Memorial Hermann Health System

Memorial Hermann Northeast Hospital

Community Health Needs Assessment 2016

June 8, 2016

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Health Resources in Action

Advancing Public Health and Medical Research

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EXECUTIVE SUMMARY

Introduction

Improving the health of a community is essential to enhancing the quality of life for residents in the region and supporting future social and economic well-being. Memorial Hermann Health System (MHHS) engaged in a community health planning process to improve the health of residents served by Memorial Hermann Northeast Hospital (MH Northeast). This effort includes two phases: (1) a community health needs assessment (CHNA) to identify the health-related needs and strengths of the community and (2) a strategic implementation plan (SIP) to identify major health priorities, develop goals, select strategies, and identify partners to address these priority issues across the community. This report provides an overview of key findings from MH Northeast's CHNA.

Community Health Needs Assessment Methods

The CHNA was guided by a participatory, collaborative approach, which examined health in its broadest sense. This process included integrating existing secondary data on social, economic, and health issues in the region with qualitative information from 11 focus groups with community residents and service providers and 27 interviews with community stakeholders. Focus groups and interviews were conducted with individuals from the Greater Houston area and from within MH Northeast's diverse community. ***The community defined for this CHNA included the cities and towns of Humble, Houston, Kingwood, Porter, New Caney, Huffman, Spring, Cleveland, and Splendora within the counties of Harris, Montgomery, and Liberty.***

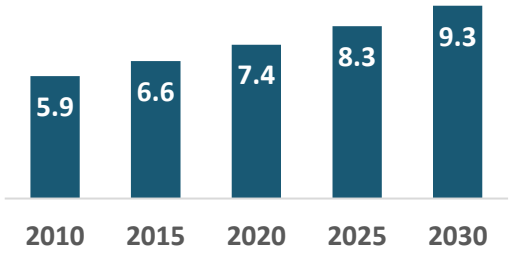
Key Findings

The following provides a brief overview of key findings that emerged from this assessment.

Community Social and Economic Context

- **Population Growth and Size:** Montgomery County was the fastest growing county within the MH Northeast community (3.1% increase in 2010-2014 over the 2005-2009 estimate). The Houston metropolitan area, which includes MH Northeast, is projected to increase from 5.9 million in 2010 to 9.3 million in 2030.

PROJECTED TOTAL POPULATION IN MILLIONS, GREATER HOUSTON METROPOLITAN AREA, 2010-2030



- **Age Distribution:** Harris and Montgomery Counties had a slightly higher proportion of residents under the age of 18 than Liberty County. Liberty and Montgomery Counties had a larger proportion of people 65 years of age and older than Harris County, over 10% in each of the two Counties. Spring had the youngest residents, and Splendora had the oldest residents.
- **Racial and Ethnic Distribution**: Harris County has greater racial and ethnic diversity among its residents than Montgomery or Liberty Counties. In Harris County, Hispanics comprised 41.1% of the population and 32.6% identified as White, non-Hispanic. Black, non-Hispanic residents comprised 18.5% of the population of Harris County and Asian, non-Hispanics comprised 6.3%. In both Montgomery and Liberty Counties, the large majority of residents were White, non-Hispanic (70.5% and 68.5%, respectively). Among cities and towns in MH Northeast's community, Houston reported the largest Hispanic population, representing 43.6% of residents; Splendora reported the largest White, non-Hispanic population (86.9%). Houston reported the largest Black, non-Hispanic community (23.0%) and the largest Asian, non-Hispanic population (6.2%).
- **Linguistic Diversity and Immigrant Population**: Almost half (42.5%) of Harris County residents spoke a language other than English at home, while in the other two counties, less than 20% spoke a language other than English at home. Across MH Northeast communities, speaking a non-English language at home ranged from a low of 10.6% in Splendora to

Houston has one of the largest immigrant populations in the United States.

a high of 46.3% in Houston. A large proportion of the non-English speaking population (over 80%) served by MH Northeast spoke Spanish or Spanish Creole at home. One in four residents in Harris County was foreign born, whereas far fewer Liberty and Montgomery County residents were foreign born. From 2000 to 2013, Houston's immigrant population grew nearly twice the rate of the national average: 59% in 13 years versus 33% in the United States.

- **Income and Poverty:** The median household income in the three counties served by MH Northeast ranged from $47,228 in Liberty County to $67,766 in Montgomery County. Among the municipalities served by MH Northeast, Spring had the highest median household income in Spring ($67,469) and Cleveland had the lowest ($27,213). The percent of adults below the poverty line in 2009-2013 was highest in Cleveland (28.0%) and lowest in Spring (7.8%).
- **Employment:** Unemployment rates for Texas and all three counties served by MH Northeast peaked in 2010 but have decreased consistently over the past five years.
- **Education:** Compared to other municipalities served by MH Northeast, Cleveland has the highest percentage of residents with a high school diploma or less (67.7%). Houston has the highest percentage of residents with a Bachelor's degree or higher (29.2%).
- **Housing:** Monthly median housing costs for owners are highest for homeowners in Montgomery County ($1,242) and lowest for homeowners in Liberty County ($667); for renters, costs are highest in Montgomery County ($965) and lowest in Liberty County ($731). In all counties, a higher percent of renters compared to homeowners pay 35% or more of their household income towards their housing costs (e.g., 46.3% of renters in Humble pay 35% or more of household income toward housing).
- **Transportation:** A majority of residents in the three counties served by MH Northeast commute to work by driving in a car, truck or van alone. Among MH Northeast municipalities, Houston has the highest percentage of workers who commute by public transportation (4.3%).

"Transportation will always be the biggest challenge, particularly for those with low socioeconomic status."

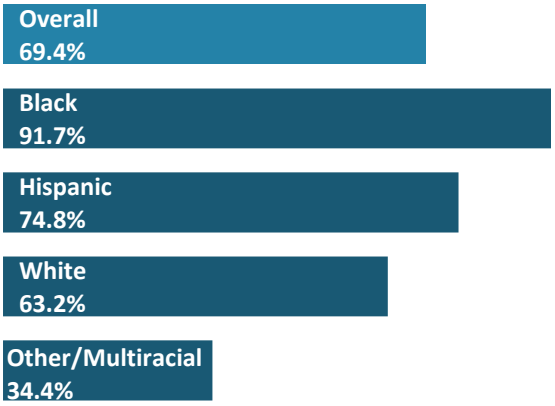
- **Crime and Violence:** Among municipalities, the violent crime rate is highest in Houston (954.8 offenses per 100,000 population) and lowest in Splendora (300.5 offenses per 100,000 population). The property crime rate is highest in Humble (10,475.9 offenses per 100,000 population) and lowest in Splendora (1,923.1 offenses per 100,000 population).

Health Outcomes and Behaviors

Physical Health

- **Overall Leading Causes of Death:** Liberty County experienced the highest overall mortality rate (1,027.1 per 100,000 population) of the three counties served by MH Northeast. Liberty County had the highest mortality rates in all leading causes of mortality—which includes heart disease, cancer, stroke, and chronic lower respiratory disease—compared to Harris and Montgomery Counties. Montgomery County has higher suicide rates in almost every age group compared to Harris County. For example, the rate of suicide among those aged 25 to 34 years in 2013 was 28.1 per 100,000 population in Montgomery County compared to 10.5 per 100,000 population in Harris County.

PERCENT ADULTS SELF-REPORTED TO BE OVERWEIGHT OR OBESE, HARRIS COUNTY, 2014



- **Overweight and Obesity:** In 2013, the percentage of Harris County residents who reported that they were overweight or obese was 69.4%. (Data is unavailable for Montgomery and Liberty Counties.) Nine out of ten (91.7%) Black, non-Hispanic adult residents in Harris County were considered overweight or obese. Overall, about one-third of Houston high school students were considered overweight (16.3%) or obese (17.9%) in 2013.
- **Diabetes:** In Harris County in 2014, 10.4% of adults self-reported to have been diagnosed with diabetes. (Data is unavailable for Montgomery and Liberty Counties.) In 2013, Harris County saw 11.3 hospital admissions per 100,000 population for uncontrolled diabetes, while Montgomery County had 7.3 admissions per 100,000 population. Data for Liberty County were unavailable due to small numbers of admissions.
- **Heart Disease, Stroke, and Cardiovascular Risk Factors:** In 2014 2.8% of Harris County adults self-reported having been diagnosed with angina or coronary heart disease, and 3.6% of adults in Harris County self-reported having a heart attack during the past year. (Data is unavailable for Montgomery and Liberty Counties.) In 2014, 3.8% of Harris County adults self-reported having a stroke during the past year. More than a third of Harris County adults self-reported having high cholesterol (38.3%) and just under a third self-reported having high blood pressure (32.4%).
- **Asthma:** In 2012, adult hospital discharges for asthma were similar in both Montgomery County (8.5 per 10,000 population) and Harris County (8.4 per 10,000 population). The rate of discharges for asthma among adults in Liberty County (11.5 per 10,000 population) was higher than for the other two counties. Among children aged 17 years and younger, the rate of asthma-related hospital discharges for Black, non-Hispanic children was three times the rate for White children (24.2 versus 10.2 per 10,000 population).
- **Cancer:** Harris and Montgomery Counties saw higher incidence rates of cancer (444.1 per 100,000 population and 448.4 per 100,000 population, respectively) compared to Liberty County (411.6 per 100,000 population). However, Liberty County (at 208.4 per 100,000 population) experienced a higher cancer mortality rate than the other counties (Harris: 163.4 per 100,000 population and Montgomery: 164.8 per 100,000 population). In a 2014 Behavioral Risk Factor Surveillance survey, 81.6% of women 40 years or older in Harris County indicated they had had a mammogram in the past two years while 70% of women indicated that they had a pap test in the past three years. (Data is unavailable for Montgomery and Liberty Counties.)
- **HIV and Sexually-Transmitted Diseases**: Harris County experienced the highest HIV rate in the region, with 516.1 people per 100,000 population living with HIV in the county, up from 478.4 people per 100,000 population in 2011. Rates of sexually transmitted diseases—chlamydia, gonorrhea, and syphilis—were markedly higher in Harris County compared to Montgomery and Liberty Counties in 2014. From 2011 to 2014, chlamydia and gonorrhea case rates increased in all three counties. Syphilis case rates increased in Harris and Montgomery Counties but decreased in Liberty County from 2011 to 2014.
- **Tuberculosis:** Harris County saw the highest tuberculosis rate in the area, with 7.2 cases per 100,000 population, more than four times the rate in Montgomery County (1.2 per 100,000 population) and twice as high as in Liberty County (2.6 per 100,000 population).
- **Influenza:** In 2014, 35.9% of adults self-reported having a seasonal flu shot or

vaccine via nose spray, and residents aged 65 years or older were disproportionately more likely to have received a flu shot (59.0%) than other age groups. (Data on influenza is only available for Harris County.)

- **Oral Health:** Across the three counties served by MH Northeast, Harris County had the highest number of dentists (57.4 per 100,000 population) and Liberty County had the lowest number of dentists (19.67 per 100,000 population). Hispanic adults in Harris County reported the lowest rates of annual dental visitation (50.6%). (Data is unavailable for Montgomery and Liberty Counties.)
- **Maternal and Child Health:** Approximately one in ten babies born in Harris, Montgomery, and Liberty Counties were premature in 2013. In all three counties, Black babies were more likely to be born low birthweight than babies of other races or ethnicities. Black, non-Hispanic teen mothers had the highest birth rates across the three-county region, with a high of 8.2% in Liberty County. In 2013, 56.1% in Harris County, 60.7% in Montgomery County, and 51.7% in Liberty County of live births occurred to mothers who received prenatal care in their first trimester. Rates of receiving no prenatal care were 3.9% and 3.1% for Harris and Montgomery County mothers, respectively. (Data for no prenatal care not available for Liberty County due to small sample size.)

Health Behaviors

- **Food Access:** In all three counties served by MH Northeast, a quarter or more of all children (i.e., those under age 18) were considered to be food insecure. In 2013, resident access to grocery stores ranged across the three counties: residents of Harris County (19 grocery stores per 100,000 population) and Liberty County (15 grocery stores per 100,000 population) had higher access than those in Montgomery County (11 grocery stores per 100,000 population). Montgomery County low-income residents had the highest access to farmer's markets (21.1%).
- **Healthy Eating:** Only 12.2% of Harris County adults in 2013 indicated that they ate fruits and vegetables five or more times per day. (Data is unavailable for Montgomery and Liberty Counties.) Lower income Harris County adults ate fewer fruits and vegetables than residents with higher median household incomes. In 2013, 8.9% of high school students in Houston indicated that they did not eat any fruit or drink any fruit juice in the past seven days.
- **Physical Activity:** More than two-thirds (68.2%) of adults surveyed in Harris County indicated that they had gotten any type of physical activity in the past month, with Hispanics being less likely to report physical activity than other races or ethnicities. (Data is unavailable for Montgomery and Liberty Counties.) In 2013, two-thirds (66.6%) of Houston high school students reported that they had not participated in 60 or more minutes of physical activity for five days in the past seven days.

One in four children in Harris, Montgomery, and Liberty Counties was food insecure in 2013.

Behavioral Health

- **Adult Mental Health:** In 2014, 19.3% of adults in Harris County self-reported as having five or more poor mental health days. (Data is unavailable for Montgomery and Liberty Counties.) Self-report of having had five or more days of poor mental health was highest among residents aged 18 to 29 (26.5%) and Black, non-Hispanic residents (24.2%) in Harris County. Rates of psychiatric discharge varied from 3.5 per 1,000 population in Montgomery County to 4.9 per 1,000 population in both Harris and Liberty Counties.
- **Youth Mental Health:** Among youth in Houston in 2013, one-third of Hispanic high school students self-reported feeling sad or hopeless for two or more weeks in the past year and 12.1% self-reported they attempted suicide at least once in the past year. Black, non-Hispanic Houston high

school students self-reported a suicide attempt rate of 11.3%.

> ***"At a state level, we are funded 49th in behavioral health care. We have not done a good job in Texas of investing in mental health."***

- **Substance Use and Abuse:** In 2014, 13.7% of Harris County adults self-reported binge drinking in the past month, and 13.6% of adults self-reported being current smokers. (Data is unavailable for Montgomery and Liberty Counties.) Montgomery County had the highest rates of non-fatal drinking-under-the-influence (DUI) motor vehicle accidents in the past month (113.3 per 100,000 population), and Harris County had the lowest rate (66.9 per 100,000 population). Just under two-thirds (63%) of Houston high school students self-reported lifetime substance use of alcohol, followed by marijuana (44%), and tobacco (43%).

Health Care Access and Utilization

- **Health Insurance:** Uninsurance rates decreased for Harris, Montgomery, and Liberty Counties following the passage of the Affordable Care Act in 2010. Harris County had higher rates of uninsurance than Montgomery County during the 2009-2014 period. In 2014, 22.0% of the total population in Harris County was uninsured compared to 14.2% in Montgomery County and 21.7% in Liberty County. In 2013, the zip codes in the immediate geographic area to the southwest of the MH Northeast facility had the highest rates of uninsurance for the total population. Among the zip codes served by MH Northeast, 90,847 residents were enrolled in Medicaid. In Montgomery County, the zip code with the most Medicaid enrollees was 77365 in Porter (5,209 enrollees). In Harris County, the zip code with the most Medicaid enrollees was 77093 in Houston (13,964 enrollees). In Liberty County, the zip code with the most Medicaid enrollees was 77327 in Cleveland (4,204 enrollees).
- **Access to Primary Care:** Harris County had a higher proportion of primary care physicians (82.6 per 100,000 population) compared to Montgomery (71.9 per 100,000 population) and Liberty (34.4 per 100,000 population) Counties. In Harris County, 38.2% of adult residents reported in the BRFSS survey that they did not have a doctor or healthcare provider. (Data unavailable for Montgomery or Liberty Counties County.) In the Houston-The Woodlands-Sugar Land MSA in 2014, 34% of physicians accepted all new Medicaid patients, 24% limited their acceptance of new Medicaid patients, and 42% accepted no new Medicaid patients. In Harris County in 2014, 37% of physicians accepted all new Medicaid patients, 23% limited their acceptance of new Medicaid patients, and 40% accepted no new Medicaid patients. (Data on Medicaid acceptance is unavailable for Montgomery and Liberty Counties due to low survey response rates.)
- **Emergency Department Care at MH Northeast for Primary Care Treatable Conditions:** Of MH Northeast's 59,755 ED visits in 2013, 53.2% were from patients who were uninsured or on Medicaid, and 36% were classified as non-emergent or with primary care treatable conditions. Of all ED visits, 6.5% were for chronic conditions, of which 28% were cardiovascular-related. Fourteen zip codes in the MH Northeast's CHNA-defined community were among the top 20 zip codes for the highest number of primary care treatable ED visits at the MH Northeast in 2013.
- **Inpatient Care at MH Northeast for Ambulatory Care Sensitive Conditions:** Of MH Northeast's 12,159 inpatient discharges in 2015, 5,012 inpatient discharges or 41.2% were related to an ambulatory care sensitive condition. The top four ambulatory care sensitive conditions that resulted in inpatient care at MH The Northeast in 2015 were congestive heart failure (198 discharges), diabetes (122 discharges), chronic obstructive pulmonary disorder (84 discharges), and bacterial pneumonia (84 discharges).

Community Assets and Resources

- **Diverse and Cohesive Community**: Residents and stakeholders described diversity and social cohesion as being among the primary assets and strengths of their community. Informants described the positive role of diversity in driving the creation of robust communities to participate in and resources to meet those needs. This social cohesion does not just occur within neighborhoods, but also within groups sharing a common issue.
- **High-Quality, Plentiful Medical Care**: A key asset identified by key informants and focus group participants was the wide availability of healthcare services and the high quality of those services, both in Houston and within communities served by MH Northeast. The healthcare system is also described as having a strong community health system in addition to world-class acute care.
- **Economic Opportunity:** Many key informants and focus group participants reported improvement in the local economy, creating economic opportunities for residents and businesses in the communities served by MH Northeast.

Community Vision and Suggestions for Future Programs and Services

- **Promote Healthy Living:** Promotion of healthy eating, physical activity, and disease self-management by healthcare delivery systems and supporting social service organizations was a top suggestion of stakeholders.
- **Improve Transportation:** Transportation presents many problems in the communities served by MH Northeast, and stakeholders offered perspectives and ideas for future programs and services to alleviate the burden caused by traffic and the lack of transportation in some communities.
- **Provide Support to Navigate the Healthcare System:** Residents need assistance in facing the number of barriers to accessing health care services in the communities served by MH Northeast. Stakeholders described existing strategies such as the incorporation of community health workers should be expanded.
- **Expand Access to Behavioral Health Services:** Informants identified behavioral healthcare access as being a major unmet need in the communities served by MH Northeast.
- **Promote Multi-Sector, Cross-Institutional Collaboration:** Health care and social service stakeholders frequently noted that, while many local services may exist in some areas, there are opportunities to improve communication and collaborate to improve population health in the communities that serve MH Northeast.

Key Themes and Conclusions

- **The three counties of Harris, Montgomery, and Liberty differ in terms of demographics and population health needs.** Liberty County residents faced greater socioeconomic and health challenges than residents in the other two counties. Harris County, which comprises over 80% of patients at MH Northeast, also experiences challenges in terms of population health, but it also has more accessible social and health resources and better public transportation for its residents.
- **The increase in population over the past five years has placed tremendous burden on existing public health, social, and health care infrastructure, a trend that places barriers to pursuing a healthy lifestyle among residents.** Infrastructure that does not keep up with demand leads to unmet needs and sustains unhealthy habits in the community. Communities without easy access to healthy foods, safe roads, affordable housing, sidewalks, and prevention of violence are at a disadvantage in the pursuit of healthy living.
- **Although there is economic opportunity for many residents, there are pockets of poverty and some residents face economic challenges that can affect health**. Seniors and members of low-income communities face challenges in accessing care and resources compared to their younger and higher income neighbors. Strategies such as the incorporation of community health workers may increase residents' ability to navigate an increasingly complex health care and public health system.

- **Obesity and concerns related to maintaining a healthy lifestyle emerged as challenges for the region**. Barriers ranged from individual challenges of lack of time to cultural issues involving cultural norms to structural challenges such as living in a food desert or having limited access to sidewalks, recreational facilities, or affordable fruits and vegetables. While several initiatives in the region are trying to address this issue, there appears ample opportunity for action, partnership, and focusing on specific at-risk populations (e.g., rural communities, youth).
- **Behavioral health was identified as a key concern among residents.** Stakeholders highlighted significant unmet needs for mental health and substance abuse services in the communities served by MH Northeast. Key informants particularly drew attention to the burden of mental health on the incarcerated population. Findings from this current assessment process illustrate the importance of pursuing innovative strategies to address behavioral health issues, such as those programs that are part of the Texas Section 1115 Medicaid demonstration waiver.
- **Communities served by MH Northeast have many health care assets, but access to those services is a challenge for some residents.** Transportation to health services was identified as a substantial concern, especially for seniors and lower income residents, as access to public transportation may be limited in some areas. There is an opportunity to expand services to fill in gaps in transportation, ensuring residents are able to access primary care and behavioral health services as well as actively participating in their communities.

BACKGROUND

About Memorial Hermann Health System

Memorial Hermann Health System (MHHS) is the largest nonprofit health care system in Southeast Texas. Memorial Hermann's 13 hospitals and numerous specialty programs and services serve the Greater Houston area, the fifth largest metropolitan area in the United States. Memorial Hermann annually contributes more than $451 million in uncompensated care, community health improvement, community benefits, health professions education, subsidized health services, research, and community education and awareness.

About Memorial Hermann Northeast

Located in the Lake Houston and Kingwood area, Memorial Hermann Northeast Hospital (hereafter MH Northeast) has been caring for families in the northeast region of Houston since 1977. A 255-bed facility, MH Northeast's affiliated doctors span a variety of disciplines. Among its healthcare services, MH Northeast provides specialty care for cancer, sleep disorders, neonatal intensive care, orthopedics and sports medicine, and women's health. MH Northeast also has a freestanding Outpatient Imaging Center featuring advanced procedures and leading technology and provides comprehensive outpatient chronic wound management through a state-of-the-art hyperbaric and advanced center. The hospital is the anchor for the innovative Memorial Hermann Convenient Care Center providing one-stop, highly coordinated access to an extensive array of Memorial Hermann services. MH Northeast also serves as a healthcare provider to passengers traveling through Houston's George Bush International Airport.

Scope of Current Community Health Needs Assessment

There are 13 hospitals participating in MHHS's community health needs assessment (CHNA) in 2016. The hospitals participating in the CHNA include: Memorial Hermann Greater Heights, Memorial Hermann Texas Medical Center, Memorial Hermann Katy Hospital, Memorial Hermann Rehabilitation Hospital - Katy, Memorial Hermann Memorial City Medical Center, Memorial Hermann Northeast, Memorial Hermann Southwest, Memorial Hermann Southeast, Memorial Hermann Sugar Land Hospital, Memorial Hermann The Woodlands Hospital, TIRR Memorial Hermann, Memorial Hermann Surgical Hospital Kingwood, and Memorial Hermann Surgical Hospital – First Colony. The CHNA process will be integrated with and inform a strategic implementation planning (SIP) process designed to develop aligned strategic implementation plans for each hospital.

Previous Community Health Needs Assessment

MHHS conducted a CHNA for each of its hospitals in 2013 to prioritize health issues, to provide a foundation for the development of a community health improvement plan, and to inform each hospital's program planning. The CHNA was conducted between August 2012 to February 2013 with the overall goal of identifying the major healthcare needs, barriers to access, and health priorities for those living in the communities of MHHS hospitals. The analysis included a review of current data and input from numerous community representatives.

During the 2013 CHNA, the following six health priorities were identified for MHHS hospitals:

- Education and prevention for diseases and chronic conditions
- Address issues with service integration, such as coordination among providers and the fragmented continuum of care
- Address barriers to primary care, such as affordability and shortage of providers
- Address unhealthy lifestyles and behaviors
- Address barriers to mental health care, such as access to services and shortage of providers
- Decrease health disparities by targeting specific populations

The process culminated in the development of an Implementation Plan to address the significant needs of residents identified through the CHNA. Each hospital utilized the plan as a guide to improve the health of their community and advance the service mission of the Memorial Hermann organization. The actions taken as a result of the 2013 implementation strategies are identified in Appendix A, Review of 2013 Initiatives. The 2016 CHNA updates the 2013 CHNA and provides additional information about community unmet needs, particularly in the area of healthy living.

Purpose of Community Health Needs Assessment

As a way to ensure that MH Northeast is achieving its mission and meeting the needs of the community, and in furtherance of its obligations under the Affordable Care Act, MHHS undertook a community health needs assessment (CHNA) process in the spring of 2016. Health Resources in Action (HRiA), a nonprofit public health consultancy organization, was engaged to conduct the CHNA.

A CHNA process aims to provide a broad portrait of the health of a community in order to lay the foundation for future data-driven planning efforts. In addition to fulfilling the requirement by the IRS Section H/Form 990 mandate, the MHHS CHNA process was designed to achieve the following overarching goals:

1. To examine the current health status of MH Northeast's communities and its sub-populations, and compare these rates to city/town, county, and state indicators
2. To explore the current health priorities—as well as new and emerging health concerns—among residents within the social context of their communities
3. To identify community strengths, resources, and gaps in services in order to help MH Northeast, MHHS, and its community partners set programming, funding, and policy priorities

Definition of Community Served for the CHNA

The CHNA process delineated each facility's community using geographic cut-points based on its main service area. MH Northeast defines its community geographically as the top 75% of zip codes corresponding to inpatient discharges in fiscal year 2015. These selected zip codes correspond to the communities of Cleveland, Houston, Huffman, Humble, Kingwood, New Caney, Porter, Splendora, and Spring within the counties of Harris, Liberty, and Montgomery. As shown in TABLE 1, a large majority of MH Northeast inpatient discharges in fiscal year 2015 occurred among residents of Harris County (84.5%) or Montgomery County (12.9%); only a small proportion of inpatient discharges occurred among Liberty County residents (2.6%).

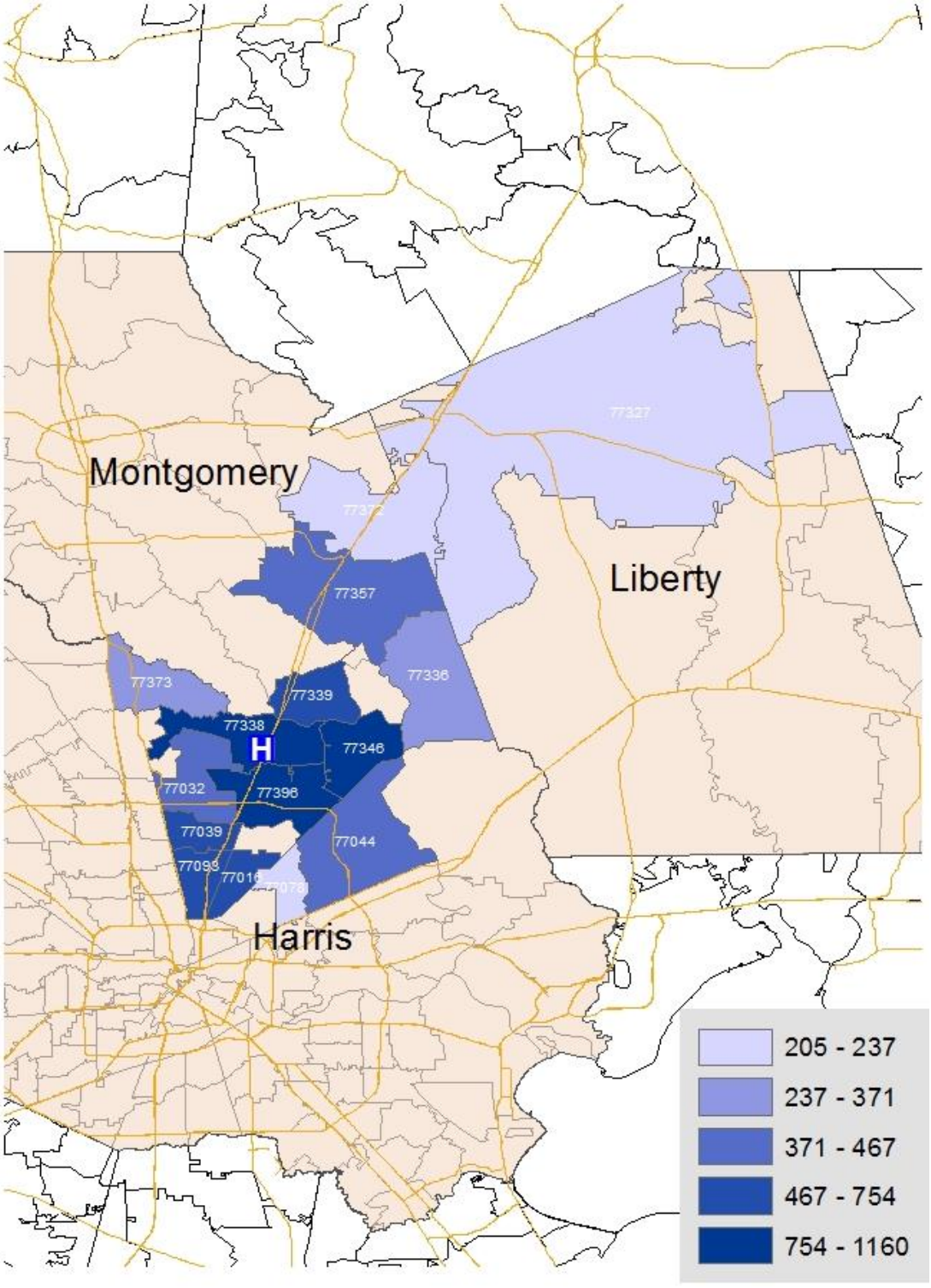
At a city level, most MH Northeast inpatient discharges occurred among residents of Humble (36.4%), followed by Houston (34.4%).FIGURE 1 presents a map of MH Northeast's CHNA defined community by zip code.

TABLE 1. NUMBER AND PERCENT OF INPATIENT DISCHARGES REPRESENTING THE TOP 75% OF ZIP CODES SERVED BY MH NORTHEAST, BY COUNTY AND CITY, FISCAL YEAR 2015

Geography	# inpatient discharges	% inpatient discharges
Harris County	7,720	84.5%
Montgomery County	1,177	12.9%
Liberty County	237	2.6%
Humble	3,323	36.4%
Houston	3,143	34.4%
Kingwood	573	6.3%
Porter	492	5.4%
New Caney	467	5.1%
Huffman	371	4.1%
Spring	310	3.4%
Cleveland	237	2.6%
Splendora	218	2.4%

DATA SOURCE: Memorial Hermann Health System, Inpatient Discharges for FY 2015
NOTE: Data reported for counties and cities corresponding to the top 75% of zip codes

FIGURE 1. NUMBER OF INPATIENT DISCHARGES REPRESENTING THE TOP 75% OF ZIP CODES SERVED BY MH NORTHEAST, BY ZIP CODE, FISCAL YEAR 2015



Zip codes
77338, 77396, 77346, 77016, 77039, 77093, 77339, 77365, 77357, 77044, 77032, 77336, 77373, 77327, 77372, 77078
Cities and towns
Cleveland, Houston, Huffman, Humble, Kingwood, New Caney, Porter, Splendora, and Spring
Counties
Harris, Liberty, and Montgomery Counties

DATA SOURCE: Map created by Health Resources in Action using 2010 data from the U.S. Department of Commerce, Bureau of the Census

APPROACH & METHODS

The following section describes how the data for the CHNA were compiled and analyzed, as well as the broader lens used to guide this process. Specifically, the CHNA defines health in the broadest sense and recognizes that numerous factors at multiple levels impact a community's health — from lifestyle behaviors (e.g., diet and exercise), to clinical care (e.g. access to medical services), to social and economic factors (e.g., employment opportunities), to the physical environment (e.g., air quality). The beginning discussion of this section discusses the larger social determinants of health framework which helped guide this overarching process.

