Round Rock Medical Center

Community Health Needs Assessment
December 2016

Community Health Needs Assessment –
Hospital Facility Geography
December 2016

The following spreadsheet shows the county of residence of patients served by St. David's HealthCare facilities. Based on this data, the four St. David's facilities include the following county Community Health Needs Assessments:

St. David's Medical Center – Travis, Williamson, Bastrop, Hays, Caldwell

St. David's South Austin Medical Center – Travis, Williamson, Bastrop, Hays, Caldwell

St. David's North Austin Medical Center – Travis, Williamson, Hays, Bastrop

St. David's Round Rock Medical Center – Travis, Williamson

Geography of Patients Served by St. David's

County	ST. DAVID'S MEDICAL CENTER		SOUTH AUSTIN MEDICAL CENTER		NORTH AUSTIN MEDICAL CENTER		ROUND ROCK MEDICAL CENTER		TOTALS	Percent
Travis	100,183	54.2%	85,199	64.3%	80,318	69.0%	14,286	23.2%	279,986	56.5%
Williamson	45,353	24.5%	1,743	1.3%	24,264	20.8%	42,503	69.1%	113,863	23.0%
Bastrop	7,959	4.3%	20,637	15.6%	3,242	2.8%	472	0.8%	32,310	6.5%
Hays	8,652	4.7%	12,263	9.3%	1,512	1.3%	211	0.3%	22,638	4.6%
Caldwell	1,907	1.0%	1,983	1.5%	303	0.3%	86	0.1%	4,279	0.9%
All Other Counties	19,063	10.3%	7,582	5.7%	5,929	5.1%	3,686	6.0%	36,260	7.3%
None/Unknown	1,636	0.9%	3,024	2.3%	875	0.8%	266	0.4%	5,801	1.2%
	184,753		132,431		116,443		61,510		495,137	

Notes:
Each of the counties that make up "All Other Counties" represent less than 1% of total patients across hospital facilities
The remaining counties (highlighted above) are included in the individual facility's CHNA if patient population represents 1% or greater

Cases from January 1, 2014 thru December 31, 2014
Extracted January 8, 2015

Community Health Needs Assessment
December 2016

Definition of the Community Served
St. David's Foundation, in collaboration with other healthcare entities in Central Texas, conducted Community Health Needs Assessments for the following 5 counties: Bastrop, Caldwell, Hays, Travis and Williamson Counties. These counties were selected because they represent the county of residence for the majority of patients receiving care at St. David's Hospital facilities. The purpose of the assessments was to identify and prioritize health needs so that healthcare organizations can better serve their communities.

Description of Process & Methodology
The assessments included several components, including: a review of previously published community needs assessments and quantitative data from secondary sources, interviews, focus groups, and an online survey.   The data collection team gathered input from people who represent the broad interests of each county and who have special knowledge of or expertise in the community's health issues. The key stakeholders included nonprofit leaders, health department authorities, public school leaders, healthcare providers or leaders, elected officials, researchers, people representing distinct geographic areas, and people representing certain ethnic/racial groups. Feedback from these key stakeholders was incorporated into the prioritization process. (For a detailed description of methodology, please refer to appendices in the attached reports.)

Prioritized Description of Significant Health Needs
Based on the findings from these five county-level assessments, St. David's has determined the following six areas to be the priority health needs to be addressed in our hospitals' Implementation Plans. The rationale for selecting the following needs is included in the attached pages:
1. Need for improved healthcare access, quality and insurance coverage
2. Need for improved socioeconomic factors that contribute to health
3. Need for improved health and well-being of children
4. Need for improved health and well-being of women
5. Need for improved health and well-being of seniors
6. Need for improved health and well-being in rural communities

Description of Resources Potentially Available to Address these Needs
St. David's will utilize a variety of resources to address these needs, including distributions from St. David's HealthCare Partnership, income from investments, and capacity of staff, including expertise in public health, grantmaking, strategic communications, and organizational capacity building.

Rationale for Selection as Community Health Need

GOAL 1: IMPROVE HEALTHCARE ACCESS, QUALITY AND INSURANCE COVERAGE FOR CENTRAL TEXANS

HOW WILL WE ADDRESS THIS GOAL? (OBJECTIVES)

1. INCREASE ACCESS TO & QUALITY OF PATIENT-CENTERED MEDICAL HOMES
2. INCREASE ACCESS TO SPECIALTY CARE
3. INCREASE ENROLLMENT AND UTILIZATION OF INSURANCE COVERAGE
4. ENSURE WORKFORCE IS ADEQUATE TO MEET NEEDS AND IS REFLECTIVE OF COMMUNITY DIVERSITY

WHY THESE AREAS?

Medical Homes and Specialty Care: Fragmented medical care is not only costly but an ineffective approach in the health care delivery system. The patient-centered medical home (PCMH) is a model of primary care that is comprehensive, patient-centered, coordinated, accessible, and committed to quality and safety. A central PCMH function is to coordinate services for patients within and outside the facilities. By coordinating care and communication, PCMHs link patients to specialists, dental and behavioral health providers and community supports that make up a "medical neighborhood."
Insurance Coverage: Uninsured people receive less medical care and less timely care, have worse health outcomes, and lack of insurance is a fiscal burden for them and their families. People of color, people in rural areas, low wage workers, and the unemployed are more likely to lack health insurance. Safety-net care from hospitals and clinics improves access, but does not fully substitute for health insurance.

Workforce: Health professional shortages in primary and specialty care, as well as allied health professions hinder access to care. Shortages affect stability and efficiency of clinics and pose challenges to their core mission. Quality, cost-effectiveness and patient satisfaction are affected. Ensuring diversity while building the workforce leads to care that is delivered with cultural and linguistic competence while bolstering patient engagement and reducing patient safety concerns.

Rationale for Selection as Community Health Need

1. INCREASE AVAILABILITY & UTILIZATION OF HEALTHY FOOD AND PHYSICAL ACTIVITY OPTIONS
2. IMPROVE DELIVERY AND COORDINATION OF WRAP-AROUND SERVICES FOR LOW-INCOME HOUSING DEVELOPMENTS INCLUDING PERMANENT SUPPORTIVE HOUSING

WHY THESE AREAS?

Clinical care accounts for 20% of one's health status while social and economic factors, the physical environment, and healthy behaviors account for the other 80%. If the aspiration is to become the healthiest community in the world, then investing in the community conditions that enable people to lead heathier lives will be an important part of SDF's strategic shift. The linkages between socioeconomic factors and health are supported by a robust evidence base and solutions are emerging. There is also ample opportunity for innovation, leadership, and multisector partnership.

While the social determinants of health can seem boundless, entering this work in the following areas would
a) build on prior work;
b) have specific agendas for leading, leveraging, or partnering;
c) connect to community health indicators;
d) and respond to priorities identified in our community health needs assessment.

Healthy Food: Research and common sense link eating nutritious food with lower rates of overweight/obesity and chronic disease. With areas in Central Texas designated as food deserts (difficult to access affordable, fresh food) and with about a quarter of Austin's population considered food insecure, eating healthy food is a challenge for many in our community. Strategic efforts nationally aim to improve first foods (very young children), school foods, and community foods.

Physical Activity: While sedentary behavior contributes to overweight/obesity and chronic disease, regular physical activity contributes to physical and emotional wellbeing and reduces the negative health effects of chronic stress. In communities where there are public safety concerns, stretched family incomes, and limited infrastructure, residents face barriers to achieving recommended levels of exercise as well as to incorporating physical activity into daily life. One strategic and sustainable approach could be to improve the built environment.

Housing Wrap Around Services: The sickest 5% of people who experience the most complex medical and social challenges drive about 50% of our nation's medical costs. The most promising model in terms of both improving individual outcomes while reducing systemic costs (e.g., emergency departments, jails) is one that stabilizes housing first for our most vulnerable residents. While SDF will not seek to fund brick and mortar housing units, it is positioned to maximize the SUPPORTIVE component of permanent supportive housing. Examples of wrap around services and community amenities include case management, assertive community treatment for people with severe mental illness, and healthy lifestyles interventions.

Rationale for Selection as Community Health Need

GOAL 3: IMPROVE THE HEALTH AND WELL-BEING OF CHILDREN AND REDUCE HEALTH DISPARITIES AMONG TARGETED CHILD POPULATIONS

HOW WILL WE ADDRESS THIS GOAL? (OBJECTIVES)

1. INCREASE PREVENTION AND TREATMENT OF TRAUMA IN CHILDREN
2. REDUCE TEEN PREGNANCY
3. IMPROVE ORAL HEALTH IN ELEMENTARY SCHOOL CHILDREN

WHY THESE AREAS?

While there are a wide variety of interventions and approaches that are designed to improve the health and well-being of children, the two objectives under this goal were selected based on the unique position SDF has in terms of our relationship with almost all of the local safety-net clinics in our area (objective 3.1) and our operation of a school-linked mobile dental program serving low income children (objective 3.2).

Prevention and Treatment of Trauma: Extensive research indicates that responsive relationships and health promoting environments in the early years provide a strong foundation for a lifetime of effective learning, adaptive behavior and good health.

Given the frequent interactions young children and their families have with primary care providers, and their generally trusted status they hold, primary care providers can be a key intercept point for both prevention and early intervention efforts regarding trauma and adversity in childhood. The American Pediatric Academy has recommended the pediatricians focus greater attention on building capacity for parents raising young children under adverse conditions. The research base on how pediatricians can do this effectively is growing significantly, led in large part by Harvard's Center for the Developing Child. Thus, there are now clearer paths and guidance that pediatricians can employ to inform that practice with this research.

Teen Pregnancy: Texas has the fourth highest rate of teen pregnancy in the nation, and the second highest rate of teen births. Texas also has the highest rate in the nation for repeat teen pregnancies. Travis, Bastrop, and Caldwell all have teen birth rates above the national average. Teen pregnancy affects communities of color disproportionately, with Latinos experiencing the highest rates of teen pregnancy, followed by African-Americans. However, socio-economics is the greatest predictor of risk for teenage pregnancy. In Travis County, only 12 of its 53 zip codes account for 80% of all teen births. These zip codes encompass lower income neighborhoods located in the far north, east, and far south parts of Austin.

Becoming a parent as a teenager creates significant challenges for the teen parents and their children. Teen parents are at increased risk of dropping out of school because of the pressures they experience. Only 38 percent of teen mothers complete high school while less than 2 percent go on to obtain a college degree. In addition, children born to teen parents are more likely to experience adverse health and developmental consequences while also having an elevated risk to perform poorly in school.

Oral Health: Childhood caries is the most preventable chronic disease in school-aged children. Significant health disparities exist as it relates to oral health access. The "silent epidemic of oral diseases" disproportionately affects disadvantaged communities, especially children, the elderly, and racial/ethnic minority groups. One in 4 children have untreated tooth decay and this rate among low-income populations is more than twice compared to higher income populations. Research from the American Dental Association and the American Academy of Pediatric Dentistry show that sealants are an evidence-based clinical practice that can decrease the risk of tooth decay by 80% in permanent molars. Despite the effectiveness of sealants to prevent caries, only one in five school-aged children from low-income families receives dental sealants to prevent dental caries.

Rationale for Selection as Community Health Need

GOAL 4: IMPROVE THE HEALTH AND WELL-BEING OF WOMEN AND REDUCE HEALTH DISPARITIES AMONG TARGET POPULATION

HOW WILL WE ADDRESS THIS GOAL? (OBJECTIVES)

1. INCREASE ACCESS TO COMPREHENSIVE WOMEN'S HEALTH SERVICES

WHY THESE AREAS?

Access to Comprehensive Women's Health: Women have a lower mortality rate than men, but experience more disease and disability throughout their lifetimes. During childbearing years, women have greater needs for clinical care than men. In 2011, significant cuts in the Texas state family-planning budget led to reductions in access and utilization of state-funded family planning services. A study in Austin in 2013 found that expressed desire for Long Acting Reversible Contraceptives (such as IUDs and implants) is greater than the ability to actually receive those highly effective methods of birth control, particularly among young, low-income, uninsured women. Investments in women's health services will not only benefit women directly, but also improve child health outcomes and reduce poverty.

Rationale for Selection as Community Health Need

GOAL 5: IMPROVE THE HEALTH AND WELL-BEING OF SENIORS AND REDUCE DISPARITIES AMONG TARGETED SENIOR POPULATIONS

HOW WILL WE ADDRESS THIS GOAL? (OBJECTIVES)

1. IMPROVE QUALITY AND ABILITY FOR SENIORS TO AGE IN PLACE.

WHY THIS AREA?

Central Texas is leading the country in the growth of older populations. A recent report by the Brookings Institute found that the Austin-Round Rock metropolitan area has the fastest growing pre-senior population (age 55-64) in the nation and the second fastest growing senior population (age 65+) in the nation.

Quality of Life: The desire of the vast majority of older adults is to remain living at home rather than enter a costly nursing home. However, many need help to achieve this goal. A St. David's Foundation survey found that 11% of seniors had difficulty getting out of a bed or chair and 7% needed help with bathing, showering or dressing. Fifteen percent lack adequate transportation and 28% of seniors age 75 and over report a problem with loneliness. The survey also found 86% of older adults have a chronic disease and 63% have multiple chronic conditions. Older adults are also vulnerable to malnutrition, abuse, neglect, and financial exploitation. As seniors near the end of life, they need support to ensure relief from the symptoms and stress of a serious illness.

Caregiver Support: Hired and family member caregivers play a vital role in enabling our senior population to age in their homes and communities. They play a direct role in managing the health and safety of the aging population and are also a source of social connection.   A lack of resources and supports for caregivers coupled with the round the clock demands of caring for seniors with health issues and disabilities can lead to caregiver burnout and dissatisfaction. This can then lead to poor quality care and frequent caregiver turnover. Family members often bear the burden of caregiving roles and often experience a downward spiral of their own health that worsened as a result of caregiving. These caregivers' health situation is more than just a problem for themselves as their decline in health has also affects their ability to provide care.

Rationale for Selection as Community Health Need

GOAL 6: IMPROVE HEALTH OUTCOMES IN RURAL COMMUNITIES AND REDUCE HEALTH DISPARITIES AMONG TARGET POPULATIONS

HOW WILL WE ADDRESS THIS GOAL? (OBJECTIVES)

1. INCREASE ACCESS TO PRIMARY CARE IN RURAL AREAS
2. REDUCE SUBSTANCE USE DISORDERS

WHY THESE AREAS?

Rural residents often experience barriers to healthcare that limit their ability to get the care they need at the right place, right time and at the right dosage. Access to primary care, mental health and dental providers is worse than average in the 4 rural counties in SDF's service area *(County Health Rankings).* In addition to inadequate supply of healthcare services in an area, there are other factors which play a significant role in healthcare access including workforce shortages (e.g. primary care providers), health insurance status, distance and transportation, poor health literacy, and the stigma of certain conditions such as mental health or substance use issues.

Access to Primary Care: Rural populations experience lower access to health care along several dimensions including affordability, proximity, and quality, compared to non-rural areas. In addition, rural communities are often designated as Health Professional Shortage Areas (HPSA) and/or Medically Underserved Areas (MUA) and have higher population to provider ratios. Although access to primary care does not guarantee good health, access to healthcare is critical for a population's well-being and vitality.

Substance Use Disorders: Existing complex challenges in many rural communities (poor housing, poverty, and unemployment) can increase the likelihood of substance use. The cultural, structural, and social realities of rural life can not only affect the prevalence of drug use but also exacerbate its consequences. The isolation and self-reliance of rural communities can negatively affect care-seeking behavior, particularly regarding mental health and substance abuse services. Barriers to care seeking in rural areas are both attitudinal and structural. Factors such as perceived stigma and mistrust in assurance of confidentiality as well as obstacles to transportation, lack of insurance coverage, and unavailability of local detoxification and psychiatric services can all inhibit rural residents' willingness and ability to seek care.

2016 Community Health Needs Assessment for Travis County

NYBECK

ANALYTICS

Health Research & Evaluation

CONTENTS

EXECUTIVE SUMMARY

Introduction and Background

St. David's Foundation, Seton Healthcare Family, Austin/Travis County Health and Human Services, and Central Health have collaborated to conduct a Community Health Needs Assessment for Travis County. The purpose of the Assessment is to identify and prioritize health needs so that these organizations can better serve their communities.

The Assessment includes four components: 1) review of previously published community needs assessments and quantitative data from secondary sources, 2) interviews, 3) focus groups, and 4) an online survey. Nybeck Analytics reviewed quantitative data analyses by Austin/Travis County Health and Human Services, MIA Consulting, and previously published community needs assessments. We incorporated these quantitative findings into the project design, interviews and focus group, and this report as appropriate. During the interviews, focus group, and online survey, Nybeck Analytics gathered input from people who represent the broad interests of Travis County and who have special knowledge of or expertise in the community's health issues. The key stakeholders included nonprofit leaders, health department authorities, public school leaders, healthcare providers or leaders, elected officials, researchers, people representing distinct geographic areas, and people representing certain ethnic/racial groups. Consultants for Nybeck Analytics conducted nine interviews and one focus group between Nov. 14, 2015 and Jan. 14, 2016. After completing the interviews and focus group, we administered an online survey in early Feb. 2016 to help prioritize needs previously identified in the Assessment. (For a detailed description of methodology, please refer to **Appendices**.)

Unmet Community Health Needs

During the Assessment, Nybeck consultants asked participants to explain what they believed were the most significant community health needs facing Travis County and the people served by the participant's organizations, barriers to meeting those needs, and potential solutions. Rather than describing "community context" or "social or environmental factors," when asked to name the most significant "community health needs," participants often replied with: "poverty," "transportation," "housing," and also needs more traditionally considered healthcare-related issues. Nybeck Analytics has followed their lead and written the report in the spirit of their responses. Based on the online survey findings and a qualitative assessment of the interviews and focus group, Nybeck Analytics offers the needs in prioritized order below.

Resources and services supporting healthy lifestyles (nutritious food, physical activity, preventive services). Participants noted the burden of chronic diseases such as heart disease, cancer, stroke, chronic lung disease, and diabetes. They emphasized investments in 1) tobacco cessation, 2) physical activity, and 3) nutrition. Approaches should be collaborative and comprehensive. Work sites, schools, and healthcare organizations can coordinate to support healthy lifestyles.

Resources and services to combat poverty. These included workforce development, early childhood education, affordable housing, and increasing the minimum wage.

Mental and behavioral healthcare. Assessment participants stressed the need to strengthen community-based services and offer more preventive care and other relatively low levels of care to people with mental and behavioral health issues. They suggested 1) studies on the cost-effectiveness of preventive services, 2) reducing the stigma of therapy, 3) earlier intervention for children to prevent mental illness, 4) expansion of mental and behavioral healthcare in schools, and 5) strengthening and expanding integrated behavioral healthcare.

Affordable housing. Participants in the Assessment called for 1) more affordable housing, 2) greater awareness and understanding of homelessness and its causes, 3) housing people with substance abuse problems or mental health issues, 4) more family shelters. They argued that housing should be seen as a "health intervention."

Primary and preventive healthcare. Participants emphasized system-level changes like improving quality of care, payment reform, and greater healthcare coverage. They also discussed solving the provider shortage, conducting more sophisticated marketing and development for safety net clinics to make them more accessible to the neediest patients, using a more holistic approach to healthcare, and providing culturally and linguistically appropriate health-related publications and materials.

Patient navigation. Patient navigation was brought up within several contexts such as to obtain healthcare coverage, to be provided to residents in affordable and supportive housing, and to help patients navigate primary and preventive care, specialty care, mental and behavioral healthcare, and substance abuse treatment.

Resources and treatment for substance abuse. A participant suggested a community-wide education and outreach response to emerging drug epidemics. Several called for building capacity in the area of substance use disorders.

More robust transportation system. Many comments focused on providing transportation to and from social service agencies and healthcare facilities. Suggestions for improvement included better planning when developing new clinics, better urban planning, and a partnership among transit and healthcare interests to tackle the transportation issue.

Reproductive health services and family planning. Participants cited the relatively high rates of HIV and other STDs in Travis County. They suggested routine HIV testing in hospitals and increasing HPV vaccine rates. With the HPV vaccine, there is a huge opportunity for success in preventing cervical, anal, and throat cancers. Focus participants stressed the continued need for family planning, including abortion services when appropriate and necessary. They also spoke of the high teen pregnancy rate among Hispanics.

Dental care among adults. Interviewees and focus group participants suggested partnerships among clinics and hospitals to help patients and decrease emergency room visits.

Specialty care and procedures. Several people stressed the need for specialty care and procedures among patients who depend on the healthcare safety net and who are covered by Medicaid. They discussed the potential for a new ambulatory surgery center.

Vision care and eyeglasses. Vision care and free to low-cost eyeglasses continue to be needs among older adults and families with children in the Austin Independent School District. Focus group participants called for a community-based approach to solving this issue.

Importance of Collaboration and Partnerships

An overall theme in addressing unmet needs in Travis County was greater collaboration and more strategic partnerships. These suggestions involved blanket agreements among the City, the County, and school districts to cut down on bureaucracies, data-sharing agreements among entities, a system of coordination among social service and healthcare providers, and a collaborative effort to improve the continuum of care.

Populations to Target with Resources and Services

Suggested resources and services can benefit all residents of Travis County, particularly those with limited resources. Interviewees and focus group participants identified people in low-income households and the following groups who may be particularly vulnerable and in need of specific resources:

- Children: preventive mental and behavioral health services, psychiatric care, HPV vaccines, vision care and eyeglasses
- Older adults: caregiver support, more trained healthcare providers, housing, transportation, food and nutrition, alternatives to nursing homes, eyeglasses
- Those suffering from severe mental illnesses or addiction: housing, peer support
- Residents of affordable or supportive housing: mental and behavioral healthcare, patient navigation
- Residents of Del Valle: transportation, resources supporting healthy lifestyles
- People with disabilities: greater number of higher-quality services, children's therapies
- Certain ethnic/racial groups: resources supporting healthy lifestyles (African Americans and Hispanics), culturally and linguistically appropriate outreach and healthcare resources (Asian-Americans and Hispanics), and HIV awareness campaigns (African-Americans)

INTRODUCTION

St. David's Foundation

St. David's Foundation is part of the public-private partnership known as St. David's HealthCare, which includes six hospitals in the Central Texas region. The Foundation represents the public arm of the partnership and is designated as a 501(c)3 hospital by the IRS. Each year, the Foundation returns a share of St. David's HealthCare's earnings to the community in the form of grants. The Foundation's grant making occurs within a five-county area in Central Texas, which includes Travis. In recent years, the Foundation has experienced dramatic growth in its earnings from St. David's HealthCare, and in 2015, the Foundation invested more than $65 million through grants and direct programs focused on community health.

Purpose of Community Health Needs Assessment

St. David's Foundation (SDF), Seton Healthcare Family (Seton), Austin/Travis County Health and Human Services, and Central Health have collaborated to conduct a Community Health Needs Assessment for Travis County. The purpose of the Assessment is to identify and prioritize health needs so that these organizations can better serve their communities.

As non-profit hospitals, Seton and SDF are each required by the IRS to prepare Community Health Needs Assessments (CHNAs) to be finished by the end of their 2016 tax years. The two organizations share the same IRS requirements to conduct CHNAs in Travis County. The IRS encourages hospitals to work with local partners to conduct CHNAs so that the community and each organization can benefit from the collaboration and avoid duplication of efforts.

For the 2016 CHNA process for Travis County, Seton and SDF collaborated in planning and making decisions to meet the needs of all organizations and the community. The organizations strove to equally divide work and financial investment. Division of responsibilities was made based on respective staff capacity and expertise and the following components:

Component	Examples	Owner Organization
Quantitative data acquisition	BRFSS, Census, RWJF County Rankings	Seton Healthcare Family
Data analysis & Interpretation	Health indicators & outcomes, demographics	Austin/Travis County Health & Human Services, St. David's Foundation, Seton Healthcare Family
Qualitative data and community feedback	Focus groups, forums, stakeholder interviews	St. David's Foundation
CHNA report development		Independently developed by each organization

To meet the goals of the Assessment, "community health" is defined in a broad sense and includes numerous factors at multiple levels. Individual behaviors (diet and exercise), clinical care (access to medical services), social and economic factors (state's minimum wage), and the physical environment (air quality, parks, sidewalks) can impact a community's health.[1]

Purpose of Report

This report focuses on the community health needs of Travis County. It describes findings from a literature review, interviews and focus groups, an online survey, and a review of existing quantitative data collected from secondary sources. The interviews and focus group were administered in Travis County. Representatives from St. David's Foundation, Seton Healthcare Family, Austin/Travis County Health and Human Services, and Central Health identified and prioritized key stakeholders to participate in the interviews, the focus group, and online survey. Key stakeholders included people who represent the broad interests of Travis County and who have special knowledge or expertise in its health issues. They included nonprofit leaders, health department authorities, public school leaders, healthcare providers or leaders, elected officials, researchers, people representing distinct geographic areas, and people representing certain ethnic/racial groups. (See **Appendices** for a detailed description of methodology.)

Profile of Travis County

Travis County's 2016 population is estimated to be 1,129,582. Bastrop's population is equal to 7% of Travis' population. Caldwell's population equals 4% of the Travis population, and the population of Hays equals 17% of the Travis population. By 2030, Travis County's population is expected to increase by 19%, adding 213,247 people and bringing the total to 1,342,829.[2]

Projected Population by Age Group, County Comparisons, 2016					
	Bastrop	Caldwell	Hays	Travis	Williamson
0 to 17	20,058	9,876	46,572	277,728	130,024
18	1,247	590	3,595	13,944	7,184
19 to 64	48,815	25,414	118,338	736,421	296,034
65 and over	12,070	5,853	19,836	101,489	55,320
Total	**82,190**	**41,733**	**188,341**	**1,129,582**	**488,562**

Source: Texas State Data Center

Several independent school districts (ISDs) serve Travis County. The largest is Austin ISD, and others include Del Valle, Eanes, Lago Vista, Lake Travis, Leander, Manor, and Pflugerville. Cities in Travis include: Austin, Bee Cave, Cedar Park, Creedmoor, Elgin, Jonestown, Lago Vista, Lakeway, Manor, Pflugerville, Rollingwood, Sunset Valley, and West Lake Hills.

Projected Population Growth, 2016-2030

County	Growth
Bastrop	29%
Caldwell	23%
Hays	45%
Travis	19%
Williamson	37%
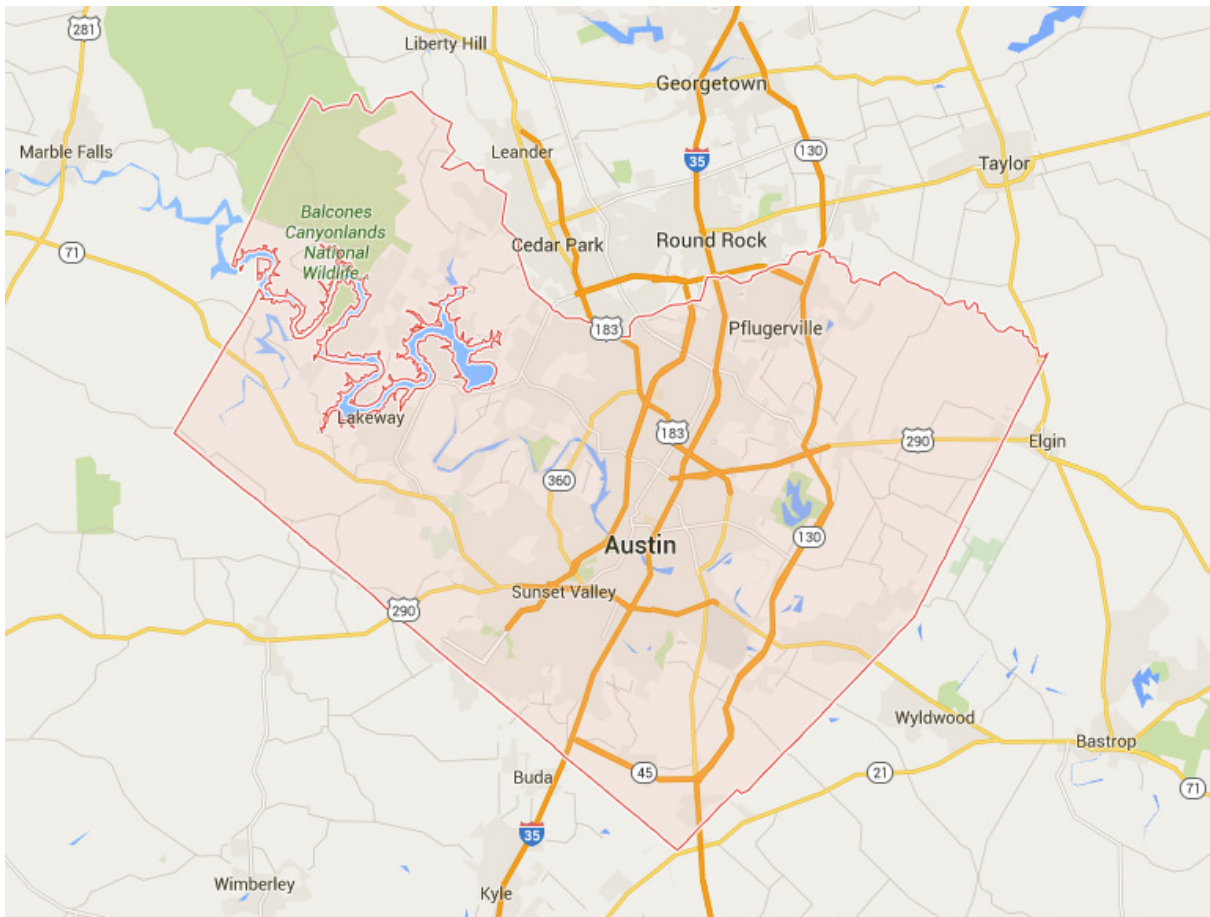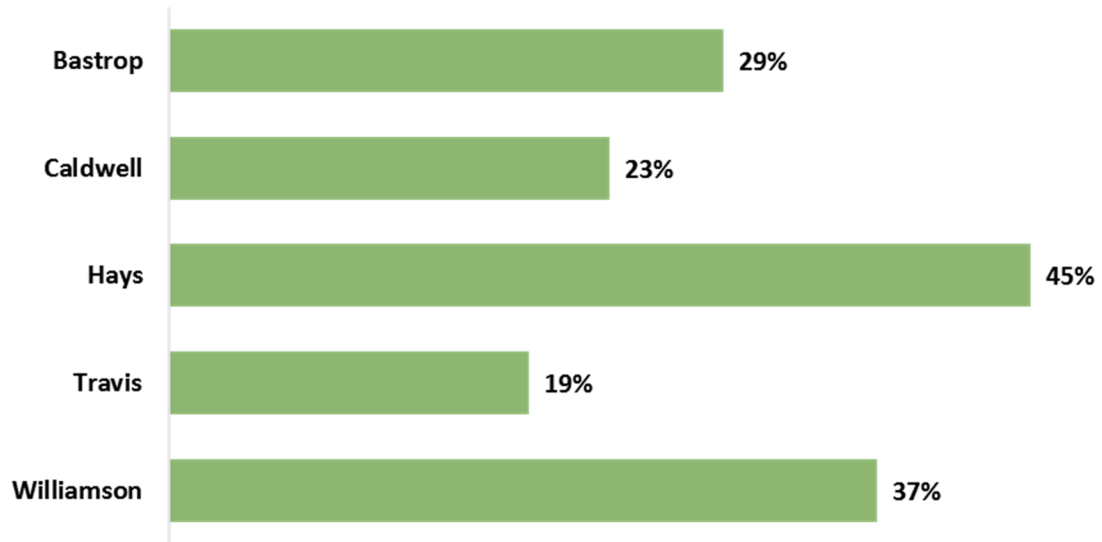
COMMUNITY HEALTH NEEDS IN TRAVIS COUNTY

This section presents findings from the interviews, focus group, and review of existing quantitative data. Nybeck Analytics is not endorsing the ideas or the needs described during the interviews and focus group, nor have we checked for accuracy of people's statements. During each interview and the focus group, we asked the participant to explain what he or she thought were the most significant community health needs facing Travis County and the people served by the participant's organization, barriers to meeting those needs, and potential solutions. Rather than describing "community context" or "social or environmental factors," when asked to name the most significant "community health needs," participants often replied with: "poverty," "transportation," "housing," and also needs more traditionally considered healthcare-related issues. Nybeck Analytics has followed their lead and written the report in the spirit of their responses. This section describes the community health needs in prioritized order. Nybeck Analytics offers this prioritization based on our analysis of the online survey findings and a qualitative assessment of the interviews and focus group.

