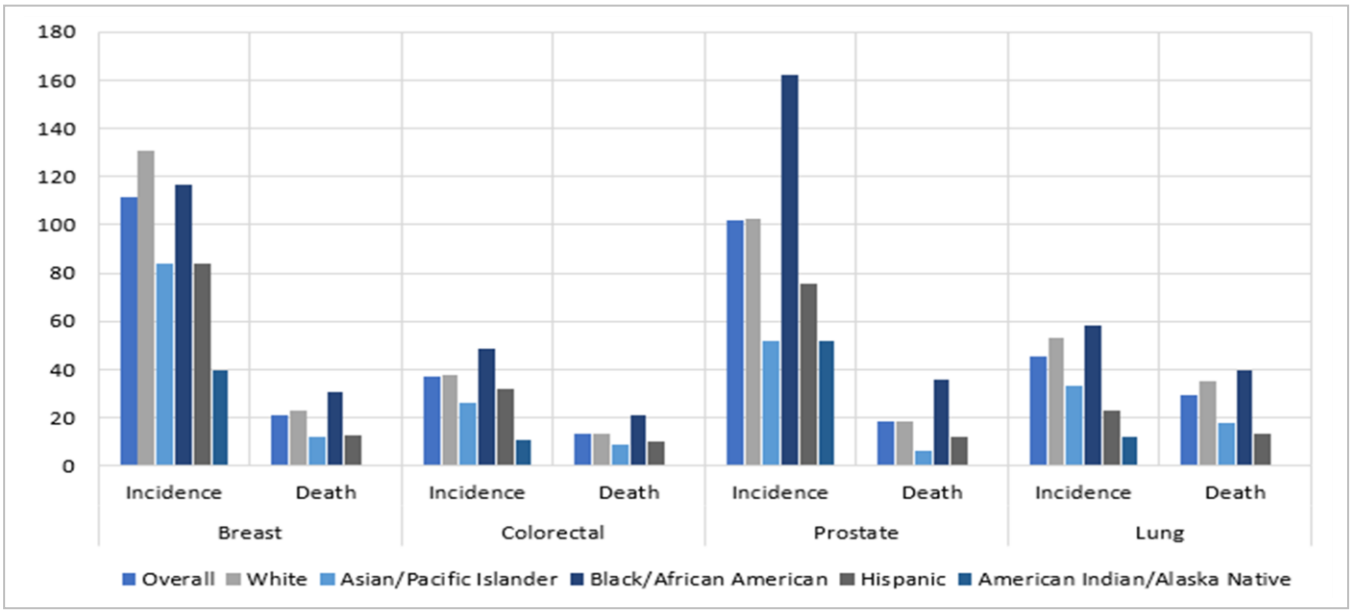


Source: Houston – State of Health (2018-20)

disproportionality in cancer incidence rates among racial and ethnic groups. People with lower socioeconomic status face more barriers to high-quality health care, including lack of insurance.[lxxiv] Figure 27 show the incidence rates amongst different race and ethnicity for Harris County.[lxxv]

Figure 28 shows the incidence and death rates for each cancer for Harris County.

Figure 28. Incidence & Death Rates by Cancer Type: Harris County (per 100,000 population)



Source: Houston – State of Health (2018-20)

Thirty-seven percent of Hispanics/Latinos in the United States are uninsured.[lxxvi] However, as a collective group, Hispanics/Latinos in the United States have lower rates for the most common cancers (female breast, colorectum, lung and prostate), but among the highest rates for cancers associated with infectious agents, such as human papillomavirus (HPV). More than nine out of every 10 cases of cervical cancer are caused by HPV.[lxxvii] The higher prevalence of HPV is largely attributed to less access to health care and appropriate screenings due to their high uninsured status.

Accidents

Accidents (or unintentional injuries) are the third leading cause of death in the United States, killing 224,000 people per year. The leading types of unintentional injury deaths include unintentional poisoning (including medication, household toxic products and illegal drug use), unintentional falls, and motor vehicle traffic accidents. It is also the third leading cause of death in both Texas and Harris County and sixth in Galveston County. [lxxviii, lxxix, lxxx]

Table 5 and Figure 29 show the percent breakdown of accident-related deaths for Harris county as well as the incidence of accident related deaths by race and ethnicity in 2019. The top age group that suffered the most deaths were between the ages of 25-34, followed by ages 55-64. Males were approximately 72% of this group.[lxxxi] Thirty-nine percent were White/non-Hispanic, 31% were Hispanic/Latino, 25% were Black/African American, and 5% other.[lxxxii]

Table 5. Leading Cause Accident (Unintentional Injury): Harris County Related Deaths (n= 1,606)	
Accidental poisoning and exposure to noxious substances	47%
Motor vehicle accidents	36%
Other and unspecified non-transport accidents and their sequelae	16%
Accidental drowning and submersion	2%

Source: Texas Department of Health & Human Services (2022)

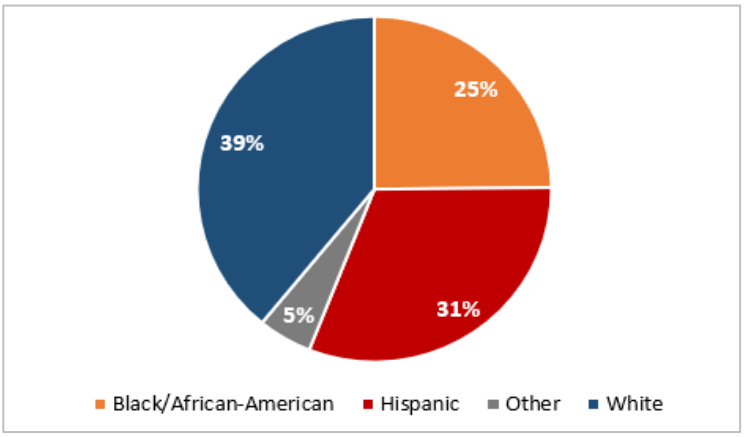
In 2021, over 25.5 million people visited the emergency department and over 24.8 million people visited the physician's office to be treated for unintentional injuries in the United States.[lxxxiii]

Motor Vehicle Accidents

Motor vehicle accidents are also a leading cause of death amongst accident-related injuries. In 2020, 20% of the motor vehicle accidents in Texas occurred in Harris County, the highest in the state. Thirteen percent of fatalities in the state occurred in Harris County, which was also the highest in the state; Galveston County had 1% of fatalities. Most accidents in Texas result from speeding, failure to yield, driving under the influence of alcohol, following too closely, and running red lights and stop signs. Almost three-fourths of fatalities were males.[lxxxiv]

Nationally, there was a surge in accident-related deaths in 2020, during the COVID-19 pandemic. According to Texas A&M Transportation Institute (TTI), the number of single and multi-car crashes were down by 55% and 23%, respectively in 2020. However, fatalities rose by 14% and 59%, respectively. The risk of death or injury is greater when there are less cars on the road due to driving at an excessive speed and impaired or distracted driving.[lxxxv]

Figure 29. Accident (Unintentional Injury) Related Deaths by Race/Ethnicity (n= 1,316): Harris County

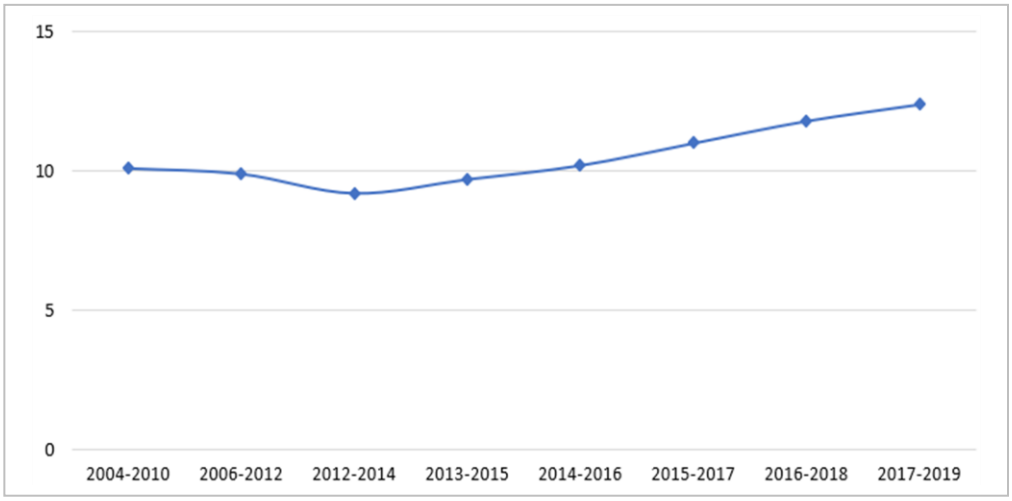


Source: Texas Department of Health & Human Services (2021)

Drug Overdoses

According to Harris County Public Health Department, deaths due to drug overdose are the leading cause of accident-related injury deaths in the United States, with over 100 deaths occurring every day. The death rate due to drug overdose has been increasing over the last two decades. Most deaths due to pharmaceutical overdose involve opioid analgesics (prescription painkillers). Figure 30 shows the death rate trend due to drug poisoning over a 15-year period.[lxxxvi]

Figure 30. Drug Overdose Death Rate Due Harris County (per 100,000 population)



Source: Houston – State of Health, 2018-2020

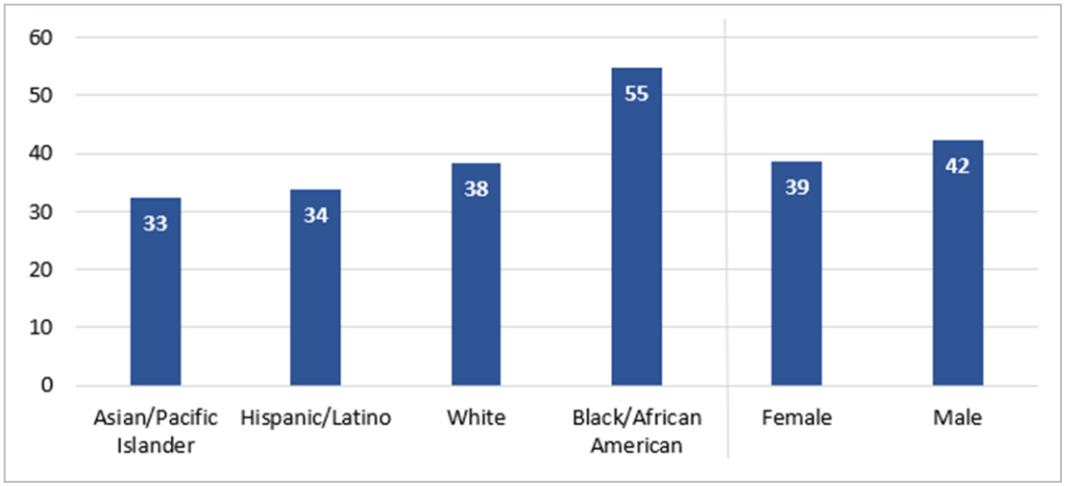
Houston and Texas are seeing a record number of deaths from the opioid epidemic, with fentanyl as the main driver. A dose of fentanyl the size of a pencil tip can kill a person. In Harris County alone, fentanyl kills more than one person every day. Deaths involving fentanyl skyrocketed by 341% (from 104 to 459) between 2004-19.[lxxxvii] Deaths are also higher amongst males and those who are Black/African American.[lxxxviii]

Cerebrovascular Disease or Stroke

Cerebrovascular Disease or Stroke is the fifth leading cause of death in the United States, the fourth leading cause of death in Harris county and third in Galveston county. [lxxxix, xc, xci] In 2019, 1,509 people died in Harris county from stroke alone.[xcii] Stroke occurs when there is a lack of blood flow to the brain, usually caused because one or more blood vessels leading to the brain is blocked or bursts.[xciii] Brain tissue can die when its blood flow is reduced or cut off. Strokes can cause patients to permanently lose speech, movement, and memory.

As shown in Figure 31, death rates for strokes are similar for males and females. Blacks/African-Americans have a higher death rate when compared to other races and ethnicities.[xciv] According to John Hopkins Medicine, Black/African Americans are at higher risk for stroke due to having a greater incidence of high blood pressure.[xcv] In Harris County, the prevalence of high blood pressure amongst this community is nearly 40%, almost 11% higher than the overall prevalence rate.[xcvi]

Figure 31. Stroke Death Rate due by Race/Ethnicity and Gender, Harris county (per 100,000 population)

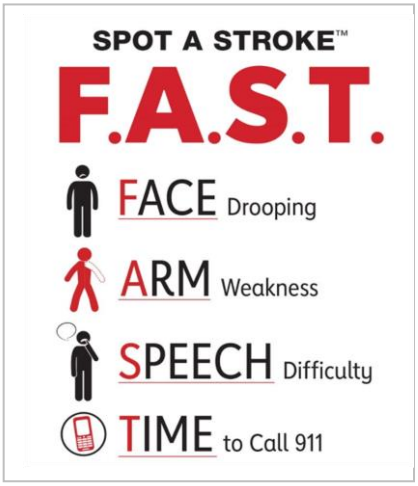


Source: Houston – State of Health (2018-20)

Strokes can occur at any age and some of the risk factors can be changed through healthy living behaviors or treated and managed by a physician. These include, high blood pressure, heart disease, diabetes, smoking, history of mini-strokes, high red blood cell count, high blood cholesterol and lipids, obesity, lack of exercise, drug and excessive alcohol use.[xcvii] The American Stroke Association continues public health education to increase recognition of warning signs of a stroke.[xcviii] The most well-known initiative is F.A.S.T., an acronym that encourages people to take note of face, arms, speech, and time as seen in Figure 32.

The Texas Department of State Health Services released Public Health Strategies for Addressing Heart Disease and Stroke in Texas which provides a set of goals, objectives and strategies for partners across the state to implement in an effort to reduce risk factors for the diseases.[xcix] The goals include supporting and reinforcing healthy behaviors, enhancing quality of care and community clinical link ages, and improving systems of care. The strategies laid out help address issues such as high blood pressure, obesity, diet, tobacco use, as well as systems of care within Texas.

Figure 32. F.A.S.T. Poster



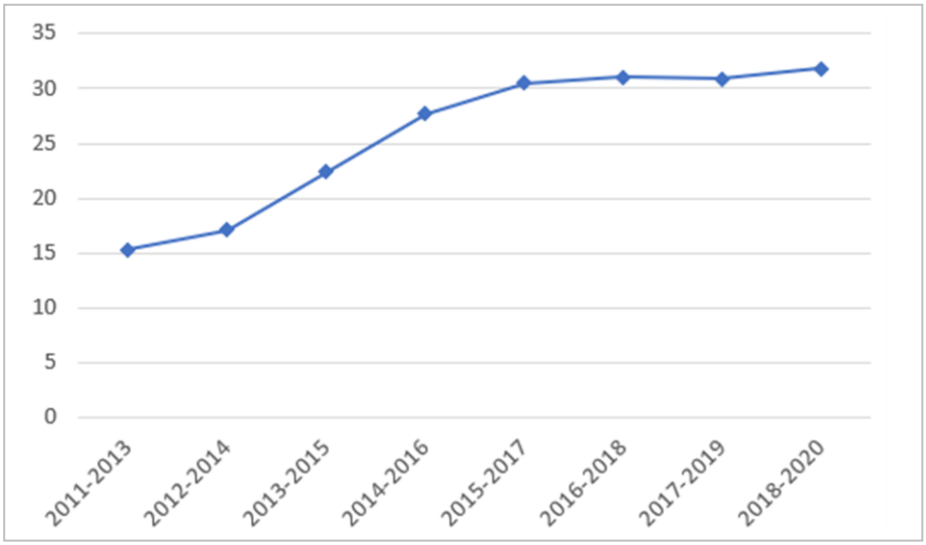
Source: American Stroke Association

Alzheimer's disease

Alzheimer's disease, the most common type of dementia, is a brain disorder that slowly destroys memory and thinking skills, and, eventually, the ability to carry out the simplest tasks. Nationally, it is ranked as the seventh cause of death [c] and sixth in Texas.[ci] However, Alzheimer's is the fifth leading cause of death in both Harris and Galveston counties.[cii, ciii]

In most people with Alzheimer's, symptoms first appear later in life. Estimates vary, but experts suggest that more than 6 million Americans, most of them age 65 or older, may have dementia caused by Alzheimer's.[civ] Figure 33 shows the death rate over time for those diagnosed with Alzheimer's disease in Harris County. Older age is a risk factor for Alzheimer's.

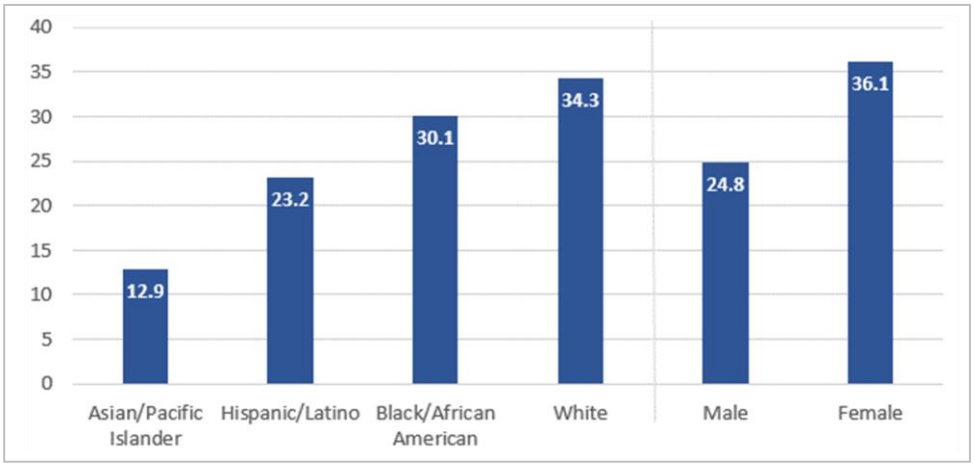
Figure 33. Alzheimer's Disease Death Rate: Harris County (per 100,000 population)



Source: Houston – State of Health, (2018-20)

As the life expectancy of women is higher on average, the incidence and mortality rate of Alzheimer's is higher for women when compared to men. In addition, differences in the social and physical environment by race/ethnicity increase risk for chronic conditions that are associated with higher dementia risk, such as cardiovascular disease and diabetes. These health conditions, which disproportionately affect Black and Hispanic populations, may explain the elevated risks some minority groups have.[cv] Figure 34 shows the death rate of Alzheimer's by gender and by race and ethnicity in Harris County.

Figure 34. Alzheimer's Disease Death Rate by Race, Ethnicity, Gender: Harris County (per 100,000 population)



Source: Houston – State of Health, 2018-2020

According to the Alzheimer's Association, currently, 6.5 million people in the United States are living with Alzheimer's disease and it is projected to rise to 13 million by the year 2050. Currently, there are approximately 400,000 individuals living with Alzheimer's in Texas. By the year 2025, this is projected to increase by nearly 23% to 490,000 individuals.[cvi] Physical activity, education, staying mentally and socially active, maintaining blood pressure and healthy diet are modifiable risk factors that can help reduce the risk of cognitive decline,

Alzheimer's, and other forms as dementia. Addressing risk factors might prevent or delay up to 40% of dementia cases. The age at which some risk factors develop appears to affect dementia risk. For example, midlife obesity, hypertension, prehypertension, and high cholesterol are associated with an increased risk of dementia. In contrast to midlife obesity, late-life obesity, and hypertension onset after age 80 are associated with decreased risk of dementia.[cvii]

Figure 35 provides a snapshot of the top ten leading causes of death in Harris County.

Figure 35. Top 10 Leading Causes of Death in Harris County

Source: Harris County Public Health Department (2016 – 20)

PRIORITIZED NEEDS OF THE HOUSTON METHODIST CLEAR LAKE HOSPITAL COMMUNITY

In the following sections, the below community needs will be described. Though the following community health priorities are ordered, this is not in direct correlation with the level of importance by which Houston Methodist Clear Lake Hospital will define each. The below outlined needs will serve as the basis for how each Houston Methodist facility will evaluate its current and future resources for the purpose of developing action plans. Houston Methodist facilities will be able to allocate financial resources, personnel and organizational assets to tackle each of the below while others, based on community priorities, may not address all of the below in a targeted manner.

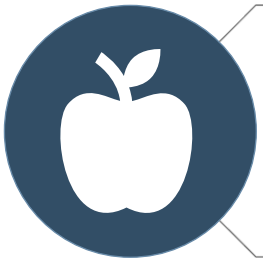
Prioritized Needs of the Houston Methodist Clear Lake Hospital Community

1. **Primary Care Services**
2. **Specialty Care Services**
3. **Healthy Living Behaviors**
4. **Mental Health Care Services**

Primary Care Services: Increase access to primary care services to support prevention and management of chronic conditions.

Specialty Care Services: Increase access to specialty care services to support chronic condition management.

Healthy Living Behaviors: Promote healthy living behaviors to reduce chronic disease and substance use development.



Mental Health Care Services: Increase access to mental health services including Treament for Substance Use Disorders.

INCREASE ACCESS TO PRIMARY CARE SERVICES TO SUPPORT PREVENTION & MANAGEMENT OF CHRONIC CONDITIONS

Overview of Primary Care

Primary care is the provision of integrated, accessible health care services which includes early detection and treatment of disease, preventive care, and diagnosis and treatment of acute and chronic illnesses that do not require specialized care. Primary care providers are trained in comprehensive, first contact, and continuing care of a patient. Providers of health care, other than physicians, may render some primary care services and include nurse practitioners, physician assistants, and some other health care providers.[cviii, cix]

Primary care providers serve a patients' basic medical needs and potentially prevent the development of chronic conditions through assessing well-being on a continual basis. This preventive care is a critical component of primary care and is key in preventing chronic disease, illnesses, and other health problems. In addition, primary care services can detect illness at an early stage when treatment is likely to be most effective. It includes services, such as screening, vaccinations, check-ups, patient counseling, and routine tests and exams. Preventive services reduce death, disability, and disease, saving years of life and ensuring people live better during those years.[cx] Despite the importance of preventive care, many people do not receive the recommended services. National estimates show that less than 7% of adults, aged 35 years and over, receive all of the recommended high priority appropriate clinical preventive services.[cxi]

Another important aspect of primary care is its role in helping to reduce expensive and unnecessary utilization of emergency departments (ED).[cxii] Each year, there are 151 million ED visits in the United States with about 22% of adults, aged 18 and over, visiting the ED in the past 12 months. Of these visits, only 8.7% result in a hospital admission. More than a quarter of Texans either do not have a usual source of care or rely on hospital EDs, according to the 2021 Texas Health Tracking Survey conducted by Episcopal Health Foundation.[cxiii] This reliance on EDs is enhanced when lack of insurance is calculated in. Despite being regular sources of care for nonurgent health issues for some patients, EDs are extraordinarily expensive options and overutilization can have repercussions across the health care system and the nation. An estimated 13% to 27% of ED visits could be managed in clinics, physician offices and urgent care centers, resulting in $4.4 billion in savings annually.[cxiv,cxv] ED costs are 12 times higher than a physician's office and the earlier and the more often a patient is seen by a primary care physician, the less likely they are to require hospitalization.[cxvi] Danielle Butler-Winery, RN, MHA, MBA, Emergency Department Director of Nursing at Houston Methodist Hospital explains the complexities of primary care through the ED when a person lacks insurance:

> "When individuals use the ED as a source for primary care it taxes an already overloaded system. Since resources are being utilized to care for patients waiting for a hospital bed, patients with non-emergent needs end up with long waits. Uninsured patients seeking primary care services at the ED often need tests that would normally be done on an outpatient basis. However, they often cannot get these tests outside of the ED due to lack of insurance so the hospital ends up performing them. Once in the hospital, if an uninsured patient requires long term care or treatment that could be done on an outpatient basis, there is no way to get them to that next level of care because they lack insurance so they remain in the hospital for this treatment. Lastly, if their condition is chronic, the patient, without continued outpatient care, becomes sick again and returns to the ED, which becomes a revolving door of care." (D. Butler-Winery, Houston Methodist)

Patient Centered Medical Homes

Primary care continuity is critical. When patients move around for care, they lack a consistent relationship with a health care provider who knows the patient's history, health needs, and ability to work on issues, such as exercise, medication adherence and necessary health education. The patient-centered medical home (PCMH) model is a critical element of the primary care discussion, especially continuity in care. PCMHs, as stated by the Patient-Centered Primary Care Collaborative, are "patient-centered, comprehensive, team-based, coordinated, accessible, and

Figure 36: Attributes and Functions of a Patient-Centered Medical Home (PCMH)

- Patient-centered
- Comprehensive Care
- Coordinated Care
- Accessible Services
- Committed to Quality and Safety

Source: Agency for Healthcare Research and Quality (2022)

focused on quality and safety… [and] a widely accepted model for how primary care should be organized and delivered throughout the health care system." PCMHs reach patients in their community and follow five main tenets found in Figure 36 as defined by the Agency for Healthcare Research and Quality. PCMHs improve quality of care and patient relationships as well as save money by reducing hospital and emergency department visits, helping to address health disparities, and improving patient outcomes.[cxvii] In addition, primary care continuity has been shown to reduce ED utilization and result in fewer hospitalizations.

Many community-based health clinics, which serve an important role in providing medical care to underserved populations in Houston, utilize a PCMH model. The number of these community-based health clinics, which include county clinics, federally qualified health centers and nonprofit charity clinics, has grown substantially over the past years.[cxviii, cxix] Houston based federally qualified health centers (FQHCs) service patients who are ≤ 200% of the Federal Poverty Level (FPL); however, they can see patients who have insurance above that threshold. Harris county residents, who are ≤ 150% the FPL, may qualify to receive services at Harris Health, the county's health care system which is comprised of multiple hospitals and clinics around the area. [cxx, cxxi]

Clinics are increasingly utilizing strategies such as team-based care and innovative payment methods to improve access to primary care.[cxxii] Vecino Health Centers is a Houston-based Federally Qualified Health Center that employs a unique payment structure which allows all patients to access all necessary services at one fixed fee which allows patients to better plan for their care and minimizes unexpected fees for care. Vecino's CEO, Daniel Montez, explains:

> "Charging uninsured patients a nominal fixed amount removes a significant barrier to accessing care. A disproportionate share of our patients suffer from chronic diseases and the nominal fixed fee makes it more likely that they will continue care because they know the cost of the visit beforehand. While more expensive for Vecino, patients have a better chance of managing their chronic disease and reduce the chances of admissions into ER and hospital." (D. Montez, Vecino Health Centers)

Access to Primary Care

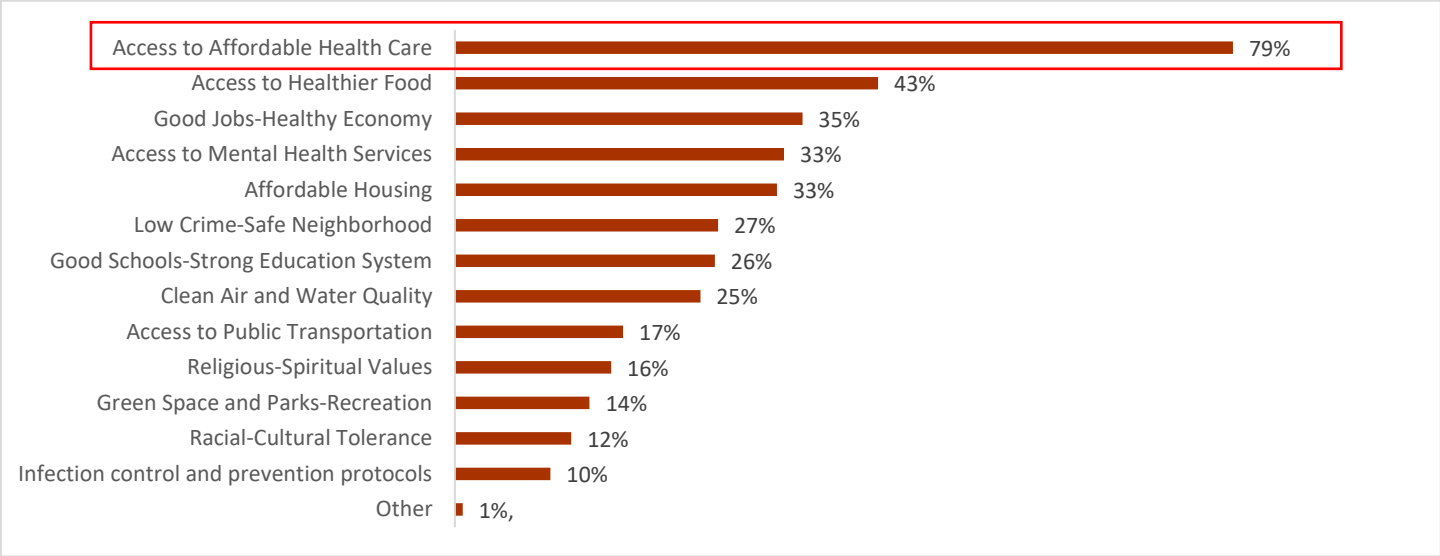
A population's access to primary care greatly impacts the overall health of a community. Nationally, improving access to comprehensive, quality health care services is a Healthy People 2030 goal. Healthy People 2030, the federal government's 10-year prevention agenda, outlines national objectives for the nation. The importance of having an established primary care provider is described as a key element within the access to health services goal. Of the goals outlined in Healthy People 2030, those most aligned with Houston Methodist's priority focus include:

- Increasing the proportion of persons with a usual primary care provider.
- Reduce the proportion of people who can't get the dental care needed.
- Reduce the proportion of people who can't get medical care when needed.

Houston Methodist community stakeholders recognize the importance of access to health services. Among the Houston Methodist survey respondents, 79% said that access to affordable health care was a necessary component of a healthy community (See Figure 37).[cxxiii] Survey respondents also outlined the primary and preventative services they had obtained in the last 12 months which enhances Houston Methodist' focus to increase access in this area. Among the Houston Methodist community stakeholders surveyed in the 2022 community health needs assessment survey, blood pressure checks and the COVID-19 vaccine were the only preventive measures taken by the majority of those sampled. Sixty-six percent of respondents received a blood pressure check within the last two years, and 59% received a COVID 19 vaccine. Other critical screenings and vaccinations were not commonly received, such as cholesterol screenings (37%), vision (35%), mammogram (22%), and colorectal screenings (12%).[cxxiv]

Figure 37. Most Important Needs for Community Health

Q: What do you think are the three most important factors for a "Healthy Community"? (N = 1,243)



Source: Houston Methodist Community Health Needs Assessment Survey (2022)

Access to preventive health and primary care are critical for underserved populations. Lack of access can have great repercussions that go beyond a person's health to affect their wellbeing and quality of life. Dr. Adlia Ebeid, PharmD, BC-ADM, RPh, Chief Clinical Officer of San José Clinic, a charitable clinic serving the uninsured of Greater Houston, explains:

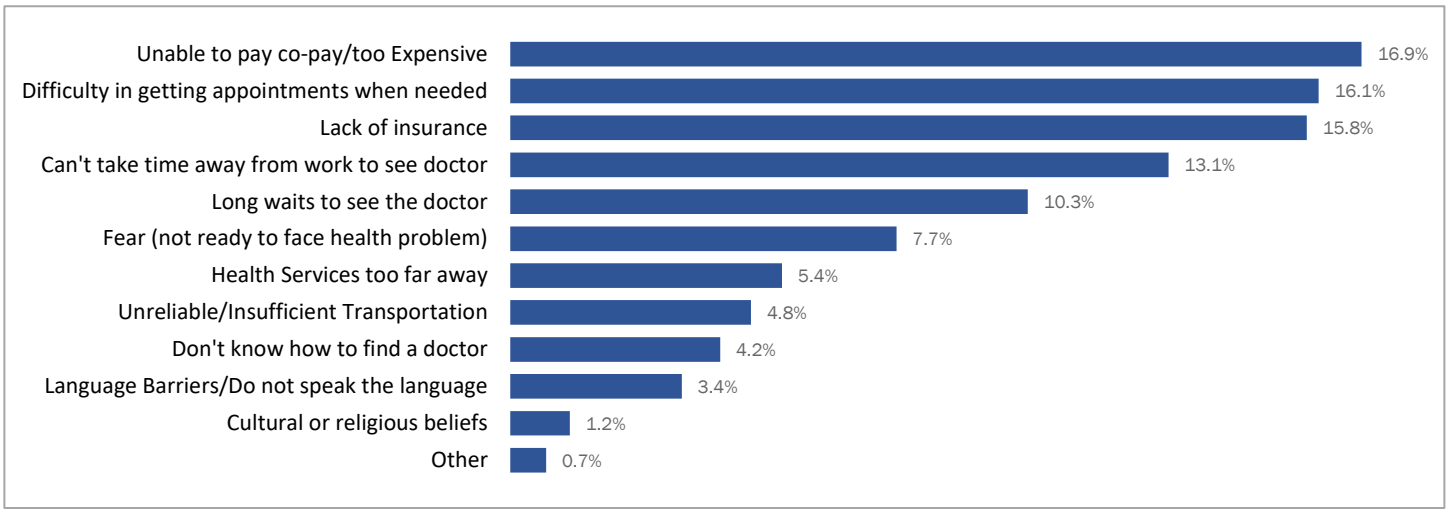
> "Access to primary care services for the underserved is foundational in allowing individuals to live fuller, more productive lives with little interference. Of most importance is that underserved populations suffer from a host of chronic conditions which, if not managed, will result in preventable emergency room visits and hospitalizations. Aside from the cost implications of the hospitalization for the patient and on our health-care system, it creates tremendous strain in other areas of the individual's life such as employment, productivity, and mental health. For example, an uncontrolled diabetic patient who ends up in the hospital after a heart attack will most likely have lost his job during that hospital stay. Being that the health care issues are chronic, this vicious cycle will continue until we prioritize preventative health and increase access to primary care services for the underserved." (A. Ebeid, San Jose Clinic)

Barriers to Accessing Primary Care

Despite the importance of accessing quality primary care services, many people face a variety of barriers that hinder their ability to access these services. In the United States, the most common barriers include lack of health insurance, inability to take time off work to attend appointments, geographic and transportation-related barriers, a shortage of primary care providers, language-related barriers, and disabilities.[cxxv] These align with findings in the 2022 Houston Methodist community health needs assessment survey. Respondents indicated the top three barriers that prevent them from seeking medical treatment included cost, inability to get an appointment, and lack of health insurance.[cxxvi] See figure 38 for rankings based on survey participants' feedback. A more in-depth discussion of the top barriers related to affordability, physician shortages and other non-financial barriers such as transportation will follow.