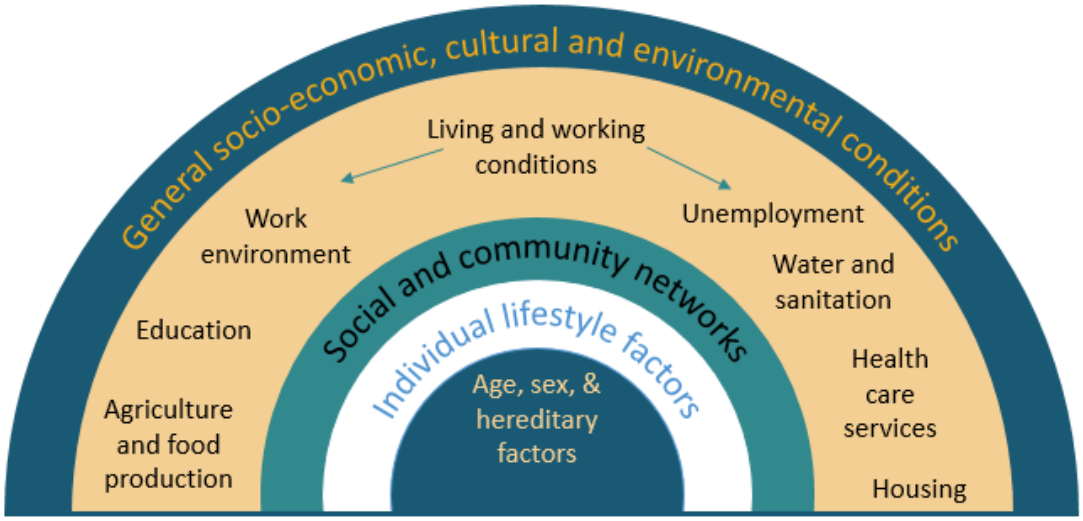
Study Approach

Social Determinants of Health Framework

It is important to recognize that multiple factors have an impact on health, and there is a dynamic relationship between real people and their lived environments. Where we are born, grow, live, work, and age—from the environment in the womb to our community environment later in life—and the interconnections among these factors are critical to consider. That is, not only do people's genes and lifestyle behaviors affect their health, but health is also influenced by more upstream factors such as employment status and quality of housing. The social determinants of health framework addresses the distribution of wellness and illness among a population. While the data to which we have access is often a snapshot of a population in time, the people represented by that data have lived their lives in ways that are constrained and enabled by economic circumstances, social context, and government policies. Building on this framework, this assessment approaches data in a manner designed to discuss who is healthiest and least healthy in the community, as well as examines the larger social and economic factors associated with good and ill health.

FIGURE 2 provides a visual representation of this relationship, demonstrating how individual lifestyle factors, which are closest to health outcomes, are influenced by more upstream factors such as employment status and educational opportunities. This report provides information on many of these factors, as well as reviews key health outcomes among the residents of MH Northeast's community.

FIGURE 2. SOCIAL DETERMINANTS OF HEALTH FRAMEWORK



SOURCE: World Health Organization, Commission on the Social Determinants of Health, Towards a Conceptual Framework for Analysis and Action on the Social Determinants of Health, 2005. Graphic reformatted by Health Resources in Action.

Health Equity

In addition to considering the social determinants of health, it is critical to understand how these characteristics disproportionately affect vulnerable populations. Health equity is defined as all people having "the opportunity to 'attain their full health potential' and no one is 'disadvantaged from achieving this potential because of their social position or other socially determined circumstance.' When examining the larger social and economic context of the population (e.g., upstream factors such as housing, employment status, racial and ethnic discrimination, the built environment, and neighborhood-level resources), a robust assessment should capture the disparities and inequities that exist for traditionally underserved groups. Thus a health equity lens guided the CHNA process to ensure data comprised a range of social and economic indicators and were presented for specific population groups. According to Healthy People 2020, achieving health equity requires focused efforts at the societal level to address avoidable inequalities by equalizing the conditions for health for all groups, especially for those who have experienced socioeconomic disadvantage or historical injustices.

The framework, process, and indicators used in this approach were also guided by national initiatives including Healthy People 2020, National Prevention Strategy, and County Health Rankings.

Methods

Quantitative Data

In order to develop a social, economic, and health portrait of MH Northeast's community through the social determinants of health framework and health equity lenses, existing data were drawn from state, county, and local sources. This work primarily focused on reviewing available social, economic, health, and healthcare-related data. Sources of data included, but were not limited to, the U.S. Census, U.S. Bureau of Labor Statistics, County Health Rankings, the Texas Department of State Health Services, and MHHS. Types of data included self-report of health behaviors from large, population-based surveys such as the Behavioral Risk Factor Surveillance System (BRFSS), public health disease surveillance data, hospital data, as well as vital statistics based on birth and death records.

Qualitative Data

While social and epidemiological data can provide a helpful portrait of a community, it does not tell the whole story. It is critical to understand people's health issues of concern, their perceptions of the health of their community, the perceived strengths and assets of the community, and the vision that residents have for the future of their community. Qualitative data collection methods not only capture critical information on the "why" and "how," but also identify the current level of readiness and political will for future strategies for action.

Secondary data were supplemented by focus groups and interviews. In total, 11 focus groups and 27 key informant discussions were conducted with individuals from MH Northeast's community from October 2015 through February 2016. Focus groups were held with 93 community residents drawn from the region. With the exception of seniors (65 years or older) for which two focus groups were conducted, one focus group was conducted for each of the following population segments:

- Adolescents (15-18 years old)
- Parents of preschool children (0-5 years old)
- Seniors (65+ years old) (two groups)
- Spanish-speaking Hispanic community members (conducted in Spanish)
- English-speaking Hispanic community members
- Asian-American community members
- Low-income community members from urban area
- Low-income community members from suburban area
- Low-income community members from rural area
- Community members of moderate to high socioeconomic status

Twenty-seven key informant discussions were conducted with individuals representing the MH Northeast community as well as the Greater Houston community at large. Key informants represented a number of sectors including nonprofit/community service, city government, hospital or health care, business, education, housing, transportation, emergency preparedness, faith community, and priority populations (e.g., low-income rural area residents representing the MH Northeast community).

Focus group and interview discussions explored participants' perceptions of their communities, priority health concerns, perceptions of public health, prevention, and health care services, and suggestions for future programming and services to address these issues. MH Northeast specifically addressed healthy eating, physical activity, and the availability and accessibility of community resources that promote healthy living. A semi-structured moderator's guide was used across all discussions to ensure consistency in the topics covered. Each focus group and interview was facilitated by a trained moderator, and detailed notes were taken during conversations. On average, focus groups lasted 90 minutes and included 6-12 participants, while interviews lasted approximately 30-60 minutes. Participants for the focus groups were recruited by HRiA, working with clinical and community partners identified by MHHS and MH Northeast. Key informants were recruited by HRiA, working from recommendations provided by MHHS and MH Northeast.

Analysis

The collected qualitative data were coded using NVivo qualitative data analysis software and analyzed thematically for main categories and sub-themes. Data analysts identified key themes that emerged across all groups and interviews as well as the unique issues that were noted for specific populations relevant to the MH Northeast community. Frequency and intensity of discussions on a specific topic were key indicators used for identifying main themes. While geographic differences are noted where appropriate, analyses emphasized findings common across MH Northeast's community. Selected paraphrased quotes – without personal identifying information – are presented in the narrative of this report to further illustrate points within topic areas.

Limitations

As with all data collection efforts, there are several limitations related to the assessment's research methods that should be acknowledged. Years of the most current data available differ by data source. In some instances, 2013 may be the most current year available for data, while 2009 or 2010 may be the most current year for other sources. Some of the secondary data were not available at the county level. Additionally, several sources did not provide current data stratified by race and ethnicity, gender, or age –thus these data could only be analyzed by total population. Finally, youth-specific data were largely not available, and in cases where such data were available, sample sizes were often small and must be interpreted with caution.

Likewise, secondary survey data based on self-reports, such as the Behavioral Risk Factor Surveillance Survey (BRFSS) and the Texas Behavioral Risk Factor Surveillance System, should be interpreted with particular caution. In some instances, respondents may over- or underreport behaviors and illnesses based on fear of social stigma or misunderstanding the question being asked. In addition, respondents may be prone to recall bias—that is, they may attempt to answer accurately, but they remember incorrectly. In some surveys, reporting and recall bias may differ according to a risk factor or health outcome of interest. Despite these limitations, most of the self-report surveys analyzed in this CHNA benefit from large sample sizes and repeated administrations, enabling comparison over time.

While the focus groups and interviews conducted for this study provide valuable insights, results are not statistically representative of a larger population due to non-random recruiting techniques and a small sample size. Recruitment for focus groups was conducted by HRiA, working with clinical and community partners. Because of this, it is possible that the responses received only provide one perspective of the issues discussed. It is also important to note that data were collected at one point in time, so findings, while directional and descriptive, should not be interpreted as definitive.

COMMUNITY SOCIAL AND ECONOMIC CONTEXT

About the MH Northeast Community

The health of a community is associated with numerous factors including what resources and services are available (e.g., safe green space, access to healthy foods) as well as who lives in the community. Focus group participants and key informants described many assets of the MH Northeast community, particularly the diversity of the population. The MH Northeast community encompasses three counties, Harris, Montgomery, and Liberty; the largest proportion of patients served by MH Northeast reside in Houston and Humble. The region has experienced substantial growth in recent years. Houston, a vibrant urban area, is the fourth largest city in the U.S. (trailing only New York, Los Angeles and Chicago). Humble is a far smaller community known for its charm which in recent years has become one of the fastest growing areas in Harris County. The Northeast region of Houston is also known for its scenic beauty, including Lake Houston's abundance of forest and recreational facilities.

Who lives in a community is significantly related to the rates of health outcomes and behaviors of that area. While age, gender, race, and ethnicity are important characteristics that have an impact on an individual's health, the distribution of these characteristics in a community may affect the number and type of services and resources available. The three counties served by MH Northeast have experienced an increase of population growth over several years, affecting the demand for resources by residents. Interview and focus group participants frequently noted that the communities served by MH Northeast are diverse across a number of indicators including age distribution, racial and ethnic composition, language, income, education, and employment. Factors affecting the population demographically are also reported, including housing, transportation, and crime and violence. The section below provides an overview of the socioeconomic context of MH Northeast's community.

Population Size and Growth

According to the American Community Survey (ACS), the Texas population increased by 9.5%—from 23,819,042 in 2005-2009 to 26,092,033 in 2010-2014 (TABLE 2). The total population across the three counties served by MH Northeast was 4,833,343 based on 2010-2014 ACS estimates, 18.5% of Texas' total population. Between the time periods 2005-2010 and 2010-2014, the population in the three counties of Harris, Liberty, and Montgomery increased. Montgomery County was the fastest growing county within the MH Northeast community defined for this CHNA, with a 3.1% increase in 2010-2014 over the 2005-2009 estimate. Houston (population: 2,167,988) was the most populous city across the three counties served by MH Northeast. Splendora (population: 1,850) was the least populous city. Humble (population: 14,926) and Houston each accounted for about 35% of the patient population at MH Northeast in 2015. Between 2005-2010 and 2010-2014, Houston experienced a decline in population (-1.1%) while Humble experienced an increase (3.2%). The community of Spring experienced a population increase of 15.7% between 2005-2010 and 2010-2014.

TABLE 2. POPULATION SIZE AND GROWTH ESTIMATES, BY STATE, COUNTY, AND CITY/TOWN, 2005-2009 AND 2010-2014

Geography	2005-2009	2010-2014	% change
Texas	23,819,042	26,092,033	9.5%
Harris County	4,182,285	4,269,608	2.1%
Montgomery County	472,162	487,028	3.1%
Liberty County	76,013	76,707	0.9%
Houston	2,191,400	2,167,988	-1.1%
Humble	14,926	15,402	3.2%
Spring	47,541	54,992	15.7%
Cleveland	7,925	7,684	-3.0%
Splendora	1,850	1,569	-15.2%

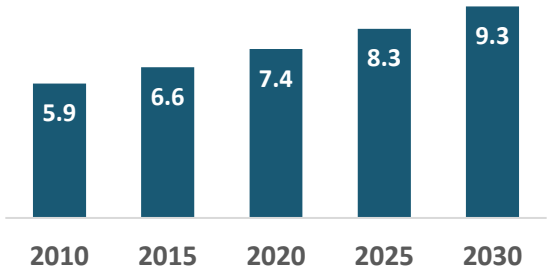
DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2005-2009 and 2010-2014

NOTE: Data not available for Huffman, Kingwood, New Caney, and Porter

Focus group participants and key informants reported that the area served by MH Northeast is experiencing population growth. Focus group members and interviewees pointed to development and sprawl as well as busy roads. Population growth was attributed to growing numbers of immigrants settling in the area as well as higher income people coming for jobs. The Greater Houston area's

industries, particularly in the energy sector, also influences population growth, according to participants, as it attracts employees from around the world. Several interviewees noted that rapid population growth has created challenges for the infrastructure in the region. As one provider shared, *"we have positive growth in our community, but this growth is also a strain on the health and social service system."* Rapid population growth in the Greater Houston area is a trend likely to continue well beyond this decade. The Houston metropolitan area is projected to increase from 5.9 million in 2010 to 9.3 million in 2030 (FIGURE 3).

FIGURE 3. PROJECTED TOTAL POPULATION IN MILLIONS, GREATER HOUSTON METROPOLITAN AREA,* 2010-2030



DATA SOURCE: Texas State Data Center, as cited by Greater Houston Partnership Research Department in Social, Economic, and Demographic Characteristics of Metro Houston, 2014
NOTE: Population projections assume the net immigration from 2010 to 2030 to be equal to that from 2000 to 2010
*Houston-The Woodlands-Sugar Land metropolitan statistical area is a nine-county area as defined by the Office of Management and Budget, which includes Harris and Fort Bend Counties but not Wharton County

Age Distribution

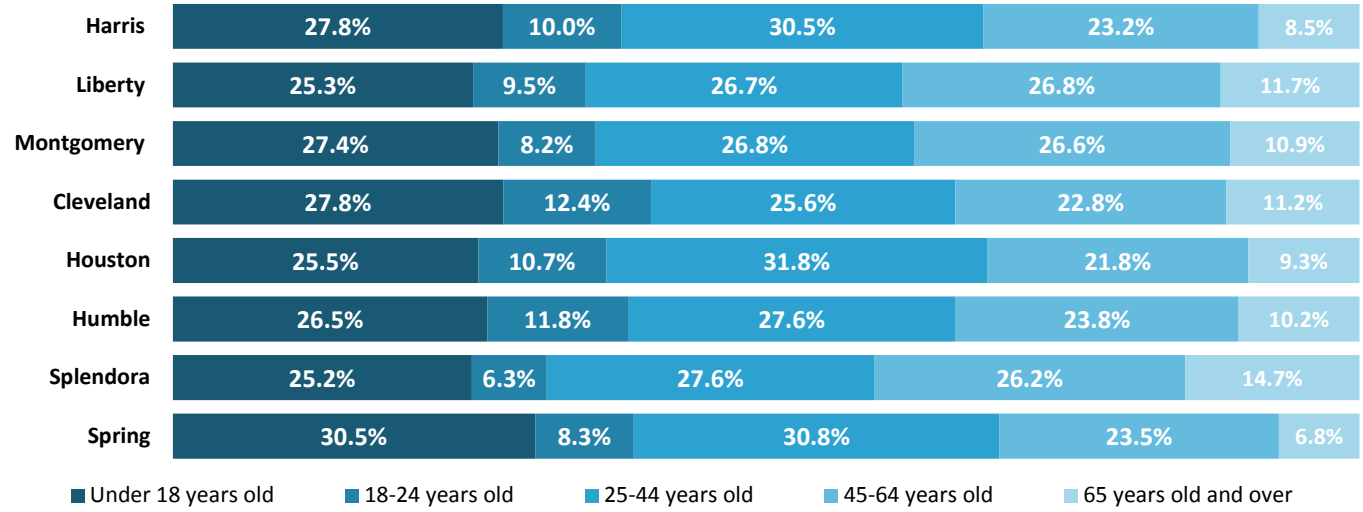
As populations age, the needs of the community shift based on increased overall need for healthcare services. The communities served by MH Northeast are diverse in terms of age. Focus group participants and interviewees described their communities as a mix of age groups, with seniors, young families, and middle age persons.

FIGURE 4 shows the age distribution of MH Northeast's community at the county and city levels. In all three counties served by MH Northeast, slightly over one quarter of the population was under the age of 18. Harris (27.8%) and Montgomery (27.4%) had a slightly higher proportion of residents under the age of 18 than Liberty County (25.3%). Liberty and Montgomery Counties had a larger proportion of people 65 years of age and older than Harris County, over 10% in each of the two Counties. In Houston and Humble, about one quarter of the population was under the age of 18, and a similar proportion of residents was age 65 or older (9.3% and 10.2%, respectively). Among the communities that make up a smaller portion of MH Northeast's patient population (for which data are available), there was some diversity in terms of age. Spring (30.5%) had the highest proportion of residents under age 18 among these communities while Splendora (14.7%) had the highest proportion of residents age 65 and older.

"My neighborhood is diverse in terms of age. There are some seniors, but also a lot of working young people."

Focus group participant

FIGURE 4. AGE DISTRIBUTION, BY COUNTY AND CITY, 2009-2013



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2009-2013
NOTE: Data not available for Huffman, Kingwood, New Caney, and Porter

Racial and Ethnic Distribution

Due to a number of complex factors, people of color experience high rates of health disparities across the United States. As such, examining outcomes by race and ethnicity is an important lens through which to view the health of a community.

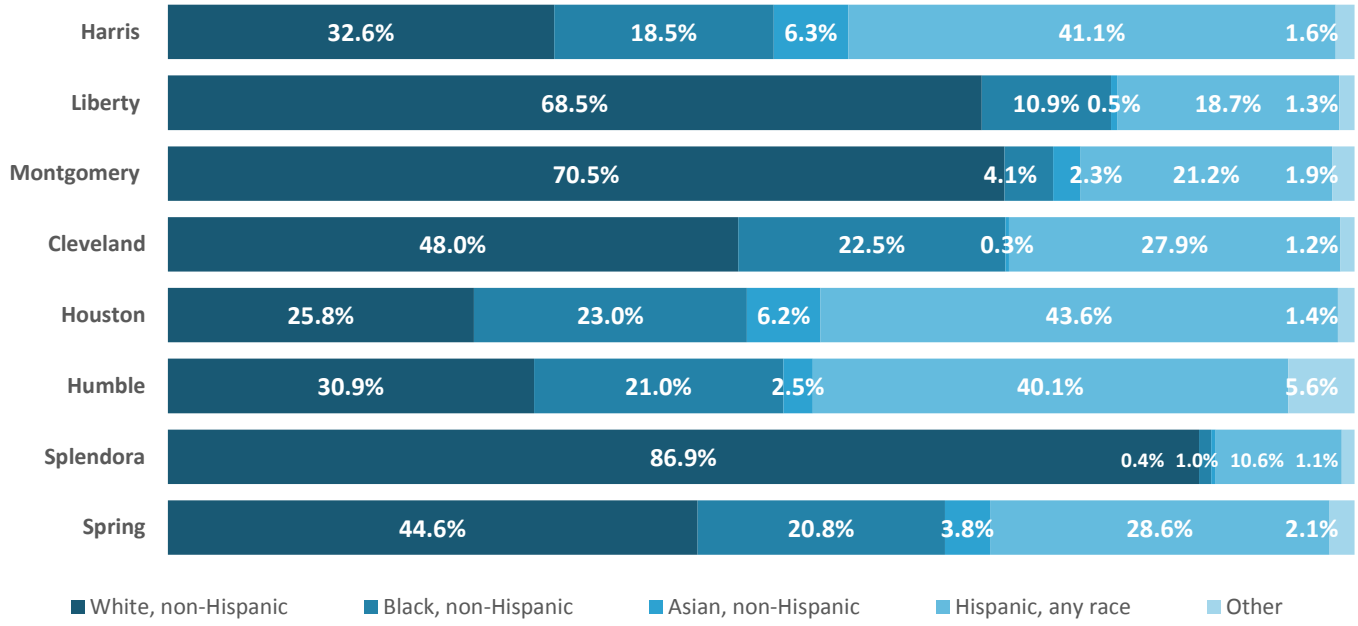
Qualitative and U.S. Census data demonstrate the broad diversity of the population served by MH Northeast in terms of racial and ethnic composition. Focus group participants and key informants frequently described the racial and ethnic distribution of their community as diverse. One focus group participant reported, *"It's a whole melting pot here."* Hispanics comprise the largest minority population group in the region and were described as including both long-standing residents and more recent arrivals. Participants generally viewed diversity as a substantial strength, such as one key informant who stated, *"I think it is our diversification…of cultures. We are a very diverse community, and I think it gives our region great opportunity."* However, focus group participants and interviewees also noted that some groups face challenges, including language isolation and cultural and other barriers to accessing health and social services. As another key informant explained, *"lack of options for immigrants is a big issue that is hard to quantify."* Several informants reported a growth in the number of undocumented people in the region, who were described as particularly vulnerable.

> ***"We are very diverse in many ways…in terms of race, ethnicity, and socioeconomic status."***
>
> **Key informant interviewee**

At the county level, Harris County was predominantly comprised of residents who self-reported their racial and ethnic identity as Hispanic (41.1%) or White, non-Hispanic (32.6%). In both Montgomery and Liberty Counties, the large majority of residents were White, non-Hispanic (70.5% and 68.5%, respectively). Hispanics comprised 21.2% of the population of Montgomery County and 18.7% of Liberty County. The proportion of residents identifying as Black, non-Hispanic residents ranged from 4.1% of the population in Montgomery County to 18.5% of the population in Harris County. The proportion of residents identifying as Asian, non-Hispanic residents ranged from 0.5% of the population in Liberty County to 6.3% of the population of Harris County. Among the cities and towns across the three counties in MH Northeast's community, Hispanics comprised the largest proportion of the populations in Humble and Houston, slightly over 40%. Black, non-Hispanic residents comprised

slightly over 20% of the population in these two cities while White, non-Hispanics comprised 30.9% of Humble's population and 25.8% of Houston's population. Among the other cities and towns in MH Northeast's community for which data are available, the demographic breakdown was similar in Spring and Cleveland, with nearly half of the populations comprising non-Hispanic Whites. Both cities had a slightly higher proportion of Hispanic residents than Black, non-Hispanic residents. Splendora's (86.9%) residents, by contrast, were predominantly White, non-Hispanic. FIGURE 5 illustrates the racial and ethnic distribution of MH Northeast's communities.

FIGURE 5. RACIAL AND ETHNIC DISTRIBUTION, BY COUNTY AND CITY, 2009-2013



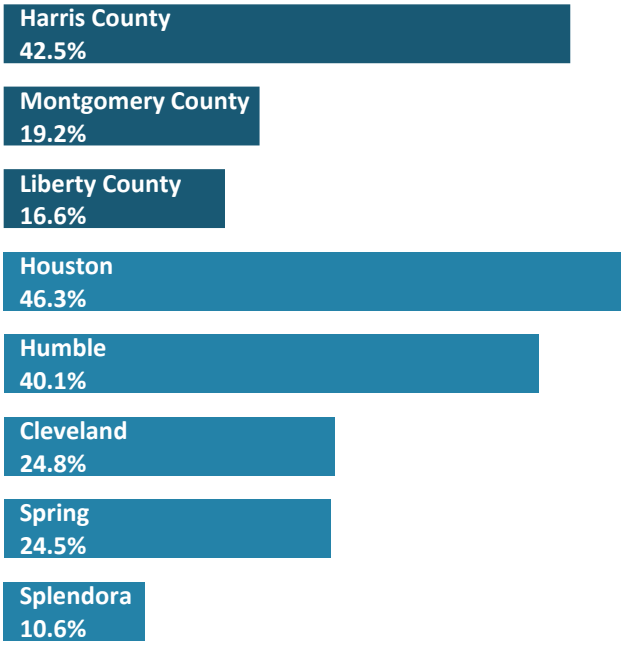
DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2009-2013
NOTE: Other includes American Indian and Alaska Native, non-Hispanic; Native Hawaiian and Other, non-Hispanic; and Two or more races, non-Hispanic; Data not available for Huffman, Kingwood, New Caney, and Porter.

Linguistic Diversity and Immigrant Population

The nativity of the population, countries from which immigrant populations originated, and language use patterns are important for understanding social and health patterns of a community. Immigrant populations face a number of challenges to accessing services such as health insurance and navigating the complex health care system in the United States.

MH Northeast serves a community in which many speak a language other than English. Many (42.5%) Harris County residents spoke a language other than English at home, while in the other two counties, less than 20% spoke a language other than English at home (FIGURE 6). In both Humble and Houston, over 40% of residents spoke a language other than English at home. Fewer non-English speakers resided in the other communities served by MH Northeast: the proportion of residents who spoke a language other than English at home ranged from 10.6% in Splendora to 24.8% in Cleveland. One key informant described this linguistic diversity as presenting challenges for the healthcare system: *"The diversity [of languages] can be one of our greatest assets, though also there can be challenges. Many languages and dialects can lead to challenges. It creates a need to meet the health needs of a diverse group."*

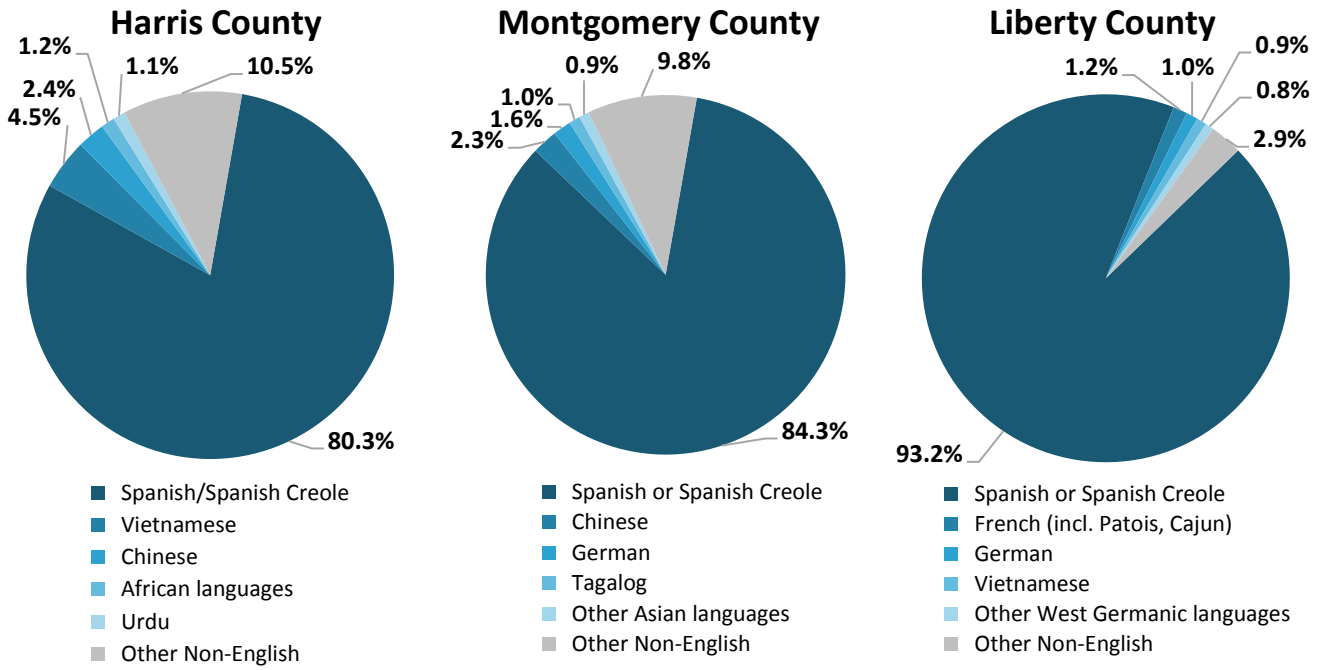
FIGURE 6. PERCENT POPULATION OVER 5 YEARS WHO SPEAK LANGUAGE OTHER THAN ENGLISH AT HOME, BY COUNTY AND CITY, 2009-2013



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2009-2013
NOTE: Data not available for Huffman, Kingwood, New Caney, and Porter

FIGURE 7 shows the top five non-English languages spoken by County. Spanish was the language predominantly spoken in each of the communities served by MH Northeast: over 80% of the non-English speaking population in communities served by MH Northeast spoke Spanish or Spanish Creole at home. About 7% of the non-English speaking population in Harris County spoke Vietnamese or Chinese; a smaller proportion of non-English speaking residents in Montgomery and Liberty Counties spoke an Asian language. In Humble 84.7% of residents did not speak English at home and in Houston, 81.1% did speak English. Other languages predominantly spoken among those who do not speak English in Humble were Other Pacific Island languages (7.5%) and Other Indic languages (2.9%). In Houston, 4.6% of residents spoke Vietnamese or Chinese (data not shown).

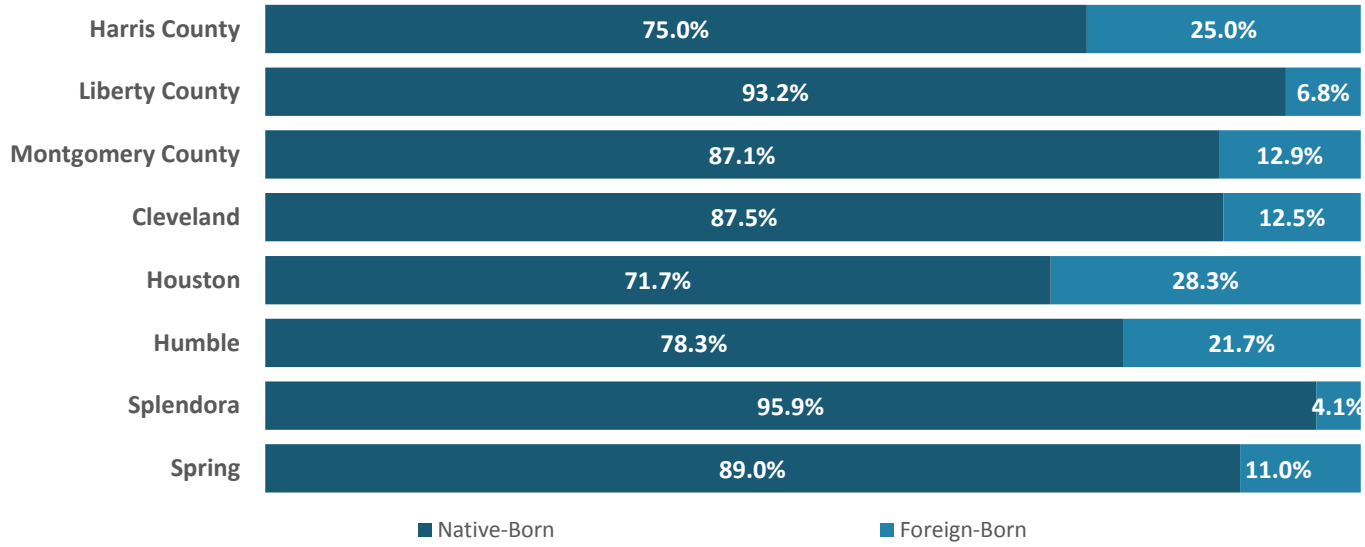
FIGURE 7. TOP FIVE NON-ENGLISH LANGUAGES SPOKEN, BY COUNTY, 2009-2013



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2009-2013

Immigration is a major part of the identity of the Greater Houston metropolitan area. Between 2000 and 2013, Houston's immigrant population grew nearly twice the national rate: 59% versus 33% (*A Profile of Immigrants in Houston,* 2015). The area's two largest established immigrants groups originate from Mexico and Vietnam, whereas the newest immigrant populations originate from Guatemala and Honduras. Informants described the MH Northeast community as a collection of immigrants from both within and outside of the United States, including more transitional individuals from other countries seeking employment. As pointed out by one focus group participant: "*People are from all over. You see it on the playground…We have one neighbor from Norway and Venezuela. The other is from Scotland."* These qualitative observations are reflected in demographics of the MH Northeast community. One in four residents in Harris County was foreign born, whereas only 6.8% of Liberty County residents and 12.9% of Montgomery County residents were foreign born (FIGURE 8). In Houston, 28.3% of residents were foreign born while in Humble, 21.7% were foreign born. According to the Texas Refugee Health Program Refugee Health Report, 5,285 refugees resettled in Harris County in 2014, with Harris County having one of the largest refugee populations in the United States.