Resources and Services Supporting Healthy Lifestyles

The Issues

In Travis County, chronic diseases are the major causes of morbidity and mortality, with high human and economic costs. "If you look at the burden of disease, both from mortality, morbidity, prevalence, you've got chronic diseases like heart disease, cancer, stroke, chronic lung disease, diabetes. Those not only affect so many people... The economic cost to our community is huge. The burden on our entire healthcare system, the hospitalizations, the outpatient clinics, the medications, all of that is huge..." Blacks have a higher prevalence of cardiovascular disease than Whites and Hispanics. Blacks and Hispanics have higher rates of diabetes than Whites.[3]

Lung cancer is the leading cause of death among the cancers, with almost 90% of lung cancers due directly to smoking. Not surprisingly, tobacco is the leading cause of preventable death in Travis County. Each year, cigarettes and other tobacco products cause approximately 600 deaths.[4] In 2011-2012, an estimated 175,293 Travis County adults, or 1 in 6, "currently" used tobacco products such as cigarettes, snus, snuff, chewing tobacco, pipes or cigars. Tobacco use in Travis County differs by sex, age group, and income:
- Men are more likely to use tobacco than women.
- Adults aged 18-44 years are more likely to use tobacco than those over 65.
- Adults with lower incomes are more likely to use tobacco than their wealthier counterparts.
- Adults without a high school diploma are more likely to use tobacco than those with higher education levels.[5]

Lack of physical activity and poor nutrition are major causes of heart disease and diabetes. In 2011-2012, over 400,000 Travis County adults (37%) were considered overweight. Over 230,000 Travis County adults (21%) were considered clinically obese. In recent years, there has been an

increase of overweight and obesity. African Americans (42%) and Latinos (37%) experienced much higher rates of obesity than Whites (19%).[6]

In Central Texas, many people have limited access to healthy foods. For example, compared to the rest of Texas and the U.S., there is a relatively low ratio of WIC-authorized food stores to people in all four counties. In Travis, 8% of the low-income population does not live within a mile of a grocery store.[7]

Limited Access to Healthy Foods, County Comparisons		
	Number of WIC-Authorized Stores per 100,000, 2011	Percentage of Low-Income Population Not Close to Grocery Store, 2010
Bastrop	5.3	18%
Caldwell	5.2	8%
Hays	5.5	7%
Travis	6.0	8%
Williamson	4.5	7%
Texas	9.1	10%
U.S.	15.6	6%

Source: RWJF County Health Rankings

Suggested Solutions

Assessment participants emphasized investments in: 1) tobacco cessation, 2) physical activity, and 3) nutrition. Approaches should be comprehensive. Work sites, schools, the City, the County, healthcare organizations, and social service organizations can coordinate to improve various aspects that affect these conditions.

"Let's Finish Off Tobacco"
Interviewees suggested increasing and enhancing community-wide policies and more screening and referral of patients. Organizations such as Seton Healthcare Family and St. David's can be advocates for community policy and can gather usual and unusual suspects in the campaign.

<u>Continue to Promote Healthy Foods and Exercise</u>
Resources and services in support of healthy lifestyles include: health education, affordable healthy food, grocery stores, accessible parks near people most in need, and sidewalks. "We can strengthen the food safety net and simplify the process for becoming SNAP eligible." As a community, we need to learn "how to infuse healthier food into people's daily lives."

Resources and Services to Combat Poverty

The Issues
Suburban poverty in the Austin Metro area has grown 143% during the last decade.[8] In Travis County, 17% of residents lived under the Federal Poverty Level. Interviewees and focus group participants echoed recent studies showing widening disparities in Travis County. When asked about the biggest need in our county, a focus group participant said, "The increased economic segregation in our community. The Martin Prosperity Institute named Austin as one of the most economically segregated cities in the nation…"[9]

Estimated Number and Percentage of People Living under the Federal Poverty Level, County Comparisons, 2010-2014			
	Below FPL	Total Pop.	%
Bastrop	13,594	82,190	17%
Caldwell	7,787	41,733	19%
Hays	32,112	188,341	17%
Travis	196,773	1,129,582	17%
Williamson	34,248	488,562	7%
Texas	-	-	18%
U.S.	-	-	15%

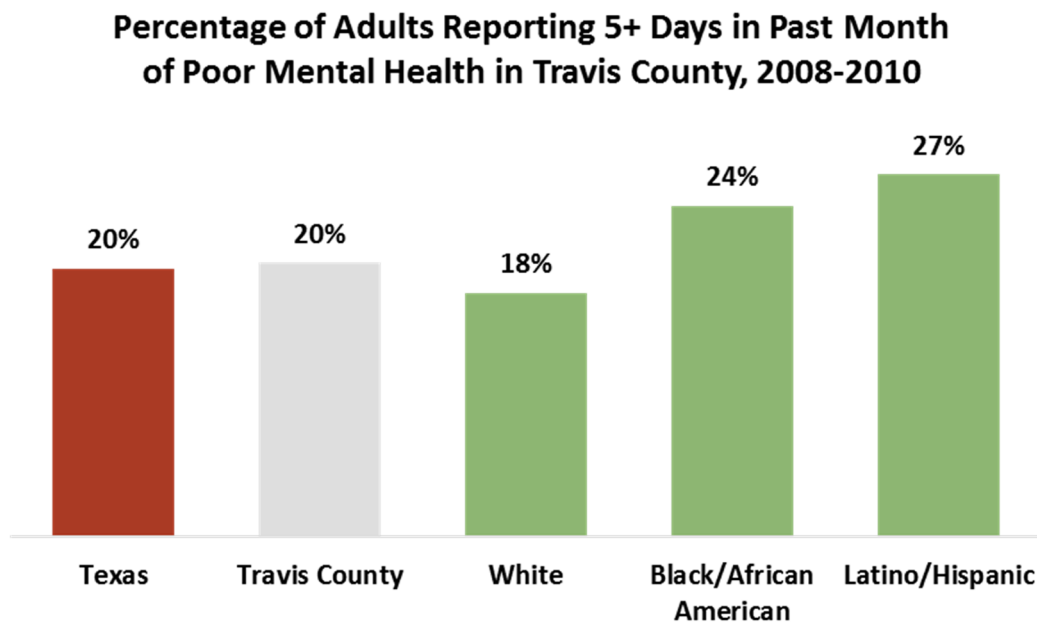*Sources: Percentages from RWJF County Health Rankings, population estimates from Texas State Data Center (2016)*

Suggested Solutions
- "If we can improve the socioeconomic status of everyone whether it's workforce development, getting people adequate paying jobs, early childhood education to get people out of the cycle of poverty... Housing and getting people low-income housing, **affordable housing** are things that can raise the underlying socioeconomic status."
- "In terms of prevention, a significant increase in the minimum wage is a massive win in terms of addressing social determinants of health…"

Mental and Behavioral Healthcare

Prevalence

A significant percentage of adults in Travis County report having poor mental health at least five days in the past month. The percentage of Latinos reporting poor mental health (27%) is higher than that of African Americans (24%) or Whites (18%).

Percentage of Adults Reporting 5+ Days in Past Month of Poor Mental Health in Travis County, 2008-2010

Texas	Travis County	White	Black/African American	Latino/Hispanic
20%	20%	18%	24%	27%

Early Intervention Services

Assessment participants suggested strengthening community-based services and offering more preventive care and other relatively low levels of care to people with mental and behavioral health issues.

The Issues

"…If we don't have prevention [or] early intervention systems in place, we pay for these people somewhere, somehow on multiple levels…" For example, "70% of the kids in the juvenile justice system have a mental health issue… Similar for the adult system. The majority of the people who are in the local jail have some kind of mental health condition, and the folks who are living on the streets, they have mental health conditions at high percentages. The folks that use emergency services are most likely to have a mental health condition…. As a community, we pay for these people somewhere and in multiple systems if we aren't able to find earlier intervention points."

Suggested Solutions

Strengthen community-based services. "Travis County has done a good job at expanding crisis capacity and getting more inpatient access to services. Now, we really need to build out the

other parts of the system, so that we have stronger community-based supports in place that help prevent people from even needing crisis services to begin with." (See The Integrated Behavioral Health System in Travis County-The Desired Continuum of Care, pg. 46.)

For example, "…One of the most recent issues is big support for a sobriety center… To go from being drunk to not drunk, and so if we put a bunch of money into that, what are we doing on the backend to make sure there are resources to connect people to? …Do we also have resources to connect them to if they have an interest in engaging in more care, so they're not hitting the sobriety center every weekend?"

Fund cost-effectiveness studies on preventive services. "Prevention works in individual cases, but in terms of being able to say this investment in prevention will save you this much, I don't think there's really been a good quantifying of that, so it's easier to say let's invest in these crisis services because you can tell that if people are getting in to crisis services, then they're not getting in to the jails or whatever. But when it's further down the line, it's just hard to figure out how much that's saving."

Reduce the stigma of therapy and counseling. To increase the number of people accessing lower levels of care, Assessment participants suggested that we further reduce the stigma surrounding mental health services:
- "Therapy, counseling, those different things have a stigma… Being able to [have] somebody who can explain the information to you in your own language or from your own background or maybe even tell your own story… Just making people understand."
- "Austin Area Research Organization's health committee is developing a strategy around mental health stigma and how they might help address it, and that might be a major barrier removal to helping people get into care."

Provide earlier and better intervention for children to prevent onset of mental illness.
- "I think one of the continuing challenges is access to psychiatric care for kids if they need it, because unless you're insured, access to psychiatric care is really hard to get… making sure we have community-based services available for ongoing counseling that kids need."
- "Psychiatric care? We don't have a lot of that in Pflugerville as far as physicians. Then, it's really hard to get somebody to downtown Austin. Once you get there and you identify the problem--psychiatrist, psychologist--if they get diagnosed… How do they get there? How do they get their lab work for the meds that they're on? It goes back to **transportation.** That is kind of like our biggest one I think: **transportation**."

Expand mental and behavioral healthcare in schools.
- "My big ask would be to mimic the program that Manor ISD has right here, the People's Community Clinic, Austin Travis County Integral Care, Student Family Support Office… Expand this program that we have" to include "zero to at least 18 to get all of our kiddos."
- "Language is key, so more bilingual therapists would be key. Your medical profession and your therapy, mental health should look like a community." In Manor, "there are 14 languages on one campus."

- "We [AISD] now have 17 campuses that offer onsite mental health treatment with an LPC. In the spring, we're going to pilot tele-psychiatry on three campuses, and we are looking for a future opportunity with our partners: Seton and Dell Children's Medical Center that provide all of our nursing services... So looking at other opportunities to bring healthcare and access to healthcare to where the students and families are."
- "How do we make sure that services are available across the entire county, whatever that looks like, through mobile services or co-located services with other providers or campus-based services? I think if you were to talk to some of the school districts, they would say mental health is one of their number one issues. Our opportunity is for prevention and earlier intervention with kids to get them on a better life path."

Strengthen and expand integrated behavioral healthcare. Interviewees and focus group participants suggested that we "strengthen the level of integration that we have... When people go to their primary care provider, they can get all their needs met, or if they come to [Integral Care] because they have a serious mental illness, they can get all their needs met for physical and health problems." We also need to ensure "that substance use disorder is part of that integration..."

People around the country are applying integrated healthcare to new client populations and agency settings. For example, in addition to placing mental/behavioral health experts in primary care settings, agencies are placing primary care providers into behavioral health settings to serve those with serious mental illnesses or substance abuse concerns. Integrated healthcare programs are also being offered to high-risk populations such as pregnant women and abused or neglected children in State custody.[10] Integrated care programs are also expanding to include additional **holistic** health practices. **Peer support** workers are being added to integrated healthcare programs to promote consumer empowerment.[11] Some programs are devoting more attention to healthy behaviors such as **nutrition, exercise**, and stress management.[12] Perhaps the most compelling direction is in regard to **prevention**. While in its infancy, integrated care programs for **early childhood** are being created. Trauma in childhood (abuse/neglect, maternal depression, domestic violence) is a significant predictor of physical and mental health problems in adulthood.[13] These stressors have been associated with the risk of cardiovascular disease, cancer, depression, substance abuse, suicide, and other health concerns. Some of the relationships have been described as "enormous."

Barriers
Barriers to improving mental and behavioral healthcare exist in Travis County. Both involve funding. **"**One of the biggest challenges our community faces is what's going to happen around the **1115 Waiver**. For example, [Integral Care's] Mobile Crisis Outreach Team works to divert people from inappropriate places, such as emergency departments and jails, and we have found that it's a very effective tool to help keep people from those more expensive levels of care... How do we continue to support effective interventions that we know are working as resources shift? ...One of the biggest risks is that as we build pieces of the system, if we don't maintain them, then we start seeing these situations where people are flooding the crisis system or needing care

because they're not getting intervention earlier." Another challenge is making sure people have **coverage** so that they can access the [mental and behavioral healthcare] they need.

Affordable Housing

The Issues

In Travis County, there are relatively high rates of housing problems: substandard structures and a high-cost housing burden.[14] Incomes are relatively flat, and housing prices continue to rise.

Percentage of Substandard Housing Units, County Comparisons, 2010-2014	
Bastrop	31%
Caldwell	34%
Hays	41%
Travis	39%
Williamson	30%
Texas	34%
U.S.	36%
Source: RWJF County Health Rankings, "Substandard" is a unit with at least 1 of 5 specified deficiencies.	

Households with Housing Costs Using More than 30% of Household Income, County Comparisons, 2010-2014	
Bastrop	29%
Caldwell	30%
Hays	40%
Travis	38%
Williamson	30%
Texas	32%
U.S.	36%
Source: RWJF County Health Rankings	

Homelessness is also a problem in Travis County. In Austin, the number of individuals experiencing homelessness declined between 2014 and 2015, but there are still 1,877 homeless people, 662 of whom are living on the streets.[15] Manor ISD serves between 450-500 homeless students annually. Austin ISD served 2,641 homeless students in school year 2014-2015.

Suggested Solutions

Interviewees and focus group participants made several suggestions on how to assist people who need housing.

<u>Greater Awareness and Understanding of Homelessness</u>
One interviewee said that to help families who need homes, we need to understand the "real barriers" to getting one. "My big ask is that for people to really understand, that it's not always a choice, it's just we have working families that just missed one mortgage payment or lost a job because of medical, which leads into homelessness. We have some undocumented families that are afraid to seek housing because they don't have the proper documentation to rent an apartment, so they stay with their friends or family."

"Manor has housing that seems to be affordable, but because most of the houses out here are propane, so that's a higher fee at certain times during the year. People don't anticipate their propane bill being $300-$400 per month for propane." Manor bills and collects month to month,

so families cannot become indebted to its utility company. "But, we have some families that have come from Austin who have $2,000 worth of debt for the utility company, so now [they] can't get housing because [they] can't get the utilities set up. Let's figure out what their real barrier is to housing. What can we help fix?" St. Vincent de Paul, East Rural Clinic, and Caritas provide utility assistance in Manor.

<u>Housing People with Substance Use Problems or Mental Health Issues</u>
An interviewee suggested expanding housing services for people with substance use problems or mental health issues. "We are now using housing as a health intervention, and this [stops] the cycle of people just using services over and over again and not really getting any better. [Housing] is a health intervention and one that's critical for preventing people from becoming really ill and also helping people regain recovery once they do become really ill. The populations that [Austin Travis County Integral Care] serve need permanent supportive housing." With regard to housing, Integral Care works with Ending Community Homelessness Coalition (ECHO), Salvation Army, Front Steps, Green Doors, Mobile Loaves and Fishes, and Community First.

One participant in our Assessment praised the accomplishments of a Medicaid 1115 waiver project, which may need funding to continue. "It's really been beneficial for [Foundation Communities]. The funding that the City has funneled to support housing through the Medicaid Waiver program has transformed how we are able to [improve] healthcare access. [It's] a community treatment team model that we employ in supportive housing for people who have crisis mental health needs. We went from being able to provide nothing to having a fairly robust system to provide to our tenants in our supportive housing communities."

<u>Need for Family Shelters</u>
"We need family shelters... You have families that stay in a shelter or a church for a week, and then they move to another church. That can be taxing on the family. Since you're in a church, you sleep there, you eat there, you do all of your basic needs there, but everybody usually has to be out by six to eight o'clock in the morning. Then when you're out, and you transport into the Day Center, which is in Balcony, it's taxing on the family. Salvation Army is a great shelter for families, but the family dorm is usually [available only] if you have a spouse." Foundation for the Homeless also provides family shelter.

Primary and Preventive Healthcare

Interviewees and focus group participants emphasized the need for greater access to primary and preventive healthcare. They discussed payment reform and quality of care, shortage of providers, lack of healthcare coverage, lack of convenient healthcare facilities, utilizing a more holistic approach, and overuse of the emergency room. Participants in our Assessment acknowledged that system-level changes can improve access to primary and preventive health services.

Quality of Care and Payment Reform

<u>The Issues</u>

The problem is that "nobody pays for [prevention]. Healthcare is an industry built on reimbursement. The model of healthcare is fee for service, so those other services are what you would call soft or social services… And the healthcare model as it is today does not award or fund prevention."

<u>Suggested Solutions</u>

One participant suggested leveraging all of the benefits of managed care: "To the degree that we can, and funders can drive that kind of collaboration, make sure from the get go, we're leveraging all the benefits of managed care without it turning into just a payer exercise in trying to squeeze out every penny of that capitated rate that they possibly can to make it work financially."

Assessment participants suggested that we "all come together" to:

- "Promote systems change and quality care. [Promote] data, health information exchange, electronic medical record changes, continued support for Integrated Care Collaboration."
- "…Pool all the healthcare dollars and then find out the strategies and ways to really bend the costs covered by prevention and education because an illness model doesn't work…"

Healthcare Coverage

Another system-level issue discussed by participants in many contexts is the lack of healthcare coverage. In Travis County, approximately 33,834 children (12%) are uninsured; 26% of adults are uninsured.

- "We lead the nation in uninsured."
- "About 11% of families in the [Austin School] District are uninsured… The population of families that we serve through our Family Resource Centers, it's about 25% of those families that are uninsured. So looking at lots of social and health, mental health needs for this."

Estimated Number and Percentage of Uninsured Children, Aged 0 to 18, County Comparisons, 2013			
	Uninsured	Total Pop.	%
Bastrop	3,515	21,305	17%
Caldwell	1,287	10,466	12%
Hays	5,970	50,167	12%
Travis	33,834	291,672	12%
Williamson	13,446	137,208	10%
Texas	-	-	13%
U.S.	-	-	8%

Sources: Percentages from RWJF County Health Rankings, population estimates from Texas State Data Center (2016)

Estimated Number and Percentage of Uninsured Adults, Aged 18 to 64, County Comparisons, 2013			
	Uninsured	Total Pop.	%
Bastrop	15,269	50,062	31%
Caldwell	8,035	26,004	31%
Hays	31,215	121,933	26%
Travis	191,343	750,365	26%
Williamson	60,644	303,218	20%
Texas	-	-	31%
U.S.	-	-	21%

Sources: Percentages from RWJF County Health Rankings, population estimates from Texas State Data Center (2016)

Provider Shortage

Primary Care Physicians per 100,000 Population, County Comparisons, 2012	
Bastrop	28.1
Caldwell	28.4
Hays	46.7
Travis	81.2
Williamson	63.8
Texas	58.5
U.S.	74.5
Source: RWJF Health Rankings	

The Issues

Even though Travis County is not designated as a Health Professional Shortage Area, several participants described a lack of access due to the shortage of providers. For example, "There's still a huge access issue, but there aren't enough medical personnel currently to address that. Really, a lot of the need is in the ancillary health areas, particularly nurses: Licensed Practical Nurses, Registered Nurses. The pipeline is very narrow. There's not enough faculty with a support for nursing education."

The table above shows 81 primary care physicians to 100,000 people in Travis. When interpreting provider to population ratios, it is important to keep in mind that most urban areas have much

higher ratios than rural areas and that providers in urban centers, like Austin, may serve patients who live in outlying counties, which would lower the effective ratio of providers to patients.

<u>Suggested Solutions</u>
"There has to be a pipeline in this community. The medical school will attract people from all over the country… To create avenues in this community that start in our school systems that educate kids about health professions and give them opportunities to begin to explore those careers all the way up through internships in high school and hard connections to the colleges here in our community that might prepare them for any of those potential careers through the healthcare industry. We have to find a way to use that medical school as a mechanism to create healthcare professionals who are connected to this community. That's a huge thing that I'm not seeing enough discussion about, as to how we create our own local pipeline to healthcare."

Insufficient Number of Clinics and Geographic Mal-Distribution of Health Services
<u>The Issues</u>
"Even with all the FQHCs and all the service we have, it's still an access problem… All of it combined takes care of about half the need, about 200,000 uninsured in Travis County." Also, we need to address "the migration population shifts in our community and how that's pushing people to some degree out of our areas. To make sure those populations are still able to access those services… As population shifts in Travis County, and particularly the safety net population or people under 200% FPL, we know the clusters and the areas in which they're moving to. They're moving east, they're moving north into Pflugerville and the like."

<u>Suggested Solutions</u>
Interviewees suggested that people in Travis County conduct more sophisticated marketing and development planning. One argued that safety net providers should increase their agility and more quickly move to the populations that need them. For example, "…More sophisticated market development, assess where population is going, create agility in safety net providers as Chicago has done. Match clinics to patient landscape."

Another suggested bringing healthcare to the patients through telemedicine: **"**We're going to pilot telemedicine on a high school campus to see how that might work, so looking at other opportunities to bring healthcare where the students and families are."

A Holistic Approach
One participant suggested that grant making organizations encourage a more innovative, holistic approach to healthcare by "bringing their program areas out of independent silos" like primary healthcare, mental healthcare, dental health, and nutrition and exercise, etc.

Others emphasized how individuals may experience better health and be more receptive to different treatments if providers were to take a more holistic approach to healthcare.

- "Spiritual side. [El Buen Samaritano] is starting to launch things like pain management through meditation, prayer-centered meditation groups… Our population's very responsive to that, and so I think there's a lot of untapped potential there."
- "The holistic approach… is really more akin to Asian culture. They go to one doctor for cultural, mental, and spiritual needs because it's all interconnected, but that system is not pervasive… The stigma of mental health treatment can be alleviated to some extent by interconnecting it with physical health, so then this doesn't have as much stigma… I think that the spiritual is an important element too that needs to be incorporated."

Culturally Appropriate Materials

Several Assessment participants emphasized the need for culturally appropriate materials related to health and accessing care. People in Travis County can do a better job of addressing health literacy and providing information in many languages including English, Spanish, Vietnamese, other Asian languages, and Arabic.

Patient Navigation

According to participants in the Assessment, the term, *patient navigation*, means assistance moving through the complex healthcare system, and it also means "connecting people to supports in the community." Patient navigation was brought up within several contexts (obtaining healthcare coverage, affordable housing, primary and preventive care, specialty care, mental and behavioral healthcare, and substance abuse treatment). The below excerpts highlight the key stakeholders' desire for patient navigation services under several circumstances.

Fund Case Managers and Patient Navigation Services inside Clinics

- "…Patient navigation and there's no funding for that… And we're all trying to cobble together some kind of intake system that screens families for all the social services that they could be eligible for…"
- "There's a social service system that's working through Best Single Source or Best Single Source Plus, and you've got… 15 different organizations coming together with a system so that there's no wrong door, and anyone entering with a utility need or rental need, are able to access services. There's a case management component that addresses the needs of that individual client within the individual organization. It's been very effective… Couldn't that be applied in a medical community?"
- "Isn't that kind of what the CCC, the Community Care Collaborative, is trying to do through the work they're doing to create an integrated delivery system?" "Exactly."

Train Community Health Workers on Healthcare Coverage and Navigation Services

During the focus group, some participants argued for better trained community health workers who could assist people in obtaining healthcare coverage and accessing care:

- "We could train those community health workers on the Medicaid system… We're cross training all of our parent support specialists and our school counselors, and all of our therapists, and our licensed professional counselors are trained on Medicaid, so that when they're providing services to families and students, they can [assist with healthcare coverage]… I know several organizations in the community: Central Health, Seton, that have licensures for the Medicaid system that maybe we can partner with."

- "Community health workers, especially with the state moving to managed care, that is a good adjunct to that model. In a lot of other communities, it's not just used for social determinates of health, it's used for the medical system to connect people with the medical systems and the specialty care… Where do they go, how do they keep their appointments?"

Others in the focus group expressed skepticism with regard to volunteers doing such work. For example:

- "I think we have to be careful… There has to be an infrastructure. There has to be supervision. These are complex rules. There are potential liabilities. There's confidentiality and HIPAA. It's not an easy thing… They really have to be part of a system."

One participant noted the potential of Central Health's Community Health Champions:

- "Central Health is developing the Community Health Champion program… Addressing the continuum, you've got doctors on one end, and you've got your next-door neighbor on the other end. It just seems like in Austin, there are big gaps in between that continuum of how to get that care and so—I don't like the idea of expecting volunteers to be able to solve significant problems over time. The Community Health Champions at least is a piece in that puzzle."

Pay Peers to Offer Support and Navigation

"If you can train people who have experienced [mental health issues], and then they can be the navigators who help people… They're paid workers… It's a more formalized system, where people can bring their lived experience to help other people… navigate systems and connect to the care they need, and those can be used in any system: chronic disease, substance use, mental health."

Provide Better Navigation in Tandem with Specialty Care

"We need better navigation and case management for the people in the system, as opposed to thinking that more specialty care is going to always solve the problem… If you just see a specialist, and then go back to your normal life, then you're going to need to see the specialist again. Whereas if you have a case manager who helps you navigate the system and see the lower levels

of care, then it keeps you from having to see the specialist… We need to dig into [this] and understand better what really is going to work… It may actually be a little simpler, but we need to think about it in a more complex way."

Provide Patient Navigation for People in Affordable/Supportive Housing

"We need to figure out a way to integrate better into the affordable/supportive housing. So many of the issues are health, and [Foundation Communities] has staff who work with a range of issues related to support, but nobody who really specializes in navigating the healthcare system, even for people who have insurance like Medicaid. It's still a challenge to be able to know what your benefits are, to be able to navigate, to make sure you do the reapplication on time. Just a whole series of things related to MAP and Medicaid. People fall through the cracks even if they do have a third-party payer…"

Resources and Treatment for Substance Abuse

Assessment participants explained issues, raised questions, and discussed barriers with regard to substance abuse and substance abuse treatment.

Provide Community-Wide Education and Outreach on Emerging Drug Problems

"We treat people that take K2, [a dangerous synthetic drug], but there's nobody in the community that seems to be responsible for responding from an information referral, community alert perspective… We know it's hitting homeless populations and marginal populations very heavily… From a public health perspective, who's responsible for responding when these kinds of issues arise in a community? You have a new drug and something that's dangerous, that's creating a lot of issues for people… How is a community going to mobilize and respond? How as a community, do we mobilize and respond around these issues in an effective way because it is really detrimental to our community overall, not only from a health perspective but from a public safety, cost perspective… It ties up our emergency system…"

Fill the Gaps in the Substance Use Disorder Area

The Issues

"There's very little access to substance abuse in this community." "Over the last several years, we have lost capacity in the substance use disorder area."

Barriers to Treating People with Substance Use Disorders
- "Some of it has to do with reimbursement rates that don't cover cost of care. So then that's true with a lot of the state resources. So folks aren't renewing their contracts or services with the state, and I would say it's just providers trying to figure out how [they] can provide the care."
- "With the changes brought about by the Affordable Care Act and the Mental Health Parity Act, ideally there will be more resources available because people will be covered through insurance for these issues, but if you're uninsured, which we still have a large number of uninsured, you don't necessarily have access to that kind of care."

More Robust Transportation System

The Issues

Many interviewees and participants emphasized the role that transportation plays in individual and community health. A representative from CapMetro acknowledged, "There's a real need to get people to the clinics, and they're having a hard time." "[Transportation] is a health and human services issue for sure. It's about getting to food. It's about getting somewhere where you can make a living, and those are health issues for sure."

Transportation's a big problem in Del Valle, Manor, and Pflugerville. "The Superintendent of Del Valle ISD says that the 148 square miles around her school had no doctor's office and no grocery store" and no public transportation… "It creates a difficult situation for families... They can't participate in their children's lives. They can't provide the kind of oversight and supervision the children need, so it just really creates a detrimental situation all the way around." "One of the bigger things [in Manor] is transportation, transportation to and from the facilities… Transportation is huge…" An interviewee in Pflugerville said, "I keep going back to transportation. We don't have buses. We don't have any of that transportation for parents to get kids to certain areas."

Suggested Solutions

Better Planning When Developing New Clinics

- Take advantage of CapMetro's data collection. "[CapMetro's] Trip Planning Specialist has all of the data on what health facilities people call her about… She's got a 13-page report on all of the data she has, for one year…"
- "One of [CapMetro's] asks would be, before any architectural drawings are done, land is bought, site decision locations are made... We have to talk to you about it before any of those decisions are made. We do get in the situation where a health facility is developed……and then we get the call, 'Hey, we have this great new facility. We'd love to have bus service there.' It's like, 'Well, you're on a frontage road that we can't safely serve,' or 'You are not in our service area."
- "Before clinics are put in a certain place, [they can talk] to CapMetro to make sure it's even possible to put a route where the clinic is… If it's outside of our service area, we cannot serve that [area] with our sales tax funds."
- "If you're looking for a high-quality service, you need density, you need a lot of people that are within walking distance of your service, you need access to the service, you need sidewalks, and a vast majority of our customers walk up to our service, they don't drive. You need other destinations besides just your facility that are nearby. If you're a health clinic, an office, a grocer or whatever, the more that's around you that people would want to go to, the better the chances that you're going to have decent quality of service. Then we also need straight lines that our service can operate on."

- "A community value... We need more affordable housing within the central city, and we need better land use planning."
- "Better land use policies that encourage things like sidewalks, straight lines, physical infrastructure of more future planning for transportation, ...small area, more density. More diversity of housing, such as single family homes, apartments, duplexes."
- "Location-efficient housing (affordable housing next to public transit) can increase household affordability and have a disproportionately positive impact on low-income households."

A Partnership among Transit and Healthcare Interests

Interviewees suggested a "demonstration project on transit and healthcare facilities working together and how to provide transit for their customers. I've always thought that might be a good idea, especially if we [CapMetro] are looking outside the service area. We don't know how open health agencies are to partnering with us on funding transportation. If we're looking at something outside the service area, we would need some sort of funding partnership. We have not done that yet with a healthcare facility."

Reproductive Health Services and Family Planning

Human Immunodeficiency Virus (HIV) and Sexually Transmitted Diseases (STDs)

The Issues

Travis County has a relatively high rate of HIV and STD prevalence compared to Texas.[16] Some 1,000 people in Travis do not know they are HIV positive. Some 250,000 people in Travis County currently have Human Papilloma Virus (HPV). Since 2003, the number of primary and secondary syphilis cases in Travis County has increased over 300 percent. Black Americans have disproportionately higher rates of HIV and other sexually transmitted diseases and are more likely to die from HIV than other groups.[17]

Suggested Solutions

For HIV, one interviewee suggested that hospitals, like Brackenridge, can "support routine HIV testing." The CDC recommends routine testing for HIV. The community can also provide prevention and public awareness campaigns, specifically among African Americans.

The "HPV vaccine is a huge opportunity for success" in preventing cervical, anal, and throat cancers. "The greatest coverage is still like 20% to 30% teens... Right now, probably 250,000 people are affected with HPV... That's a low hanging fruit basket... If you can get all providers to recommend it, just to include it in their recommendations and don't differentiate it, it's a part of the package..."

Family Planning Services

Abortion Services

"…It's unclear what's going to be happening at the state and federal level with Title X. [Abortion services haven't] been completely eliminated yet in Travis County, but it's moving in that direction, so we want to make sure women have access to reproductive health services, family planning, including abortion if appropriate and necessary."

Preventing Unwanted Pregnancies among Teens

The teen pregnancy rate for Travis County is relatively low compared to Texas. Yet, in 2011, the rate for Hispanics (47.2 per 1000 15 to 17 year olds) in Travis County was nearly double the county's overall teen pregnancy rate. The birth rate for White adolescent was 3.9, and for Blacks aged 15 to 17, it was 30.3.[18] In Pflugerville, "three of the schools have pregnant middle schoolers, one to two on each campus."

Dental Care among Adults

"Dental is still a need in Travis County. That is very obvious." Many adults in Travis County cannot access dental care. Thirty-one percent reported that they had not had a dental exam in the past year.

Estimated Number and Percentage of Adults with No Dental Exam in Past 12 Months, County Comparisons, 2006-2010			
	No Exam	Total Pop.	%
Bastrop	37,528	62,132	60%
Caldwell	11,978	31,857	38%
Hays	51,462	141,769	36%
Travis	264,075	851,854	31%
Williamson	100,032	358,538	28%
Texas	-	-	37%
U.S.	-	-	30%

Sources: Percentages from RWJF County Health Rankings, population estimates (19 and older) from Texas State Data Center (2016)

There is "one cause: there are no payer sources—doctors and clinics cannot afford to offer dental." Interviewees and focus group participants stressed the need for dental care and how this need translates to overuse of the emergency room. Interviewees suggested a partnership among clinics and hospitals: "This is an area where we could use collaboration from hospitals because… a significant number of their emergency department visits are probably related to emergency dental care. One would think that there would be a way to work with hospitals to divert those visits that don't need to be there through a clinic that could actually take care of dental needs before they abscess…"

Specialty Care and Procedures

The Issues
Several people stressed the need for specialty care among patients who depend on the healthcare safety net and who are covered by Medicaid. "Specialty care is a mess." "In my population one of the biggest needs is access to specialty care. We're a primary care practice. Patients need specialists frequently. If they don't have a payer source like Medicaid, MAP, or ACA product, it is very difficult in this community. There are very limited resources, especially if they need a procedure." "It's a year wait when you have an orthopedic issue..." Not surprisingly, delayed specialty care often results in unreimbursed inpatient hospital care or emergency room care.