Figure 38. Biggest Barriers to Seeking Medical Treatment

Q: What are the top 3 biggest barriers that prevent you and/or your immediate family from seeking medical treatment? (N =884)



Source: Houston Methodist Community Health Needs Assessment Survey (2022)

Insurance & Cost

Despite the United States leading the world in health care spending, many Americans cannot afford health insurance. Even insured individuals experience cost-related barriers to care. More than 30 million Americans are uninsured. In Texas, at least 4.8 million (17%) people are uninsured. The cost of health care and insurance coverage are interdependent barriers impacted by the changing health care and political landscape.[cxxvii]

Within the Houston Methodist Clear Lake Hospital community, 15% of the Galveston County population lacks health insurance, ranking close to the state average (17%), which is one of the highest in the nation. Harris county exceeds the state average, with 20% of the population uninsured.[cxxviii] In the 2022 Houston Methodist community health needs assessment survey, lack of insurance was cited as one of the top three biggest barriers to seeking medical treatment with 28% of respondents mentioning it as a barrier.[cxxix] Considering insurance is what helps make health care affordable, the number one response of medical care being too expensive can have a major correlation to the uninsured rate in the community.

Although the 2010 Patient Protection and Affordable Care Act aimed to increase the availability of affordable health insurance in the United States, there are still many individuals who remain uninsured. Its implementation led to an increase in insurance coverage in Texas, with more than 1 million Texans receiving coverage. However, Texas' rejection of the state Medicaid expansion resulted in an estimated $100 billion in federal funding left on the table over the next decade. In 2019, lawmakers unsuccessfully introduced bills to expand Medicaid in the state. If Texas expanded Medicaid, an estimated 1.2 million uninsured Texans would qualify for Medicaid coverage which would improve access to primary care.[cxxx]

Due to the lack of expansion of Medicaid in Texas, residents in Texas, as well as other states, have limited eligibility resulting in a coverage gap. Some adults earn too much to qualify for the state's Medicaid threshold but not enough to meet the criteria for financial assistance through the Affordable Care Act's marketplace. These individuals are left stuck between two income eligibility lines and with little support for purchasing insurance. Nationally, more than 2 million uninsured adults, and in Texas, more than 750,000 Texans, fall into the Medicaid coverage gap.[cxxxi, cxxxii]

The uninsured have less access to care than those who are insured. Nearly one-third of uninsured individuals forego medical care due to cost. They are also less likely than those with insurance to obtain preventive care and treatment for chronic illness and major health conditions. Uninsured individuals who do have access to providers often cannot afford to obtain recommended treatments or follow-up care.[cxxxiii] In the 2022 Houston

Methodist community health needs assessment survey, affordability was the top barrier to seeking medical treatment reported by respondents.[cxxxiv]
Adults living below the federal poverty level (FPL) are also more likely to forego medical care due to cost. In a recent study, 15% of adults living below 200% FPL reported delaying and/or going without medical care in the last year. Those living below the FPL are at the highest risk of being uninsured compared to the general population (under the age of 65). The uninsured are not the only ones impacted by the high cost of health care. Those who are insured, especially those with high deductibles, as well as people with poor health, are particularly burdened by cost. For example, families living below 200% FPL with employer-based coverage spend a significantly higher percentage of their household income on premiums and out-of-pocket medical costs compared to higher income families.[cxxxv]

Physician Shortages

Access to primary care is also impacted by physician availability. Currently, primary care providers comprise 30% of the total physician workforce.[cxxxvi] The growing, aging population is leading to an increased demand for physicians in the United States and is a primary driver for future primary care provider shortages. By 2033, the general population is expected to grow by nearly 10.5%; the 65+ population will increase by 45.1%. The national projected physician shortage is estimated to be between 21,400 and 55,200 physicians by 2033. Additionally, more than 40% of physicians will be 65 or older within the next decade implying higher likelihood of retirement. Retirement in addition to factors such as physician burnout impact the availability of physicians.[cxxxvii]

From a state perspective, Texas ranks 41st in the nation in the number of active physicians per 100,000 population.[cxxxviii] This includes active physicians with a doctor of medicine (MD) or a doctor of osteopathic medicine (OD) degree. The shortage of physicians is growing in Texas, and projections indicate that Graduate Medical Education (GME) will not produce enough physicians to meet the state's needs.[cxxxix] Specifically considering primary care physicians, the federal government's Health Resources and Services Administration reports that only five Texas counties have enough primary care physicians for their population. One of these five counties is Fort Bend county which is included in the Houston Methodist Clear Lake Hospital community. More than 80% of Texas counties are categorized as whole county shortage areas since there is fewer than one primary care physician for every 3,500 county residents.[cxl]

The Houston Methodist Clear Lake Hospital community experiences primary care physician shortages, although the severity varies within counties. The Texas Department of State Health Services ranks counties by their ratio of the population to primary care physicians. Harris county has one primary care physician to 1,128 individuals, which ranks slightly lower than Galveston county (1:1,450). See table 6 for details.[cxli] Rates vary within counties as well. In Harris county, ZIP codes showing the greatest need for more primary care providers were primarily located in the north, northwest and southeast parts of the county according to one study.[cxlii]

Table 6. Houston Methodist Clear Lake Hospital Community
Primary Care Physicians by County, 2020

County	Primary Care Physician Total	2020 Population	Ratio of Population to One Primary Care Physician	Rank – Ratio Of County Population to PCP *
Galveston	245	355,196	1,450	58
Harris	4,416	4,978,845	1,128	35

**Out of 220 counties with data*

Source: United States Department of Health and Human Services (2020)

The shortages warrant attention as an increase in supply of primary care physicians is directly associated with improved health outcomes on many fronts including cancer, heart disease, stroke, infant mortality, low birth weight, and life expectancy.[cxliii] Despite efforts by health systems and the government, an expansion in education, and implementation of new efficiencies of care, the doctor shortage will remain a significant issue

both nationally and locally.[cxliv] Trevor Burt, MS, EdD., Vice President of Education Administration at Houston Methodist, explains:

> "While there are more medical schools opening in Texas and beyond, the concern remains with the failure to keep pace with new, Centers for Medicare & Medicaid (CMS) residency slots. The Houston Methodist Hospital Family Medicine and Internal Medicine residency programs continue to see robust and diverse applicants for the twenty-five collective, first year positions each year. As a System, we are looking to expand primary care residency positions in our regional hospitals. We remain hopeful that an expansion over the next several years will provide primary care training opportunities, as well as a pipeline for primary care physicians treating patients in our communities for years to come." (T. Burt, Houston Methodist)

Other Nonfinancial Barriers

In addition to insurance and affordability barriers and provider shortages, individuals face a multitude of other issues that affect their ability to access primary care. Health care systems are complex and can be difficult to navigate. In addition, work schedules, coupled with limited provider office hours, pose an issue to individuals who may not have sick leave benefits. Fear of losing wages may also factor into an individual's decision to seek primary care. One study showed that even when provided with sick leave, some workers may not take the leave due to lost wages.[cxlv] Among the Houston Methodist community stakeholders surveyed in the 2022 community health needs assessment survey, 23% of respondents reported that they couldn't take time off of work in order to go to the doctor.[cxlvi] Physical access issues also impact health seeking behavior. More than 3.6 million people in the United States are unable to obtain medical care due to transportation barriers. Barriers include travel distance, especially in rural areas, vehicle access, inadequate infrastructure, and transportation related costs.[cxlvii]

Research also shows that individuals who speak a language other than English at home may be less likely to access primary care and screening programs.[cxlviii] Palak Jalan, MHA, Chief Population Officer for Access Health, a local FQHC primarily serving Fort Bend county, describes the non-financial barriers that their patients experience:

> "Our patients face various barriers such as lack of transportation, lack of childcare and fear of losing wages in the pursuit of accessing care. These barriers impact everyday life and overall health, preventing them from visiting their primary care provider. This often exacerbates their medical conditions, and they end up needing more specialized, urgent, or emergent care which could have been prevented in the first place. Therefore, AccessHealth focuses on not just the medical, but social needs of patients to improve overall well-being." (P. Jalan, AccessHealth).

COVID-19 and Primary Care Access

Primary care practices played an important role in the COVID-19 pandemic, serving as the first point of contact for diagnosis and treatment for individuals infected with the virus, as well as providing primary prevention through vaccinations.[cxlix] However, the COVID-19 pandemic likely impacted access to care since employment and income decreased during this time, with Black/African Americans and Hispanic/Latinos being disproportionately affected by lost income compared to White/non-Hispanics.[cl, cli] Thirteen percent of respondents in the 2022 Houston Methodist community health needs assessment survey reported losing health insurance during the COVID-19 pandemic and 33% lost their job.

COVID related stay-at-home measures, and concerns about potential risk of infection at doctor's offices also impacted access and utilization during the pandemic. Twenty-six percent of participants in a 2020 National Health Interview Study reported delaying or foregoing care due to COVID-19. Delays in care were concentrated early on in the pandemic and rebounded slightly towards the end of 2020 but not enough to make up for missed care earlier in the year.[clii]

One trend that expanded during the pandemic is enhanced telemedicine practices. Telemedicine utilization increased from less than 1% of outpatient visits pre-pandemic to 13% of outpatient visits in the first six months

of the pandemic in 2020.[cliii] Telemedicine was a particularly effective practice given the COVID-19 risks and restrictions, as it can help facilitate access, reduce contact and therefore reduce the risk of disease transmission.[cliv] Additionally, telemedicine can help lessen the strain on health care facilities. El Centro de Corazón, a FQHC, is a strong proponent of telemedicine. Marcie Mir, LCSW, CEO, explains:

> "Telehealth plays a significant role in the provision of primary care services. So many of our patients face barriers to accessing care, so being able to be "seen" by a provider via telehealth removes these barriers. However, the challenge is that not all services are able to be done via telehealth; for example, well exams, in which the provider has to physically touch the patient for certain screenings and to hear one's lungs and heart". (M. Mir, El Centro de Corazón)

In addition to limitations due to the type of service that can be offered via telemedicine, gaps in technology use and access remain an issue for some patients. For example, among non-elderly adults with Medicaid, 25% did not use the internet and 40% reported not using email.[clv] This lack of usage may be related to access to internet service or smartphones, and/or individuals lacking the skills required to engage in telemedicine services.[clvi]

INCREASE ACCESS TO SPECIALTY CARE SERVICES TO SUPPORT CHRONIC CONDITION MANAGEMENT

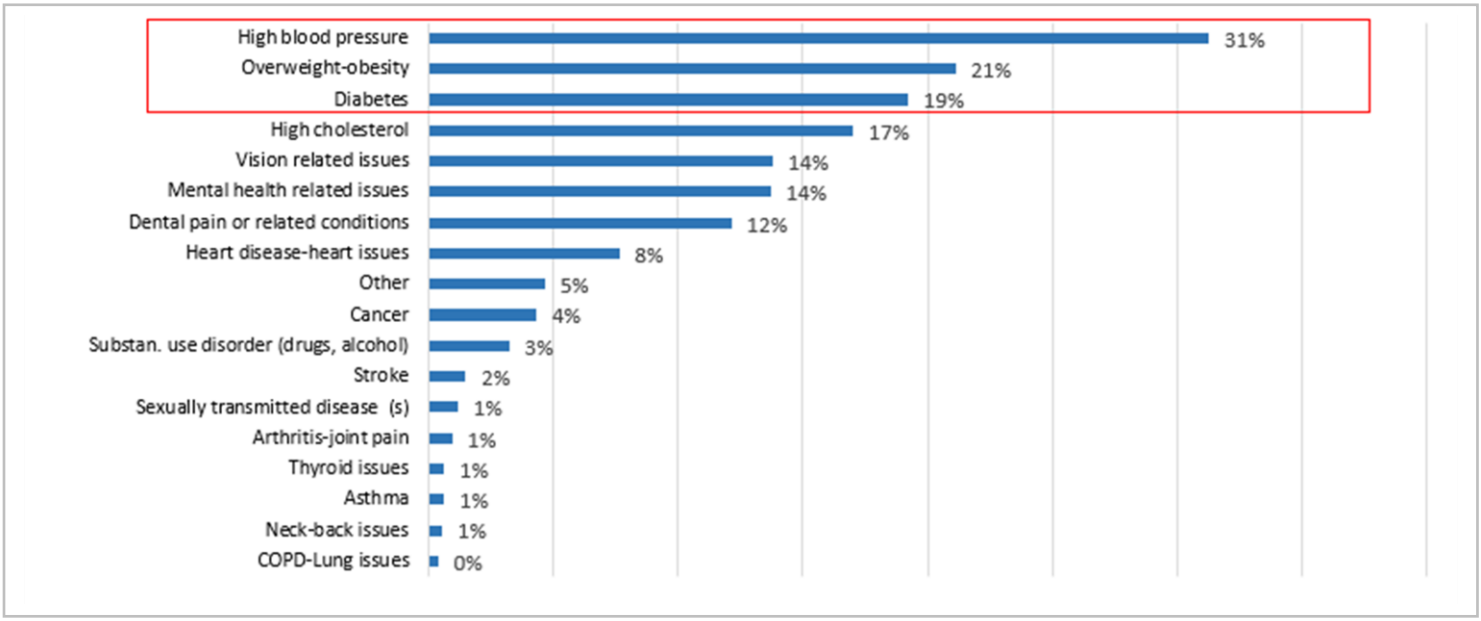
Prevalence and Effects of Chronic Disease

Chronic diseases are ongoing, generally incurable illnesses or conditions that require routine medical attention.[clvii] According to the CDC, 6 in 10 adults in the United States have a chronic disease and 4 in 10 adults have two or more.[clviii] Chronic diseases, which include heart disease, stroke, diabetes, cancer, respiratory diseases, arthritis, obesity, and oral diseases, are part of the 90% of the nation's $4.1 trillion in annual health care expenditures.[clix]

Chronic diseases affect different systems or organs in the body and may lead primary care physicians to refer a patient to a specialist for a more thorough evaluation. Along with treatment for newly diagnosed diseases, specialty care involves the management of ongoing, complex chronic diseases that may need frequent adjustments to medication or care by a physician who has been trained to deliver specialized treatments.

Tobacco use, consuming an unhealthy diet, lack of physical activity and excessive alcohol use are key risk factors for chronic diseases.[clx] These risk factors are why Houston Methodist has also prioritized the importance of promoting healthy living behaviors which will be addressed in a later section of this report. Chronic disease is prevalent within the Houston Methodist Clear Lake Hospital community. In Harris County, 29% of individuals have high blood pressure, 72% are considered overweight or obese and 12% have diabetes.[clxi] Similarly, those surveyed for the Houston Methodist community health needs assessment survey indicated the top three chronic diseases negatively impacting their health are high blood pressure, overweight – obesity, and diabetes. Figure 39 shows the results.

Figure 39: What are the current primary health conditions negatively impacting your health? (N = 1,270)



Source: Houston Methodist Community Health Needs Assessment survey (2022)

Most Common Specialty Care Needs

As previously described, some of the leading causes of death in Texas, Harris and Galveston counties include heart disease, cancer, stroke, chronic lower respiratory diseases, and diabetes. These chronic conditions are exacerbated by other medical complications, including high blood pressure, high cholesterol, poor nutrition, and obesity.

Working in tandem with a patient's primary care physician, specialty providers focus on supporting the management of these chronic conditions that are linked to causes of death. This section provides a brief overview on some of the specialties that address chronic disease management as well as critical community health issues (mental health, obstetrics and gynecology).

Cardiology

Cardiologists specialize in the prevention and treatment of diseases that can affect the cardiovascular system such as heart disease, heart arrhythmias and hypertension. In Harris County, nearly 30% of residents have high blood pressure and when left untreated, further complications can develop such as stroke, heart failure, kidney disease, vision loss, etc.[clxii, clxiii] Heart disease, the leading cause of death for women in the United States, encompasses several types of heart conditions including coronary heart disease which is the most common.[clxiv] Cardiologists can assist patients through the screening and monitoring of key risk factors that can affect the cardiovascular system, including a patient's body mass index, blood pressure, cholesterol, and blood sugar; which are all risk factors for heart disease.

Oncology

Oncologists, also called cancer specialists, treat and provide patients who are diagnosed with cancer. There are three major oncology areas based on treatment: medical oncology (treatment includes chemotherapy, immunotherapy and targeted therapy), radiation oncology (using high energy x-rays or other particles to destroy cancer cells) and surgical oncology (includes removing the tumor and nearby tissue).[clxv] In Harris County, the cancer incidence rate is 393.9 cases per 100,000 people.[clxvi]

Early detection is critical to cancer prevention and treatment. Screening tests aim to detect cancer early and reduce the chances of death due to cancer. Table 7 displays the most prevalent types of cancer and the associated screening test.[clxvii]

Table 7. Screening Tests for Most Prevalent Types of Cancer

Type of Cancer	Screening Test
Breast Cancer	Mammography
Cervical Cancer	Pap Test, HPV Test
Colorectal Cancer	Colonoscopy, Sigmoidoscopy, Stool Tests
Lung Cancer	Low-dose Helical Computed Tomography
Prostate Cancer	Prostate-specific antigen (PSA)

Source: National Cancer Institute (2022)

Endocrinology

Endocrinologists specialize in the care of individuals living with diabetes and other conditions affecting the endocrine system such as thyroid disorders, osteoporosis, growth hormone deficiency, cholesterol, high blood pressure, etc.[clxviii] Diabetes, which affects 10.3% of adults living in Harris County, can lead to other health complications like heart disease, vision loss and kidney disease.[clxix] There are two types of diabetes which are type 1 which is when the body does not make insulin, a hormone which regulates glucose in the blood and type 2 which is when a person does not have enough insulin or it does not work properly to regulate the glucose.[clxx] Due to diets, culture and genetics, Hispanics and Asians are at higher risk for diabetes.[clxxi] When left untreated, diabetes treatment requires specialized intervention and monitoring.[clxxii] Elevated blood pressure, high cholesterol and triglycerides, and increase in weight are precursors for diabetes and can be treated by an Endocrinologist.[clxxiii]

Pulmonology

Pulmonologists focus on treating patients with respiratory issues such as chronic lower respiratory disease which encompass chronic obstructive pulmonary disease (COPD), chronic bronchitis, emphysema, and asthma.[clxxiv] Causing shortness of breath and tightening in the chest, these diseases affect over 17% of the United States population with asthma impacting the most.[clxxv] In Harris County, 7% of adults have been diagnosed with asthma and 6% have been diagnosed with COPD.[clxxvi] Although there is no cure for these diseases, symptoms can be managed through medication.

Mental Health

Psychiatry and mental health focus on the diagnosis, treatment, and prevention of mental, emotional, and behavioral illnesses. Individuals seek help for numerous reasons such as panic attacks, hallucinations, thoughts of suicide, feelings of sadness, hopelessness, anxiousness, substance use, etc.[clxxvii] 19.7% of Harris County adults have battled depression at one time in their life.[clxxviii] Through various types of treatment, psychiatrists, licensed therapists and other types of mental health providers treat patients to help process stressors, emotions, and decision-making.[clxxix] Given the prioritizing of this health issue, the section Increase Access to Mental Health Care Services Within The Surrounding Underserved Community will explore the prevalence and impacts of this health condition and the services that support it.

Obstetrics & Gynecology

Obstetrics & Gynecology, commonly referred to as OB-GYN, is a branch of medicine that specializes in the care of women during pregnancy and childbirth and in the diagnosis and treatment of diseases of the female reproductive organs as well as other health issues such as menopause, hormone imbalance, and infertility.[clxxx] OB-GYN providers offer preventative care such as cervical cancer screenings, testing for Sexually Transmitted Diseases (STDs) and Sexually Transmitted Infections (STIs) as well as the management of endometriosis, uterine fibroids and polycystic ovarian syndrome (PCOS).

Obstetrics focuses on pregnancy, childbirth, postpartum and the care of women giving birth. Early prenatal care is critical for the well-being of the woman and baby. In the United States, those who are born to mothers that do not get prenatal care are three times more likely to have low birth weight and five times more likely to die than those born to mothers who do get prenatal care.[clxxxi] In Texas, 20% of infant deaths (301) were related to disorders related to short gestation and low birth weight and maternal complications (122) of pregnancy.[clxxxii] In 2019, 30% of women in Texas received prenatal care in the second or third trimester while four percent received no prenatal care throughout their pregnancy.[clxxxiii]

Women can also experience complications during pregnancy, childbirth and postpartum. Each year, more than 1,000 women die in the United States as a result of pregnancy or delivery complications.[clxxxiv] Health conditions such as cardiovascular problems, diabetes, high blood pressure, depression, anxiety, blood clots can cause maternal health problems during or after pregnancy. According to the National Center for Health Statistics, maternal mortality rates are higher for Black/African Americans at 69.9 deaths for every 100,000 births when compared to White/non-Hispanics and Hispanic at 26.6 and 28, (per 100,000 births) respectively.[clxxxv] In Texas specifically, the maternal death rate was higher for Black/African Americans at 42.6 (per 100,000 live births). White/non-Hispanics had a maternal death rate of 27.6 and a 19.2 rate for Hispanics.[clxxxvi]

Barriers to Accessing Specialty Care

As noted earlier, specialty care services are critical and frequently needed to help manage chronic diseases as well as other health conditions that arise. The additional services that are associated with seeing a specialist can eventually lead to barriers for individuals with a limited income or poor access. To better understand these hurdles, the following section will explore the most common barriers to accessing specialty care in the Houston Methodist Clear Lake Hospital community including the costs associated with health complications, how rural living affects one's health, and physician shortage and specialty care services demand.

Cost of Specialty Care

As leading causes of death, heart disease and stroke cost the United States healthcare system $216 billion per year; Diabetes, cancer, obesity and other chronic diseases, each, have an almost equal cost to the healthcare system.[clxxxvii] In 2020, uncompensated care in the United States was $42.6 billion and $3.4 billion in Texas.[clxxxviii, clxxxix] With increased testing, imaging, treatment, medication and surgical needs that can occur with specialists, specialty care can cause one to have extraordinary medical debt that can lead to bankruptcy. For example, in the United States, patients undergoing cancer treatment paid $5.6 billion in out of pocket cancer treatment which includes surgery, radiation and chemotherapy.[cxc] The New England Journal of Medicine states that it can cost Medicare Part D beneficiaries, who have been diagnosed with breast cancer

and do not qualify for low-income subsidies, approximately $12,000 per year for one medication.[cxci] National expenditures, which include attributable costs for medical services and oral prescription drugs, vary by type of cancer. In 2020, national expenditure for female breast cancer care was $29.8 billion. See table 8 for top five cancer sites and national expenditure costs.[cxcii]

Table 8. National Expenditure for Cancer Care in 2020

Cancer Site	Costs (in billions)
Female Breast	$29.8
Colorectal	$24.3
Lung	$23.8
Prostate	$22.3
Non-Hodgkin Lymphoma	$18.6

Source: National Cancer Institute (2020)

The average expense for specialty physicians is significantly higher than primary care, which is $186. Table 9 displays the average expenses for various specialties. Cardiology expenses are 80% higher at $335 and Orthopedics is 125% higher at $419.[cxciii] A patient who is uninsured will likely incur a majority of these costs when visiting the physician.

Table 9. Average expenses per Specialty

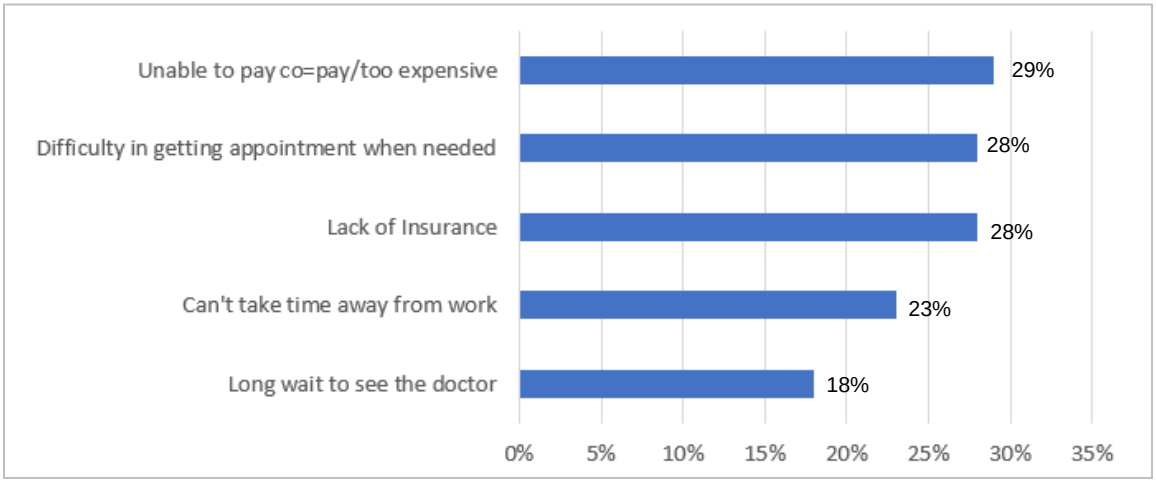
Specialty	Average Expense
Primary Care	$186
Dermatology	$268
Ophthalmology	$307
Cardiology	$335
Orthopedics	$419

Source: National Library of Medicine (2018)

Seventy-eight percent of those who are uninsured skipped or postponed medical care due to associated costs, which is 40% higher than those who are insured. Overall, Texans between the age of 18-64 find it more challenging to afford medical care and experience more difficulty in paying medical bills. As seen in the table above, disparities in specialty health care access also exist for minority racial and ethnic populations. Hispanic/Latinos are more likely to find it difficult to afford health care (58%) when compared to Black/African Americans (45%) and White/non-Hispanics (41%) as well as finding it more difficult to pay their medical bills.[cxciv]

These statistics are in alignment with those who were surveyed for the Houston Methodist community health needs assessment survey as respondents indicated that the top three barriers to seeking medical care are: the inability to pay co-pay/too expensive, difficulty in getting an appointment when needed and lack of insurance. See Figure 40 below.

Figure 40. Barriers to Seeking Medical Care
(n = 1,213)



Source: Houston Methodist Community Health Needs Assessment Survey (2022)

Challenges in Rural Living

An individual's residence can be a major factor in accessing health care. While urban areas have, on average, 263 specialists per 100,000 residents, rural areas have 30 specialists per 100,000 residents.[cxcv] In Texas, 75% of counties are designated as Health Professional Shortage Areas and/or Medically Underserved Areas which include 64 counties without a hospital and 25 counties without a primary care physician. Approximately 10% of the population (3 million) live in rural areas which have limited and inadequate access to affordable,

quality health care.[cxcvi] Karen Harwell, CPA, Chief Executive Officer for Lone Star Family Health Center, an FQHC serving the Montgomery County areas, outlines the challenges of providing health care in rural communities.

> "The most common challenges of access to care among rural patient populations are specialist-to-patient ratios (as well as primary care), long driving distances from care, cost, and access to reliable transportation. The disparity in the availability of specialists between rural and urban settings in Texas is lower than that of the PCP to patient ratio. We aim to address these disparities by upholding our current operations and continuously expanding our reach to more remote places. We also continue to offer telehealth post-pandemic as an option to patients. This is especially helpful for patients who have far to drive and those with limited access to transportation. As always, our sliding scale helps to address the cost barrier, allowing low-income patients to access quality care at an affordable price." (K. Harwell, Lone Star Family Health Center)

Chronic disease prevalence tends to be higher in rural areas when compared to urban areas. The prevalence of diabetes is 17% higher in rural areas than urban areas and obesity is 20% higher.[cxcvii] Over the past decade, 26 hospitals in 22 Texas rural communities have closed.[cxcviii] When these hospitals close, the ramifications are steep; recruitment of new specialty physicians, nurses and other health care professionals becomes challenging. Over time, as core establishments of the town begin to close, such as the primary care clinic, pharmacy, banks and grocery stores, recruitment of specialty physicians becomes more difficult.[cxcix]

Many residing in these rural areas are uninsured and have lower income which makes it more difficult to seek care outside of their town due to distance and affordability. Average per capita income in rural areas is $45,120, 22% less than the Texas average ($55,129).[cc] As the second largest state in the United States, many Texans drive far distances to see a specialist. A primary care physician located in Marfa, Texas – a town in West Texas, reports that most patients must drive six to 10 hours round trip to see a specialist physician.[cci]

Physician Shortage within Specialty Care

The Association of American Medical Colleges (AAMC) published a report in 2021 that outlines the looming physician shortage that the United States is currently facing. By 2034, there will be a non-primary care specialty physician shortage of 21,000 to 77,100 providers, which include surgical specialties, medical specialties, and other specialty physicians.[ccii] In Texas and the Gulf Coast region, vascular surgery, infectious disease, physical medicine and rehabilitation and nephrology are the specialties that will be in most demand.[cciii] Due to COVID-19 and the long-term effects caused by it, there is an even more increasing demand for infectious disease physicians.[cciv] Victor Fainstein, MD, FACP, FIDA, Medical Director and Senior Advisor HM Global Health care Services and Chairman Emeritus HMH Division of Infectious Diseases at Houston Methodist Hospital explains the necessity of infectious disease physicians.

> "Infectious disease specialists play a paramount role not just providing patient care, but especially understanding new illnesses via public health and basic research efforts. The need for these highly skilled specialists will continue to rapidly grow not just in USA but all over the world. Their extensive training, expertise and input into the health care system and indispensable." (V. Fainstein, Houston Methodist Hospital)

One of the reasons for the physician shortage is due to the aging population of the current workforce and the onset of retirement. Two out of five active physicians will be 65 or older within the next 10 years. Over 50% of pulmonology, cardiology, psychiatry, thoracic and orthopedic surgery, neurology, anesthesiology, ophthalmology, and urology physicians are currently above the age of 55. Another reason for a physician shortage is the medical school and residency selection of specialties. Between 2014-19, first-year residents and fellows increasingly specialized in sports medicine (+ 29.1%) and neurology (+25.2%), while large decreases occurred in ophthalmology (-10.9%), plastic surgery (-10.8%), and vascular and interventional radiology (-10.5%). Pediatric anesthesiology was increased by 53% and critical care medicine by 38%. There were large decreases in ophthalmology, plastic surgery, and vascular and interventional radiology.[ccv] In a

survey conducted by Merritt Hawkins, 38% of physicians said that due to COVID-19, they would like to retire within the next year.[ccvi]

Specialty Care and Service Demands

With the complimentary work that goes hand in hand with chronic disease management, primary care physicians work closely with specialist care physicians to help care for a patient, holistically. As the number of individuals with chronic diseases has increased over the years as well as an aging senior population, the demand for specialists has also increased. A 2022 study by Merritt Hawkins shows the increase in physician wait times by specialty. These lengthy wait times occur for a multitude of reasons including growth in population, the aging population and workforce, physician burnout due to demanding work quotes exacerbated by COVID-19, causing early retirement due to emotional and physical exhaustion, and the increased prevalence of chronic disease. See table 10 for appointment wait times in the Houston region, which includes the Houston Methodist Clear Lake Hospital community.[ccvii]

Table 10. Physician Appointment Wait Times: Houston, TX

Specialty	Shortest time to appt.	Longest time to appt.	Avg. time to appt.	Increase or decrease from 2017
Cardiology	2 days	105 days	23 days	↑ 92%
OB-GYN	3 days	114 days	30 days	↑ 11%
Orthopedic Surgery	1 days	44 days	11 days	↑ 10%

Source: Merritt Hawkins (2022)

Stephanie Jones-Wood, MPH, CPQH, Director of Provider Engagement and Resilience at Houston Methodist Hospital states the following regarding physician burn out.

> "Physician burnout can impact patient wait times for specialty care directly and indirectly. Directly, a burned-out physician may be less efficient in managing their patient load. This can result in overlooked patient needs, medication errors, or misdiagnosis – these are all a risk to patient safety and the emotional well-being of the physician. Further, a burned-out physician might order excessive tests or unnecessary procedures. Unnecessary testing and procedures burden the "system" and takes away patient care slots from other patients who may genuinely need them. Indirectly, the literature shows us that burned out physicians are more likely leave the field of medicine all together or retire early. This contributes to a workforce shortage of specialist physicians. With fewer specialists, patients may incur longer wait times when they need a specialty physician." (S. Jones-Wood, Houston Methodist Hospital)

At Harris Health System, the county's hospital system, wait times to see a specialist can be as high as four to six months due to backlogs and physician shortages.[ccviii] Those with Medicaid or who are underinsured/uninsured have the most difficulty accessing specialty care as they rely on health care access through FQHCs and/or charity clinics which are not required to provide specialty care services. Due to the limited scope of care that most community health centers practice, many clinics must create a wide network of referrals or physicians who will volunteer at the health center or see patients at little to no cost. Partnerships are built with larger hospital systems to target the most critical specialties that meet the patient's needs but can be restricted due to hospital limitations and/or the amount of time physicians can dedicate to these health centers each month. When physicians can see patients in their medical home, patients are less likely to have to navigate the complex health system for specialty care.

With minority groups having a higher prevalence of various chronic diseases and more social determinants of health barriers, such as economic stability (which includes lower income), there is a higher likelihood that they do not see a healthcare specialist for treatment. A study that looked at the rate of necessary invasive cardiac procedures for more than 10,000 cardiac patients, found differences in surgery across both race and gender: relative to white men, white women were 72% as likely to receive the recommended surgery, black men 67%, and black women just 50%. Studies have also shown, for example, that Black/African American and Hispanic patients less likely to be counselled on smoking cessation than white patients.[ccix]

COVID-19 and Ongoing Effects on Specialty Care Access

The landscape of health care delivery adapted quickly to challenges stemming from the pandemic. During lockdown, hospitals, health centers, and physician offices pivoted quickly to administer routine care for their patients, with many adopting a telemedicine model. Prior to COVID-19, only 2% of clinicians (excluding mental health physicians) adopted telemedicine. In the first six months of the pandemic, 13% of outpatient visits were conducted virtually; 67% of endocrinologists, 57% of gastroenterologists, 56% of neurologists began using telemedicine platforms to help patients manage their patient's conditions.[ccx, ccxi] A now more common practice, this mode of delivery helps increase access to see a medical specialist, especially for those who live in rural parts of the state. Telemedicine is also ideal for patients in need of standard check-ins with their physicians or for the review of basic lab results.