FIGURE 8. NATIVITY, BY COUNTY AND CITY, 2009-2013



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2009-2013
NOTE: Data not available for Huffman, Kingwood, New Caney, and Porter

Income and Poverty

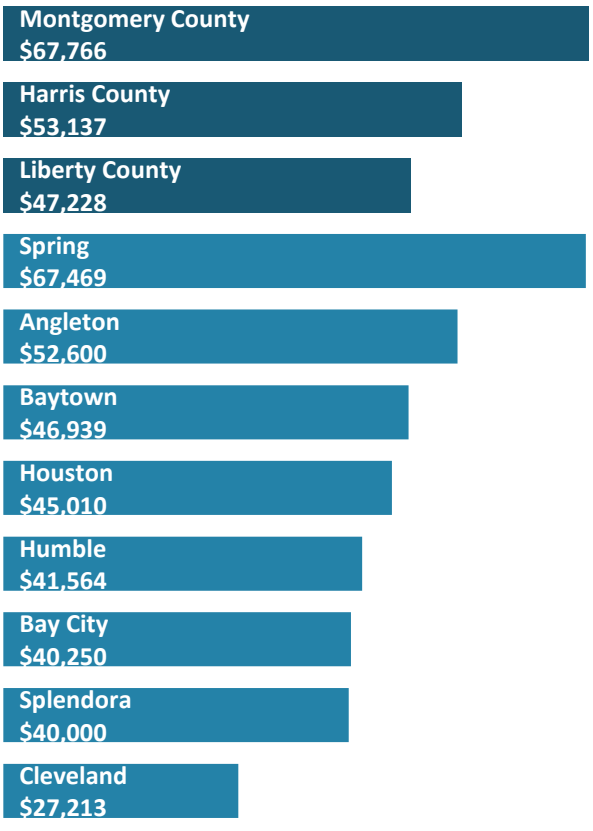
Income and poverty status have the potential to impact health in a variety of ways. For example, the stress of living in poverty and struggling to make ends meet can have adverse effects on both mental and physical health, while financial hardship is a significant barrier to accessing goods and services.

Focus group participants and key informant interviewees alike reported that the region served by MH Northeast includes both wealthier and lower income individuals. As one informant described, *"[Houston] is very sprawled out and somewhat segregated because of it. There are areas of Houston that are very very poor and then you can throw a rock and in that distance the area becomes extremely affluent and wealthy."* Participants noted the large number of children in schools receiving free and reduced lunch, seniors who live on fixed incomes, and immigrants who face challenges integrating into the local economy. Themes emerging in focus group discussions and interviews included the challenges low-income residents face paying rent, buying nutritious food, and paying for health insurance and health care. A health care provider key informant highlighted how these choices affect the emergency care system in the community: *"A lot of times a patient is not going to take care of themselves if they have no shelter; they may want to put food on the table instead of see the doctor, and then they get to the ER. It's a vicious cycle."* At the same time, several interviewees mentioned that the recent downturn in oil prices has negatively affected some residents who were previously more economically secure. As one interviewee noted, *"many folks are getting laid off and relying on public benefits; this means more families who need help."*

Data from the 2009-2013 American Community Survey shows that the median household income in the three counties served by MH Northeast ranged from $47,228 in Liberty County to $67,766 in Montgomery County. Among the cities and towns, Spring had the highest median household income ($67,469) and Cleveland had the lowest ($27,213) (FIGURE 9). Median income in the two cities comprising MH Northeast's largest patient populations was in the middle of this range: $41,564 in Humble and $45,010 in Houston. FIGURE 10 shows the percent of adults below the poverty line in 2009-2013. Both Harris (15.1%) and Liberty (16.4%) Counties had a higher proportion of adults below the poverty line than Montgomery County (10.5%). The percent of adults below the poverty line in 2009-2013 was higher in Houston (18.6%) than in Humble (15.2%). Among the other communities served by MH Northeast, the poverty rate varied substantially, ranging from 7.8% in Spring to 28.0% in Cleveland.

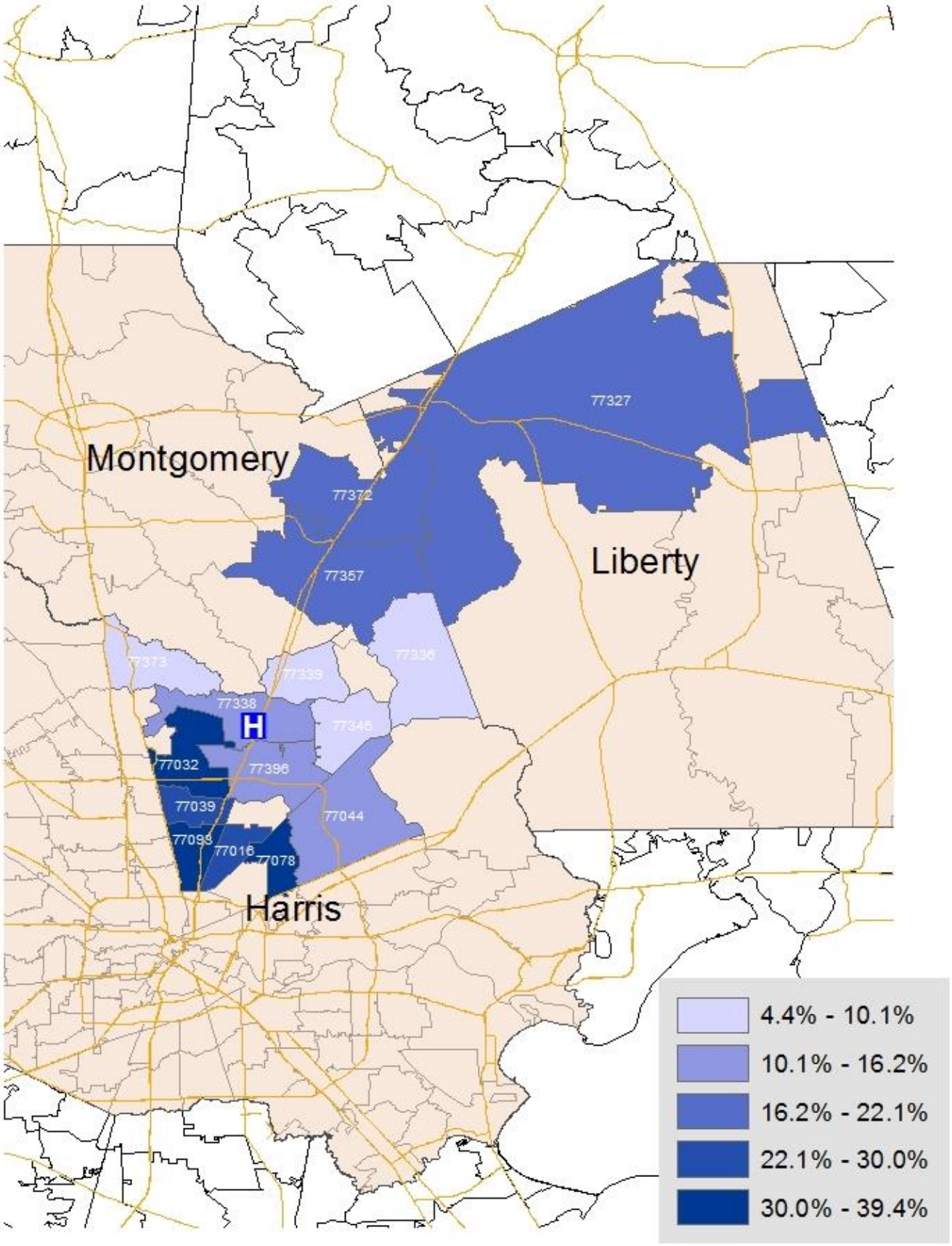
> ***"But at the end of day, if you are on a fixed income, do you choose to pay for insurance or pay for food for your family?"***
>
> **Focus group participant**

FIGURE 9. MEDIAN HOUSEHOLD INCOME, BY COUNTY AND CITY, 2009-2013



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2009-2013
NOTE: Data not available for Huffman, Kingwood, New Caney, and Porter

FIGURE 10. PERCENT INDIVIDUALS 18 YEARS AND OVER BELOW POVERTY LEVEL, BY ZIP CODE, 2009-2013

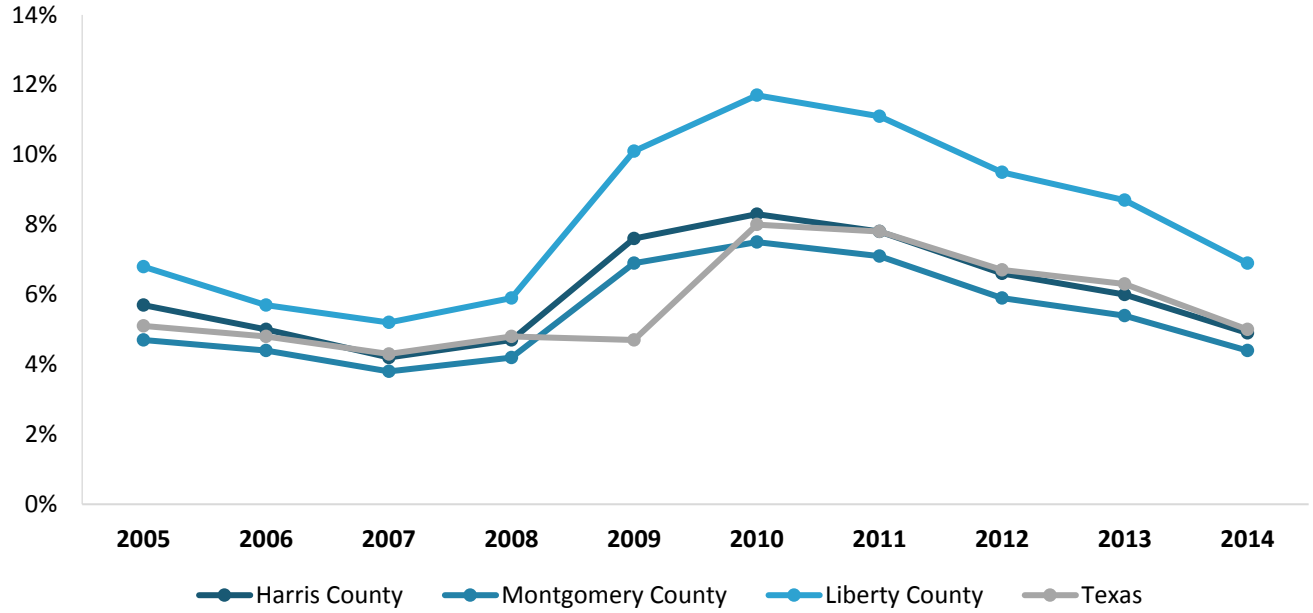


DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2009-2013

Employment

Employment status also can have a significant impact on one's health. Many focus group participants and key informant interviewees reported that the economic outlook of the Greater Houston area region was positive overall. However, several noted that the recent decrease in oil prices has had a negative impact on employment and expressed concern if prices continue to stay low. As one interviewee noted, *"every day in the newspaper, you read about a company going under and employees losing jobs."* Some respondents expressed particular concern about low-wage workers—those who work multiple jobs, are often undocumented, and most often have no health insurance. As one key informant explained, *"there is a low rate of unemployment but a high rate of uninsured."* Data from the American Community Survey show that the unemployment rates for Texas and all three counties served by MH Northeast peaked in 2010 but have decreased consistently over the past five years (FIGURE 11).

FIGURE 11. TRENDS IN UNEMPLOYMENT RATE, BY COUNTY AND STATE, 2005-2014



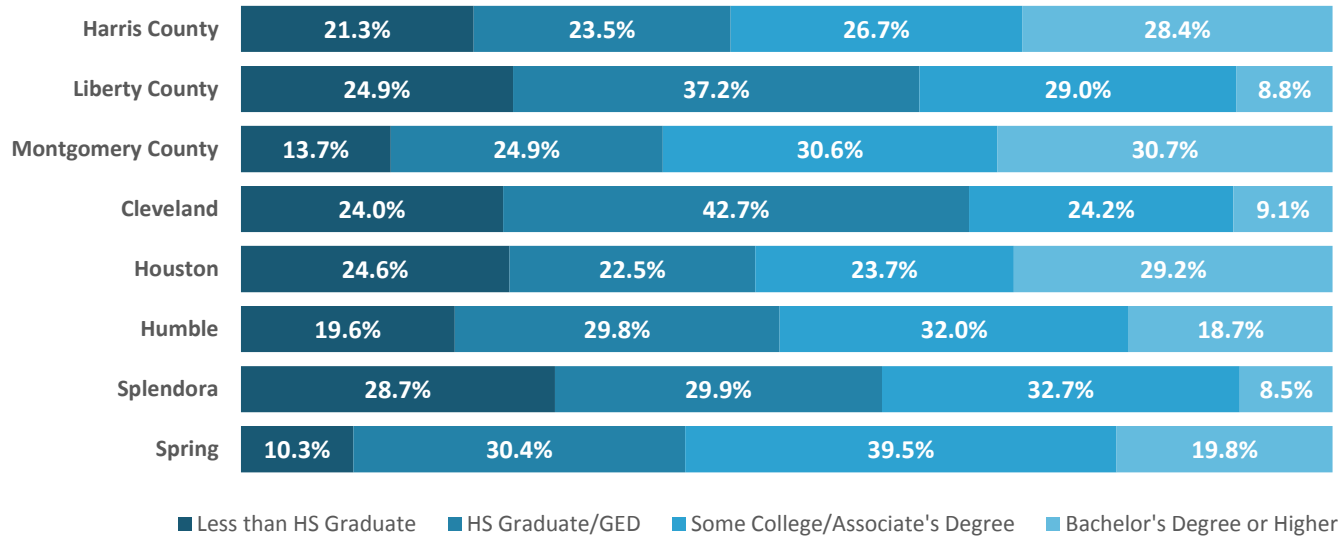
DATA SOURCE: Bureau of Labor Statistics, Local Area Unemployment Statistics, Labor force data by county; and Bureau of Labor Statistics, Current Population Survey, Annual Averages, 2005-2014

Education

Educational attainment is often associated with income, and higher educational achievement is linked with greater health literacy. Perceptions of schools in the region were mixed. While some focus group participants and interviewees reported that the schools in the region are strong, others reported that educational quality and opportunity varied across the region. As one informant shared, *"We have a couple of good high schools in the city, but a lot of families move out of the city to the better schools."* Of the three counties served by MH Northeast, a higher proportion of residents over 25 years old in Liberty County (62.1%) and Harris County (44.83%) than in Montgomery County (38.6%) had a high school diploma or less (FIGURE 12). The proportion of residents with a college degree or higher was far smaller in Liberty County (8.8%) compared to Harris County (28.4%) and Montgomery County (30.7%). In both Humble (49.4%) and Houston (47.1%), slightly less than half of adults had a high school diploma or less. Houston had a higher proportion of adult residents with a Bachelor's degree or more (29.2%) than Humble (18.7%). There is substantial variation in education levels across the other communities served by MH Northeast as well. Spring had the highest proportion of residents with a college degree or higher (19.8%) while Cleveland had the highest proportion of residents with a high school diploma or less (66.7%).

> ***"I do think Houston does a good job with caring for kids. Education is important here."***
>
> **Key informant interviewee**

FIGURE 12. EDUCATIONAL ATTAINMENT OF POPULATION 25 YEARS AND OVER, BY COUNTY AND CITY, 2009-2013



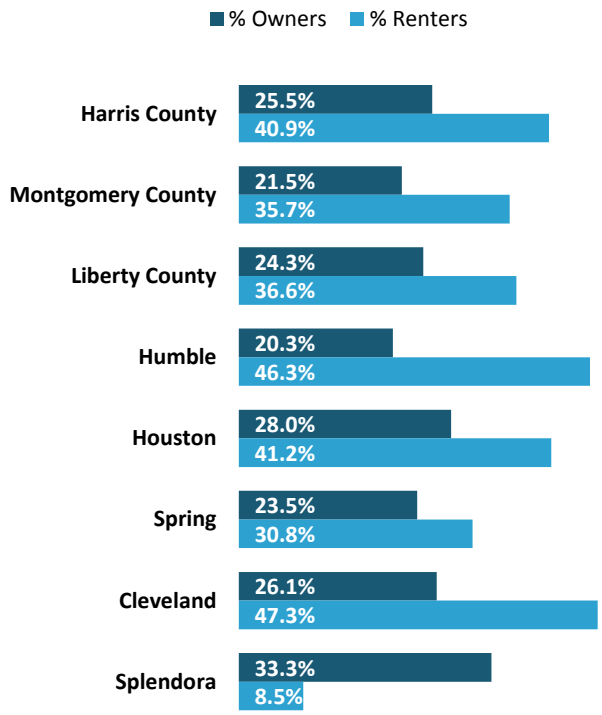
DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2009-2013
NOTE: Data not available for Huffman, Kingwood, New Caney, and Porter

Housing

Housing costs are generally a substantial portion of expenses, which can contribute to an unsustainably high cost of living. Additionally, poor quality housing structures, which may contain hazards such as lead paint, asbestos, and mold, may also trigger certain health issues such as asthma. Perspectives on the cost of housing in the region varied across informants. Some reported that housing prices were reasonable, while others expressed concern about housing being unavailable or unaffordable, especially for some segments of the population. One key informant expressed concern about there being insufficient housing for the disabled. *"People with physical disabilities often have trouble finding shelter."* Another segment identified as being at risk for housing insecurity was seniors. One focus group participant described how this issue affected her: *"The rent keeps going up. I'm trying to get into a senior home. I have to wait two years."* A couple of respondents reported that among minority populations, multi-generational families living together is more common but can contribute to overcrowding. Some participants were concerned about the strain of population growth on the need for housing and subsequent need for more roads. In more urban areas, stakeholders reported there being a lot of apartment complexes where violence may be more likely to occur.

Across the three counties served by MH Northeast, the monthly median housing costs for homeowners were similar for homeowners in Harris ($1,232) and Montgomery ($1,242) Counties and far lower for homeowners in Liberty County ($667). For renters, costs were highest in Montgomery County ($965) and lowest in Liberty County ($731) (data not shown). Housing costs were similar in Humble ($1,289 for homeowners and $829 for renters) and Houston ($1,479 for homeowners and $848 for renters). In all three counties and towns and cities with the exception of Splendora, a higher percentage of renters compared to homeowners paid 35% or more of their household income towards their housing costs (FIGURE 13). In both Humble and Houston, slightly less than half of renters pay more than 35% or more of their household income towards their housing costs.

FIGURE 13. PERCENT HOUSING UNITS WHERE HOMEOWNERS AND RENTERS HAVE HOUSING COSTS THAT ARE 35% OR MORE OF HOUSEHOLD INCOME, BY COUNTY AND CITY, 2009-2013



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2009-2013
NOTE: Data not available for Huffman, Kingwood, New Caney, and Porter

Transportation

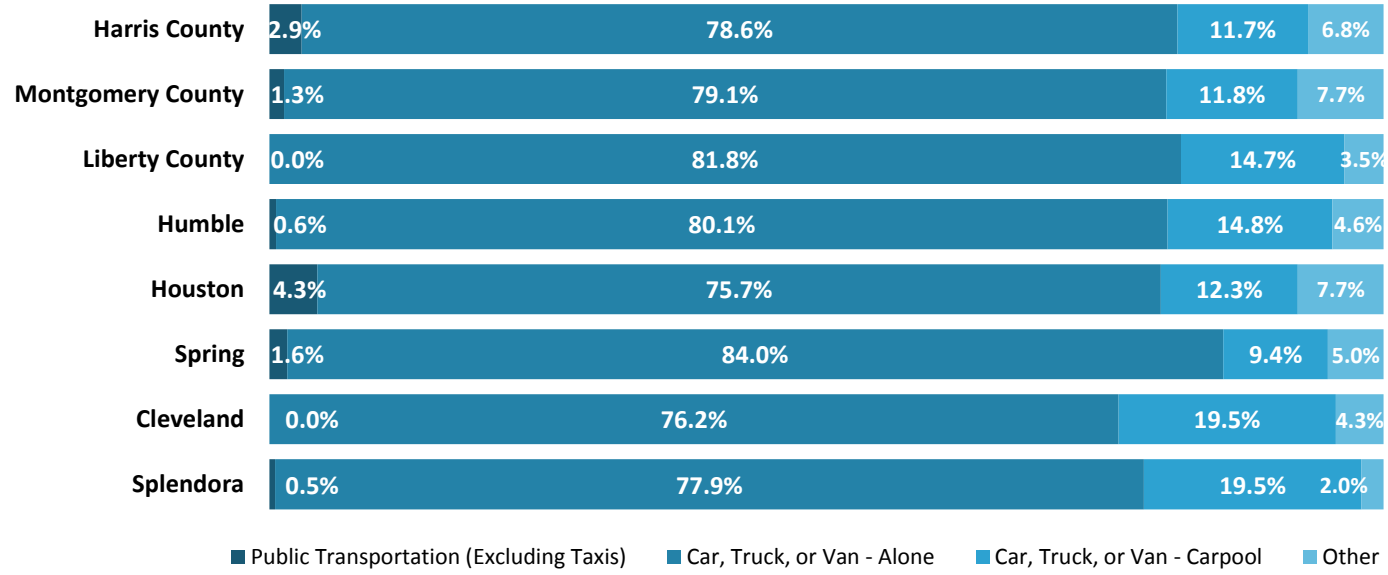
Transportation is important for people to get to work, school, healthcare services, social services, and many other destinations. Modes of active transportation, such as biking and walking, can encourage physical activity and have a positive impact on health. Almost all focus group participants and key informant interviewees reported transportation as a major concern in their community. Residents reported that private cars are the prominent means of transportation in the region and those who do not have cars, most notably seniors and low-income residents, face substantial transportation challenges. Providers reported that transportation challenges are among the greatest barriers low-income patients face in accessing health care. As one interviewee explained, *"Transportation will always be the biggest challenge, particularly for those with low [income]."*

There was conflicting feedback about the availability and quality of public transportation. One

key informant reported: *"Our public transportation is not good enough. It's a barrier. You don't see as many people walking around in Houston."* However, another informant shared the perspective that *"transportation is pretty good, we have a very strong public transportation system."* Additionally, several respondents reported that there are transportation options for disabled persons and seniors and a limited number of programs that offer transportation vouchers; however, respondents also reported wait times for services, requirements that rides be scheduled far in advance, and long travel times. When asked about active transportation options such as walking and biking, many respondents stated that concerns about safety, in addition to distances, presented barriers. For some, the hot climate presented an additional challenge for active transportation.

Many communities do not have sidewalks, although this was reported to be changing. The region does not have bike paths and this creates safety issues for bicyclists. As a focus group member stated, *"I am afraid to get a bike because you can keep going and you're going to get hit. There are so many hit and runs."* Some attributed the lack of public and active transportation options to public attitudes. As one interviewee explained, "*In Texas, people feel like they need their cars ... public transportation is viewed as something that'd lower property value."* A related transportation issue raised by focus group participants and interviewees is long commuting times. Some respondents reported commutes of several hours per day. Several participants connected long commuting times to health, such as one who shared, *"When you think about it, three hours commuting a day can take a toll on other things. Like do I have time to go to the grocery store? Do I have time to exercise?"* As reflected in the focus groups and interviews, the vast majority of residents in the counties and municipalities served by MH Northeast commuted to work by driving in a car, truck or van alone (FIGURE 14). Among the municipalities, Houston had the highest percentage of workers who commute by public transportation (4.3%).

FIGURE 14. MEANS OF TRANSPORTATION TO WORK, BY COUNTY AND CITY, 2009-2013



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2009-2013
NOTE: Data not available for Huffman, Kingwood, New Caney, and Porter

Crime and Violence

Exposure to crime and violence can have an impact on both mental and physical health. Certain geographic areas may have higher rates of violence, which can serve as stressors for nearby residents. Violence can include physical, social, and emotional violence, such as bullying, which can occur in person or online. Focus group participants and key informants described the priority of violence as a top issue as being dependent on where one lives.

In some areas, crime was not described as a salient issue but in others, crime was top of mind. For example, one focus group participant from urban Houston reported, *"We're very low crime,"* but another focus group participant from the same group reported, *"There's gang violence as well, especially in [my neighborhood]."* Types of crime vary across the communities served by MH Northeast according to informants. Participants in the CHNA described a number of crimes affecting their community including burglary, drug use and dealing, human trafficking, and gang violence. Other focus group participants expressed concern that violence in the community places their children at risk: *"Unfortunately, I think [the top issue] is violence. It's gun violence. Our kids…I think about their safety. Either because of media or something…we see an uptick in children being exposed to violence."* Personal safety while exercising and children playing outside was a concern expressed by several participants.

> ***"Illicit drugs and human trafficking are part of the greater Houston area that contribute to crime but they aren't the only things we are dealing with."***
>
> **Key informant interviewee**

Rates of both violent and property crime were highest in Harris County and lowest in Montgomery County (TABLE 3). Among the cities and towns, the violent crime rate was highest in Houston (954.8 offenses per 100,000 population) and lowest in Splendora (300.5 offenses per 100,000 population). The property crime rate was highest in Humble (10,475.9 offenses per 100,000 population) and lowest in Splendora (1,923.1 offenses per 100,000 population).

TABLE 3. VIOLENT AND PROPERTY CRIME RATE PER 100,000 POPULATION

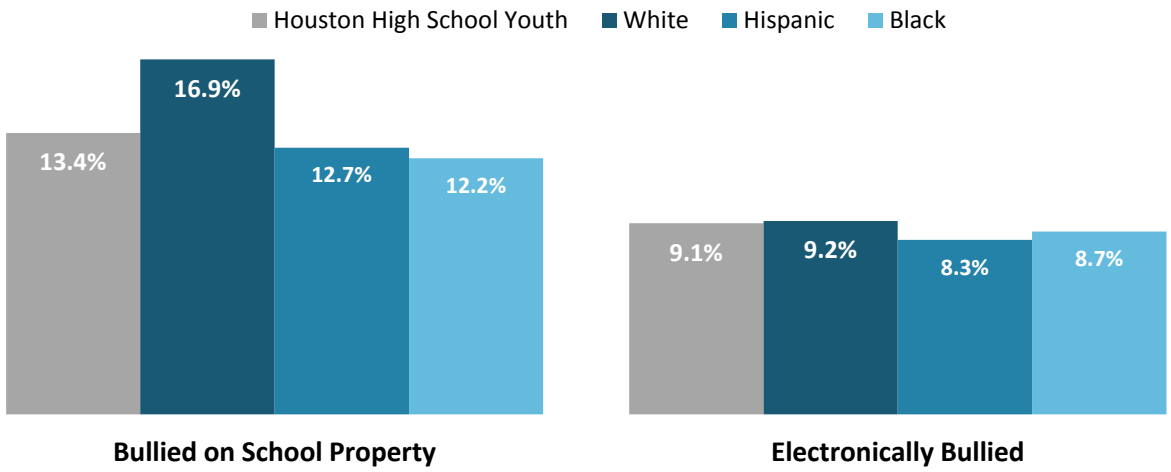
Geography	Violent Crime Rate	Property Crime Rate
Harris County	691.4	3,825.0
Montgomery County	147.3	1,622.8
Liberty County	373.0	2,946.7
Humble	590.2	10,475.9
Houston	954.8	4,693.7
Cleveland	816.8	9,295.9
Splendora	300.5	1,923.1

DATA SOURCE: Texas Department of Public Safety, Texas Crime Report, 2014

NOTE: Violent crime includes murder, robbery, and assault; and property crime includes burglary, larceny, and auto theft; City data reported by city agency; Data not available for Huffman, Kingwood, New Caney, Porter, and Spring

Focus group participants and key informant interviewees did not specifically name bullying in schools or cyberbullying as major issues in their communities. According to the Centers for Disease Control and Prevention High School Youth Risk Behavior Survey, in 2013, 13.4% of Houston high school students in grades 9 through 12 reported being bullied on school property, and 9.1% reported being electronically bullied (FIGURE 15). Houston high school students self-identifying as White were more likely to report being bullied, either in school or online, than Hispanic or Black, non-Hispanic high school students.

FIGURE 15. PERCENT HOUSTON YOUTH (GRADES 9-12) SELF-REPORTED TO HAVE BEEN BULLIED ON SCHOOL PROPERTY OR ELECTRONICALLY IN PAST 12 MONTHS, BY RACE AND ETHNICITY, 2013



DATA SOURCE: Centers for Disease Control and Prevention, High School Youth Risk Behavior Survey, Houston, TX, 2013
NOTE: There was insufficient sample size to report on other races or ethnicities

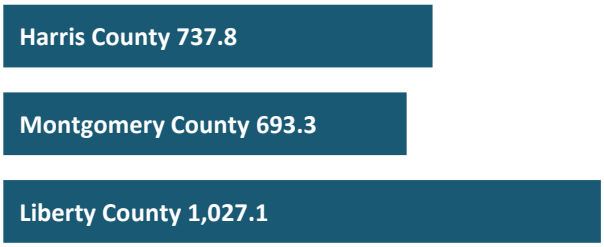
HEALTH OUTCOMES AND BEHAVIORS

People who reside in the communities served by MH Northeast experience a broad range of health outcomes and exhibit health behaviors that reflect their socioeconomic status and the built environment around them. Many of the demographic factors described previously such as population growth, lack of public transportation, and crime all have a role on population health, including mortality chronic disease, behavioral health, communicable disease, and oral health, among other issues. Focus group participants and key informants representing the MH Northeast community described a high burden of chronic disease, particularly among lower income residents in urban areas of Houston. From mortality to healthy living, this section provides a snapshot of health within the communities served by MH Northeast.