Suggested Solutions
With regard to specialty care, Assessment participants discussed the potential for a new ambulatory surgery center:
- "…Encouraging is the new Dell Medical School, especially around specialty care… They're talking about building an ambulatory surgery center so that those folks who can't get into specialists could."
- "…An ambulatory surgery center where you can walk in and get many procedures done in a day surgery, no need to spend overnight in the hospital, including taking your gall bladder out laparoscopically versus spending a night in the hospital. You can do that in a 23-hour stay."
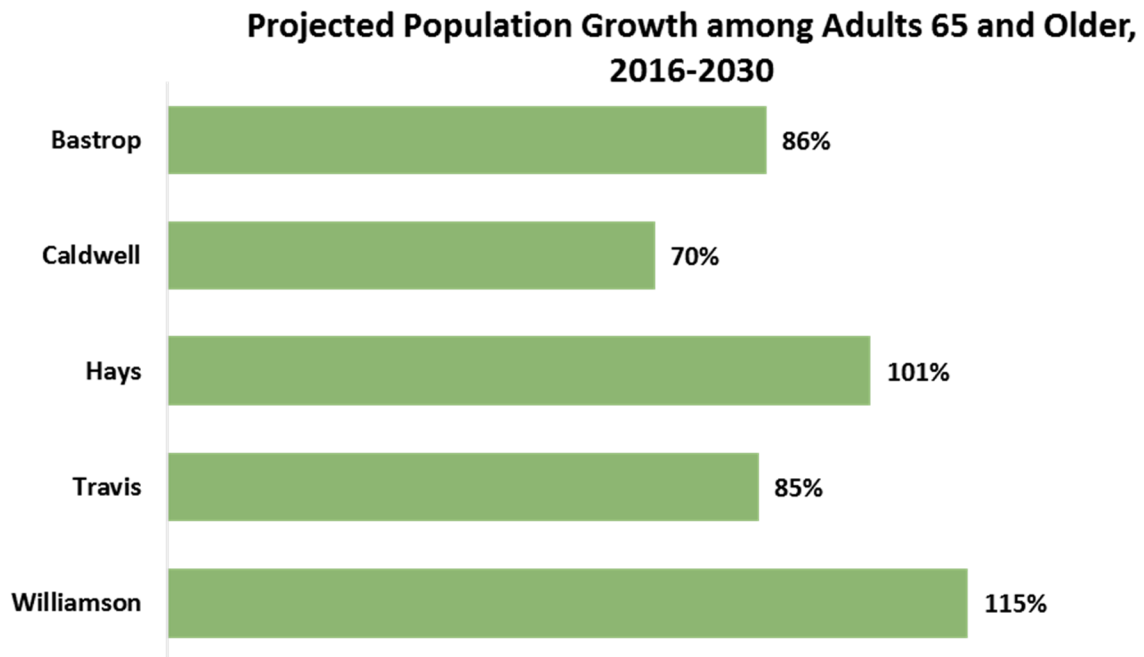
Vision Care and Eyeglasses

Vision care and free to low-cost eyeglasses continue to be needs among older adults and families with children in the Austin Independent School District. "Often times, the family is sharing the one pair of glasses that was prescribed to the child."

Needs among Specific Populations

Older Adults
Participants emphasized the needs of older adults in Central Texas. Some of their needs mirror the issues of the overall population; others are specific to seniors. Why emphasize the needs of older adults? "The aging population is just absolutely exploding." In Travis County, in 2016, adults aged 65 and older numbered 101,489. By 2030, it's projected that there will be 187,459 seniors, an 85% increase.[19]

"The growth in the aging population is going to tax everything. Do we have enough hospitals? Do we have enough minor care clinics? Do we have enough personnel to care for them? Do we have enough transportation resources? Do we have the educated workforce that can help care for the population?"

Projected Population Growth among Adults 65 and Older, 2016-2030

County	Growth
Bastrop	86%
Caldwell	70%
Hays	101%
Travis	85%
Williamson	115%

Caregiver Support

In Travis County, there is an unmet need for caregiver support and in-home respite. The lack of caregiver support can cause family caregivers to work part-time, leave the workforce, or retire early.[20] "Family care givers are definitely being taxed or being asked to provide care for a lot longer than they used to because people live with that illness a lot longer."

Middle-income seniors suffer "because they don't qualify for Medicaid. Because middle-income seniors do not qualify for Medicaid, the State cannot pay for an in-home caregiver. Many of these middle-income families lack long-term care insurance, "so they really get stuck."

Caregiver support services do exist in Travis County, but according to interviewees, the amount of these services is not going to be able to keep up with population growth. Often, churches are able to offer caregiver respite services for only "a couple of hours once a week. It's really insufficient."

More Trained Nurses for Assisted Living and Nursing Home Facilities

There is a growing need for trained staff who can provide consistent high-quality care. Central Texas needs more Registered Nurses, Licensed Practical Nurses, Licensed Vocational Nurses, and Certified Nursing Assistants who have training in gerontology. "As more and more [assisted living facilities and nursing homes] open up in our ten counties, primarily in Hays, Travis and Williamson, because that's where the populous is, staffing in those facilities is becoming more and more of an issue. There are not enough people being trained. The competition is growing so much that consistency is starting to falter."

Affordable and Accessible Housing for Older Adults

Seniors need affordable *and accessible* housing. "People can't age in affordable housing if it's not accessible." One problem is that many seniors make too much money to qualify for income-qualified housing. Yet, they also cannot afford to "pay outrageous taxes. They're moving out of Travis County. They're moving out to the more outlying counties, and the problem is, there are fewer support services available for them."

There is currently a push for "Transit-Oriented Housing Developments," which are often public-private partnerships. The Aging and Disability Resource Center has an initiative called "Housing Navigation," which is becoming involved with the housing authorities in the ten-county Central Texas region.

Appropriate Food Sources and Good Nutrition

Congress passed the Older Americans Act (OAA) in 1965 in response to concern by policymakers about a lack of community social services for older adults. Although older adults may receive services under other federal programs, the Older Americans Act is considered to be the major vehicle for social and nutrition services to seniors and their caregivers. The Act authorizes a wide array of service programs through a national network of 56 State agencies on aging, 629 area agencies on aging, and nearly 20,000 providers. Unfortunately, according to an interviewee, Texas lost approximately 17% of its Older American Act funds in 2013. This funding has not been replaced, and the current political environment is not conducive to increased funding. The Area Agency on Aging of the Capital Area and a network of providers rely on this funding to provide many home-delivered meals and congregate meals, and funding for them continues to be an issue.

Need for Culturally-Appropriate Materials in More Languages

Among older adults, there is need for publications in multiple languages. In Travis, 6% of people aged 60 and older have limited English skills.

Adults Aged 60 and Older with Limited English Speaking Ability, County Comparisons, 2010			
	Limited English	Total Pop.	%
Bastrop	705	13,064	5%
Caldwell	290	6,455	4%
Hays	839	20,455	4%
Travis	7,293	115,757	6%
Williamson	1,565	55,880	3%

Source: U.S. Census, cited in Area Agency on Aging of the Capital Area,
Capital Area Council of Governments Area Plan , FY 2015-2016.

Dental Care

"Medicaid doesn't pay for any dental. The Area Agency on Aging of the Capital Area has a long waiting list for people who need dental… it's not just a filling, it's teeth needing to be pulled. Major stuff… The lack of dental care is a huge issue for our seniors. It's the number one way they get an infection in their heart. They can't eat. They need soft foods. They don't have access to soft foods… People even on Medicaid can't afford [dental services]. They definitely can't afford any kind of even preventive dental care…."

Care Transitions

A *care transition* is the movement of a patient from one setting of care (hospital, ambulatory primary care practice, ambulatory specialty care practice, long-term care, home health, rehabilitation facility) to another. Much evidence exists that patients who undergo transitions often experience quality-of-care issues. An interviewee from a community-based organization advocated for more funding to pay for "train the trainer" courses. She noted that care transition programs run by community-based organizations work best if hospitals allow the Care Transitions coach to embed herself in the hospital to "talk about care transitions, to get people to agree to be in the Care Transitions program, and [to make sure] the case managers [in the hospital] have a good understanding of it. Then the hospitals have to be somewhat agreeable in [providing information about the patient being discharged.]"

Leadership, Collaboration, and Planning that Account for Older Adults

An interviewee suggested a Commission on Seniors in every town, city, and county so that the voices and perspectives of seniors can be included in discussions on planning. In addition to creating the commissions or task forces, city and county planners need to take advantage of them.

Alternatives to Nursing Homes

According to an interviewee, the conversion of Medicaid to managed care organizations is changing the way the Medicaid population's needs are being met. The change is affecting seniors who live in nursing homes. "Assisted living for seniors is a much more affordable way to care for folks than 24-hour skilled nursing care… Medicaid in Texas only pays for an extremely limited amount of care in assisted livings. So, it's forcing our Medicaid population to live in skilled nursing facilities, when they may not need to… That's a very high cost of care… It always seemed fairly tragic that there's a group of seniors with Alzheimer's who could really benefit from being in an assisted living facility, and they can't participate in that." She advocated for giving our seniors more options and choices: their own homes, assisted living facilities, and nursing homes.

Eyeglasses for Older Adults Who Do Not Qualify for Medicaid

The Area Agency on Aging of the Capital Area "helps some people get glasses, just basic glasses when their glasses break. Again, we have very little funding. I think Medicaid does help pay for one pair of glasses every two years. Most of the time they may be okay, but it's your middle-income people who need help with glasses."

People with Disabilities

For people with disabilities in Central Texas, "access to services is far and away the most important thing." "The national office for United Cerebral Palsy just released a report that compared quality of services for people with disabilities nationwide, and Texas is only ahead of Mississippi right now…" The waiting for home- and community-based services: "Nationally, there are 350,000 people on the waiting list; 50% of those individuals live in Texas."

The "hostility of the state legislature to the Medicaid program severely restricts access. There's no defined benefit for autism currently, and our state Medicaid program is one of the last states to define a benefit. With now 1 out of 45 kids presenting with autism, the fact that we're not addressing that is going to present a severe opportunity for us…" There was also a "$350,000,000 cut to children's therapies [during] the last legislative session… When you consider the fact with rising autism rates being what they are…, and the fact that we're at the very bottom of the nation right now addressing needs for a population that's doubling over the next decade, [it] really presents a perfect storm for us."

PRIORITIZING UNMET NEEDS

Rankings

Nybeck Analytics administered an online survey after all interviews and the focus group were completed so that Assessment participants and other identified key stakeholders had the opportunity to prioritize unmet needs previously specified. The first part of the survey asked respondents to rank unmet needs by five criteria often used to prioritize community health needs. (Please refer to the **Appendices** for a detailed description of methodology.) The criteria were: 1) Relatively large number of people affected, 2) Availability of cost-effective solutions, 3) A root cause of several other issues, 4) Existence of large disparities among groups, and 5) Existence of leadership and momentum to solve unmet need. Based on these weighted criteria, 30 respondents ranked the unmet needs. Respondents' priority scores were very high and extremely similar for all of the community needs. There was not much variation. The needs that received the highest rankings were (in this order): 1) resources and services supporting healthy lifestyles, 2) reproductive health services and family planning, 3) primary healthcare, 4) mental and behavioral healthcare, 5) resources and services to combat poverty, and 6) affordable housing. Dental care among adults and specialty care were ranked lowest. In a separate question on the survey, when asked to "choose one unmet need as the most important to address in the next one to three years," respondents ranked these as the top priorities: 1) resources and services to combat poverty, 2) affordable housing, and 3) mental and behavioral healthcare. No one named "dental care among adults." (See **Appendix 1** for tables showing results.) **Supports for healthy lifestyles, mental and behavioral healthcare, and combating poverty were consistently rated as higher priorities**. Dental care among adults and specialty care were consistently rated as lower priorities.

When asked to choose the "one unmet need to address," three respondents expressed reservations about choosing only one. One explained,

> We can't afford to address just one issue as the return on investment differs across issue areas. Affordable housing, transportation and combating poverty are very expensive and will require long term commitments; expanding primary care access, healthy lifestyles, dental, behavioral health, including substance abuse treatment, and specialty care less so. Investments in those areas may produce broader return to the community in a shorter timeframe. Reproductive health needs to be looked at separately from abortions, but both are overly politicized, especially teen birth control and sex education and therefore difficult to address.

Based on the online survey findings and a qualitative assessment of the interviews and focus group, Nybeck Analytics offers the needs in prioritized order below.

Resources and services supporting healthy lifestyles (nutritious food, physical activity, preventive services). Participants noted the burden of chronic diseases such as heart disease, cancer, stroke, chronic lung disease, and diabetes. They emphasized investments in 1) tobacco cessation, 2) physical activity, and 3) nutrition. Approaches should be collaborative and comprehensive. Work sites, schools, and healthcare organizations can coordinate to support healthy lifestyles.

Resources and services to combat poverty. These included workforce development, early childhood education, affordable housing, and increasing the minimum wage.

Mental and behavioral healthcare. Assessment participants stressed the need to strengthen community-based services and offer more preventive care and other relatively low levels of care to people with mental and behavioral health issues. They suggested 1) studies on the cost-effectiveness of preventive services, 2) reducing the stigma of therapy, 3) earlier intervention for children to prevent mental illness, 4) expansion of mental and behavioral healthcare in schools, and 5) strengthening and expanding integrated behavioral healthcare.

Affordable housing. Participants in the Assessment called for 1) more affordable housing, 2) greater awareness and understanding of homelessness and its causes, 3) housing people with substance abuse problems or mental health issues, 4) more family shelters. They argued that housing should be seen as a "health intervention."

Primary and preventive healthcare. Participants emphasized system-level changes like improving quality of care, payment reform, and greater healthcare coverage. They also discussed solving the provider shortage, conducting more sophisticated marketing and development for safety net clinics to make them more accessible to the neediest patients, using a more holistic approach to healthcare, and providing culturally and linguistically appropriate health-related publications and materials.

Patient navigation. Patient navigation was brought up within several contexts such as to obtain healthcare coverage, to be provided to residents in affordable and supportive housing, and to help patients navigate primary and preventive care, specialty care, mental and behavioral healthcare, and substance abuse treatment.

Resources and treatment for substance abuse. A participant suggested a community-wide education and outreach response to emerging drug epidemics. Several called for building capacity in the area of substance use disorders.

More robust transportation system. Many comments focused on providing transportation to and from social service agencies and healthcare facilities. Suggestions for improvement included better planning when developing new clinics, better urban planning, and a partnership among transit and healthcare interests to tackle the transportation issue.

Reproductive health services and family planning. Participants cited the relatively high rates of HIV and other STDs in Travis County. They suggested routine HIV testing in hospitals and increasing HPV vaccine rates. With the HPV vaccine, there is a huge opportunity for success in preventing cervical, anal, and throat cancers. Focus participants stressed the continued need for family planning, including abortion services when appropriate and necessary. They also spoke of the high teen pregnancy rate among Hispanics.

Dental care among adults. Interviewees and focus group participants suggested partnerships among clinics and hospitals to help patients and decrease emergency room visits.

Specialty care and procedures. Several people stressed the need for specialty care and procedures among patients who depend on the healthcare safety net and who are covered by Medicaid. They discussed the potential for a new ambulatory surgery center.

Vision care and eyeglasses. Vision care and free to low-cost eyeglasses continue to be needs among older adults and families with children in the Austin Independent School District. Focus group participants called for a community-based approach to solving this issue.

Importance of Root Causation

In explaining how they chose the one unmet need to address in the next one to three years, almost all respondents emphasized how the issue is a **root cause for other issues**. For example, poverty "is the deepest root of all root causes." A respondent who prioritized affordable housing said, "It is difficult for people to recover from substance abuse, mental health episodes or even physical impairments without the safety and security afforded by a private room…" A respondent who prioritized mental and behavioral healthcare explained, "It's a core issue that is linked to several other issues including overall health, poverty, substance use disorder, tobacco use, chronic disease. It often goes untreated and drives high utilization of emergency/crisis and criminal justice services."   A respondent who prioritized supports for healthy lifestyles also stressed the concept of root causation.

Researchers have referred to the social determinants of health as "upstream" factors affecting "downstream" health issues and interventions.[21]   In other words, the strains of poverty, low levels of education, housing instability, and a lack of transportation create situations that produce health disparities. Subsequently, interventions must be developed to address the disproportionately high rate of health problems in resource-poor environments. Just as scholars have argued, respondents emphasized that the antecedent causes must be addressed first. The benefit of starting "upstream" is that it will be more effective and more cost efficient than trying to fund a multitude of services for treating health problems and crises. While it could be argued that initiatives to address poverty and homelessness are not "health" interventions, the respondents felt otherwise.

Populations to Target with Resources and Services

Suggested resources and services can benefit all residents of Travis County, particularly those with limited resources. Interviewees and focus group participants identified people in low-income households and the following groups who may be particularly vulnerable and in need of specific resources:

- Children: preventive mental and behavioral health services, psychiatric care, HPV vaccines, vision care and eyeglasses
- Older adults: caregiver support, more trained healthcare providers, housing, transportation, food and nutrition, alternatives to nursing homes, eyeglasses
- Those suffering from severe mental illnesses or addiction: housing, peer support
- Residents of affordable or supportive housing: mental and behavioral healthcare, patient navigation
- Residents of Del Valle: transportation, resources supporting healthy lifestyles
- People with disabilities: greater number of higher-quality services, children's therapies
- Certain ethnic/racial groups: resources supporting healthy lifestyles (African Americans and Hispanics), culturally and linguistically appropriate outreach and healthcare resources (Asian-Americans and Hispanics), and HIV awareness campaigns (African-Americans)

APPENDICES

Appendix 1. Description of Methodology

Review of Literature and Quantitative Data

A Nybeck Consultant conducted a literature review using previously published community needs assessments and other local reports focused on Austin or Travis County. MIA Consulting, on behalf of Seton Healthcare Family, was partly responsible for the collection and review of the quantitative data that derive from secondary sources. Community-level data were gathered from sources including the American Community Survey, U.S. Census and Behavioral Risk Factor Surveillance System, and the Texas State Data Center to illustrate the county's demographics, health outcomes and health factors. MIA Consulting reviewed 80 measures and put measures into groups to allow data to be examined at a higher level.

Data analysis utilized z-score methodology to compare measures of specific counties to each other, Texas, and the United States. The Robert Wood Johnson Foundation (RWJF) uses z-scores to produce its county rankings for various health measures. Z-scores are a way to standardize different types of data for comparison purposes. The scores measure the number of standard deviations from the average of all counties, and are not a comparison to an ideal standard.

Nybeck Analytics incorporated the findings from MIA Consulting, Austin/Travis County Health and Human Services publications, and previous community needs assessments into the project design, interviews and focus group, and this report as appropriate. Nybeck Analytics incorporated several estimates and figures from the Austin/Travis County Health and Human Services Department's *2015 Critical Health Indicators Report*. See **Appendix 2** for references.

Interviews with Key Stakeholders

Purpose

The purpose of in-depth interviews was to "identify and prioritize the health needs of the community" from the stakeholders' points of view. Findings from interviews informed the design of the focus group. Interviews followed a semi-structured guide, and covered the identification of health needs, prioritization of health needs, and how best to meet those needs. The interviewer asked about barriers and reasons for unmet health needs, existing resources, needed resources, and potential solutions among specific subgroups in the community. At the end of each interview, the interviewer 1) asked if the interviewee could recommend anyone for an interview, focus group, or the online survey, 2) asked for permission to use quotes with interviewee's name, and 3) explained that all interviewees would be asked to complete a brief survey to prioritize health needs. Refer to **Appendix 3** for Interview Guide.

Sample and Recruitment

Representatives from collaborating agencies (St. David's Foundation, Seton Healthcare Family, Central Health, and Austin/Travis County Health and Human Services) made up a steering committee, which was responsible for designing the Assessment. The steering committee

members contributed contact information for 70 people who represent the broad interests of Travis County and who are knowledgeable about its health-related issues. These stakeholders included nonprofit leaders, health department authorities, public school leaders, healthcare providers or leaders, elected officials, researchers, people representing distinct geographic areas, and people representing certain ethnic/racial groups. The steering committee then prioritized potential interviewees, paying attention to factors such as type of work and work place.

To recruit interviewees, Nybeck consultants, with the assistance of St. David's Foundation and collaborating partners, called and emailed prioritized key stakeholders. Nybeck Analytics conducted 9 interviews (8 face-to-face and 1 phone) between Nov. 17, 2015 and Jan. 14, 2016. Interviews lasted between 25 and 60 minutes, and all face-to-face interviews took place at the interviewees' offices. Two interviews included two interviewees. The sample included people from the below organizations.

Organizations Represented by Interviewees	
Name	**Type**
Austin/Travis County HHS	State, county, city health dept.
CAPCOG	Community-based organization
CapMetro	Transportation
CapMetro	Transportation
CapMetro	Transportation
Del Valle ISD	Public education, health in schools
Integral Care	Safety net clinic, mental health
Integral Care	Safety net clinic, mental health
Lone Star Circle of Care	Safety net clinic
Manor ISD	Public education, health in schools
Pflugerville ISD	Public education, health in schools

Transcription
All interviews were audio-recorded and transcribed and remain confidential.

Focus Group
Purpose and Questions to Address
The purpose of the focus group was to approximate a group response to ideas and flesh out proposed concepts. The group followed a semi-structured guide:
1. Identify significant health needs
2. Identify barriers and reasons for unmet health needs
3. What supports, programs, and services would help to improve the needs, or issues?
4. Identify existing resources, needed resources, and potential solutions among specific subgroups in the community
5. What is the group's reaction to a) health needs, b) barriers, and c) supports, programs, and services put forth by the interviewees, the literature review, and the quantitative analyses?

Nybeck consultants finalized the design of the focus group guide after discussions with St. David's Foundation (SDF) staff and the Steering Committee, a review of the quantitative data presented by SDF's collaborating partners, and analysis of interview data collected up to the day of the focus group.

Recruitment and Sample
Potential participants were identified from the list of 70 key stakeholders. Most participants were recruited through organizations (schools, social service agencies, clinics) that provide services to community residents. Others were elected officials or government leaders. During recruitment, Nybeck staff explained the study's purpose. An incentive of $50 was offered to all participants. Nybeck consultants recruited 13 key stakeholders who represented a specific group, occupation, or perspective important to the project. Eleven people from the below organizations participated in the focus group.

Organizations Represented by Focus Group Participants	
Name	Type
Asian American Quality of Life Commission	Community-based organization
Austin ISD	Public education, health in schools
City of Austin	City government
Community Action Network	Community-based organization
CommUnity Care	Safety net clinic
El Buen Samaritano	Safety net clinic
Foundation Communities	Community-based organization
Meals on Wheels and More	Community-based organization
One Voice/Easter Seals Central Texas	Community-based organization
People's Community Clinic	Safety net clinic
Travis County	State, county, city health dept.

Administering Focus Group and Collecting Data
The focus group lasted 90 minutes. The moderator began with an "unbiased" assessment of the focus group participants' views of the health needs in their community. The moderator asked open-ended questions about health needs. Next, the moderator followed up with probes about any health needs that came up in the quantitative and qualitative analyses but that didn't come up in the groups open-ended responses, such as, "You mentioned that there is a need in your community for primary care services like better management of diabetes. We've heard from other sources/stakeholders that there is also a need to improve the management of hypertension in their communities. Is this something that you are also facing within your community? Please tell me more." An assistant moderator took notes and digitally recorded the group interview for transcription.

Data Analysis: Interviews and Focus Group

Nybeck consultants coded all transcripts and identified the main themes. From successive readings of transcripts, we used content analysis to produce a progressively more refined coding scheme. Nybeck consultants collaboratively developed the coding and themes for the final summaries.

Online Survey to Prioritize Needs

A goal of this project is to prioritize health needs. This prioritization was a two-step process. The first determined the criteria used to prioritize health needs using Nominal Group Technique. The second step was to prioritize the health needs identified throughout the project (literature review, quantitative analysis, interviews, and focus group) through an online survey.

A Nybeck consultant administered the Nominal Group Technique during two planning meetings that took place in October 2015 (**Appendix 4**). SDF staff, Nybeck consultants, and collaborating partners completed the exercise, which resulted in five weighted criteria to be used in prioritizing needs: 1) Relatively large number of people affected (.29), 2) Availability of cost-effective solutions (.26), 3) A root cause of several other issues (.21), 4) Existence of large disparities among groups (.14), and 5) Existence of leadership and momentum to solve unmet need (.10).

The second step involved the survey. Using the criteria identified during the two planning meetings, Nybeck constructed a Prioritization Matrix on SurveyMonkey. See **Appendix 5** for process. A St. David's Foundation Program Officer emailed a note to all listed stakeholders with email addresses (n=62), saying that they would receive an email invitation from Nybeck Analytics to complete the six-minute survey. A Nybeck consultant emailed all interviewees, all focus group participants, and other key stakeholders an invitation on Feb. 1, 2016. A reminder was emailed on Feb. 5, and the survey closed on Feb. 9. Fourteen interviewees and focus group participants and sixteen other key stakeholders completed the survey. The response rate was 48%.

Sample for Online Survey		
	n	**%**
Private nonprofit social service organization (provider, executive, other staff)	12	40%
City, county, or state government (elected official or other staff)	5	17%
School or school district (nurse, counselor, superintendent, other staff)	3	10%
Private, nonprofit safety net clinic (provider, executive, other staff)	3	10%
Health department of public clinic (provider or other staff)	1	3%
Private for-profit medical practice (provider, executive, other staff)	1	3%
University or private research firm	1	3%
Foundation or other philanthropic organization	1	3%
Local mental health authority	1	3%
Other	2	7%
Total	**30**	**100%**

Following instructions in the Priority Matrix, a Nybeck consultant analyzed the data using SPSS. Based on the weighted criteria, 30 respondents ranked the unmet needs in this order:

1. Resources and services supporting healthy lifestyles (healthy food, physical activity, preventive services)
2. Reproductive health services and family planning, including abortion
3. Primary healthcare
4. Mental and behavioral healthcare
5. Resources and services to combat poverty
6. Affordable housing
7. Substance abuse treatment
8. Transportation
9. Dental care among adults
10. Specialty care

In a separate question, when asked to "choose one unmet need as the most important to address in the next one to three years," resources and services to combat poverty, affordable housing, and mental and behavioral healthcare were the top priorities (see table below). No one named "dental care among adults."

Choosing One Unmet Need as the Most Important to Address In the Next One to Three Years, Travis County, 2016		
	n	%
Resources and services to combat poverty	6	20%
Affordable housing	6	20%
Mental and behavioral healthcare	6	20%
Resources and services supporting healthy lifestyles (healthy food, physical activity, preventive services)	3	10%
Transportation	2	7%
Primary healthcare	1	3%
Substance abuse treatment	1	3%
Specialty care	1	3%
Reproductive health services and family planning, including abortion	1	3%
Don't know	3	10%
Total	**30**	**100%**

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Appendix 3. Interview Guide

Introduction

St. David's Foundation has asked Nybeck Analytics to conduct a Community Health Needs Assessment. Seton Healthcare Family, Central Health, and Austin/Travis County Health and Human Services are collaborating with St. David's. The purpose of the Assessment is to identify and prioritize health needs of the community so that these organizations can better serve their patients and communities. We want to get input from people who represent the broad interests of Travis County and who have special knowledge of or expertise in its health issues. The purpose of this interview is to get *your* perspective and opinions.

Definition of Community (Travis)

Background of Interviewee/Organization
Current role, background and training, expertise

Significant Health Needs
- What are largest unmet needs? Why?
- What concerns you most about this community's health? Why?
- Barriers and reasons for unmet health needs

Resources/Solutions
- Thinking about the "significant health needs" identified above, what services are needed, or what services need to be expanded or improved?
- Identify current resources in the community
- Find out how best to meet identified needs, identify resources and potential solutions: What do you think could be done to address the health need we've discussed?
- Identify existing resources, needed resources, and potential solutions <u>among specific subgroups in the community</u>

Closing and Follow-Up
- Ask if interviewee knows anyone else in community appropriate for interview, focus group, or online survey.
- Ask for permission to use quotes with interviewee's name. If "yes," Explain that if quote is slated for final report, a Nybeck consultant will contact interviewee and get explicit permission to use specific quote.
- Explain that a Nybeck consultant will email invitation to complete a brief online survey to prioritize health needs.

Appendix 4. Nominal Group Technique[1]

The Nominal Group Technique (NGT) has been widely used in public health as a mechanism for prioritizing health problems through group input and information exchange. This method is useful in the early phases of prioritization when there is a need to generate many ideas in a short amount of time and when input from multiple people must be taken into consideration. An advantage of using this technique is that it is a democratic process allowing for equal say among all participants, regardless of position in the agency or community.

Step-by-Step Instructions:

1. **Establish group structure –** Group of partners with Nybeck Consultant as moderator. Moderator clarifies objective and the process.
2. **Silent brainstorming –** Nybeck consultant asks partners to brainstorm and think about potential criteria before meeting.
3. **Each person lists the criteria that they thought about on a note card.**
4. **Generate list in round-robin fashion –** Nybeck consultant solicits one idea from each person and lists them on a flip chart for the group to view. This process should be repeated until all ideas and recommendations are listed.
5. **Group discussion –** Nybeck consultant reads aloud each item in sequence, and the group responds with feedback on how to condense or group items. Participants also provide clarification for any items that others find unclear. Add criteria as necessary.
6. **Anonymous ranking –** On a note card**,** all people at meeting silently rank each listed health problems on a scale from 1 to 5 (or so), and Nybeck consultant collects, tallies, and calculates total scores.
7. **Repeat if desired/weight criteria–** Once the results are displayed, the group can vote to repeat the process if items on the list receive tied scores or if the results need to be narrowed down further. Discuss how to weight criteria.

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[1] Duttweiler, M. 2007. *Priority Setting Tools: Selected Background and Information and Techniques*. Cornell Cooperative Extension. Cited in "First Things First: Prioritizing Health Problems," National Association of County and City Health Officials. http://www.naccho.org/topics/infrastructure/accreditation/upload/Prioritization-Summaries-and-Examples.pdf. Sept. 2015.

Appendix 5. Prioritization Matrix[2]

A prioritization matrix is one of the more commonly used tools for prioritization and is ideal when health problems are considered against a large number of criteria or when an agency is restricted to focusing on only one priority health issue. Although decision matrices are more complex than alternative methods, they provide a visual method for prioritizing and account for criteria with varying degrees of importance.   The following steps outline the procedure for applying a prioritization matrix to prioritize health issues. The table below shows a single person's matrix.

Example Prioritization Matrix			
	Criterion 1 (Rating X Weight)	Criterion 2 (Rating X Weight)	Criterion 3 (Rating X Weight)	Priority Score
Health Problem A	2 X 0.5 = 1	1 X .25 = .25	3 X .25 = .75	2
Health Problem B	3 X 0.5 = 1.5	2 X .25 = 0.5	2 X .25 = 0.5	2.5
Health Problem C	1 X 0.5 = 0.5	1 X .25 = .25	1 X .25 = .25	1

1. Create a matrix – List all issues vertically down the y-axis of the matrix and all the criteria across the x-axis of the matrix so that each row is represented by a health issue and each column is represented by a criterion. Include an additional column for the priority score.

2. Rate against specified criteria – Fill in cells of the matrix by rating each health issue against each criterion, which should have been established by the team prior to beginning this process. An example of a rating scale can include the following: 3 = criterion met well, 2 = criterion met, 1 = criterion not met.

3. Weight the criteria – If each criterion has a differing level of importance, account for the variations by assigning weights to each criterion. For example, if 'Criterion 1' is twice as important as 'Criterion 2' and 'Criterion 3,' the weight of 'Criterion 1' could be .5 and the weight of 'Criterion 2' and 'Criterion 3' could be .25. Multiply the rating established in Step 2 with the weight of the criteria in each cell of the matrix. If the chosen criteria all have an equal level of importance, skip this step.

4. Calculate priority scores – Once the cells of the matrix have been filled, calculate the final priority score for each health issue by adding the scores across the row. Assign ranks to the health problems with the highest priority score receiving a rank of '1.'

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[2] Duttweiler, M. 2007. *Priority Setting Tools: Selected Background and Information and Techniques*. Cornell Cooperative Extension. Cited in "First Things First: Prioritizing Health Problems," National Association of County and City Health Officials. http://www.naccho.org/topics/infrastructure/accreditation/upload/Prioritization-Summaries-and-Examples.pdf. Sept. 2015.

Appendix 6. Online Survey Instrument

Welcome and Thanks

This 6-minute online survey is part of the 2015-2016 Community Health Needs Assessment. The Assessment is a collaborative effort led by St. David's Foundation, Seton Healthcare Family, Central Health, and Austin/Travis County Health and Human Services. On behalf of these organizations, thanks for helping to prioritize community health needs in Travis County.

1. In the last few months, as part of the Community Health Needs Assessment, did you participate in an interview or focus group?

        1. Yes (*skip to Q3*)

        2. No

Prioritizing Community Health Needs in Travis County

During the Community Health Needs Assessment, people who represent the broad interests of Travis County and who are familiar with its health issues identified several unmet needs. These unmet needs are listed on the left. Five criteria, or questions, often used to prioritize needs are listed at the top.

2. Considering the unmet needs on the left, please use the drop-down menus to answer each question by responding "yes," "somewhat," or "no."