However, it also has some inherent barriers, especially with those who are older and/or low income. Nationally, the highest users of telehealth platforms were young adults between the ages of 18-24 (73%), those earning $100,000 (69%), those with private insurance (66%) and those who identified as White/Non-Hispanics (62%). The number falls significantly for those who do not have a high school diploma (38%), those age 65 and older (44%), and among minority groups, Black/African American (54%), Asian (51%), and Hispanic/Latino (51%). Telehealth visits, as compared to telephone visits, require more complex setup and internet access, which many low-income households do not have.[ccxii] In Texas, 22% of residents did not have a computer, tablet, or smartphone with internet access or did not know how to access the telehealth appointment. Those living in rural towns are also at a disadvantage with having strong internet broadband available with 20% not having internet to connect for their telehealth visits.[ccxiii]

COVID-19 further enhanced the challenges to accessing specialty care with low income and racial and ethnic minority communities being disproportionally impacted. When an appointment was available, many chose to continue working instead to pay for the food and other necessities that were scarce during that time. In the early months of the pandemic, 41% of U.S. adults delayed or avoided medical care which included both urgent and routine care, procedures, and diagnostic studies due to lockdown measures, fear of exposure to the virus or due to prior exposure. With these postponements, there was a delayed management of chronic diseases, routine vaccinations, detection of new conditions which can worsen current chronic conditions.[ccxiv] Table 11 shows the decrease of routine screening by type of cancer. In 2021, physicians saw more cases of advanced stages of cancer that could have been detected with routine care due to the delay in screening and diagnostic testing.[ccxv]

Table 11. Reduction in Routine Cancer Screenings

Type of Cancer	Percentage Decrease
Breast	85%
Colon	75%
Prostate	74%
Lung	56%

Source: American Society of Clinical Oncology (2020)

Underserved Populations and Specialty Care Access

Specialty care is necessary in the prevention and treatment of many chronic illnesses. As discussed, high healthcare costs, lack of insurance, access, and rural living are barriers to accessing specialists. As physicians begin to retire, recruitment for young graduates has proven to be difficult for some specialties, which impacts the number of physicians in certain areas and therefore limits the number of appointments that are available. The population that is most vulnerable and more susceptible to the barriers are those who are under and uninsured. These individuals are at higher risk of experiencing more social determinants of health challenges, such as education and economic stability, than those who are higher income and insured. These concepts will be discussed in detail within the "Social Determinants of Health" section below.

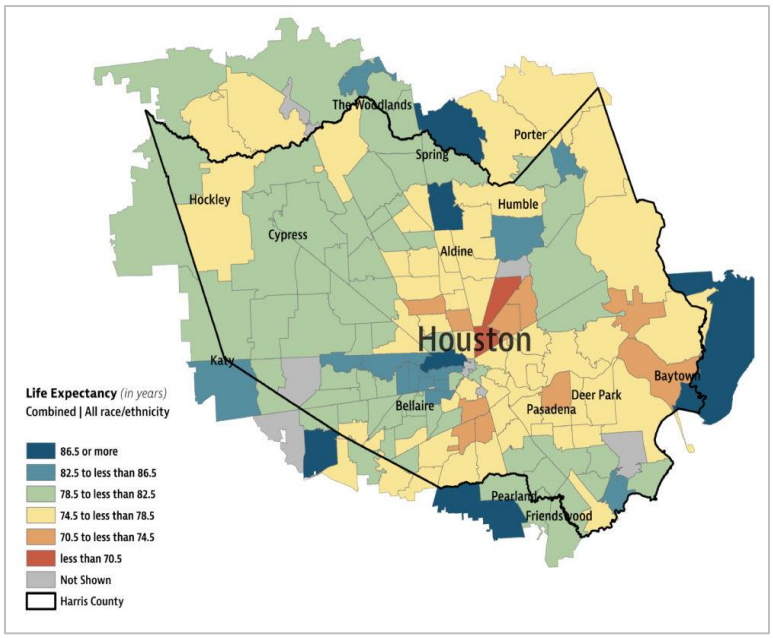
Living a Healthy Lifestyle and Its Impact on Well-being

The development of chronic diseases is mostly associated with unhealthy behaviors such as tobacco usage, substance use, low physical activity, poor nutrition and more. Such behaviors are often shaped by the environments in which we live, work, learn and play, also known as social determinants of health. The healthy or unhealthy living choices that people make can have a direct impact on chronic disease development and, ultimately, impact a person's overall life expectancy. The World Health Organization defines life expectancy, or life expectancy at birth (LEB) as the average number of years that a newborn could expect to live, if he or she were to pass through life exposed to the sex- and age-specific death rates prevailing at the time of his or her birth, for a specific year, in a given country, territory, or geographic area. Life expectancy reflects the overall mortality level of a population and is one of the most frequently used health status indicators. Gains in life expectancy can be attributed to a number of factors including better education, greater access to quality health care services, income level and can even be attributed to factors such as ZIP code that one resides in. In the following sections, the areas that Houston Methodist Clear Lake serves will be analyzed. The impact that the ZIP codes of Harris and Galveston Counties have its citizens life expectancy will be explored and then an in-depth outline of contributing factors to chronic condition development will be explored.

Life Expectancy

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. The life expectancy in Texas varies by as much as 30 years with a statewide life expectancy of 78.4 years. While Harris County is comparable with an average life expectancy of 79.2 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.[ccxvi] The life expectancy in Galveston County is 78 years of age.[ccxvii] 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 or highest income communities in Harris County. The life expectancy of this ZIP code is 84.9 years. In the city of Clear Lake which is where the Houston Methodist Clear Lake hospital is located, the ZIP 77058 has an average life expectancy of 83.1, which is 5 years greater compared to all of Harris county.[ccxviii] See figure 41 for an outline of how life expectancy varies by ZIP code in Harris County.

Figure 41. Houstonian Life Expectancy by ZIP Code



Source: UT Southwestern Medical Center (2019)

Life expectancy variations are enhanced when looked at by demographics such as gender or race and ethnicity. For example, in Harris County, though the overall life expectancy is 79.2, the life expectancy of Black/African Americans is only 74.1 followed by the next lowest life expectancy rate of White Non-Hispanics at 78.8. Comparatively, Hispanics have a life expectancy rate of 82.2 years with Asians at 86.6 years.[ccxix]

In general, life expectancy across the United States declined by 2.7 years between 2020-21 due to the COVID -19 pandemic as well as the growing opioid epidemic.[ccxx] In 2020, life expectancy at birth in the United States was 77 years old. In 2021, the average life expectancy declined to 76.1 years of age overall. This decline took the United States life expectancy to its lowest since 1996. The life expectancy of women in the United States dropped 0.8 years from 79.9 years in 2020 to 79.1 years in 2021, while the life expectancy for men dropped one full year from 74.2 to 73.2 years in 2021. American Indian-Alaskan Natives had the largest decrease in life expectancy in 2021 among all race/ethnicities with a decrease of 6.6 years from 2019-21 from 78.4 years to 71.8 years.[ccxxi] Deaths from the COVID-10 pandemic contributed to 50% of the decline in life expectancy from 2020-21.[ccxxii] It was widely recognized that those with chronic conditions were more susceptible to severe reactions when catching the virus. The CDC indicates heart disease, diabetes, cancer, chronic obstructive pulmonary disease, chronic kidney disease, and obesity are all conditions that increase the risk for severe illness from COVID-19.Other factors, including smoking and pregnancy, also increased the risk for severe illness.[ccxxiii] Considering 6 in 10 Americans have at least one chronic condition, you can make the connection of the impact on life expectancy in the country as a result of the pandemic.

Researchers from Harvard conducted a comprehensive analysis to examine how a healthy lifestyle is related to longer life expectancy that is free from major chronic disease. The study found adherence to five low-risk lifestyle-related factors, as seen in table 12:

Table 12. Lifestyle for Longer Life Expectancy

Category	Lifestyle for Longer Life Expectancy
Healthy Eating	Higher diet quality score (upper 40%)
Physical Activity	Moderate to vigorous physical activity at least 30 minutes a day
Weight Management	Body mass index between 18.5-24.9
Tobacco Usage	Never smoking
Alcohol Usage	Women: 5-15 g/day; Men 5-30 g/day

Source: Harvard (2021)

This report will explore how these five low-risk lifestyle factors can impact the Houston Methodist Clear Lake Hospital community when addressed and will expand on additional factors that can derail a person's ability to live a healthy life.

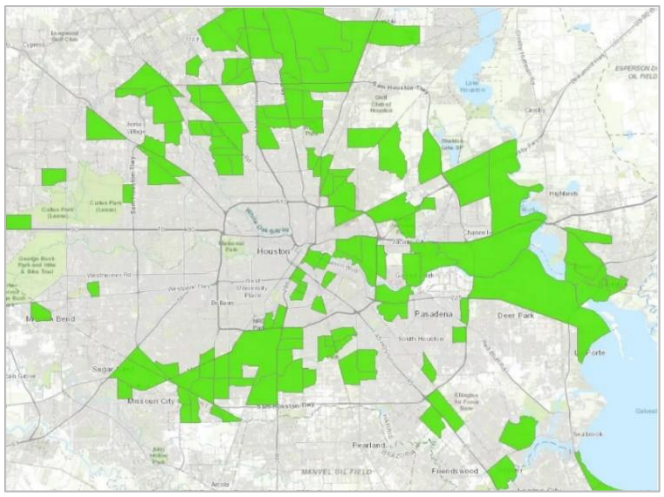
Healthy Eating

Proper nutrition is essential for keeping people healthy across their lifespans. A healthy diet helps children grow and develop properly and reduces their risk of chronic diseases, including obesity. People with healthy eating patterns live longer and have a lower risk of heart disease, type 2 diabetes, certain cancers, and being overweight and obese — all of which are leading causes of death in the primary county served by Houston Methodist Clear Lake Hospital. Healthy eating can help individuals with these chronic diseases manage their conditions and prevent disease-related complications. However, most Americans do not have a healthy diet. Diets in the United States are high in added sugars, sodium, and saturated fats, exacerbated by inexpensive, convenient, and widely available processed, fast food, and sugary drinks.[ccxxiv]. Angela Snyder MS, RD, LD, Senior Corporate Wellness Dietitian at Houston Methodist Wellness services highlights the levels of sugar consumption by adults in the United States:

> "Even though sugar intake in the United States has been on the decline over the past decade most people are still consuming well over the current recommendations. The majority of American's sugar intake is coming from added sugars in foods like soft drinks, sweetened coffee or tea, and snacks and desserts. We should aim to limit both frequency and portion of these foods and beverages. However, foods like whole fruit and milk products that contain natural sugars should be a regular part of a healthy diet. We know from research that consuming too much added sugar can lead to increased inflammation in the body, weight gain, increased risk for type 2 diabetes, and increased risk of heart disease. The goal is not to eliminate sugars from our diet, but rather limit these foods to small portions less often." (A. Snyder, Houston Methodist Wellness Services)

Fewer than 10% of adults eat the recommended daily amount of fruits and vegetables and 90% of Americans age two or older consume more than the recommended amount of sodium. In addition, 60% of young people aged two to 19 years and 50% of adults consume a sugary drink daily. The 2020-25 Dietary Guidelines for Americans recommends individuals two years and older keep their intake of added sugar to less than 10% of their daily calories and children younger than two years should not be fed foods and beverages with added sugars at all.[ccxxv]

Figure 42. Houston Underserved Areas with Low Access to Food



Micronutrients are dietary components, often referred to as vitamins and minerals, which although only required by the body in small amounts, are vital to development, disease prevention, and well-being. Micronutrients are not produced in the body and must be derived from the diet. Deficiencies in micronutrients such as iron, iodine, Vitamin A, folate, and zinc can have devastating consequences. For instance, iron deficiency increases the risk of maternal and perinatal mortality as well as low birth weight. Iron deficiency in adults can cause restless leg syndrome, a condition that causes unpleasant or uncomfortable sensations in the legs, as well as an irresistible urge to move them.[ccxxvi] Deficiency in B vitamins, water soluble vitamins which are important for maintaining cell metabolism, generation of red blood cells and assist with keeping individuals energized, are linked to lesions in and around the mouth, commonly referred to as canker sores.[ccxxvii, ccxxviii] Vitamin A is necessary to support healthy eyesight and immune system functions. Adults who are deficient in Vitamin A are at risk for a condition known as night blindness, which reduces their ability to see in low light or darkness. This can eventually damage the cornea and ultimately lead to blindness.[ccxxix] A diet that provides an insufficient intake of vitamins and minerals can cause several symptoms that can result in a lower quality of life. Increasing your intake of foods rich in the appropriate micronutrients can help resolve or greatly reduce the likelihood of developing adverse health outcomes.[ccxxx]

Access to foods that support healthy eating patterns contributes to an individual's health throughout their life by lowering the risk of chronic disease. Within many Houston neighborhoods, the lack of access to healthy foods such as fresh fruits, vegetables, and whole grains, combined with low household income, and other factors such as transportation, time, ability, and proclivity to cook, make food insecurity and food deserts a reality for many individuals and strongly impacts individual and community health.[ccxxxi] Sandra Wicoff, Chief Executive Officer of Target Hunger expresses the impact that food deserts have on individuals:

> "When you look at the overall health of an individual, all social determinants of health are relevant, including food insecurity and the availability of healthy food. When someone lives in a food desert, it means that they have low or no access to nutritious food, especially fruits and vegetables, as grocery stores are far away and typically offer a low-quality selection. This is more common in low socioeconomic areas and impacts individuals in negative ways. The inaccessibility of healthy food, in addition to the higher cost, makes it much more difficult to lead a healthy lifestyle and break the cycle of poverty." (S. Wicoff, Target Hunger)

Food Accessibility: Geographic areas 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 have been defined by the United States Department of Agriculture (USDA) as food deserts. 'Low income' tracts are defined as those where at least 20% of the people have income at or below the federal poverty levels, or where the median family income for the tract is at or below 80% of the surrounding area's median family income.[ccxxxii] Food deserts are most commonly measured by the following indicators of access: accessibility to sources of healthy food, individual-level resources that may affect accessibility, and neighborhood-level indicators of resources. Figure 42 shows the highlighted green areas as communities in greater Houston with low access to food. 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 but, also makes it difficult for those who do not have food venues with healthy choices within walking distance. In the 2022 Houston Methodist community health needs assessment survey 11.44% of Houston Methodist survey respondents indicated that a lack of transportation options had deterred them from getting to food venues with healthy choices. Sandra Wicoff expresses the issues with how the lack of transportation in Houston impacts access to health foods:

> "Lack of transportation negative impacts access. With grocery stores at least a mile away in urban food deserts, and often much farther, lack of transportation exacerbates issues such as carrying multiple bags of heavy groceries; food safety concerns for cold or frozen items during extended travel periods; and all concerns about having young children in tow." (S. Wicoff, Target Hunger)

When healthy options are not available, most settle for foods that are high in calories and low in nutritional value. These types of foods tend to be less expensive and sold in non-grocery store settings such as fast-food restaurants and convenience stores which are more prevalent. Altogether, these barriers limit access to foods that support healthy eating patterns. Over 500,000 Houstonians live in USDA-designated food desert areas.[ccxxxiii]

Source: USDA Economic Research Service (2021)

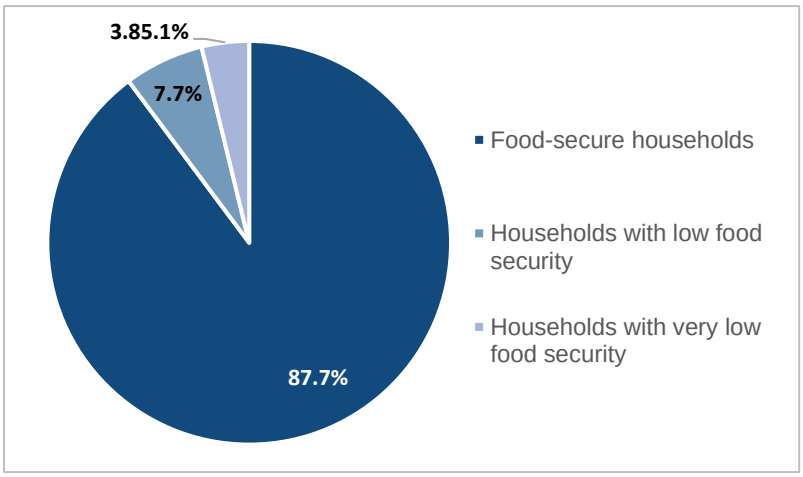
Lack of access to nutritious foods are often characterized by the term food insecurity. As defined by the United States Department of Agriculture (USDA), food insecurity is a household-level economic and social condition of limited and uncertain access to adequate food that is associated with low incomes. Maintaining a healthy diet requires nutritious food to be not only accessible geographically but also affordable. When looking at affordability, nationally, the USDA estimates Americans have spent an average of 10.3% of their income on food, spread evenly across food prepared at home and food eaten outside of the home.[ccxxxiv] However, a 2018 study conducted by the Centers for Disease Control suggests the national may be higher suggesting people in rural communities spend 19% of their household income and people in urban communities spending roughly 17% of their household income on food. Altogether, these barriers limit access to foods that support healthy eating patterns.[ccxxxv]

Texas is ranked as one of the 11 states with a food insecurity rate higher than the national average per the USDA (13.1%).[ccxxxvi]Per a Rice University 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 was 4 percentage points above the reported national average at the time.[ccxxxvii] 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.[ccxxxviii] In 2021, Galveston County had a 13.9% rate of food insecurity. [ccxxxix]

Food Insecurity Impact on Youth: Children not having access to nutritious food during this important developmental period can have adverse effects for a lifetime. Per Feeding America 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.[ccxl]

Figure 43. U.S. Households by Food Security Status

Health Outcomes of the Food Insecure:



Source: USDA (2022)

People unable to consume a nutrient-rich diet contributes to the development of obesity, heart disease, hypertension, diabetes, and other chronic diseases. As seen in Figure 43, 7.7% (10.2 million) of United States households had low food security, and 5.1% (6.8 million) had very low food security in 2022. Low food security households obtained enough food to avoid substantially disrupting their eating patterns or reducing food intake by using a variety of coping strategies such as eating less varied diets, participating in federal food assistance programs, or getting food from community panties. In very low food security homes, one or more household members had their normal eating patterns disrupted and food intake was reduced at times during the year due to insufficient funds or other resources for food.[ccxli] The National Poll on Healthy Aging conducted a survey in 2019 among individuals aged 50-80 years to understand the relationship between food insecurity and chronic diseases. The study found that food insecurity was positively associated with multiple chronic conditions.[ccxlii] Adults in households with low food security were 15.3% more likely to have a chronic illness such as hypertension or diabetes.[ccxliii] Adults who eat unhealthy diets as a result of food insecurity have a higher risk of obesity, heart disease, type 2 diabetes, and certain cancers.[ccxliv] According to Feeding Texas, 11% of households with seniors in Texas face food insecurity. Adults 60+ have a higher prevalence of food insecurity when they have a disability and live alone. This age group also report skipping meals due to factors such as inability to afford food. [ccxlv] Food banks and pantries exist across Texas to address food security for people of all ages. These food banks provide nourishing food from farmers, hunters, manufactures and retailers by distributing donated and purchased groceries to food insecure families.[ccxlvi] Considering the lack of access to nutritious meals due to barriers such as finances or environment, food banks are intentional about providing healthy food options that promote nutrition and heart health for clients to reduce the onset of chronic conditions as a result of unhealthy eating habits.[ccxlvii]

Physical Activity

Although there are genetic, behavioral, metabolic, and hormonal influences on body weight, obesity is caused by an energy imbalance that occurs when you take in more calories than you burn through exercise and normal daily activities, which results in one's body storing those excess calories as fat. This can lead to obesity, which is a medical problem that increases the risk of other diseases and health problems, such as heart disease, diabetes, high blood pressure, and certain cancers.[ccxlviii] In 2019, 29.6% of Houstonian adults reported as sedentary, not participating in any physical activities other than their regular job during the past month.[ccxlix] According to the CDC, in 2020, only 46.9% of adults met the Physical Activity Guidelines for aerobic physical activity, in the United States. [ccl]

An overwhelming amount of scientific and medical literature supports the concept that daily habits and actions exert an enormous impact on short-term and long-term health and quality of life. In adults, a single bout of moderate-to-vigorous physical activity provides immediate benefits for your health including improved sleep quality, less feelings of anxiety, reduced blood pressure, and a boost in immune function. The long-term effects of regular physical activity provide additional important health benefits for chronic disease preventions such as, reducing the risk of developing dementia, depression, heart disease, stroke, and type 2 diabetes, cancer, the weight gain and improves bone health. A meta-analysis of observational studies concluded that

physically active adults had a 35% lower risk of cognitive decline compared with those who were physically inactive.[ccli] Regular exercise releases feel-good endorphins, natural cannabis-like brain chemicals and other natural brain chemicals that can enhance your sense of well-being. A recent study by Harvard School of Public Health found that running for 15 minutes a day or walking for an hour reduces the risk of major depression by 26%.[cclii] Regular physical activity can help keep one's thinking, learning, and judgement skills sharp with age.[ccliii] However, only about 1 in 4 adults and 1 in 6 high school students fully meets physical activity guidelines for aerobic activities, as seen in figure 44. In 2021 25.6% of Texans reported no physical activity or exercise other than their regular job in the past 30 days. In 2021, individuals age 18-44 had the lowest rate at 20.7%. Those ages 45-64 had a slightly higher rate at 26.7% and individuals over 65 had a rate of 34.2%. Also, women had a higher rate at 27.1% than men at 23%. Individuals who made $75,000 or more per year had the lowest rate at 14.8% and adults that made less than $25,000 per year, almost tripled that with a rate of 40.8%.[ccliv]

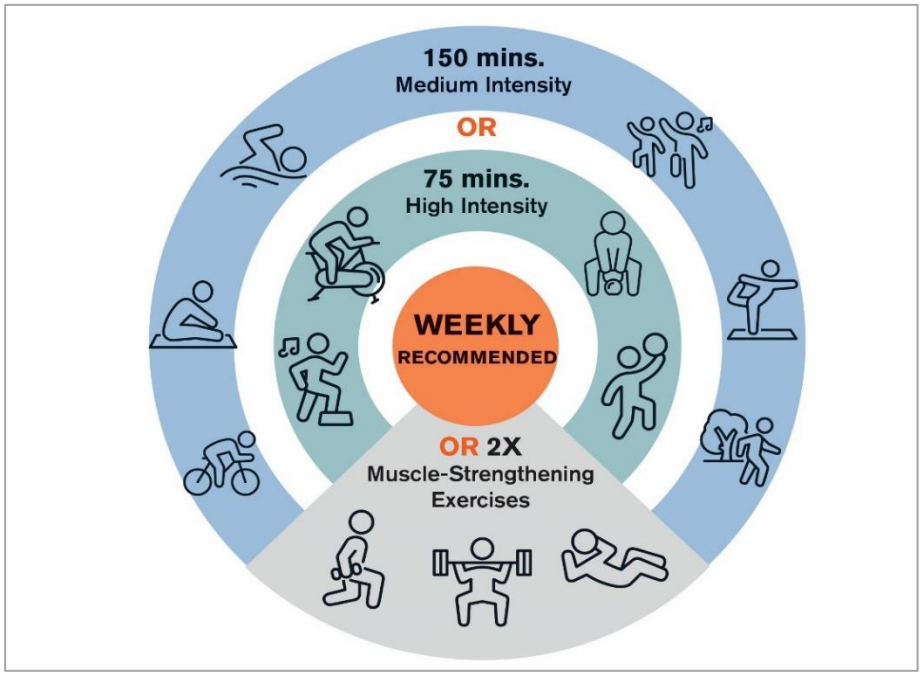
Figure 44. Activity Guidelines for Aerobic Activities

Source: America's Health Rankings (2021)

Costs of Physical Inactivity: Being physically inactive costs Americans hundreds of dollars each year. Inadequate levels of physical activity are associated with $117 billion in annual health care costs in the United States, representing about 11% of the total. If adults increased their average physical activity participation by just 10 minutes per day, over 110,000 lives per year could be saved. People who start to exercise before or during middle age typically see anywhere from $824 to $1,874 annually on health care costs after retirement, and the earlier they start their workouts, the greater those savings can be. This is due to, in large part, needing fewer doctor visits and medications. A recent study by the National Cancer Institute found that men and women who reported exercising moderately throughout their lives (walking or otherwise being in motion a few hours most weeks), saved an average of $1,350 annually, or about 16%, on health care expenses after reaching age 65 compared to sedentary people. This data shows that being active earlier in life may have especially potent and lingering impacts on health care costs as individuals age.[cclv]

Recommended Amount of Physical Activity: To promote and maintain health, the World Health Organization recommends that adults aged 18-64 engage in vigorous physical activity at 75-150 minutes per week through exercises such as yoga or walking briskly. Alternatively, adults can also perform moderate exercise for 150-300 minutes per week through running to achieve the same health benefits. Figure 45 below depicts the recommended physical activity levels for adults. However, 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. The 2022 community health needs assessment survey reported 23.52% of those who took the survey did not exercise for a total of 2.5 hours or more per week. Maria

Figure 45. Recommended Physical Activity per Week



Source: WHO (2022)

Vidal-Michel, MS, CHES, CWC, Manager of Employee Wellness Services at Houston Methodist gives insight into the benefits of being physically active:

> "Physical activity not only helps us live longer, but also significantly improves our quality of life. We are better able to prevent chronic diseases, some cancers and osteoporosis, manage our weight and improve brain health and mobility. Adults need at least 150 minutes of activity per week, which is approximately 30 minutes per day. If that seems overwhelming, try starting with 10-15 minutes and increase from there. It is also acceptable to do three 10-minite bouts of activity per day to improve blood pressure levels and improve heart health. The most important think is finding something you and enjoy and sticking with it." (M. Vidal-Michel, Houston Methodist Wellness Services)

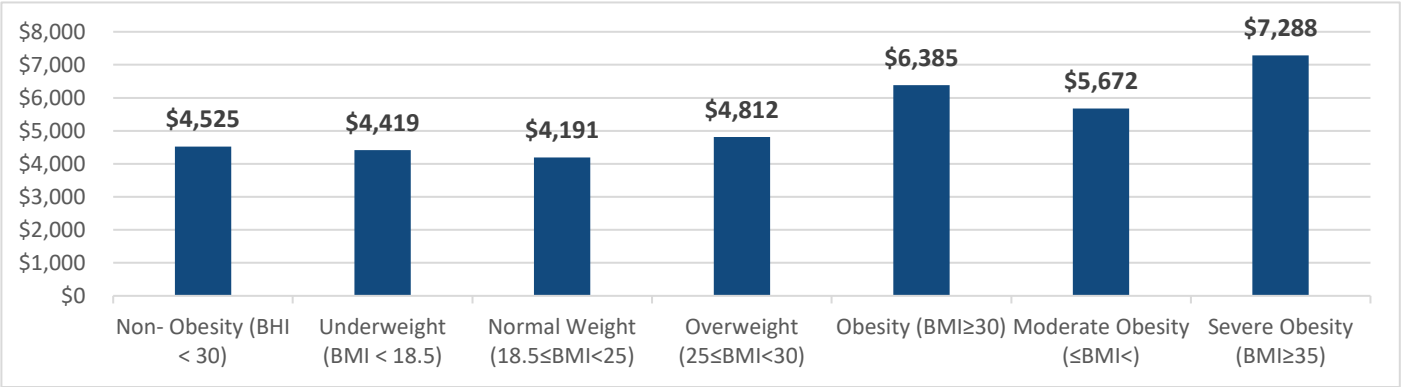
Barriers to Physical Activity: While individuals make the final choice about whether to be physically active, they can face challenges that make this choice more difficult. They may not know about or have access to safe places to be physically active, may live in communities not designed for activity, or may have chronic conditions or physical limitations that create additional barriers.[cclvi] Additionally, when asked on the 2022 community health needs assessment survey about factors negatively impacting the community, 13.60% of respondents reported lack of green space and parks/recreation. In looking specifically at individuals with household incomes at $25,000 - $35,000, 17.26% reported this reasoning as a barrier negatively impacting their community. Individuals are more likely to visit a park if they do not have to get in a car or use public transportation to get there.[cclvii] However, only 58% of people can walk to a park within 10 minutes in the Greater Houston Area. Texas Health and Human Services also attributes environmental changes, such as urban sprawl, and less physical education in schools as a barrier to physical activity.[cclviii] For inactive adults, replacing sedentary behavior with light-intensity physical activity is likely to produce health benefits.[cclix] Despite all of the known benefits, the majority of Texans do not get enough physical activity on a daily basis. Between 2017-20, 27.5% of Texas were considered physically inactive meaning they did no physical activity outside of their regular job.[cclx] Of those in Galveston county, 30.1% reported having no leisure-time physical activity.[cclxi]

Maintaining a Healthy Body Weight

Being overweight and obese are increasingly common conditions in the United States and may cause the following complications: death, sleep apnea, breathing problems, mental illness, and body pain or difficulty with physical functioning. Obesity is a complex disease involving an excessive amount of body fat. Obesity and being overweight can be caused by a variety of factors such as when people eat more calories than they burn through physical activity, environments (ex. limited access to healthy foods, lack of parks, large food portions, etc.), genetics, stress, and health conditions and medication.[cclxii] Adults who have a body mass index (BMI) of 30 or higher are considered obese. While obesity is not a primary cause of death, it is a leading contributor to a number of potentially serious health problems including coronary heart disease, type 2 diabetes, digestive problems, and certain cancers (uterine, cervical, ovarian, breast, colon, rectum, esophageal, liver, gallbladder, pancreatic, kidney and prostate). Additionally, regarding population health outcomes, the percentage of overweight and obese adults is an indicator of the overall health and lifestyle of a community and carries significant economic costs due to increased health care spending and lost earnings.[cclxiii] Seven out of ten adults and three out of ten children in the United states are currently overweight or obese, and the prevalence continues to rise, with half of adults projected to be living with obesity by 2030.[cclxiv]

Cost of Obesity and Being Overweight: With obesity on the rise in the United States, so is the cost of health care. In a recent study, researchers found, higher costs in general for females and the lowest expenditures occurring at a BMI of 20.5 for females and 23.5 for males. Above a BMI of 30, predicted costs continued to increase linearly, which each one-unit increase in BMI associated with an additional cost of $253 per person on average. Obesity was associated with $1,861 in excess annual medical costs per person, accounting for

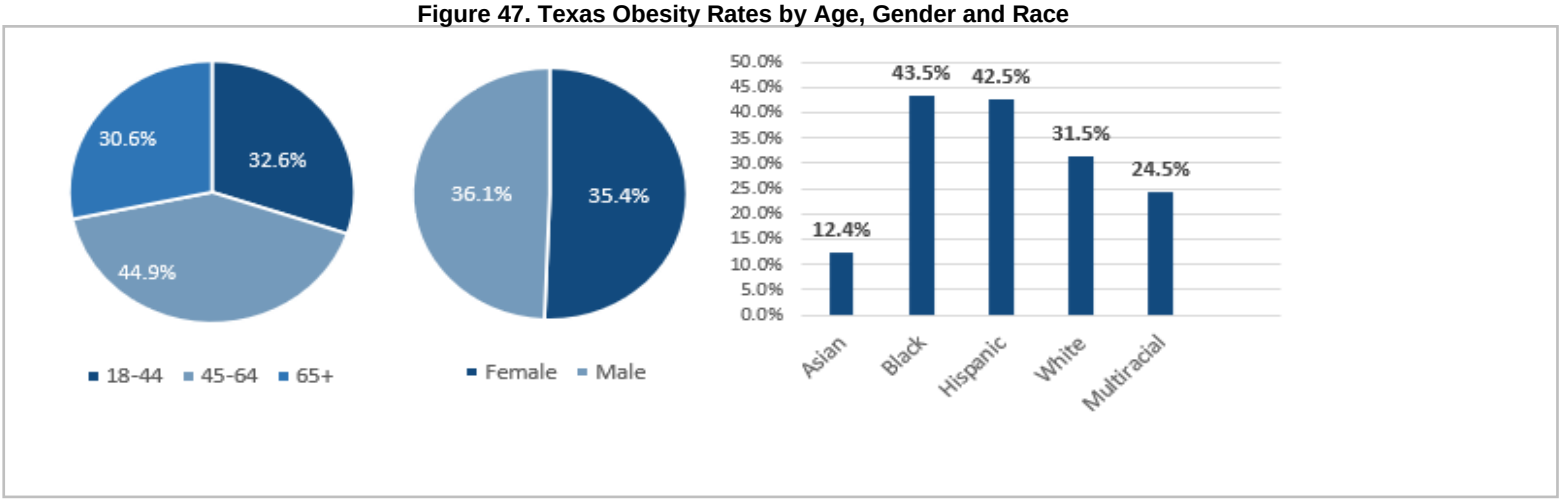
Figure 46. Total and Excess Annual Medical Expenditures by BMI Category ($US 2019)



Source: Harvard T.H. Chan School of Public Health (2021)

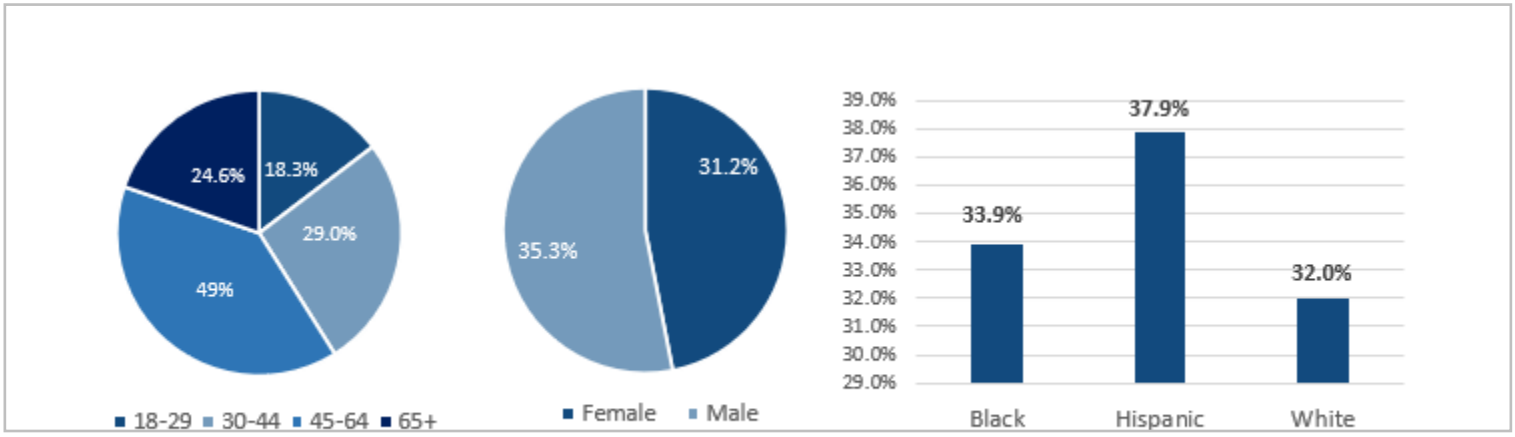
nearly $173 million of annual spending in the United States. Most of these costs were from individuals with severe obesity, who have excess annual costs of over $7,288. Additionally, being overweight was associated with over $4,812 per person in excess cost, contribution to $50 billion in medical spending per year. Figure 46 shows the estimated BMI-related medical expenditures in adults, ages 18-64 in the United States.[cclxv] From 2017-20, the obesity rate in the United States increased from 30.5% to 41.9%. During the same time, the prevalence of severe obesity, having a Body Mass Index of 40 or higher, increased from 4.7% to 9.2%.[cclxvi] Data also shows that disparities in obesity rates exist between race and ethnicity, age and gender. Nationally, adults who identified as Hispanic/Latino and Black/African American had a higher prevalence of obesity at 36.6% and 41.6%, respectively, compared to White/Non-Hispanic adults at 30.7%.[cclxvii] Obesity rates are lower among Asian adults at 11.8%. At the state level, Texas had a higher obesity rate with 34.8% of Texans being obese.[cclxviii] Texas Hispanic/Latino and Black/African-American adults had higher obesity rates at Texas Hispanic/Latino and Black/African-American adults had higher obesity rates at 42.5% and 43.5%, respectively, than White/Non-Hispanic adults (31.5%) and Asian adults (12.4%).[cclxix] In addition, adults between the age of 45- 64 and females tend to have higher obesity rates, Figure 45 notes the obesity rate distributions among age, sex and race in Texas.