Overall Leading Causes of Death

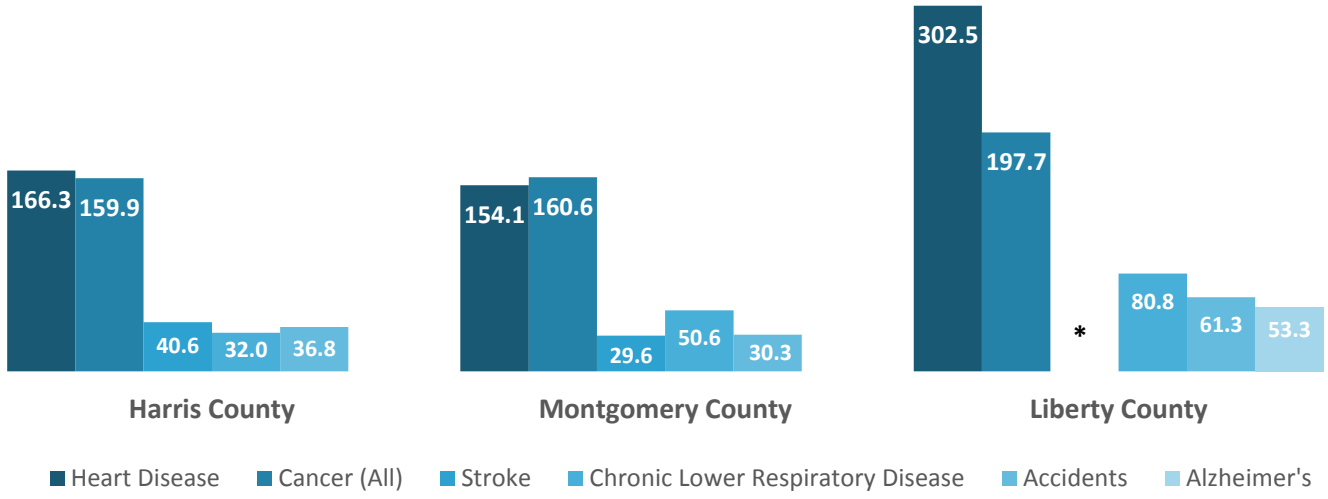
Mortality statistics provide insights into the most common causes of death in a community. This type of information can be helpful for planning programs and policies targeted at leading causes of death. According to the Texas Department of State Health Services, Liberty County experienced the highest overall mortality rate (1,027.1 per 100,000 population) of the three counties served by MH Northeast (FIGURE 16). This finding is not surprising since Liberty County has the highest proportion of seniors as well as lower levels of education and household incomes across the three counties served by MH Northeast. Similarly in 2013, Liberty County had the highest mortality rates in all top leading causes of mortality—which includes heart disease, cancer, stroke, and chronic lower respiratory disease—compared to Harris and Montgomery Counties (FIGURE 17). TABLE 4 presents the leading causes of death by age and county in 2013.

FIGURE 16. MORTALITY FROM ALL CAUSES AGE-ADJUSTED RATE PER 100,000 POPULATION, BY COUNTY, 2013



DATA SOURCE: Texas Department of State Health Services, Health Facts Profiles, 2013

FIGURE 17. LEADING CAUSES OF DEATH PER 100,000 POPULATION, BY COUNTY, 2013



DATA SOURCE: Texas Department of State Health Services, Health Facts Profiles, 2013
NOTE: Age-adjusted mortality rate per 100,000 population; asterisk (*) denotes insufficient sample size

TABLE 4. LEADING CAUSES OF DEATH, MORTALITY RATE PER 100,000 POPULATION, BY AGE AND COUNTY, 2013

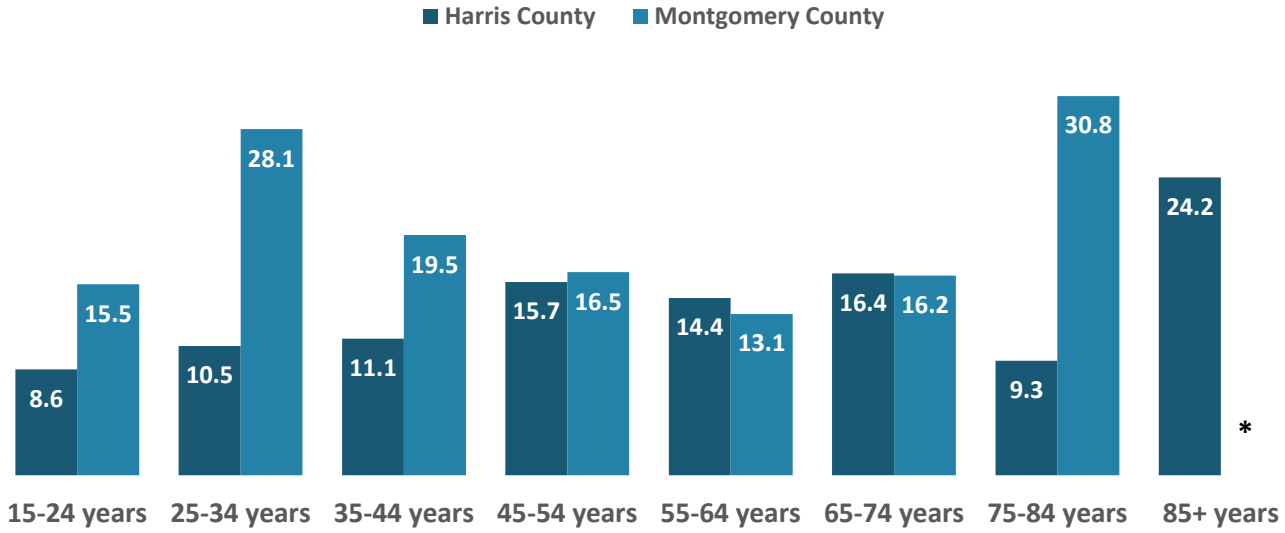
		Harris County	Montgomery County	Liberty County
Under 1 year	Certain Conditions Originating in the Perinatal Period	347.5	123.5	-
	Congenital Malformations, Deformations and Chromosomal Abnormalities	133.9	154.4	-
	Homicide	19.9	-	-
	Accidents	12.8	-	-
	Septicemia	8.5	-	-
1-4 years	Cancer	4.4	-	-
	Accidents	4.1	19.8	-
	Congenital Malformations, Deformations and Chromosomal Abnormalities	2.6	-	-
	Heart Disease	1.9	-	-
5-14 years	Cancer	3.7	-	-
	Accidents	2.8	-	-
	Chronic Lower Respiratory Diseases	0.8	-	-
	Heart Disease	0.8	-	-
15-24 years	Accidents	24.1	21.7	-
	Homicide	16.2	7.8	-
	Suicide	8.6	15.5	-
	Cancer	4.8	-	-
	Heart Disease	2.3	-	-
25-34 years	Accidents	24.7	23.1	-
	Homicide	14.9	-	-
	Cancer	11.2	13.2	-
	Suicide	10.5	28.1	-
	Heart Disease	5.9	-	-
35-44 years	Cancer	29.3	33.5	65.9
	Accidents	28.2	36.3	-
	Heart Disease	19.3	13.9	-
	Suicide	11.1	19.5	-
	Homicide	9.8	-	-
45-54 years	Cancer	95.5	86.6	95.5
	Heart Disease	82.2	60.5	82.2
	Accidents	42.5	37.1	42.5
	Chronic Liver Disease and Cirrhosis	22.1	17.9	22.1
	Suicide	15.7	16.5	15.7
55-64 years	Cancer	273.3	286.5	356.5
	Heart Disease	194.8	173.5	356.5
	Accidents	49.7	37.7	91.7
	Stroke	39.5	37.7	61.1
	Diabetes	38.2	32.7	-
	Chronic Lower Respiratory Diseases	*	*	71.3
65-74 years	Cancer	618.1	558.4	716.0
	Heart Disease	419.8	383.1	895.0
	Chronic Lower Respiratory Diseases	97.9	178.1	390.6
	Stroke	92.0	62.0	130.2
	Diabetes	71.0	*	*
	Septicemia	*	*	97.6

		Harris County	Montgomery County	Liberty County
65-74 years	Nephritis, Nephrotic Syndrome, and Nephrosis	*	62.0	-
75-84 years	Heart Disease	1,166.1	1,116.3	2,169.3
	Cancer	1,115.1	1,060.7	1,574.5
	Stroke	304.3	234.4	419.9
	Chronic Lower Respiratory Diseases	274.6	431.7	839.7
	Septicemia	173.5	*	-
	Alzheimer's Disease	*	148.2	524.8
85+ years	Heart Disease	3,459.7	3,399.8	5,864.2
	Cancer	1,586.9	2,026.5	1,131.7
	Stroke	957.0	653.2	823.0
	Chronic Lower Respiratory Diseases	627.5	954.6	*
	Alzheimer's Disease	574.2	535.9	1,851.9
	Nephritis, Nephrotic Syndrome, and Nephrosis	*	*	720.2

DATA SOURCE: Texas Department of State Health Services, Texas Health Data, Deaths of Texas Residents, 2013
NOTE: Asterisk (*) indicates cause of death not one of the top five leading causes; Dash (-) denotes unreliable rate; "All Other Diseases" not reported in leading causes

Suicide rates in Montgomery County were higher than in Harris County, across all ages except 65-74 years. The suicide rate for people ages 25 to 35 years in Montgomery County (28.1 per 100,000 population) was over twice as high as among adults of this age in Harris County (10.5 per 100,000 population) and the suicide rate for those ages 15 to 24 years was almost twice as high in Montgomery County as in Harris County. Suicide is more common among people over the age of 45. In both counties, the suicide rate for seniors was the highest of that across all age groups (FIGURE 18). Data for Liberty County were unavailable due to unreliable rates.

FIGURE 18. SUICIDE MORTALITY RATE PER 100,000 POPULATION, BY AGE AND COUNTY, 2013



DATA SOURCE: Texas Department of State Health Services, Texas Health Data, Deaths of Texas Residents, 2013
NOTE: Data for Liberty County not reported due to unreliable rates; asterisk (*) indicates unreliable rate

Chronic Diseases and Related Risk Factors

Diet and exercise are risk factors for many chronic diseases. Access to healthy food and opportunities for physical activity depend on not only individual choices but also on the built environment in which we live, the economic resources we have access to, and the larger social context in which we operate. Risk factors for chronic diseases like obesity, heart disease, diabetes, cancer, and asthma include diet and exercise as well as genetics and stress. The prevention and management of chronic diseases is important for preventing disability and death, and also for maintaining a high quality of life.

Access to Healthy Food and Healthy Eating

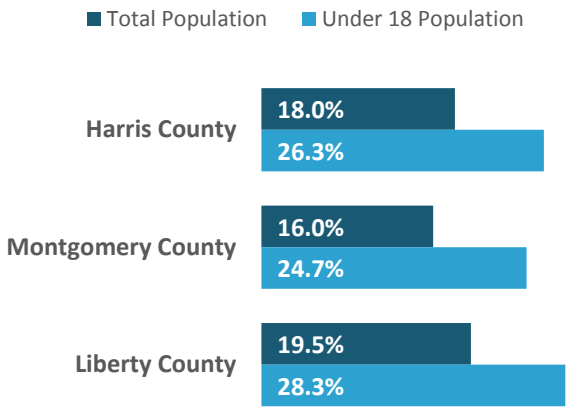
One of the most important risk factors for maintaining a healthy weight and reducing risk of cardiovascular disease is healthy eating habits, secured by access to the appropriate foods and ensuring an environment that helps make the healthy choice the easy choice.

> ***"Having access to healthy food is sometimes like 20 miles away so even if you do have the motivation to eat healthy, without your own car, it's challenging."***
>
> **Key informant interviewee**

Food Access

Rates of food insecurity are similar for adults across all three counties served by MH Northeast, and children are more likely to be food insecure than adults. Focus group participants and key informants identified food insecurity among children to be a major issue affecting the community. In all three counties served by MH Northeast, a quarter or more of all children (i.e., those under age 18) are considered to be food insecure (FIGURE 19). Several respondents reported that they live in food deserts, and explained that they face challenges accessing food, especially food that is healthy. For example, a key informant interviewee discussed limited access to healthy food choices explaining that, *"if you live in a food desert then it's hard to obtain food, even if healthy options are available elsewhere. You see a lot of corner stores with unhealthy food."* Another informant echoed this saying, *"Even in a larger county like Houston that has ample resources, food deserts are a problem."* Although some reported that strides have been made in areas such as school lunches and breakfasts, more needs to be done. Among households in Liberty County, nearly 19% of families (or nearly 1 in 5) received benefits from the Supplemental Nutrition Assistance Program (SNAP), the program providing nutritional assistance for low-income families (FIGURE 20). In Harris County, in 2013, 12.6% of families received SNAP benefits, while the percentage was lower in Montgomery (7.5%).

FIGURE 19. PERCENT FOOD INSECURE BY TOTAL POPULATION AND UNDER 18 YEARS OLD POPULATION, BY COUNTY, 2013



DATA SOURCE: Map the Meal Gap, 2015
NOTE: Food insecurity among children defined as self-report of two or more food-insecure conditions per household in response to eight questions on the Community Population Survey.

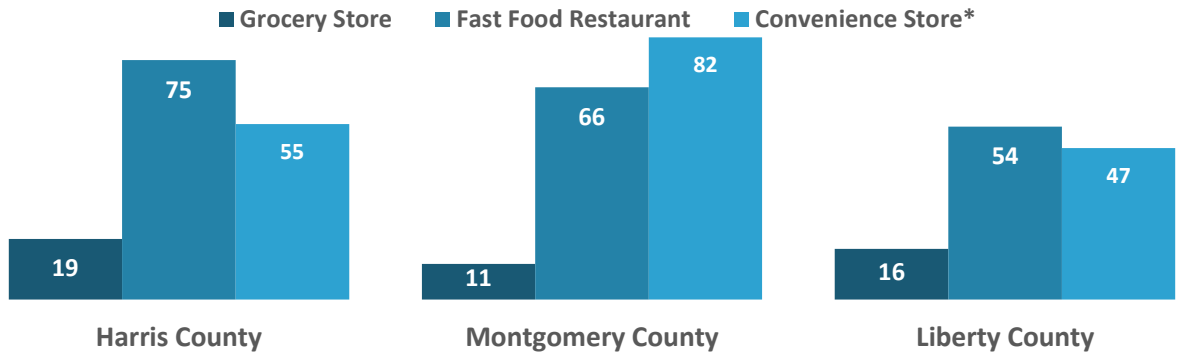
FIGURE 20. PERCENT HOUSEHOLDS RECEIVING SNAP BENEFITS, BY COUNTY, 2009-2013

DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2009-2013, as cited by Prevention Resource Center Regional Needs Assessment, 2015

According to the US Department of Agriculture, in 2013, resident access to grocery stores ranged across the three counties: residents of Harris County residents (19 grocery stores per 100,000

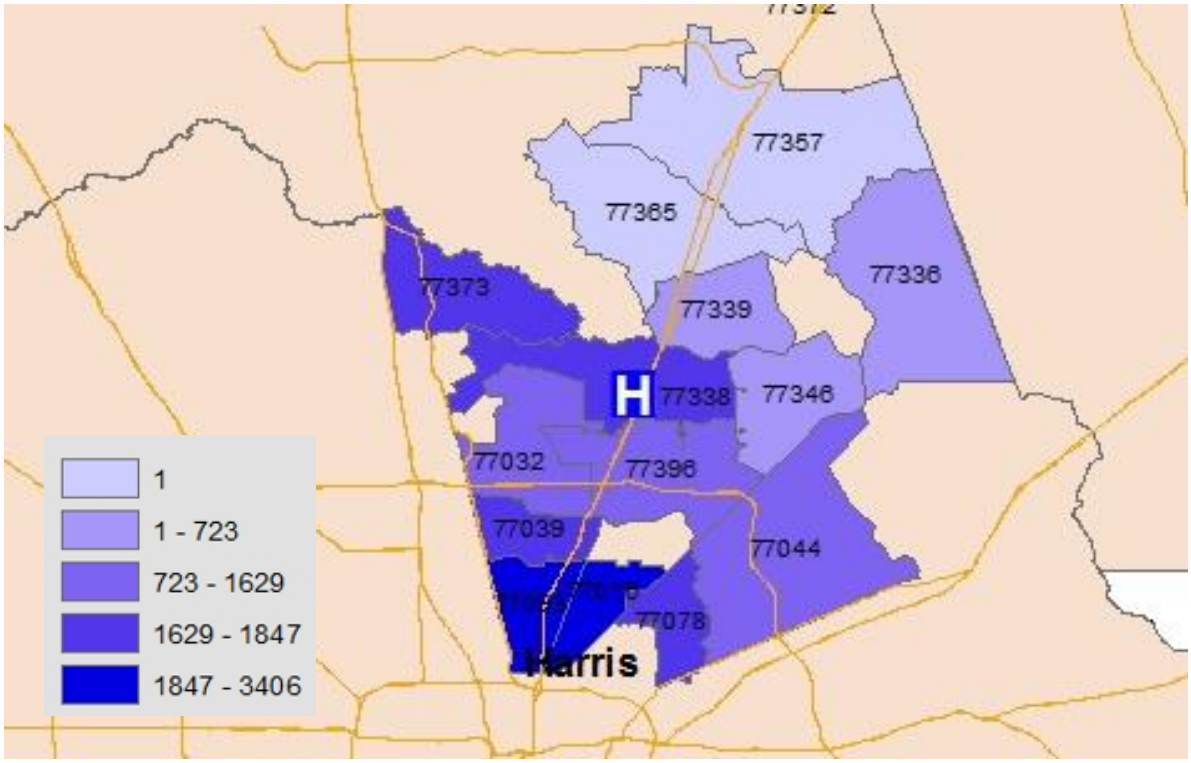
population) and Liberty County (15 grocery stores per 100,000 population) had higher access than those in Montgomery County (11 grocery stores per 100,000 population) (FIGURE 21). Montgomery County residents in 2012 had the highest access to convenience stores (82 convenience stores per 100,000 population) compared to 55 convenience stores per 100,000 population in Harris County and 47 convenience stores per 100,000 population in Liberty County. The prevalence of fast, convenient food was echoed by community residents and key informants such as one who stated, *"We are full of chain restaurants and fast food in this area."* Montgomery County low-income residents had higher access to farmer's markets (21.1%) than those in Harris County (13.7%) (data not shown; data for Liberty County not available). Among zip codes corresponding to MH Northeast's community, Houston zip code 77016 had the highest number of calls (3,406) to the Harris County United Way Helpline related to food in 2014 (FIGURE 22).

FIGURE 21. ACCESS TO GROCERY STORES, FAST FOOD RESTAURANTS, AND CONVENIENCE STORES, PER 100,000 POPULATION, BY COUNTY, 2013



DATA SOURCE: US Census Bureau, County Business Patterns, as cited by Community Commons, 2013; and as city by USDA Food Environment Atlas, 2012
*Convenience store data reflects 2012

FIGURE 22. NUMBER OF FOOD-RELATED CALLS TO 2-1-1 UNITED WAY HELPLINE IN HARRIS COUNTY, BY ZIP CODE, 2014



DATA SOURCE: United Way of Harris County, 2014

Eating Behaviors

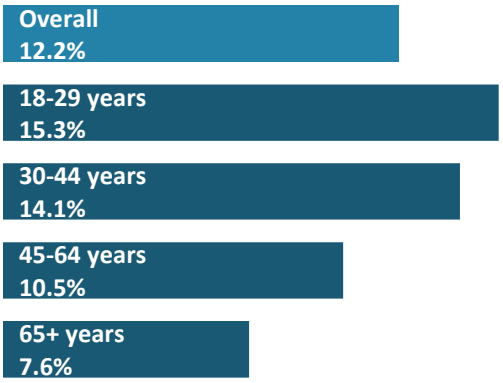
Eating healthy food promotes overall health. Focus group participants and key informant interviewees described healthy eating as a difficult habit to master. Poor access to healthy foods, the low cost of fast food, cultural food norms, and poor education about nutrition were cited across all informants as being top drivers of unhealthy eating habits. Key informants pointed to the lack of grocery stores in low-income communities as contributing to unhealthy eating habits. The prevalence of convenience stores, which tend to offer less healthy options, was cited in some neighborhoods, contributing to poorer eating habits among residents. As one informant shared, *"You see a lot of corner stores with unhealthy food. We don't have a good transportation system in Houston, so it makes it a big deal trying to access somewhere else in the city."* The low cost of and easy access to unhealthy, fast food was frequently cited as a contributor to unhealthy eating habits. Several respondents reported that this is a particular concern for lower income residents. As one interviewee explained, *"there are folks who are real concerned about where their next meal comes from versus what the food is."*

Other key informants cited cultural factors as affecting whether people make healthy food choices. As one community leader pointed out, *"Southern cuisine isn't healthy. Our food is fried and made with lots of butter."* Another informant echoed this saying, *"We have great food with huge portions."* The composition of diets among Hispanic and Asian residents, with high fat and salt content, was also noted. Key informants also reported that education is a driver of healthy eating habits. The lack of knowledge about healthy eating and how to prepare healthy foods emerged as a key theme across several focus groups and interviewees. As one person stated, *"more and more people don't know how to make food. People depend on pre-made food or fast food."* A critical need, therefore, according to respondents, is nutrition education.

> ***"Unhealthy food is more readily available and cheaper; it is too demanding to plan out healthy meals when working three jobs and stretching a budget."***
>
> **Key informant interviewee**

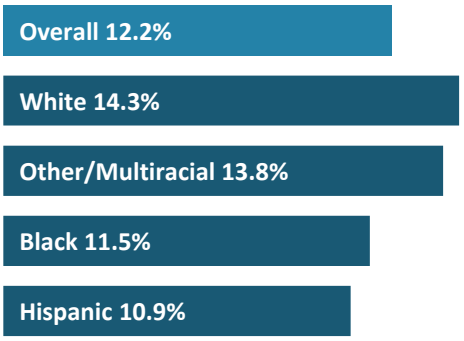
Surveys in Harris County reveal that only 12.2% of Harris County adults indicated that they ate fruits and vegetables five or more times per day (similar to the government recommendation) (FIGURE 23). Adults who were younger (18-29 years old) had the highest percentage of respondents meeting this recommendation. When examining responses by race and ethnicity, 14.3% of Whites indicated this eating behavior compared to 11.5% of Black, non-Hispanic adults and 10.9% of Hispanics (FIGURE 24). Lower income Harris County adults ate fewer fruits and vegetables than residents with higher median household incomes (FIGURE 25).

FIGURE 23. PERCENT ADULTS SELF-REPORTED TO HAVE CONSUMED FRUITS AND VEGETABLES AT LEAST FIVE TIMES PER DAY, BY AGE, HARRIS COUNTY, 2013



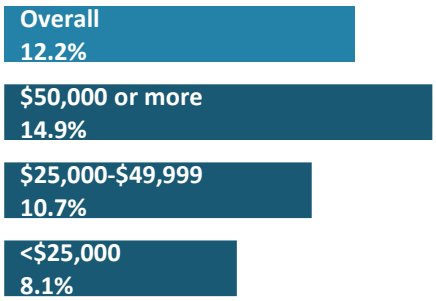
DATA SOURCE: Texas Behavioral Risk Factor Surveillance System, 2013

FIGURE 24. PERCENT ADULTS REPORTED EATING FRUITS AND VEGETABLES 5+ TIMES A DAY IN HARRIS COUNTY BY RACE AND ETHNICITY, 2013



DATA SOURCE: Texas Behavioral Risk Factor Surveillance System, 2013

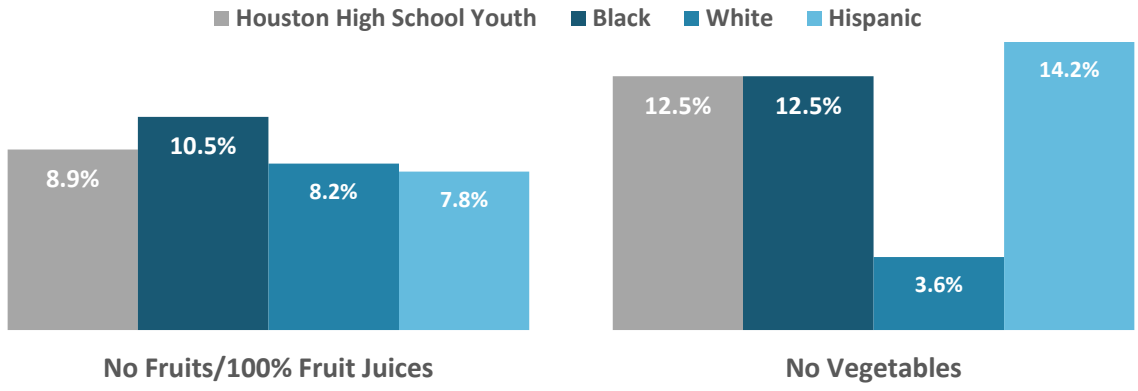
FIGURE 25. PERCENT ADULTS SELF-REPORTED TO HAVE CONSUMED FRUITS AND VEGETABLES AT LEAST FIVE TIMES PER DAY, BY MEDIAN HOUSEHOLD INCOME, HARRIS COUNTY, 2013



DATA SOURCE: Texas Behavioral Risk Factor Surveillance System, 2013

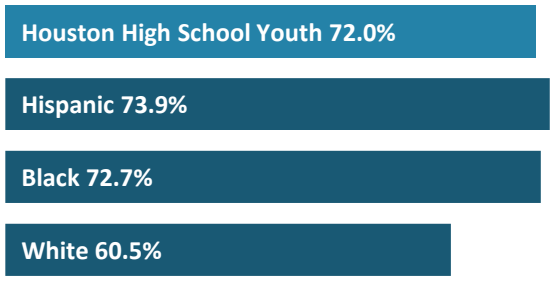
Youth in Houston were surveyed about their eating habits in 2013. In the survey, 8.9% of high school students in Houston indicated that they had not eaten any fruit or drink any fruit juice in the past 7 days, while 12.5% reported that they had not eaten any vegetables during this time period (FIGURE 26). Black, non-Hispanic students were most likely to indicate that they had not eaten any fruits (at 10.5%), while Hispanic students were most likely to report not eating any vegetables (at 14.2%). Non-white students were more likely to indicate they had not eaten breakfast in the past seven days. Compared to 60.5% of White students, 72.7% of Black, non-Hispanic students, and 73.9% of Hispanic students reported they had not eaten breakfast in the past seven days (FIGURE 27). Black students were more likely to report drinking soda two or more times per day in the last seven days (19.5%) than Hispanic (14.7%) and White students (9.0%) (FIGURE 28).

FIGURE 26. PERCENT HOUSTON YOUTH (GRADES 9-12) SELF-REPORTED TO NOT HAVE EATEN FRUITS OR DRUNK 100% FRUIT JUICES AND VEGETABLES IN PAST 7 DAYS, BY RACE AND ETHNICITY, 2013



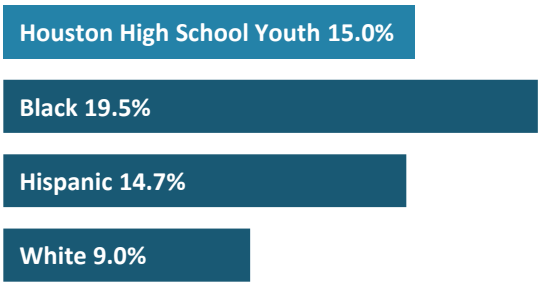
DATA SOURCE: Centers for Disease Control and Prevention, High School Youth Risk Behavior Survey, Houston, TX, 2013

FIGURE 27. PERCENT HOUSTON YOUTH (GRADES 9-12) SELF-REPORTED TO HAVE NOT EATEN BREAKFAST AT ALL IN PAST SEVEN DAYS, BY RACE AND ETHNICITY, 2013



DATA SOURCE: Centers for Disease Control and Prevention, High School Youth Risk Behavior Survey, Houston, TX, 2013

FIGURE 28. PERCENT HOUSTON YOUTH (GRADES 9-12) SELF-REPORTED TO HAVE DRUNK SODA TWO OR MORE TIMES A DAY IN PAST SEVEN DAYS, BY RACE AND ETHNICITY, 2013



DATA SOURCE: Centers for Disease Control and Prevention, High School Youth Risk Behavior Survey, Houston, TX, 2013

Physical Activity

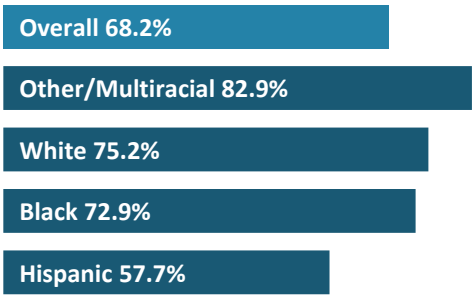
Another important risk factor for maintaining a healthy weight and reducing one's risk of cardiovascular disease is physical activity. When asked about opportunities for physical activity in the region, focus group members and interviewees shared several perspectives. Some reported good access to parks and other opportunities for physical activity. However, some stated that these were not equally distributed across the region. As one informant mentioned, *"We have a fairly good park and recreation system, but not so much in lower income neighborhoods."* Others commented on the region's lack of infrastructure such as sidewalks and bike routes. As one informant explained, *"Houston has not invested in an infrastructure that creates an environment to provide for healthier living."* The dangers associated with biking on the streets of Houston were mentioned by several respondents as was the quality of parks and playgrounds in some neighborhoods. As one focus group member explained, *"The inner city children have nowhere to go, don't have anything to play on. The lights in the evening are not even lit."* However, a couple of interviewees shared that efforts have been made in recent years to improve sidewalks, connect parks, and incorporate green space into city master plans.

Another factor affecting outdoor physical activity, according to some residents, is Texas' hot and dry climate. Others expressed concerns about air pollution. Given this, some residents mentioned that the region lacks low-cost opportunities for indoor physical activity such as gyms, community centers, and youth centers. Perspectives on the role of schools in promoting physical activity among students were mixed: some respondents reported that schools have been proactive in the area of physical activity while others reported that the focus on testing has made it difficult for schools to do much more than promote academics. Time for exercise was also identified as a substantial constraint for residents. As one informant stated, *"[People] spend so much time commuting that by the time they get home they don't want to go somewhere to exercise."* As with healthy eating, norms about physical activity and education about its importance were also cited as barriers to enhanced physical activity.

> ***"Exercise is a luxury item in Houston. Jogging is something you do if you have time."***
>
> **Key informant interviewee**

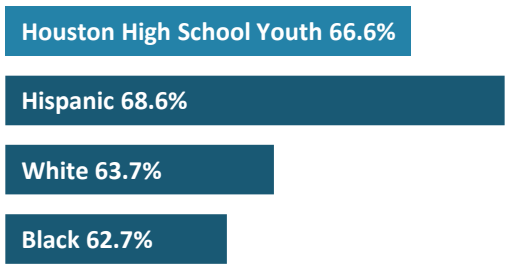
More than two-thirds (68.2%) of adults surveyed in Harris County indicated that they had undertaken physical activity in the 30 days before responding to the BRFSS survey (FIGURE 29). When examining results by race and ethnicity, Hispanics were the least likely to report this, with 57.7% saying they had participated in any physical activity in the past month (FIGURE 29). In surveys with Houston high school students, two-thirds (66.6%) reported that they had not participated in 60 or more minutes of physical activity for 5 days in the past 7, the recommendation for youth physical activity levels (FIGURE 30). Hispanic youth were slightly more likely to indicate this, with 68.6% reporting not reaching this level of activity.