	Does this unmet need affect a relatively large number of people?	Are cost-effective solutions available to address this?	Is this unmet need a root cause of several other issues?	Thinking of this unmet need, do large disparities exist among groups?	Do leadership and momentum exist to solve this?
Resources and services to combat poverty					
Transportation					
Affordable housing					
Primary healthcare					
Dental care among adults					
Mental and behavioral healthcare					
Substance abuse treatment					
Specialty care					
Reproductive health services and family planning, including abortion					
Resources and services supporting healthy lifestyles (healthy food, physical activity, preventive services)					

Prioritizing Needs in Travis: Interview and Focus Group Participants

Unmet needs identified during the Assessment's interviews, focus group, and literature review are listed on the left. Five criteria, or questions, often used to prioritize needs are listed at the top.

3. Considering the unmet needs on the left, please use the drop-down menus to answer each question by responding "yes," "somewhat," or "no."

	Does this unmet need affect a relatively large number of people?	Are cost-effective solutions available to address this?	Is this unmet need a root cause of several other issues?	Thinking of this unmet need, do large disparities exist among groups?	Do leadership and momentum exist to solve this?
Resources and services to combat poverty					
Transportation					
Affordable housing					
Primary healthcare					
Dental care among adults					
Mental and behavioral healthcare					
Substance abuse treatment					
Specialty care					
Reproductive health services and family planning, including abortion					
Resources and services supporting healthy lifestyles (healthy food, physical activity, preventive services)					

Last Three Questions

4. If you could choose one unmet need as the most important to address in the next one to three years, what would it be?
1. Resources and services to combat poverty
2. Transportation
3. Affordable housing
4. Primary healthcare
5. Dental care among adults
6. Mental and behavioral healthcare
7. Substance abuse treatment
8. Specialty care (such as cardiology, urology, orthopedics, etc.)
9. Reproductive health services and family planning, including abortion

10. Resources and services supporting healthy lifestyles (healthy food, physical activity, preventive services)
11. Don't know

5. Please explain why you chose to prioritize this one need. _____

_____

_____

6. Where do you work?   Please choose the response that most closely describes your work place.
1. Health department or public clinic (provider, executive, other staff)
2. Private for-profit medical practice (provider or other staff)
3. Private, nonprofit social service organization (provider, executive, other staff)
4. School or school district (nurse, counselor, superintendent, other staff)
5. Place of worship
6. Hospital (hospitalist, nurse, executive, other staff)
7. Private, nonprofit safety net clinic (provider, executive, other staff)
8. University or private research firm
9. Foundation or other philanthropic organization
10. City, county, or state government (elected official or other staff)
11. Other (please specify) _____

Thanks so much for completing the survey. We really appreciate it.

ENDNOTES

[1] This definition of community health is the same used by Austin/Travis County HHS in its Community Health Assessment. See Austin/Travis County Health and Human Services Dept. *Together We Thrive: Austin/Travis County Community Health Plan*. Dec. 2012. https://www.austintexas.gov/sites/default/files/files/Health/CHA-CHIP/cha_report_8-24-12.pdf. Nov. 2015.

[2] These projections are based on the Texas State Data Center's One-Half 2000-2010 Migration (0.5) Scenario. It assumes rates of net migration one-half of those of the post-2000 decade. The reason for including this scenario is that many counties in Texas are unlikely to continue to experience the overall levels of relative extensive growth of the 2000 to 2010 decade. This scenario projects rates of population growth that are slower than 2000-2010 changes, but with steady growth. http://osd.texas.gov/Data/TPEPP/Projections/. March 2016.

[3] Austin/Travis County Health and Human Services Dept. *2015 Critical Health Indicators Report*. http://www.austintexas.gov/sites/default/files/files/Health/Info_to_Post/Critical_Health_Indicators_2015.pdf. Nov. 2015.

[4] Austin/Travis County Health and Human Services Dept. 2015.

[5] Texas Behavioral Risk Factor Surveillance System, cited in Austin/Travis County Health and Human Services Dept. *2015 Critical Health Indicators Report*.

[6] Austin/Travis County Health and Human Services Dept. *Together We Thrive: Austin/Travis County Community Health Plan*. Dec. 2012. https://www.austintexas.gov/sites/default/files/files/Health/CHA-CHIP/cha_report_8-24-12.pdf. Nov. 2015.

[7] County Health Rankings and Roadmaps, Robert Wood Johnson Foundation and University of Wisconsin Population Health Institute. http://www.countyhealthrankings.org/. Feb. 2016. *Living close to a grocery store* is defined differently in rural and non-rural areas. In rural areas, it means living less than 10 miles from a grocery store. In non-rural areas, it means less than 1 mile. *Low income* is defined as having an annual family income of less than or equal to 200% of the Federal Poverty Level.

[8] Brookings Institute, cited in *2014 Community Needs & Trends Report* by United Way for Greater Austin, United Way 211.

[9] Florida, Richard, and C. Mellander. 2014. *Segregated City: The Geography of Economic Segregation in America's Metros*. Martin Prosperity Institute. http://martinprosperity.org/media/Segregated%20City.pdf. Feb. 2016.

[10] Watt, Toni. 2015. *Harris County Protective Services Integrated Health Care Implementation Grant: Mid-Course Evaluation Report*. Submitted to the Hogg Foundation for Mental Health.

[11] Watt, Toni. 2015. *Advancing Peer Support in Integrated Care: Year 1 Evaluation Report*.

[12] Watt, Toni, et al. 2015. "A Primary Care-Based Early Childhood Nutrition Intervention: Evaluation of a Pilot Program Serving Low-Income Hispanic Women," *Journal of Racial and Ethnic Health Disparities*, 2, 537-547.

[13] Shonkoff, J.P. et al. 2012. "The Lifelong Effects of Early Childhood Adversity and Toxic Stress." *Pediatrics*, 129: e232-e246. Adverse Childhood Experiences (ACE) Study. 1996. http://www.cdc.gov/violenceprevention/acestudy/. March 2016.

[14] County Health Rankings and Roadmaps.

[15] Housing Works Austin. "2015 City Council District Analyses." http://housingworksaustin.org/news/2015-city-council-district-analyses/. Oct. 2015.

[16] County Health Rankings and Roadmaps.

[17] Austin/Travis County Health and Human Services Dept. 2015.

[18] Austin/Travis County Health and Human Services Dept. 2015.

[19] These projections are based on the Texas State Data Center's One-Half 2000-2010 Migration (0.5) Scenario. It assumes rates of net migration one-half of those of the post-2000 decade. The reason for including this scenario is that many counties in the State are unlikely to continue to experience the overall levels of relative extensive growth of the 2000 to 2010 decade. This scenario projects rates of population growth that are slower than 2000-2010 changes, but with steady growth. http://osd.texas.gov/Data/TPEPP/Projections/. March 2016.

[20] AARP Public Policy Institute and National Alliance for Caregiving. *Caregiving in the U.S. 2015*. June 2015. http://www.caregiving.org/wp-content/uploads/2015/05/2015_CaregivingintheUS_Final-Report-June-4_WEB.pdf. Feb. 2016.

[21] Gehlert, S. et al. "Targeting Health Disparities: A Model Linking Upstream Determinants to Downstream Interventions: Knowing about the Interaction of Societal Factors and Disease Can Enable Targeted Interventions to Reduce Health Disparities." *Health Affairs* (Project Hope). 2008;27(2):339-349.

2016
Community
Health
Assessment

Williamson County, Texas

Williamson County and Cities Health District

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FRIDAY & ADAPT

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Hutto ISD

IT'S TIME TEXAS

Leander ISD

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Literacy Council of Williamson County

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Mental Health Task Force

OneLife Health Coaches

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Valence Health

Opportunities for Williamson and Burnet Counties

Williamson County and Cities Health District

Williamson County EMS

Williamson County HealthCare Link

Wyoming Springs Pediatrics

Executive Summary

Overview

In order to strategically address health issues within the community, it is vital to first sustain broad community partnerships and develop a shared vision and goals for the future. This joint ownership and responsibility for the community's health catalyzes the efficient utilization of resources across agencies and groups to evaluate and achieve improvements in health status. The Williamson County and Cities Health District (WCCHD) in collaboration with strong community partners, including the WilCo Wellness Alliance (WWA), Baylor Scott & White Health, Opportunities for Williamson and Burnet Counties, Seton Healthcare Family, and the St. David's Foundation led the Williamson County CHA Strategic Planning Team (hereafter referred to as the CHA Team). The goals of the CHA Team were to:

1. Identify existing and emerging community health needs;
2. Identify the strengths and assets available to improve health;
3. Determine key issues that affect quality of life;
4. Understand key forces of change influencing health in the community;
5. Evaluate the local public health system and determine priorities for improvement; and
6. Identify top health priorities for future health improvement efforts.

Methodology

The CHA Team used the National Association of County and City Health Officials (NACCHO) Mobilizing for Action through Planning and Partnerships (MAPP) process as a proven systematic framework for identifying community health needs and the resources for meeting those needs.

The MAPP process consisted of four assessments – the community health status assessment, the community themes and strengths assessment, the forces of change assessment, and the local public health systems assessment. Following this framework, the CHA Team utilized a mixed-method, participatory, and collaborative approach to conduct these assessments to evaluate the health of the community defined by the geographic area of Williamson County, Texas.

The assessment process included both primary data generated by the partners and secondary data from external organizations; the CHA team aggregated this data on health, socio-behavioral, and economic indicators for the county from a large number of local, state, and federal data sources.[1] Whenever possible, the CHA Team analyzed data at the census tract level to understand the diversity within and across areas of Williamson County at the most detailed level available.

However, the CHA Team recognized that numbers alone don't always tell the whole story. As such, the team complemented the large volume of quantitative data with qualitative data gathered through facilitated discussions, key informant interviews, and focus groups with residents and stakeholders.

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[1] *Note: Data sources and references are provided in the main document but have been removed from the Executive Summary for brevity.*

Through engagement in facilitated discussions, leadership from WCCHD and the WWA provided feedback on the current status of and potential improvements to the local public health system. Additionally, trained facilitators conducted 12 focus groups with community members from a variety of groups including youth, non-English speakers, older adults, healthcare systems staff, non-profit organizations, educational entities, and local governments. In all, the CHA process engaged more than 100 individual community members.

Together, these quantitative and qualitative analyses constituted a comprehensive view of the factors influencing the health of the community and provided the basis for the community's determination of their priority areas.

Of course, the CHA is just the first part of this effort. The companion document, the Community Health Improvement Plan (CHIP), will be community's action plan for proactively addressing the priority areas and coordinating community-wide improvement efforts for the next three years. A community-based team in collaboration with the Wilco Wellness Alliance (WWA) and other stakeholders will also develop the CHIP.

Key Findings

Although this document identified many findings and issues, the authors have distilled some of the key findings for consideration here in the Executive Summary and have listed them by assessment below.

Key Findings - Community Health Status Assessment

The Community Health Status Assessment (CHSA) comprised the bulk of the CHA, with detailed analyses of the disease burdens and health statuses of Williamson County residents as compared to the overall population of Texas and national Healthy People 2020 (HP2020) targets. The CHA Team analyzed data on the burden of disease, causes of death, and behavioral risk factors (e.g., lifestyle issues such as tobacco use). The team selected assessment categories from the MAPP framework's Core Indicator List. The following summary statistics and trends describe the changing population, highlight health successes, and identify gaps where progress can be made to improve the health and well-being of Williamson County residents.

Top 10 Causes of Death

Over the past century, the leading causes of death in the U.S. have shifted from infectious diseases and acute illnesses to chronic and degenerative illnesses. In 2013, the top 10 causes of death in Williamson County were: 1. Cancer, 2. Heart Disease, 3. Stroke, 4. Lung Disease, 5. Accidents, 6. Alzheimer's Disease, 7. Kidney Disease, 8. Suicide, 9. Parkinson's Disease, and 10. Diabetes Mellitus. From 2004 to 2013, cancer and heart disease were responsible for over 40% of all attributed causes of death. However, influenza and pneumonia have continued to be common causes of death in both the county and the state.

Population Growth and Demographic Shifts

Between 2010 and 2014, Williamson County's population continued to increase rapidly. Current projections by the Texas Office of the State Demographer (OSD) show that the county is expected to increase from almost 500,000 to over 600,000 in the next ten years, and reach nearly one million residents by 2050. Rapid population growth will place greater demands on the current healthcare and public health infrastructure and may lead to shifts in patterns of disease transmission as the population density increases.

A large part of this growth has been driven by a marked increase in the county's Hispanic population; the OSD estimates that this ethnic group will double by 2050. After English, Spanish was the second most common language spoken at home in the county. Language barriers can prevent access to health care and limit the availability of culturally appropriate information about available resources. As such, planning for future resource allocation and initiatives should consider the needs of the growing Hispanic population.

Williamson County is also graying. By 2050, the OSD predicts residents 65 years and older will be the largest single age group in Williamson County. The healthcare system should consider that additional resources will be needed for advanced care planning and chronic disease management for this growing segment of the population.

Unfortunately, the lack of available health information for other racial and ethnic groups in the county prevented the CHA team from gaining a better understanding of minority health issues. The authors recommend that data sources (particularly those at the local level) include race, ethnicity, and language variables to allow for determination of health disparities in minority populations.

Summary of Health Indicators

Robert Wood Johnson Foundation's County Health Rankings has consistently recognized Williamson County as one of the healthiest counties in Texas. The county has ranked in the top three since 2010. There are many definitions of health, but the most holistic is that of the World Health Organization (WHO): "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

The CHSA provided summarized data to put the successes and challenges in context. In many cases, Williamson County met or exceeded the HP2020 targets, but in other areas more can be done to improve the overall health of citizens. The following graphic provides a brief summary of the following topic areas and health indicators, and Williamson County's status for each:

Indicator and Analysis	Status
Access to Care • *Health Insurance:* Although the percentage of uninsured persons in the county was lower than Texas across all groups in both adults and children, 24.2% of Hispanics did not have health insurance as compared to about 10.4% for non-Hispanic Whites, 13.6% for African Americans, and 12.9% for Asian Americans. Florence, Jarrell, Weir, Bartlett, Granger, as well as small areas in Georgetown, Taylor, and Round Rock had the highest percentages of uninsured individuals. The HP2020 goal is 0% uninsured, which the county failed to meet for all groups.	🔴
Chronic Disease • *Heart disease*: Heart disease mortality rates have been declining and were consistently lower for the county (114.6/100,000) than the state rate (175.5/100,000). However, for men and African Americans, the rates were considerably higher (144.1 and 145.1, respectively). All of these rates failed to meet the HP2020 target of 103.4 deaths per 100,000 population. • *Stroke*: Stroke mortality rates in the county (32.1/100,000) were below both Texas rate (42.6/100,000) and the HP2020 target of 34.8/100,000. However, the mortality rate in Hispanics (35.8/100,000) failed to meet the HP2020 goal. • *Diabetes:* Diabetes death rates in the county at 11.2/100,000 were half the state rate of	🔴 🟡 🟢

22.0/100,000 and fell far below the HP2020 target of 66.6/100,000.

- *Blood Pressure and Cholesterol*: In the county, 27.2% of adults had high blood pressure, whereas 35.4% had high cholesterol. Although both percentages were lower than the state (30.0% and 41.8% respectively), they still failed to meet the HP2020 goals of 26.9% and 13.5%.

Mental Health & Substance Abuse

- *Quality of Life*: Adults in the county reported an average of 2.9 poor physical health and 2.7 poor mental health days in the past 30 days, while adults in Texas reported an average of 3.5 days and 3.0 days respectively. There is no HP2020 goal for this metric.
- *Intentional Self Harm (Suicide)*: Suicide rates have increased 34.8% since 2005 in the county, from 8.9/100,000 in 2005-2009 to 12.0/100,000 in the most recent five-year period (2009-2013). The rate was also greater than the state rate of 11.6/100,000. For men, the rate was 18.9/100,000, and for non-Hispanic Whites, 17.5/100,000. This was an important issue in the county and failed to meet the HP2020 target of 10.2/100,000.
- *Substance Abuse/Tobacco*: A smaller percentage of adults in Williamson County (12.0%) smoked cigarettes than in Texas (15.0%). The county meets the HP2020 target of 12.0%
- *Substance Abuse/Alcohol:* The percentages of adults that drink excessively were higher in the county (19.0%) than in Texas (17.0%). Still, the county met the HP2020 target of less than 25.4% of adults drinking excessively in the previous 30 days.
- *Mental Health Providers*: Williamson County had a lower ratio of mental health providers than in Texas. In the county, 1 mental health provider existed for every 1,060 individuals in the county compared to 1 for every 990 in Texas. There is no HP2020 goal for this metric.

Maternal and Child Health

- *Low Birth Weight*: The percentage of Williamson County babies born with low birth weight has increased for the last decade, with 7.2% of live births. The state percentage was 8.4%. As a whole, the county met the HP2020 target of 7.8%, but at 13.0% African American infants were disproportionately affected by low birth weight and did not meet the HP2020 goal.
- *Prenatal Care*: The county's overall percentage of mothers who received early prenatal care in the first trimester was 79.6%, which exceeded the HP2020 goal of 77.9%. However, when stratified by race and ethnicity, non-Hispanic Whites exceeded the goal at 83.9% but African American (71.6%) and Hispanic populations (70.6%) were somewhat lower.
- *Infant Mortality:* The county's infant mortality rate was 4.8/1,000 live births, which was lower than the state's rate of 5.9/1,000. Both were lower than the HP2020 target of 6.0 deaths per 1,000 live births even when stratified by race/ethnicity. However, insufficient data were available for African American and Other racial and ethnic groups to determine if a disparity might exist. At the state level, African Americans have nearly doubled the infant mortality (11.5/1,000 versus 5.9/1,000).

Obesity, Overweight, & Healthy Eating

- *Obesity:* The percentage of obese residents in Williamson County has increased over time from 21.2% in 2004 to 28.5% in 2012, which now has exceeded the state percentage of 28.2%. However, this still met the HP2020 target of 30.5% or fewer obese adults. Disturbingly, the incidence of childhood obesity has also been increasing.
- *Overweight:* An astounding 40.3% of adults in the county were overweight, which significantly exceeded the average percentage in Texas (35.5%). Combined, overweight and obese account for 68.8% of Williamson County residents, leaving 31.2% at a healthy weight. This was below the HP2020 goal of 33.9% at a healthy weight.
- *Healthy Eating:* In the county, 74.4% of adults did not consume enough fruits and vegetables, which was below the state average of 76.2%. Hispanic adults had an even higher percentage of

adults with inadequate consumption of fruits and vegetables (85.7%). In addition, food deserts were located in census tracts near Jarrell, Bartlett, Granger, Taylor, Round Rock, and Georgetown. There is no HP2020 goal for this metric.	
Active Living • *Physical Activity:* The number of adults participating in no leisure time physical activity has improved over time from a high of 20.7% in 2005 to 18.4% in 2012 which was nearly half the HP2020 goal of 32.6%. Williamson County has consistently had a lower percentage of physically inactive adults than the state, which averaged 24.0% in 2012. • *Environment:* In 2013, 9.5 recreation and fitness facilities existed for every 100,000 population as compared to 7.7 facilities for every 100,000 population in Texas. Williamson County has consistently had more facilities per capita than the state since at least 2008. There is no HP2020 goal for this metric.	🟢 🟢
Infectious Diseases • <u>*Chlamydia and Gonorrhea*</u>: Despite reported incidence rates for chlamydia (335.2/100,000) and gonorrhea (67.2/100,000) being lower than in Texas (475.0 and 127.7/100,000), these rates have risen steadily since 2007. These sexually transmitted infections appeared to disproportionately affect women and African Americans (490.7 and 615.2 per 100,000 population, respectively). There is no HP2020 goal for this metric.	🟡
Legend: Red: Disparities exist among different demographic groups for indicator and indicator does not meet HP2020 goal or the indicator does worse compared to the state; Yellow: Disparities might exist among different demographic groups while meeting HP2020 goal or indicator does better than the state; Green: Disparities do not exist among different demographic groups and indicator meets HP2020 goal or does better than the state	

Health Disparities

HP2020 defines a health disparity as "a type of health difference that is closely linked with social, economic, and/or environmental disadvantage." Examining factors such as race and ethnicity, gender, age, socioeconomic status (SES), disability status, mental health, or geographic location and characterizing how their complex interactions affect individual and population health can help community members and stakeholders identify and better understand health disparities. The CHSA identified the following key factors (socioeconomic status, geographic distribute, and demographics) as potential sources of health disparities.

- Socioeconomic Status
  - There was a small but significant proportion of households with low incomes; 14.1% of households in the county earned less than $34,999 per year.
  - African Americans had slightly lower median household incomes compared to non-Hispanic Whites ($69,180 versus $74,260). Asian Americans did better than non-Hispanic Whites ($102,713 versus $74,260), and Hispanics had the lowest median household incomes at $59,192. Both Hispanics and African American households earned less than the average median household income in the county.
  - The neighborhoods with the lowest median household incomes were located in Taylor. Three census tracts in Taylor, one in Cedar Park, one in Round Rock, and one in Georgetown had the highest concentrations of families living below poverty.
- Geographic Distribution
  - Interstate highway 35 (IH-35) separated the county into distinct east and west health profiles.

Individuals living east of IH-35 tended to have lower SES, were more likely to be African American or Hispanic, and had worse health outcomes. Individuals living west of IH-35 tended to have higher SES, were non-Hispanic Whites, and had improved health outcomes. Asian Americans tended to live west of IH-35 and were concentrated near the southern areas of the county.

- o Williamson County residents living in cities located in rural areas such as Liberty Hill, Florence, Jarrell, Bartlett, Granger, Taylor, Thrall, Thorndale, and Coupland tended to have worse health outcomes, issues with transportation and health care access, and lack of resources. Additionally, these residents had a higher percentage of babies born with low birth weight, had reduced access to health insurance, and lived in environments that were less conducive to better health (such as food deserts).

- **Demographics (Race/Ethnicity, Age, and Gender)**
  - o African Americans had the highest mortality rates for diabetes, cancer, heart disease, and stroke. By contrast, non-Hispanic Whites had higher mortality rates for lung disease, suicide, and unintentional injuries.
  - o Males tended to have worse health outcomes than females; they also had higher mortality rates for most health issues and conditions.

Key Findings - Community Themes and Strengths Assessment

While the Community Themes and Strengths Assessment (CTSA) revealed many positive aspects and an overall positive perception of quality of life in Williamson County, it also identified areas for improvement.

Throughout this assessment process, the CHA Team engaged with key leaders, a wide variety of community stakeholders, a youth population, a Spanish speaking population, an elder population, and both urban and rural residents. These diverse populations shared perceptions of their communities and the county as a whole. According to the data collected the most important values Williamson County residents held were family, health, transportation, safety, leadership and community connection, employment, and recreation opportunities. The assessment also looked at the issues that most affected quality of life in Williamson County. Residents were most concerned with:

- Access to Healthcare
- Affordable Childcare
- Awareness of Resources
- Barriers to Healthy Lifestyles
- Affordable Housing
- Transportation Issues
- Access to Bilingual Resources

Our residents and stakeholders listed a variety of resources as important assets for improving health and quality of life of residents, including the robust network of nonprofit organizations, faith-based organizations, the growing healthcare system, the network of school districts and higher education campuses, parks and recreation, and the business community. The CTSA process revealed multiple ways to leverage existing resources and provided a comprehensive understanding of the perceptions of values, concerns and assets in the county.

While most acknowledged the many challenges that lay ahead, the community members, stakeholders, and leaders in this assessment anticipated improvements in the health and wellness where they live, work, worship, play, or learn in Williamson County.

Key Findings - Forces of Change Assessment

The Forces of Change Assessment (FoCA) identified the external factors that affect the environment in which the Williamson County public health system operates and the challenges and opportunities created by these factors. Focus group participants identified six forces of change. Within each of these focus areas, participants' recognized specific challenges and opportunities that each of these forces creates for the local public health system. The main force of change described through this assessment was the growth of Williamson County and its impacts on the population and all levels of infrastructure. Other forces of change that were significant in the county were:

- Demographic changes;
- Role of technology;
- Changes in access to healthcare;
- Increasing need for community preparedness; and
- Economic changes.

Key Findings - Local Public Health System Assessment

The Local Public Health Systems Assessment (LPHSA) was a useful process for the participants, which included key leaders from WCCHD and WWA. Through facilitated discussions, participants prioritized and rated services provided by the local public health system in Williamson County. WCCHD, WWA, and the community will use these findings to improve the local public health system's provision of the Ten Essential Public Health Services through the implementation of the short- and long-term improvement recommendations from participants.

Recommendations based on the assessment were:

- Increase community dissemination and promotion of the CHA
- Incorporate outreach and external communications as a core component of Disease Control and Prevention to increase awareness among medical providers
- Increase inclusion and coordination in preparedness planning across all WCCHD divisions
- Develop health district-wide community partner contact list
- Establish process for identifying key constituent partners in the community
- Re-engage the WWA through identifying and recruiting key stakeholders, and robust facilitation of the community and working groups
- Re-assess the structure of the WWA and set WWA goals at the policy, systems, and environmental level

Key Findings - Health Priority Survey

The CHA process provided comprehensive understanding of the perceptions of values, concerns and assets in the county, as well as the external factors affecting the ability of these issues to be addressed through the local public health system. The CHA Team solicited input from the community and determined a list of possible health priorities

based on the results of all of the assessments.

The Top Five Health Priorities For Williamson County In 2016 Were:
1. **Mental Health:** Prevention, support and treatment for mental illness 2. **Access to Healthcare:** Basic, affordable healthcare available for all residents 3. **Awareness of Healthcare Resources:** Available information and communication channels for resources 4. **Active Living:** Resources, access and awareness for physical activity opportunities 5. **Chronic Disease:** Prevention, treatment and management of chronic diseases

Conclusions

Through the review of primary and secondary data, this CHA provides a snapshot into the health and quality of life of Williamson County residents. Though the county consistently ranks among the healthiest in Texas, data consistently follows demographic, social, and economic patterns that reveal health disparities across the county. WCCHD, WWA, and community partners will use these results to develop a CHIP to address the top issues in Williamson County.

This collaborative effort will be the common agenda the county will use to improve the health of all residents. Additionally, this assessment and recommendations can be used in the development of the following:

- Community health changes and trends
- Hospital based community benefit plans
- Organizational strategic planning
- Evidence base for grant applications

WCCHD, the WWA, and our community partners hope this assessment will increase engagement in supporting the health of the people of Williamson County.

Introduction

Many factors shape the health of a community. The concept of social determinants of health captures the complex, integrated, and overlapping social structures and economic systems that are responsible for many health inequities. These social structures and economic systems include the social environment, physical environment, health services, and structural and societal factors. Social determinants of health are shaped by the distribution of money, power, and resources throughout the community (1). The five major categories of health determinants are genetics, behavior, social circumstances, environmental and physical influences, and medical care (2). To improve the health and quality of life of a community, it is necessary to address not only the multiple social determinants of health, but also to move from a focus on sickness and disease to one based on prevention and wellness.

Sustained and broad community involvement is necessary to address the strategic health issues within the community and the solutions, like the issues, require the resources of multiple agencies and individuals. This shared ownership of community health among diverse stakeholders offers better mobilization and utilization of resources to achieve improvement. The first step in this community health improvement process is the Community Health Assessment (CHA).

The CHA is designed to:

1. Collect, analyze, and use data to educate and mobilize communities, develop priorities, gather resources, and plan actions to improve population health, and
2. Provide a foundation of data to be used for evidence-based goal setting and decision making (3).

Williamson County CHA

The Williamson County and Cities Health District (WCCHD) led this CHA effort in collaboration with strong community partners including the WilCo Wellness Alliance (WWA), Baylor Scott & White Health, Opportunities for Williamson and Burnet Counties, Seton Healthcare Family, and the St. David's Foundation.

The goals of the Williamson County CHA were to:

1. Identify existing and emerging community health needs;
2. Identify strengths and assets that are available to improve health;
3. Determine key issues that affect quality of life;
4. Understand key forces of change that are or will be influencing health in the community;
5. Evaluate the local public health system and determine priorities for improving provision of the Ten Essential Public Health Services; and
6. Identify top health priorities for future health improvement efforts.

The Mobilizing for Action through Planning and Partnerships Framework

The Mobilizing for Action through Planning and Partnerships (MAPP) framework from the National Association of County and City Health Officials (NACCHO) is a proven, systematic, and outcome-oriented process for the ongoing engagement of community stakeholders. MAPP provides a method to help communities prioritize public health issues, identify resources available, and take action. The 2016 Williamson County CHA Team used this process to provide an update to the 2013 report.

MAPP included four assessments, each of which offered important information for improving community health (4). Taken as a whole, the four assessments provided a comprehensive understanding of the health of the community. The four assessments were:

- The **Community Health Status Assessment (CSHA)** identifies priority health issues in the community and looks at health outcomes and health behaviors. Questions answered by this assessment include "How healthy are Williamson County residents?" and "What does the health status of our community look like?"

- **The Community Themes and Strengths Assessment (CTSA)** identifies important issues in the community and answers the questions "What is important to our community?" and "What assets do we have that can be used to improve community health?"

- **The Forces of Change Assessment (FoCA)** identifies factors that affect the context of the community such as legislation, technology, and other changes. The assessment answers the question "What is occurring or might occur that affects the health of our community or the local public health system?"

- **The Local Public Health System Assessment (LPHSA)** looks at the organizations and agencies that constitute the local public health system and answers the questions "What are the components, activities, competencies, and capacities of the local public health system?" and "How are the Ten Essential Services being provided to the community?"

Methods

The Williamson County CHA Team used both quantitative and qualitative data from primary and secondary data sources to compile the four MAPP assessments and determine health priorities. Significant secondary data sources included:

- American Community Survey (ACS)
- Area Health Resource File (AHRF)
- Behavioral Risk Factor Surveillance System (BRFSS)
- Centers for Disease Control and Prevention Wide-ranging Online Data for Epidemiologic Research (CDC WONDER)
- Center for Medicare & Medicaid Services (CMS)
- County Business Patterns (CBP)
- Dartmouth College Institute for Health Policy & Clinical Practice
- Feeding America
- National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)
- National Vital Statistics System (NVSS)
- Nielsen Claritas and SiteReports
- Safe Drinking Water Information System (SDWIS)
- Surveillance, Epidemiology, and End Results Program State Cancer Profiles (SEER SCP)
- Texas Department of Family and Protective Services CPS
- Texas Department of State Health Services (DSHS)
- Texas Education Agency (TEA)
- Texas Office of the State Demographer (OSD)
- Uniform Crime Reporting – FBI
- U.S. Census Bureau (Census)
- U.S. Department of Agriculture (USDA)

Stakeholder Focus Groups and Key Informant Interviews

In September 2015, WCCHD and the WWA hosted the Health Education Summit at Texas A&M Health Science Center in Round Rock. The purposes of the event were to:

- Increase capacity of local professionals to engage in effective health education and promotion activities;
- Strengthen multi-sector collaboration for evidence-based improvements in health policies, programs and environments;
- Explore innovative practices aimed at improving health behaviors, health equity, and health policies in Williamson County; and
- Serve as the Annual Fall Meeting for the WWA.

Baylor Scott & White contracted Truven Health Analytics to lead eight focus groups with questions modeled after standards from NACCHO. Participants in the focus groups represented multiple sectors in the community: healthcare, local government, school districts, non-profit, higher education and business. Appendix E contains the full results from these focus groups. Truven Health Analytics also conducted key informant interviews with community leaders.

Community Member Focus Groups

In October 2015, WCCHD conducted four focus groups in locations across Williamson County to obtain public feedback regarding health perceptions of the community. Specifically, the focus groups included participants from pre-identified priority populations across the four geographic areas of the county (North, South, East, and West). WCCHD collaborated with the Literacy Council of Williamson County, Taylor Independent School District (ISD), Good Life Taylor, Opportunities Bagdad Head Start and Opportunities Round Rock Head Start to identify and recruit participants at risk for social, economic, and/or environmental disadvantage and of varying age, sex, and race/ethnicity. The specific aim for choosing these subgroups was to identify key health issues and perceptions from populations where resources may be most needed and strategically utilized in the future. The purpose of the focus groups was to gather information from community members about the community they live in and the factors that impact quality of life, community assets and strengths, forces of change, and health priorities.

The CHA team held one community focus group in each of the four geographic areas of Williamson County:

- North Williamson County (Georgetown, Florence, Jarrell, Weir)
- South Williamson County (Round Rock, Hutto)
- East Williamson County (Taylor, Bartlett, Granger, Coupland, Thrall)
- West Williamson County (Cedar Park, Leander, Liberty Hill)

Each focus group was approximately two hours in length and conducted in English (three groups) or Spanish (one group). Each focus group included one facilitator and one scribe from WCCHD or the community. The scribe and the facilitator audio recorded all discussions to ensure that information was captured correctly and completely. The facilitators guided each discussion with the same script modeled after standards from the NACCHO (provided in Appendix F). Participants attended the focus groups on a voluntary basis and consented to participate. Each facilitator discussed with participants how feedback would be used confidentially to identify health priorities across the county. Parental consent forms were obtained for participants under the age of 18. WCCHD staff analyzed responses using WCCHD scribe notes and transcribed audio recordings.

Local Public Health Systems Assessment

The WCCHD District Leadership Team (DLT) and the WWA Leadership Team completed the LPHSA in two rounds.

In October 2015, the WCCHD DLT completed the Priority of Model Standards questionnaire online (Appendix G) and components of the Local Public Health System Performance Assessment Instrument (Appendix H) during a two-hour discussion facilitated by the Director of Public Health Initiatives and Planning (PHIP) at WCCHD.