Figure 47. Texas Obesity Rates by Age, Gender and Race



Source: America's Health Rankings (2022)

Figure 48. Harris County Obesity Rates by Age and Gender and Race



Source: Houston State of Health (2022)

Tobacco and Nicotine Use

Smoking remains the leading cause of preventable death and disease in the United States, killing more than 480,000 Americans each year. Smoking causes immediate damage to your body, which can lead to long-term health problems.[cclxx] Currently, more than 16 million Americans are living with a disease caused by smoking. According to the CDC, smoking causes cancer, heart disease, stroke, lung diseases, diabetes, and chronic obstructive pulmonary disease (COPD), which includes emphysema and chronic bronchitis. Smoking also increases the risk for tuberculosis, certain eye diseases, and immune system problems, including rheumatoid arthritis.[cclxxi] In addition, smokeless tobacco causes a number of serious oral health problems, including cancer of the mouth and gums, periodontitis, and tooth loss. [cclxxii] Texas has a lower smoking rate than the United States as a whole with 13.2% of Texans identifying as smokers compared to 15.5% of the rest of the country. This is in alignment with the findings from the 2022 community health needs assessment where 13.62% of respondents reported they smoke, vape, or chew tobacco.

Traditionally, tobacco products were used by smoking cigarettes or chewing tobacco. However, in the recent decade, e-cigarettes have become popular, especially amongst young people. Many young people use e-cigarettes, an electronic device that heats a liquid and produces an aerosol or mix of small particles in the air. E-cigarettes are known by many different names including e-cigs and vapes. E-cigarettes contain nicotine, which is highly addictive and can harm adolescent brain including parts that control attention, learning, mood and impulse control, which continues into the early to mid-20's. Also, some of the ingredients in e-cigarette aerosol can be harmful to the lungs long-term. Other common substances found in e-cigarettes, that may pose a risk to the lungs include diacetyl which damages small passageways in the lungs, formaldehyde which can cause lung and heart disease and acrolein which damages the lungs.[cclxxiii] A study by the University of California San Diego Herbert Wertheim School of Public Health and Human Longevity Science, reported that starting tobacco products, including e-cigarettes, before the age of 18 is a major risk factor for people becoming daily cigarette smokers. The study found that people age 12-24 who used e-cigarettes were three times as likely to become daily cigarette smokers in the future. Among those who reported using a tobacco product, daily use increased with age through age 28. Daily cigarette smoking nearly doubled for those between 18 to 28 of age. In 2021, daily cigarette smoking nearly doubled for those between 18 to 28 of age. The data showed that e-cigarettes are a gateway for those who become daily cigarette smokers.[cclxxiv] In addition to impact of physical health, e-cigarettes can also have an impact on the community. Defective e-cigarette batteries have caused fires and explosions, a few which have resulted in serious injury.[cclxxv]

Additionally, secondhand smoke – smoke from burning tobacco products, such as cigarettes, cigars, pipes, or smoke that has been exhaled, or breathed out, by the person smoking – contributes to approximately 41,000 deaths among nonsmoking adults and 400 deaths in infants each year. Secondhand smoke causes stroke, lung cancer, and coronary heart disease in adults. Children who are exposed to secondhand smoke

are at increased risk for sudden infant death syndrome, acute respiratory infections, middle ear disease, more severe asthma, respiratory symptoms, and slowed lung growth.[cclxxvi]

Alcohol Consumption

The Dietary Guidelines for Americans recommend that adults of the legal drinking age can choose not to drink, or to drink in moderation by limiting intake to 2 drinks or less in a day for men or no more than 1 drink a day for women. In the 2022 community health needs assessment, 17 out of 1,319 (1.33%) of respondents reported they were a heavy drinker and 124 of those respondents (9.66%) reported they were a moderate drinker. Additionally, 469 (36.55%) reported they drank on occasion. In 2021, 19% of Harris County adults indicated binge drinking at least once in the past 30 days. This is slightly higher than the Texas rate of 16.4%. In Harris County, adults age 18-29 had a 21.4% binge drinking rate while those age 30-44 had a rate of 27.6%. Females binge drank much less than males with an average of 15.5% compared to 22.3% for males. Additionally, alcohol consumption varies by race/ethnicity. For example, Hispanic/Latinos had a binge drinking rate of 22% compared to White/non-Hispanics with a rate of 20.2%.

Table 13 defines the drinking amounts for men and women to be considered a moderate, binge or heavy drinker. Binge drinking is a pattern of drinking that brings blood alcohol concentration levels to 0.08 g/dL. This typically occurs after four drinks for women and five drinks for men. [cclxxvii] Binge drinking is associated with health conditions, such as unintentional injuries, alcohol poisoning, liver disease, cardiovascular disease, and poor control of diabetes.

Table 13. United States Adults Drinking Amounts Defined

	Moderate (Per Day)	Binge (Per 2 Hours)	Heavy Use (Per Day)
Men	2 or More	5 or More	4 or More
Women	1 or More	4 or More	3 or More

Source: National Institute on Alcohol Abuse and Alcoholism (2022)

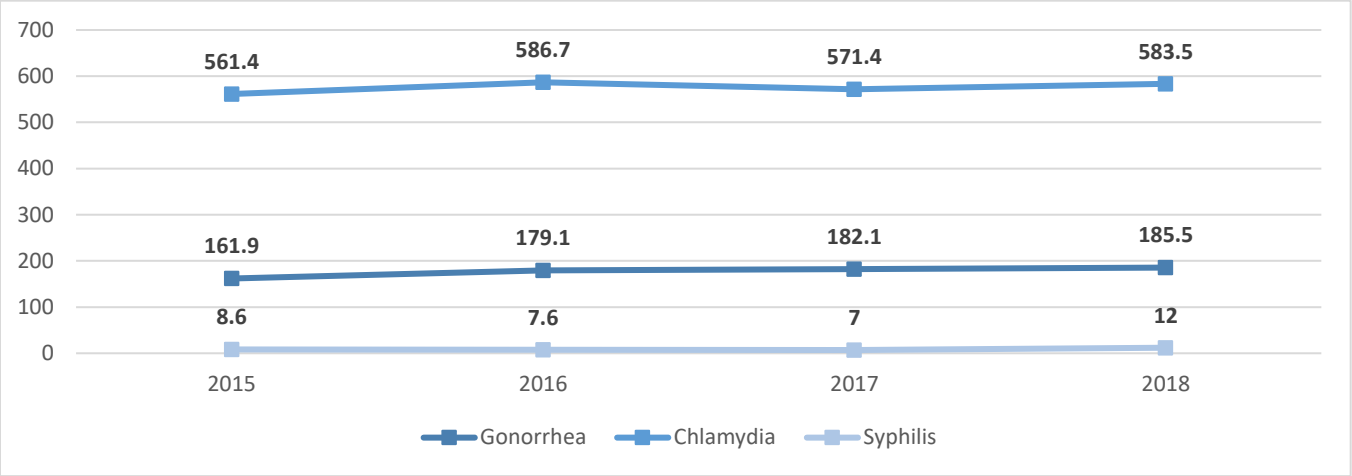
Excessive alcohol use led to more than 140,000 deaths and 3.6 million years of potential life lost in the United States from 2015-19, shortening the lives of those who died by an average of 26 years. In 2021, more than 246 people in Harris County were out on bond for two or more Drinking While Intoxicated (DWI) charges. In 2020, the average arrests for a DWI in Texas was 256.6 out of every 100,000 people.[cclxxviii] Further, excessive drinking was responsible for 1 in 10 deaths among working-age adults aged 20-64. Excessive alcohol use is harmful to one's health and attributes to numerous short-term and long-term health risks, such as injuries, violence, alcohol poisoning, risky sexual behaviors, miscarriages, stillbirths, or fetal alcohol spectrum disorders among pregnant women.[cclxxix] The impact of excess drinking on a community will be further explored in the section Increasing Access to Mental Health Services.

Safe Sex Practices

All forms of sexual contact carry some risk, however, having sex with only one monogamous partner is believed to be safe and reduces the risk of exposure to sexually transmitted diseases (STDs) and sexually transmitted infections (STIs). STDs/STIs are infection diseases that usually spread from one person through sexual contact such as vaginal, oral, or anal sex. The bacteria, viruses or parasites that cause sexually transmitted diseases may pass from person to person in blood, semen, or vaginal and other bodily fluids. These infections can also be transmitted, non-sexually, through blood transfusions or shared needles.[cclxxx]

STDs are a substantial health challenge facing the United States, and the epidemic disproportionately affects certain populations. Figure 49 shows the rate of STIs in Harris County during 2015-18. Many cases of chlamydia, gonorrhea, and syphilis continue to go undiagnosed and unreported, and data on STDs such as human papillomavirus (HPV) and herpes simplex virus, are not routinely reported to the CDC.

Figure 49. Harris County STI Rate per 100,000 Cases



Source: Houston State of Health (2019)

This leads to only a fraction of the data being captured on the American STD epidemic. Strong public health infrastructure is critical to prevent and control STDs, especially among the most vulnerable groups.[cclxxxi] Knowing the number of reported STIs such as Human Immunodeficiency Virus (HIV) is important because it will help correlate how many new cases occur among the population and will help infected individuals make behavior changes to improve their own health and prevent the spread of HIV to partners.[cclxxxii]

According to the CDC, reported cases of STDs in the United States decreased during the early months of the COVID-19 pandemic in 2020, but most resurged by the end and the prevalence of chlamydia declined 13% compared to the year prior. The following section details some of the most prevalent STDs and STIs in the United States:

- **Chlamydia:** Chlamydia is one of the most commonly reported STIs in the United States with over 1.8 million cases reported in 2019. When untreated, chlamydia can lead to pelvic inflammatory disease in women, a major cause of infertility and ectopic pregnancy. The rate of chlamydia is higher in Harris County than in Texas, at 583.5 cases per 100,000 and 508.2 cases per 100,000 respectively.[cclxxxiii]

- **Gonorrhea:** Gonorrhea, the second most commonly reported STD in the United States, is a major cause of pelvic inflammatory disease. Furthermore, when left untreated, gonorrhea may facilitate the transmission of HIV.[cclxxxiv] In Texas, the rate of gonorrhea has increased from 4% to 12% from 2011-18.[cclxxxv] In Harris County, the rate of gonorrhea is 185.8 per 100,000.[cclxxxvi] In the United States, the highest reported rates of infection are among sexually active teenagers, young adults, and African Americans.[cclxxxvii]

- **Syphilis:** Primary and secondary syphilis, when left untreated, can facilitate HIV transmission and may also cause brain damage and blindness. Since reaching a historic low in 2000-01, the rate of primary and secondary syphilis has increased almost every year, increasing 6.8% during 2019-20. Men account for the most cases of syphilis, with the vast majority of those cases occurring among gay, bisexual, and men who have sex with men (MSM).[cclxxxviii] In 2020, Harris County reported an increased rate of 12 cases per 100,000 which is substantially higher than the Texas report of 8.8 cases per 100,000.[cclxxxix]

- **Human Immunodeficiency Virus:** Human immunodeficiency virus (HIV) is a virus that attacks the cells that help the body fight infection, making a person more vulnerable to other infections and

diseases. HIV is spread by contact with certain bodily fluids of a person living with HIV, most commonly during unprotected sex or through sharing injection drug equipment. If left untreated, HIV can lead to acquired immunodeficiency syndrome (AIDS). Once people living with HIV have reached the AIDS phase, the survival time is three years on average. AIDS is a significant cause of death in many populations.[ccxc] According to HIV.gov, an estimated 1.2 million people (aged 13 and older) in the United States are living with HIV.[ccxci] As of 2019, 1 in every 312 Texans were living with HIV, totaling 95,196 people. Of those, 4,302 were newly diagnosed. In Harris County, 567 out of every 100,000 people are living with HIV.[ccxcii]

- **Human Papillomavirus:** Human papillomavirus, or HPV, is the most common sexually transmitted infection in the United States.[ccxciii] Without treatment, HPV may cause cervical cancer or genital warts. HPV is responsible for 70% of cervical cancer cases diagnosed worldwide. When looking at the United States specifically, the CDC estimates that there were 43 million HPV infections in 2018 which equated to 43% of American adults ages 18-59.[ccxciv] In Harris County, 10.3 out of every 100,000 females had HPV in 2018, compared to the Texas rate of 9.3 per 100,000 females.[ccxcv] In men, HPV is the leading cause of cancer in the oropharynx, the middle part of the throat, behind the oral cavity. There are approximately 16,000 cases of oropharyngeal cancer in the United States annually, and more than 70% are caused by HPV.[ccxcvi] In 2006, a vaccine was developed to prevent HPV. This vaccine is recommended for females ages 11-26 and males age 11-21 who have not been previously vaccinated. As of 2019, only 54% of adolescents and 21% of adults were adequately vaccinated.[ccxcvii]

INCREASE ACCESS TO MENTAL HEALTH CARE SERVICES INCLUDING TREAMENT FOR SUBSTANCE USE DISORDERS

Mental Health Defined & Its Impact on the United States

Figure 50. Mental Illness Experienced Annually

Source: Houston Methodist

The American Psychiatric Association defines mental illness as health conditions involving changes in emotion, thinking or behavior, or a combination of these, and is key to relationships, personal and emotional well-being, and contributing to community or society.[ccxcviii] Annually, it is estimated that an estimated 1 in 5 adults in the United States (66.5 million) experience mental illness (see figure 50) and approximately 1 in 25 adults in the United States (13.3 million) experience a serious mental illness.[ccxcix] As reference, serious mental illness is defined as a mental, behavioral or emotional disorder, excluding developmental and substance use disorders, resulting in serious functional impairment, which substantially interferes with or limits one or more major life activities. Examples of serious mental illness include major depressive disorder, schizophrenia and bipolar disorder.[ccc] According to the National Institute of Mental Health, serious mental illness is relatively rare. However, serious mental illness is a significant public concern with an estimated economic impact of more than $300 billion annually.[ccci] In Harris county, serious mental illness affects approximately 145,000 adults.[ccciii] Conditions classified as serious mental health conditions include, but are not limited to:

- **Schizophrenia:** Schizophrenia is a mental disorder characterized by disruptions in thought process, perception, emotional responsiveness and social interaction. It is typically persistent and can be both severe and disabling. Symptoms of schizophrenia include, but are not limited to, psychotic symptoms, such as hallucinations, delusions, and thought disorder (unusual ways of thinking) as well as reduced expression of emotions, among other symptoms. It is typically diagnosed in the late teen years to early thirties and tends to emerge earlier in males (late adolescence to early 20s) than females (early 20s to early 30s). It is considered one of the top 15 leading causes of disabilities worldwide. It is estimated 1 in 100 Americans live with this condition.[ccciii]

- **Bipolar Disorder:** Bipolar disorder, also known as manic-depressive illness, is a brain disorder that causes unusual shifts in mood, energy, activity levels, concentration, and the ability to carry out day-to-day tasks. There are three types of bipolar disorder: Bipolar 1, Bipolar 2, and Cyclothymia. All three types include manic and depressive episodes. Additionally, Bipolar 1 is characterized as having full blown manic episodes.[ccciv] There are 2.8% Americans adults living with this condition.[cccv]

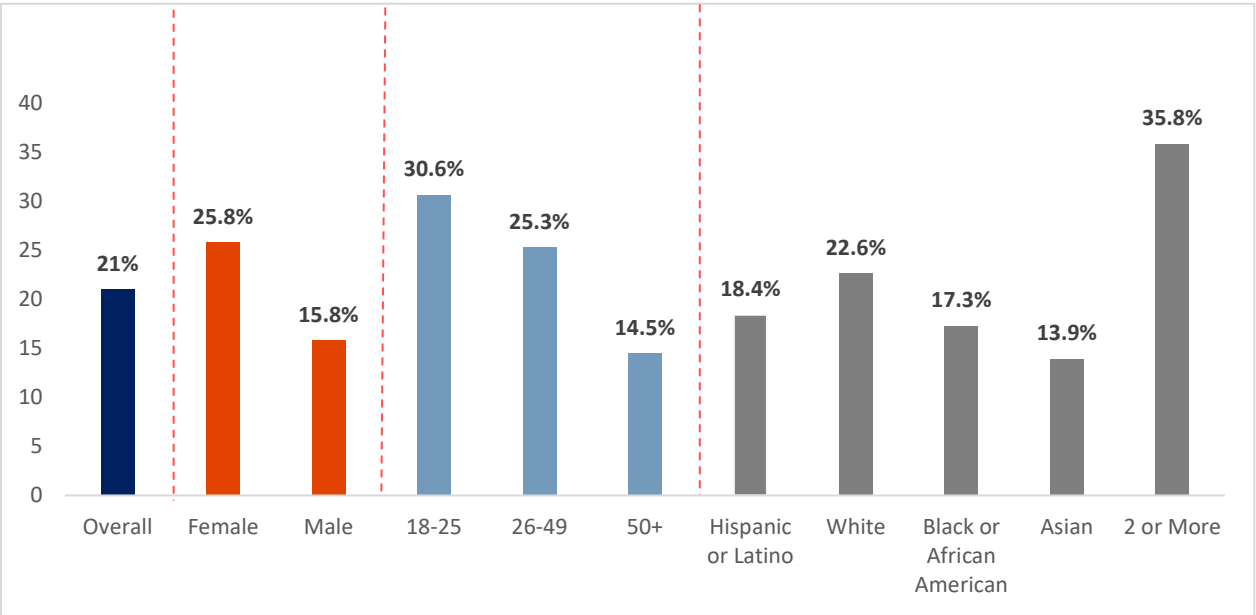
- **Major Depressive Disorder:** Major depressive disorder (or clinical depression) is a common, but serious mood disorder that comes in many forms (i.e. postpartum depression, dysthymia, seasonal affective disorder, etc.). It causes severe symptoms that affect how an individual feels, thinks, and handles daily activities, such as sleeping, eating, or working. To be diagnosed with depression, symptoms must be present for at least two weeks. Symptoms can include but are not limited to having a persistent sad or anxious mood, feelings of hopelessness, loss of interest or pleasure in hobbies and activities, suicidal thoughts or attempts, and restlessness among many others.[cccvi] It is estimated that 8.4% of Americans live with a form of this condition.[cccvii]

Prevalence of Other Common Mental Health Conditions

The aforementioned mental illnesses are a smaller and more severe subset of any mental illness (AMI). AMI is defined as a behavioral, mental, or social disorder. It encompasses all recognized mental illnesses. Examples of these include anxiety disorders, addictive behaviors, eating disorders, attention deficit disorders and post-traumatic stress disorders. In 2020, there were 52.9 million adults (21%) aged 18 or older in the United States with AMI. Young adults aged 18-25 years had the highest prevalence of AMI at 30.6% compared to adults aged 36-49 years at 25.3%. Adults aged 50 and older had the lowest prevalence at 14.5%. Regarding gender, the prevalence of AMI was higher among females at 25.8%, compared to males at 15.8%.

The prevalence of AMI was highest among adults reporting two or more races at 35.8%, followed by White/Non-Hispanic adults at 22.6%. The prevalence of AMI was lowest among Asian adults at 13.9%. See figure 51 below for a breakdown of the prevalence of AMI impacting American adults by gender, race and age.[cccviii]

Figure 51. Prevalence of Any Mental Health Illness Among Adults in the United States (2020)



Source: SAMHSA (2020)

Common AMI include but are not limited to:

- **Anxiety Disorders:** Anxiety disorders are the most common mental illness in the United States, affecting 19% of the adult population (40 million people) every year. According to Mental Health America, during the COVID-19 pandemic from January to September 2020, 315,220 people took the anxiety screen, which was a 93% increase from the 2019 total number of anxiety screenings.[cccix] According to the U.S. Census Bureau Household Pulse Survey, the proportion of adults in the MSA who have felt anxious, nervous, or on edge for at least more than half of the days of a week has remained elevated throughout the pandemic. A Census Bureau survey found that at the end of summer 2021, 24% of adults within the MSA reported anxiety symptoms for at least half the days of the week, which were similar to rates from when the survey began in 2020.[cccx, cccxi] There are several types of anxiety disorders, including generalized anxiety disorder, panic disorder, social anxiety disorder and various phobia-related disorders. Panic disorders are sudden periods of intense fear that come on quickly and reach their peak within minutes. Women are twice as likely to have panic disorders and the condition is estimated to impact 4.7% of adults at some point in their lives.[cccxii] People with generalized anxiety disorder display excessive anxiety or worry, most days for at least six months, about a number of things, such as personal health, work, social interactions, and everyday routine life circumstances. Generalized anxiety disorder affects approximately 3% of the United States.[cccxiii]

- **Addictive Behaviors:** Addictive behaviors are often associated with substances such as drugs and alcohol and are classified as substance use disorders. When addictive behaviors extend beyond substances, they then can be classified as behavioral addictions. Behavioral addictions are a form of addiction that involves a compulsion to engage in a rewarding nonsubstance-related behavior, despite negative consequences to the person's physical, mental, social or financial well-being.[cccxiv] Examples of this include, gambling, food, pornography, video games and more. Substance use disorders and addictive behaviors will be explored in more depth later in the section.

- **Eating Disorders:** Millions of Americans are estimated to suffer from potentially life-threatening eating disorders, which are behavioral conditions characterized by severe and persistent disturbance in eating behaviors and associated distressing thoughts and emotions.[cccxv] The National Association of Anorexia Nervosa and Associated Disorders estimates that at least 29 million individuals of all ages and genders in the United States are diagnosed with an eating disorder.[cccxvi] According to Yale Medicine, the National Eating Disorders Association reported increases as high as 70% to 80% in calls to its helpline during the COVID-19 pandemic.[cccxvii] Eating disorders are among the deadliest mental illnesses, second only to opioid overdose.[cccxviii] There are a variety of eating disorders, many of which cause a variety of additional health problems ranging from heart failure, osteoporosis, and pancreatitis to tooth decay, muscle loss, and gallbladder disease.

Chronic illnesses such as diabetes, cancer, and heart disease may make an individual more likely to develop or have a mental health condition due to the stress related to management of their diagnoses. According to the National Institute of Mental Health, people who have depression and another medical illness tend to have more severe symptoms of both illnesses, which may also lead to higher medical costs compared to those who do not have both illnesses. Also, the reverse is true for people who experience depression. They are at a higher risk of developing certain physical illnesses such as diabetes, cardiovascular disease, stroke, pain, and Alzheimer's Disease.[cccxix] Among the 1,270 survey respondents of the Houston Methodist 2022 community health needs assessment survey who disclosed what current primary health conditions were negatively impacting their health, 13.7% indicated mental health related issues.

Consequences of Lack of Treatment

Despite the prevalence of mental health issues, approximately 54% of the American population with a mental illness did not receive treatment in 2019, per Mental Health America.[cccxx] In 2020, it is worth noting that those receiving mental health treatment increased to 65%, which can possibly be attributed to the mental and emotional toll the pandemic had on the country. [cccxxi] Untreated mental illness consequences range from public health crises from individual impacts such as poor physical health and lost jobs to the epidemic of drug overdoses and suicide. According to the American Foundation for Suicide Prevention, 90% of people who die by suicide have a diagnoseable and potentially treatable mental health condition.[cccxxii] However, the majority of people who die by suicide had never seen a mental health professional or been diagnosed with a mental illness.[cccxxiii] In addition, the National Center for Health Statistics estimates there were 107,622 drug overdose deaths in the United States during 2021. This was an increase of nearly 15% from the 93,655 deaths estimated in 2020. Given the prioritization of this health issue, the subsection, Substance Use Disorders, will expand on the impact of substance abuse on the community and the services that support it.

Lack of treatment can also lead to or further complicate homelessness. According to the National Alliance to End Homeless, in January 2022, 582,462 people were experiencing homelessness in the United States.[cccxxiv] Epidemiological studies have consistently found that 25 – 30% of homeless persons have a severe mental illness.[cccxxv]

Another aspect of the mental health treatment access issue ties to the corrections system in the United States. This can demonstrate a cycle in which failure to access appropriate mental health care services can result in a person's untreated condition placing them in negative situations that may result in incarceration. Mental Health America estimated 1.2 million people living with mental illness in the United States are in jail or prison.[cccxxvi] The Sentencing Project, a nonprofit organization that works for a fair and effective criminal justice system, gathers state-level criminal justice data from a variety of sources. The data shows the number of people incarcerated in state prisons per 100,000 residents in each state. For comparison, Texas has the seventh highest state imprisonment rate at 443 people for every 100,000. The lowest ranked at 50th is Massachusetts with 96 people per 100,000.[cccxxvii] The lowest ranked at 50th is Massachusetts with 133 people per 100,000.[cccxxviii] The correction system has become the largest provider of mental health support in the country. Though those incarcerated can begin getting treatment, many lose access to the mental health services when they return to the community which can be risky for people who suddenly lose access to prescribed medications, thus repeating the cycle. Harris county has one of the largest jails in Texas and about a quarter of the inmates in the jail are on psychotropic medications, making it one of the largest mental health

facilities in the state.[cccxxix] Carlie Brown, MPH, MBA who serves as the executive vice president at Healthcare for the Homeless - Houston shares how the lack of treatment for mental health disorders can lead to or further complicate homelessness:

> "Texas is ranked (almost) last in the nation for access to mental health care. Lack of access to mental health care both causes and perpetuates homelessness for people who are struggling. The impact mental health has on housing and overall stability cannot be overstated. Unmet mental health needs effect daily functioning, employability, ability to maintain personal relationships… the list goes on. Additionally, mental health needs complicate every other aspect of care, which is why behavioral health is a central part of our model at Healthcare for the Homeless – Houston. It is literally a daily struggle to try and address the overwhelming demand for mental health services." (C. Brown, Healthcare for the Homeless)

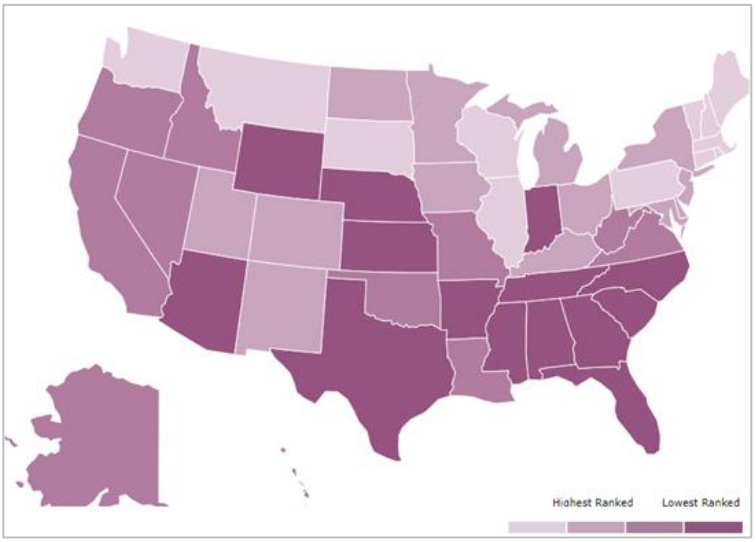
Financial Implications

The financial implications of mental health issues are significant for the country and the world. Depression and anxiety have a significant economic impact; the estimated cost to the global economy is $1 trillion per year in lost productivity.[cccxxx] In the United States, serious mental illness accounts for $193 billion in lost earnings every year. Depression is estimated to cause 200 million lost workdays each year at a cost of $17 billion to $44 billion to employers, according to the Centers for Disease Control (CDC).[cccxxxi]

Mental Health and the State of Texas

An estimated 3,347,000 adults in Texas have a mental health condition and 796,000 of those adults have a serious mental illness. Within the Houston Methodist Clear Lake Hospital community, it is estimated that Harris county has 400,000 people living with a serious mental health condition, representing an estimated 8% of the Harris county population.[cccxxxii] Despite the number of people impacted by mental health conditions in Texas and Harris county, Texas is ranked last in the country by Mental Health America in terms of access to care for those with mental health conditions for both adults and youth/adolescent populations (see figure 52). The rankings took into account access to insurance and treatment, quality and cost of insurance, access to special education and workforce availability.[cccxxxiii]A high access ranking indicates that a state provides relatively more access to mental health treatment and insurance. It also considered the following categories when assessing the adult population:

Figure 52. Access to Care Ranking



Source: Mental Health America (2022)

- Adults with AMI who are uninsured
- Adults with AMI who did not receive treatment
- Adults with AMI reporting unmet need
- Adults with a cognitive disability who could not see a doctor due to costs

Additional mental health statistics for Greater Houston Area: [cccxxxiv] [cccxxxv] [cccxxxvi]:

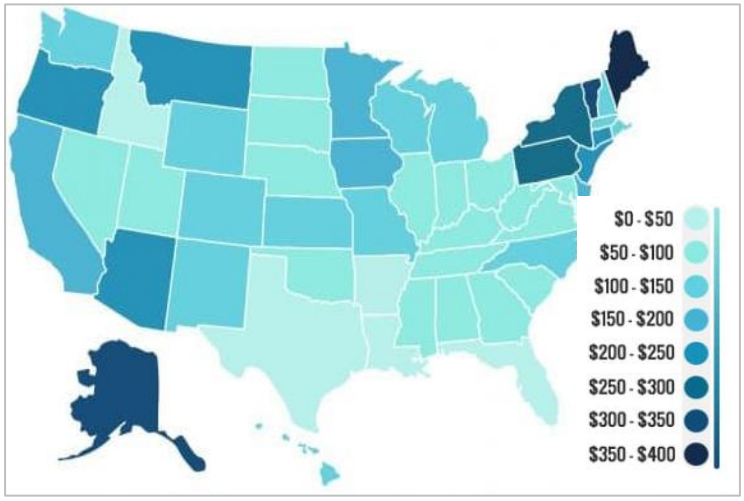
10.7 per 100,000 deaths are due to suicide in Harris County.	**139%** increase in the number of suicides in Fort Bend County between 2001 – 2020.	**3.6** average number of days adults in Harris County reported their mental health was not good in a 30-day span.	**$232** average cost per day for a person to spend in a mental health unit in Harris County jail compared to $57 per day for general population.	**16.2%** Adults in Harris County reported 14+ days of experiencing frequent mental distress in a one-month period.

The prevalence of mental health needs within the state and Houston Methodist Clear Lake Hospital community are great with 43.4% of Texas adults reporting symptoms of depression or anxiety in early 2021.[cccxxxvii] Further, fifty-nine percent of survey respondents to the Houston Methodist 2022 community health needs assessment survey indicated they could have benefitted from mental health support during the past 12 months. It is worth noting, many of the states that rank the poorest when it comes to mental health care access also have the highest number of adults incarcerated. As mentioned in the previous section, the prison system is the primary provider of mental health care and many people in the prison system remain untreated until entering the system.[cccxxxviii]

Barriers to Accessing Care

The amount a state invests in mental health care can play a major role in the barriers a community may experience accessing services. Funding for mental health services come from both private and public sources. Private sources include private health insurance, out of pocket payments, and self-payment. Public sources include governmental funding (federal, state and county) as well as funding from nonprofit agencies. Texas ranks last in the country regarding mental health care access and what may contribute to this low ranking is the low percentage of state spending towards mental health. It is estimated that Texas spends approximately 1.2% of its budget on mental health care services, which ranks Texas as 40th in terms of spending by state. For comparison, Maine ranks the highest in the country for state spending at 5.6%, while Arkansas is ranked last, with the lowest amount of spending at 0.7%.[cccxxxix] The lack of state spending for mental health services varies and does not necessarily indicate poor quality of services, but can contribute to limited facilities, psychiatric beds and other shortages necessary for patients needing care. Texas has a total of 9 psychiatric hospitals, which equates to a capacity of 2,463 beds.[cccxl] For additional insight into state investments, the per capita spending in Texas on mental health is approximately $45.23. For comparison, the highest per capita spending in the country is in Maine ($362.75) and the lowest is in Florida ($36.05) (see figure 53).[cccxli] Vice President of Government Affairs, Daniel Morales, describes the importance of the community coming together to find solutions to mental health funding and access issues:

Figure 53. Per Capita Spending by State



Source: Addiction Centers of America: SAMHSA

> "Texans' access to mental health continues to be a problem, particularly for those with limited resources in all areas of the state. It is important that we work together as a community along with state and federal legislators to find solutions, increase funding and improve access to critical mental health resources." (D. Morales, Houston Methodist)

The following sections will outline some of the barriers most commonly associated with lack of access to mental health care services and are tied to lack of treatment for conditions. These barriers can be exacerbated when additional factors, such as race, gender and general socioeconomic factors come into play.