FIGURE 29. PERCENT ADULTS SELF-REPORTED TO HAVE PARTICIPATED IN ANY PHYSICAL ACTIVITIES IN PAST MONTH, BY RACE AND ETHNICITY, HARRIS COUNTY, 2013



DATA SOURCE: Texas Behavioral Risk Factor Surveillance System, 2013

FIGURE 30. PERCENT HOUSTON YOUTH (GRADES 9-12) SELF-REPORTED TO NOT HAVE BEEN PHYSICALLY ACTIVE FOR AT LEAST 60 MINUTES PER DAY ON FIVE OR MORE DAYS IN PAST SEVEN DAYS, BY RACE AND ETHNICITY, 2013



DATA SOURCE: Centers for Disease Control and Prevention, High School Youth Risk Behavior Survey, Houston, TX, 2013

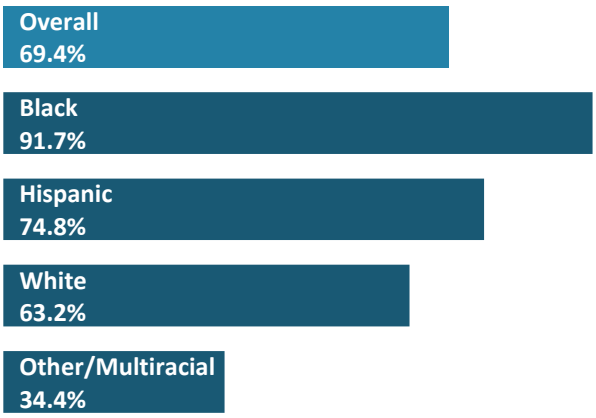
Overweight and Obesity

Obesity is a major risk factor for poor cardiovascular health and increases the risk of death due to heart disease, diabetes, and stroke. Every community served by MH Northeast is affected by obesity. Almost all focus group participants and key informant interviewees acknowledge overweight and obesity is a major issue in the community, alongside diabetes and heart disease. Obesity, as described by focus group participants and key informant interviewees, is driven by unhealthy eating habits and low levels of physical activity. For example, one key informant interviewee reported, *"Houston has an obesity problem – we tend to spend a lot of time in cars and inside, not a lot outside in green spaces."* Several participants shared concerns about children being at high risk for obesity and the long-term impact of childhood obesity on children's ability to learn, their health as they grow older, and the costs to the health care system. As one key informant shared, *"Childhood obesity has already been a problem but now we're seeing an increase in younger kids."* Residents also expressed concern about obesity among children, such as one mother who wondered, *"Where are all the kids at the playground? Often we have it to ourselves. The mall is full, but the playground is empty."* A couple of respondents reported that obesity among immigrant groups is rising, not only because of the high fat and salt content of some ethnic foods, but also because of the attraction of American fast food. However, obesity is not limited to young, minority, or low-income residents. As one interviewee explained, *"there is a lot of obesity in people who are well off."*

> ***"Obesity is a significant problem because of the eating choices people make and the fact some of the population are not educated…We drive everywhere, and it's too hot to run here."***
>
> **Key informant interviewee**

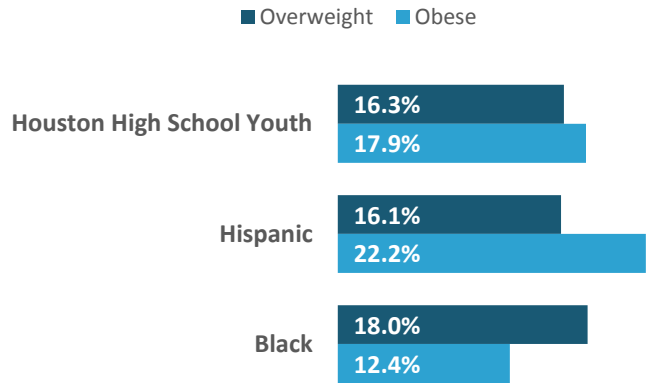
In 2013, the percentage of Harris County residents reported that they were overweight or obese was 69.4%. Nine out of ten (91.7%) Black, non-Hispanic residents in Harris County were considered overweight or obese, according to self-reported height and weight responses (FIGURE 31). Overall, about one-third of Houston high school students were considered overweight (16.3%) or obese (17.9%) (FIGURE 32). At 22.2%, Hispanic high school students in Houston were most likely to be considered obese, while Black, non-Hispanic high school students were most likely to be considered overweight (18.0%).

FIGURE 31. PERCENT ADULTS SELF-REPORTED TO BE OVERWEIGHT OR OBESE, BY RACE AND ETHNICITY, HARRIS COUNTY, 2014



DATA SOURCE: Texas Behavioral Risk Factor Surveillance System, 2014

FIGURE 32. PERCENT HOUSTON YOUTH (GRADES 9-12) SELF-REPORTED TO BE OVERWEIGHT OR OBESE, BY RACE AND ETHNICITY, 2013



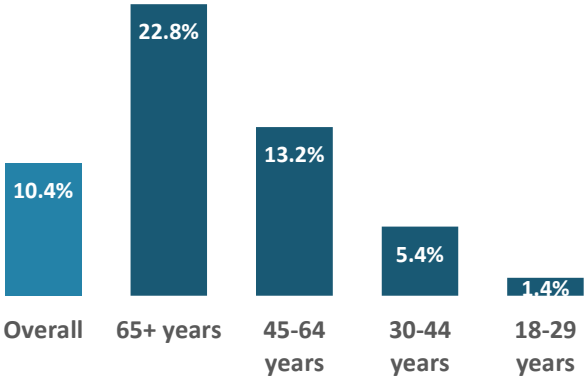
DATA SOURCE: Centers for Disease Control and Prevention, High School Youth Risk Behavior Survey, Houston, TX, 2013
NOTE: All other races or ethnicities were considered as having insufficient sample sizes for analysis.

Diabetes

Diabetes is a life-long chronic illness that can cause premature death. According to the American Diabetes Association, care for diagnosed diabetes accounts for one in five healthcare dollars in the United States, a figure which has been rising over the last several years. Diabetes is an issue for many residents in communities served by MH Northeast. The majority of focus group participants and key informants named diabetes (along with cancer and hypertension) as a top health issue in the region. Others noted that like obesity, diabetes is becoming increasingly prevalent in children. Informants talked about the unmet needs of diabetics, particularly due to lack of self-management and delaying care that can come with lack of health insurance or money for healthcare. One key informant reported, *"You see a lot of cases with Type 2 diabetes. These people have more doctors than ever. Take multiple medications at a time. All of those things cost money."* Many informants discussed diabetes *"running in families"* as though diabetes is an expectation of life. As one informant explained, "*We see people who expect to have diabetes because everyone in their family does."* Providers shared that this attitude makes it difficult to talk to patients about the preventable nature of the disease.

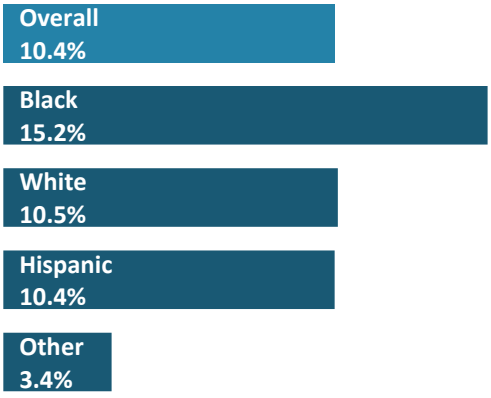
In Harris County in 2014, 10.4% of adults self-reported to have been diagnosed with diabetes (FIGURE 33). Self-reported diabetes diagnosis was more likely to be reported in older age groups of Harris County residents, with 22.8% of persons aged 65 years or older self-reporting they had diabetes compared to 1.4% of persons aged 18 to 29 years. A higher proportion of Black, non-Hispanic adults in Harris County self-reported receiving a diabetes diagnosis (15.2%) than persons self-identifying as Hispanic, White or other races or ethnicities (FIGURE 34). In 2013, Harris County saw 11.3 hospital admissions per 100,000 population for uncontrolled diabetes, while Montgomery County had 7.3 admissions per 100,000 population (data not shown). Data for Liberty County were unavailable due to small numbers of admissions.

FIGURE 33. PERCENT ADULTS SELF-REPORTED TO HAVE BEEN DIAGNOSED WITH DIABETES, BY AGE, HARRIS COUNTY, 2014



DATA SOURCE: Texas Behavioral Risk Factor Surveillance System, 2014
NOTE: Excludes respondents who were diagnosed during pregnancy

FIGURE 34. PERCENT ADULTS SELF-REPORTED TO HAVE BEEN DIAGNOSED WITH DIABETES, BY RACE AND ETHNICITY, HARRIS COUNTY, 2014



DATA SOURCE: Texas Behavioral Risk Factor Surveillance System, 2014

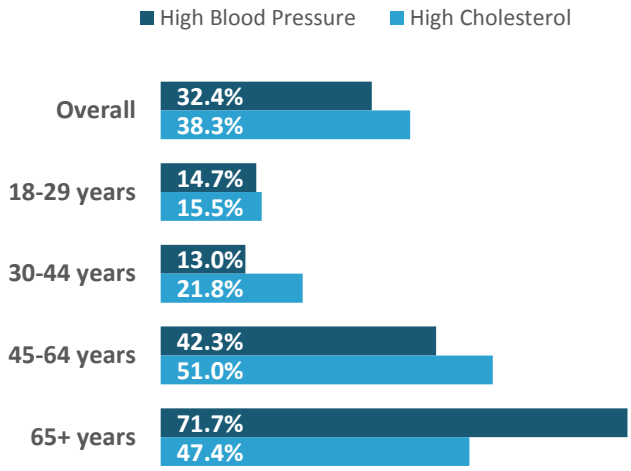
Heart Disease, Stroke, and Cardiovascular Risk Factors

Hypertension (e.g., high blood pressure) is one of the major causes of stroke, and high cholesterol is a major risk factor for heart disease. Both hypertension and cholesterol are preventable conditions, but unhealthy lifestyle choices can play a major role in the development of these top two cardiovascular risk factors. Heart disease and stroke are among the top five leading causes of death both nationally and within this region. One focus group participant said many diseases affected her community, *"Especially heart disease… everybody has high blood pressure."* Focus group participants named hypertension and heart disease as among the top issues affecting their community, especially among seniors and immigrants. As with diabetes, poor self-management and delayed care can have substantial negative consequences for patients and lack of education was seen as a factor contributing to heart disease risk. Other informants mentioned acculturation as being related to developing conditions like hypertension as newcomers experience the variety and quantity of food in the U.S. Some key informants expressed concern that heart disease and stroke occurs more in populations experiencing healthcare inequities and those with less access to healthy food and options for physical activity.

> ***"Everybody I know is on blood pressure medication."***
>
> **Senior focus group participant**

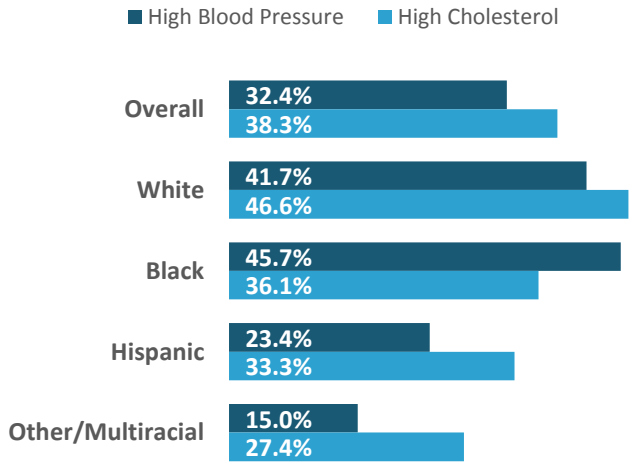
In Harris County, according to the Texas Behavioral risk Factor Surveillance System, in 2014 2.8% of adults self-reported having been diagnosed with angina or coronary heart disease (data not shown). Similarly, 3.6% of adults in Harris County self-reported having a heart attack in 2014, and 3.8% of Harris County adults self-reported having a stroke (data not shown). Over a third of Harris County adults self-reported having high cholesterol (38.3%) and just under a third self-reported having high blood pressure (32.4%) (data not shown). Harris County residents over the age of 65 were disproportionately more likely to report having high blood pressure (71.7%) than their younger counterparts (FIGURE 35). White Harris County residents had the highest self-reported rate of high cholesterol (46.6%) while Black, non-Hispanic Harris County residents had the highest self-reported rate of high blood pressure (45.7%) (FIGURE 36).

FIGURE 35. PERCENT ADULTS SELF-REPORTED TO HAVE HAD HIGH BLOOD PRESSURE AND HIGH BLOOD CHOLESTEROL, BY AGE, HARRIS COUNTY, 2013



DATA SOURCE: Texas Behavioral Risk Factor Surveillance System, 2013

FIGURE 36. PERCENT ADULTS SELF-REPORTED TO HAVE HAD HIGH BLOOD PRESSURE AND HIGH BLOOD CHOLESTEROL, BY RACE AND ETHNICITY, HARRIS COUNTY, 2013



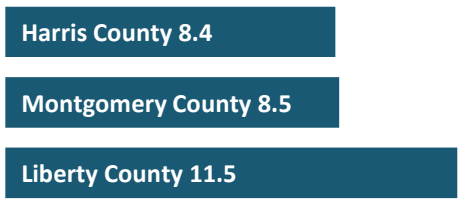
DATA SOURCE: Texas Behavioral Risk Factor Surveillance System, 2013

Asthma

A few key informant interviewees described air quality as an area of concern for the community, particularly for people living in Houston. Several focus group members and interviewees reported that asthma rates were high in the region, which was attributed to environmental quality and housing quality.

In 2013, 12.6% Texas adults self-reported having asthma at one point in their lifetime according to the Texas Behavioral Risk Factor Surveillance System. In Harris County, 4.6% of adult residents reported that they currently had asthma (data not shown). In 2012, adult hospital discharges for asthma were similar in both Montgomery County (8.5 per 10,000 population) and Harris County (8.4 per 10,000 population) (FIGURE 37). The rate of discharges for asthma in Liberty County (11.5 per 10,000 population) was higher than for the other two counties. Among children in Harris County aged 17 years and younger, the rate of asthma-related hospital discharges for Black, non-Hispanic children was three times the rate for White children (24.2 versus 10.2 per 10,000 children) (FIGURE 38).

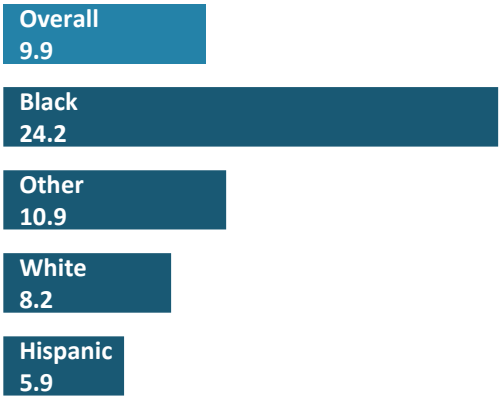
FIGURE 37. AGE-ADJUSTED ASTHMA HOSPITAL DISCHARGE RATES PER 10,000 POPULATION, COUNTY 2012



DATA SOURCE: Texas Health Care Information Collection (THCIC), Inpatient Hospital Discharge Public Use Data File, 2012, as cited by Texas Department of State Health Services, Office of Surveillance, Evaluation and Research, Health Promotion and Chronic Disease Prevention Section, in Asthma Hospital Discharge Rates by County and by Demographics for Selected Counties, Texas, 2005-2012

NOTE: Data do not include HIV and drug/alcohol use patients

FIGURE 38. AGE-ADJUSTED ASTHMA HOSPITAL DISCHARGE RATES PER 10,000 CHILDREN (0-17 YEARS OLD), BY RACE AND ETHNICITY, HARRIS COUNTY, 2012



DATA SOURCE: Texas Health Care Information Collection (THCIC), Inpatient Hospital Discharge Public Use Data File, 2012, as cited by Texas Department of State Health Services, Office of Surveillance, Evaluation and Research, Health Promotion and Chronic Disease Prevention Section, in Asthma Burden Among Children in Harris County, Texas, 2007-2012

NOTE: White, Black, and Other identifying as non-Hispanic

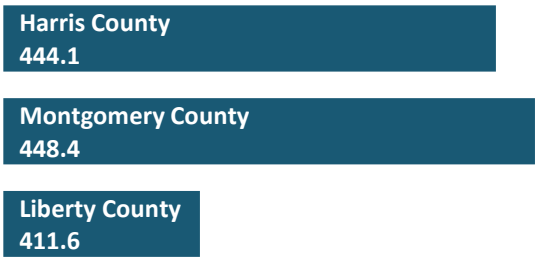
Cancer

Cancer is among the top two leading causes of death in the region. (In some cases, cancer is the leading cause of death, while heart disease is number one in others.) This trend is similar to what is seen nationally. Focus group participants and key informant interviewees described cancer as one of the top health conditions seen in their communities. A few informants expressed concern that people do not have access to or are aware of early screening and detection resources. A focus group participant said, *"You may get cancer because you don't get access to resources."*

Harris and Montgomery Counties saw higher incidence rates of cancer (444.1 per 100,000 population and 448.4 per 100,000 population, respectively) compared to Liberty (411.6 per 100,000 population) (FIGURE 39). However, Liberty County (at 208.4 per 100,000 population) experienced a higher cancer mortality rate than the other counties (Harris: 163.4 per 100,000 population and Montgomery: 164.8 per 100,000 population) (FIGURE 40). Cancer screening data is only available from Harris County. In a 2014 Behavioral Risk Factor Surveillance survey, 81.6% of women 40+ years or older indicated they had had a mammogram in the past two years while 70% of

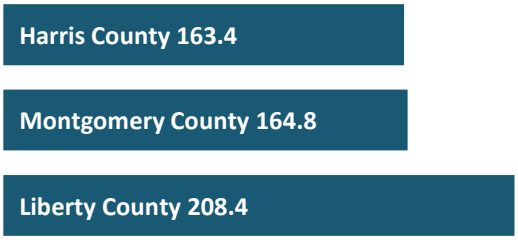
women indicated that they had had a pap test to test in the past three years (FIGURE 41). Over two-thirds (64.8%) of adults 50 years of age and older in Harris County self-reported having a colonoscopy or sigmoidoscopy.

FIGURE 39. AGE-ADJUSTED INVASIVE CANCER INCIDENCE RATE PER 100,000 POPULATION, BY COUNTY, 2008-2012



DATA SOURCE: Texas Cancer Registry, 2008-2012

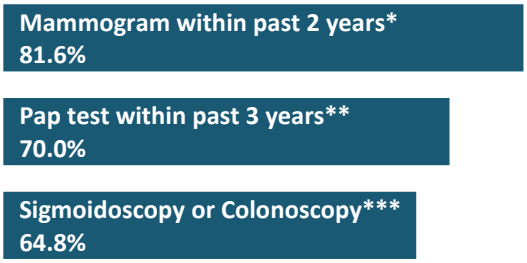
FIGURE 40. AGE-ADJUSTED CANCER MORTALITY RATE PER 100,000 POPULATION, BY COUNTY, 2008-2012



DATA SOURCE: Texas Cancer Registry, 2008-2012

> ***"Mental health issues are multi-cultural. They do not discriminate… it will touch every family regardless of their level of education and professional standing. It goes back to access to care and treatment. The lower income cohort is most vulnerable because they lack access to specialists."***
>
> **Key informant interviewee**

FIGURE 41. PERCENT ADULTS SELF-REPORTED CANCER SCREENING, HARRIS COUNTY, 2014



DATA SOURCE: Texas Behavioral Risk Factor Surveillance System, 2014
NOTE: * women 40 years old and over; ** women 18 years and over; *** adults 50 years and over

Behavioral Health

Behavioral health issues, including mental health and substance abuse disorders, have a substantial impact on individuals, families, and communities. Mental health status is also closely connected to physical health, particularly in regard to the prevention and management of chronic diseases. This section describes the burden of mental health and substance use and abuse in the communities served by MH Northeast.

> ***"At a state level, we are funded 49th in behavioral health care. We have not done a good job in Texas of investing in mental health."***
>
> **Key informant interviewee**

Mental Health

Focus group participants and key informants identified mental health and lack of access to mental health services as a major unmet need in the community served by MH Northeast. Behavioral health providers reported a growth in demand for their services. Overall, stress, anxiety, and depression were identified as the most common mental health concerns in the community.

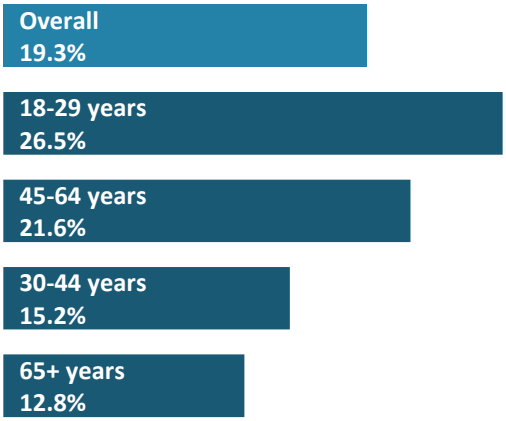
Respondents reported that the region lacks enough mental health providers of all kinds to address the need, including psychiatrists and social workers, in-patient beds, and school counselors and others skilled at addressing the needs of children and

teens. As a result, those who need services must wait long periods to access them or go untreated. Other informants noted the link between mental health and incarceration. One key informant shared that, *"We have a huge problem with mental health…the largest mental health center is the county jail."* Several respondents specifically mentioned a long-standing lack of attention to and investment in mental health services at the state level, although others mentioned that new innovations that are being supported through Texas' Section 1115 Medicaid demonstration waiver, a provision of the Social Security Act that allows provisions of major health and welfare programs authorized under the Act to be waived.

While more affluent residents were seen as having greater access to mental health services, low-income residents face substantial challenges including transportation and lack of insurance and resources to pay for services out of pocket. According to respondents, addressing the mental health concerns of non-English speakers and recent immigrants, some of whom suffer from PTSD, is a particular challenge. Reasons cited included lack of bilingual providers, stigma within communities, and reluctance by undocumented individuals with mental health concerns to seek care. Stigma about mental illness was mentioned as a substantial barrier to identifying mental health concerns and seeking treatment among all population groups. As one informant explained, *"People may not seek services because of the stigma or what they perceive is normal in their own families and may not realize that it's correctable and there are services available."* Focus group members who were Asian and Hispanic specifically mentioned barriers within families and communities that contribute to a reluctance to seek behavioral health services. As the member of one focus group explained, *"[People] will hide mental health issues from their families so that they [their families] will think everything is ok. They don't want to worry family members."* Respondents saw a need to destigmatize mental health illness.

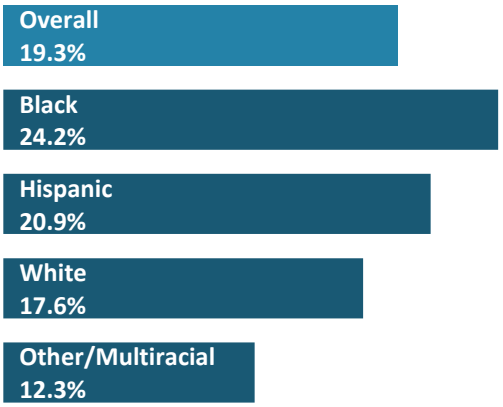
According to the Texas Behavioral Risk Factor Surveillance System, in 2014 19.3% of adults in Harris County self-reported as having five or more poor mental health days (FIGURE 42). Self-report of having had five or more days of poor mental health was highest among residents aged 18 to 29 (26.5%) and Black, non-Hispanic residents (24.2%) in Harris County (FIGURE 43).

FIGURE 42. PERCENT ADULTS SELF-REPORTED HAVE HAD FIVE OR MORE DAYS OF POOR MENTAL HEALTH, BY AGE, HARRIS COUNTY, 2014



DATA SOURCE: Texas Behavioral Risk Factor Surveillance System, 2014

FIGURE 43. PERCENT ADULTS SELF-REPORTED HAVE HAD FIVE OR MORE DAYS OF POOR MENTAL HEALTH, BY RACE AND ETHNICITY, HARRIS COUNTY, 2014



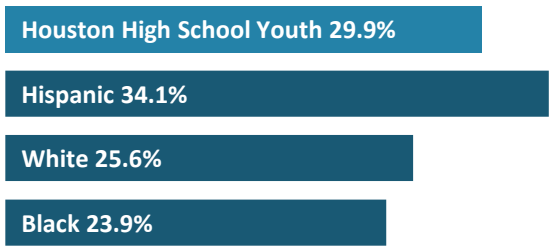
DATA SOURCE: Texas Behavioral Risk Factor Surveillance System, 2014

Focus group participants and key informants reported that children and youth are at high risk for mental health problems, and that the response to their needs is inadequate. Several respondents observed that increasingly younger children are struggling with serious emotional illness, which were attributed to preterm births, parental substance abuse during pregnancy, and family stress and violence. Among older youth, stress associated with academic pressures was identified

as a concern. As one youth focus group member shared, *"Stress is the biggest thing…I would definitely say stress is huge."* While mental health services in general were seen as lacking in the region, services for children and youth were reported to be particularly scarce. As a result, schools are increasingly called on to address these concerns, something that many are ill-equipped to do according to informants. The consequence, as one informant shared, is that *"Too many cases are undiagnosed for too long."*

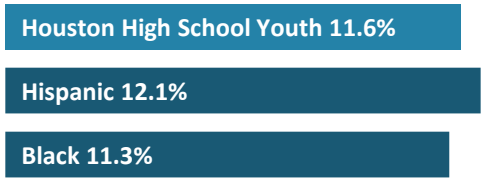
Houston Hispanic youth experienced higher mental health needs than youth of other races or ethnicities in 2013. Among youth in Houston, one-third of Hispanic high school students self-reported feeling sad or hopeless for two or more weeks in the past year (FIGURE 44). Many (12.1%) Hispanic Houston high school students self-reported they attempted suicide at least once in the past year; 11.3% of Black, non-Hispanic students self-reported a suicide attempt (FIGURE 45).

FIGURE 44. PERCENT YOUTH (GRADES 9-12) SELF-REPORTED FELT SAD OR HOPELESS FOR TWO OR MORE WEEKS IN PAST 12 MONTHS IN HOUSTON, RACE AND ETHNICITY, 2013



DATA SOURCE: Centers for Disease Control and Prevention, High School Youth Risk Behavior Survey, Houston, TX, 2013
NOTE: There was insufficient data for other races or ethnicities.

FIGURE 45. PERCENT YOUTH (GRADES 9-12) SELF-REPORTED ATTEMPTED SUICIDE ONE OR MORE TIMES IN PAST YEAR IN HOUSTON, BY RACE AND ETHNICITY, 2013



DATA SOURCE: Centers for Disease Control and Prevention, High School Youth Risk Behavior Survey, Houston, TX, 2013

Substance Use and Abuse

Substance use and abuse affects the physical and mental health of its recipients, their families, and the wider community. Stakeholders raised substance abuse as being an important health issue in the community by many interview and focus group participants. Participants shared concerns about marijuana and other drug use as well as alcohol abuse in the region, which some linked to increased crime in their communities. Neither focus group participants nor key informant interviewees identified opioid addiction as a major health issue affecting the MH Northeast community. Several informants attributed this to a reluctance among physicians to prescribe pain medication and the closing down of several pain clinics in Houston in recent years.

Among teens, use of alcohol and marijuana was reported. Student focus group members cited peer pressure as one reason students begin using substances. Alcohol abuse—among both adults and teens—was reported to be a concern for the region. The availability of alcohol was also noted. As a member of the Spanish-speaking focus group shared, *"Every block you see a bar. There's one good and five bad places."* Youth focus group members reported that alcohol abuse and drinking and driving among teens is a critical issue, and noted recent deaths in their schools due to drunk driving by teens. Schools were reported to be responsive in providing education about the dangers of substance use although some stressed that more was needed. Perspectives on the prevalence of smoking varied across respondents. Some respondents reported that it was not a key health issue for the region. Others, however, reported higher rates of smoking among seniors and some demographic groups. Smoking and vaping was reported to be less prevalent among youth.

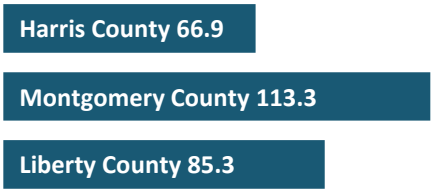
As with mental health services, residents reported that the need for substance use services—both prevention and treatment—exceeds the available supply. Barriers to addressing substance use issues are similar to those for mental health concerns and include stigma, lack of services, and lack of awareness about the dangers of substance use. As one informant explained, *"No one wants to talk about behavioral health or substance abuse because of the stigma."*

According to the Texas Behavioral Risk Factor

Surveillance System, in 2014 13.7% of Harris County adults self-reported binge drinking in the past month, and 13.6% of adults self-reported being current smokers. Only 1.9% of Harris County adults self-reported to have drank alcohol and drove in the past month (data not shown). Montgomery County had the highest rates of non-fatal drinking-under-the-influence (DUI) motor vehicle accidents in the past month (113.3 per 100,000 population), and Harris County had the lowest rate (66.9 per 100,000 population) according to the Texas Department of Transportation (FIGURE 46).

According to the Texas Youth Risk Behavior Survey, in 2013 Houston high school students self-reported using alcohol (31%), marijuana (23%), or tobacco (11%) in the past month (FIGURE 47). Just under two-thirds (63%) of Houston high school students self-reported lifetime substance use of alcohol, followed by marijuana (44%), and tobacco (43%) (FIGURE 48). White Houston high school students had disproportionately higher rates of ever using tobacco and prescription drugs than students of other races or ethnicities (FIGURE 49).

FIGURE 46. NON-FATAL DRINKING UNDER THE INFLUENCE (DUI) MOTOR VEHICLE CRASH RATE PER 100,000 POPULATION, BY COUNTY, 2010-2014

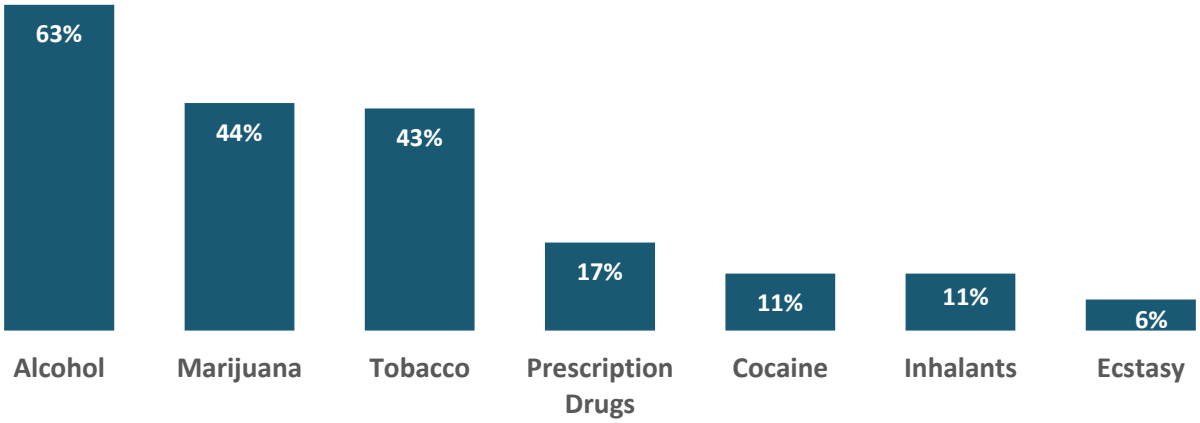


DATA SOURCE: Texas Department of Transportation, 2010-2014, as cited in Prevention Resource Center 6, Regional Needs Assessment, 2015

FIGURE 47. PERCENT HOUSTON YOUTH (GRADES 9-12) SELF-REPORTED CURRENT SUBSTANCE USE IN PAST 30 DAYS, 2013

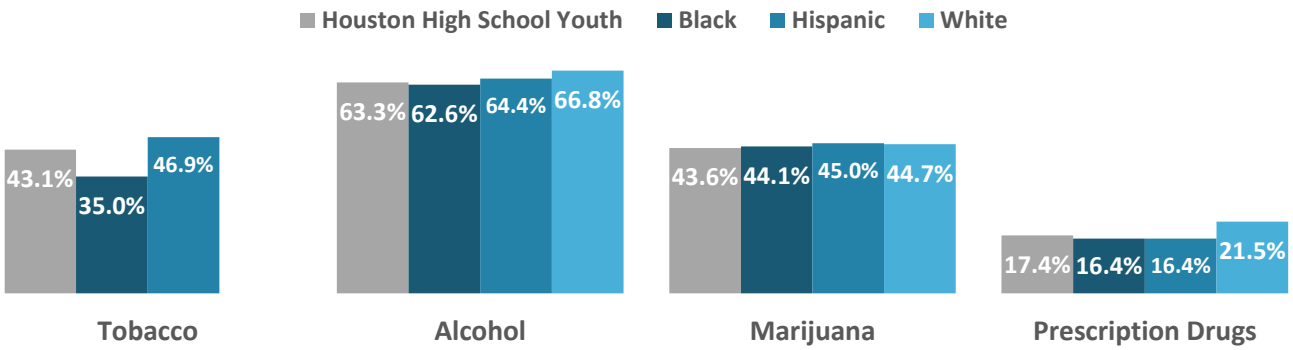
DATA SOURCE: Texas Youth Risk Behavior Survey, 2013, as cited in Prevention Resource Center, Regional Needs Assessment, 2015

FIGURE 48. PERCENT HOUSTON YOUTH (GRADES 9-12) SELF-REPORTED SUBSTANCE USE, 2013



DATA SOURCE: Texas Youth Risk Behavior Survey, 2013, as cited in Prevention Resource Center, Regional Needs Assessment, 2015

FIGURE 49. PERCENT YOUTH (GRADES 9-12) SELF-REPORTED SUBSTANCE USE IN HOUSTON, BY RACE AND ETHNICITY, 2013



DATA SOURCE: Centers for Disease Control and Prevention, High School Youth Risk Behavior Survey, Houston, TX, 2013
NOTE: Percentages were not calculated for American Indian/Alaska Native, Asian, Native Hawaiian/Pacific Islander, or Multiple Races due to insufficient sample size

Communicable Diseases

Communicable diseases are diseases that can be transferred from person to person. These conditions are not as prevalent as chronic diseases in the region, but they do disproportionately affect vulnerable population groups.