Eleven participants were present for the assessment and represented the following Divisions:

- Administration
- Clinical Services
- Disease Control and Prevention
- Environmental Health Services
- Information Technology
- Public Health Initiatives and Planning
- Social Services
- Women, Infant and Children (WIC) Program

Participants in the WCCHD DLT meeting used the Socrative mobile device polling application to respond to each of the questions in the assessment. The application calculated averages for the performance scores. The Model Standard scores were an average of the question scores within that Model Standard, Essential Service scores were an average of the Model Standard scores within that Essential Service, and the overall assessment score was the average of the Essential Service scores.

The following week, the WWA Leadership Team completed the same two tools online and during a two-hour discussion facilitated by the Director of PHIP at WCCHD. Eight members completed the survey and four were present for the assessment. Participants represented the following sectors:

- Hospitals
- Local government
- Non-profit organization
- School district

Participants from the WWA Leadership meeting used the facilitated discussion to arrive at a consensus regarding the status of the local public health system and their recommendations for priority areas and improvement.

As a result of these two rounds, the CHA Team collected a detailed assessment of the local public health system based on the input of a diverse group of internal and external stakeholders with knowledge of the system.

Prioritization Process

To identify options for priorities, The CHA Team combined its data review with the information from stakeholder focus groups at Health Education Summit and community member focus groups, where the participants in each group were asked to come to a consensus on what they felt were the top health priorities for the county.

The CHA Team used the issues and ideas generated through the focus groups to develop a quantitative survey for community members and stakeholders to vote on the most critical priorities for Williamson County. The CHA team sent the survey to the entire 400+ membership of the WWA as well as additional community partners via email. The CHA team collected survey responses from November through December 2015. The CHIP will address the issues with the highest number of recorded votes.

Limitations

The nature of available data sources was the largest limitation to the CHSA. The process of data collection, aggregation, and publication by myriad sources prevents access to comprehensive, up-to-the-minute data for the CHSA. For some health indicators, the available data can be several years old and may no longer be representative of the community. For some data, local details concerning socioeconomic, demographic, or geographic distribution were not available, which limited the ability of the analysts to measure the impact of those factors on health statuses. Additionally, significant health events can occur in small numbers and hamper the ability of the analysts to conduct meaningful subgroup analyses by race, ethnicity, or language.

The process of securing focus group participants for the CTSA and FoCA also proved to be challenging. Members of WWA recruited participants as opposed to random selection. This sampling method can introduce selection bias into the results.

The CHA Team encouraged participation from multiple stakeholders in the focus groups, but some representatives were missing from the process including those from the business community, media, health insurance, and judicial institutions. The assessment format for the stakeholder focus groups (as one session in the Health Education Summit) may have precluded some participants, especially those in high profile or demanding roles, from engaging in the meetings. The time commitment may also have hindered the ability of some to participate due to lack of employer support or conflicting priorities. It is also possible that the group process deterred introverted individuals who prefer less interactive approaches.

The methodology for gathering inputs and the development of a response for each question in the LPHSA also incorporated an unavoidable element of subjectivity. In addition, participants had differences in knowledge about the public health system. This may have led to some interpretation differences and issues for some of the questions, potentially introducing a degree of response variability.

Community Description

Williamson County is a rapidly growing mid-sized county located in Central Texas just north of the state's capitol of Austin, which is located in Travis County **(Figure 1).** Williamson is bounded by Burnet County to the West, Bell County to the North, Milam and Lee Counties to the East, and Travis and Bastrop Counties to the South. Austin's continued increase in population has impacted Williamson County, with greater and greater numbers of Williamson County residents commuting into Austin for work each day. However, Williamson County is an economic magnet in its own right, with major employers such as Dell, Sears Teleserv, Emerson, Round Rock Premium Outlets, Baylor Scott & White Healthcare, St. David's Round Rock Medical Center and Georgetown Hospital, Seton Medical Center Williamson, Cedar Park Regional Medical Center, Southwestern University, Texas A&M Health Science Center Round Rock, and TECO Westinghouse (5).

With a total estimated population in 2014 of 489,250 residents, the county has experienced dramatic population growth in the last decade. Demographic changes have accompanied the overall population growth, with large increases in Hispanic, Asian American, and aging populations (6).

**Figure 1: Map of Williamson County, Texas**
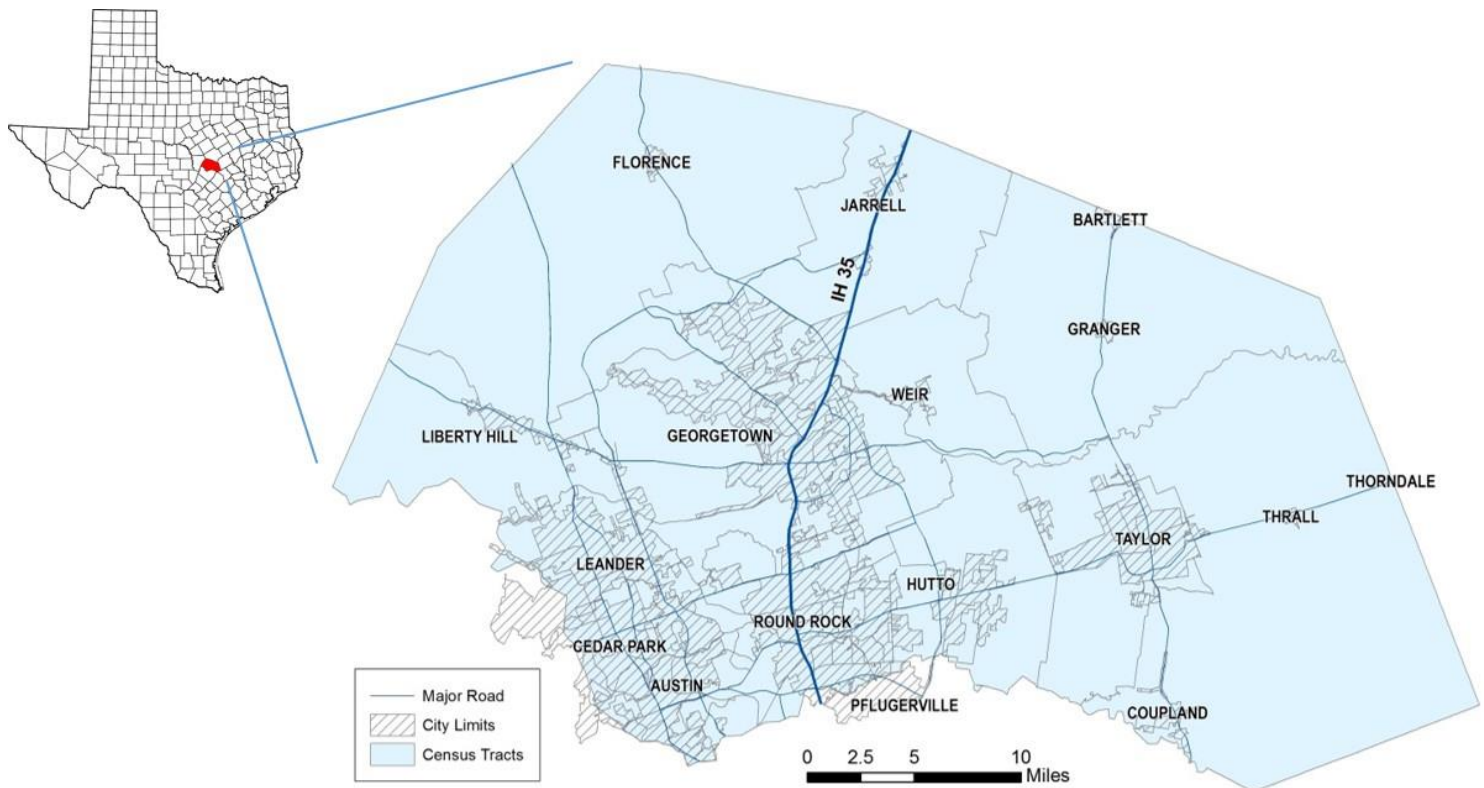
Map Source: Disease Control and Prevention Division, WCCHD

Williamson County was wealthier and more educated than Texas as a whole (7). While the county continued to benefit from an abundance of high technology firms, including the corporate headquarters of Dell Incorporated, the county was also witnessing solid job growth in higher education, healthcare, manufacturing, and retail through economic development efforts to diversify. The county's unemployment rate was 6.9% in 2014, which was lower than the Texas state average of 7.7% (7).

As of 2016, Williamson County ranked in the top three healthiest counties in Texas for the sixth consecutive year (8). Out of 241 ranked counties, Williamson County was third overall in health outcomes and third overall in health factors. While the county was in the top ten for health behaviors (#8), clinical care (#4), and social and economic factors (#3), the county was ranked 135th for physical environment.

Although the county income and educational attainment averages were higher than Texas as a whole, disparities in community healthcare needs existed within the county – mainly between the urban/suburban and rural areas. Truven Health Analytics displayed these disparities in their Community Need Index (CNI) tool (9). The CNI score was an average of five different barrier scores that measured various socioeconomic indicators of each community, and was a strong indicator of a community's demand for various healthcare services. The elements that composed this indicator were income, cultural barriers, education, insurance, and housing. The map of the CNI for Williamson County, shown in **Figure 2**, identified the high need areas of the county, which tended to be in the eastern, more rural area of the county. Williamson County had an average CNI score of 2.9 on a scale of one to five, with five representing areas of highest need. The CNI map provided zip-code level analysis of need. Healthcare and public health communities could use this information to determine geographic areas for targeted intervention.

Figure 2: Community Need Index in Williamson County by Zip Code
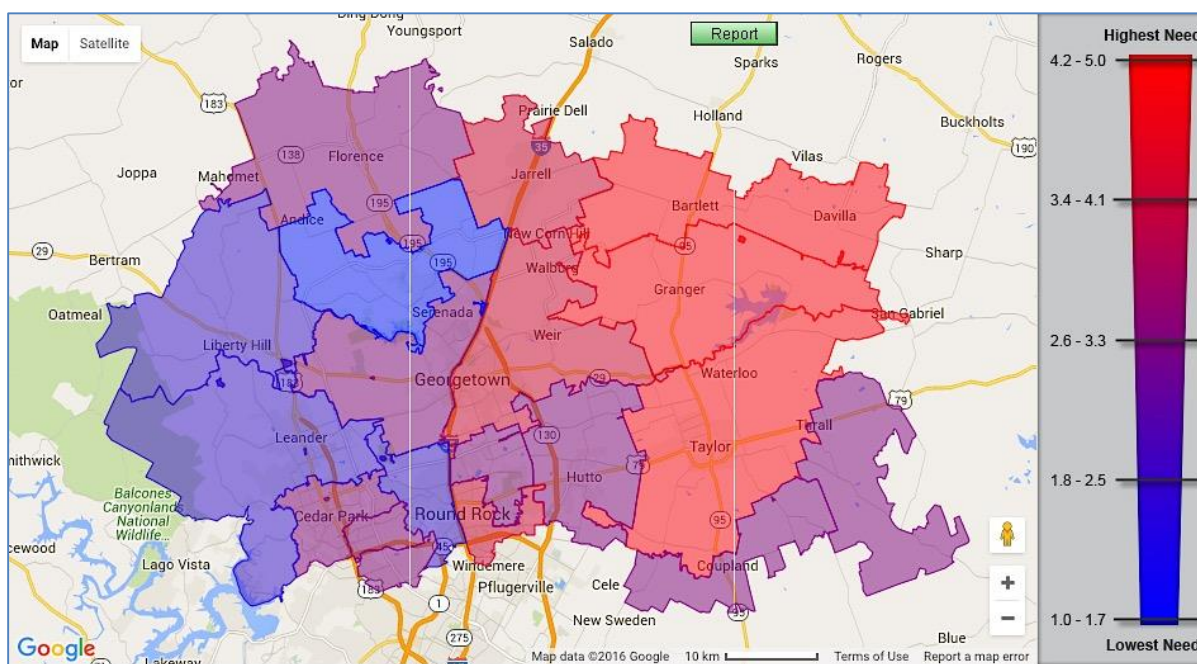
Data Sources: Truven Health Analytics, 2015; Insurance Coverage Estimates, 2015; The Nielson Company, 2015; Community Needs Index, 2015.

Community Health Status Assessment

This assessment aimed to answer the following questions:

"How healthy are our residents?"

"What does the health status of our community look like?"

Overview

According to the WHO, health is a "state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." The Community Health Status Assessment (CHSA) is a comprehensive summary representing the aggregate disease burden and health status of Williamson County residents compared to the overall population of Texas and applicable Healthy People 2020 (HP2020) targets. HP2020 is the nationwide set of 10-year health promotion and disease prevention goals established by the United States Department of Health and Human Services (10). The CHA Team obtained data for the CHSA from the most recent available secondary data sources at the local, state, and national levels. Data sources were referenced in each section. The CHSA presents statistics and trends for various health indicators (guidelines used to determine the health status of a county or state) to identify both achievements and gaps in health status and health care availability among race, ethnicity, age, gender, or socioeconomic groups within the county. Community partners can apply these data to determine strengths and key health issues to establish evidence-based planning and interventions across Williamson County.

The CHA Team derived the CHSA section content from the NACCHO MAPP framework "Core Indicator List," which divided indicators (data elements) into the eleven broad-based categories (C1-11). The CHA team used these categories as a standardized guide to analyze the health status of Williamson County systematically through a strategic process.

The CHA Team identified health successes and challenges through the comparison and analysis of available data related to each category. Once the analysis was completed, the CHA Team summarized the potential impact of the indicators on the overall health status of the community.

The assessments that follow take an in-depth look at health, social, economic, and environmental indicators. These indicators, taken in conjunction with community needs projected for the future, will provide the evidence foundation to improve the health of Williamson County.

The CHSA addressed health indicators within the following categories adapted from the NACCHO MAPP framework "Core Indicator List" and will follow this organizational structure:

C1. Demographic Characteristics

C2. Socioeconomic Characteristics

C3. Health Resource Availability

C4. Quality of Life

C5. Behavioral Risk Factors

C6. Environmental Health Indicators

C7. Social and Mental Health

C8. Maternal and Child Health

C9. Death, Illness, and Injury

C10. Communicable Disease

C11. Sentinel Events

Strengths and Limitations

The purpose of this assessment is to provide a general snapshot of the current health of the community. A wide variety of health data is available at the county level, providing extensive evidence to support health improvement decision-making for those in the healthcare and public health communities who will use this document.

Although rich in variety and reliable by source, there were limitations to the data. Not all data sources could provide comprehensive, up-to-the-minute data for at the Williamson County-level. For all health indicators, the CHA Team sought the most recent data available for this assessment, even if from two or more years in the past. For some indicators, local data with details concerning socioeconomic, demographic, or geographic distribution did not exist, thus limiting the CHA Team's ability to measure the impact on health status from these influencing factors. Additionally, significant health events that occurred in small numbers restricted the ability to conduct meaningful analysis and/or identify disparities, especially for subgroups such as a specific race or ethnicity, or small geographic areas such as zip codes or census tracts.

> Please note that for the purposes of this assessment, the non-Hispanic White population was referred to as "White", the non-Hispanic African American population was referred to as "Black", and Asian Americans as "Asian" in shorthand for graphs and figures. Hispanics, regardless of race, were noted as Hispanic although in Williamson County they are primarily Hispanic Whites as defined by the U.S. Census.

C1. Demographic Characteristics

Population Growth

> *"I've been here almost 40 years. I was 16 when I got here. [Williamson County] was – very small. There weren't a lot of people. There are a lot of changes; a lot of people everywhere"* – Focus group participant

> *"Yes, a lot of people are coming from the outside. That's what I've noticed."* – Focus group participant

As noted in the Community Description, Williamson County has been undergoing tremendous growth. Between 2010 and 2014, the county's population grew 15.8%, nearly double the population growth within Texas (7.2%). Cedar Park, Georgetown, Hutto, and Leander lead the county in growth, with increases between 3 and 4 times the state rate as shown in **Table 1** below. The Office of the State Demographer predicted the county's population to double in size, reaching nearly 1 million residents by 2050 **(Figure 3)**.

Table 1: Population Change in Williamson County and Texas, 2010-2050

Geographic Area	2010 Pop.[1]	2014 Pop.[1]	% Growth 2010-14*	2050 Pop.[2]
Texas	25,146,104	26,956,958	7.2%	40,502,749
Williamson County	422,649	489,250	15.8%	992,814
Cedar Park	51,743	63,574	22.9%	
Georgetown	47,455	59,102	24.5%	
Hutto	16,459	21,170	28.6%	
Leander	26,262	34,172	30.1%	
Round Rock	99,990	112,744	12.8%	
Taylor	15,281	16,483	7.9%	
*Notes: *Growth from April 1, 2010 to July 1, 2014*				
Data Sources: [1] Census, 2014; [2] Office of the State Demographer, 2050				

Figure 3: Population Projections for Williamson County, 2010-2050

Data Source: Office of the State Demographer, 2010-50
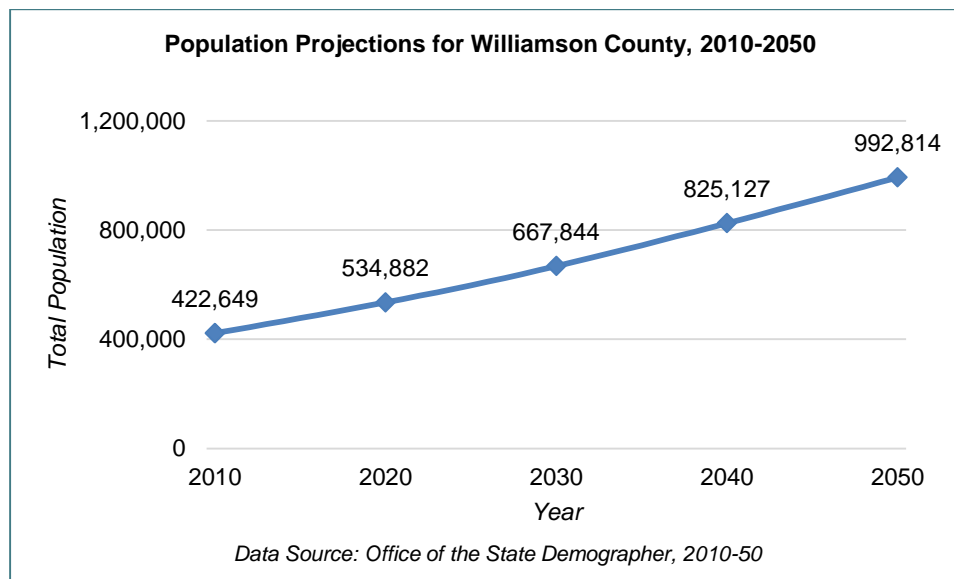
The rapid growth in the county can place greater demands on the current healthcare and public health infrastructure as well as on community resources. For example, if population growth outpaces growth in health care providers, a shortage will occur and access to health care will be affected. In addition, rapid growth can lead to shifts in distribution of health conditions and diseases. The county should systematically structure health resources and interventions in regards to culture, language, age, race, ethnicity, and language to accommodate the growing population. Stakeholders should assess health concerns and needs on a recurring and consistent basis, which will be an ongoing challenge given the increasing demands of a growing and changing population.

Gender and Age Distribution

> "[A] positive part of my life is coming to the senior center now. When we get a bigger one, it will be even more enjoyable, because a lot of people are getting turned away."
> – Focus group participant

As of 2014, the gender distribution in Williamson County was similar to the overall gender distribution in Texas; slightly more females (50.8%) than males (49.2%) lived in the county **(Table 2)**.

Table 2: Gender Distribution in Williamson County and Texas, 2014

Gender	Williamson County	Texas
Female	50.8%	50.3%
Male	49.2%	49.7%
Data Source: Census, 2014		

The relative proportion of the county's senior population is also rapidly growing. **Figure 4 and Table 3** provide a breakdown of the age groups by percentage of the total. By 2050, residents aged 65 years and older are expected to be the largest age group in Williamson County (24.7%), with a larger proportion than the state as a whole (19.5%). By that time, projections show that one in four county residents will be at least 65 years of age. Projections also show the decreasing proportion of residents under the age of 24, with the percentage of those in the "less than 18 years" and "between 18 to 24 years" age groups shifting from 27.1% and 8.7% in 2014 to 19.9% and 7.7% in 2050, respectively.

**Table 3: Age Distribution in Williamson County and Texas, 2014 and 2050**

Age	2014[1]		2050*[2]	
	Williamson County	Texas	Williamson County	Texas
Median	34.6	33.8	--	--
Under 18	27.1%	26.4%	19.9%	22.7%
18 to 24	8.7%	10.2%	7.7%	9.0%
25 to 44	29.0%	27.5%	24.1%	25.7%
45 to 64	24.5%	24.2%	23.6%	23.1%
65 and over	10.7%	11.7%	24.7%	19.5%
*Notes: * Population Projections: 0.5 Migration Rate*				
Data Sources: [1]Census, 2014; [2]Office of the State Demographer, 2050				

According to the Centers for Disease Control and Prevention (CDC) report on *The State of Aging and Health in America*, 2 out of every 3 older Americans have multiple chronic conditions (11).

The projected sharp increase in the older population and potential for increased prevalence of chronic diseases in Williamson County will increase the need in the future for resources in advance care planning and chronic disease management. In addition, the county will need to provide healthcare and quality of life-associated resources needed to meet the challenges presented by an aging population (11).

Figure 4: Population Projections by Age (in years) for Williamson County, 2010-2050

Population Projections by Age (in years) for Williamson County, 2010-2050

Data Source: Office of the State Demographer, 2010-2050
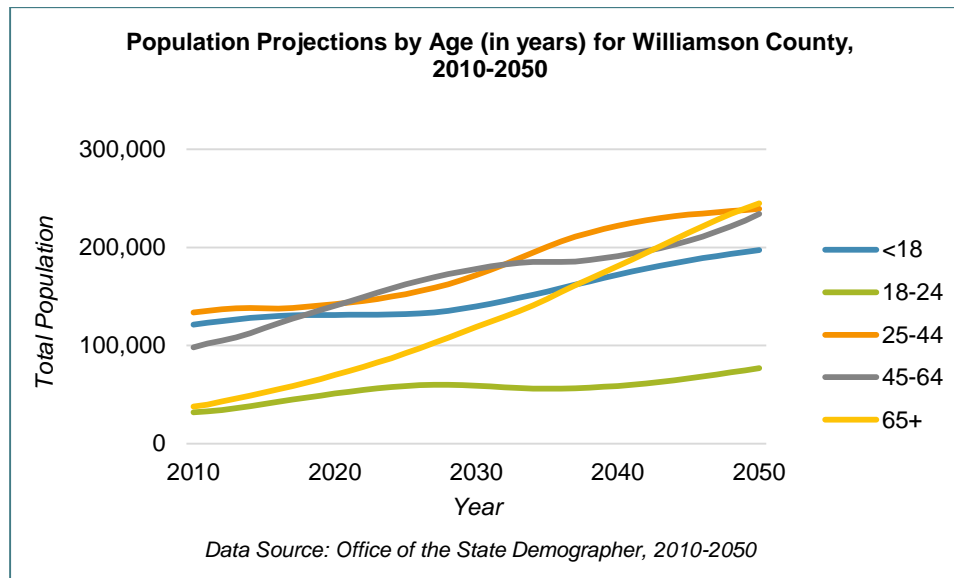
Race/Ethnicity Distribution

> *"Personally, I've seen a lot of changes in Georgetown because when I got here, there weren't a lot of Hispanics living here in Georgetown. There wasn't a lot of information for Hispanics, or perhaps it was that I like didn't know much or didn't know, or wasn't more informed. So, I think that we do need more information; [to be] more informed of what there is."* – Focus group participant

Rapid population growth has brought with it an influx of diverse individuals into Williamson County, and this increased diversity will lead to shifting demographic trends in health status. As shown in **Table 4**, the largest racial and ethnic group in Williamson County in 2014 was non-Hispanic Whites (62.3%) followed by Hispanics (23.8%), Others (7.3%), African Americans (6.7%), Asian Americans (5.6%), American Indians/Alaskan Natives (0.9%), and then Native Hawaiians/Pacific Islanders (0.1%). **Figure 5** provide a chart of these strata. When compared to Texas, the county had a higher percentage of non-Hispanic White and Asian American populations and a smaller percentage of Hispanic and Black/African American populations. In addition, conditions and risk factors such as obesity and diabetes may disproportionately affect some Hispanic populations (12), and the impact of these conditions and risk factors should be considered by those undertaking any future health improvement strategies.

Table 4: Race/Ethnicity Distribution in Williamson County and Texas, 2014 and 2050

Race/Ethnicity	2014[1]		2050*[2]	
	Williamson County	Texas	Williamson County	Texas
Non-Hispanic White	62.3%	44.0%	42.1%	27.8%
Hispanic^	23.8%	38.4%	40.7%	53.1%
Black/African American	6.7%	12.4%	6.3%	10.0%
Asian American	5.6%	4.3%	N/A	N/A
American Indian/Alaskan Native	0.9%	1.0%	N/A	N/A
Native Hawaiian/Pacific Islander	0.1%	0.1%	N/A	N/A
Others	7.3%	10.1%	N/A	N/A
*Notes: * Population Projections: 0.5 Migration Rate; N/A: Population projects not available for following races. ^Hispanic involves all races although a majority of indiduals that are Hispanic are White.* *Data Sources: [1] Census, 2014; [2] Office of the State Demographer, 2050*				

Figure 5: Race/Ethnicity Distribution in Williamson County and Texas, 2014

Notes: White = Non-Hispanic, White; AI/AN = American Indian/Alaskan Native; NH/PI = Native Hawaiian/Pacific Islander
Data Source: Census, 2014
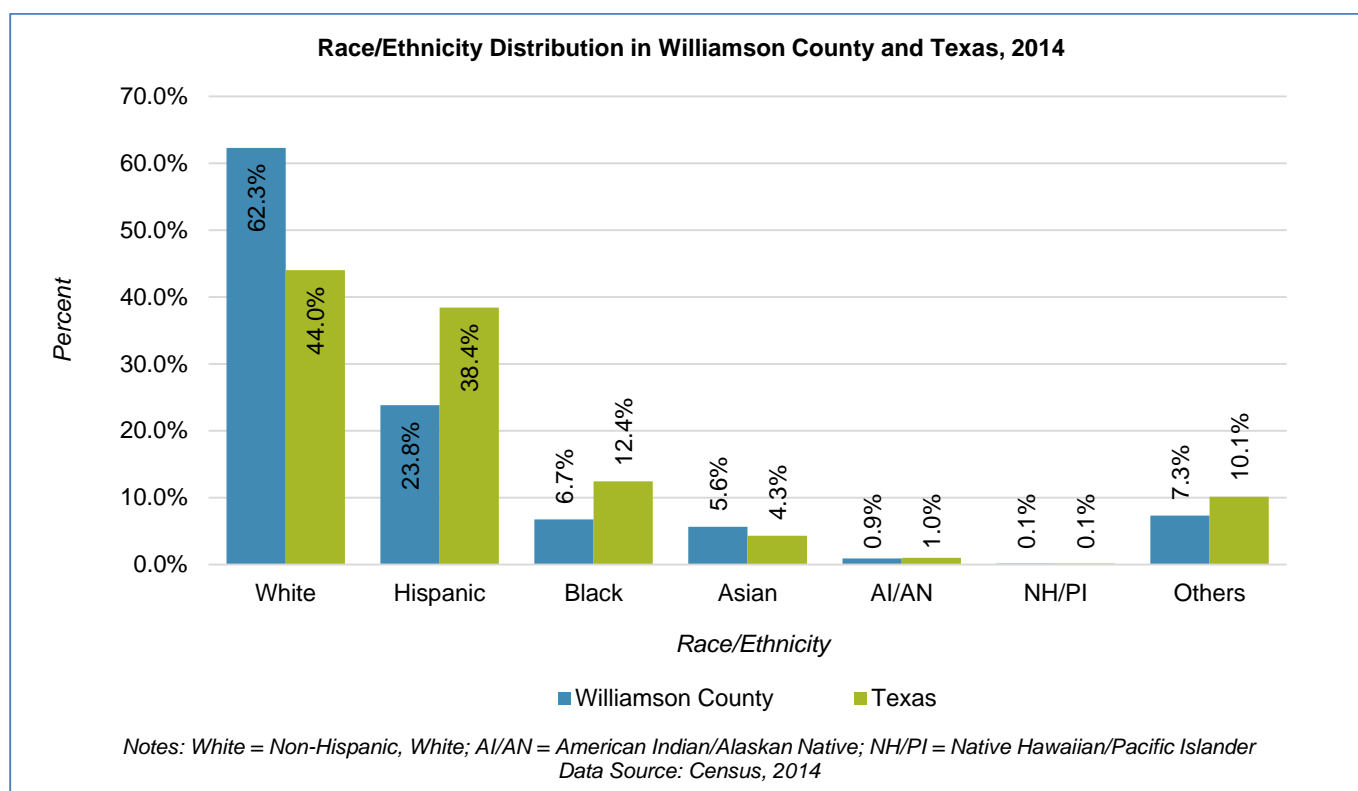
In the county, 53.2% of persons younger than 18 years were non-Hispanic White, while Hispanic children accounted for 30.8% of the total number of children (Figure 6 and Figure 7). The Hispanic population in the county is expected to increase to nearly match the non-Hispanic White population (40.7% versus 42.1%) by 2050. Future resources and initiatives will be needed to accommodate the growing Hispanic population in the county.

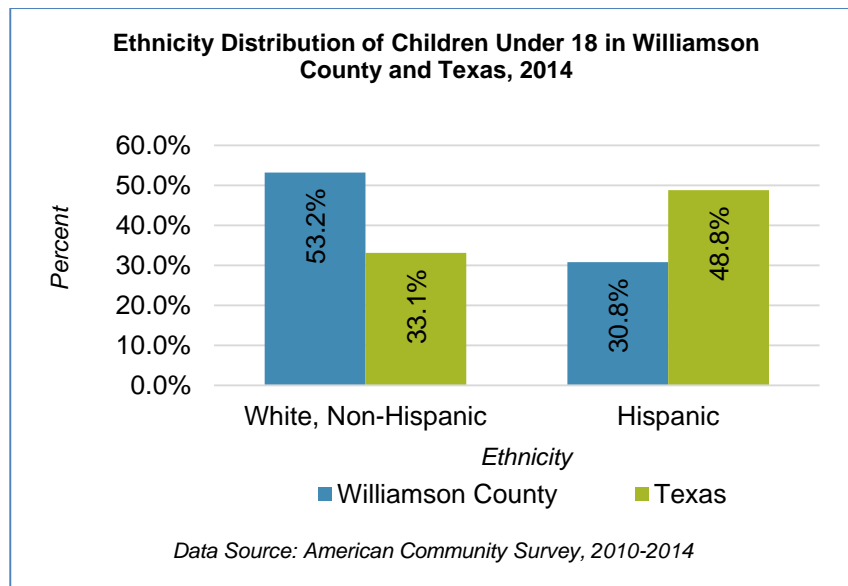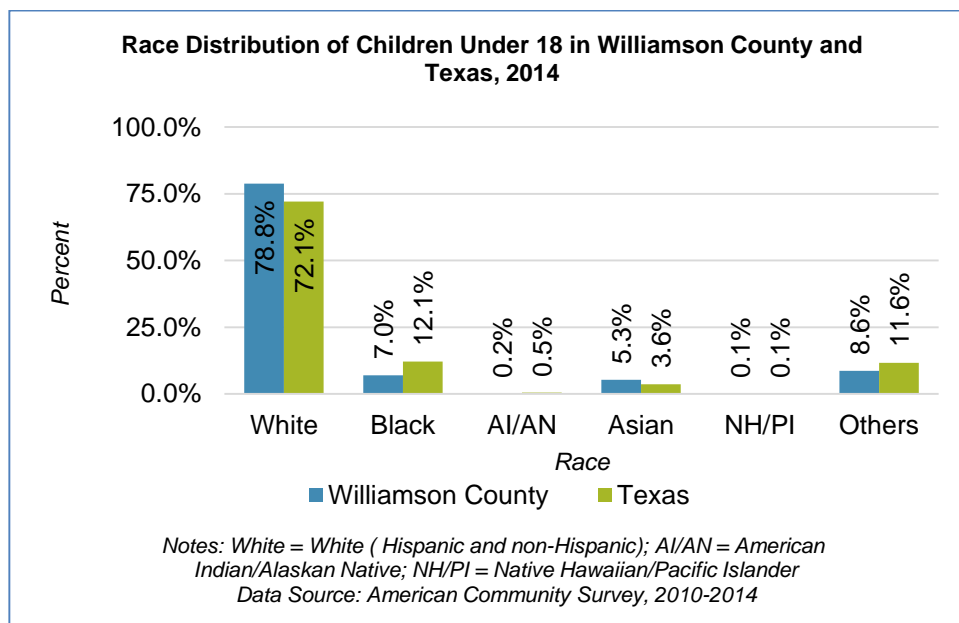**Figure 6: Ethnicity Distribution of Children Under 18 in Williamson County and Texas, 2014**

Ethnicity Distribution of Children Under 18 in Williamson County and Texas, 2014

White, Non-Hispanic: Williamson County 53.2%, Texas 33.1%
Hispanic: Williamson County 30.8%, Texas 48.8%

Ethnicity

■ Williamson County ■ Texas

Data Source: American Community Survey, 2010-2014

Figure 7: Racial Distribution of Children Under 18 in Williamson County and Texas, 2014

Race Distribution of Children Under 18 in Williamson County and Texas, 2014

White: Williamson County 78.8%, Texas 72.1%
Black: 7.0%, 12.1%
AI/AN: 0.2%, 0.5%
Asian: 5.3%, 3.6%
NH/PI: 0.1%, 0.1%
Others: 8.6%, 11.6%

Race

■ Williamson County ■ Texas

Notes: White = White (Hispanic and non-Hispanic); AI/AN = American Indian/Alaskan Native; NH/PI = Native Hawaiian/Pacific Islander
Data Source: American Community Survey, 2010-2014

The geographic distributions of racial and ethnic groups throughout Williamson County are shown in the following figures. The CHA team mapped the percentages of non-Hispanic Whites **(Figure 8)**, Hispanics **(Figure 9)**, African Americans **(Figure 10)**, and Asian Americans **(Figure 11)** across the county by census tracts. Census tracts are small and relatively permanent statistical subdivisions of the county with between 1,200 and 8,000 residents. Interstate Highway 35 (IH-35), a major north-south interstate highway, divides the county's geography approximately in half. The interstate is the thick black line on **Figures 8-11**. The largest concentrations of non-Hispanic Whites lived west of IH-35, while Asian Americans lived southwest of the interstate near Austin, Cedar Park, and Round Rock. African Americans and Hispanics mostly lived east of the interstate.