Financial & Insurance Barriers

The lack of funding from public sources often places a heavier financial burden on an individual seeking mental health services. Insurance options such as private insurance and Medicaid can help decrease the financial burden. However, psychiatrists are less likely than other physicians to accept health insurance, which requires patients to pay out of pocket costs. This practice can limit access to only those who can afford upfront fees. Despite over 90% of general health care services being billed through insurance plans, 45% of psychiatrists do not accept any form of insurance, and a much larger proportion accept only a very limited set of plans, which makes it extremely difficult for patients to find suitable, in-network referrals.[cccxlii] A primary reason for this discrepancy relates to the time it takes for psychiatrists to perform counseling and therapy.

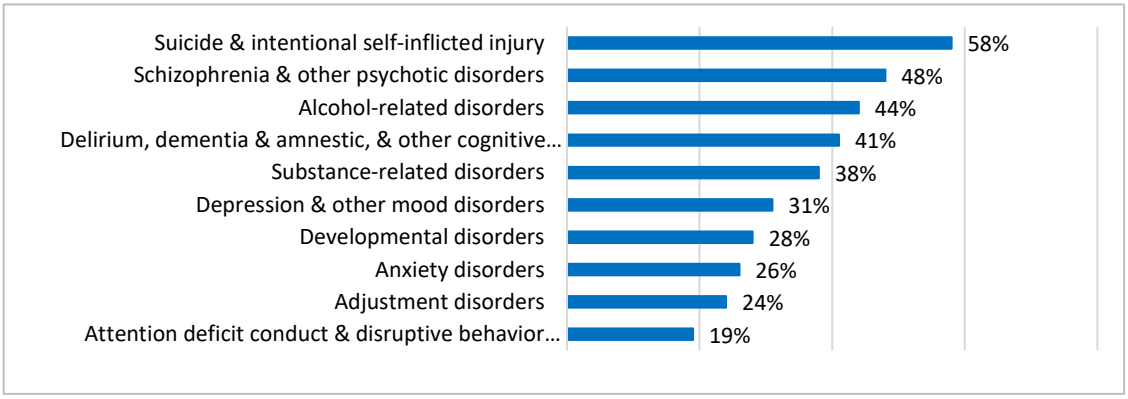
Since psychiatrists spend more time with patients than other practitioners, they may have fewer patients (limiting income). Coupled with the uncertainty of insurance reimbursement, psychiatrists may choose to abstain from dealing with insurance companies all together. Even if insurance was more widely accepted for mental health services, there would still be a significant number of people who would not be able to access it due to lack of insurance. Mental Health America estimates that 21.5% of the Texas population with a mental illness are uninsured. Dr. Alok Madan, PhD, MPH who serves as the vice chairman for behavioral health at Houston Methodist Hospital, provides insight on some of the issues surrounding insurance and mental health services.

> "Mental health professionals across the board are choosing to forego participating in third-party payer plans because reimbursement for services can be up to 75% less than what is fair market value. Insurance reimbursement rates are supposedly 'usual, customary, and reasonable.' This is far from reality. Then, there are the issues of excessive documentation requirements, chronic denials for services … administrative costs, etc. Once we put this in the context of not enough mental health providers in general, we find ourselves sitting in the middle of a mental health crisis. We find ourselves intervening only when there is a crisis, and that intervention is often counter therapeutic." (A. Madan, Houston Methodist Hospital)

Out of Pocket Spending:

What also drives costs up for this service can be the length of time required to appropriately treatment a person considering therapy depends on the individual and their unique needs. The treatment methods, the goals of the person seeking support, the symptoms, and the patient's history all determine the length of therapy. Based on research cited by the American Psychology Association (APA), on average 15 to 20 sessions are required for 50% of patients to recover as indicated by self-reported symptom measures.[cccxliii] With estimations that the average cost for a therapy session is between $100 and $200, coupled with the APA estimated amount of sessions people need to make measurable progress, a person could easily have to pay full out-of-pocket costs between $1,500 to $4,000 for care. Even with employer-sponsored health insurance, many people with mental health conditions face high out-of-pocket spending. In 2018, a quarter of large employer plan enrollees who had mental health diagnoses had out-of-pocket spending in excess of $2,000. Out-of-pocket spending exceeded $2,000 for 31% of those being treated for depression and other mood disorders and 58% for those being treated for intentional self-inflicted injuries (figure 54).[cccxliv]

Figure 54. Share of People with Large Employer Coverage Who Have Out-of-Pocket Spending >$2,000, by Mental Health Disorder



Source: KFF analysis of IBM MarketScan Commercial Claims and Encounters Database (2018)

These cost constraints can feel even greater for a person who is uninsured and living below the federal poverty level (FPL). For example, paying up to $4,000 for services out-of-pocket can be a major undertaking for person living 200% of the FPL ($27,180 annually), which can be a deterrent. Many charity organizations and federally qualified health centers are beginning to offer mental health services on a sliding scale, including free of charge. Brenda Edwards, director of behavioral health sciences at Spring Branch Community Health Center, provides insight on why it is important to offer mental health services on a sliding scale fee schedule to patients:

"Offering a sliding fee schedule for mental health services is essential, it assists with making it possible for individuals to get mental health services regardless of their socioeconomic background. Many people are concerned about the cost of therapy and other mental health services, especially when it is a self-pay expense which keeps some from seeking mental health services. Affordable counseling and mental health services help patients prioritize their mental wellbeing and thereby fosters healthier communities." (B. Edwards, Spring Branch Community Health Center)

However, the services currently being provided, even free of charge, may not be enough to meet the growing demand when looking additional barriers related to having enough mental health practitioners.

Physician and Workforce Shortages

The professionals most commonly associated with mental health care service provision are psychologists and psychiatrists. A psychologist specializes in the study of the mind and behavior and in the treatment of mental, emotional and behavioral disorders. Psychologists may hold a doctoral degree but are not considered a medical doctor. A psychiatrist specializes in the same areas of study as a psychologist, but a main defining element is that a psychiatrist can prescribe medications and is a medical doctor. Counselors and clinical social workers can also provide mental health services.

Table 14. Ratio of Mental Health Providers to Population by County

Ratio of Mental Health Providers to Population Texas: 1:690	
Counties in Houston Methodist Clear Lake Hospital Community	
Harris	1:660
Galveston	1:750

Source: County Health Rankings (2022)

Serious mental health conditions are most often treated by psychiatrists. However, Texas has a physician shortage that includes psychiatry. It is estimated that 170 counties out of 254 (with a combined population of 2.6 million) have no psychiatrist.[cccxlv] This shortage of psychiatrists is expected to grow in coming years. Furthermore, Texas has a 1:690 ratio of mental health providers for the population according to the 2022 County Health Rankings. For Harris County, it is a 1:660 ratio (see Table 15). The top 90th percentile in the country is 1:340.[cccxlvi] See table 14 for a comparison of counties. There are various reasons these shortages may exist. The Association of American Medical Hospitals outlines a few reasons that may contribute to the growing physician shortages, including:[cccxlvii]

- **More people seeking care:** Greater awareness of mental health problems has led to more people seeking treatment than in the past, thereby outpacing the workforce. For example, at the height of the pandemic, 40% of adults reported symptoms of anxiety or depression, compared with 11% pre-COVID. Within a few years, the United States will be short between 14,280 and 31,109 psychiatrists to meet the demand. In addition, with the country's anticipated population growth and the increasing mental health need as a result of the pandemic, there are not enough residency slots available to train new providers.[cccxlviii]

- **Inability to meet salary demands:** Mental health providers are frequently reimbursed less than physical health providers, which makes it difficult for institutions to cover salaries. Note, average salary of a psychiatrist in Houston per Salary.com is $246,501.[cccxlix]

- **Aging out of profession:** More than 60% of practicing psychiatrists are over the age of 55, one of the highest proportions among all professions, which puts them in position for retirement.[cccl]

Some areas in the country experience greater shortages than others. More than 115 million people in the United States live in designated health professional shortage areas (HPSA). These are areas in which the ratio of mental health professionals to residents is smaller than 1 per 30,000 people.[ccli] There are more than 6,000 areas designated as HPSAs in the United States which equate to a need for more than 8,000 practitioners (See Figure 53).[cclii] Shortages occur across the United States and are more likely to be pronounced in rural areas. Some counties have no provider at all.

Figure 55. Health Professional Shortage Areas (HPSA)

Source: HRSA Shortage

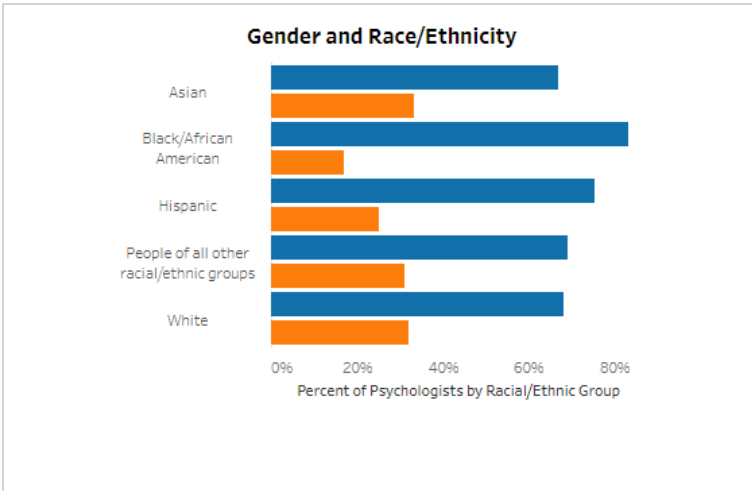
Because of a lack of trained mental health providers, primary care physicians are often the sole source or on the front line of health care used by patients with a mental health illness. According to the National Institute of Health, 40% of primary care visits address depression, anxiety, and any mental illness. For patients with severe mental illness, primary care physicians also provide over one-third of the care and write a quarter of the prescribed medications.[ccliii] Though primary care visits may improve access for many patients, the utilization of primary care physicians as the main source of treatment for mental health may still lack both intensity and quality.

A recent study addressing the integration of mental health care into the primary care setting focused on monitoring primary care protocols for patients with depression in comparison to other physical ailments. They found primary care doctors were less likely to complete the same level of follow-up protocol for patients with depression compared to other patients with nonmental health issues. This suggests that primary care providers may not be best equipped to handle treatment beyond medication prescribing and initial screening.[ccliv] Lara Hamilton, RN, Executive Director of Christ Clinic, shares the importance of mental health being added to their primary care services, along with the challenges they had before adding the program.

> "Access to mental health providers was identified as a primary need for our patients as the population that we serve is at an increased risk for mental illness, and anxiety has been one of our top diagnoses for years. Finding an affordable option to access licensed therapists and behavioral health medication (when indicated) is lifesaving for patients, and an individual's income level should not be the primary determining factor in accessing this care. Implementing Integrated Behavioral Health into our primary care routine was intimidating at first, because it widened our scope of practice, but we continue to learn more every day through our various partnerships and continuing education opportunities. Now, not only do patients have access to counseling, but we are able to screen every patient who walks through our doors for anxiety and depression, offer a brief intervention, and prescribe medications when indicated." (L. Hamilton, Christ Clinic)

Mental Health Provider Diversity: In addition to the lack of dedicated mental health care providers in the current workforce, diversity in this field is limited as well. Mounting evidence suggests when physicians and patients share the same race or ethnicity, this improves medication adherence, time spent together, shared decision-making, wait times for treatment, and patient perceptions of treatment decisions.[ccclv] As it relates to mental health provider diversity, according to 2021 data from the American Psychological Association (APA), about 81% of the United States psychology workforce is white. According to the same report, Hispanics represented the second largest group at 8%, Asians represented 3%, and African Americans just 5%.[ccclvi] See Figure 54 for a breakdown of diversity in the psychology workforce. With knowledge that patients are more likely to seek treatment and/or adhere to care plans when they can identify with their provider, the diversity of the field may be an important component to supporting people seeking care. Ariel Smith, PhD, Clinical Psychologist at Lone Star Circle of Care, an FQHC with clinics across Central and Southeast Texas, provides insight on this issue:

Figure 56. Demographics of Psychology Workforce in U.S.



Source: American Psychological Association

> "Being a person of color can be an incredibly isolating and demoralizing experience in America. Representation among providers matters because it can support these individuals in feeling seen, heard, and safe to access help when they need it." (A. Smith, Lone Star Circle of Care)

Stigma

One of the most significant barriers to care for mental health is stigma, which is defined as "the negative social attitude attached to a characteristic of an individual that may be regarded as mental, physical, or social deficiency. A stigma implies social disapproval and can lead unfairly to discrimination against and exclusion of the individual.[cccvii] Stigma can be parsed into three categories, public, institutional, and self. Public stigma involves the negative or discriminatory attitudes that others have about mental health illness. Self-stigma is the negative attitudes, including internalized shame, that people with mental illness have about their own condition. Institutional stigma involves policies of government and private organizations that intentionally or unintentionally limit opportunities for people with mental illness.[cccviii] Stigmas associated with mental health that can impact a person's willingness to seek mental health support include stereotypes, prejudices and discrimination. Figure 57 outlines the types of stigmas and how they are often expressed when viewed through the public, self and institutional lens.

Figure 57. Types of Stigmas

	Public	Self	Institutional
Stereotypes & Prejudices	People with mental illness are dangerous, incompetent, to blame for their disorder, unpredictable	I am dangerous, incompetent, to blame	Stereotypes are embodied in laws and other institutions
Discrimination	Therefore, employers may not hire them, landlords may not rent to them, the health care system may offer a lower standard of care	These thoughts lead to lowered self-esteem and self-efficacy: "Why try? Someone like me is not worthy of good health."	Intended and unintended loss of opportunity

Source: American Psychiatric Association adapted from Corrigan et al.

Dr. Alok Madan, PhD, MPH shares how stigma creates barriers to seeking mental health services and the role it plays in individuals obtaining necessary mental health treatment:

> "Though improving, stigma continues to be a significant barrier to engaging in psychiatric care. Folks are often embarrassed by their distress and blame themselves for not being able to cope with life stressors. Guilt and shame often prevent folks from seeking help. Cultural factors also play a role. Some see mental illness as a weakness or a moral failing and discourage even bringing up the topic. Younger generations, fortunately, are more open to acknowledging their suffering and are asking for help." (A. Madan, Houston Methodist Hospital)

As mentioned by Dr. Madan, the willingness to acknowledge mental health illness and, therefore, seek treatment varies by age. According to American Psychological Association's Stress Report in America, Generation Z (born between 1997 – 2012) are significantly more likely (27%) than other generations to report their mental health as fair or poor, with Millennials (born between 1981 – 1996) at 15% and Generation X (born between 1965 – 1980) at 13%. The survey also found Generation Z more likely (37%), along with Millennials (35%), to report they have received treatment or therapy from a mental health professional compared with a 26% of Generation X, 22% of baby boomers (aged 1946 – 1964) and 15% of older adults.[ccclix]

Despite this growing awareness, stigmas and social perceptions can still be a hindrance to those who may need care. Additional examples of stigma include:

- **Fear of Being Perceived as Dangerous**: What exacerbates the "dangerous" narrative is the phenomenon of mass shooting in the United States and the narrative that those who committed the shooting were living with a mental illness. Mass shootings are defined as three or more persons being shot in one incident, excluding the perpetrator, at one location, excluding organized crime as well as gang-related and drug-related shootings.[ccclx] Contrary to the belief that those with mental illness are violent, Columbia University Department of Psychiatry states that approximately 5% of mass shootings are related to severe mental illness.[ccclxi] In contrast, deaths by suicide using firearms account for most gun-related deaths suggesting those living with a mental illness are more likely to hurt themselves than others. The overall contribution of people living with serious mental illness to violent crimes is only about 3% to 5%.[ccclxii]

- **Religious Attitudes**: *S*ome religious beliefs can lead people to shy away from seeking mental health support due to perceptions that mental disorders are the result of weak faith or general sin. However, religious affiliation can give also people something to believe in, can provide a sense of structure, and can offer an opportunity for a group of people to connect with each other over similar beliefs. These facets can have a positive impact on mental health and suggest a link with lower rates of depression, suicide and anxiety.[ccclxiii] Many health care professionals also believe that spiritual and religious leaders can help those in need of mental health services take that first step towards getting treatment.

  > "Often times, regardless of your faith, our first point of contact with the mental health world frequently happens in our houses of worship. We find those to be safer, tighter communities with somebody in a healing profession and willing and able to listen without judgment and this is across faiths. This becomes, frequently, a point of contact into the mental health world for a lot of people who don't want to say depression, who don't want to say psychosis, who don't want to say addiction for all the stigma and all that related to it. For them, it is ok to talk to your pastor, your imam, your rabbi. It is much easier to do that, than talking to your primary care doctor who you may or may not even have." (A. Madan, Houston Methodist Hospital)

- **Competence and Capabilities**: Those with mental health conditions may be hesitant to seek treatment or disclose their condition for fear of being discriminated against by employers and co-workers in terms of their capability to perform duties. The America Disabilities Act (ADA) prevents the workplace from discriminating against those with disabilities, which includes mental illness. However, even with these protections, concern persists in terms of office treatment. Michelle Parker, MBA, Director of Client Services and Standards at Houston Methodist, provides further insight on this topic:

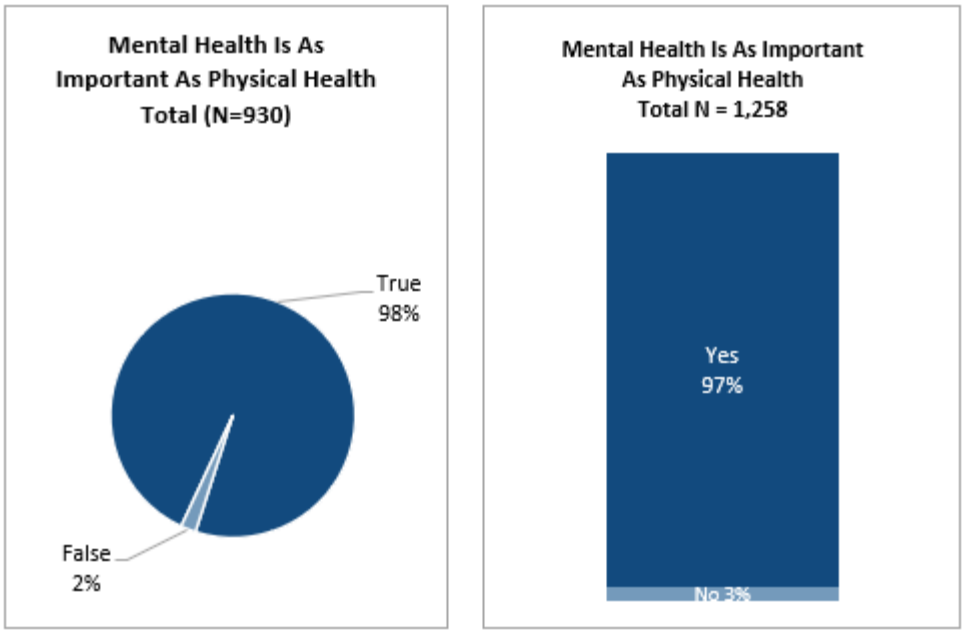
  > "Our Corporate Human Resources Client Services department has seen a significant increase in ADA accommodation requests by employees including those with mental health conditions. Our team works closely with management to accommodate employees as much as possible to ensure they can

continue to add value by performing all the essential functions of their positions. Where that is not possible, we work closely with our leave administration program to ensure employees who need some time off to care for their mental health are supported the same way we'd support any other disability. The fact that we work in an organization that truly lives our I CARE values helps us ensure employees are treated compassionately as well as supports our partnership with management and employees to make sure that employees get care when needed, while also continuing to serve our common goal of unparalleled patient care." (M. Parker, Houston Methodist)

- **Cultural Stigma**: For some people, making an appointment with a mental health provider may be an independent and personal decision. For others, the decision to seek therapy services may be influenced by their culture or community, as each culture has its own interpretation, understanding and beliefs around mental health symptoms. Culture teaches individuals whom to rely on for support during difficult times and ways to cope with distress. This may impact whether a person seeks mental health services, or their decision not to seek care at all. In many cultures, negative stigma about therapy services or mental health symptoms is a major obstacle to getting professional help. Research shows that people in ethnic and racial minority groups in the United States are less likely than White/non-Hispanic adults to seek outpatient therapy services. For Middle Eastern American and Asian American communities, cultural beliefs that seeking mental health treatment will bring shame and dishonor to the family leads some people to internalize their symptoms instead of seeking therapy.[ccclxiv]

Despite the stigmas related to accessing mental health, many people recognize the value of seeking care. In the 2022 Houston Methodist community health needs assessment survey, 97% respondents overwhelmingly agreed that mental health was as important as physical health. This sentiment has continued from the last survey conducted in 2019 in which 98% agreed that mental health was as important as physical health. See figure 58.

Figure 58. Perceptions of the Importance of Mental Health: 2019 versus 2022



Source: Houston Methodist Community Health Needs Survey (2022)

Impact of COVID-19 on Mental Health

The COVID-19 pandemic, one of the biggest global crises in generations, has had far-reaching and severe repercussions for health systems, economies, and societies. As people grapple with these economic, social, and health impacts, mental health has been widely affected.[ccclxv]

According to the World Health Organization, a great number of people have reported psychological distress and symptoms of depression, anxiety, or post-traumatic stress due to the COVID-19 pandemic. This has led

to a 27.6% increase in cases of major depressive disorder and 25.6% increase in cases of anxiety disorders worldwide in 2020. Females were more affected compared to males and the younger adult population (20 – 24 years), were more affected than older adults. While mental health needs have increased, mental health services have been severely disrupted. Dr. Madan speaks to the impact of the growing demand during the pandemic:

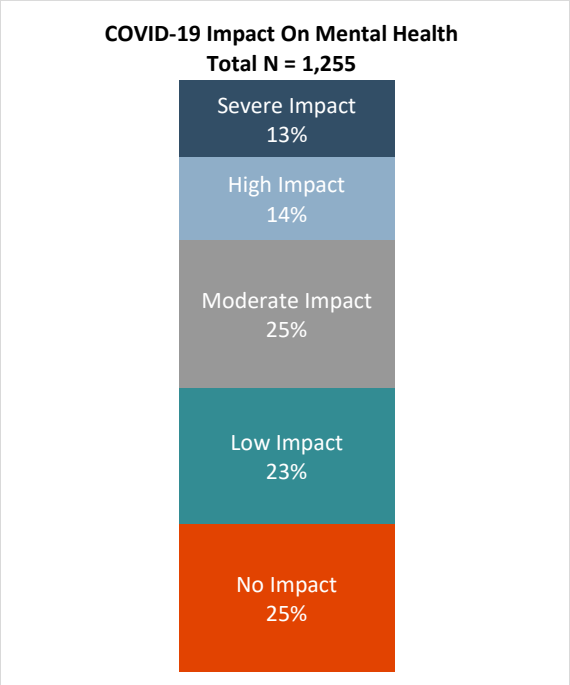
> "Our barely functional mental health treatment infrastructure has all but collapsed in the past couple of years. Those with limited financial resources are disproportionately and negatively affected. Access to treatment was a challenge prior to 2020. Today there are even fewer resources to share among an ever-increasing need for services." (A. Madan, Houston Methodist Hospital)

This was especially true early into the pandemic when infrastructure and staff were redeployed to COVID-19 relief. Also, social isolation measures prevented people from accessing care. In many cases, misinformation and poor knowledge about the virus fueled worries and fears that stopped people from seeking help.[cccLxvi]

When Houston Methodist surveyed the community, 27% of respondents indicated COVID-19 had an impact on their mental health with 25% indicating it somewhat had an impact (see figure 59). Though there may have been an expectation that the percent reporting a greater impact on their mental health would have been higher, it is not uncommon that people may not associate feelings of stress with mental health which could be why less people reported feeling impacted mentally by COVID-19.

Many people think of the more serious conditions such as depression and anxiety. However, stress is also a sign of a person's mental and emotional well-being that people may underestimate as something needing attention. Stress is described by the American Psychological Association (APA) as "a feeling of being overwhelmed, worried or run-down." Stress can affect people of all ages, genders and circumstances and can lead to both physical and psychological health issues. By definition, stress is any uncomfortable 'emotional experience accompanied by predictable biochemical, physiological and behavioral changes.[cccLxvii] Some stress can be beneficial at times, producing a boost that provides the drive and energy to help people get through situations like exams or work deadlines. However, an extreme amount of stress can have health consequences and adversely affect the immune, cardiovascular, neuroendocrine and central nervous systems.[cccLxviii]

Figure 59: COVID-19 Impact on Mental Health



Source: Houston Methodist Community Health Needs Assessment Survey (2022)

In 2020, the APA conducted a survey on stress and found that Americans have been profoundly affected by the COVID-19 pandemic, and that the external factors Americans listed in previous years as sources of stress such as work, economy, and health remain present and problematic. For example, 78% of United States adults state the COVID-19 pandemic is a significant source of stress in their life. In addition, 67% of United States adults experienced increased stress over the course of the pandemic. See below for additional stats on the impact of the pandemic:[cccLxix]

COVID-19 IMPACT

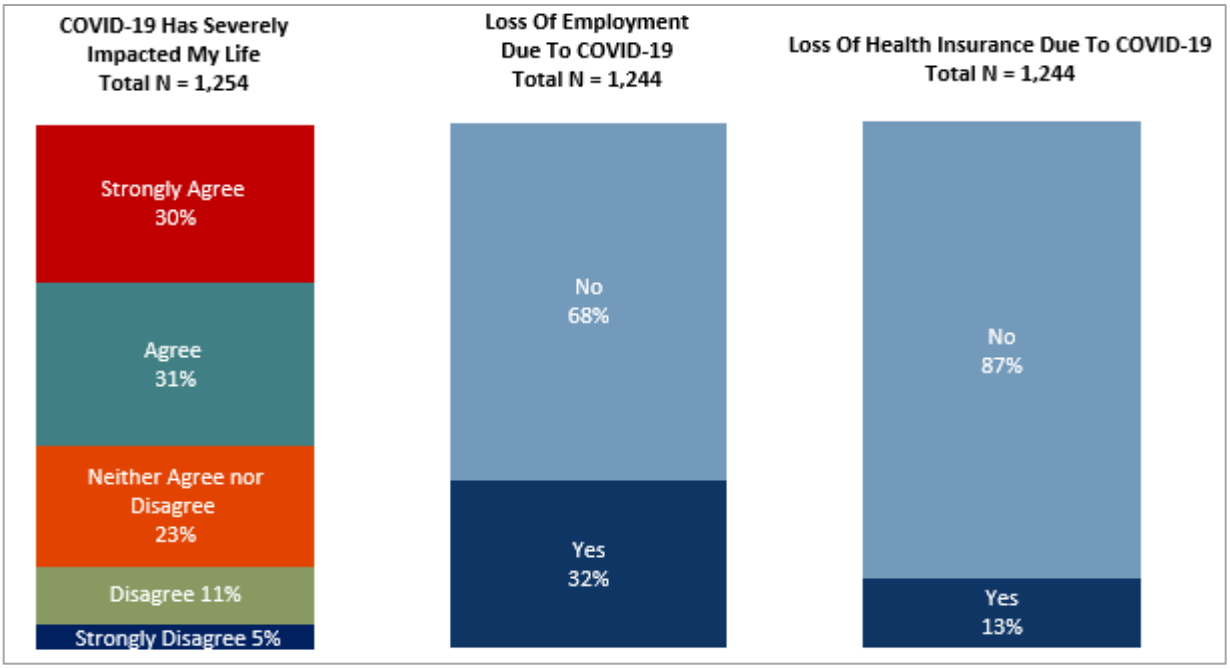
68%
U.S. adults reported their job was negatively impacted by COVID-19

64%
U.S. adults say that money is a significant source of stress in their life as a result of COVID-19

52%
U.S. adults say that have experienced negative financial impact due to the pandemic

Prolonged stress can take not only a mental toll but also a physical toll on the body, resulting in conditions like insomnia, high blood pressure and a weakened immune system. As people grapple with these economic, social, and health impacts, mental health has been widely affected.[ccclxx] Based on the 2022 Houston Methodist community health needs assessment survey, over 60% of respondents felt that COVID-19 had severely impacted their life. In addition, 32% of respondents lost their jobs due to COVID and just over one in ten people lost health insurance (see figure 60).

Figures 60. Perception that COVID-19 Has Severely Impacted One's Life



Q). Overall, how would you rate your mental health?
Q). Mental health is just as important as physical health.
Q). On a scale of 1-5, with 1 being "No Impact" and 5 being "Severe Impact," how much did COVID-19 impact your mental health?

Source: Houston Methodist Houston Methodist Community Health Needs Assessment Survey (2022)

Substance Use Disorder

Substance use disorders result from long-term and excessive use to addictive substances such as nicotine, alcohol, and other illicit drugs. Continued use often leads to social, academic, and occupational disengagement. Typically coupled with a psychiatric or mental health disorder, some individuals are predisposed to substance use due to genetics, environment, or a diagnosis of some mental health illnesses such as attention-deficit/hyperactivity disorder (ADHD) and bipolar disorder.[ccclxxi] Nationally, 16.5% or 46.3 million of Americans aged 12 or older, met the applicable DSM-5 criteria for having a substance use disorder, including 29.5 million who were classified as having an alcohol use disorder and 24 million were classified with having a drug use disorder. [ccclxxii] In Texas, at least one third of adults and one fourth of youth who have a substance use disorder have an associated psychiatric condition.[ccclxxiii]

Table 15. Classes of Drugs

Alcohol	Opioids
Caffeine	Sedatives
Cannabis	Hypnotics & Anxiolytics
Hallucinogens	Stimulants
Inhalants	Tobacco

Substance use disorders includes 10 separate classes of drugs, which are illustrated in table 15.[ccclxxiv] According to the National Survey on Drug Use and Health (NSDUH), prepared for Substance Abuse and Mental Health Services Administration (SAMHSA), 21.4% or 59.3 million, of the United States population, age 12 and older, have a substance use disorder. Among the disorders, the top 5 most prevalent drugs and/or drug classes are: marijuana, opioids, hallucinogens, sedatives, and cocaine (a stimulant).

Table 16 shows a list of the top 9 drugs that surveyors were exposed to.[ccclxxv] Illicit drug use has increased for those age 26 and older from 2015-2020.[ccclxxvi]

Illicit drug use varies by race and ethnicity. Comprising of less than 2% of the United States population, American Indians/Alaska Natives experience the highest percentages of illicit drug use. Some of the factors that contribute to this is historical trauma, violence, poverty, high unemployment, discrimination, racism, lack of health insurance and low levels of educational attainment.[ccclxxvii] Figure 61 shows the illicit drug use in the past year for ages 12 and older by race and ethnicity.[ccclxxviii]

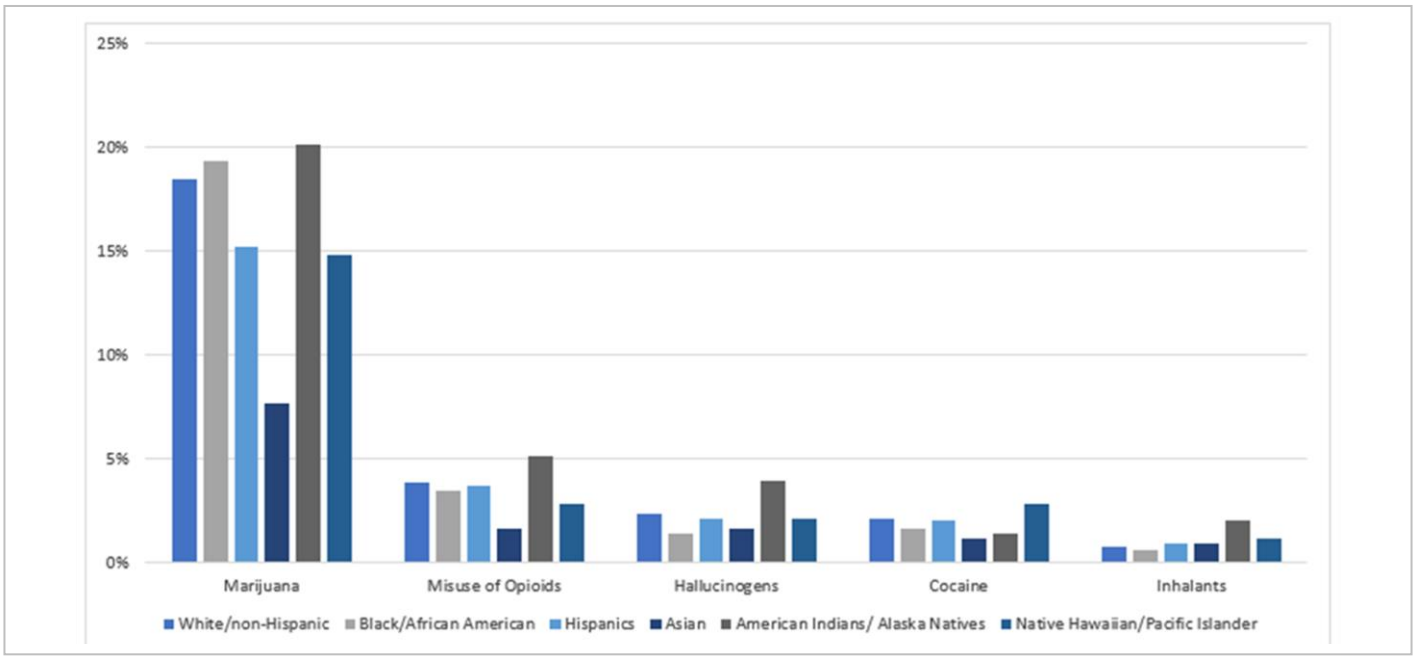
Source: National Library of Medicine (2022)

Table 16. Drug Exposure (ages 12 and older)

Drug	Percent
Marijuana	18.7%
Opioids	3.4%
Hallucinogens	2.6%
Sedatives	1.7%
Cocaine	1.7%
Stimulants	1.7%
Methamphetamine	0.9%
Inhalants	0.8%
Heroin	0.4%

Source: Substance Abuse and Mental Health Services Administration (2021)

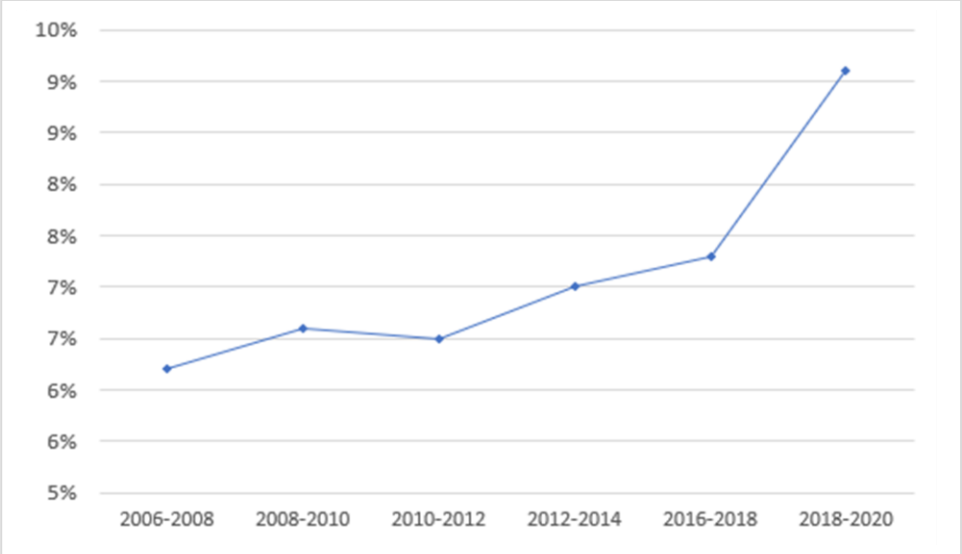
Figure 61. Illicit Drug Use in the Past Year, Age 12 and Older: United States



Source: Substance Abuse and Mental Health Services Administration (2019)

In region 6A of Texas, which includes Austin, Chambers, Colorado, Fort Bend, Harris, Liberty, Montgomery, Walker, Waller, and Wharton counties, 9.1% of people, age 12 and older, used an illicit drug in the past 12 months, which is a 25% increase from the previous two years.[ccclxxix] See figure 62.