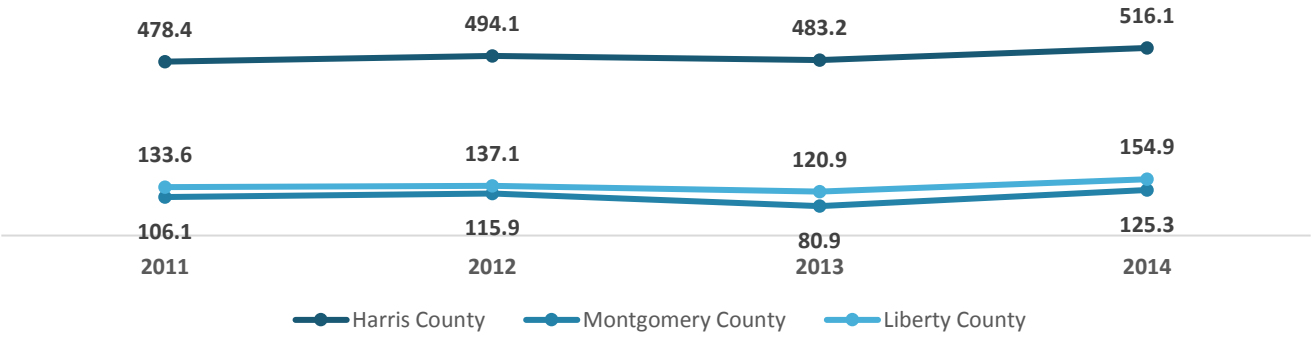
Focus group participants and key informants had few concerns or comments about communicable disease and their concerns varied. Some informants reported concern about parents not getting their children vaccinated against diseases such as measles, which they attributed to continuing misinformation about vaccines. Hepatitis was identified by a few informants as a concern and was reported to be prevalent among some demographic groups. Some focus group participants and key informants reported that education and awareness about HIV/AIDS is lacking in some communities and perceive a lack of resources in low-income areas, contributing to disparate levels of education.

> ***"We have an international airport…This makes us vulnerable to communicable infectious diseases."***
>
> **Key informant interviewee**

HIV

Harris County experienced a much higher HIV rate in 2014 than either Montgomery or Liberty Counties, with 516.1 people living with HIV per 100,000 population, compared to 125.3 per 100,000 population for Montgomery County and 154.9 for Liberty County (FIGURE 50). HIV rates in all three counties increased from 2011 to 2014.

FIGURE 50. RESIDENTS LIVING WITH HIV RATE PER 100,000 POPULATION, BY COUNTY, 2011-2014

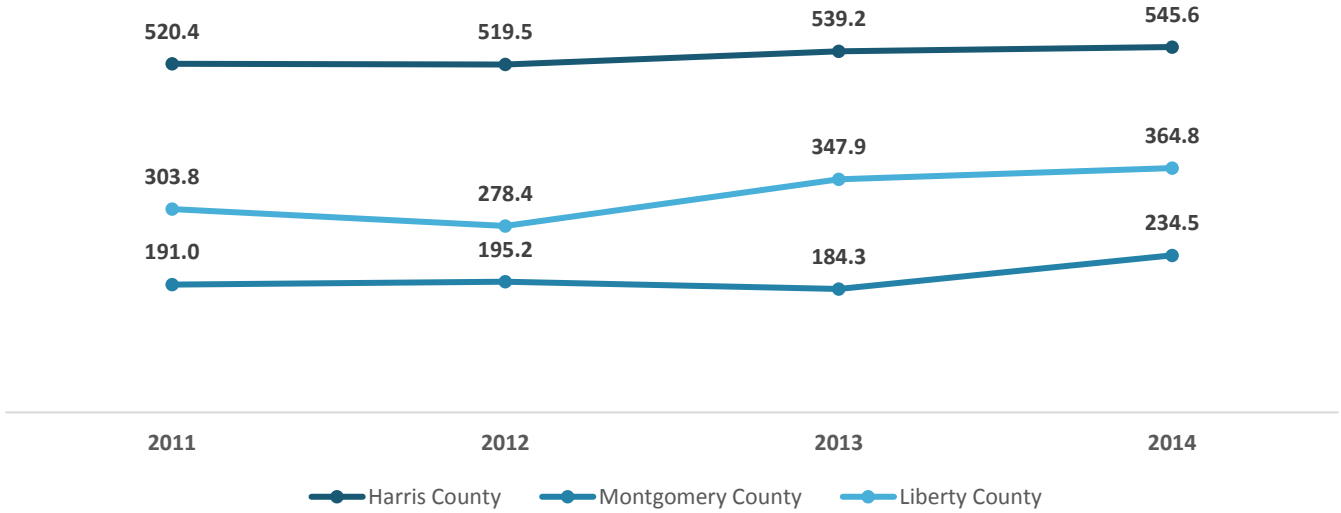


DATA SOURCE: Texas Department of State Health Services, Texas HIV Surveillance Report, 2011, 2012, 2013, and 2014

Other Sexually-Transmitted Diseases

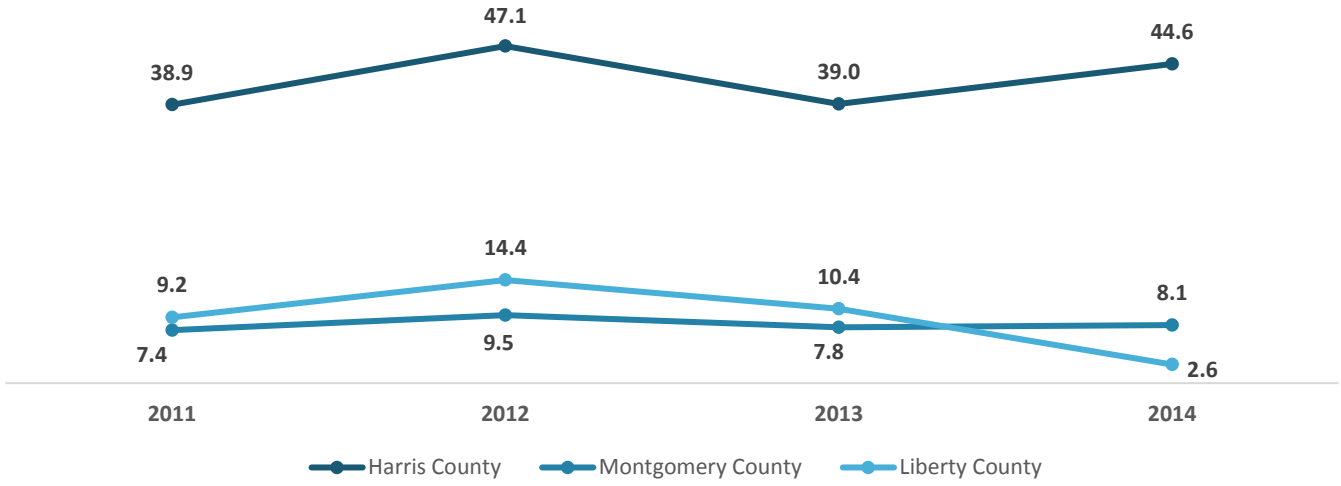
Trends in rates of chlamydia, gonorrhea, and syphilis varied by county. Rates of chlamydia, gonorrhea, and syphilis were markedly higher in Harris County compared to Montgomery and Liberty Counties in 2014. From 2011 to 2014, chlamydia and gonorrhea case rates increased in all three counties (FIGURE 51 and FIGURE 53). Syphilis case rates increased in Harris and Montgomery Counties but decreased in Liberty County from 2011 to 2014 (FIGURE 52).

FIGURE 51. CHLAMYDIA CASE RATES PER 100,000 POPULATION, BY COUNTY, 2011-2014



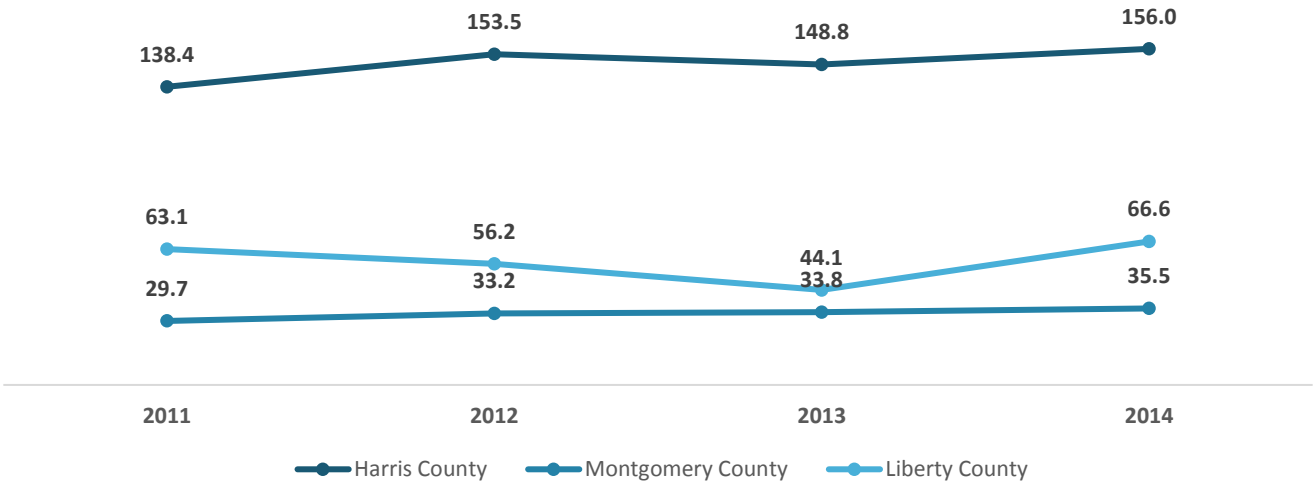
DATA SOURCE: Texas Department of State Health Services, TB/HIV/STD Epidemiology and Surveillance Branch, Texas STD Surveillance Report, 2014

FIGURE 52. SYPHILLIS CASE RATES PER 100,000 POPULATION, BY COUNTY, 2011-2014



DATA SOURCE: Texas Department of State Health Services, TB/HIV/STD Epidemiology and Surveillance Branch, Texas STD Surveillance Report, 2014

FIGURE 53. GONORRHEA CASE RATES PER 100,000 POPULATION, BY COUNTY, 2011-2014

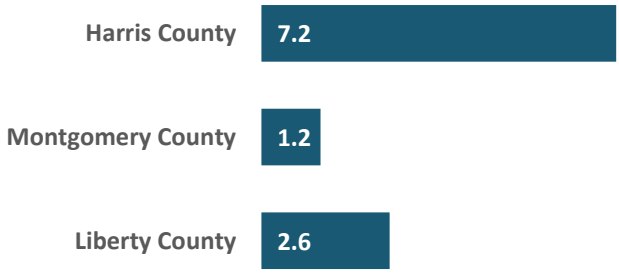


DATA SOURCE: Texas Department of State Health Services, TB/HIV/STD Epidemiology and Surveillance Branch, Texas STD Surveillance Report, 2014

Tuberculosis

Harris County saw the highest tuberculosis rate in the area, with 7.2 cases per 100,000 population. The rate of tuberculosis in Harris County was over five times the rate in Montgomery County (1.2 per 100,000 population) and over twice as high as in Liberty County (2.6 per 100,000 population) (FIGURE 54).

FIGURE 54. TUBERCULOSIS CASE RATE PER 100,000 POPULATION, BY COUNTY, 2014

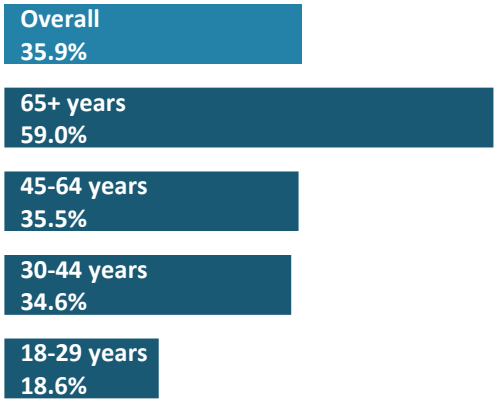


DATA SOURCE: Texas Department of State Health Services, TB-HIV-STD and Viral Hepatitis Unit, TB Counts and Rates by, 2014

Influenza

Data on influenza rates is only available for Harris County. In 2014, 35.9% of adults reported having had a seasonal flu shot or vaccine via nose spray, according to the Texas Behavioral Risk Factor Surveillance System. As shown in FIGURE 55, residents aged 65 years or older were disproportionately more likely to have received a flu shot (59.0%) than other age groups. (Data on influenza only available for Harris County.)

FIGURE 55. PERCENT ADULTS SELF-REPORTED TO HAVE HAD SEASONAL FLU SHOT OR SEASONAL FLU VACCINE VIA NOSE SPRAY, BY AGE, BY COUNTY, 2014



DATA SOURCE: Texas Behavioral Risk Factor Surveillance System, 2014

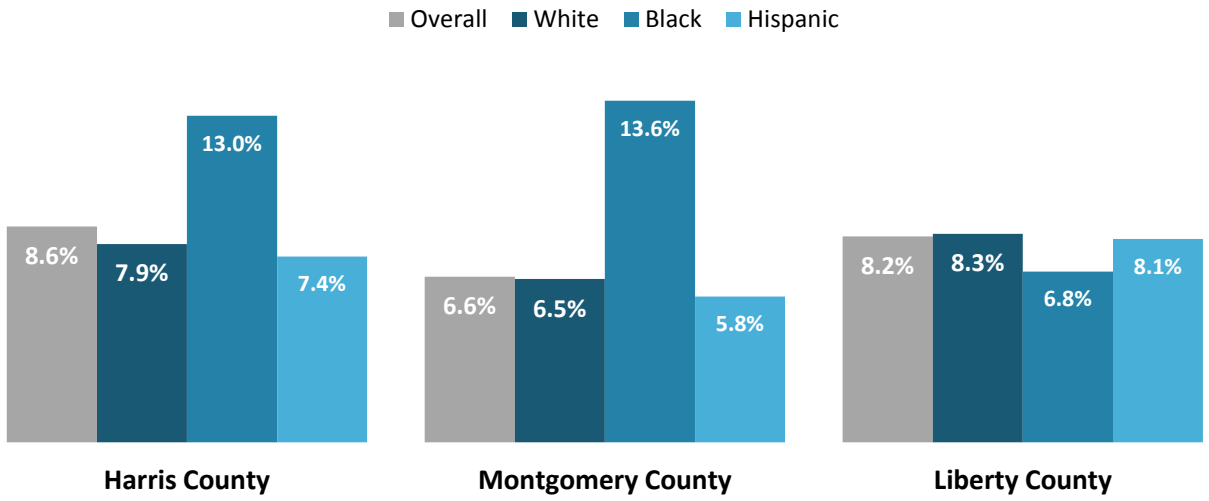
Reproductive and Maternal Health

Good reproductive and maternal health provides a stronger foundation for newborns and children to have a more positive health trajectory across their lifespans. This section presents information about birth outcomes and teen pregnancy in the communities served by MH Northeast.

Birth Outcomes

Approximately one in ten babies born in Harris, Montgomery, and Liberty Counties were born premature, meaning born before 37 weeks gestation in 2013 (data not shown). The proportion of babies born with low birthweight was higher in Harris County (8.6%) and Liberty County (8.2%) compared to Montgomery County (6.6%). The proportion of babies born with low birthweight varied by race or ethnicity. Black, non-Hispanic babies in the counties are more likely to be born low birthweight than babies of other races or ethnicities (FIGURE 56). In Montgomery County, the proportion of Black, non-Hispsanic low birthweight babies was two times higher than babies of other races or ethnicities.

FIGURE 56. PERCENT LOW BIRTH WEIGHT INFANTS, OVERALL AND BY RACE AND ETHNICITY, BY COUNTY, 2013

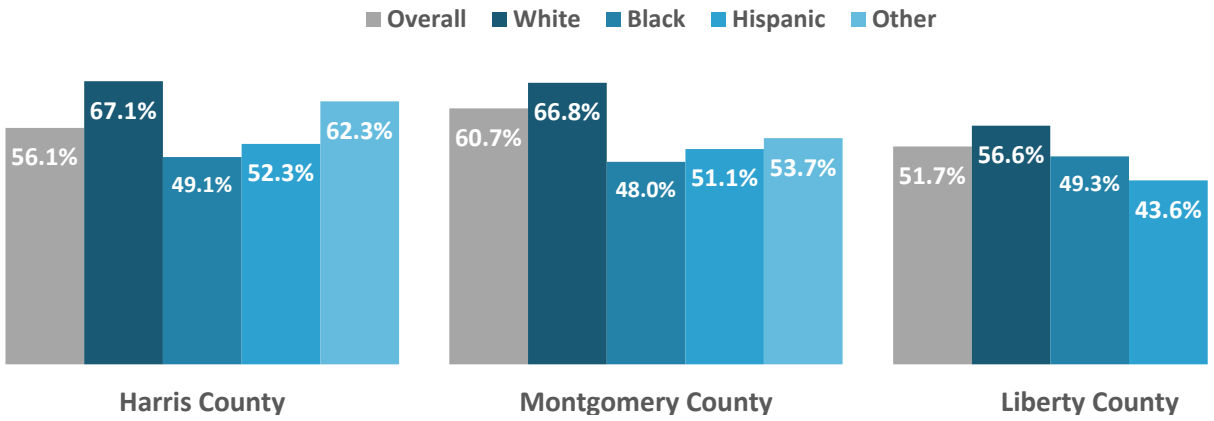


DATA SOURCE: Texas Department of State Health Services, Texas Vital Statistics Annual Report, 2013
NOTE: White includes Other and Unknown race and ethnicity
NOTE: Low birth weight is defined as under 2,500 grams

Prenatal Care

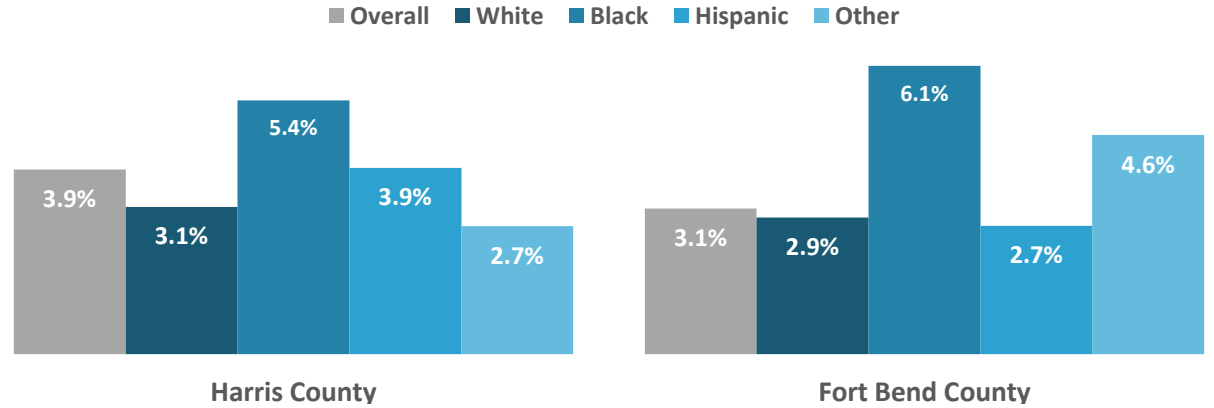
According to the Texas Department of State Health Services, 56.1% in Harris County, 60.7% in Montgomery County, and 51.7% in Liberty County of live births occurred to mothers who received prenatal care in their first trimester. Rates of first trimester prenatal care in all counties were highest for White, non-Hispanic mothers (FIGURE 57). In Liberty County, the rate of first trimester prenatal care was lowest for Hispanic mothers (43.6%). In Harris and Montgomery County, rates of first trimester prenatal care were lowest for Black, non-Hispanic mothers (49.1% and 48.0%, respectively). Rates of receiving no prenatal care were 3.1% and 3.9% for Montgomery and Harris County mothers, respectively (FIGURE 58). (Data on receiving no prenatal care was unavailable for Liberty County.) Rates of receiving no prenatal care in both counties were highest for Black, non-Hispanic mothers (6.1% in Montgomery County and 5.4% in Harris County). In Montgomery County, the rate of receiving no prenatal care was lowest for Hispanic mothers (2.7%); in Harris County, the rate of receiving no prenatal care was lowest for mothers of Other race and ethnicity (2.7%).

FIGURE 57. PERCENT BIRTHS WITH PRENATAL CARE IN THE FIRST TRIMESTER, BY RACE AND ETHNICITY OF MOTHER, 2013



DATA SOURCE: Texas Certificate of Live Birth, as cited by Texas Department of State Health Services, Center for Health Statistics, Texas Health Data, Birth Outcomes, 2013
NOTE: Data for Other insufficient in number to be reported for Liberty County

FIGURE 58. PERCENT BIRTHS WITH NO PRENATAL CARE IN ANY TRIMESTER, BY RACE AND ETHNICITY OF MOTHER, 2013

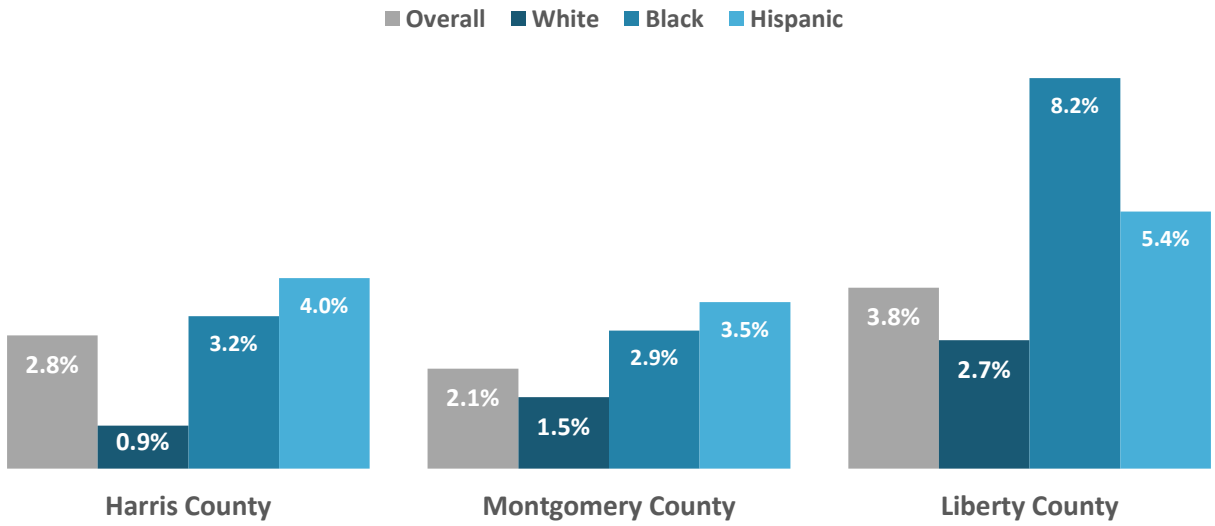


DATA SOURCE: Texas Certificate of Live Birth, as cited by Texas Department of State Health Services, Center for Health Statistics, Texas Health Data, Birth Outcomes, 2013
NOTE: Data insufficient to report for Liberty County

Teen Births

In 2013, 12,245 births occurred to Texas mothers aged 17 years or younger, representing 3.1% of all births in Texas according to the Texas Department of State Health Services (data not shown). Among the three counties served by MH Northeast, Liberty had the highest rate of teen births (3.8%) and Montgomery had the lowest rate of teen births (2.1%) (FIGURE 59). Teen birth rates varied by race and ethnicity. Black, non-Hispanic teen mothers in Liberty County (8.2%) had the highest birth rate. Births to Hispanic and Black, non-Hispanic teen mothers were higher than those to White mothers across the three-county region.

FIGURE 59. PERCENT BIRTHS TO TEENAGED MOTHERS AGE 17 YEARS OLD AND UNDER, BY RACE AND ETHNICITY, BY COUNTY, 2013



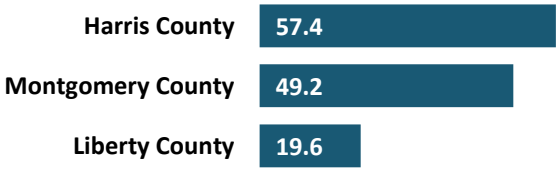
DATA SOURCE: Texas Department of State Health Services, Texas Vital Statistics Annual Report, 2013
NOTE: White includes Other and Unknown race and ethnicity

Oral Health

Oral health is a strong indicator of overall well-being and health. In addition to tooth decay and gum disease, poor oral hygiene has been linked in some studies to premature birth, cardiovascular disease, and endocarditis. Oral bacteria and inflammation can also lead to infection in people with diabetes and HIV/AIDS. Several focus group respondents and interviewees reported that oral health was a concern, especially for seniors on fixed incomes and low-income individuals. Dental services were described as being expensive and thus out of reach for many. Focus group members shared personal experiences in trying to get dental care which was often too expensive for them to afford. While some health clinics have dental services, these are often difficult to access due to long waitlists. As one provider of oral health care in Montgomery County explained, *"We do a lot of good but we are only scratching the surface. The kids who come have never seen a dentist before."* Dental care for children was seen as a need as well as well as resources to pay for things like toothbrushes. Parent education was also seen as key.

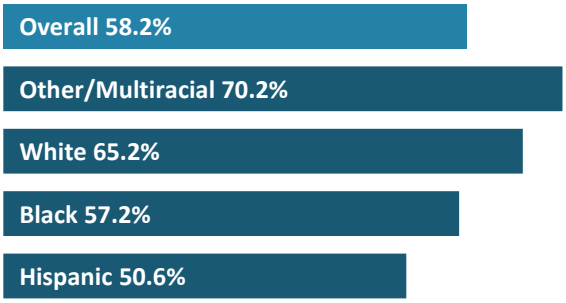
Across the three counties served by MH Northeast, Harris County had the highest rate of dentists (57.4 per 100,000 population) and Liberty County had the lowest rate of dentists (19.67 per 100,000 population) (FIGURE 60). According to the Texas Behavioral Risk Factor Surveillance System, 58.2% of adults in Harris County in 2014 self-reported having visited a dentist or dental clinic within the past year for any reason (FIGURE 61). Hispanic adults in Harris County reported the lower rates of annual dental visitation (50.6%) compared to other races and ethnicities. Adults with higher education levels (i.e., more than a high school education) were more likely to have received dental care in the past year in Harris County (FIGURE 62). Similarly, adults with higher incomes were more likely to have received dental care (FIGURE 63).

FIGURE 60. NUMBER OF DENTISTS PER 100,000 POPULATION, BY COUNTY, 2014



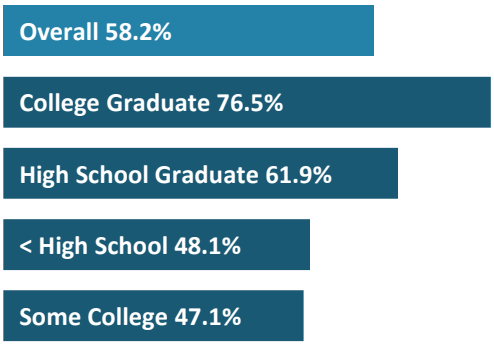
DATA SOURCE: Texas Medical Board, as cited by Texas Center for Health Statistics, 2014

FIGURE 61. PERCENT ADULTS SELF-REPORTED TO HAVE VISITED DENTIST OR DENTAL CLINIC WITHIN PAST YEAR FOR ANY REASON, BY RACE AND ETHNICITY, HARRIS COUNTY, 2014



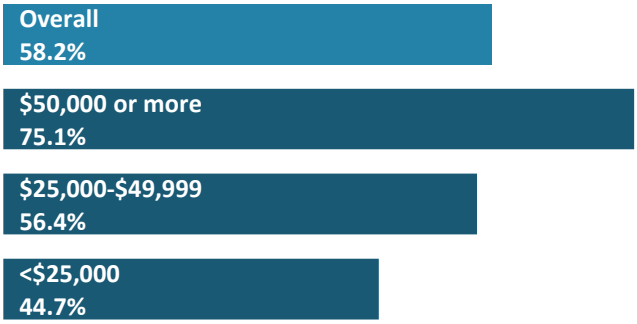
DATA SOURCE: Texas Behavioral Risk Factor Surveillance System, 2014

FIGURE 62. PERCENT ADULTS SELF-REPORTED TO HAVE VISITED DENTIST OR DENTAL CLINIC WITHIN PAST YEAR FOR ANY REASON, BY EDUCATION, HARRIS COUNTY, 2014



DATA SOURCE: Texas Behavioral Risk Factor Surveillance System, 2014

FIGURE 63. PERCENT ADULTS SELF-REPORTED TO HAVE VISITED DENTIST OR DENTAL CLINIC WITHIN PAST YEAR FOR ANY REASON, BY INCOME, HARRIS COUNTY, 2014



DATA SOURCE: Texas Behavioral Risk Factor Surveillance System, 2014

HEALTHCARE ACCESS AND UTILIZATION

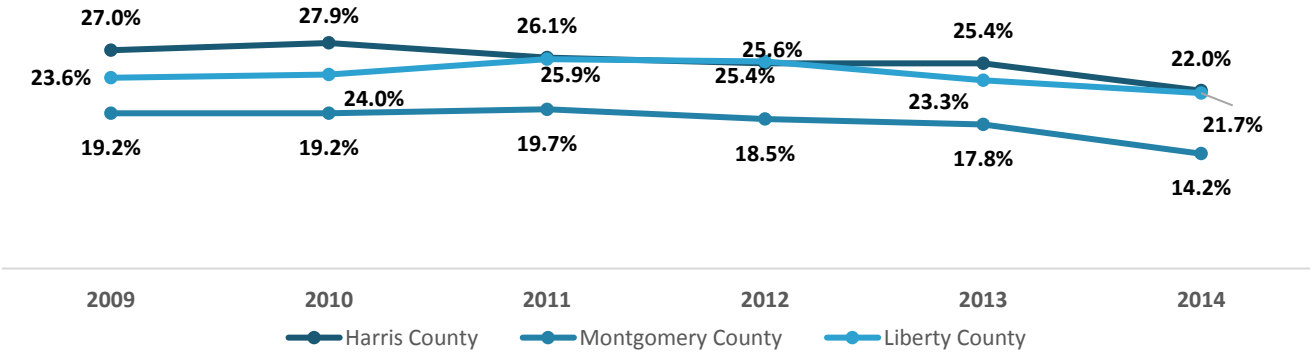
Health Insurance

Health insurance is a significant predictor of access to healthcare services and overall population health. While some interview and focus group participants stated that community members have access to health insurance, others noted substantial gaps. For example, focus group participants from low-income areas reported frustration regarding this lack of health insurance. As one member of a focus group shared, *"You work 30+ years and retire, now you have no insurance; they know you don't have insurance and a whistle goes off... After taking care of people all your life, you struggle."* Others reported that despite the Affordable Care Act (ACA), the number of uninsured in the region was high. One reason for this, according to respondents, is that Texas has not adopted Medicaid expansion, which leaves a large number of working poor uninsured. Additionally, respondents reported that the cost of insurance is too high for some to afford. Lack of insurance and underinsurance has a substantial negative impact on health, according to informants, because people will not seek preventative care. As one interviewee shared, *"When people are uninsured, people are less likely to be proactive about health."*

Another challenge cited by informants has been patients' lack of understanding about what is covered by different insurance products and navigating their health insurance. Residents in focus groups expressed frustration when trying to understand co-pays and deductibles, in and out of network providers, services covered, and billing statements. This is especially challenging, respondents reported, for those who don't speak English, new immigrants, or those who have lower literacy levels as well as those who have never had insurance coverage and are inexperienced in how insurance works and how to effectively utilize it. They stressed the importance of persistence, and a need to be proactive.