Figure 8: Distribution of Non-Hispanic Whites by Census Tract in Williamson County, 2010-2014
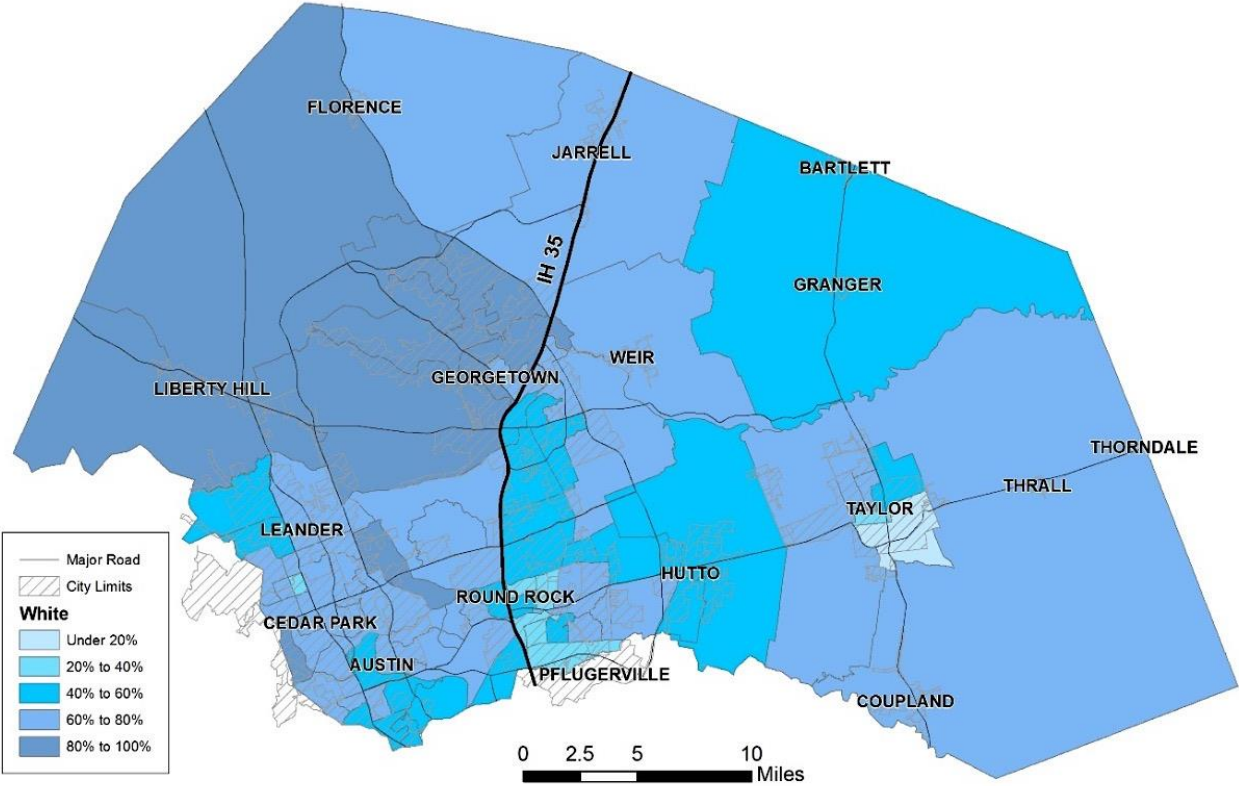

Map Source: Disease Control and Prevention Division, WCCHD
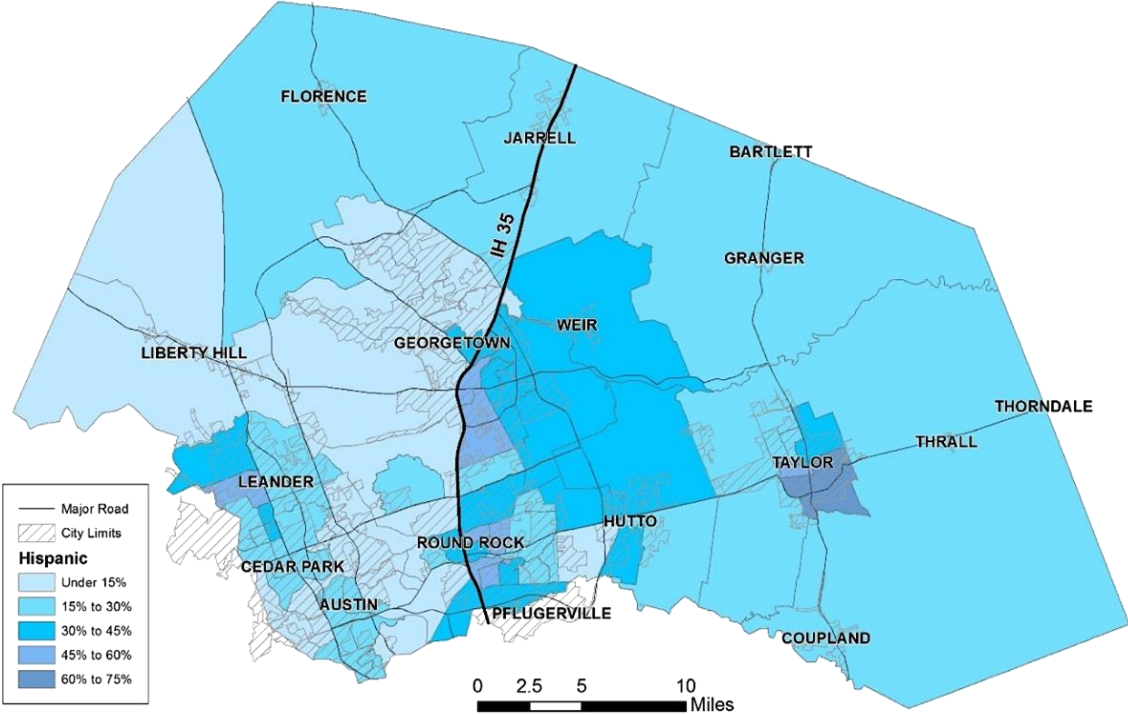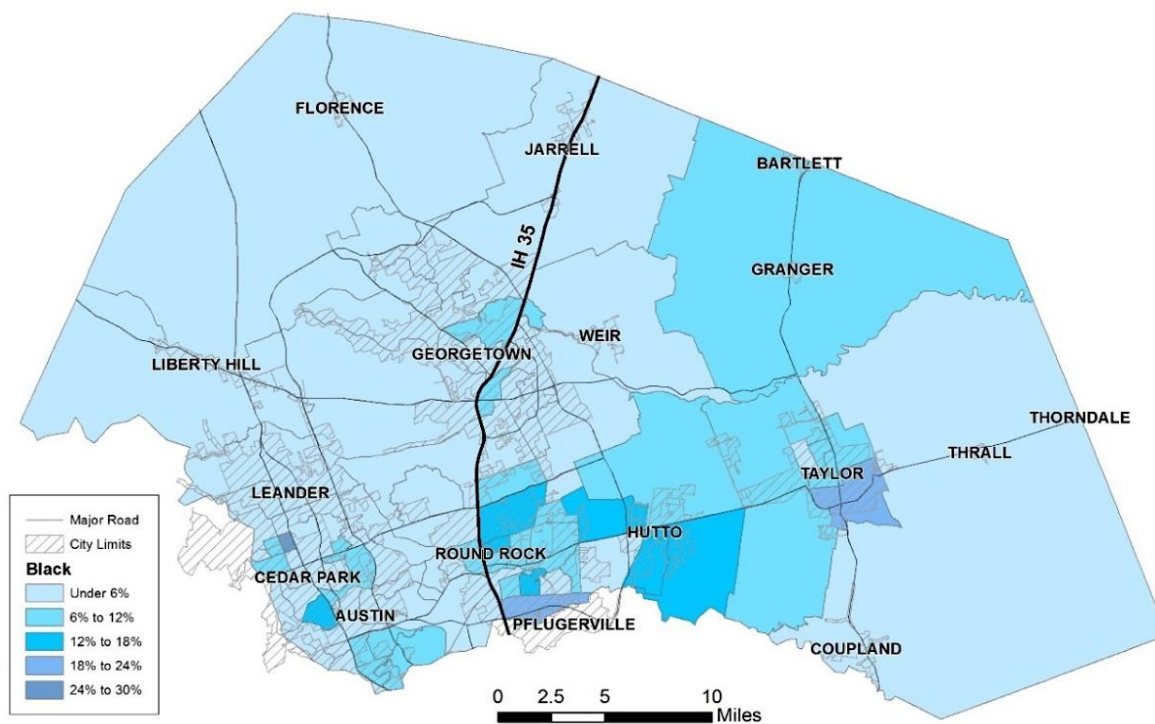*Data Source: American Community Survey, 2010-2014*

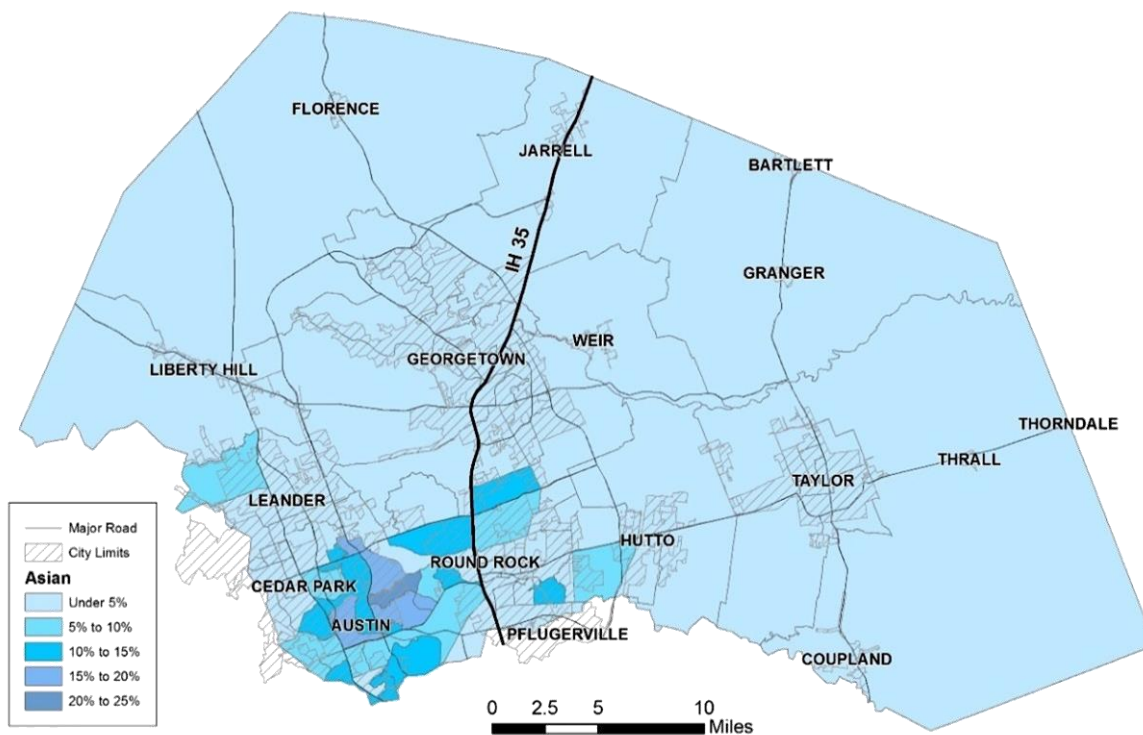**Figure 9: Distribution of Hispanics by Census Tract in Williamson County, 2010-2014**

Map Source: Disease Control and Prevention Division, WCCHD
Data Source: American Community Survey, 2010-2014

Figure 10: Distribution of African Americans by Census Tract in Williamson County, 2010-2014

Map Source: Disease Control and Prevention Division, WCCHD
Data Source: American Community Survey, 2010-2014

Figure 11: Distribution of Asian Americans by Census Tract in Williamson County, 2010-2014

Map Source: Disease Control and Prevention Division, WCCHD
Data Source: American Community Survey, 2010-2014

Language Spoken at Home

Compared to Texas, Williamson County had more residents older than five years of age who only spoke the English language at home **(Table 5)**. 79.3% of residents in the county spoke only English at home, as compared to about 65.1% in Texas. A majority of residents in the county who spoke a language other than English at home spoke Spanish (14.6%). Language barriers can prevent access to health care such as knowledge of information about resources. Similarly, a lack of information about the provision of culturally-appropriate care for other racial and ethnic groups can prevent the accurate assessment of the health status of individuals.

Table 5: Language Spoken at Home (Ages 5 and Over) in Williamson County and Texas, 2010-2014

Indicator	Williamson County	Texas
English Only	79.3%	65.1%
Language other than English	20.7%	34.9%
Spanish	14.6%	29.5%
Data Source: American Community Survey, 2010-2014		

C2. Socioeconomic Characteristics

Socioeconomic characteristics are indicators that describe individual or population economic status, work status, and social status. CDC measures economic status by how much money a person earns each year, work status by whether a person has a job, and social status by how many years a person spent in school (13). When measured together, these three indicators estimate socioeconomic status (SES). Research shows that individuals or populations with higher SES have better levels of health and health outcomes (14).

Economic Status - Median Household Income

> *"[The] cost of living that the elderly and people with families that are just starting out; or even for the kids that are just getting out of college, can't afford to live in this community. [How] are you going to have a community if you're just basically narrowing it down to almost, it seems like, to where only the upper class can almost live?" – Focus group participant*

As was stated in the Community Description, Williamson County is relatively affluent when compared to Texas; the median household income of the county was $73,286, more than $20,000 higher than the state's median household income. At the subgroup level, the median income for each racial and ethnic group was also higher than each subgroup's median income in Texas. The non-Hispanic White ($74,260) and Asian American ($102,713) populations earned above the Williamson County total median household income.

The Hispanic ($59,192) and African American ($69,180) populations earned below the total median household income of the county, but still earned above the median for the state as a whole **(Figure 12 and Figure 13)**. The county's income distribution for 2010-2014 is depicted in **Figure 14.**

Figure 12: Median Household Income by Ethnicity in Williamson County and Texas, 2015
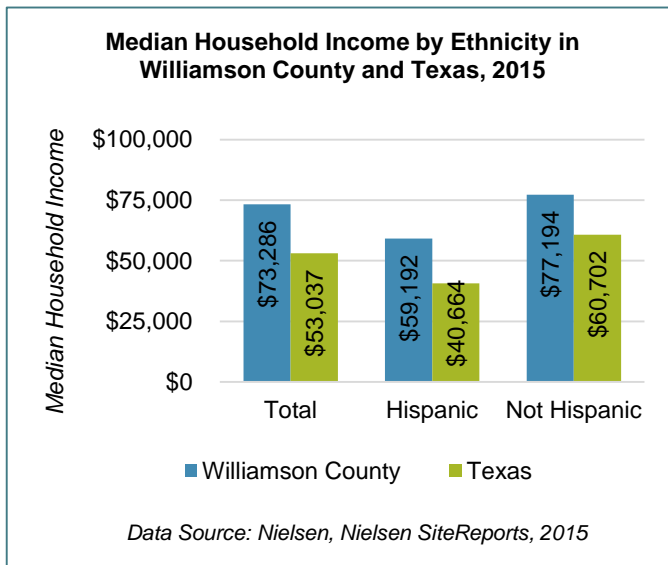
Median Household Income by Ethnicity in Williamson County and Texas, 2015
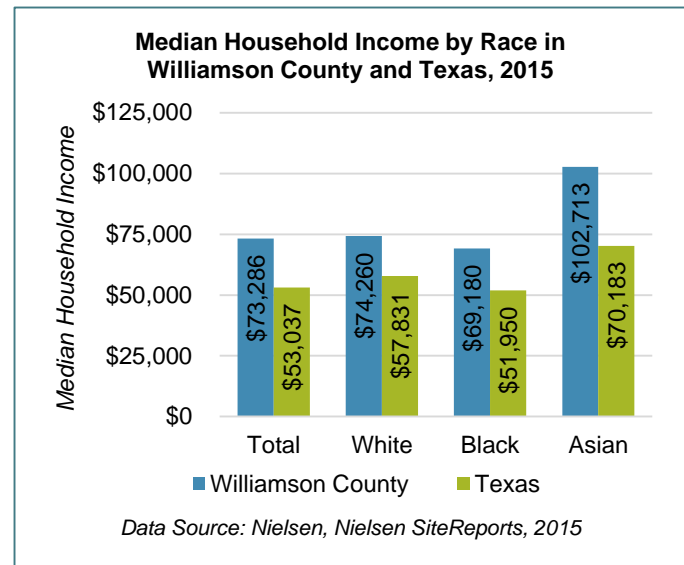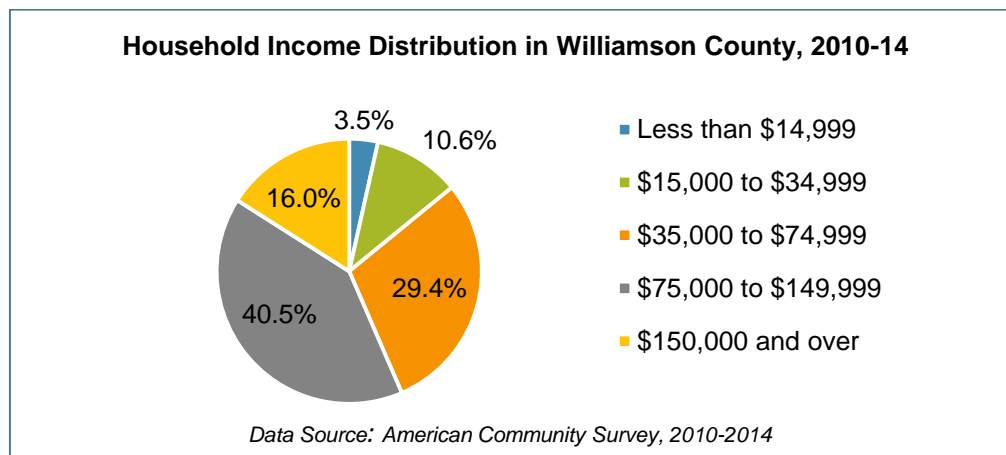

Data Source: Nielsen, Nielsen SiteReports, 2015

Figure 13: Median Household Income by Race in Williamson County and Texas, 2015

Median Household Income by Race in Williamson County and Texas, 2015

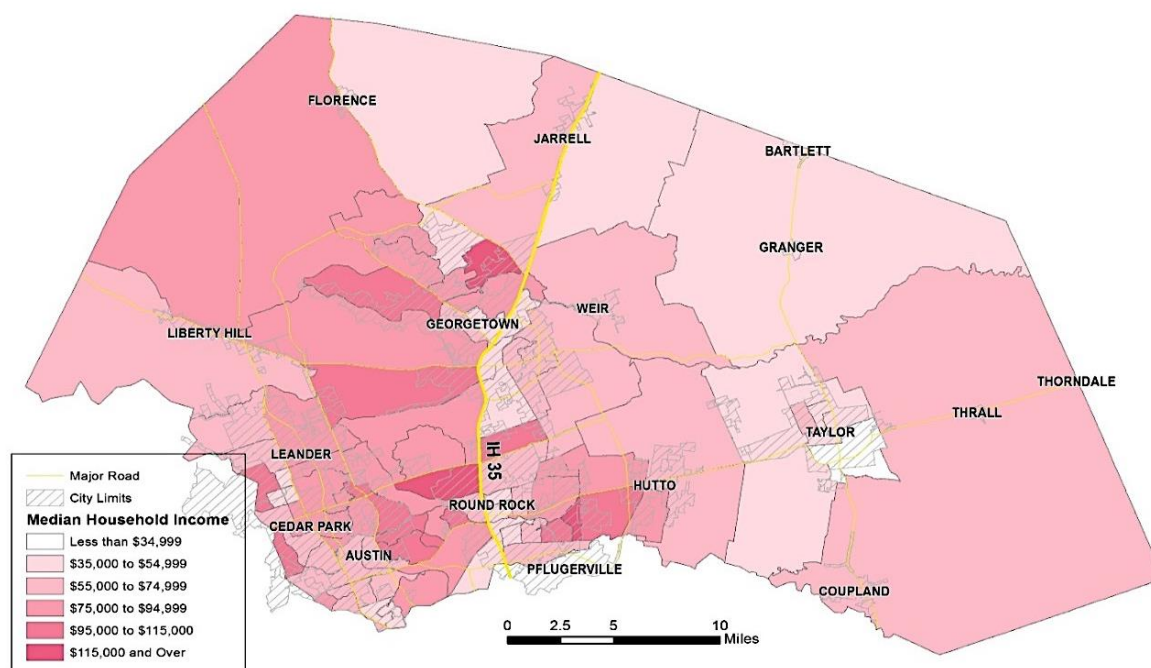*Data Source: Nielsen, Nielsen SiteReports, 2015*

Figure 14: Household Income Distribution in Williamson County, 2010-2014

Household Income Distribution in Williamson County, 2010-14

Legend:
- Less than $14,999
- $15,000 to $34,999
- $35,000 to $74,999
- $75,000 to $149,999
- $150,000 and over

Pie values: 3.5%, 10.6%, 29.4%, 40.5%, 16.0%

Data Source: American Community Survey, 2010-2014

When mapped across the county (Figure 15), the census tracts located west of IH-35 had higher median household incomes when compared to the east side. The areas located in Georgetown and Round Rock had the highest median household income ($115,000 and over), whereas areas in Taylor had the lowest median household incomes (less than $34,999).

Figure 15: Median Household Income by Census Tract in Williamson County, 2015

Map Source: Disease Control and Prevention Division, WCCHD
Data Source: Nielson Claritas, 2015

Work Status - Poverty and Unemployment

*"When you come here [you] had no idea that the job market is outrageous."*

"I can't even afford the low-income apartments. They need to lower."– Focus group participants

Compared to the level of poverty in Texas (17.7%), Williamson County residents had a significantly smaller percentage (7.6%) who were living below the federal poverty level in 2010-2014. As stated in **Table 6,** a disproportionate percentage of the poor were African Americans (14.6%) and Hispanics (12.2%).

Table 6: Poverty and Unemployment Levels in Williamson County and Texas, 2010-2014

Indicator	Williamson County	Texas
Population Living Below Poverty Level	7.6%	17.7%
Non-Hispanic White	5.3%	9.3%
African American	14.6%	24.1%
Asian American	5.4%	11.8%
Hispanic	12.2%	26.1%
Children Living Below Poverty Level	9.6%	25.3%
Families Living Below Poverty Level	5.3%	13.7%
Unemployment (Civilian Labor Force, 16 and older)	6.9%	7.7%
Data Source: American Community Survey, 2010-2014		

About 1 in 10 children (9.6%) and 1 in 20 families (5.3%) lived below poverty in the county. Areas east of IH-35 had higher concentrations of families living below poverty than those west of IH-35 **(Figure 16).** Three census tracts in Taylor, one in Cedar Park, one in Round Rock, and one in Georgetown had the highest concentrations of families living below poverty. The percentage of the civilian labor force that was unemployed was lower in the county (6.9%) than in Texas (7.7%) **(Table 6)**.

Figure 16: Families Living Below Poverty by Census Tract in Williamson County, 2015
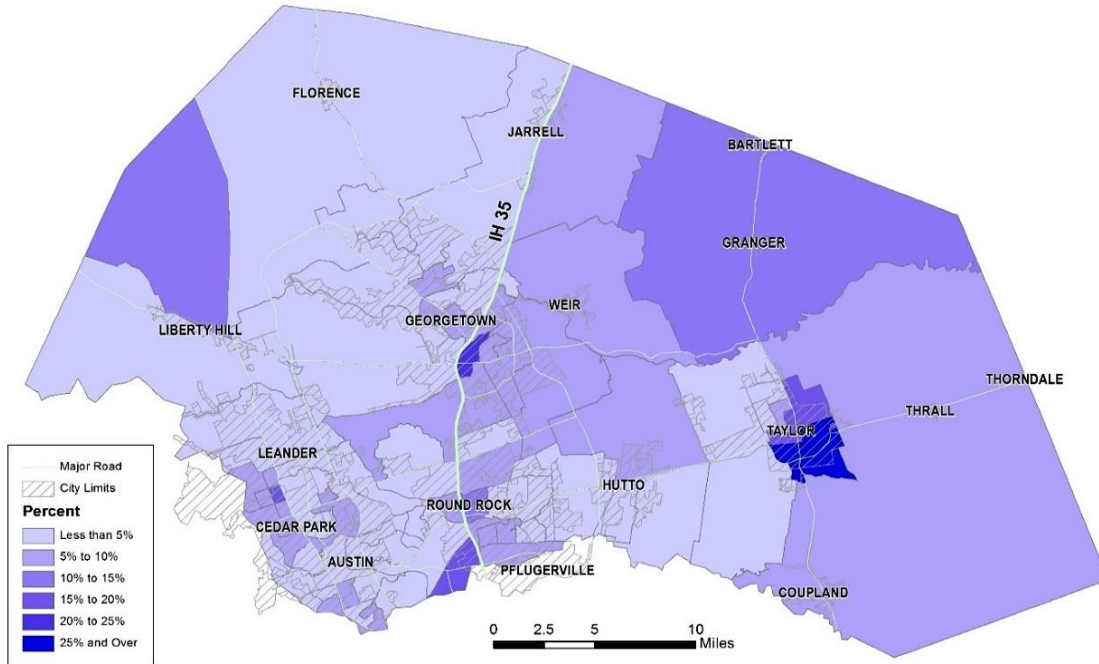
Map Source: Disease Control and Prevention Division, WCCHD
Data Source: Nielson Claritas, 2015

Social Status - Educational Attainment

Williamson County is highly educated **(Table 7)**. A majority of residents aged 25 and older have attended either some form of college or higher (71.7%). This percentage was higher than residents in Texas (56.3%), a pattern that held for Bachelor's and graduate/professional degrees as well. In the county, about 1 in 4 residents had attended some college (24.8%), 1 in 10 had an Associate's degree (8.3%), 1 in 4 had a Bachelor's degree (26.4%), and 1 in 10 had a graduate/professional degree (12.2%).

**Table 7: Percentage of Educational Attainment of Population Ages 25 and Older
in Williamson County and Texas, 2010-2014**

Indicator	Williamson County	Texas
High school graduate (includes equivalency)	20.6%	25.2%
Some college, no degree	24.8%	22.7%
Associate's degree	8.3%	6.6%
Bachelor's degree	26.4%	17.9%
Graduate or professional degree	12.2%	9.1%
Data Source: American Community Survey, 2010-2014		

C3. Health Resource Availability

Indicators related to health resource availability are used to measure "access, utilization, cost and quality of health care and prevention services" in a population (4). Many barriers prevent access to health care such as a lack of health insurance coverage, a limited availability of health care providers (e.g., primary care physicians, dentists, and mental health providers), lack of transportation, and inability to pay for health services. These barriers can lead to unmet health needs, delays in care, failure to receive preventive services, and preventable hospitalizations (15).

Improving indicators related to health resource availability is one of the keys to advancing the health of the county.
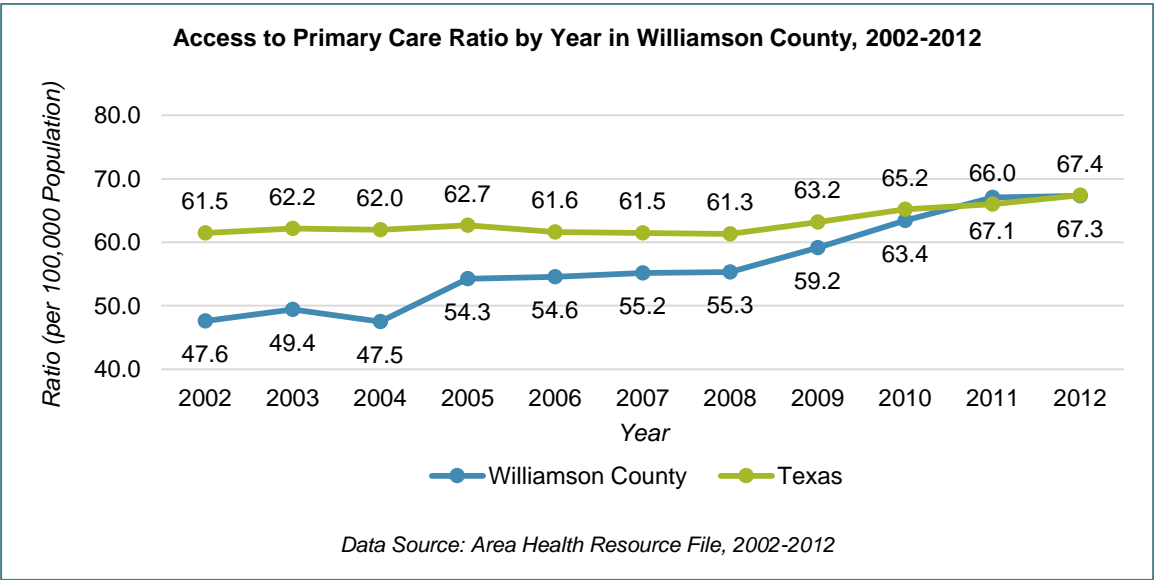
Access to Health Care

> "A lot of people don't go see their doctor or anything, because they can't afford it.
> Consequently they get sicker and wind up passing away because they can't afford it."
> – Focus group participant

> "[Access to healthcare is] terrible. You get sick and [are told], "Well, come next week."
> Well, if you're calling, it's because you're sick at that moment." – Focus group
> participant

Primary care is a person's initial point of contact for medical care to prevent and treat disease and illness (4). According to the *Journal of Health Affairs*, patients with a primary care provider have better management of chronic diseases, lower overall healthcare costs, and a higher level of satisfaction with their care (2).

Access to primary care in Williamson County has increased in the last decade to match ratios in Texas (Figure 17). In 2002, the county had a lower ratio of Primary Care Physicians (PCPs) (47.6 PCPs per 100,000 population) as compared to Texas (61.5 PCPs per 100,000 population). By 2012, the county increased to 67.3 PCPs per 100,000 population, nearly matching the ratio in Texas (67.3 versus 67.4 per 100,000 population). According to the Area Health Resource File, the data included all PCPs practicing patient care, including hospital residents.

Figure 17: Access to Primary Care Ratio by Year in Williamson County, 2002-2012

Access to Primary Care Ratio by Year in Williamson County, 2002-2012

Data Source: Area Health Resource File, 2002-2012

Additional indicators that provided information on the status of access to health care in Williamson County included dentist ratio, mental health providers ratio, percentage of adults without any regular doctor, and the ratio of Federally Qualified Health Centers (FQHCs) or centers dedicated to serving individuals with lack of access to medical care in the county (Table 8).

In the county, 1 dentist existed for every 1,880 individuals which was equal to the ratio in Texas and 1 mental health provider existed for every 1,060 individuals in the county compared to 1 for every 990 in Texas. There were 2.6 FQHCs in the county as compared to 1.4 in Texas for every 100,000 individuals in the county. Furthermore, Williamson County (16.5%) had nearly half the percentage of adults without any regular doctor than the rest of the state (32.4%).

Table 8: Additional Access to Health Care Indicators in Williamson County and Texas

Indicator	Williamson County	Texas
Dentist Ratio*[1]	1880:1	1880:1
Mental Health Providers Ratio[2]	1060:1	990:1
Federally Qualified Health Centers Ratio^[3]	2.6	1.4
Adults Without Any Regular Doctor (%)[4]	16.5%	32.4%
*Notes: * ratio of population to provider; ^ per 100,000 Population* *Data Sources: [1] AHRF, 2014; [2] CMS National Provider Identification, 2015; [3] CMS, Provider of Services File, 2014; [4] Behavioral Risk Factor Surveillance System, 2011-2012*		

Health Insurance

> *"The sad part is also that you're paying and you get to a place [and they say], "No, we don't accept that insurance." – Focus group participant*

> *"I'm finding what's difficult is those that used to take Medicare don't anymore. The problem is [physician's offices] are dropping a lot of Medicare. Unless you're an existing customer, they won't accept you. It's becoming more of a challenge to find the proper doctors." – Focus group participant*

Health insurance improves health by increasing access to medical treatment, drugs, routine checkups, and screenings. Compared to Texas, fewer Williamson County children (9.1% vs. 14.0%) and total persons (12.6% vs. 21.9%) were uninsured as shown in **Figure 19**. However, when stratified by race/ethnicity, about 1 in 4 Hispanics (24.2%) did not have health insurance – higher than for non-Hispanic White, African American, and Asian American individuals **(Figure 18)**.