Figure 62. Illicit Drug Use: Region 6A



Source: Houston State of Health (2020)

The following section will provide a brief overview of some of the listed classes of drugs and their illicit use, alcohol abuse, adverse outcomes related to each, and access to available resources.

Marijuana (Cannabis)

Marijuana is the most commonly used drug in the United States and legality varies based on the state. Nineteen states, two territories, and the District of Columbia have legalized small amounts of cannabis (marijuana) for adult recreational use.[ccclxxx] Those who use marijuana in excess can develop marijuana use disorder which can cause problems at home, school, or work, in relationships, driving impairment, physical and psychological problems.[ccclxxxi] In region 6A of Texas, 7% of individuals report using marijuana.[ccclxxxii]

Three out of ten users have a marijuana use disorder with the highest rates among young adults between ages 18-25.[ccclxxxiii, ccclxxxiv] Fifty-three percent of current or prior users age 18 and older, first tried it between the ages of 12-17, with 2% using it before 12 years of age.[ccclxxxv] Teens who begin using marijuana before the age of 18 are four to seven times more likely to develop a marijuana use disorder when compared to adults.[ccclxxxvi] When marijuana use starts during adolescence, there could be permanent effects on the developing brain such as difficulty thinking, problem-solving, learning, memory, maintaining attention, reduced coordination, and issues with school and social life. Teens who use marijuana regularly are more likely to quit high school or not get a college degree.[ccclxxxvii] Marijuana can cause impairment in emotional identification, processing, and problem solving and has been linked to depression, social anxiety, and suicidal thoughts.[ccclxxxviii] There is limited evidence which supports that marijuana is a gateway to other drugs. However, those who use marijuana may have a higher risk of dependence and may increase the frequency over time.

While recreational marijuana use remains illegal in 31 states (and legal in 19), medicinal use is legal in 37 states, with California being the first state to pass it through legislature in 1996. Patients can use the drug to treat some medical conditions through oral consumption.[ccclxxxix] Marijuana helps treat chronic pain, especially in cases of cancer, neuropathy, arthritis, as well as insomnia.[cccxc] More than 600,000 individuals in the nation have used this form of medication to treat their chronic pain and it has been shown to reduce pain by 40%.[cccxci]

Opioids

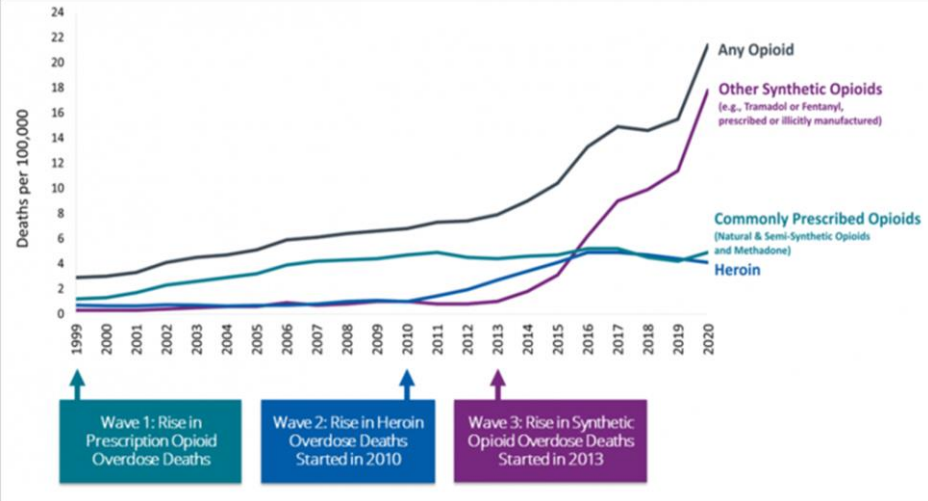
Opioids are a class of drugs that are naturally found in the opium poppy plant and are used to reduce pain. The most common prescription medications, frequently referred to as “painkillers”, include natural opioids such as oxycodone, hydrocodone, morphine, and codeine.[cccxcii] Fentanyl and methadone, which are synthetic

opioids, are also prescribed to treat patients with severe pain.[cccxciii] Over the past 20 years, opioid-related deaths have increased more than eight times. In 2021, nearly 80,000 people died of drug overdose deaths that involved opioid use, an increase of 15.9% from the previous year; 88% of the opioid overdose deaths were due to synthetic opioids.[cccxciv]

Opioid Epidemic in the United States

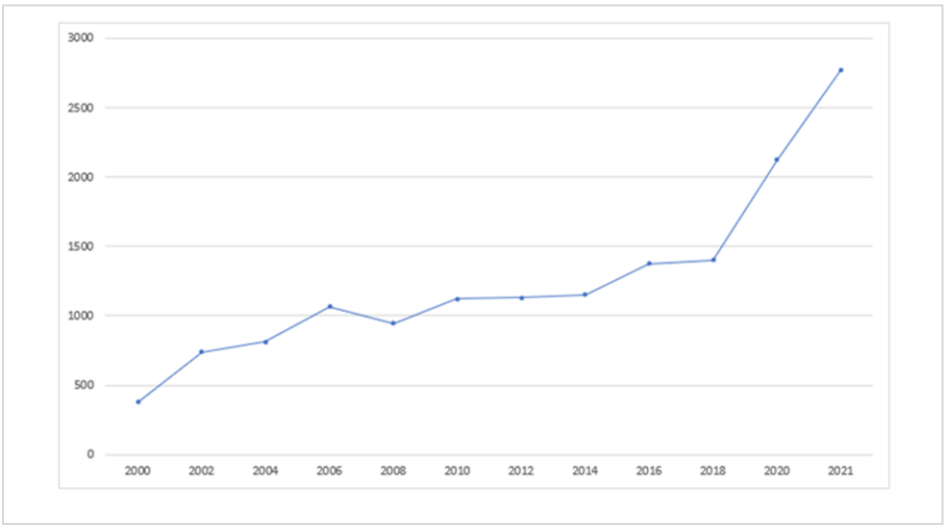
The opioid epidemic in the United States can be classified in three waves. The first wave, which occurred in the mid-1990s, started with the Food and Drug Administration (FDA) approving OxyContin (oxycodone) for pain relief, with its use increasing since 1999. The second wave, which began around 2010, was due to the expanded heroin distribution that was marketed to opioid addicts at the time including heroin, a semi-synthetic opioid derived from chemically processing morphine.[cccxcv] Between 2010 to 2021, overdose deaths related to heroin increased three times, and over 11% of all opioid deaths involved heroin.[cccxcvi] [cccxcvii] The third wave, which began in 2013, is due to the rise in synthetic opioids such as fentanyl.[cccxcviii] Fentanyl, which is prescribed to treat severe pain, typically with advanced cancer, is 50 to 100 times more potent than morphine.[cccxcix] Figure 63 shows the death rate from an opioid overdose from 1999-2021 in the United States.[cd]

Figure 63: Overdose Deaths from Opioids in the United States (1999-20)



Source: Centers for Disease Control and Prevention (2022)

Figure 64: Overdose Deaths from Opioids in Texas. (1999 – 2021)



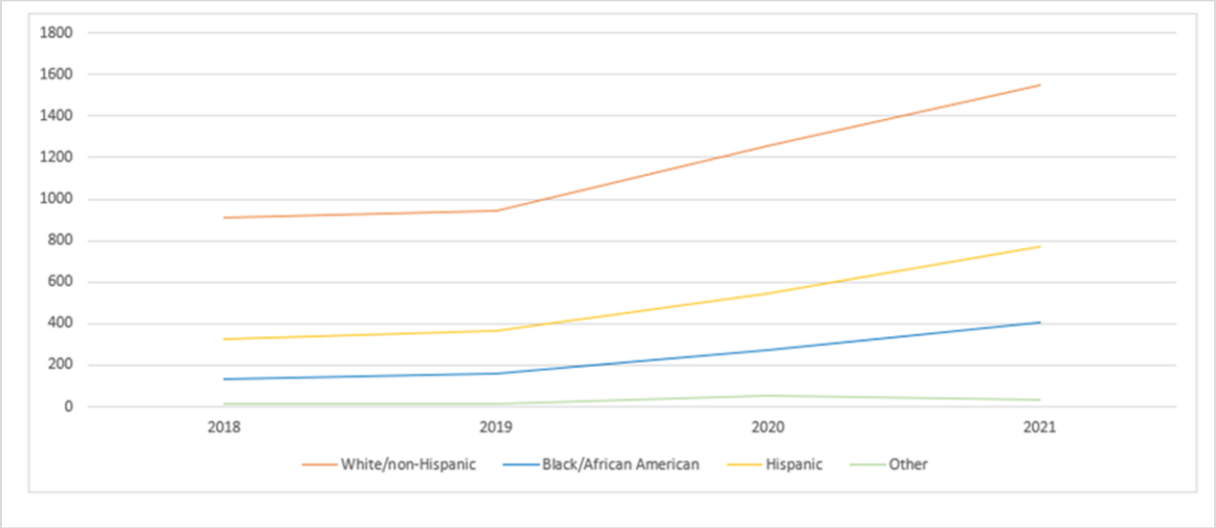
Source: Kaiser Family Foundation (2023)

In Texas, deaths related to opioid overdose have had a similar trend, with the number of deaths increasing six times over the same period.[cdi] Figure 63 shows the trend in opioid related deaths from 1999 to 2020 in Texas.

Historically, low-income, minority groups have had less access to health care providers and are therefore prescribed opioids for pain relief less frequently than White/non-Hispanic populations. Biases exist within the treatment of patients with different racial backgrounds, with some medical professionals assuming minorities are more likely to be substance abusers or have a higher threshold for pain. These misconceptions lead to overprescribing pain medications to White/Non-Hispanics, and under prescribing to minority groups.[cdii] The excess in prescribing can lead to more overdosing and death. However, the trend has shifted in recent years, minority groups now appear to be increasing their risk of opioid use, abuse, and death.[cdiii] Figure 63 below

shows the number of overdose deaths from opioids by race and ethnicity in Texas between 2018 and 2021.[cdiv]

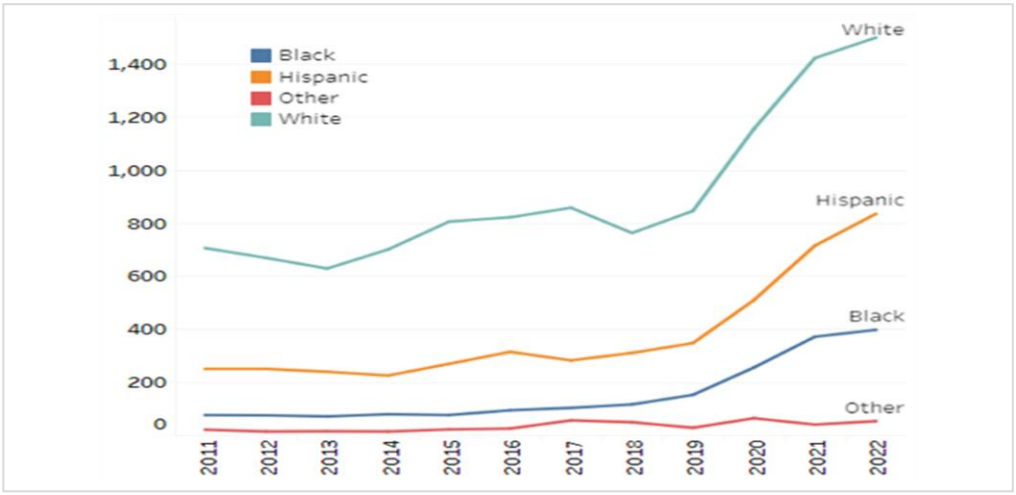
Figure 65: Overdose Deaths related to Opioids by Race and Ethnicity: Texas (2018-2021)



Source: Kaiser Family Foundation (2022)

Figure 66 shows the number of (reported) deaths, 1,498 in 2022, in the Texas area by race/ethnicity. Fifty-four percent of the deaths were those individuals who identified as White/non-Hispanic[cdv]

Figure 66: Opioid Related Deaths by Race/Ethnicity: Texas



Source: Texas Department of State Health Services (2022)

Hallucinogens

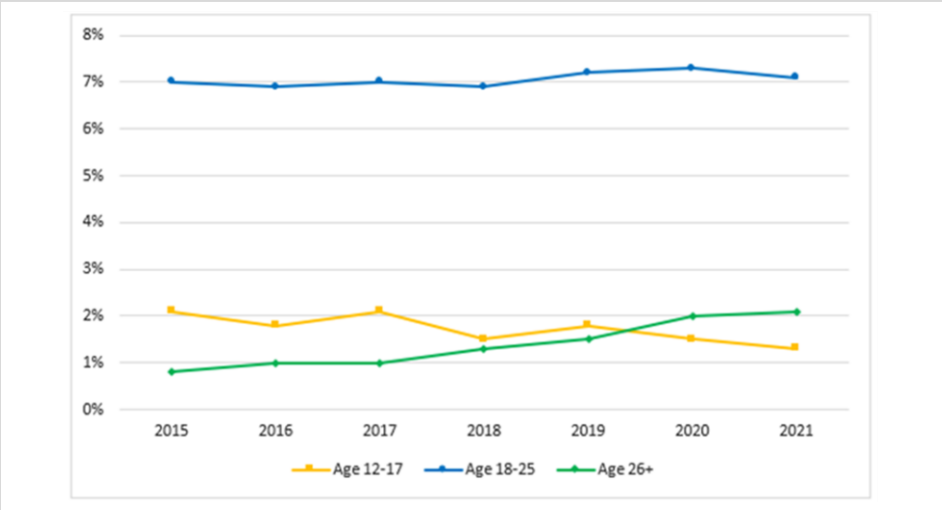
Hallucinogens, often called “psychedelic” drugs, alter a person’s awareness of their surroundings, thoughts and feelings. Split between two categories, classic (e.g. LSD, magic mushrooms, MDMA) and dissociative (e.g. PCP, ketamine, DXM), hallucinogens cause hallucinations and a disconnection between body and environment.[cdvi] These drugs can be man-made or found from plants or mushrooms. Users often feel rapid, intense emotional swings and see images, hear sounds, and feel sensations that seem real but are not.[cdvii]

The use of this drug began centuries ago during religious rituals to induce states of detachment from reality and connect on a spiritual level. Now, people report using hallucinogenic drugs for more social or recreational

purposes, including personal enjoyment, stress management, or enabling them to enter what they perceive as a more enlightened sense of thinking or being. Hallucinogens have also been investigated as therapeutic agents to treat diseases associated with perceptual distortions, such as schizophrenia, obsessive-compulsive disorder, bipolar disorder, and dementia.[cdviii]

The age group with the highest use are those between ages 18-25.[cdix] In 2021, there was a 38% decrease for those between ages 12-17 and a 162.5% increase in those above age 26. Figure 67 shows the use of hallucinogens by age group from 2015-21.

Figure 67: Hallucinogen Use Trend Over Time: United States



Source: Substance Abuse and Mental Health Services Administration (2020)

Cocaine

A powerful addictive stimulant, cocaine derives from the leaves of the coca plant native to South America and is often mixed with products such as cornstarch, talcum powder, or flour to increase sales and profit. It can also be mixed with synthetic opioids such as fentanyl which increases the addictiveness of the drug.[cdx] Often taken in binges, cocaine increases levels of dopamine in the brain, which is a neurotransmitter that transmits messages between nerve cells.[cdxi] Cocaine prolongs the buildup of dopamine between nerve cells and causes a high while consuming the drug. Short-term, health effects include being extremely happy and energetic, high level of alertness, sensitivity to sight, sound and touch, paranoia, and irritability.[cdxii]

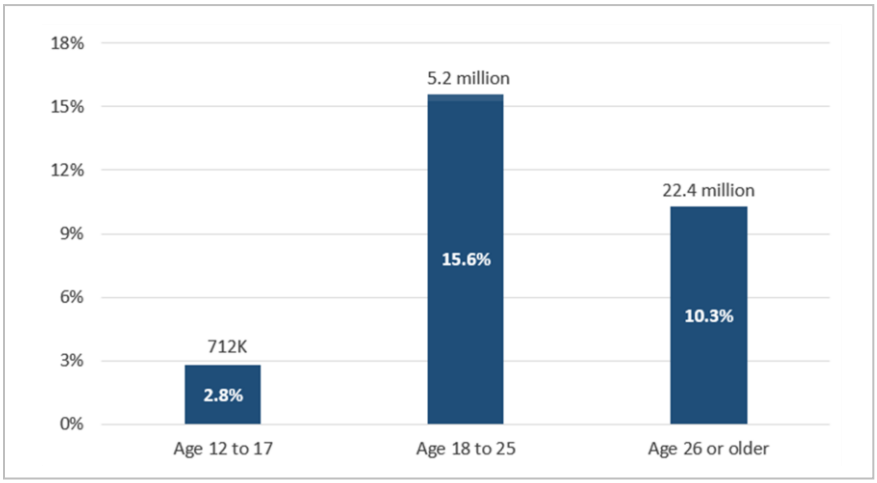
Over 5 million adults in the United States report current cocaine use, which is roughly 2% of the population.[cdxiii] In 2021, the number of deaths from cocaine overdose increased by 23% in the United States from 19,927 in 2020 to 24,538 in 2021.[cdxiv] In region 6A of Texas, 1.3% of the population report using cocaine.[cdxv]

Alcohol

Alcohol use disorder is a medical condition caused by the inability to stop or control one's alcohol use despite the personal and professional consequences. Including terms such as alcohol abuse, dependence addiction, and alcoholism, the severity of this disorder can range from mild to moderate to severe.[cdxvi] Alcohol misuse, such as binge drinking or heavy alcohol use, increases the chances of developing alcohol use disorder. Binge drinking is defined as excessive drinking during a short period of time, which is generally four drinks for women and five drinks for men in about two hours.[cdxvii] Heavy alcohol use is the consumption of more than four drinks on any day or more than 14 drinks per week for men. For women, consuming more than three drinks on any day or more than seven drinks per week is considered heavy use.[cdxviii]

Other factors that increase the likelihood of alcohol use disorder include drinking at an earlier age, genetics/family history, and mental health conditions.[cdxix] Figure 68 shows the percentage of people who had alcohol use disorder in the past year by age. The highest prevalence was among those between ages 18-25.[cdxx]

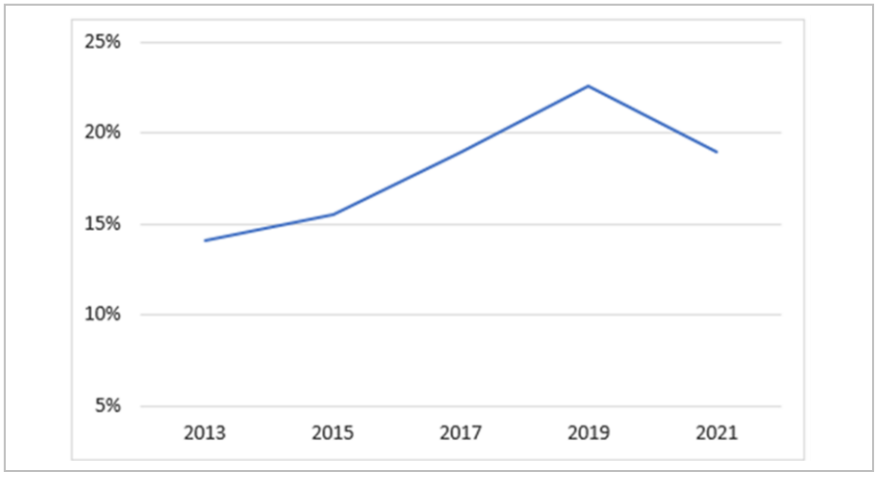
Figure 68: Individuals with Alcohol Use Disorder by Age Group



Source: Substance Abuse and Mental Health Services Administration (2020)

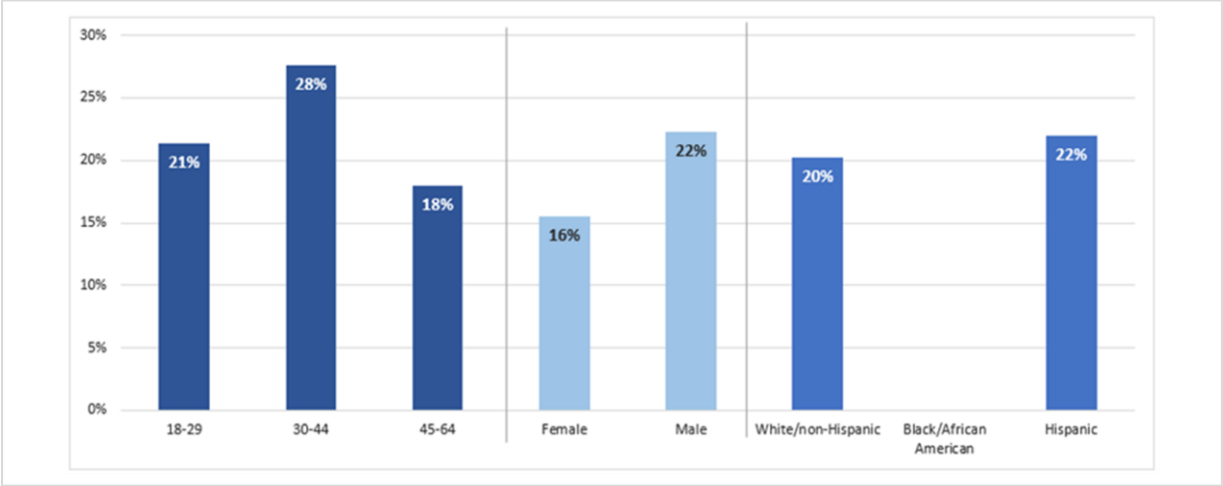
In Harris County, adults who binge drink have been increasing over the years. This excessive drinking pattern can lead to alcohol use disorder. In 2021, nearly 19% of adults reported binge drinking, an increase of 16% from the previous reporting period. Figure 69 shows the trend of adults who binge drink in Harris County.[cdxxi] Twenty-eight percent of adults between the ages of 30-44 reported binge drinking; more than any other age groups. In addition, males reported higher incidence of binge drinking compared to females. Hispanics reported higher rates than other racial/ethnic minority groups. Figure 70 shows the age, gender, and race/ethnicity breakdown of those who binge drink in Harris County.[cdxxii]

Figure 69: Adults Who Binged Drink in the last 30 days: Harris County



Source: Houston State of Health (2021)

Figure 70: Demographics of Adults Who Binge Drink: Harris County



Source: Houston State of Health (2021)

Excessive alcohol use can lead to or worsen chronic diseases. It can cause high blood pressure, stroke, heart disease, fatty liver, hepatitis, fibrosis, and cirrhosis of the liver. It also contributes to cancers of the mouth, throat, larynx, esophagus, colon, liver and breast.[cdxxiii] Table 17 shows the incidence rates for alcohol-associated cancers by site.[cdxxiv] In Texas, alcohol-related cancer incidence rates were lower or similar to the United States except for liver cancer.

Table 17: Alcohol Associated Cancers, Texas (per 100,000 population)

Cancer Site	Incidence Rate
Breast (female)	111.7
Colorectal	36.8
Lip, oral cavity, pharynx	10.9
Liver	9.8
Esophagus	3.8
Larynx	2.9

Source: Texas Cancer Registry; Texas Department of State Health Services (2020)

Impact of Substance Use

Substance abuse is associated with a variety of negative health outcomes such as lung disease, heart disease, stroke, cancer, mental health conditions, pregnancy complications, injuries, STDs, HIV/AIDs, and more.[cdxxv] Substance abuse can also result in death due to drug overdose, and more than 100,000 drug overdose deaths were reported in 2021.[cdxxvi] The number of overdose deaths is on the rise and this increase is linked to the COVID-19 pandemic. More than 1 in 10 adults reported initiating or increasing substance use in order to cope with stress during the pandemic. As mentioned earlier in this report, there was a 15% increase in overdose deaths between 2020-21. Although White/non-Hispanics account for the largest share of drug overdose deaths, the increase in recent years is disproportionately affecting people of color.[cdxxvii]

Substance use disorders co-occur at high prevalence with mental disorders. Both disorders share some underlying causes and common risk factors such as genetic and environmental factors. Certain genes may be a risk factor since SUD and mental disorders run in families. Stress, trauma and other environmental factors can cause genetic changes that are then passed down over generations. These factors may lead to SUD or mental disorders. Individuals who experience mental disorders may use substances to self-medicate, leading to substance misuse. On the other hand, substance use can influence the development of other mental disorders since it can cause changes in brain structure and function.[cdxxviii]

At the interpersonal level, substance use has a strong impact on children, family, and friends. Research shows that certain environmental factors increase the risk of addiction, especially when exposed in the early years of life. Therefore, a child's home environment and parents or older family members' usage of substances can impact a child's risk of utilizing drugs or alcohol later in life. The National Institute on Drug Abuse explains that as the child enters their teen years, the risk of initiating substance use may be amplified even more for adolescents who have poor social skills or who struggle in school. Other environmental risk factors that may

increase the risk of substance use include frequent exposure to social influences that promote substance use and the utilization of substances by friends and peers.[cdxxix]

Community Impact

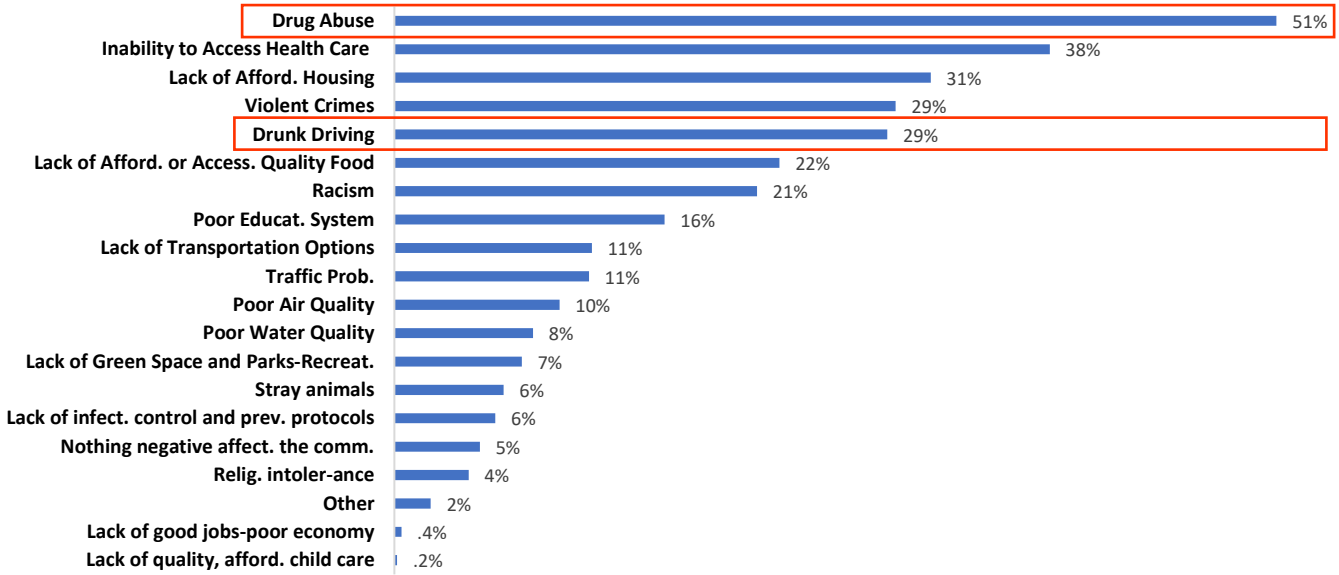
Substance misuse and substance use disorders have serious and wide-ranging public health, economic and societal implications for communities. The societal costs of disease, premature death, lost productivity, violence and criminal activity, unplanned sexual activity, incarceration, and more, are all effects of substance abuse.[cdxxx] Economically, it costs national and local economies more than $400 billion annually.[cdxxxi]

From a public safety perspective, substance abuse is linked to a number of adverse outcomes that affect not only the individual who is using substances but the general public. These adverse outcomes can include an increased risk of trauma such as falls, burns, drowning, and injury from motor vehicle collisions and interpersonal violence.[cdxxxii, cdxxxiii] There are high rates of substance abuse within the criminal justice system; 85% of the prison population has an active substance use disorder or were incarcerated due to a crime related to drugs or the use of drugs.[cdxxxiv] Devon Anderson, JD, President/CEO of Justice Forward, and former District Attorney of Harris county, explains the impact that substance abuse has on incarceration, along with the importance of treatment:

> "Virtually every case in the courthouse has some connection to substance use disorder. Because this is a public health issue and a generational disease, treatment is often the answer, not incarceration." (D. Anderson, Justice Forward)

In the 2022 Houston Methodist community health needs assessment survey, 51% of respondents indicated that drug abuse is a major factor negatively impacting their community. This is a marked increase from the 2019 survey conducted in which drug abuse was ranked third highest with 32% of respondents indicating drug abuse was most negatively impacting their community. Drunk driving, which is linked to alcohol misuse, also ranks among the top five most important negative factors mentioned by respondents at 29%. This is also an increase from the 2019 survey in which 22% indicated drunk driving was a major issue. Figure 71 shows a compiled list of factors negatively impacting the community.

Figure 71. Three Most Important Factors Negatively Impacting Your Community (N = 1232)



Source: Houston Methodist Houston Methodist Community Health Needs Assessment Survey (2022)

Substance abuse impacts community health in several ways. It increases the spread of infectious diseases such as HIV/AIDS, Hepatitis, and STDs. In the United States, individuals who inject drugs account for approximately 1 in 10 HIV diagnoses.[cdxxxv] In addition to intravenous drug use being linked to HIV/AIDs, substance abuse also increases the likelihood of high-risk sex with infected partners.[cdxxxvi] Maternal and child health can be impacted by substance use as well. Drinking alcohol or taking drugs during pregnancy can lead to pregnancy complications and a wide range of developmental problems for children which will impact them throughout their lifetime. National Institutes of Health-funded community studies estimate that as many as 1% to 5% of United States schoolchildren may have Fetal Alcohol Spectrum Disorders (FASD).[cdxxxvii] Nadine Scamp, LMSW, CEO of Santa Maria Hostel, explains:

> "Prenatal alcohol exposure is unfortunately common and can have profound negative effects on the developing fetus - it is the leading cause of preventable birth defects and developmental disabilities. As there is no safe amount of alcohol use during pregnancy, and since up to half of pregnancies are unplanned, alcohol use screening, education and support should be provided to all individuals of childbearing age so that they can take steps to reduce risk of prenatal alcohol exposure. For pregnant women who have trouble stopping use, it is vitally important for both her health and that of her baby that providers link them to treatment options and provide support in a non-judgmental manner." (N. Scamp, Santa Maria Hostel)

Prevention & Treatment

Substance abuse should be considered a public health problem and addressed at individual, interpersonal, school, community, and policy levels to encourage change. Primary prevention and early intervention focus upstream to promote the avoidance or reduction of substance use. School and community-based prevention programs, including those aimed at youth and engaging coalitions, have proven to be successful in preventing substance initiation. Currently, more than 5,000 coalitions are working across the country to prevent and reduce substance misuse and substance use disorders in communities.[cdxxxviii] Mary Beck, LMSW, CAI, CEO of The Council on Recovery, outlines the importance of community-based primary prevention strategies.