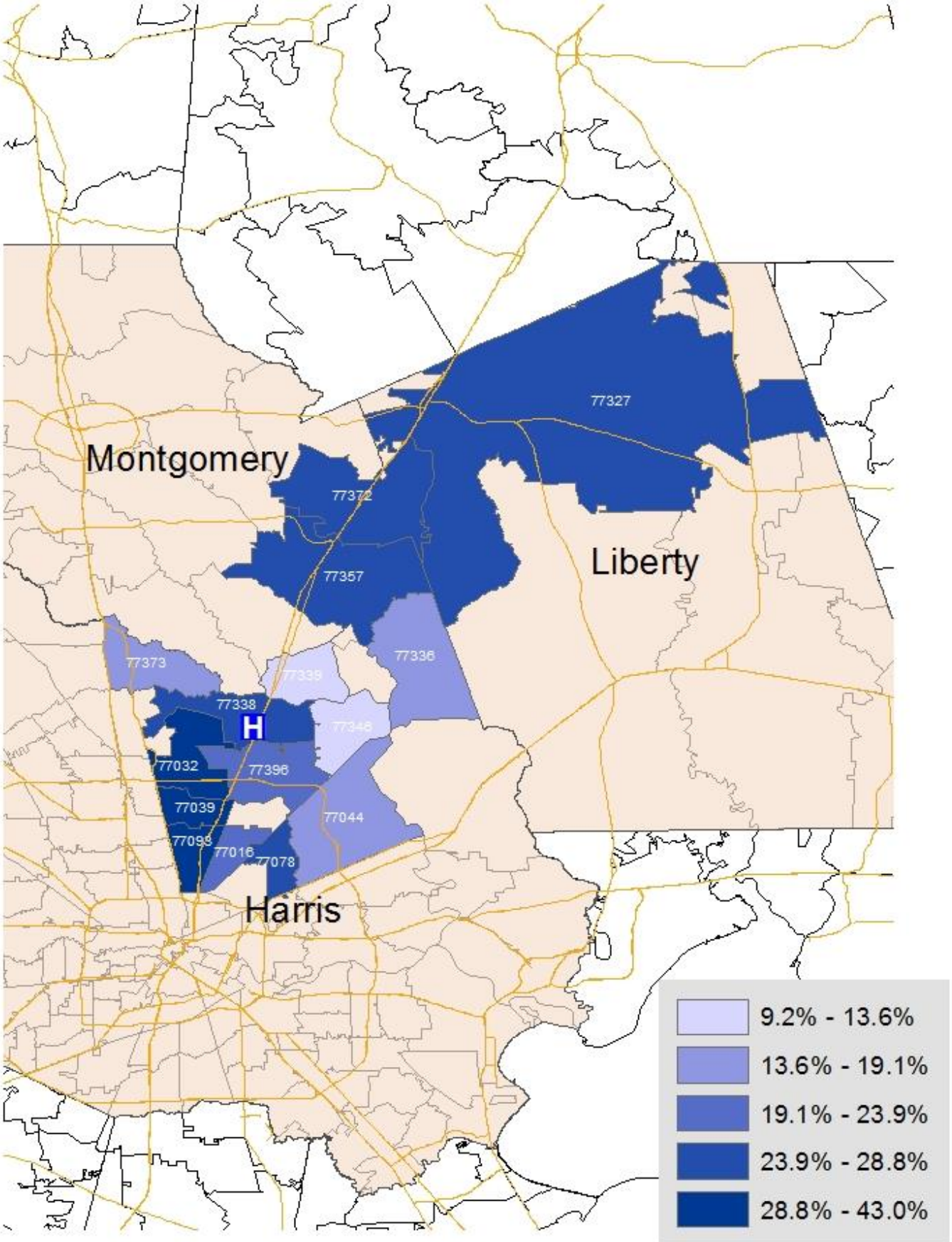
Following the passage of the Affordable Care Act in 2010, overall uninsurance rates decreased for Harris, Montgomery County, and Liberty County (FIGURE 64). Harris County had higher rates of uninsurance than Montgomery County during the 2010 to 2014 period. In 2014, 22.0% of the total population in Harris County was uninsured compared to 14.2% in Montgomery County and 21.7% in Liberty County. Rates of uninsurance varied by zip code across the communities served by MH Northeast. In 2013, the zip codes in the immediate geographic area to the southwest of the MH Northeast facility had the highest rates of uninsurance for the total population (FIGURE 65). In 2013, three zip codes in Houston had the highest rates of uninsurance for the total population: 77039 (43%) 77093 (42.5%), and 77032 (38%). Among individuals aged 18 and younger, uninsurance rates reported in 2013 were lower than the overall population (FIGURE 66). In 2013, 2 zip codes in Houston had the highest rates of uninsurance for individuals aged 18 and younger: 77032 (39.4%) and 77093 (34.1%). Among the zip codes served by MH Northeast, 90,847 residents were enrolled in Medicaid. In Montgomery County, the zip code with the most Medicaid enrollees was 77365 in Porter (5,209 enrollees) (FIGURE 67). In Harris County, the zip code with the most Medicaid enrollees was 77093 in Houston (13,964 enrollees). In Liberty County, the zip code with the most Medicaid enrollees was 77327 in Cleveland (4,204 enrollees).

FIGURE 64: PERCENT TOTAL POPULATION UNINSURED, BY COUNTY, 2009 – 2014



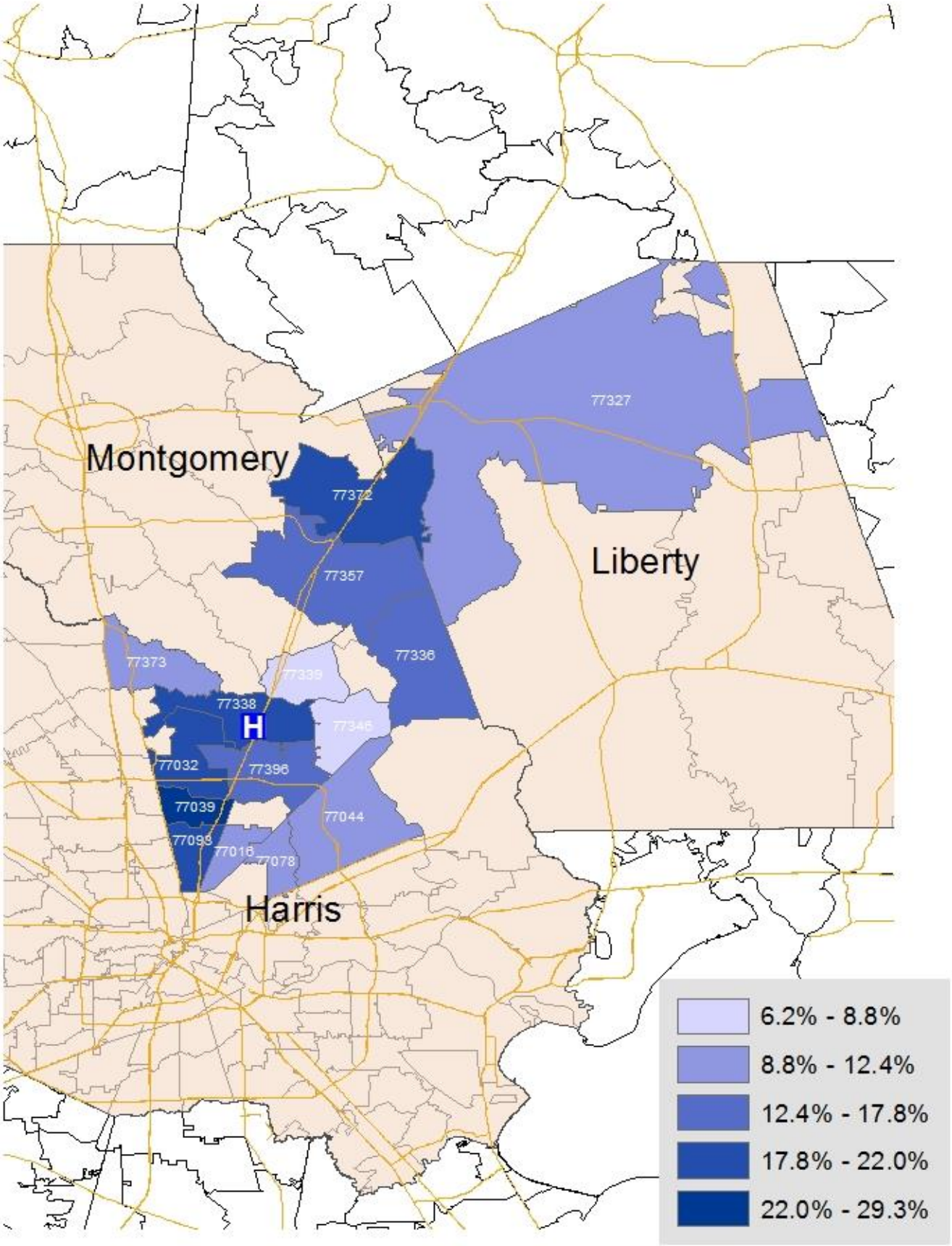
DATA SOURCE: U.S. Census Bureau, American Community Survey 1-Year Estimates, 2009, 2010, 2011, 2012, 2013, and 2014

FIGURE 65. PERCENT TOTAL POPULATION UNINSURED, BY ZIP CODE, 2013



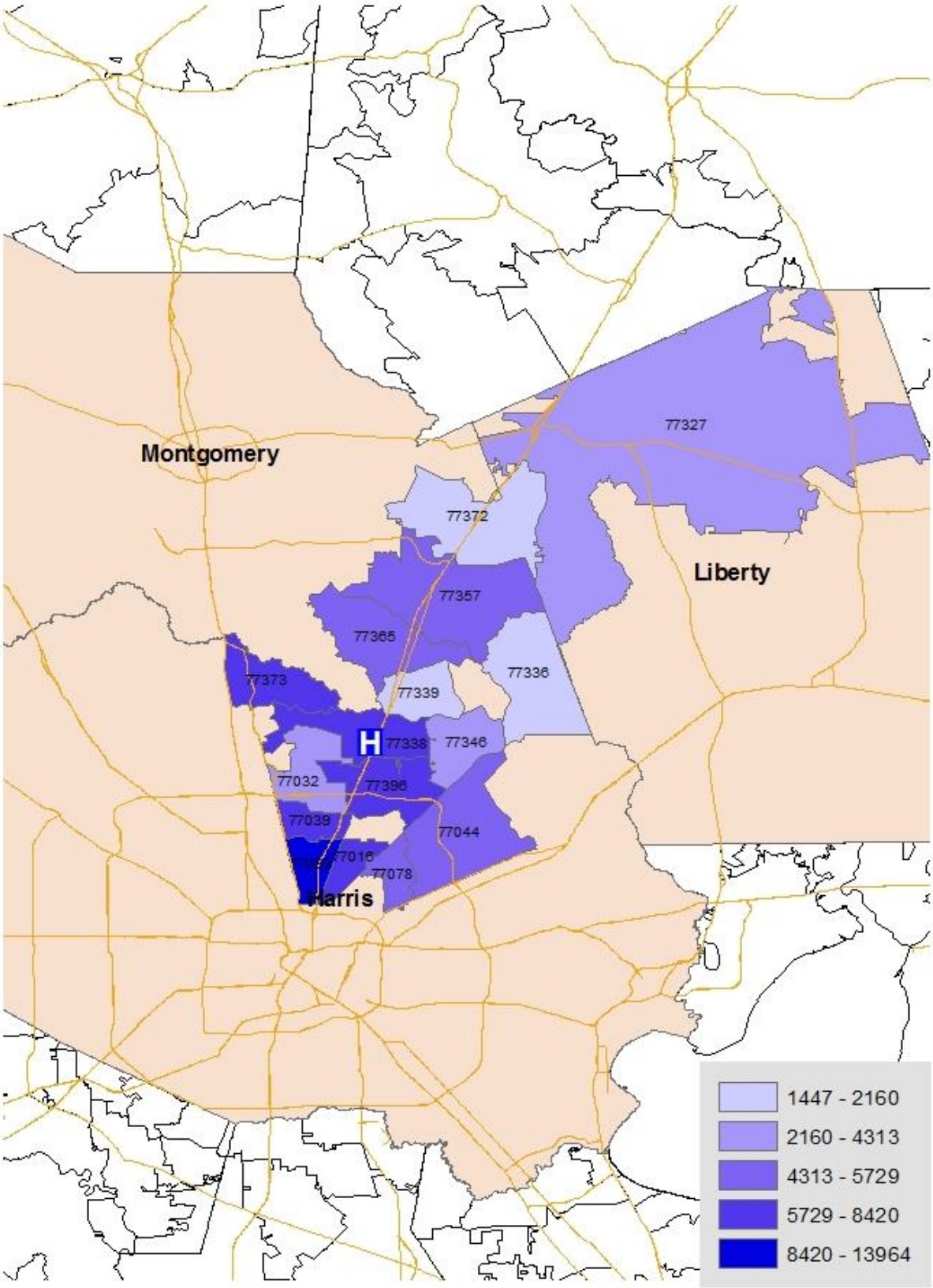
DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2009-2013

FIGURE 66. PERCENT UNDER 18 YEARS OLD POPULATION UNINSURED, BY ZIP CODE, 2013



DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2009-2013

FIGURE 67. NUMBER ENROLLED IN MEDICAID, BY ZIP CODE, FISCAL YEAR 2015



DATA SOURCE: Texas Health and Human Services Commission System Forecasting, March 2016
NOTE: Enrollment by zip code does not equal total enrollment due to lack of zip code data for some clients

Healthcare Access and Utilization

When asked about access to healthcare services, respondents acknowledged that while the region has many medical services, barriers exist and services are not available equally to everyone. Access to care was described as a challenge particularly in some areas served by MH Northeast where economic challenges were greater and there is a higher proportion of low-income and uninsured patients. Respondents shared that some residents face barriers to accessing health care that include the availability of providers and appointments, cost, transportation and for some, language and cultural barriers.

> ***"If the doctor prescribes a prescription and your insurance doesn't cover it. You go back and the doctor says 'you've got to get this.' It costs $400. How does any senior pay for that?"***
>
> **Senior focus group participant**

While some residents reported that the region has many specialists, others disagreed. Focus group participants and key informants stated that shortages of lower cost specialty providers, particularly in oral health and psychiatry, presented a barrier to access to care for area residents. As one mental health provider explained, *"I'm a social worker by training, and licensed, and I don't think we can keep up with the demand on our systems and structures."* Several respondents mentioned that the growing number of free-standing ERs and drugstore-based clinics have added to the landscape of healthcare services available to residents. However, as one provider explained, "*What patients get there is access but not a medical home."* A related challenge, according to respondents, is that a growing number of physicians in the region served by MH Northeast, especially specialists and mental health providers, do not accept Medicaid and Medicare or cap their number of patients. As one interviewee stated *"[doctors don't need to take public insurance because there are enough people here [with private insurance] who seek medical care."* Providers report that low reimbursement and difficult contracting experiences with the state have been the primary reasons that practices are closing to Medicare and Medicaid patients. According to focus group respondents and interviewees, the barriers to healthcare access have led to increased use of emergency departments (ED) for health issues that are not emergent. As one informant explained, *"We have a high number of people who have public insurance and who say their doctor of choice is the ER."*

The cost of health care was also reported to be a challenge to accessing health care. Focus group members and interviewees reported that high deductibles and co-pays prevent some from accessing needed care. Several respondents expressed a concern about high-deductible plans that can discourage patient use of health care. As one provider explained, *"A pressing concern for many is the high-deductible plans. Some don't recognize what that impact is, but many will defer care because of that cost."* A related challenge is the cost of medication, some of which are not covered by insurance. One focus group participant from a mid-to-high socioeconomic status reported that some people do not have *"access to medication…They can't afford it. They can buy food, but can't get insulin because of the co-pay."* While residents reported that there are medication assistance programs, these are seen as insufficient to meet the need. A couple of respondents also mentioned that cost of other health services—like dental and vision care—is expensive and often not covered by insurance.

> ***"Doctors are not taking Medicare any more and we have an exploding senior population. Most patients have multiple issues and several meds."***
>
> **Key informant interviewee**

In addition to the barriers described above, cultural and language minorities face unique challenges to accessing health care according to respondents. Newcomers often take low wage jobs with no health insurance. They must negotiate a complex and unfamiliar U.S. healthcare system and much

paperwork. While respondents reported that some healthcare providers have bilingual staff or use translation services, not all do. Again, undocumented individuals were identified by several respondents as a particularly vulnerable population. As one key informant shared, *"People who are undocumented often feel scared to seek out services. So we see those residents have the most challenges when accessing health care."*

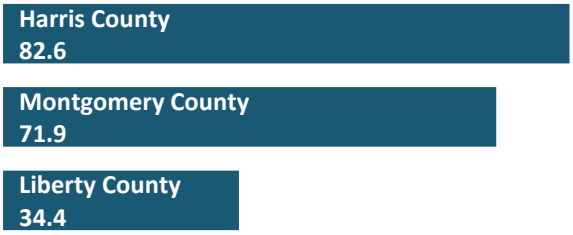
Among those residents needing assistance to obtain health and social services, focus group participants reported challenges in meeting administrative requirements of existing programs as well as the lack of availability of assistance programs in some geographic areas. One focus group participant residing in a low-income area reported that *"…there are a lot of places that say they help people, but it's a lot of paperwork. We need more assistance. Or you go there, and they say they have no funding."* Another challenge according to informants is that people are not accessing existing health and social services because they don't know about them. As one interviewee from Harris County explained, *"Harris County has a lot of programs and services. Information needs to be made available to [patients]."*

Access to Primary Care

The number of primary care physicians (including general practice, family practice, OB-GYN, pediatrics, and internal medicine) per 100,000 population varied by county. According to the Texas Medical Board, the number of primary care physicians serving Harris County in 2014 was 82.6 per 100,000 population compared to Montgomery (71.9 per 100,000 population) and Liberty (34.4 per 100,000 population) Counties (FIGURE 68). In Harris County, 38.2% of adult residents reported in the BRFSS survey that they did not have a doctor or healthcare provider. (Data unavailable for Montgomery or Liberty Counties County.)

According to the Texas Medical Association's 2014 physician survey, the percent of Texas physicians who accept all new Medicaid patients decreased from 42% in 2010 to 37% in 2014. In the Houston-The Woodlands-Sugar Land MSA in 2014, 34% of physicians accepted all new Medicaid patients, 24% limited their acceptance of new Medicaid patients, and 42% accepted no new Medicaid patients. In Harris County in 2014, 37% of physicians accepted all new Medicaid patients, 23% limited their acceptance of new Medicaid patients, and 40% accepted no new Medicaid patients. (Data on Medicaid acceptance is unavailable for other counties due to low survey response rates.)

FIGURE 68. NUMBER OF PRIMARY CARE PHYSICIANS PER 100,000 POPULATION, BY COUNTY, 2014



DATA SOURCE: Texas Medical Board, as cited by Texas Center for Health Statistics, 2014

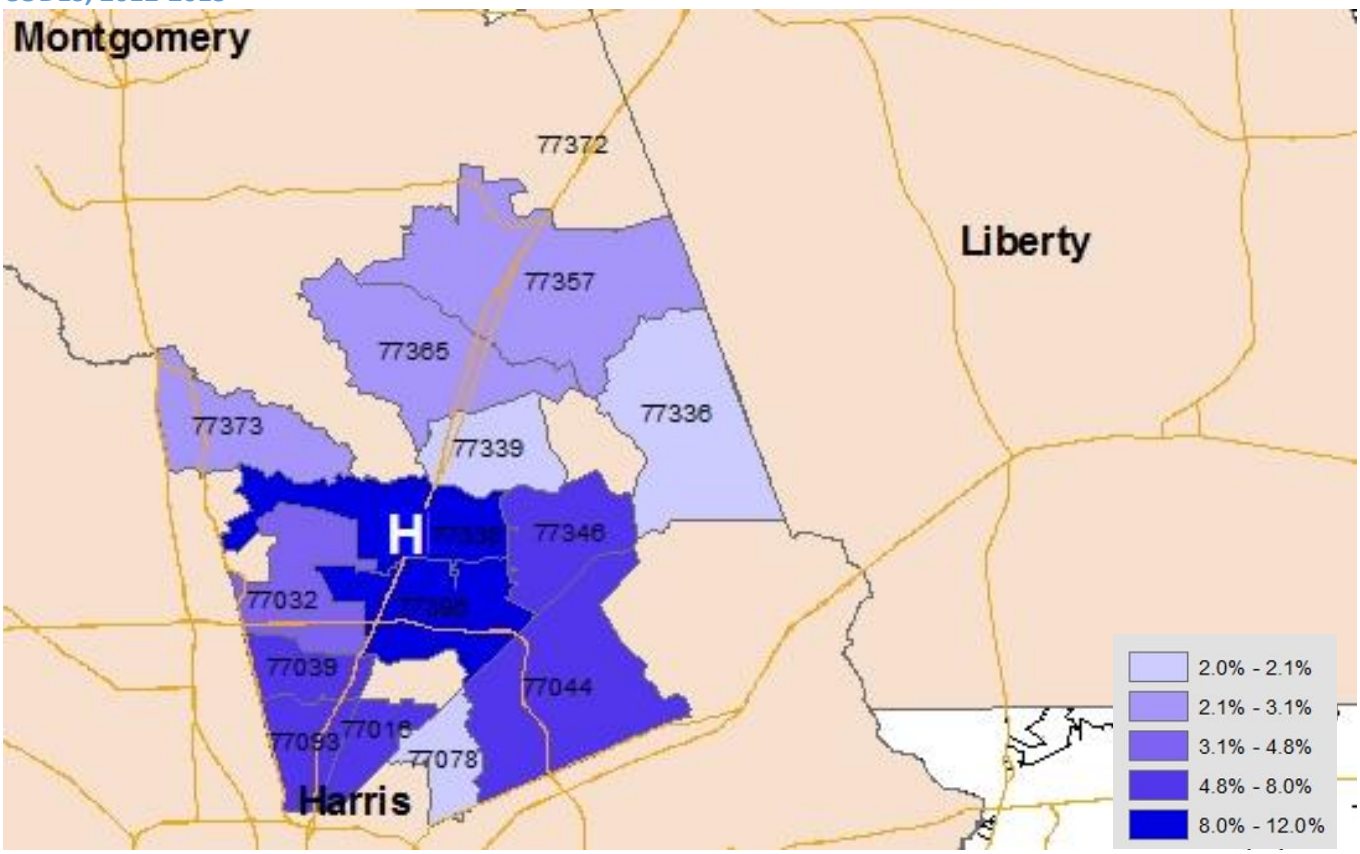
Emergency and Inpatient Care for Primary Care Treatable Conditions

People who are poor, uninsured or covered by Medicaid, certain racial and ethnic minorities and immigrants, and individuals with limited education, literacy, or English language skills are all less likely to have a usual source of care (USOC) provider other than a hospital emergency department (ED). In 2013, about 4 in 10 ED visits were classified as primary care-related.

Of MH Northeast's 59,755 ED visits in 2013, 53.2% were from patients who were uninsured or on Medicaid, and 36% were classified as non-emergent or with primary care treatable conditions. Fourteen zip codes in the MH Northeast's CHNA-defined community were among the top 20 zip codes for the highest number of primary care treatable ED visits at the MH Northeast in 2013 (FIGURE 69). Of all ED visits, 6.5% were for chronic conditions, of which 28% were cardiovascular-related.

Of MH Northeast's 12,159 inpatient discharges in 2015, 5,012 inpatient discharges or 41.2% were related to an ambulatory care sensitive condition. The top four ambulatory care sensitive conditions that resulted in inpatient care at MH The Northeast in 2015 were congestive heart failure (198 discharges), diabetes (122 discharges), chronic obstructive pulmonary disorder (84 discharges), and bacterial pneumonia (84 discharges).

FIGURE 69. PRIMARY CARE TREATABLE EMERGENCY DEPARTMENT VISITS AT MH NORTHEAST BY TOP 20 ZIP CODES, 2012-2013



DATA SOURCE: Memorial Hermann Health System, Emergency Department Data, 2012-2013

COMMUNITY SUGGESTIONS FOR FUTURE PROGRAMS AND SERVICES

"Houston is recognized as a world class medical care city with a mix of the most extensive high-end hospitals. Yes we have access issues, but the healthcare infrastructure is strong."

Key informant interviewee

"Diverse cultures, races, ethnicities, and countries of origin contribute to the strength of the city."

Key informant interviewee

Diverse, Cohesive Community

Residents and stakeholders described diversity and social cohesion as being among the primary assets and strengths of their community. The Greater Houston area was described as *"an extremely diverse community"* with *"positive growth"* and a *"sense of community."* Informants described the positive role of diversity in driving the creation of robust communities to participate in and resources to meet those needs. *"Houston is an extremely rich place, culturally. We have something for everyone. Community needs can be met pretty well here in Houston because there's a lot of understanding of different types of needs. The feeling is that you can always find community."* Many key informants and focus group participants described a sense of social cohesion across communities. This cohesion does not just occur within neighborhoods, but also within groups sharing a common issue. For example, one key informant reported: *"From what I see in the disability community is a strong sense of friendship. People know each other and care about each other because they see that they have similar difficulties. That brings people together and supports and connects them."*

High-Quality, Plentiful Medical Care

A key theme among key informants and focus group participants was the wide availability of healthcare services and the high quality of those services, both in Houston and within communities served by MH Northeast. As one informant explained, *"[We have] one of the strongest complex of medical services in the United States and the world."* The healthcare system is also described as having a strong community health system in addition to world-class acute care. *"We have a strong community health care system…there is [sic] a significant amount of hospitals available to people."* Additionally, many respondents pointed to excellent services provided by health departments in many counties in the region and a strong infrastructure of school-based health centers. The challenge, noted by many respondents, is insuring these excellent services are accessible to all residents.

Economic Opportunity

Many key informants and focus group participants reported improvement in the local economy, creating economic opportunities for residents and businesses in the communities served by MH Northeast. *"There are jobs here. They may not be high paying jobs, but they provide some income for people to survive."* The cost of living was also reported as a positive by focus group participants. As one focus group member shared, *There's a lower cost of living. Everything is more affordable here."*

COMMUNITY VISION AND SUGGESTIONS FOR FUTURE PROGRAMS AND SERVICES

Assessment participants were asked about their vision for the future of their community, and ideas for programs, services and initiatives. Prominent themes that emerged related to the future program and service environment included the promotion of healthy eating and physical activity, improvement of transportation and roads, supporting people in their navigation of the healthcare system, expansion of available and access to healthcare services, and multi-sector collaboration across institutions.

Promote Healthy Living

Promotion of healthy eating, physical activity, and disease self-management by healthcare delivery systems and supporting social service organizations was a top suggestion of stakeholders. Interviewees and focus group members identified a need to address the rising rates of obesity and chronic disease in the region and promote community health for the long term. Suggestions about how to do this varied. For example, one informant suggested insurance incentives: *"An insurance product can encourage healthy lifestyles. If you can put a reasonable one in people's hands…that incentivizes people and it could have the biggest effect."* Other residents expressed a desire for communities that encourage physical activity through improved sidewalks, better lighting, and bike lanes. They reported that healthy eating could be encouraged through more community gardens and farmer's markets as well as efforts that improve the variety of healthy selections in corner markets. Informants stressed that options for healthy living—be they recreational and fitness opportunities or classes related to chronic disease self-management or nutrition—need to be low cost, culturally appropriate and reach the people who need them most. One key informant noted that promotion of healthy living must be aligned with better access to healthcare services: *"The long term solution is healthy living. Needs to be pushed concurrently with healthcare access. They need to come hand in hand."*

Respondents largely recognized, however, that increasing access to healthy foods and opportunities for physical activity were insufficient and that people also needed to be aware of what it means to live a healthy lifestyle, and how to do so. As one interviewee mentioned, *"It all comes down to lack of knowledge. People don't know where to start as far as health. They don't have the basics down. Things like: How should I be dieting? How much should I be walking?"* Other stakeholders suggested investment in education in communities with the highest rates of obesity to promote healthier habits. *"I suggest major educational efforts. Not one size fits all but they would be tapping into multiple parts of the community where you can access individuals who need it."* To address this, they suggested more education programs around things like nutrition, cooking healthy foods, and more community-based events around physical activity. Parental engagement was seen as critical. As one person stated, *"We need to do more educating and engaging family. It needs to be reinforced at the family level."* Respondents saw many potential partners in this work including hospitals, schools and school nurses, social service organizations, public programs like WIC, faith institutions, and workplaces. A few suggested PSAs with positive messaging around healthy lifestyles.

Improve Transportation

Transportation presents many problems in the communities served by MH Northeast, and stakeholders offered perspectives and ideas for future programs and services to alleviate the burden caused by traffic and the lack of transportation in some communities. As one key informant shared, *"We really do need a robust transportation system. Increasing access to that will make a big difference in community health."* Focus group participants and key informant interviewees made suggestions about the direction of future efforts to address transportation. For example, stakeholders suggested nonprofits could offer more transportation services. As stated by one key informant: *"Having more vehicles available and of course more people to hire would help."* Stakeholders also suggested public transportation be expanded and promoted, especially in areas where the population is expanding.