Figure 18: Percentage of Population without Insurance by Race/Ethnicity in Williamson County and Texas, 2010-2014
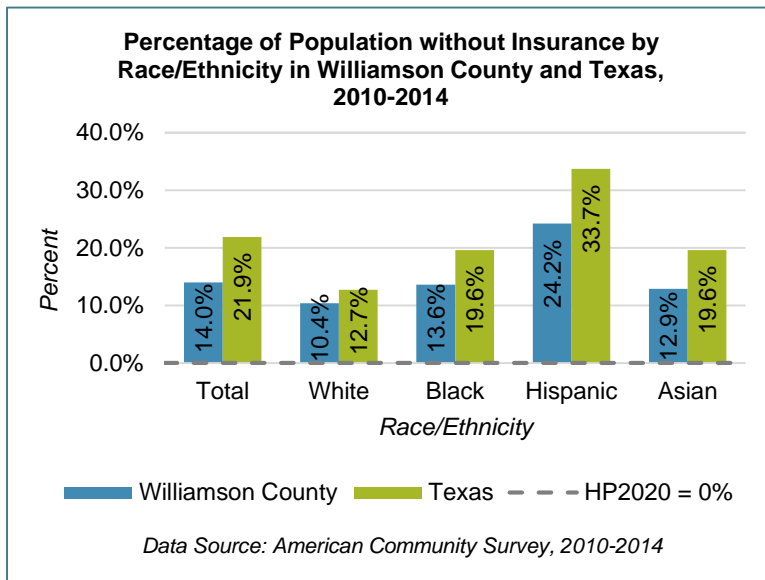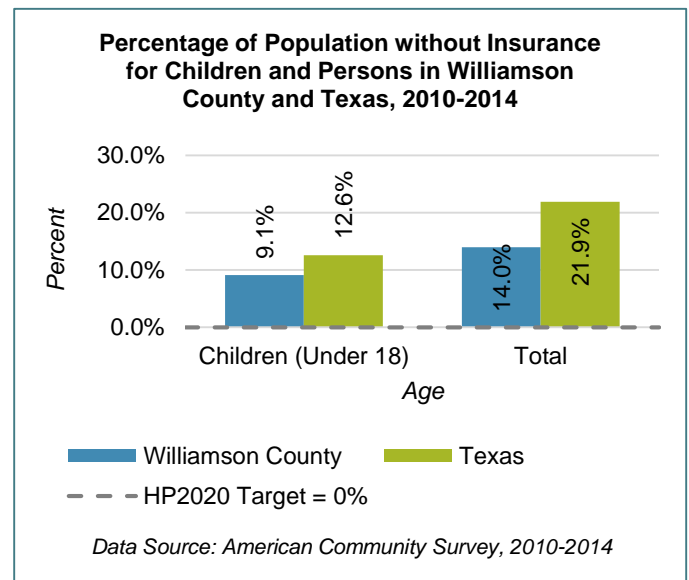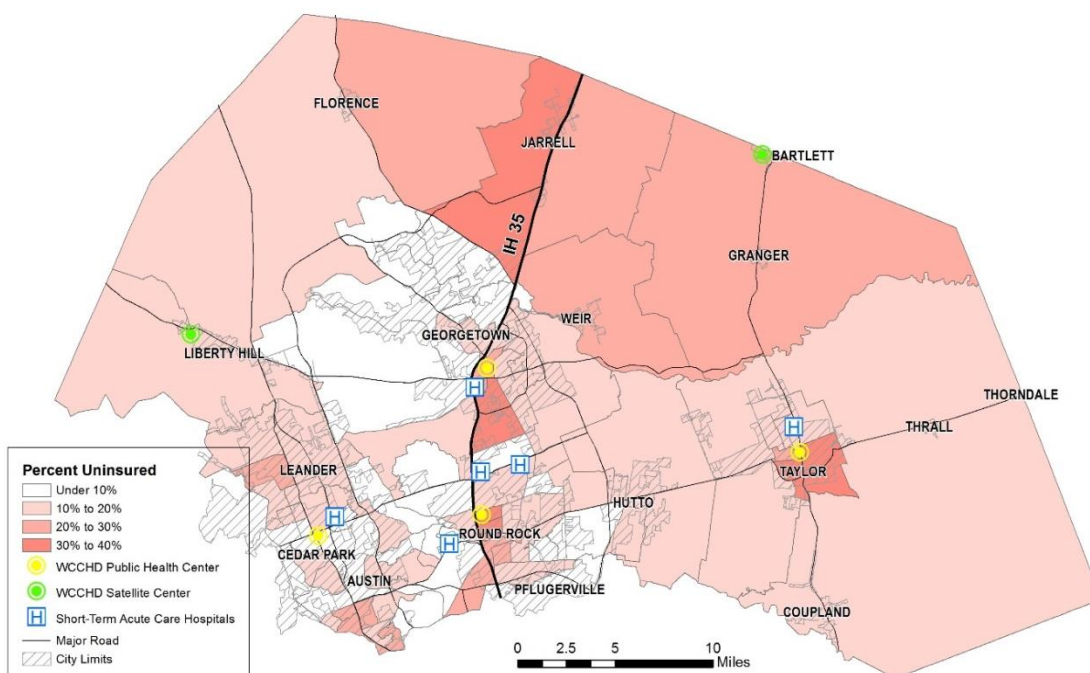
Percentage of Population without Insurance by Race/Ethnicity in Williamson County and Texas, 2010-2014

Total: Williamson County 14.0%, Texas 21.9%
White: Williamson County 10.4%, Texas 12.7%
Black: Williamson County 13.6%, Texas 19.6%
Hispanic: Williamson County 24.2%, Texas 33.7%
Asian: Williamson County 12.9%, Texas 19.6%

Williamson County — Texas — HP2020 = 0%

Data Source: American Community Survey, 2010-2014

Figure 19: Percentage of Population without Insurance for Children and Persons in Williamson County and Texas, 2010-2014

Percentage of Population without Insurance for Children and Persons in Williamson County and Texas, 2010-2014

Children (Under 18): Williamson County 9.1%, Texas 12.6%
Total: Williamson County 14.0%, Texas 21.9%

Williamson County — Texas — HP2020 Target = 0%

Data Source: American Community Survey, 2010-2014

Williamson County did not meet the ambitious HP2020 target of 100% insurance coverage for children and adults. Geographically, the highest percentages of uninsured individuals were located near the rural and eastern side of the county (Figure 20). These cities included Florence, Jarrell, Weir, Bartlett, Granger, and small areas in Georgetown, Taylor, and Round Rock. Williamson County should strive to increase health insurance for all individuals, especially persons of Hispanic ethnicity.

Figure 20: Percentage of Total Population without Insurance by Census Tract in Williamson County, 2010-2014

Map Source: Disease Control and Prevention Division, WCCHD
Data Source: American Community Survey, 2010-2014

Potentially Preventable Hospitalizations (PPH)

> *"Affordable is out of the question. You either have no coverage at all, or go to the*
> *emergency room. Then they charge you an arm and a leg and you spend the rest of*
> *your life paying that off." – Focus group participant*

Potentially preventable hospitalizations (PPH) are admissions to a hospital for certain acute illnesses (e.g., dehydration) or worsening chronic conditions (e.g., diabetes) that may not have required hospitalization had these conditions been managed successfully by primary care providers in outpatient settings (16). To understand the cost burden and impact of PPHs, DSHS collects data for average hospital charges (costs) for selected diseases and conditions (17). In 2013, the average hospital charges and per capita hospital charges were lower in Williamson County than in Texas **(Table 9)**.

However, these costs were still a significant burden - $31,379 average cost and $1,442 per adult, reflecting continued issues with management of the illnesses and conditions that could be helped with better access to health care. While not all hospitalizations are avoidable, admissions for PPHs vary and commonly include access to primary care, care-seeking behaviors, and the quality of care available (16). **Table 9** on the following page provide a breakdown by illness or condition, as well as a comparison between the county and state for each.

Table 9: Potentially Preventable Hospitalizations for Adult Residents in Williamson County and Texas, 2013

Illness or Condition	Average Hospital Charge		Hospital Charges Divided by 2013 Adult Population	
	Williamson County	Texas	Williamson County	Texas
Total	*$31,379*	*$34,178*	*$1,442*	*$2,512*
Bacterial Pneumonia	$33,399	$36,925	$360	$530
Dehydration	$23,452	$21,706	$61	$101
Urinary Tract Infection	$23,518	$25,282	$168	$265
Angina (without procedures)	$28,256	$24,987	$14	$17
Congestive Heart Failure	$37,834	$41,191	$354	$689
Hypertension (High Blood Pressure)	$24,282	$25,365	$51	$85
COPD or Asthma in Older Adults	$29,650	$31,674	$245	$411
Diabetes Short-term Complications	$25,662	$26,913	$48	$88
Diabetes Long-term Complications	$42,309	$46,872	$140	$323
Data Source: Texas Department of State Health Services Center for Health Statistics, 2013				

C4. Quality of Life

Quality of life (QOL) indicators describe not only how long a person lives, but also how well that person is living. QOL measures an individual's ability to function well physically, mentally, emotionally, and socially in life (18). QOL indicators are designed to examine factors that enhance or diminish quality of life. According to the CDC, QOL indicators such as self-reported health status and disability may be more useful to predict health than objective morbidity and mortality measures like cause of death or mortality rates (19).

Self-Reported Health Status

> *"Some people don't even know what is healthy." – Focus group participant*

Self-reported health status is a measure of how individuals view their own health (18). Williamson County residents reported a better health status than Texas residents overall (Table 10). Approximately 1 in 8 adults in the county (13%) reported their health as poor or fair as compared to 1 in 5 in the state (20%). Additionally, adults in the county reported an average of 2.9 poor physical and 2.7 poor mental health days in the past 30 days, while adults in Texas reported an average of 3.5 days and 3.0 days, respectively.

Table 10: Self-Reported Health Status of Adults in Williamson County and Texas, 2014

Indicator	Williamson County	Texas
Poor or fair health	13.0%	20.0%
Poor physical health days out of 30 days	2.9	3.5
Poor mental health days out of 30 days	2.7	3.0
Data Source: Behavioral Risk Factor Surveillance System, 2014		

Disability

According to the CDC, a disability "is any condition of the body or mind (impairment) that makes it more difficult for the person with the condition to do certain activities (activity limitation) and interact with the world around them (participation restrictions)" (20). Disability may significantly affect the quality of life of an individual.

For example, an individual with physical, mental, or emotional conditions can have difficulties going to work or living independently, thus affecting quality of life (20). The percentage of the county's population with a disability was 9.3%, slightly below 11.6% in Texas (Figure 21).

Figure 21: Percent Individuals with a Disability by Race/Ethnicity in Williamson County and Texas, 2010-2014

Percent Individuals with a Disability by Race/Ethnicity in Williamson County and Texas, 2010-2014

Note: White = Non-Hispanic White
Data Source: American Community Survey, 2010-2014
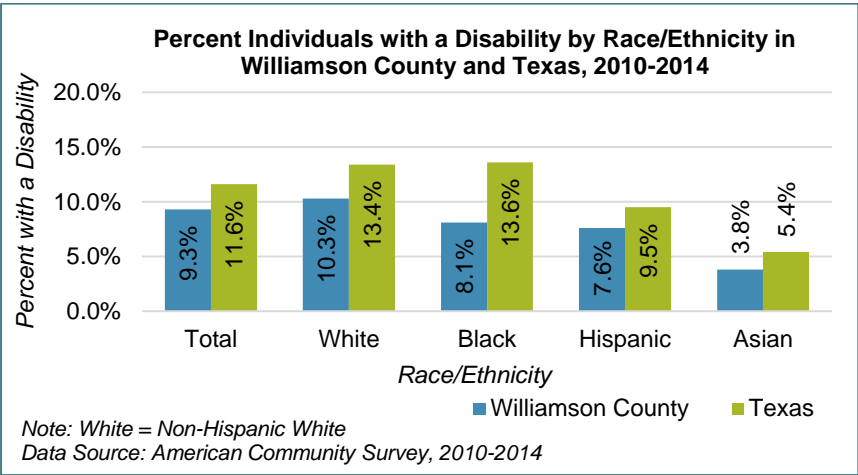
The highest percentages of disabilities were in the non-Hispanic White population (10.3%) and adults 65 years of age and older (31.5%), as shown in **Figure 21 and Figure 22**. The percentage of individuals affected by disability will most likely continue to increase as the population continues to age and the proportion of the population over the age of 65 increases **(Figure 4).**

**Figure 22: Percent Individuals with a Disability by Age in Years in
Williamson County and Texas, 2010-2014**

**Percent Individuals with a Disability by Age in Years in
Williamson County and Texas, 2010-2014**

Data Source: American Community Survey, 2010-2014
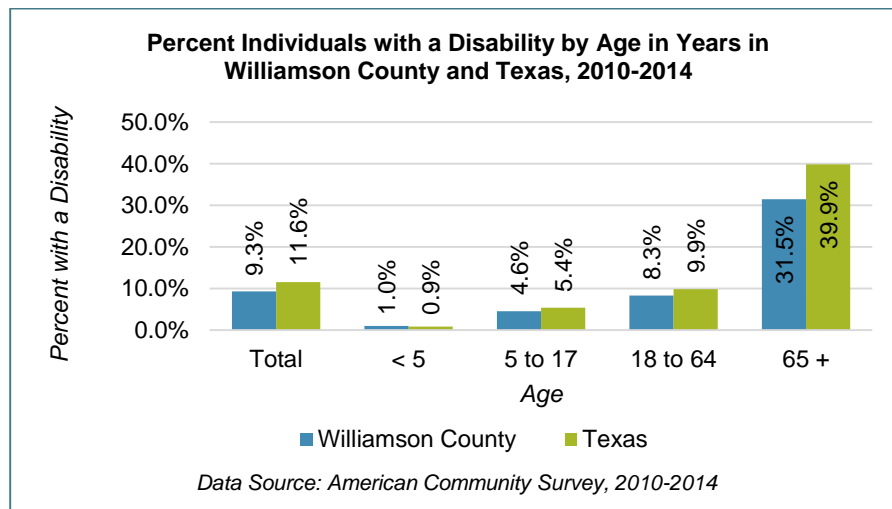
C5. Behavioral Risk Factors

Behavioral risk factors are behaviors that can increase the chances of injury, disease, or death (4). Behavioral risk factors associated with chronic and infectious diseases include obesity and overweight, physical inactivity and unhealthy eating, substance abuse, and lack of cancer screening.

Adult and Childhood Obesity

> *"I'd love to see more focus on child obesity. There's so much land we could actually use, even as a community to do those Victory Gardens."* – Focus group participant

Obesity in an adult is defined as having a Body Mass Index (BMI) greater than or equal to 30.0, whereas overweight is generally indicated by a BMI between 25.0 and 29.9 (21). Obesity and overweight increases the chances of developing heart disease, stroke, and diabetes and other risk factors including high blood pressure and high cholesterol (22).

From 2004 to 2012, obesity increased in Williamson County, as it did for Texas as a whole **(Figure 23)**. In 2004, 21.2% of the adult population in the county was obese. By 2012, the percentage of adult residents classified as obese rose to 28.5%, surpassing the state percentage of 28.2%. Still, the county met the HP2020 target of 30.5% or less obese adults in the county but is approaching the limit quickly. Furthermore, 4 out of 10 adults in the county were overweight/obese (40.3%), again exceeding the statewide percentage (35.5%) **(Table 11).** Community health improvement initiatives will need to take collective action to reverse these trends.

In contrast, the percentage of individuals with obesity-related risk factors such as high blood pressure and high cholesterol in the county was lower than percentage in the state. About 1 in 4 adults had high blood pressure (27.2%), and about 1 in 3 adults had high cholesterol (35.4%) in the county. This was compared to about 3 in 10 adults (30.0%) and 4 in 10 adults (41.8%) respectively in the state **(Table 11).**

However, the available secondary data for overweight and obese adults does not include additional data related to

high blood pressure and cholesterol. Consequently, the CHA Team was not able to identify a relationship between these conditions and risk factors at the county level. Additional data would be required to examine these conditions and risk factors independently. More specifically, the CHA team would like to analyze data stratified by race/ethnicity and SES to determine those that are at a true risk for being overweight and obese, having high blood pressure and cholesterol, and the relationship between these factors.

Figure 23: Percentage of Adults Obese by Year in Williamson County and Texas, 2004-2012

Percentage of Adults Obese by Year in Williamson County and Texas, 2004-2012

Data Source: National Center for Chronic Disease Prevention and Health Promotion, 2004-2012
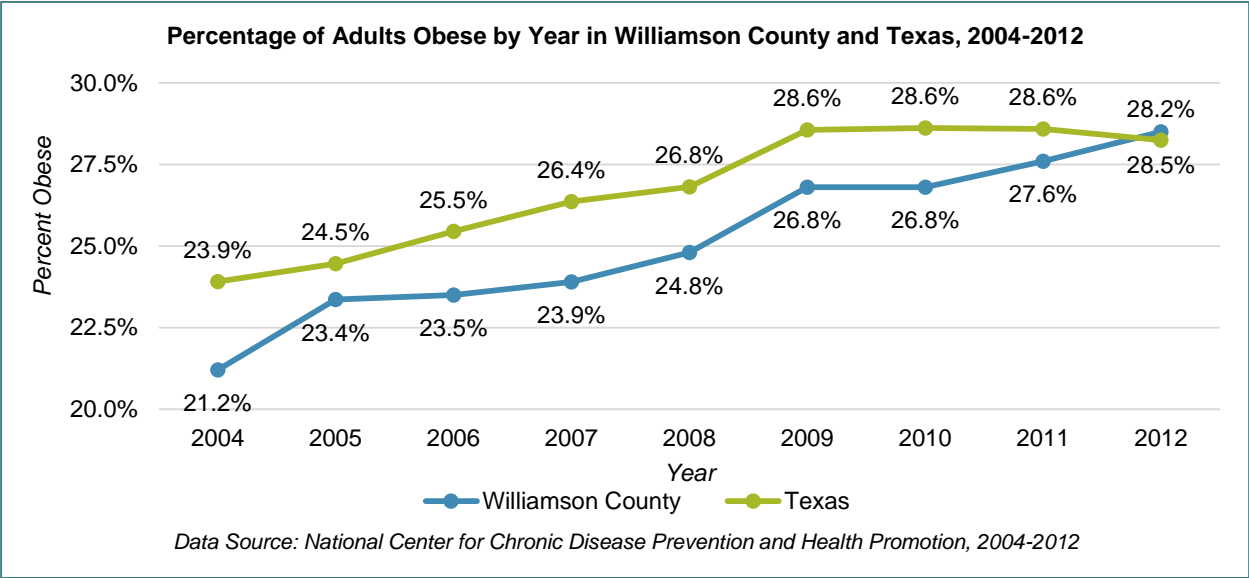
Table 11: Percentage of Adults with Obesity and Overweight Related Risk Factors in Williamson County and Texas

Indicator	Williamson County	Texas
Obesity[1]	28.5%	28.2%
Overweight[2]	40.3%	35.5%
High Blood Pressure[3]	27.2%	30.0%
High Cholesterol[1]	35.4%	41.8%
Data Sources: [1] Behavioral Risk Factor Surveillance System (BRFSS), 2011-2012; [2] National Center for Chronic Disease Prevention and Health Promotion, 2012; [3] BRFSS, 2006-2012		

Similarly, childhood obesity is also on the rise in Williamson County. Childhood obesity can lead to short and long-term health consequences, extending even into adulthood (23). According to the Texas Education Agency (TEA), each independent school district (ISD) in Williamson County is required to evaluate the fitness level of all students between 3rd and 12th grade with the FITNESSGRAM® assessment tool (24).

FITNESSGRAM® uses Healthy Fitness Zones (HFZs) criteria to evaluate student fitness levels (aerobic capacity, body composition, BMI). The zones are established by The Cooper Institute of Dallas, Texas, and represent minimum levels of fitness that offer protection against diseases that result from sedentary living (25). If the performance goal is not met, the results are classified as Needs Improvement (NI) or, for Aerobic Capacity and Body Composition, Very Lean (Body Composition only) or Needs Improvement-Health Risk (NI-HR). When mapped across Williamson County ISDs, Liberty Hill, Leander, Cedar Park, Austin, and Round Rock tended to have higher concentrations of 3rd to 12th graders who achieved the HFZ standards (Figure 24 and Figure 25).

Figure 24: Percent of 3rd to 8th Grade Students with BMI Achieving the Healthy Fitness Zone by Independent School District, 2012-2013
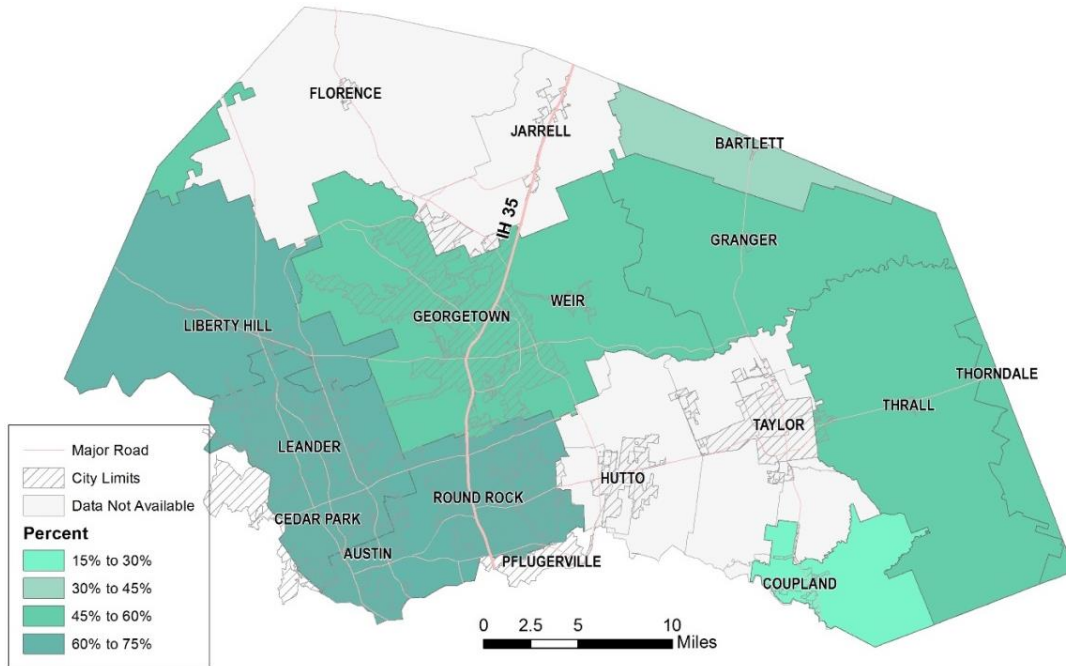
Notes: Percent calculated by dividing the sum of student with "Body Mass Index (BMI) Achieving Healthy Fitness Zone" by all students tested.
Map Source: Disease Control and Prevention Division, WCCHD; Data Source: Texas Education Agency Fitnessgram®, 2012-2013

Figure 25: Percent of 9th to 12th Grade Students with BMI Achieving the Healthy Fitness Zone by Independent School District, 2012-2013
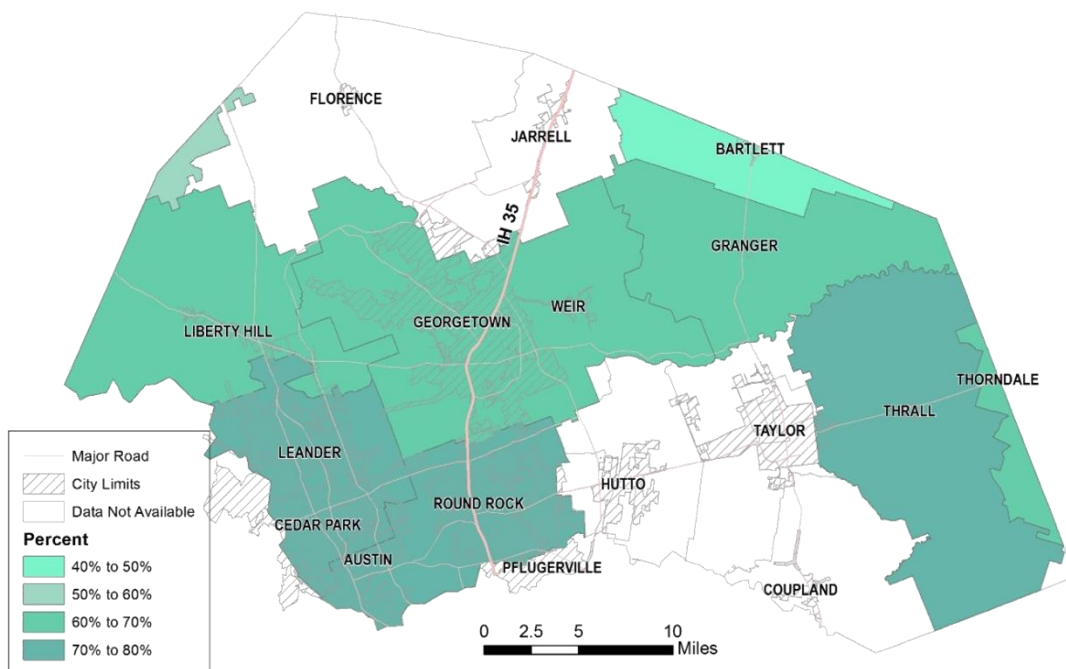
Notes: Percent calculated by dividing the sum of student with "Body Mass Index (BMI) Achieving Healthy Fitness Zone" by all students tested.
Map Source: Disease Control and Prevention Division, WCCHD; Data Source: Texas Education Agency Fitnessgram®, 2012-2013

> *"Even if [a person] were to think about eating healthier and going to the grocery store and looking at the healthier things, they probably would realize that what they're eating is a lot cheaper, and they're used to eating it compared to the healthier foods. Then it just kind of falls on both cultural and financial."* – Focus group participant

> *"[I would like] more physical activity opportunities for all types of people. People that have healthcare conditions."* – Focus group participant

Physical activity and healthy eating improves health and reduces the risk for disease. Recommended levels of physical activity for adults include either 150 minutes of moderate physical activity or 75 minutes of moderate to vigorous physical activity (MVPA) per week and recommended levels for children include 60 minutes of MVPA per day (26). The newly released 2015-2020 Dietary Guidelines recommends five guidelines for healthy eating: 1) "follow a healthy eating pattern across the lifespan", 2) "focus on variety, nutrient density, and amount", 3) "limit calories from added sugars and saturated fats and reduce sodium intake", 4) "shift to healthier food and beverage choices", and 5) "support healthy eating patterns for all" (27).
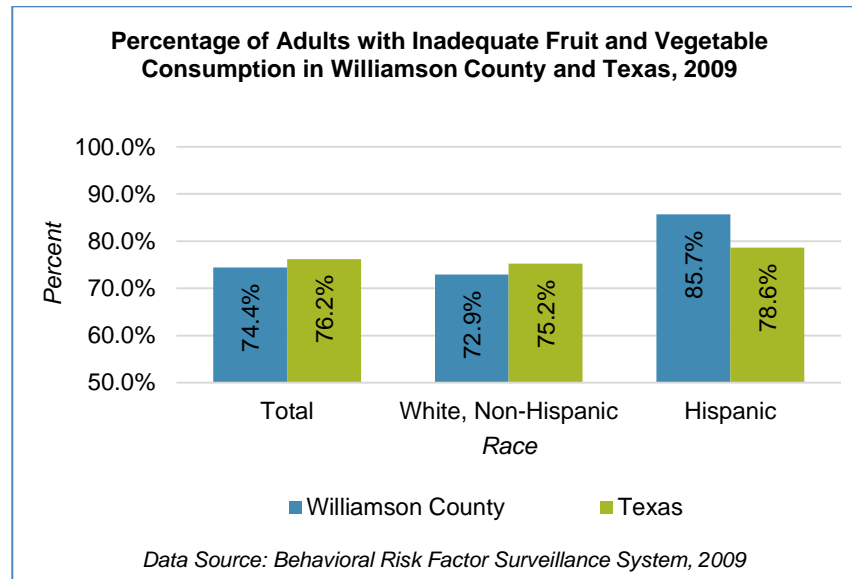
The percentage of physically active adults in the county has improved since 2004 **(Figure 26)**. In 2012, the percentage of adults in Williamson County who reported no leisure time physical activity (18.4%) was below percentage of adults in Texas (24.0%). The county met the HP2020 target of 32.6% of adults engaged in no leisure-time physical activity.

Figure 26: Percentage of Adults Physically Inactive by Year in Williamson County and Texas, 2004-2012

Percentage of Adults Physically Inactive by Year in Williamson County and Texas, 2004-2012

Data Source: National Center for Chronic Disease Prevention and Health Promotion, 2004-2012
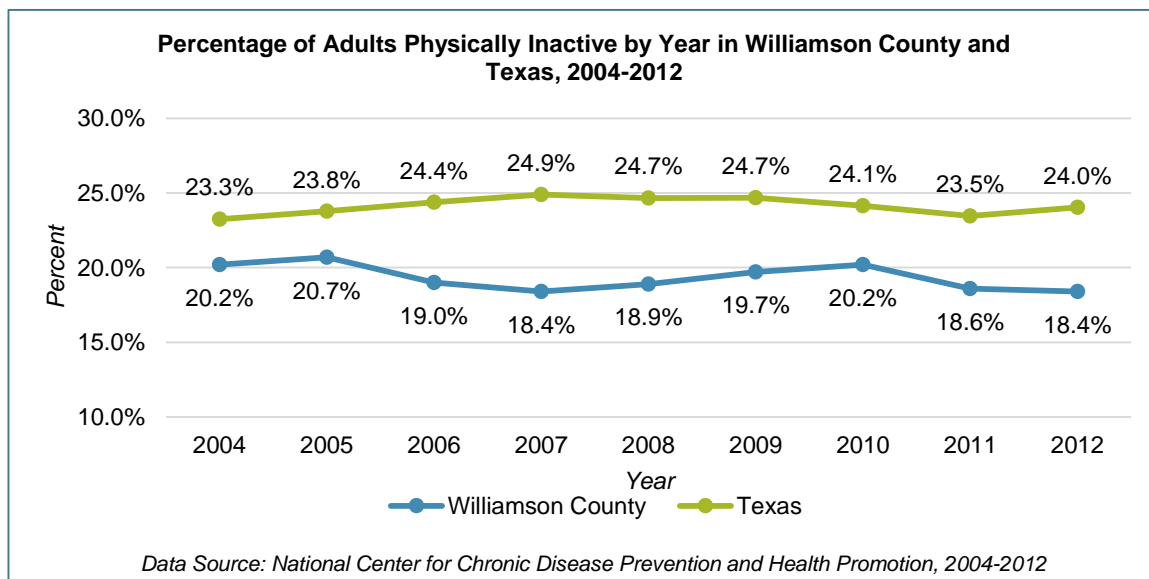
About 3 in 4 adults in the county (74.4%) and in Texas (76.2%) did not consume enough fruits and vegetables **(Figure 27)**. In addition, Hispanic adults had an even higher percentage of adults with inadequate consumption of fruits and vegetables (85.7%). The county must increase efforts to improve healthy eating and physical activity to combat the rising rates of obesity and overweight in the county.

Figure 27: Percentage of Adults with Inadequate Fruit and Vegetable Consumption in Williamson County and Texas, 2009

Percentage of Adults with Inadequate Fruit and Vegetable Consumption in Williamson County and Texas, 2009

Total: Williamson County 74.4%, Texas 76.2%
White, Non-Hispanic: Williamson County 72.9%, Texas 75.2%
Hispanic: Williamson County 85.7%, Texas 78.6%

Y-axis: Percent (50.0% to 100.0%)
X-axis: Race

■ Williamson County ■ Texas

Data Source: Behavioral Risk Factor Surveillance System, 2009

Substance Use and Abuse

> *"I don't know, for here it just seems to be normal. That someone's going to get found with drugs in a week."* – Focus group participant

Substance abuse involves the misuse of alcohol, tobacco, and legal and illegal drugs. Tobacco use and smoking can damage every organ in the body and cause diseases ranging from cancer to heart disease to chronic obstructive pulmonary disease (28). Adults smoked fewer cigarettes in Williamson County (12.0%) than in Texas (15.0%). The county met the HP2020 target of 12.0% **(Figure 28)**.

Excessive drinking of alcohol involves binge drinking, heavy drinking, and drinking by pregnant women or persons younger than 21 years. Binge drinking is defined as four or more drinks for women and five or more drinks for men in a single occurrence. Heavy drinking is defined as having eight or more drinks per week for women and fifteen or more drinks per week for men. Excessive drinking can lead to death and disease (29). The percentage of adults that drink excessively was higher in the county (19.0%) than in Texas (17.0%) **(Figure 29)**. The county met the HP2020 target of 25.4% of adults drinking excessively in the previous thirty days.