> "Community-based strategies are critical to ensuring the success of prevention efforts. Previously, single-strategy, single-system efforts were used, and resulted in temporary or no success. Community-based strategies also create awareness across communities and seek to address underlying variables that correlate with high-risk behaviors such as drug abuse. Houston has a well-established and effective prevention system, including 10+ coalitions, 14+ school-based prevention providers, a Recovery Oriented System of Care Network, and a Network of Behavioral Health Providers." (M. Beck, The Council on Recovery)

Secondary and tertiary prevention strategies include screenings, early diagnosis and the provision of treatments in a variety of settings ranging from in-patient settings to schools, and even virtually. Treatments may include medication, family or group therapy, individual counseling or therapy, and contingency management which engages positive reinforcement.[cdxxxix]

Barriers to Access to Care

Access to care for substance abuse and substance use disorders is hampered by a myriad of barriers. Treatment is part of a complex system that both providers and patients can find difficult to navigate. Additionally, services and personnel dedicated to treating substance use disorders are limited and insurance coverage for treatment varies. Lack of transportation can make it difficult for individuals to reach treatment facilities. Homelessness is another barrier since individuals who lack basic needs, such as housing may face difficulties in focusing on substance abuse treatment.[cdxl] Finally, an individual's motivation for change is another important barrier. It is challenging to initiate and sustain behavior change such as engaging in treatment for substance abuse.[cdxli] There is also a stigma associated with substance misuse and seeking treatment, which affects treatment-seeking behavior and access to care.[cdxlii]

Access to care for substance abuse was further impacted by COVID-19 and evidence is beginning to show that access and utilization of substance use treatment worsened during the COVID-19 pandemic.[cdxliii] Recent

research shows that only 10% of individuals who report having a substance use disorder receive treatment, primarily due to cost, and uncertainty on how to seek treatment.

The United States Department of Health and Human Services reports that current workforce shortages for substance abuse treatment impact the availability of treatment for SUD, especially medication assisted treatment.[cdxliv] The Health Resources and Services Administration (HRSA) anticipates a continued shortage in the future within the substance use workforce. For example, by 2030, HRSA estimates just a 3% increase in the number of addiction counselors, compared to a 15% increase in demand for these professionals.[cdxlv] Other barriers include insufficient training, education and experience, lack of institutional and clinician peer support, provider stigma and inadequate or complicated reimbursement for services.

The Affordable Care Act (ACA) and The Mental Health Parity and Addiction Equity Act (MHPAEA) are intended to improve access to substance use disorder treatment, however, they have only resulted in partial success and more reform is needed.[cdxlvi] More recent policy actions affiliated with the American Rescue Plan Act aimed to address the substance use crisis. Nearly $4 billion dollars were allocated to substance abuse prevention and treatment. Other recent policies focus on harm reduction programs, expanding the availability of medication-assisted treatment and improving the restrictions on the delivery of substance use care such as telehealth. Addressing racial equity issues as they relate to substance abuse are included in recent efforts as well.[cdxlvii] In Texas, the Department of State Health Services has enacted a state plan to address substance use, including improvements to surveillance, education, and resource development for the public and medical professionals.[cdxlviii] Despite a renewed focus to address the substance abuse crisis, additional efforts by stakeholders at all levels will be required to begin to move the needle on this important public health issue.

Social Determinants of Health

Social Determinants of Health (SDOH) are the conditions in a person's environment (such as where one is born, lives, learns, works, worships, etc.) that affect one's health as well as quality of life outcomes and risks. There are five main categories for SDOH: education access and quality, economic stability, neighborhood and built environment, health care access, and social and community context.[cdxlix] Table 18 shows various factors that impact each of the categories.

Table 18. Social Determinants of Health Factors

EDUCATION ACCESS & QUALITY	ECONOMIC STABILITY	NEIGHBORHOOD & PHYSICAL ENVIRONMENT	HEALTH CARE ACCESS	COMMUNITY & SOCIAL CONTEXT
Literacy	Employment	Housing	Health Coverage	Social Integration
Language	Income	Transportation	Provider Availability	Support Systems
Early Childhood Education	Expenses	Safety	Provider Linguistic and Cultural Competency	Community Engagement
Vocational Training	Debt	Parks	Quality of Care	Discrimination
Higher Education	Medical bills	Playgrounds		Stress
	Support	Walkability		
	Food insecurity	Zip Code/Geography		
	Access to Nutritious Options			

HEALTH OUTCOMES

Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

Source: Kaiser Family Foundation (2018)

Addressing the factors within each category is vital to improving overall health equity and reducing health disparities. Health equity is when an individual has a fair and just opportunity to be as healthy as possible. This requires removing obstacles to health (SDOH) such as poverty, discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care. Individuals from racial and ethnicity minority groups, along with women, LGBTQI+, those with disabilities and/or limited English proficiency are some groups that experience health disparities due to the social constructs that exist.[cdl]

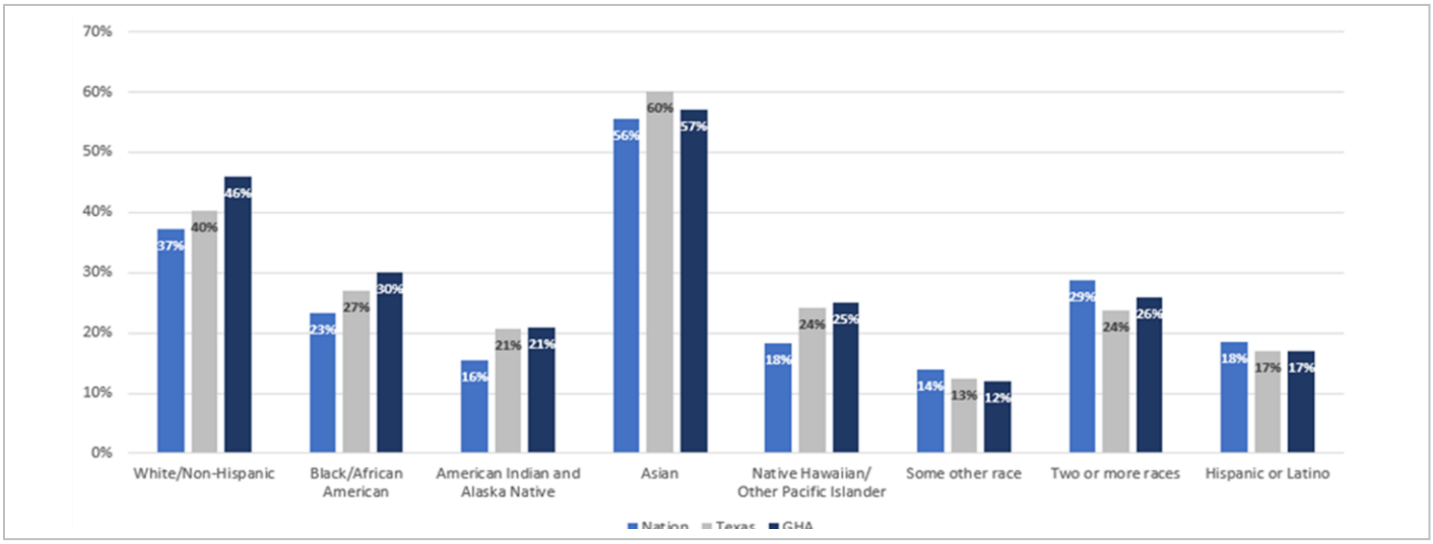
Education Access and Quality

Education can influence an individual's health throughout their lifetime. Adults who achieve a higher educational attainment, have greater resources available to help support a healthier lifestyle. Early childhood development makes a lasting impact on the physical and mental health of children that carries them through adulthood. If a child is involved in educational opportunities that promote positive childhood development, they are at lower risk of having heart disease, obesity, high blood pressure, and high cholesterol in adulthood. They are also less likely to binge drink, smoke cigarettes and use illegal drugs.[cdli]

High school years are also pivotal for any student. Those from low-income families often have less access to resources and typically live in communities where schools have less funding and are considered underperforming. High school dropout rates are higher for those students who have less engaged parents and teachers. In addition, individuals who do not complete high school are at higher risk of developing at least one chronic health condition such as diabetes, heart disease, high blood pressure, etc.[cdlii]

Similar to other SDOH needs, race and ethnicity can also influence an individual's educational attainment. Figure 72 below shows the educational attainment for those obtaining a bachelor's degree by race and ethnicity for the nation, Texas, and the Greater Houston Area (GHA).

Figure 72. Bachelor's degree or higher by Race and Ethnicity



Source: U.S., Census Bureau (2016 – 2021)

In the United States, Asians and White/Non-Hispanics have a higher percentage of individuals graduating with a bachelor's degree or higher, with 56% and 37% respectively. Black/African Americans and Hispanics have a lower rate at 23% and 18% respectively.[cdliii] In the GHA, percentage distributions are similar to that of the nation and state. This educational attainment can be a predictor of a person's proclivity to living in poverty and therefore, can have a great influence on one's overall healthcare outcomes throughout their life.

Economic Stability

Economic stability is described as one's ability to access means essential to life such as financial resources, quality housing and food, and employment that provides consistency as well as a living wage.[cdliv] Being economically stable indicates that an individual is in a financial position where they are able to make positive decisions/impact in various aspects of their life. In 2022, only 31% of Americans considered themselves to be economically stable; 69% of Americans were not. These individuals struggle to save, borrow, or plan in ways that allow them to be resilient and seize opportunities over time. Of the 69% who considered themselves economically unstable, 22% worried about providing food for themselves and/or family and 26% worried about affording rent or mortgage over the past three months.[cdlv]

Higher income can be an indicator of one's educational attainment level and often the root predictor of a person's ability to achieve economic stability and positive long-term health outcomes. Nationally, average weekly earnings for those with a high school diploma is $781, whereas income increases significantly with those with higher educational attainment. For those who have a bachelors, average weekly earnings is $1,305, masters is $1,545 and doctoral is $1,885, a 141% increase from those who have a high school diploma. This increase in income sets individuals up to be in a healthier financial position. Being in a positive financial position increases the likelihood of one being economically stable and having improved health. There is a direct correlation between a person's annual income and their prevalence of certain health conditions with lower income being associated with greater prevalence of health conditions such as diabetes, obesity and more. In a report published by the Urban Institute and Center on Society and Health, a link was made between socioeconomic status and prevalence of health outcomes. The report, titled "How are Income and Wealth Linked to Health and Longevity?", a National Health Interview Survey was referenced in which surveyors uncovered higher prevalence of chronic conditions such as kidney disease and coronary heart disease the lower the household income was.[cdlvi] See table 19 for an outline of the survey results linking health to income.

Table 19. Prevalence (%) of Diseases by Income, Adults

Disease or Illness	Annual Family Income				
	Less than $35,000	$35,000 - $49,999	$50,000 – 74,999	$75,000 – $99,999	$100,000 or more
Coronary Heart Disease	8.1	6.5	6.3	5.3	4.9
Stroke	3.9	2.5	2.3	1.8	1.6
Emphysema	3.2	2.5	1.4	1.0	0.8
Chronic Bronchitis	6.3	4.0	4.4	2.2	2.4
Diabetes	11.0	10.4	8.3	5.6	5.9
Ulcers	8.7	6.7	6.5	4.7	4.4
Kidney Disease	3.0	1.9	1.3	0.9	0.9
Liver Disease	2.0	1.6	1.0	0.6	0.7
Chronic Arthritis	33.4	30.3	27.9	27.4	24.4
Hearing Trouble	17.2	16.0	16.0	16.2	12.4
Vision Trouble	12.7	9.8	7.5	5.7	6.6
No Teeth	11.6	7.8	5.5	4.2	4.1

Source: Urban Institute and Center on Society and Health

Disparities in financial security was seen when Houston Methodist surveyed the Greater Houston community. Of the 1,123 survey respondents, nearly 30% of respondents indicated that they were unable to afford the co-payment for a doctor's visit because of the high cost. Inability to afford to see a doctor is linked to income, employment status. A person unable to afford to see a doctor are more likely to develop chronic conditions that go unchecked.

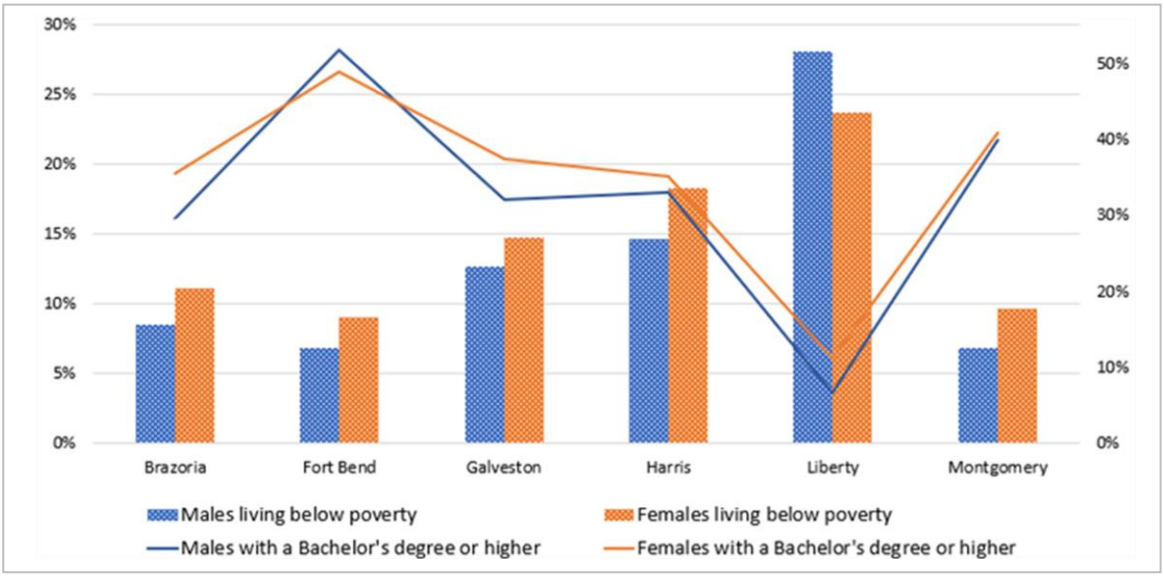
Race, ethnicity, gender, and income level all impact one's economic stability and overall financial health. In 2022, only 15% of Black/African Americans and 23% of Hispanic/Latinos were considered to be economically stable, compared to 359% of White/non-Hispanics and 44% of Asians.[cdlvii] In the Greater Houston Area, minority groups such as Black/African Americans and American Indians/Alaska Natives have higher unemployment rates (6% and 10% respectively) than White/non-Hispanics (4%).[cdlviii] Those who are unemployed are not able to earn a steady income and have a more difficult time saving money for expenses such as medication and other medical needs. According to the 2022 Kinder Institute for Urban Research annual Houston Area Survey, 47% of Black/African Americans do not have the resources to cover a $400 emergency. This number is slightly lower for Hispanic/Latinos at 40% and significantly lower for White/non-Hispanic and Asian Houstonians at 20% and 13%, respectively.[cdlix]

When individuals experience unemployment, there is a loss of income as well as a potential loss of health insurance. In regard to gender differences, although males and females have similar rates for educational attainment in the country, females are paid $0.84 for every $1.00 a male earns, nationally. In the Greater Houston Area, females earn at a lower rate of $0.81.[cdlx, cdlxi] This reduction of income and health insurance can have detrimental effects on one's short and long-term health.

Together, these factors – income, educational attainment and gender – can impact the likelihood of an individual living in povery which often predict health outcomes. Figure 73 shows a comparison of those residents living in

poverty along with educational attainment by gender for all counties served in the Greater Houston Area.[cdlxii] As the graph shows, women are living in poverty at higher rates than men across all counties. Those counties with lower education attainment, have higher rates of poverty. Nationally, 28% of women who have less than a bachelor's degree had problems paying for their medical bills. Sixteen percent of those who have a bachelor's degree or higher encountered the same difficulty. In addition, 24% of women making less than 200% of the FPL describe their health as fair or poor; whereas 11% of those above 200% feel the same.[cdlxiii]

Figure 73. Poverty and Educational Attainment by Gender



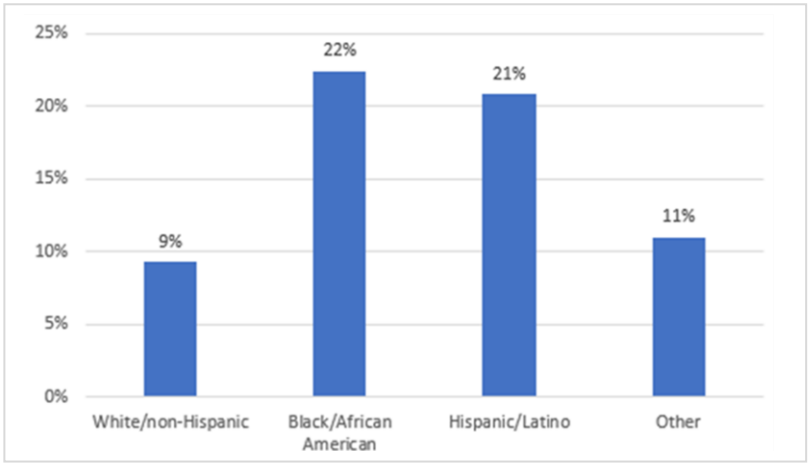
Source: U.S. Census Bureau (2022)

Food Insecurity

A result of economic instability that has a major toll on one's heath is food insecurity, which is defined as the disruption of food intake or eating patterns due to lack of money or resources, more than 38 million Americans, including 7.3 million children, experience food insecurity, which is 12.8% of householders within the United States.[cdlxiv, cdlxv, cdlxvi] Almost all households who had very low food security (5.1 million) reported that food would run out before they get money to buy more; 95% reported that they could not afford to eat balanced meals, 67% reported being hungry but did not eat because they could not afford it.[cdlxvii]

The USDA has been trending food insecurity for over 20 years. Although levels of food insecurity ebbs and flows, one trend that has been consistent is the racial prevalence of obtaining food. Intertwined with other factors such as income, employment, poverty – minority groups report higher rates of food insecurity.[cdlxviii] Figure 74 shows the percent of food insecure households in the United States by race and ethnicity. Hispanics (21%) and Black/African Americans (22%) have a higher rate of food insecurity than the overall household rate (9%).

Figure 74. Food Insecure Households by Race and Ethnicity



Source: U.S. Dept of Agriculture (2020)

Texas ranks second for states with the highest food insecurity.[cdlxix] In Harris County, 13.8% of residents said they experience food insecurity. Liberty County has the highest percentage at 15.7% and Fort Bend County has the lowest at 9.1%.[cdlxx] Table 20 shows counties that are within the Greater Houston Area.

Table 20. Percentage of Population Food Insecure

County	Percent Food Insecure
Liberty	15.7%
Chambers	14.4%
Harris	13.8%
Galveston	13.1%
Montgomery	11.7%
Waller	10.9%
Brazoria	10.7%
Fort Bend	9.1%

Source: Feeding America (2021)

According to the Houston Methodist survey conducted earlier this year, 'access to healthier food" was the second most important factor for a health community at 43%. Living with food insecurity typically means making difficult decisions between paying for food or basic necessities such as utilities, rent, transportation, schooling. Seventy-nine percent of the 1 million people who are food insecure in southeast Texas eat unhealthy meals as a result of not having enough food or funds.[cdlxxi] The unhealthy eating and lack of access to healthy food is associated with higher rates of chronic health problems such as diabetes, heart disease, high blood pressure, hyperlipidemia, obesity, and mental health issues including major depression.[cdlxxii]

Neighborhoods and Built/Physical Environment

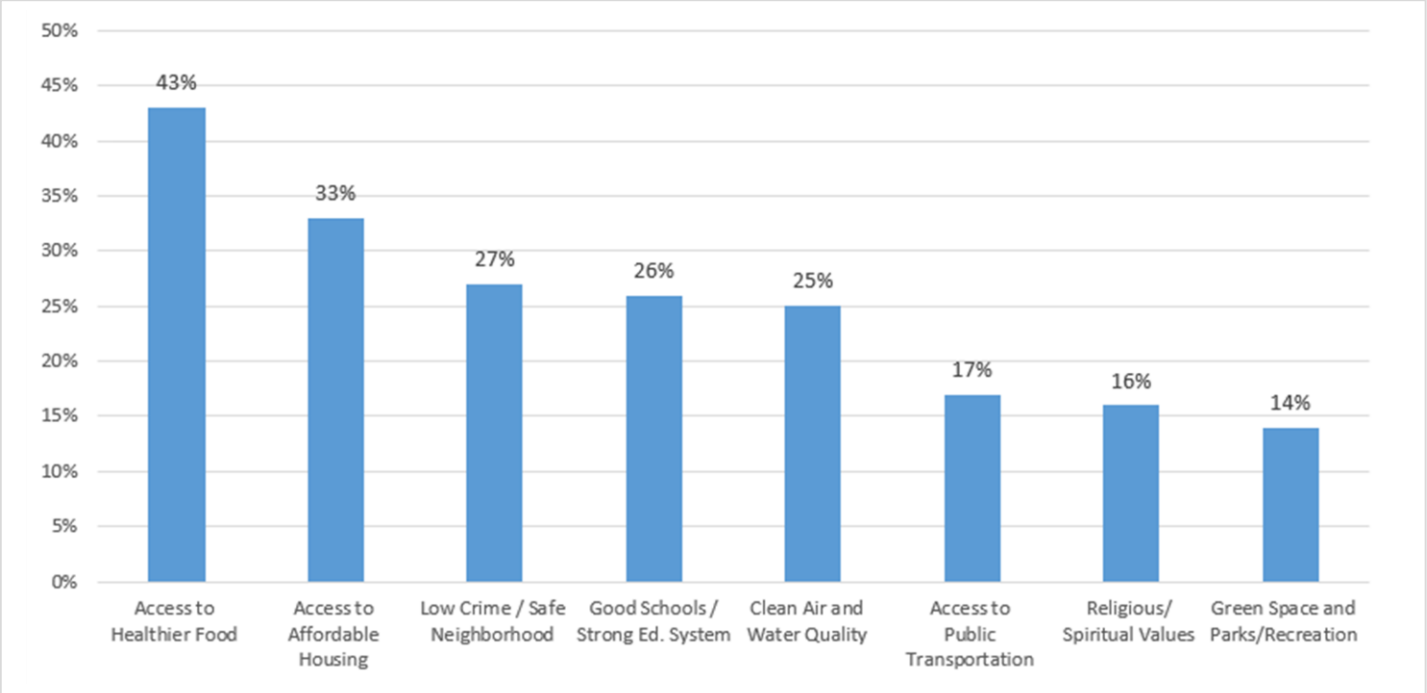
Neighborhoods and communities have a major impact on a person's physical, mental, and emotional well-being as well as their overall health. The social environment is the composition and social aspects of neighborhoods, such as community support, social activity, networks, crime, and presence of disorderly conduct. The built environment includes the physical attributes of its surroundings such as sidewalks, streets, parks, playgrounds, grocery stores, fast food chains, liquor stores, etc.[cdlxxiii] Those living in poverty are more likely to live in communities where the social and built environments need to be improved. In the Greater Houston Area, only 58% of Houstonians are able to walk to nearby park. The southwest, east and north parts of Houston have some opportunities to improve public green space.[cdlxxiv]

These communities are more likely to experience food deserts, which is when residents have few to no options for obtaining healthy and affordable foods. This limited access to food influences how one gets nutritional value through what they eat, making a lasting impact on their health and increasing the likelihood of diseases such as diabetes and hypertension. In addition, public transportation can be limited or non-existent in some areas. This lack of transportation can inhibit one from going to their place of employment, seeing a doctor or visiting the grocery store which can impact one's overall health.[cdlxxv] In the Greater Houston Area, 92,000 households do not have a vehicle to access and 57,000 people use the public transportation system as their primary way for commuting.[cdlxxvi]

These same neighborhoods typically have scarce community space and engagement activities that can impact one's well-being. Without proper infrastructure, such as community centers, sporting facilities, and greenspace, exposure to different activities that support active lifestyles such as bike riding and playing basketball or baseball, and exercising becomes limited which causes physical inactivity and can lead to an increase in chronic health conditions as well as mental health needs.

There are multiple factors that impact the feelings of a community being safe and healthy. Figure 75 reflects the responses from the Houston Methodist community health needs assessment survey when asked about the most important factors for a healthy community. Access to healthier food, affordable housing and living in a safe neighborhood were the top three factors pertaining to this category. Seventeen percent reported that access to public transportation were important factors for a healthy community. Fourteen percent responded that green space and parks/recreation areas are important factors.

Figure 75: Most Important Factors for a Healthy Community (n = 1,243)



Source: Houston Methodist Community Health Needs Assessment Survey (2022)

Health Care Access and Quality

Health insurance coverage, affordability, provider availability, and cultural competency are some of the major areas that influence the level of quality of health care that one has access too. As mentioned earlier, Texas has the greatest number of uninsured individuals (17%), making it very arduous for a large number to get access to health care, especially for those who live in rural parts of the state. Access challenges are exacerbated when looking at the disparities by race and ethnicity. According to Kaiser Family Foundation, individuals of Black/African American, Hispanic, American Indian and Alaskan Native fare worse than White/non-Hispanics in health coverage, access/use, health status, outcomes, behaviors and SDOH.[cdlxxvii] This disparity is further outlined by Adlia Ebeid, PharmD, BC-ADM, RPh, Chief Clinical Officer with San Jose Clinic, a local charitable clinic primarily serving uninsured populations:

> "Black/African Americans and Hispanics tend to have lower wages and are not provided insurance or other benefits, making it very difficult to access or afford specialty care. In addition, while their level of education may directly impact employment decisions, it also impacts how they prioritize health and seek specialty care in non-emergency situations. Other obstacles presented to this patient population include language, cultural and political barriers to accessing and affording care." (A. Ebeid, San José Clinic)

When SDOH factors (such as economic stability, education access and quality, environment) are left unaddressed, these differences are associated with having more risk factors for diabetes, heart disease, obesity, cancer and other diseases and less access to high-quality and timely prevention, early detection, and treatment. As shown throughout this report, minority groups tend to work in industries that are low-income, labor driven where health insurance is limited or not available – limiting access to quality health care and screenings. These same groups have higher food insecurity and rates of poverty which can lead to higher prevalence of chronic

health conditions. See table 21 for outline of Harris County and how economic factors can impact insurance status and health outcomes.[cdlxxviii] [cdlxxix] [cdlxxx] [cdlxxxi]

Table 21: Economic Factors Impact on Insurance and Health Outcomes by Race/Ethnicity

Race/Ethnicity	Median Income	% Poverty	% Uninsured	% Unemployed	% Food Insecure	% Obese	% Death Rate due to Diabetes	% Hospitalization Rate due to Hypertension
Black NH	$52,313	21.7%	16.2%	8.1%	25%	33.9%	36.6%	12.9%
Hispanic	$59,384	20.3%	32.2%	5.6%	16%	37.1%	24.1%	6.5%
White NH	$95,441	8.1%	7.5%	4.1%	7%	32%	18.8%	1%

Sources: US Census Bureau; Houston State of Health; Feeding America

Community and Social Context

Positive relationships and interactions with family, friends, co-workers, and community members can impact an individual's health and well-being. Challenges and threats that are out of one's control, such as unsafe neighborhoods, discrimination, and bullying, can make lasting and harmful impacts on one's health, safety, and behaviors. The U.S. Department of Health and Human Services has outlined objectives to increase social and community support for the Healthy People 2030 initiative. Some key objectives are listed below.[cdlxxxii]

Increase the proportion of adolescents who have adults they can talk to about serious problems
Children and adolescents who have supportive and trusting adults in their upbringing are less likely to partake in risky behaviors. These risky behaviors can and are often linked to health problems in adulthood. Mentoring programs are a valuable way to improve behavioral, social, emotional, and academic outcomes.

Increase the proportion of parents who use positive communication with their child
Positive, reinforcing, and supportive communication between parents and children can help them stay engaged in school and social activities. These conversations, ranging from values, experiences, and feelings help create a foundation for children where they can build upon and maintain a healthier lifestyle as they go through adulthood.

Reduce the proportion of children with a parent or guardian who has served time in jail
Children and adolescents who have a parent or guardian that is or has been incarcerated are more likely to live in lower income areas or poverty, experience homelessness and domestic violence. More than 5 million children have had a parent incarcerated at some point in their lives.[cdlxxxiii] Higher rates of incarceration are often seen in racial/ethnic minorities and those with lower educational attainment. Black/African American youth are five times more likely to be incarcerated than White/non-Hispanics; Hispanics are 42%.[cdlxxxiv] Approximately 92,000 children in Harris county have a parent who is incarcerated.[cdlxxxv] Children who have had a parent or guardian incarcerated experience psychological strain, anti-social behavior, school suspension/expulsion, economic hardship and/or criminal activity that eventually become a vicious cycle. These behaviors can lead to mental health issues as well as substance use.[cdlxxxvi]

Increase the health literacy of the population
Health literacy is the degree in which individuals can identify, understand and use information and services to make decisions about their health. Patients who are unable to interpret health information effectively, develop more diseases and have higher mortality rates. Low health literacy is often linked to those who are older, have limited education, lower income, foreign speakers and have multiple chronic conditions.[cdlxxxvii] Examples of health literacy are being able to locate providers and/or services, completing complex health forms, sharing medical history with clinical staff, seek preventive health care,

managing chronic health conditions and understanding directions on taking medication.[cdlxxxviii] According to the Barbara Bush Literacy Foundation, 1 in 3 adults in Harris county are functionally illiterate.[cdlxxxix]

Increase civic participation through voting, volunteering, etc.
Civil participation through community involvement such as voting can help improve one's health benefits and can be a catalyst for change. Approximately 71% registered voters in the Greater Houston Area voted in the 2020 presidential election.[cdxc] Volunteering or participating in group activities can also improve one's health. Members of civic groups are more likely to be physically and mentally active and engage in more social networks and develop a sense of purpose.[cdxci]

CONCLUSION:
COVID-19 has had a profound impact on those living and working in the country as well as bringing the existing racial inequities in health care to the forefront. FamiliesUSA, a nonpartisan health care advocacy group, stated that over 21 million Americans lost their job during the beginning months of COVID-19 (February – May 2020). In Texas, there was a 15% increase in job loss, compared to 2018, with an estimated number of those becoming uninsured as a result at 659,000.[cdxcii]

The Episcopal Health Foundation conducted a 2020 Texas COVID-19 Survey to measure the impact of the pandemic on Texans' lives including their health, financial condition, and concerns for the future. Sixteen percent of Black/African Americans and 9% of Hispanics lost their health insurance during the pandemic, whereas 5% of White/non-Hispanics experienced the same hardship. This loss of health insurance creates additional health care obstacles that may be difficult to overcome such as finding a provider who can help manage chronic diseases or paying for medication.[cdxciii]

The pandemic also emphasized the necessity of essential workers to the workforce. Essential workers are defined as employed individuals who must work outside their home, even when stay-at-home orders are enacted. In Texas, a majority of essential workers are minorities; with 43% Hispanic, 10% Black/African American and 6% other. The remaining 38% identified as White/non-Hispanic.[cdxciv] In the Greater Houston Area, 66% of Hispanics and 58% of Black/African Americans risked COVID-19 exposure to continue working during the pandemic because they were not able to afford staying at home. Frontline workers are less likely to have health insurance coverage and more likely to receive government assistance when compared to non-essential employees. With Black/African Americans and Hispanic/Latinos comprising a large percent of frontline workers, it is not a surprise this demographic consistently reported worse health outcomes during the pandemic compared to their White/non-Hispanics counterparts.[cdxcv]

This report is designed to highlight the shifting needs of the Houston Methodist Clear Lake Hospital community as it relates to health care outcomes. Whether health care outcomes are being driven by lack of access to insurance, provider shortages or social determinants of health, the need to implement strategies to disrupt the pattern of health care inequities is critical. Houston Methodist Clear Lake Hospital has developed an implementation strategy designed to help address some of the identified needs that align with the four identified health priorities below which will guide Houston Methodist Clear Lake Hospital's activities through 2025.

CONCLUSION

This community health needs assessment (CHNA) report provides the foundation for Houston Methodist Clear Lake's Hospital's efforts to guide community benefit planning to improve the health status of the supported community. The priorities outlined in this report will serve as the foundation for the formulation of the Houston Methodist Clear Lake Hospital Implementation Plan for 2024.

The appendix at the end of this report will provide the following additional resources of information:

- Houston Methodist Leadership and Acknowledgements
- Community Input
- 2023 Community Health Needs Assessment Implementation Plan Outcomes
- Community Resources
- References

Please note that this assessment and the subsequent implementation plan will be routinely reevaluated in order to ensure that Houston Methodist is responding in the most impactful ways to the most pressing health needs of the greater Houston community.

APPENDIX

HOUSTON METHODIST LEADERSHIP AND ACKNOWLEDGEMENTS

Houston Methodist Leadership

- Marc L. Boom, MD, MBA, FACP, FACHE, President and Chief Executive Officer, Houston Methodist
- Carl Little, MSHA, Senior Vice President and Chief Executive Officer, Houston Methodist Clear Lake

Houston Methodist Board of Directors

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- Vidal G. Martinez
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- W. Benjamin Moreland
- Peter T. Nguyen, MD, President Medical Staff
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- Edmund W. Robb III, DMin
- Douglas E. Swanson, Jr.
- Spencer A. Tillman

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- James C. Dishman
- Connie M. Dyer
- Isaac H. Kempner III
- Robert K. Moses
- Sandra Gayle Wright, RN, EdD

Office of Community Benefits Leadership

- Cathy Easter, MPH, Senior Vice President, Houston Methodist Community Development

Acknowledgments

The Office of Community Benefits would like to acknowledge and give a special thanks to the following individuals at Houston Methodist who contributed to the development of this report:

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- Danielle Butler-Winey, RN, BSN, MHA, MBA, Director of Nursing, Houston Methodist Hospital
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- Sonia Hernandez Moya, MBA, Senior Project Manager, Global Health Care Services Patient Services
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- Andi Tieszen, MHA Project Specialist, Office of Community Benefits
- Maria Vidal-Michel, MS, CHES, CWC, Manager, Wellness Services
- Kimber Williams, Program Manager, Office of Community Benefits

COMMUNITY INPUT

The following stakeholders and subject matter experts provided input to the Community Health Needs Assessment by participating in an online survey and/or via personal communication.