Provide Support to Navigate the Healthcare System

Residents need assistance in facing the number of barriers to accessing healthcare services in the communities served by MH Northeast. Stakeholders described existing strategies such as community health workers should be expanded. Given the challenges in understanding and navigating the health insurance and healthcare systems especially with the implementation of ACA, several respondents suggested that more support be provided to residents around this. Numerous respondents pointed to the critical role that Community Health Workers (CHWs) play in educating patients and community members about prevention and in helping them to navigate the health system. For example, a stakeholder stated that she suggests *"navigator programs for people to access health care."* Senior focus group respondents were particularly insistent that advocates be available for them to navigate the complexities of the healthcare system. As one senior focus group member stated, *"We need personal advocates for us seniors. We don't have anyone to fight for us, no one to talk for us."* As one person stated, *"We need to teach health literacy. Sure, the ACA has been positive but if people don't know how to use their insurance, it's useless."* Respondents also pointed to the need for larger systems reform that incentivizes a more holistic approach to health care, including a social support component. For example, one informant said, *"If there was a mechanism to reimburse providers to provide social support within the healthcare setting…that would make patients' lives easier. They wouldn't have to worry as much about how to navigate the system. Maybe like a one-stop shop. More comprehensive care. Looking more like holistic care."*

Expand Availability and Access to Healthcare Services

While the communities served by MH Northeast offer a multitude of healthcare services that are recognized as being among the best in the United States, access remains a top issue that community stakeholders wished to see addressed. As one informant stated, *"We've got some of the greatest physicians in town. The cardiologists, the OBs, the neonatologists…and that's great but we need more."* One strategy suggested by multiple stakeholders was investment in training local workforce to become healthcare professionals, particularly in specialties such as child psychiatry, vision, and behavioral health: "*We need educational institutions to staff the innovative programs we need. That's coming full circle. This is not what it was years ago…until we get enough providers…that's when we will achieve the structure and service delivery to meet all the needs. We have to look beyond our own walls to do this."* This stakeholder also suggested partnerships with academic institutions to train the future workforce needed to meet the needs of the growing population.

Enhancing awareness of existing services—both health related and social services—was also seen as critical. Respondents reported that more needs to be done to market the services that already exist in the region, including programs offered by hospitals, social service agencies, and health departments. Residents expressed a desire for more marketing of local programs and services. They stressed the need for a multi-pronged marketing approach that is relevant to the audiences. This should include, respondents reported outreach through traditional means such as TV and radio (for seniors), social media, and messaging through local cable TV or ethnic media outlets.

Expand Access to Behavioral Health Services

Informants identified behavioral healthcare access as being a major unmet need in the communities served by MH Northeast. Residents reported that more behavioral health services were needed across the region and across age groups. *"There is a major need for detox and behavioral health. There needs to be a closer link between population health and primary care,"* said one key informant. Many stakeholders reported that the Texas Section 1115 Medicaid demonstration waiver had opened the door in Texas to improvement in access to and quality of behavioral health services. Stakeholders suggested Texas should pursue strategies that sustain these efforts and continue to promote innovation within the behavioral health services space. Respondents also suggested that much more needs to be done to reduce the stigma associated with behavioral health issues. They suggested education at multiple levels included community-wide through PSAs as well as work within schools and community-based programs.

Promote Multi-Sector, Cross-Institutional Collaboration

Healthcare and social service stakeholders frequently noted that, while many local services exist, there are opportunities to improve communication and collaborate to improve population health in the communities that serve MH Northeast. Lack of collaboration among big players in the healthcare space—from medical institutions to public health organizations, government, payers, and social services—was a consistent theme across the key informant interviews. Informants suggested that developing a common agenda across sectors with multiple institutions is a needed next step to improving population health. *"If we could get everybody working on a common agenda…Driving our resources into one area…If we could rally on one thing…that would be incredibly helpful. A concentrated effort."* As noted earlier, respondents reported that because the Texas Section 1115 Medicaid demonstration waiver is intended to promote systems transformation, it provides an opportunity for regional partnerships to address service gaps.

KEY THEMES AND CONCLUSIONS

Through a review of the secondary data and discussions with community residents and key informants, this assessment report provides an overview of the social and economic environment of the community served by MH Northeast, health conditions and behaviors that most affect the population, and perceptions of strengths and gaps in the current environment. Overarching themes that emerge from this synthesis include:

- **The three counties of Harris, Montgomery, and Liberty differ in terms of demographics and population health needs.** Liberty County residents faced greater socioeconomic and health challenges than residents in the other two counties. Quantitative data indicate that Liberty County residents have a lower median household income, experience higher unemployment, and are less educated than their counterparts in Harris and Montgomery Counties. Liberty County also has fewer dentists and primary care physicians per 100,000 population than the other counties. While the residents of Montgomery and Harris County are predominantly White, Harris County and the two cities of Houston and Humble are home to a more racially, ethnically, and linguistically diverse population. Liberty County residents experience higher rates of mortality than residents in Harris or Montgomery Counties.

- **The increase in population over the past five years has placed a tremendous burden on existing public health, social, and healthcare infrastructure, a trend that places barriers to pursuing a healthy lifestyle among residents.** The residents of communities served by MH Northeast are experiencing challenges associated with rapid population growth, including strain on housing availability, time spent commuting to work, and the availability of resources to stay healthy. Infrastructure that does not keep up with demand leads to unmet need and sustains unhealthy habits in the community. Communities without easy access to healthy foods, safe roads, affordable housing, fewer sidewalks, and more violence are at a disadvantage in the pursuit of healthy living.

- **Although there is economic opportunity for many residents, there are pockets of poverty and some residents face economic challenges which can affect health**. Seniors and members of low-income communities face challenges in accessing care and resources compared to their younger and higher income neighbors. While uninsured rates have decreased slightly over the past five years, many adults and children face barriers to obtaining care including cost, availability of providers, language and cultural barriers, and transportation. There are many support organizations in the community that help the uninsured obtain health insurance and charitable care such as federally qualified health centers, but stakeholders report more support is needed for this vulnerable population. Strategies such as community health workers may increase residents' ability to navigate an increasingly complex healthcare and public health system.

- **Obesity and concerns related to maintaining a healthy lifestyle emerged as challenges for the region**. In Harris County, nearly 7 in 10 adults were considered overweight or obese. It also emerged as a key issue in every focus group and interview discussion. Barriers ranged from individual challenges of lack of time to cultural issues involving cultural norms to structural challenges such as living in a food desert or having limited access to sidewalks, recreational facilities, or affordable fruits and vegetables. While several initiatives in the region are trying to address this issue, there appears ample opportunity for action, partnership, and focusing on specific at-risk populations (e.g., rural communities, youth).

- **Behavioral health was identified as a key concern among residents.** Stakeholders highlighted significant unmet needs for mental health and substance abuse services in the communities served by MH Northeast, particularly the burden of mental illness on young people and the incarcerated population. Findings from this current assessment process illustrate the importance of pursuing innovative strategies to address behavioral health issues, such as those programs that are part of the Texas Section 1115 Medicaid demonstration

waiver. This area is rife with opportunity to address needs that are currently not being met.

- **Communities served by MH Northeast have many healthcare assets, but access to those services is a challenge for some residents.** Transportation to health services was identified as a substantial concern, especially for seniors and lower income residents, as there are few public transportation options in the region. While existing public transportation is being expanded in a limited way in the region, other communities have limited access to public transportation. There is an opportunity to expand services to fill in gaps in transportation, ensuring residents are able to access primary care and behavioral health services as well as actively participate in their communities.

PRIORITIZATION OF COMMUNITY HEALTH NEEDS

The CHNA data collection process was conducted over a six-month period. During that time, HRiA analyzed secondary data, and conducted numerous focus groups with community members and key informant interviews with leaders and providers. The severity and magnitude of epidemiological data were triangulated with level of concern among leaders and community members to identify key community needs. The following key health issues emerged most frequently from a review of the available data across all MHHS hospitals and were considered in the selection of the system-wide Strategic Implementation Plan (SIP) health priorities:

- Health Care Access
- Issues Related to Aging
- Behavioral Health, Including Substance Abuse and Mental Health
- Transportation
- Healthy Eating, Active Living, and Overweight/Obesity
- Chronic Disease Management

HRiA and MHHS conducted an initial narrowing of the priorities based on key criteria, outlined in FIGURE 70, which could be applied across all CHNAs in the system. MHHS applied these criteria to select system-level priorities for approval by representatives from MH Northeast. The **final three key priorities identified by this process were:**

1. Healthy Living
2. Behavioral Health
3. Health Care Access

In May 2016, HRiA led a two-hour, facilitated conversation with Memorial Hermann Health Systems (MHHS), MH Northeast, and the other 12 MHHS hospitals participating in its 2016 CHNA-SIP process. This conversation included a presentation of the priorities identified by the community health needs assessment (CHNA) across all MHHS hospitals, including a discussion of the key criteria for prioritization and the impact of these health issues on the most vulnerable populations. After discussion among all hospital facilities, representatives came to consensus on these three final key priorities for each hospital facility and agreed to set hospital-specific goals, objectives, and strategies within them that addressed the facility's specific service area and populations served.

FIGURE 70.PRIORITIZATION CRITERIA

RELEVANCE *How Important Is It?*	**APPROPRIATENESS** *Should We Do It?*	**IMPACT** *What Will We Get Out of It?*	**FEASIBILITY** *Can We do It?*
• Burden (magnitude and severity, economic cost; urgency of the problem) • Community concern • Focus on equity and accessibility	• Ethical and moral issues • Human rights issues • Legal aspects • Political and social acceptability • Public attitudes and values	• Effectiveness • Coverage • Builds on or enhances current work • Can move the needle and demonstrate measureable outcomes • Proven strategies to address multiple wins	• Community capacity • Technical capacity • Economic capacity • Political capacity/will • Socio-cultural aspects • Ethical aspects • Can identify easy short-term wins

APPENDIX A. REVIEW OF 2013 INITIATIVES

CHNA PRIORITIES	OBJECTIVES	RESULTS
Education and prevention for diseases and chronic conditions	To address education and prevention for diseases and chronic conditions (diabetes, heart disease, cancer, and Alzheimer's) through community programs such as education sessions, screenings, support groups and health education publications.	In the past three years, MH-Northeast served 69,888 individuals through 35 programs focused on education and prevention for diseases and chronic conditions.
Address issues with service integration, such as coordination among providers and the fragmented continuum of care	To address information sharing, patients' needs for medical homes, and inappropriate ED use through several programs.	All 11 participating hospitals are responding to the community's concern about the lack of record sharing among providers through the Memorial Hermann Information Exchange (MHiE) which uses a secure, encrypted electronic network to integrate and house patients' digital medical records so they are easily accessible to authorized MHiE caregivers. The service is free to patients and only requires their consent. To date, 50.6% or 4,117,874 of Memorial Hermann patients have registered to participate. Another initiative is for all inpatient, outpatient, and emergency room progress notes to be electronic providing for up-to-date provider access anytime, anywhere. The ER Navigation services at MH-Northeast consist of navigating self-pay/uninsured and Medicaid patients without a primary care provider and who present to the Emergency Department (ED) for primary care reasons. Certified Community Health Workers (CHWs) provide the following navigation services: referrals to PCPs / Medical Homes; assistance with scheduling follow-up doctors' appointments, follow-up calls to assist patients with additional resources, and education on the importance of establishing a medical home. The Program has reduced ER visit utilization by 67% in the 12-months post discharge.
Address barriers to primary care, such as affordability and shortage of providers	To develop recruiting strategies for PCPs within the service area; To assess implementation of a Hospitalist Service to the medical staff to introduce,	MH-Northeast has promoted the importance of having a PCP through communication with a PCP liaison and outreach education. 2 primary care physicians and 2 mid-level providers (one replacement, one new position)

CHNA PRIORITIES	OBJECTIVES	RESULTS
	educate, and encourage service buy-in by physicians; and To continue to capitalize on community resources for primary care.	were recruited into Memorial Hermann Medical Group (MHMG) at the Convenient Care Center. 1 physician was recruited into MHMG in Kingwood. The additional Kingwood location opened in FY2015 is creating additional primary care physician opportunities. Hospitalists have been introduced to primary care physicians in the service area and to medical staff specialists. A list of physicians who admit to the hospitalists is maintained by Patient Access. MH-Northeast provides vouchers to the Memorial Hermann Neighborhood Health Clinic--NE, which provides primary care services in a cost effective setting. The voucher program introduces the working poor to an affordable medical home.
Address unhealthy lifestyles and behaviors	To continue to reinforce healthy lifestyles and influence and encourage behavior change.	-MH-Northeast provided "Staying Active" education for Humble Seniors. -MH-Northeast included healthy meal preparation in "Red Wine Dark Chocolate" and in Stroke and Cancer Survivors groups. -MH-Northeast included "Ask a Dietitian" and portion control education in Stroke Survivor group meetings, in the "Men's Health Event", at the Diabetes Education programs, and at health and employer wellness fairs. -MH-Northeast continued to sponsor and encourage employees to participate in community walks and runs that encourage health and fitness such as: YMCA Bridgefest, American Heart Association Heart Walk, Lake Houston Area Chamber 10k/5K, Relay for Life, etc. -MH-Northeast's Wellness Center offers discounted rates to people over 55 years old to the Wellness Center. -MH-Northeast offers Yoga classes to all cancer survivors. -Patient meal plans were revised to include a "Wellness" entree option to encourage healthier eating habits. -MH-Northeast's cafe implemented the "Mindful Eating Program" that provides suggestions to a healthier option that is being served on the particular day.

CHNA PRIORITIES	OBJECTIVES	RESULTS
		-High fat products in vending machines were replaced with lower fat options. These options were labeled for visibility. -Employee wellness programs continue to include incentive/disincentive for wellness/non wellness selections.
Address barriers to mental healthcare, such as access to services and shortage of providers	To partner with the Psych Response Team to provide case management of post-discharge behavioral health patients in order to encourage compliance in prescribed health maintenance activities. To partner with the Psych Response Team to provide a crisis stabilization clinic that will provide rapid access to initial psychiatric treatment and outpatient services.	To address the barriers to obtaining mental health care, Memorial Hermann has a Psych Response Team used by all of its hospitals to identify, consult with and refer patients who would benefit from appropriate community mental health care. In FY 2016, consults totaled 8,335. Through appropriate referral and placement among 200+ mental health providers within the greater Houston area, the Psych Response Team has reduced emergency room average length of stay for psychiatric patients needing an inpatient psychiatric bed from 72 hours in 2000 to 5.5 hours today. The Psych Response Case Management Program provides intensive community-based case management services for individuals with chronic mental illness who struggle to maintain stability in the community. Since its inception in October 2013, this program has serviced 301 patients from enrollment to discharge. 1800 face-to-face encounters, where case manager and patient collaborate to maintain mental health stability, have resulted in a reduced client facility utilization of 68% in the 6-months post discharge. The Memorial Hermann Mental Health Crisis Clinic is an “Urgent Care” outpatient mental health clinic intended to serve individuals in crisis situations or individuals unable to follow up with other outpatient providers for their mental health needs. The clinic aims to promote better health outcomes for patients with mental health treatment needs, decrease unnecessary ED visits, and decrease inpatient hospitalizations and incarcerations due to inability to engage and remain in mental health treatment. Licensed Clinic Social Workers and Licensed Professional Counselors assist in linking to outpatient follow-up, either by helping patients establish an appointment with an outpatient provider or by providing patients with resources and referrals. These clinics are not designed to provide continuous

CHNA PRIORITIES	OBJECTIVES	RESULTS
		outpatient follow-up for mental health needs; rather, they serve as part of the mental health safety net in lieu of expensive ED visits. There are three clinic locations in the greater Houston area. From 2015-2016, patient encounters, including follow-up visits, totaled 7,149. Memorial Hermann Home Health has a behavioral health trained home health nurse that is available for home health needs that are complicated by behavioral health disease. Memorial Hermann's substance abuse facility, the Prevention and Recovery Center (PaRC), opened an Outpatient Center directly across the street from MH-Northeast in 2014.
Decrease health disparities by targeting specific populations	To address the populations most at risk including the safety net population, the unemployed, children, elderly and "almost elderly," non-English speaking minorities, Asian immigrant populations and the homeless.	MH-Northeast continues to provide middle and high school students with sports physicals so that they can participate in school sports. As the Humble ISD health partner, MH-Northeast also provides concussion evaluation and athletic trainer services. Case Management creates and distributes throughout the hospital lists of local food pantries, local shelters, low cost prescription programs and low cost and free clinics. Cab vouchers are provided when needed to assist with the discharge process.
Increased access to affordable dental care	Not Applicable	The need for "increased access to affordable dental care" is not addressed due to the fact that dental is not a core business function of Memorial Hermann and the limited capacity of each hospital to address those needs. Memorial Hermann fully supports local governments in their efforts to impact these issues.
Increased access to transportation	Not Applicable	The need for "increased access to transportation," is not addressed due to the fact that transportation is not a core business function of Memorial Hermann and the limited capacity of each hospital to address those needs. Furthermore, the hospitals do not have the expertise to address access to transportation and the system views this issue as a larger city and county infrastructure related concern. Memorial Hermann fully

CHNA PRIORITIES	OBJECTIVES	RESULTS
		supports local governments in their efforts to impact these issues.

Note: Appendix A, Review of 2013 Initiatives, added to the 2016 Community Health Needs Assessment on 4/24/17.

APPENDIX B. FOCUS GROUP AND KEY INFORMANT ORGANIZATIONS

Organizations Involved in Focus Group Recruitment by Population Segment

Low-income community members from suburban area	ACCESS Health, Fort Bend County
Seniors (65+ years old)	The Pinnacle Senior Center
Community members from more mid to higher SES area	Fort Bend County Women's Club (Sugar Land)
Spanish-speaking Hispanic community members and English-speaking Hispanic community members	Association for the Advancement of Mexican Americans
Parents of preschool children (0-5 years old)	The Yellow School
Seniors (65+ years old)	Senior Center, City of South Houston
Low-income community members from rural area	Mamie George Community Center (Catholic Charities)
Adolescents (15-18 years old)	Katy Family YMCA
Low-income community members from urban area	Houston Food Bank
Asian community members	HOPE Clinic

Organizations Contributing Key Informant Interviews

ACCESS Health (FQHC)
Asian American Health Coalition
Association for the Advancement of Mexican Americans
Blue Cross Blue Shield
Children at Risk
Childrens Defense Fund
Christ Clinic
City of Houston, Department of Neighborhoods
City of Houston, Department of Parks and Recreation
Community Health Choice
Fort Bend Health and Human Services
Harris County Public Health and Environmental Services
Harris Health
Houston Independent School District
Institute for Spirituality and Health
Interfaith Community Clinic
Interfaith Ministries of Greater Houston
LoneStar Family Health Center
Mayor's Office for People with Diabilities
Memorial Hermann Texas Medical Center
Memorial Hermann Health System
Office of Harris County Judge Ed Emmett
One Voice Texas
Pasadena Independent School District
SETRAC (Southeast Texas Regional Advisory Council)
Sheltering Arms Senior Services, Neighborhood Centers Inc.
Southwest Management District
Texas Legislature
The Harris Center for Mental Health and IDD (MHMRA)
Tri County Services
United Way of Montgomery County
University of Texas School of Public Health

APPENDIX C. FOCUS GROUP GUIDE

Goals of the Focus Groups:

- To identify the perceived health needs and assets in the community
- To understand to what extent healthy living, including healthy eating and physical activity, is achievable in the community and perceived barriers to living a healthy lifestyle
- To gain an understanding of people's barriers to health and how these barriers can be addressed
- To identify areas of opportunity for Memorial Hermann to address needs

[NOTE: THE QUESTIONS IN THE FOCUS GROUP GUIDE ARE INTENDED TO SERVE AS A GUIDE, BUT NOT A SCRIPT.]

BACKGROUND (5 MINUTES)

- Welcome everyone. My name is _____, and I work for Health Resources in Action, a non-profit public health organization in Boston.

- We're going to be having a focus group today. Has anyone here been part of a focus group before? You are here because we want to hear your opinions. I want everyone to know there are no right or wrong answers during our discussion. We want to know your opinions, and those opinions might differ. This is fine. Please feel free to share your opinions, both positive and negative.

- Memorial Hermann Health System is conducting a community health assessment to gain a greater understanding of the health issues facing residents in the Greater Houston area and its specific communities, how those needs are currently being addressed, and where there are opportunities to address these needs in the future. The information you provide is a valuable part of this assessment and improving health services in the community.

- As you can see, I have a colleague with me today, [NAME], who is taking notes during our discussion. She works with me on this project. I want to give you my full attention, so she is helping me out by taking notes during the group and she doesn't want to distract from our discussion.

- [NOTE AUDIOTAPING IF APPLICABLE] Just in case we miss something in our note-taking, we are also audio-taping the groups tonight. We are conducting several of these discussion groups around the Greater Houston area, and we want to make sure we capture everyone's opinions. After all of the groups are done, we will be writing a summary report of the general opinions that have come up. In that report, I might provide some general information on what we discussed tonight, but I will not include any names or identifying information. Your responses will be strictly confidential. In our report, nothing you say here will be connected to your name.

- You might also notice that I have a stack of papers here. I have a lot of questions that I'd like to ask you tonight. I want to let you know that so if it seems like I cut a conversation a little short to move on to the next question, please don't be offended. I just want to make sure we cover a number of different topics during our discussion tonight.

- Lastly, please turn off your cell phones or at least put them on vibrate mode. The group will last only about 80-90 minutes. If you need to go to the restroom during the discussion, please feel free to leave, but we'd appreciate it if you would go one at a time.

- Any questions before we begin our introductions and discussion?

INTRODUCTION AND WARM-UP (5-10 MINUTES)

- Now, first let's spend a little time getting to know one another. Let's go around the table and introduce ourselves. Please tell me: 1) Your first name; 2) what town or neighborhood you live in; and 3) something about yourself – such as how many children you have or what activities you like to do in your spare time. [AFTER ALL PARTICIPANTS INTRODUCE THEMSELVES, MODERATOR TO ANSWER INTRO QUESTIONS]

COMMUNITY AND HEALTH PERCEPTIONS (15-20 MINUTES)

- Tonight, we're going to be talking a lot about the community or neighborhood that you live in. How would you describe your community?
    - If someone was thinking about moving into your community, what would you say are some of its biggest strengths or the most positive things about it? [PROBE ON COMMUNITY AND ORGANIZATIONAL ASSETS/STRENGTHS]
- What are some of the biggest problems or concerns in your community? [PROBE ON ISSUES IF NEEDED – HEALTH, ECONOMIC, SOCIAL, SAFETY, ETC.]
    - Just thinking about day-to-day life –working, getting your kids to school, things like that – what are some of the challenges or struggles <u>you</u> deal with on a day-to-day basis?
- What do you think are the most pressing <u>health</u> concerns in your community? [PROBE ON THE FOLLOWING SPECIFIC ISSUES IF NOT MENTIONED: CHRONIC DISEASES/CONDITIONS, MENTAL HEALTH, SUBSTANCE ABUSE, VIOLENCE, ACCESS TO HEALTY FOOD; ENSURE ADEQUATE DISCUSSION TIME; PROBE ON HEALTH CARE ACCESS IF MENTIONED]
    - How have these health issues affected your community? [PROBE FOR SPECIFICS]
- Thinking about health and wellness in general, what helps keep you healthy?
    - What makes it <u>easier</u> to be healthy in your community?
    - What supports your health and wellness?
    - What makes it <u>harder</u> to be healthy in your community?

PERCEPTIONS OF PUBLIC HEALTH/PREVENTION SERVICES AND HEALTH CARE (15-20 minutes)

- Let's talk about a few of the health issues you mentioned. [SELECT TOP HEALTH CONCERNS] What programs, services, and policies are you aware of in the community that currently focus on these health issues?

    - What's missing? What programs, services, or policies are currently not available that you think should be?

    - What do you think the community should do to address these issues? [PROBE SPECIFICALLY ON WHAT THAT WOULD LOOK LIKE AND WHO WOULD BE INVOLVED TO MAKE THAT HAPPEN]

        - What do you think are some things a community could do to make it easier for people to be healthy?
        - If these things were available in the community, what would make you more likely to access these opportunities? (PROBE ON SPECIFICS IF NEEDED: What would these programs/services include? Where should they be offered? During what hours? How often? Would you prefer an individual or group setting?)

- [IF NOT ALREADY MENTIONED] I'd like to ask specifically about health care in your community. Have you or someone close to you ever experienced any challenges in trying to get health care? What specifically? [PROBE FOR BARRIERS: INSURANCE ISSUES, LANGUAGE BARRIERS, LACK OF TRANSPORTION, CHILD CARE, ETC.]

    - [NAME BARRIER] was mentioned as something that made it difficult to get health care. What do you think would help so that people don't experience the same type of problem that you did in getting health care? What would be needed so that this doesn't happen again? [REPEAT FOR OTHER BARRIERS]

PERCEPTIONS OF HEALTHY LIVING AND RELATED PROGRAMS (20-25 MINUTES)

- I'd now like to talk specifically about being able to live a healthy lifestyle such as being able to maintain a healthy weight and being able to exercise. In your opinion, is being able to maintain a healthy habits a concern in your community?

    - [PROBE IF NEEDED: How much of a concern is being able to live a healthy lifestyle relative to other health or economic issues?]

- What are some things that you think people can do to achieve or maintain a healthy weight in your community? [PROBE FOR RISK FACTORS AND BEHAVIORS: ACCESS TO HEALTHY FOODS, SAFE ENVIRONMENTS FOR BEING PHYSICALLY ACTIVE, EATING HEALTHY AT HOME OR WORK, TIME TO BE PHYSICALLY ACTIVE, ETC.]

- Let's talk about healthy eating.

    - Do you know of any programs in your community that currently try to address healthy eating? What are they?

    - What kinds of programs or services would you want to see in your community to help people with healthy eating? What would the program look like?

- If these programs or services were available in the community, what would make you more likely to access these opportunities? (PROBE ON SPECIFICS IF NEEDED: Where should they be offered? During what hours? How often? Would you prefer an individual or group setting?

- Let's talk about exercise.

    - Do you know of any programs in your community that currently try to help people exercise more? What are they?

    - What kinds of programs or services would you <u>want</u> to see in your community to help people with physical activity? What would the program look like?

    - If these programs or services were available in the community, what would make you more likely to access these opportunities? (PROBE ON SPECIFICS IF NEEDED: Where should they be offered? During what hours? How often? Would you prefer an individual or group setting?

CLOSING (2 MINUTES)

- Thank you so much for your time and sharing your opinions. Before we end the discussion, is there anything that you wanted to add that you didn't get a chance to bring up earlier?

- I want to thank you again for your time. And we'd like to express our thanks to you. [DISTRIBUTE STIPENDS AND HAVE RECEIPT FORMS SIGNED].

- As I mentioned before, we are conducting these groups around the Greater Houston area, and we're also talking to people who work at organizations. After all this is over, we're going to be writing up a report. Memorial Hermann wants to share these report findings with people who are interested in the results. We have a sign-up sheet here if you are interested in finding out more about the results of this effort and to receive a summary of the report findings. Feel free to provide your name and contact information, if you are interested. If you are not interested, you do not have to sign up. [PROVIDE CONTACT SHEET FOR INTERESTED PEOPLE]

- Thank you again. Your feedback is greatly valuable, and we greatly appreciate your time and for sharing your opinion.

APPENDIX D. KEY INFORMANT INTERVIEW GUIDE

Goals of the Key Informant Interview

- To determine perceptions of the health-related strengths and needs of individuals served in the primary service area of each MHHS facility
- To explore how these issues can be addressed in the future
- To identify the gaps, challenges, and opportunities for addressing community needs via the SIP planning process

[NOTE: QUESTIONS FOR THE INTERVIEW GUIDE ARE INTENDED TO SERVE AS A GUIDE, NOT A SCRIPT.]

BACKGROUND (5 minutes)

- Hi, my name is _____ and I am with Health Resources in Action, a non-profit public health organization. Thank you for taking the time to speak with me today.

- As I mentioned previously, we are working with Memorial Hermann Health System on their community health needs assessment. This effort aims to gain a greater understanding of the health of area residents served by [NAME OF FACILITY], how these health needs are currently being addressed, and opportunities to facilitate successful implementation of community activities for the future.

- We are conducting interviews with leaders in the community to understand different people's perspectives on these issues. We greatly appreciate your feedback, insight, and honesty.

- Our interview will last about ____ minutes [EXPECTED RANGE FROM 30-60 MINUTES, DEPENDING ON INTERVIEWEE]. We recognize your time is valuable, so please let us know if you have any time constraints for our conversation. After all of the discussions are completed, we will be writing a summary report of the general themes that have emerged during the discussions. We will not connect any names or identifying information to any specific response. Nothing sensitive that you say here will be connected to directly to you in our report.

- Any questions before we begin our introductions and discussion?

THEIR AGENCY/ORGANIZATION

- What is role is at [NAME OF ORGANIZATION]? (probe: in relation to health care)

COMMUNITY ISSUES

- How would you describe the community which your organization serves?
    - What do you consider to be the community's strongest assets/strengths?
        - What are some of its biggest concerns/issues in general? What challenges do residents face day-to-day?
    - What do you think are the most pressing <u>health</u> concerns in the community? Why? [PROBE ON SPECIFICS]
- Memorial Hermann Health System has identified promotion of healthy living as one of their priority areas for its assessment.

- Does [NAME OF COUNTY] have any programs that promote healthy lifestyles? (Prompt for nutrition, exercise.) If yes:
    - Do you think these programs are adequate? What is needed to improve these programs?
    - Which populations are most vulnerable or at risk for unhealthy lifestyles?
    - How do residents obtain information about these programs?
    - What do you think are community residents' biggest challenges in adopting a healthy lifestyle?
- FOR ADDITIONAL PRIORITY HEALTH AREAS, ASK THE FOLLOWING QUESTIONS FOR EACH AREA:
    - Memorial Hermann has also identified [HEALTH ISSUE] as a priority area for its assessment of community needs.
        - How has [HEALTH ISSUE] affected your community?
        - Who do you consider to be the populations in the community most vulnerable or at risk for [THIS CONDITION / ISSUE]?
        - From your experience, what are <u>community residents'</u> biggest challenges to addressing [THIS ISSUE]?
        - From your experience, what are <u>organizations'</u> biggest challenges to addressing [THIS ISSUE]?
        - What programs, services, or policies are you aware of in the community that address [THIS HEALTH ISSUE]? [PROBE FOR SPECIFICS]
        - Where are the gaps? What program, services, or policies are currently not available that you think should be?

    [REPEAT SET OF QUESTIONS FOR NEXT HEALTH ISSUE IDENTIFIED]

3. In general, what is occurring or has recently occurred that affects the health of the community you serve? [PROBE ON EXTERNAL FACTORS: Built environment, physical environment, economy, political environment, resources, organizational structures, etc.]

4. What are some factors that make it easier to be healthy in your community?

5. What are some factors that make it harder to be healthy in your community?

ACCESS TO CARE

- What do you see as the strengths of the health care and social services in your community? What do you see as its limitations?

- What challenges/barriers do residents in your community face in accessing health care and social services? What specifically? [PROBE IN DEPTH FOR BARRIERS TO CARE: INSURANCE ISSUES, LANGUAGE BARRIERS, LACK OF TRANSPORTION, CHILD CARE, ETC.]

    - What programs, services, or policies are you aware of in the community that address access to care?

    - Where are the gaps? What program, services, or policies are currently not available that you think should be?

ADDRESSING COMMUNITY NEEDS IN THE FUTURE

- What would be the 1 thing that you think needs to be done in the next year that would help make the biggest difference in improving community health?

- Thinking about the future, what would you like to see MHHS/[NAME OF FACILITY] work on to address community needs?

    - What resources or supports are needed to facilitate this success? What needs to be in place as planning and implementation move forward?

CLOSING (2 minutes)

- Thank you so much for your time. That's it for my questions. Is there anything else that you would like to mention that we didn't discuss today? Thank you again. Have a good day.

Please address written comments on the CHNA and Strategic Implementation Plan and requests for a copy of the CHNA to:

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