Input from persons with special knowledge:

- Devon Anderson, JD, President, Chief Executive Officer of Justice Forward
- Mary Beck, LMSW, CAI, Chief Executive Officer, The Council on Recovery
- Trevor M. Burt, M.S., Ed.D., Vice President, Education Administration, Houston Methodist Academic Institute, Houston Methodist
- Danielle Butler-Winey, RN, BSN, MHA, MBA, Director of Nursing, Houston Methodist Hospital
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- Carrie T. Rys, MBA, Chief Administrative Officer, The Harris Center for Mental Health and IDD
- Angela Snyder MS, RD, LD, Senior Wellness Dietitian, Houston Methodist
- Maria Vidal-Michel, MS, CHES, CWC, Manager, Employee Wellness Services, Houston Methodist

Input Collection: Input from members with broad interest in the community

- Scott Jones, MTh, PhD, Bishop, Texas Annual Conference
- David Lyon, MA, DDiv, Senior Rabbi, Congregation Beth Israel
- Elena Marks, JD, MPH, President & CEO, Episcopal Health Foundation
- Mia Wright , Director of Ministry, The Fountain of Praise

Input Collection: Input from leaders and members of medically underserved, low-income populations:

- Carlie Brown, MPH, MHA, Executive Vice President, Healthcare for the Homeless – Houston
- Alix CaDavid, Director of Program Development, Vecino Health Centers
- Maria Elva Cantu-Ondarza, MEd, MBA, Treasurer, Board of Directors, Hispanic Health Coalition
- Matthew Cox, Sr. Vice President of Programs, Memorial Area Ministries
- Adlia Ebeid, PharmD, BC-ADM, RPh, Chief Clinical Officer, San José Clinic
- Brenda Edwards ,LCSW, Director of Behavioral Health Services, Spring Branch Community Health Center
- Aarti Goswami, MA, MEd, LPC. Vice President, Center for Resiliency, The Alliance
- Lara Hamilton, RN, Executive Director, Christ Clinic
- Karen Harwell, CPA, Chief Executive Officer, LoneStar Family Health Center
- Frances Isbell, MA, Chief Executive Officer, Healthcare for the Homeless-Houston
- Palak Jalan, Chief Population Health Officer, AccessHealth
- Marcie Mir, LCSW, Chief Executive Officer, El Centro de Corazon
- David Montez, Chief Executive Officer, Vecino Health Centers
- Daniel Morales, Vice President, Government Affairs, Houston Methodist
- Penny Pabst, M.Ed., OHCC, Chief Administrative Officer, Community Health Network
- Michelle Parker, MBA, Director of Client Services and Standards, Houston Methodist
- Ana Rausch, MA, Vice President of Program Operations, Coalition for the Homeless of Houston
- Nadine Scamp, LMSW, Chief Executive Officer, Santa Maria Hostel, Inc.
- Vandana Shrikanth, MD, Medical Director- Specialty Services, Legacy Community Health
- Timika Simmons, Chief Executive Officer. TOMAGWA Healthcare Ministries
- Ariel Smith, Ph.D., Clinical Psychologist, Lone Star Circle of Care
- Marlen Trujillo, PhD, MBA, Chief Executive Officer, Spring Branch Community Health Center
- Kavon Young MD, Medical Director, El Centro de Corazon
- Sandra Wicoff, JD, Chief Executive Officer, Target Hunger

Federally Qualified Health Centers

Access Health – Brookshire Clinic
533 FM 359 S
Brookshire, TX 77423
281.342.4530

Access Health - Missouri City
307 Texas Pkwy Suite 100
Missouri City, TX 77489
281.969.1800

Access Health - Stafford
10435 Greenborough Dr., Suite 300
Stafford, TX 77477
281.261.0182

Avenue 360 Humble
9816 Memorial Blvd., Suite 120
Humble, TX 77338
281.570.2525

Avenue 360 Memorial City
902 Frostwood Dr., Suite 142
Houston, TX 77024
713.827.8266

Avenue 360 Montrose
1427 Hawthorne St.
Houston, TX 77006
713.529.6071

Avenue 360 Spring Cypress
17010 Sugar Pine Dr.
Houston, TX 77090
281.537.8621

Central Care Integrated Health Services
8610 MLK Jr Blvd.
Houston, TX 77033
713.734.0199

Coastal Health & Wellness Texas City
9850-C Emmett F Lowry Expressway, Suite C
Texas City, TX 77591
409.938.2234

Denver Harbor Family Clinic
424 Hahlo St.
Houston, TX 77020
713.674.3326

Access Health - East Fort Bend
7707 Hwy. 6 S.
Missouri City, TX 77459
281.342.4530

Access Health - Richmond
400 Austin St.
Richmond, TX 77469
281.342.4530

Airline Children's Clinic
5808 Airline Dr.
Houston, TX 77076
713.695.4013

Avenue 360 Main Campus
2150 W. 18th St., Suite 300
Houston, TX 77008
713.426.0027

Avenue 360 Midtown
2920 Fannin St.
Houston, TX 77002
713.827.8266

Avenue 360 South Central
4405 Griggs Rd.
Houston, TX 77021
832.962.4111

Bayside Clinic
621 S. Ross Sterling (FM 563)
Anahuac, TX 77514
409.267.3143

Coastal Health & Wellness Galveston
4700 Broadway Ave. J
Galveston, TX 77551
409.938.2234

Cypress Health Center
12340 Jones Rd., Suite 100
Houston, TX 77070
713.873.5240

El Centro de Corazón - Eastwood Health Center
412 Telephone Rd.
Houston, TX 77023
713.660.1880

El Centro de Corazón - Southeast Health Center
5901 Long Dr.
Houston, TX 77087
713.660.1880

Health Center of Southeast Texas (Cleveland)
307 N. William Barnett Ave.
Cleveland, TX 77327
281.592.2224

Health Center of Southeast Texas (Livingston)
204 West Park Dr. Suite # 200
Livingston, TX 77351
936-327-4660

Health Center of Southeast Texas (Terrenos-Plum Grove Clinic
871 County Road 3549
Cleveland, TX 77327
832-678-5032

Healthcare for the Homeless - Cathedral Clinic (The Beacon)
1212 Prairie St.
Houston, TX 77002
713.220.9730

HOPE Clinic – Aldine
3000 Aldine Mail Route Rd., Building C Suite 200
Houston, TX 77039
713.773.0803

HOPE Clinic – Main
7001 Corporate Dr. Suite 120
Houston, TX 77036
713.773.0803

Legacy Community Health – Alief Bissonnet
12345 Bissonnet St.
Houston, TX 77099
832.548.5000

Legacy Community Health - Baytown
4301 Garth Rd., Suite 302
Baytown, TX 77521

281.420.8400

Legacy Community Health - Branard
401 Branard St., Level 3
Houston, TX 77006
713.366.7444

Legacy Community Health – Central Stag
3455 Stagg Dr.
Beaumont, TX 77701
409.833.8850

Legacy Community Health - Lyons Avenue
3811 Lyons Ave.
Houston, TX 77020
832.548.5400

El Centro de Corazón - Magnolia Health Clinic
7037 Capitol St., Suite N100
Houston, TX 77011
713.660.1880

Health Center of Southeast Texas (Liberty)
1202 N. Travis St.
Liberty, TX 77575
936.334.1185

Health Center of Southeast Texas (Shepherd)
11 Woodland Park Dr.
Shepherd, TX 77371
936-628-1100

Healthcare for the Homeless - Caroline Street Clinic/Dental Clinic
1934 Caroline St.
Houston, TX 77002
713.286.6000

Healthcare for the Homeless – Reed Family Clinic (with New Hope Housing)
2605 Reed Rd
Houston, TX 77051
713-532-9901

HOPE Clinic – Alief
14438 Bellaire Blvd.
Houston, TX 77083
713.773.0803

HOPE Clinic – West
12121 Westheimer Rd. Suite 205
Houston, TX 77007
713.773.0803

Legacy Community Health - Baker Ripley 6500 Rookin St., Building B Suite 200 Houston, TX 77074
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12667 Bissonnet St.
Houston, TX 770099

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Legacy Community Health – Central Beaumont
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Beaumont, TX 77702
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Legacy Community Health - Deer Park Center St
3430 Center St.
Deer Park, TX 77536
281.628.2040

Legacy Community Health - Mapleridge
6550 Mapleridge St., Suite 106
Houston, TX 77081
713.779.7200

Legacy Community Health - Montrose
1415 California St.
Houston, TX 77006
832.548.5100

Legacy Community Health – Northside Irvington
3517 Irvington Blvd, Suite 200
Houston, TX 77009
832.548.5032

Legacy Community Health - Santa Clara
5616 Lawndale Str., Suite A108
Houston, TX 77023
713.921.0075

Lesbian Health Initiative of Houston, Inc
401 Branard St.
Houston, TX 77006
713.426.3356

Lone Star Family Health Center - Grangerland
13905 Grangerland Rd.
Conroe, TX 77306
936.539.4004

Lone Star Family Health Center - Spring
440 Rayford Rd., Suite 150
Spring, TX 77386
936.539.4004

Martin Luther King Jr. Health Center
3550 Swingle Rd.
Houston, TX 77047
713.547.1000

Salvation Army - Conroe Corps Community Center
304 Avenue E.
Conroe, TX 77301
936.760.2440

Salvation Army - The Center of Hope
1717 Congress St.
Houston, TX 77002
713.223.8889

Legacy Community Health - Northline
5598 - A1 North Freeway Northtown Plaza
Houston, TX 77076
281.628.2030

Legacy Community Health - San Jacinto
4301 Garth Rd., Suite 302
Baytown, TX 77521
281.420.8400

Legacy Community Health - Southwest Clinic
6441 High Star
Dr. Houston,
TX 77074
832.548.5300

Lone Star Family Health Center - Conroe
605 S. Conroe Medical Dr.
Conroe, TX 77304
936.539.4004

Lone Star Family Health Center - Huntsville
227 SH 75 N Ste 130
Huntsville, Texas 77320
936.539.4004

Lone Star Family Health Center - Willis
9516 W. FM 1097., Suite 140
Willis, TX 77318
936.539.4004

Salvation Army - Adult Rehabilitation Center
1015 Hemphill St.
Houston, TX 77007
713.869.3551

Salvation Army - Family Residence
1603 McGowen St.
Houston, TX 77004
713.650.6530

Salvation Army - Young Adult Resource Center
1621 McGowen St.
Houston, TX 177004
713.658.9205

Spring Branch Community Health Center - Cy-Fair
7777 Westgreen Blvd.
Cypress, TX 77433
713.387.1118

Spring Branch Community Health Center – Katy
5502 1st St.
Katy, TX 77493
713.231.5757

Spring Branch Community Health Center – Hillendahl Clinic
1615 Hillendahl Blvd., Suite 100
Houston, TX 77055
713.462.6565

Spring Branch Community Health Center – Memorial
902 Frostwood Drive Suite #108
Houston, Texas 77024
713.827.4744

Spring Branch Community Health Center – NAM Clinic
15555 Kuykendahl Rd.
Houston, TX 77090
281-885-4630

Spring Branch Community Health Center - Pitner Rd Clinic
8575 Pitner Rd.
Houston, TX 77080
713.462.6545

Spring Branch Community Health Center - West
19333 Clay Rd.
Katy, TX 77449
713.462.6555

Spring Branch Community Health Center – Whole Life
1905 Jacquelyn Dr., Suite 101
Houston, TX 77055
713.231.5767

Stephen F. Austin Community Health Center - Adoue Family
1111 W. Adoue St.
Alvin, TX 77511
281.824.1480

Stephen F. Austin Community Health Center - Angleton Internal Medicine & Primary Care
2020 E Mulberry St.
Angleton, TX 77515
281.824.1480

Stephen F. Austin Community Health Center - Bacliff
1136 Grand Ave.
Bacliff, TX 77518
281.824.1480

Stephen F. Austin Community Health Center – Brazoria County Dream Center Integrated Health Center
792 Brazosport Blvd S.
Clute, TX 77531
281.824.1480

Stephen F. Austin Community Health Center - Freeport Family
905 N. Gulf Blvd.
Freeport, TX 77541
979.871.9553

Stephen F. Austin Community Health Center – Lake Jackson Family Care
100 Highway 332 West, suite 1404
Lake Jackson, Texas 77566
281.824.1480

Stephen F. Austin Community Health Center - MyCHN League City
2360 Gulf Fwy S #100-C
League City, TX 77573
281.824.1480

Stephen F. Austin Community Health Center – MyCHN Silverlake
9430 Broadway St Suite 120
Pearland, TX 77584
281.824.1480

Stephen F. Austin Community Health Center - Pearland Family Health Center
2552 East Broadway St, #102,
Pearland, TX 77581
281.824.1480

Stephen F. Austin Community Health Center - Scarsdale Family Health Center
10851 Scarsdale Blvd Suite 160
Houston, TX 77089
281.824.1480

Charity Clinics

Christ Clinic of Katy
25722 Kingsland Blvd., Suite 111
Houston, TX 77495
713.734.0199

CHRISTUS St. Mary's Clinic
2120 S. Wayside Dr., Suite B
Houston, TX 77023
713.803.1840

Harris Health System – Health Clinics
4800 Fournace Place
Bellaire, TX 77401
713.526.4243

Ibn Sina - Clear Lake Community Medical Center
15132 Old Galveston Rd. (Hwy 3)
Houston, TX 77642
281.990.7462

Ibn Sina – S. Post Oak Community Medical Center
16345 S. Post Oak Rd.
Houston, TX 77053
281.438.7462

Ibn Sina - Wilcrest Community Medical Center
11226 S. Wilcrest Dr.
Houston, TX 77099
281.977.7462

Interfaith Community Clinic
101 Pine Manor Dr.
Oak Ridge North, TX
77385 281.364.7889

Islamic Society of Great Houston - Al Mustafa Clinic
17250 Coventry Park Dr.
Houston, TX 77084
281.561.5767

Islamic Society of Great Houston - Synott Clinic
10415 Synott Rd.
Sugarland, TX 77478
281.561.5767

Northwest Assistance Ministries Pediatric Health Center
15555 Kuykendahl Rd.
Houston, TX 77090
281.885.4555

CHRISTUS Point of Light Clinic 2401
Terminal St., Suite 100-D
Dickinson, TX 77539
713.803.1830

Galveston County Health District
9850-B Emmett F Lowry Expressway
Texas City, TX 77591
409.938.7221

Houston Health Department – Health Clinics
8000 N Stadium Dr.
Houston, TX 77054
409.772.1011

Ibn Sina - North Shepherd Community Medical Center
5012 N. Shepherd Dr.
Houston, TX 77018
713.695.7462

Ibn Sina - Wilcrest Children's Clinic
11220 S. Wilcrest Dr.
Houston, TX 77099
281.495.7462

Ibn Sina - Wilcrest Dental Center
11224 S Wilcrest Dr.
Houston, TX 77099
281.977.7467

Islamic Society of Great Houston - Al Mumineen Clinic
12002 Fondren Meadow Dr.
Houston, TX 77071, USA
281.561.5767

Islamic Society of Great Houston - Friendswood
13630 Beamer Rd. Suite 123
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281.561.5767

Memorial Hermann Neighborhood Health Centers
929 Gessner Drive, Suite 2600
Houston, Texas 77024
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San Jose Clinic - Main Campus
2615 Fannin St.
Houston, TX 77002
713.228.9411

San Jose Clinic - Rosenberg
1615 Avenue E.
Rosenberg, TX 77471
832.945.6711

Southside Behavioral Health Clinic
1721 16th St.
Galena Park, TX 77547
713.497.0940

TOMAGWA Health Care Ministries
455 School St., Suite 30
Tomball, TX 77375
281.357.0747

UTMB Health Clinics
301 8th St.
Galveston, TX 77555
409.772.1011

Multiservice and Specialty Resources

Amazing Place
3735 Drexel Dr.
Houston, TX 77027
713.552.0420

American Cancer Society
2500 Fondren Rd., Suite 100
Houston, TX 77063
713.706.5690

Arms Wide Adoption Services
6925 Portwest Dr. Suite 110
Houston, TX 77024
713.681.6991

Association for the Advancement of Mexican Americans
6001 Gulf Freeway
Houston, TX 77023
713-967-6700

Avondale House
3737 O'Meara Drive
Houston, TX 77025
713.993.9544

BakerRipley Citizenship and Immigration Program Gulton Sharpstown Campus
6500 Rookin St.
Houston, TX 77074
713.273.3707

BakerRipley Citizenship and Immigration Program Ripley House Campus
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Houston, TX 77011
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BakerRipley Cleveland Campus
720 Fairmont Pkwy.
Pasadena, TX 77504
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BakerRipley Gulfton Sharpstown Campus
6500 Rookin St.
Houston, TX 77074
713.273.3700

BakerRipley Harbach Campus
6225 Northdale St.
Houston, TX 77087
713.640.7100

BakerRipley Leonel Castillo Community Center
2101 South St.
Houston, TX 77009
713.380.2260

BakerRipley Ripley House
4410 Navigation Blvd.
Houston, TX 77011
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Bay Area Turning Point
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Webster, TX 77598
281.338.7600

Boat People SOS
11360 Bellaire Blvd., Suite 910
Houston, TX 77072
281.530.6888

Bo's Place
10050 Buffalo Speedway
Houston, TX 77054
713.942.8339

Boynton Music Academy at Boynton Chapel Methodist Church
2812 Milby St.
Houston, TX 77004

Boys and Girls Club of Greater Houston
8575 Pitner Rd.
Houston, TX 77025
713-868-3426

Braes Interfaith Ministries
4300 W. Bellfort Blvd.
Houston, TX 77035
713.723.2671

Brazosport Medical Center CHI St. Luke's
100 Medical Dr.
Lake Jackson, TX 77541
979.297.4411

Bread of Life Inc
1703 Gray St.
Houston, TX 77003
713.650.0595

CASA of Liberty and Chambers Counties
2015 Scout Ln.
Liberty, TX 77575
936.334.9000

Capital IDEA Houston
2101 Crawford, Suite 211
Houston, TX 77002
832.280.5343

Catholic Charities
2900 Louisiana St.
Houston, TX 77006
713.526.4611

Chinese Community Center, Inc.
9800 Town Park Dr.
Houston, TX 77036
713.271.6100

Coalition for the Homeless
2000 Crawford St., Suite 700
Houston, TX 77002
713.739.7514

Combined Arms
2929 McKinney St.
Houston, TX 77003
888.737.3112

Community Assistance Center
1022 McCall Ave.
Conroe, TX 77301
3936-539-9211

Community Family Centers
7524 Ave. E.
Houston, TX 77012

Covenant House
1111 Lovett Blvd.
Houston, TX 77006
713.523.2231

Cypress Assistance Ministries
11202 Huffmeister Rd. #5
Houston, TX 77065
281.955.7684

Depelchin Children's Center - Clear Lake
1300-A Bay Area Blvd., Suite
200 Houston, TX 77058
281.282.6062

Depelchin Children's Center - Main Campus
4950 Memorial Dr.
Houston, TX 77007
(713) 730.2335

Depelchin Children's Center - Spring
2940 FM 2920, Suite 150
Spring, TX 77388
281.367.7707

Depelechin Children's Center - Stafford
12300 Parc Crest Dr., Suite 120
Stafford, TX 77477
281.207.2361

Dress for Success Houston
3310 Eastside St.
Houston, TX 77098
713.957.3779

East Harris County Empowerment Council
12605 E. Fwy.
Houston, TX 77015

Easter Seals
4888 Loop Central Dr.
Houston TX 77081
713.838.9050

Family Houston
4625 Lillian St.
Houston, TX 77007
713.861.4849

Family to Family Network
16225 Park Ten Pl. Suite 500
Houston, TX 77084
713-466-6304

Fresh Spirit Wellness for Women, Inc.
5100 Westheimer Rd
Houston, TX 77056
713.588.4416

Fort Bend Women's Center
501 E. Hwy. 90A
Richmond, TX 77406
281.644.5750

Girls Inc. of Greater Houston
2190 North Loop W.
Houston, TX 77018
713.802.2260

Hope and Healing Center
5025 Riverway Dr.
Houston, TX 77056
713.871.1004

Houston Food Bank
535 Portwall St.
Houston, TX 77029
713.223.3700

Houston ISD Foundation
4400 West 18th St.
Houston, TX 77092

Iconoclast Artists
11140 Greenbay St.
Houston, TX 77024

Justice Forward
515 Caroline St.
Houston, TX 77002
713.899.9893

Latino Learning Center
3522 Polk St.
Houston, TX 77003
713.223.1391

MD Anderson Gynecologic Oncology Clinic at The Woman's Hospital of Texas
7900 Fannin St., Suite 2500
Houston, TX 77054
713.7952.1380

Menninger
12301 S. Main St.
Houston, TX 77035
866.853.6125

Generation One
3805 Burkett St.
Houston, TX 77004
713.654.8008

Harris County Social Services
9418 Jensen Dr.
Houston, TX 77093

713.696.7900

Houston Area Women's Center (HAWC)
1010 Waugh Dr.
Houston, TX 77019
713.528.6798

Houston Hospice
1905 Holcombe Blvd.
Houston, TX 77030
713.467.7423

HYPE Freedom School, Inc.
13233 Cullen Blvd.
Houston, TX 77047
832.510.0431

Interfaith Caring Ministries
151 Park Ave.
League City, TX 77573
281.332.3881

Local Infant Formula for Emergencies, Inc. - L.I.F.E. Houston
2002 S. Wayside Dr.
Houston, TX 77023
713.528.6044

Magnificat Houses Inc
3209 Austin St.
Houston, TX 77004
713.529.4231

Memorial Assistance Ministries
1625 Blalock Rd.
Houston, TX 77080
713.568.4516

Missouri City (TX) Chapter of The Links, Inc.
P.O. Box 8068
Houston, TX 77288

Montrose Center
401 Branard St.
Houston, TX 77006
713.529.0037

NestQuest Houston Inc.
1907 Sabine St.
Houston, TX 77007
832.304.9660

Nora's Home
8300 El Rio St.
Houston, TX 77054
832.831.3720

Northwest Assistance Ministries
15555 Kuykendahl Rd.
Houston, TX 77090
281.885.4555

Pathfinder
6912 Stella Link Rd.
Houston, TX 77025
713.275.5400

Rebuilding Together Houston
104 N. Greenwood, Suite 100
Houston, TX 77011
713.659.2511

Ronald McDonald House Houston
1907 Holcombe Blvd.
Houston, TX 77030
713.795.3500

SEARCH Homeless Services
2015 Congress St.
Houston, TX 77002
713-739-7752

Star of Hope Doris and Carloss Morris Men's Development Center
1811 Ruiz St.
Houston, TX 77002
713.748.0700

South Texas College of Law Houston
1303 San Jacinto
Houston, TX 77002
713-659-8040

Target Hunger
1260 Shotwell St.
Houston, TX 77020
832.767.1677

NAACP - Houston Branch
2002 Wheeler Ave.
Houston, TX 77004
713.526.3389

Network of Behavioral Health Providers
9401 SW Fwy.
Houston, TX 77074
713.970.3410

Northside Health Center
8504 Schuller Rd.
Houston, TX 77093
832.395.9100

Open Door Mission
5803 Harrisburg Blvd.
Houston, TX 77011
402.422.1111

Project Row Houses
2521 Holman St.
Houston, TX 77004
713.526.7662

Refugee Services of Texas Houston Services Center
7211 Regency Square Blvd., Suite 203
Houston, TX 77036
713.644.6224

Santa Maria Hostel
807 Paschall St.
Houston, TX 77009
713.690.0900

SER-Jobs for Progress of the Texas Gulf Coast, Inc
1710 Telephone Rd.
Houston, TX 77023
713.773.6000

Star of Hope Women & Family Development Center
2575 Reed Rd.
Houston, TX 77051
713.222.2220

Tahirih Justice Center
1717 Saint James Place, Suite 450
Houston, TX 77056
713.496.0100

Texas Children's Hospital Autism Center
8080 N. Stadium Dr.
Houston, TX 77054
832.822.1900

Texas Children's Pavilion for Women
6551 Main St.
Houston, TX 77030
832.826.3000

Texas Children's Pediatrics - Corinthian Pointe
5505 W. Orem Dr., Suite 100
Houston, TX 77085
713.283.1039

Texas Children's Pediatrics - Gulfgate
740 Gulfgate Mall,
Suite Y Houston, TX
77087
713.514.8060

Texas Children's Pediatrics - Gulfton
5900 Chimney Rock Rd.
Houston, TX 77081
713.661.2951

Texas Children's Pediatrics - Ripley House
4410 Navigation Blvd., Suite 278
Houston, TX 77011
713.547.8282

Texas Southern University Department of Health Kinesiology and Sports Studies
310 Cleburn St.
Houston, TX 77020
713-313-7011

The Alliance
6440 Hillcroft St.
Houston, TX 77081
713.776.4700

The Bridge Over Troubled Waters, Inc
3811 Allen-Genoa Rd.
Pasadena, TX 77504
713.472.0753

The Children's Assessment Center
2500 Bolsover St.
Houston, TX 77005
713.986.3300

The Landing
9894 Bissonnet St., #605
Houston, TX 77036
713.766.1111

The Montrose Center
401 Branard St.
Houston, TX 77006
713.529.0037

The Rose Galleria
5420 W. Loop S., Suite 3300
Bellaire, TX 77401
281.484.4708

The Rose Southeast
12700 N. Featherwood Dr., Suite 260
Houston, TX 77034
281.484.4708

The T.R.U.T.H. Project
P.O. Box 710138
Houston, TX 77271

The Women's Resource of Greater Houston
730 N Post Oak Rd. Suite 203
Houston, TX 77024
713.667.4493

Thomas Street Health Center
2015 Thomas St.
Houston, TX 77009
713.873.4000

TIRR Memorial Hermann
1333 Moursund St.
Houston, TX 77030
713.797.5942

TIRR Memorial Hermann The Woodlands Medical Center - Inpatient
9250 Pinecroft Dr. East Tower, 7th Floor
The Woodlands, TX 77380
713.797.5942

UTHealth and Bread of Life
7000 Fannin St.
Houston, TX 77030

UTHealth Harris County Psychiatric Center
2800 S. MacGregor Way
Houston, TX 77021
713.741.5000

UTMB Angleton RMCHP Clinic
1108 E. Mulberry
St. Angleton, TX
77515
979.849.9740

UTMB Breast Health and Imaging Center
2240 Gulf Fwy S., Suite 2.11 League
City, TX 77573 409.772.7150

UTMB Conroe RMCHP
Clinic 701 E. Davis St., Suite
A Conroe, TX 77301
409.266.1888

UTMB Galveston RMCHP
1005 Harborside Dr.
Galveston, TX 77550
409.747.4952

UTMB Infusion Therapy Center at Victoria Lakes
2240 Gulf Fwy S., Suite
2.11 League City, TX
77573 832.505.1800

UTMB Katy RMCHP Clinic
511 Park Grove Dr. Katy, TX 77450
409.266.1888

UTMB New Caney RMCHP Clinic
21134 US Hwy. 59
New Caney, TX 77357
281.577.8966

UTMB Pediatric Primary Care - Lake Jackson
208 Oak Dr. S., Suite 400 Lake
Jackson, TX 77566 979.285.2900

UTMB Pearland RMCHP Clinic
2750 E. Broadway
St. Pearland, TX
77581
409.266.1888

UTMB Pasadena RMCHP
3737 Red Bluff Rd., Suite 150
Pasadena, TX 77503
409.266.1888

UTMB Sugar Land RMCHP Clinic
14823 Southwest
Fwy. Sugar Land, TX
77478 409.266.1888

UTMB Texas City RMCHP 2000
Texas Ave. Suite 300 Texas City, TX
77590 409.266.1888

United Against Human Trafficking
6671 Southwest Freeway Suite 220
Houston TX 77074
713.874.0290

Urban Harvest
3302 Canal St.
Houston, TX 77003
713.880.5540

Vaccine Center for Adults and Travelers
8000 N. Stadium Dr.,
5thFloor Houston, TX 77054
832.393.5427

Volunteers of America Texas
4808 Yale St.
Houston, 77018
817.529.7300

Wesley Community Center
1410 Lee St.
Houston, TX 77009
713.223.8131

West Houston Assistance Ministries, Inc.
10501 Meadowglen Ln.
Houston, TX 77042
713.780.2727

YES Prep Public Schools
5515 South Loop East, Suite B
Houston, TX 77033
713.967.9000

YMCA of Greater Houston
1331 Augusta Dr.
Houston, TX 77057

Nonprofit Hospitals

Baylor College of Medicine
One Baylor Plaza
Houston, TX 77030
713.798.4951

Baylor St Luke's Medical Center - McNair Campus
7200 Cambridge Street
Houston, TX 77030
832.354.1000

Ben Taub General Hospital
1504 Taub Loop
Houston, TX 77030
713.873.2000

CHI St. Luke's Health - Baylor St. Luke's Medical Center
6720 Bertner Ave.
Houston, TX 77002
832.355.1000

CHI St. Luke's Health - Brazosport Hospital
100 Medical Dr.
Lake Jackson, TX 77566
979.297.4411

CHI St. Luke's Health - Lakeside Hospital
17400 St. Luke's Way
The Woodlands, TX 77384
936.266.9000

CHI St. Luke's Health - Patients Medical Center
4600 E. Sam Houston Pkwy. S.
Pasadena, TX 77505
713.948.7000

CHI St. Luke's Health - Springwoods Village Hospital
2255 East Mossy Oaks Rd.
Spring, TX 77389
346.305.5000

CHI St. Luke's Health - Sugar Land Hospital
1317 Lake Point Pkwy.
Sugar Land, TX 77478
281.637.7000

CHI St. Luke's Health - The Vintage Hospital
20171 Chasewood Park Dr.
Houston, TX 77070
832.534.5000

CHI St. Luke's Health - The Woodlands Hospital
17200 St. Luke's Way
The Woodlands, TX 77384
936.266.2000

Houston Methodist Baytown Hospital
4401 Garth Rd.
Baytown, TX 77521
281.420.8600

Houston Methodist Clear Lake Hospital
18300 St. John Dr.
Nassau Bay, TX 77058
281.523.2000

Houston Methodist Continuing Care Hospital
701 S. Fry Rr.
Katy, TX 77450
281.599.5700

Houston Methodist Hospital Texas Medical Center
6565 Fannin St.
Houston, TX 77030
713.790.3311

Houston Methodist Sugar Land Hospital
16655 Southwest Fwy.
Sugar Land, TX 77479
281.274.7000

Houston Methodist The Woodlands Hospital
17201 Interstate 45 South
The Woodlands, TX 77385
936.270.2000

Houston Methodist West Hospital
18500 Katy Fwy.
Houston, TX 77094
832.522.8280

Houston Methodist Willowbrook Hospital
18220 State Hwy. 249
Houston, TX 77070
281.737.2500

MD Anderson Gynecologic Oncology Clinic at The Woman's Hospital of Texas
7900 Fannin St. Suite 2500
Houston, TX 77054
713.7952.1380

MD Anderson League City
2280 Gulf Fwy. S.
League City, TX 77573
713.563.0670

MD Anderson Memorial City
Medical Plaza 4
925 N. Gessner Rd. Suite 450
Houston, TX 77024
713.358.5300

MD Anderson Sugar Land
1327 Lake Pointe
Pkwy. Sugar Land, TX
77478 281.566.1800

MD Anderson Texas Medical Center
1515 Holcombe Blvd.
Houston, TX 77030
877.632.6789

MD Anderson The Woodlands Medical Arts Center
17198 St. Luke's Way
The Woodlands, TX 77384
713.563.0050

MD Anderson West Houston
13900 Katy Fwy.
Houston, TX 77079
713.563.9600

Memorial Hermann Greater Heights Hospital
1635 N. Loop W.
Houston, TX 77008
713.867.2000

Memorial Hermann Katy Hospital
23900 Katy Fwy.
Katy, TX 77494
281.644.7000

Memorial Hermann Northeast Hospital
18951 Memorial Dr. North
Humble, TX 77338
281.540.7700

Memorial Hermann Pearland Hospital
16100 South Fwy.
Pearland, TX 77584
713.413.5000

Memorial Hermann Southeast Hospital
11800 Astoria Blvd.
Houston, TX 77089
281.929.6100

Memorial Hermann Southwest Hospital
7600 Beechnut St.
Houston, TX 77074
713.456.5000

Memorial Hermann Sugar Land Hospital
17500 W. Grand Pkwy
S. Sugar Land, TX
77479 281.725.5000

Memorial Hermann Texas Medical Center
6411 Fannin St.
Houston, TX 77030
713.704.4000

Memorial Hermann The Woodlands Medical Center
9250 Pinecroft Dr.
The Woodlands, TX 77380
713.897.2300

St. Joseph Medical Center
1401 St. Joseph Pkwy.
Houston, TX 77002
713.757.1000

Michael E. DeBakey VA Medical Center
2002 Holcombe Blvd.
Houston, TX 77030
713.791.1414

Shriners Hospital for Children - Houston
6977 Main St.
Houston, TX 77030
713.797.1616

Texas Children's Hospital
6621 Fannin St.
Houston, TX 77030
(832) 824-1000

Texas Children's Hospital The Woodlands (Inpatient & Emergency)
17600 Interstate 45 S.
The Woodlands, TX 77384
936.267.5000

Texas Children's Hospital The Woodlands (Outpatient Services)
17580 Interstate 45 S.
The Woodlands, TX 77384
936.267.5000

Texas Children's Hospital West Campus
18200 Katy Fwy. (I-10 and Barker Cypress)
Houston, TX 77094
832.227.1000

Texas Children's Pediatrics - Corinthian Pointe
5505 W. Orem Dr., Suite 100
Houston, TX 77085
713.283.1039

Texas Children's Pediatrics - Gulfton
5900 Chimney Rock Rd.
Houston, TX 77081
713.661.2951

Texas Children's Pediatrics - Ripley House
4410 Navigation Blvd., Suite 278
Houston, TX 77011
713.547.8282

The University of Texas Health Science Center at Houston
7000 Fannin St.
Houston, TX 77030
713.500.4472

The University of Texas Medical Branch
301 University Blvd.
Galveston, TX 77555
409.772.1011

UTMB Health - Angleton Danbury Campus
132 East Hospital Dr.
Angleton, TX 77515
979.849.7721

UTMB Health - Clear Lake Campus
200 Blossom St.
Webster, TX 77598
832.632.6500

UTMB Health - League City Campus
2240 Gulf Fwy S., Suite 2
League City, TX 77539
409.772.1011

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