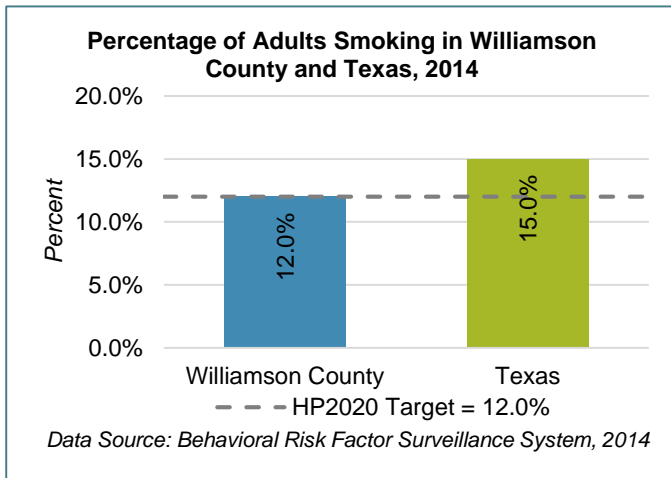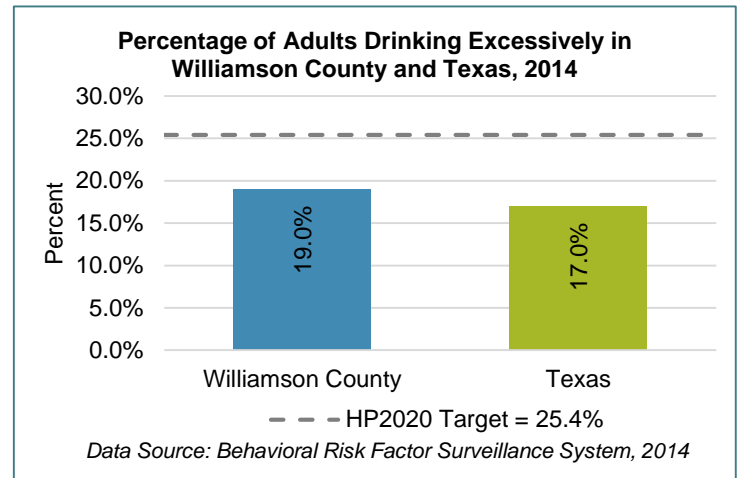**Figure 28: Percentage of Adults Smoking in Williamson County and Texas, 2014**

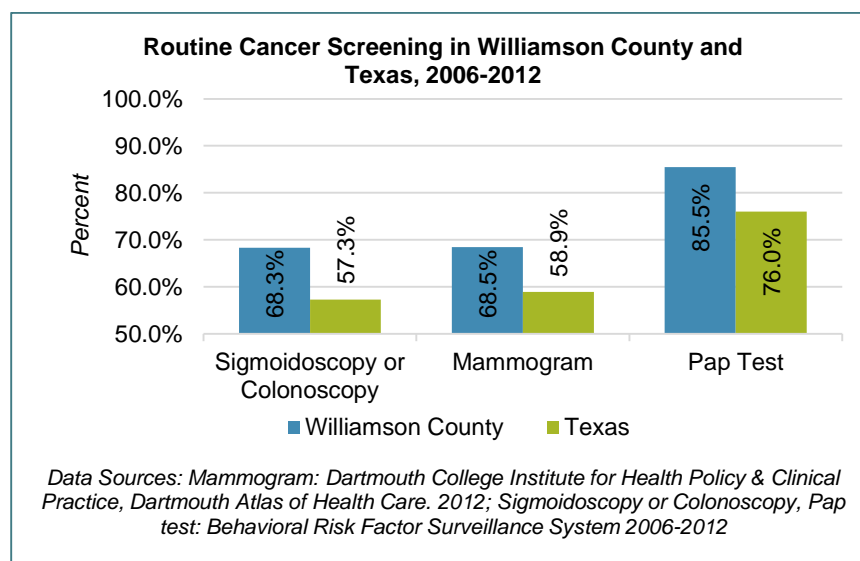**Figure 29: Percentage of Adults Drinking Excessively in Williamson County and Texas, 2014**

Percentage of Adults Smoking in Williamson County and Texas, 2014

- Williamson County: 12.0%
- Texas: 15.0%
- HP2020 Target = 12.0%

Data Source: Behavioral Risk Factor Surveillance System, 2014

Percentage of Adults Drinking Excessively in Williamson County and Texas, 2014

- Williamson County: 19.0%
- Texas: 17.0%
- HP2020 Target = 25.4%

Data Source: Behavioral Risk Factor Surveillance System, 2014

Routine Cancer Screening

Routine cancer screening involves checking for signs and conditions of cancer prior to symptoms. Early detection of cancer leads to more prompt treatment to increase survival. Cancer was the number one cause of death in the county **(Figure 41).** Important routine screening tests for cancer include colonoscopy and sigmoidoscopy for colorectal cancer, mammography for breast cancer, and Pap test for cervical cancer (30).

When compared to Texas, Williamson County has improved percentages of routine cancer screening **(Figure 30)**. The percentage of adults aged 50 years and over who have ever had colon cancer screening in the county is 68.3%, higher than in Texas (57.3%). The percentage of Williamson County female Medicare enrollees aged 67-69 years who received mammograms in the past two years was 68.5%, as compared to 58.9% in Texas. The percentage of adult females aged 18 years and over who had a Pap test in the last three years in the county was 85.5%, compared to 76.0% in Texas. However, the county has yet to meet the HP2020 target of 93% screening rate for Pap tests.

Figure 30: Routine Cancer Screening in Williamson County and Texas, 2006-2012

Routine Cancer Screening in Williamson County and Texas, 2006-2012

- Sigmoidoscopy or Colonoscopy: Williamson County 68.3%, Texas 57.3%
- Mammogram: Williamson County 68.5%, Texas 58.9%
- Pap Test: Williamson County 85.5%, Texas 76.0%

Data Sources: Mammogram: Dartmouth College Institute for Health Policy & Clinical Practice, Dartmouth Atlas of Health Care. 2012; Sigmoidoscopy or Colonoscopy, Pap test: Behavioral Risk Factor Surveillance System 2006-2012

C6. Environmental Health Indicators

The physical and built environments can directly affect health and quality of life by increasing or decreasing exposure to certain environmental risks or health behaviors (31). For example, the physical and built environment can either promote or discourage an active living and healthy eating lifestyle. Additionally, clean air and water are essential to physical health.

Physical Environment

The physical environment can involve air and water quality. Air pollution is measured by particulate matter (PM). Also known as fine particulate matter, PM 2.5 are particles smaller than 2.5 microns in size that can travel deep into the lungs, affecting both short and long-term lung function. Drinking water violations can also be indicative of the water quality of the community. Compared to the state, air pollution and drinking water violations were lower in the county **(Table 12)**. Specifically, the fine particulate matter in the county (8.9) was lower than in Texas (9.6) and drinking violations were lower in the county (3.0%) than in Texas (7.0%).

**Table 12: Physical Environment in Williamson County and Texas 2011-2014**

Indicator	Williamson County	Texas
Air pollution – PM 2.5 µg/m³ [1]	8.9	9.6
Drinking water violations[2]	3.0%	7.0%
Data Sources: [1] CDC WONDER, 2011; [2] Safe Drinking Water Information System, 2013-2014		

Active Living Support

> *"They really need to fix some of the roads and actually put sidewalks in, because it's extremely dangerous to walk this area."* – Focus group participant

Active living support involves creating and improving sidewalks, neighborhood parks/trails, and smoke-free places to improve health and physical activity in the county (31). A higher number of recreation and fitness facilities can increase community access to active living. In 2013, 9.5 recreation and fitness facilities existed for every 100,000 population in Williamson County as compared to 7.7 facilities for every 100,000 population in Texas **(Figure 31)**.

Figure 31: Recreation and Fitness Facilities Rate by Year in Williamson County and Texas, 2008-2013

Recreation and Fitness Facilities Rate by Year in Williamson County and Texas, 2008-2013

Williamson County: 2008: 8.0, 2009: 8.8, 2010: 9.5, 2011: 7.8, 2012: 8.3, 2013: 9.5
Texas: 2008: 7.1, 2009: 7.1, 2010: 7.2, 2011: 7.1, 2012: 7.2, 2013: 7.7

Data Source: County Business Patterns, 2008-2013
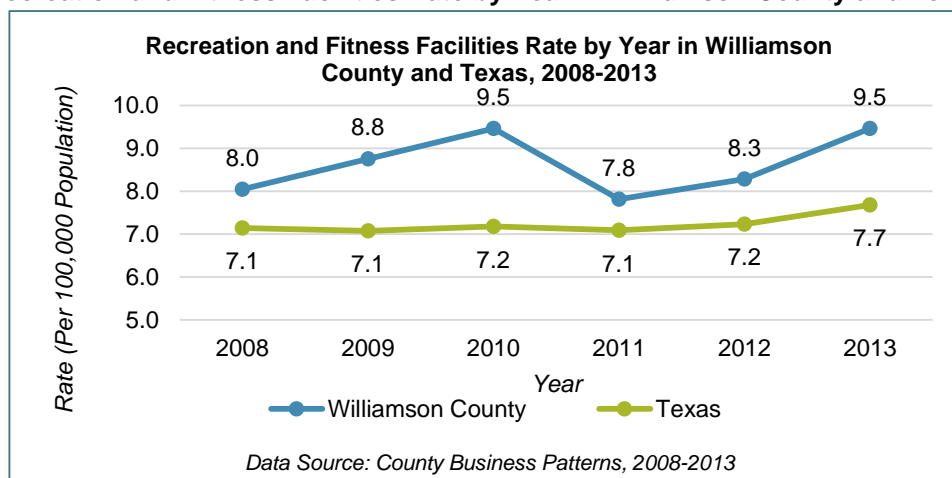
Healthy Eating Support

Feeding America, the nation's largest domestic hunger-relief organization, defines food insecurity as the "lack of access, at times, to enough food for an active, healthy life for all household members." Risk for food insecurity tends to increase as poverty and unemployment increase and home ownership decreases (32). As compared to Texas, Williamson County has lower percentages of overall food insecurity. However, about 1 in 5 children and 1 in 7 persons in the county lacked access to enough food for an active and healthy lifestyle (Table 13).

In addition, the built environment surrounding the healthy food environment is associated with the nutrition and diet of its residents and the availability and affordability of healthy foods in the county (31). Compared to Texas, there were less grocery stores/supermarkets and Supplemental Nutrition Assistance Program (SNAP, formerly known as food stamps) authorized retailers, but more fast food restaurants per every 100,000 population in the county than in Texas (Table 13). Only 9.2 grocery stores and supermarkets and 51.6 SNAP authorized retailers existed for every 100,000 population in the county. In contrast, Texas had 13.8 grocery stores and 71.9 SNAP authorized retailers. On the other hand, 75.5 fast food restaurants existed for every 100,000 population in the county as compared to 74.1 fast food restaurants in Texas. Such an environment can prevent access to affordable healthy foods and promote access to unhealthy foods.

Table 13: Healthy Eating Environment in Williamson County and Texas 2013-2014

Indicator	Williamson County	Texas
Overall Food Insecurity[1]	14.7%	17.0%
Child Food Insecurity[1]	21.3%	25.6%
Grocery Stores and Supermarkets Rate*[2]	9.2	13.8
Fast Food Restaurants Rate*[2]	75.5	74.1
SNAP Authorized Retailers Rate*[3]	51.6	71.9
Notes: * per 100,000 population *Data Sources: [1] Feeding America, 2014; [2] County Business Patterns, 2013; [3] U.S. Department of Agriculture, 2014*		

The U.S. Department of Agriculture (USDA) defines food deserts as "urban neighborhoods and rural towns without ready access to fresh, healthy, and affordable food." A food desert must meet both low-income and low-access criteria (33). When mapped across Williamson County by census tracts, food deserts were located in census tracts near Jarrell, Bartlett, Granger, Taylor, Round Rock, and Georgetown (Figure 32).

Figure 32: Food Deserts by Census Tract in Williamson County, 2010
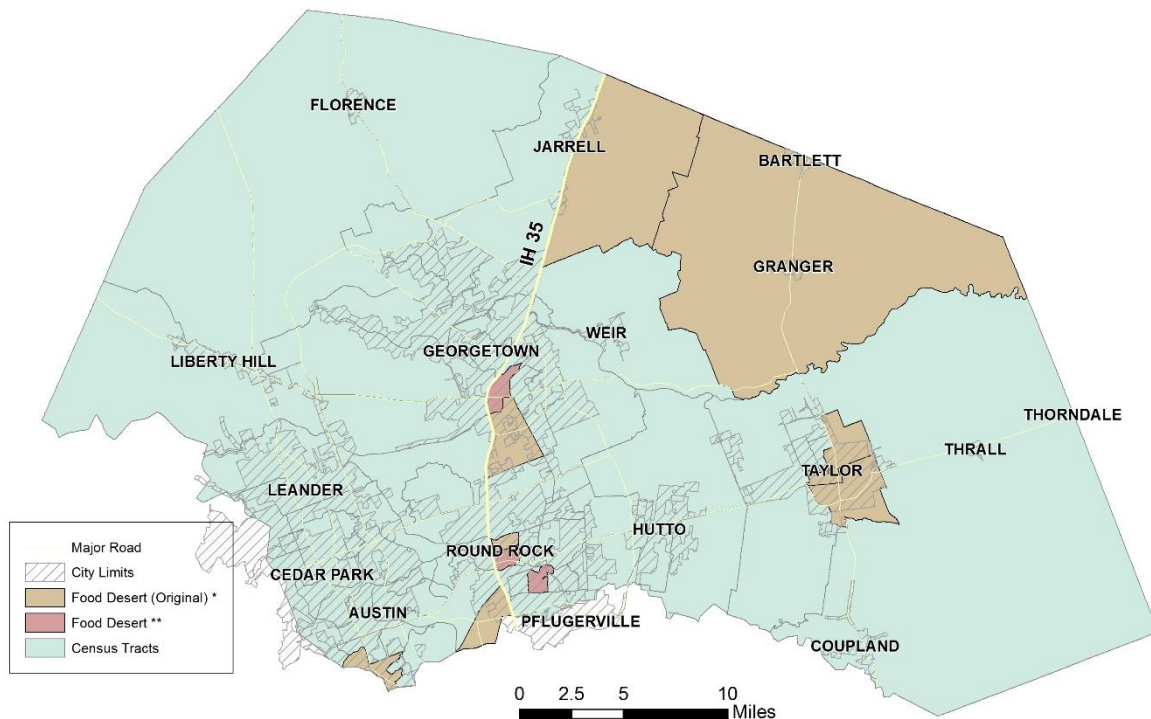
Notes: * Low- income census tracts where a significant number or share of residents is more than 1 mile (urban) or 10 miles (rural) from the nearest super market; ** Expanded criteria to determine food deserts include 1. 0.5 mile (urban) or 10 miles (rural), 2. 1 mile (urban) or 20 mile (rural), or 3. No vehicle access.
Map Source: Disease Control and Prevention Division, WCCHD
Data Source: USDA Economic Research Service - Food Access Research Atlas, 2010

C7. Social and Mental Health

"I know my mom had mental health issues and there's not … she actually had to go to a hospital, like a mental facility here. There wasn't that many. If you're on the waiting list. If somebody's trying to harm themselves and they're on a waiting list, what are you going to do? Help them when they're dead, almost?" – Focus group participant

The CDC defines mental health as "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community." Mental health also involves emotional, psychological, and social well-being. Lack of adequate housing, safe neighborhoods, education, access to health care, and equitable jobs and wages can increase the risk for mental health issues (34).

Poor mental health days are days where mental health (including stress, depression, and problems with emotions) was not good. Between 2006 and 2012, the number of poor mental health days that adults in Williamson County reported in the past 30 days was 2.7 days, compared to 3.0 days in Texas **(Table 10).**

Intentional Self-Harm (Suicide)

Individuals that are at risk for intentional self-harm (suicide) may contend with a variety of conditions that affect their mental health, including depression, mental illness, substance abuse, loneliness, family history of suicide and violence, or physical illness. Suicide and suicide attempts can leave harmful effects on individuals, families, and communities (35). Decreasing risk for suicide involves targeting these whole hosts of risk factors and increasing protective factors such as mental health support, clinical interventions, and family and community support.

Over the last ten years, suicide was one of the top ten causes of death in the county in six of those years **(Figure 41)**. In addition, suicide rates in Williamson County have steadily increased since 2005 surpassing rates in Texas. Between 2005 and 2009, the age-adjusted 5-year death rate for suicide was 8.9 deaths per 100,000 population. Between 2009 and 2013, the age-adjusted 5-year death rate for suicide was 12.0 deaths per 100,000 population **(Figure 33)**.

Figure 33: Age-Adjusted Suicide Mortality Rate by Rolling 5-Year Average in Williamson County, 2005-2013

Age-Adjusted Suicide Mortality Rate by Rolling 5-Year Average in Williamson County, 2005-2013

Data Source: Texas Department of State Health Services, Center for Health Statistics, 2005-2013
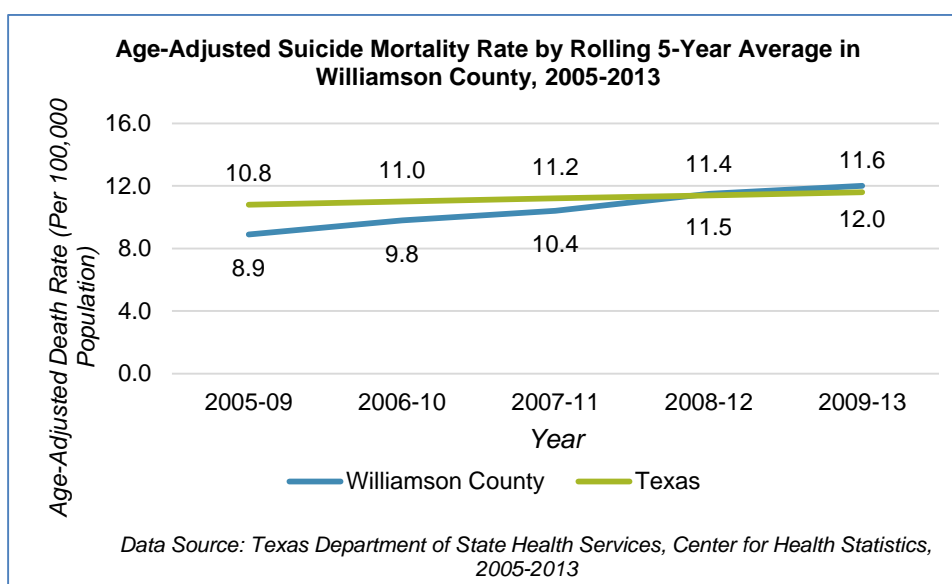
Age-adjusted suicide mortality rates for all individuals, and when stratified for males and non-Hispanic Whites, did not meet the HP2020 target (10.2 deaths/100,000 population) **(Figure 34 and Figure 35)**. Males (19.6 deaths/100,000 population) and non-Hispanic Whites (14.5 deaths/100,000 individuals) had higher rates of suicides than the general Texas population. DSHS did not calculate age-adjusted mortality rates for Blacks/African Americans and Other race/ethnicity groups due to small numbers of attributed deaths in these categories.

Figure 34: Age-Adjusted Suicide Mortality Rate by Gender in Williamson County and Texas, 2009-2013

Age-Adjusted Suicide Mortality Rate by Gender in Williamson County and Texas, 2009-2013

Data Source: Texas Department of State Health Services, Center for Health Statistics, 2009-2013
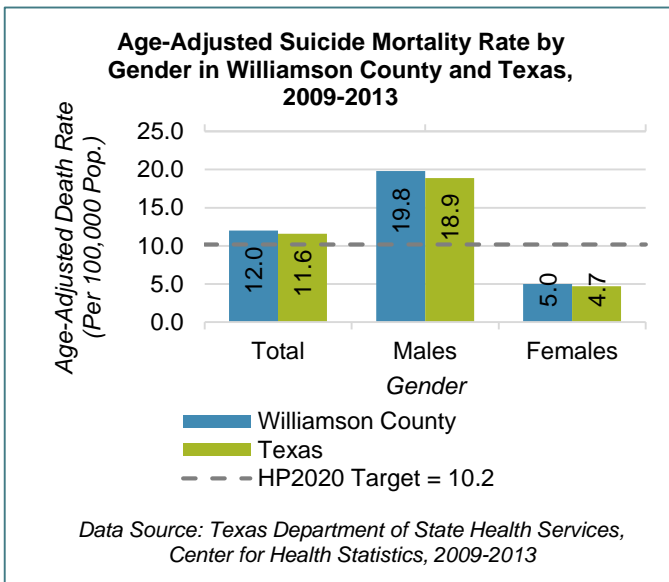
Figure 35: Age- Adjusted Suicide Mortality Rate by Race/Ethnicity in Williamson County and Texas, 2009-2013

Age- Adjusted Suicide Mortality Rate by Race/Ethnicity in Williamson County and Texas, 2009-2013

Notes: * N/A - Too few deaths to calculate age-adjusted mortality rate; White = Non-Hispanic White
Data Source: Texas Department of State Health Services, Center for Health Statistics, 2009-2013
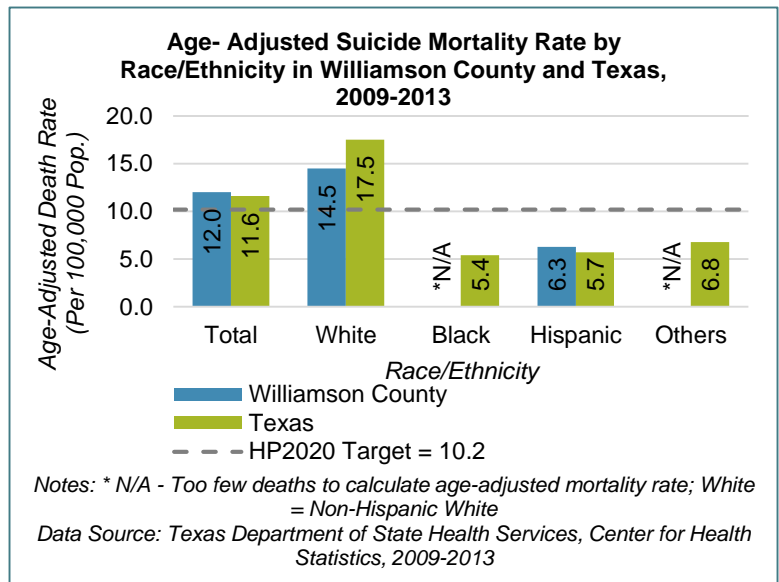
Additional Mental Health Indicators

"Is safety a priority? Yeah, definitely." – Focus group participant

Motor vehicle crash deaths, child abuse rate, total violent crime rate, and drug overdose mortality rate can be indicative of mental health. The county had improved rates when compared in all categories to Texas. The rate for motor vehicle crash death in the county (6.0 deaths per 100,000 population) was less than half that in Texas (13.4 deaths per 100,000 population). The rate for child abuse in the county (5.3 per 1,000 children) was almost half that in Texas (9.2 per 1,000 children). The total violent crime rate in the county (142.3 reported violent crime offenses per 100,000 population) was a third of that in Texas (422.0 violent crimes per 100,000 population). In addition, the number of overdose deaths in the county (8.0 per 100,000 population) was less than in Texas (9.0 per 100,000 population) (Table 14).

Table 14: Additional Mental Health Indicators in Williamson County and Texas, 2002-2014

Indicator	Williamson County	Texas
Motor Vehicle Crash Death Rate*[1]	6.0	13.4
Child Abuse Rate (per 1,000 Children)[2]	5.3	9.2
Total Violent Crime Rate^*[3]	142.3	422.0
Drug Overdose Mortality Rate*[4]	8.0	9.0
Notes: ^ Includes homicide, forcible rape, robbery, and aggravated assault; * per 100,000 population Data Sources: [1] Texas Department of State Health Services Center for Health Statistics, 2013, [2] Texas Department of Family and Protective Services CPS, 2014; [3] Uniform Crime Reporting – FBI, 2010-2012; [4] CDC Wonder, 2002-2014		

C8. Maternal and Child Health

The well-being of mothers, infants, and children determine the health of the next generation and can help predict future public health challenges for families, communities, and the health care system (36). Additionally, maternal health is highly correlated with infant and child health (37). Because infants and children are considered vulnerable populations, the health and well-being of this population can also indicate the health status of a community (4).

Infants Born with Low Birth Weight

Infants born with low birth weight weigh less than 2,500 grams and tend to suffer from many health issues. Low birth weight is affected by the mother's genetics as well as the mother's health status. In addition, low birth weight is indicative of health disparities in the population (37). The percentage of infants born with low birth weight in the county has slightly increased over time from 6.6% between 2002 and 2008 to 7.2% between 2006 and 2012, whereas in Texas as a whole the percentage has remained essentially constant **(Figure 36).** Compared to Texas, Williamson County had lower percentages of infants born with low birth weight, except for Hispanic infants **(Figure 37)**.

Figure 36: Percentage of Babies Born with Low Birth Weight by 7-Year Rolling Average in Williamson County and Texas, 2002-2012
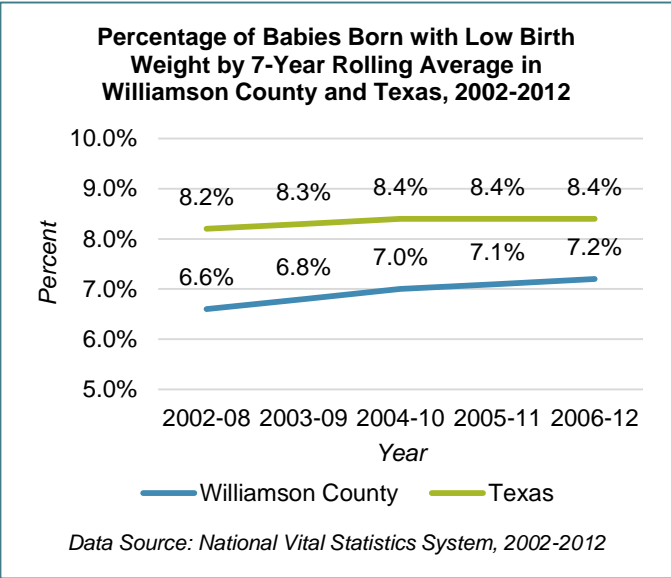
Figure 37: Percentage of Babies Born with Low Birth Weight by Race/Ethnicity in Williamson County and Texas, 2013

Percentage of Babies Born with Low Birth Weight by 7-Year Rolling Average in Williamson County and Texas, 2002-2012

Data Source: National Vital Statistics System, 2002-2012

Percentage of Babies Born with Low Birth Weight by Race/Ethnicity in Williamson County and Texas, 2013

Notes: White includes non-Hispanic White, Other and Unknown Race/Ethnicity
Data Source: Texas Department of State Health Services Center for health Statistics, 2013
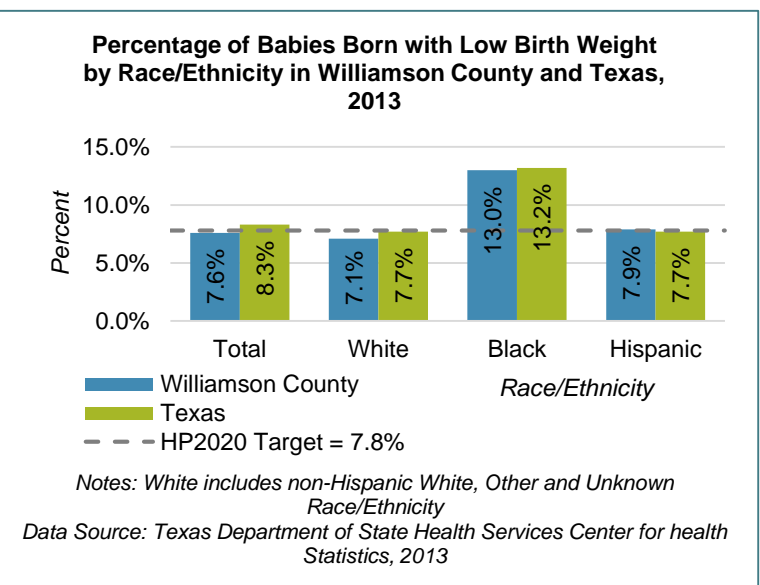
Additionally, the percentages for Black/African American (13.0%) and Hispanic (7.9%) infants exceeded the HP2020 target of 7.8%.

Child and Infant Mortality Rates

Infant mortality rate is frequently used as a proxy to describe the overall health status of a community, as health factors that impact the community tend to affect the health of an infant (38). Compared to Texas (5.8 deaths/1,000 live births), the infant mortality rate for Williamson County (3.5 deaths/1,000 live births) was lower **(Table 15)**.

Table 15: Child and Infant Mortality Rate in Williamson County and Texas, 2009-2013

Indicator	Williamson County	Texas	HP2020
Infant Mortality Rate*¹	3.5	5.8	6.0
Child Mortality Rate^²	36.7	53.1	--
Notes: * Per 1,000 live births, ^ Per 100,000 Children under 18 *Data Sources: ¹ Texas Department of State Health Services Center for Health Statistics, 2013; ² CDC WONDER, 2009-2012*			

Furthermore, the county and the state's mortality rates fell below the HP2020 target (6.0 deaths/1,000 live births) **(Figure 38)**. Rates for Non-Hispanic Whites (4.4 deaths/1,000 live births) and Hispanics (4.9 deaths/1,000 live births) in the county fell below the HP2020 target. No rates were available for Blacks/African Americans and Other race/ethnicities due to limited numbers. The child mortality rate can help understand the years of potential life lost in a county (39). Like infant mortality rate, the child mortality rate in the county (36.7 deaths/100,000 children) fell below the rate in Texas (53.1 deaths/100,000 children).

Figure 38: Infant Mortality Rate in Williamson County and Texas, 2010-2013

Notes: * Rates are not calculated when the number of deaths is fewer than 20; White = Non-Hispanic White
Data Source: Texas Department of State Health Services Center for Health Statistics, 2010-2013
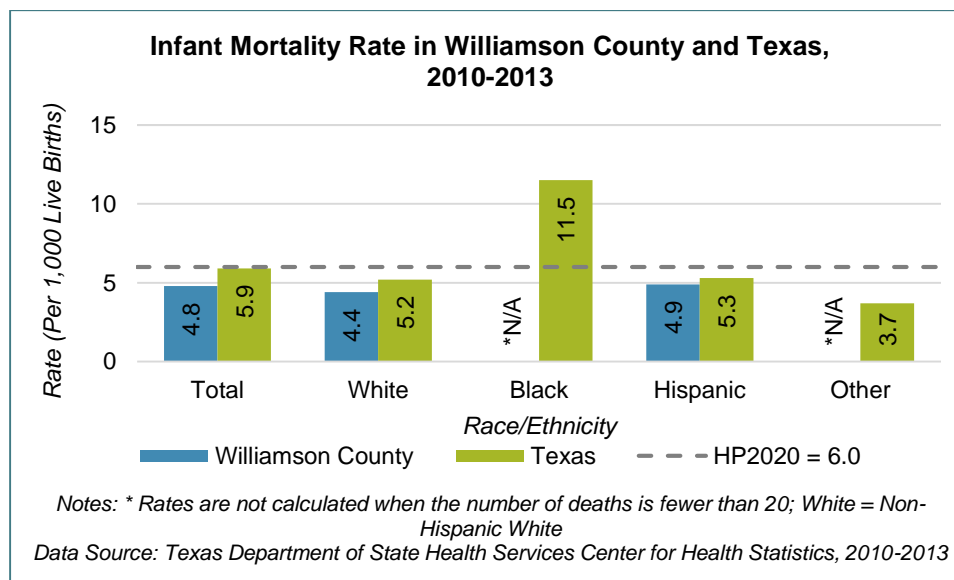
Teen Births

> *"I know over five people who are pregnant or have already had their kids." – Youth focus group participant*

Teen pregnancy and teen childbirth can increase health care costs, high school dropout rates, lower school achievement, incarceration, and unemployment. In addition, a high teen birth rate might indicate the prevalence of unsafe sex practices (37). The annual rate of teen births in the county was 31.7 teen births for every 1,000 females aged 15-19 years old **(Figure 39)**. The number of teen births was higher for Hispanic (57.1 births/1,000 females aged 15-19) and Black/African American (36.4 births/1,000 females aged 15-19) teenagers. In addition, 1.9% of live births were born to adolescents under the age of 18 years in the county as compared to 3.5% in Texas.

Figure 39: Teen Birth Rate (7 Year Average) by Race/Ethnicity in Williamson County and Texas, 2006-2012

Teen Birth Rate (7 Year Average) by Race/Ethnicity in Williamson County and Texas, 2006-2012

Rate (Per 1,000 Females 15-19)

- Total: Williamson County 31.7, Texas 55.0
- White: Williamson County 20.4, Texas 31.4
- Black: Williamson County 36.4, Texas 56.2
- Hispanic: Williamson County 57.1, Texas 79.1

Race/Ethnicity

■ Williamson County ■ Texas

Note: White = Non-Hispanic White
Data Source: National Vital Statistics System, 2006-2012
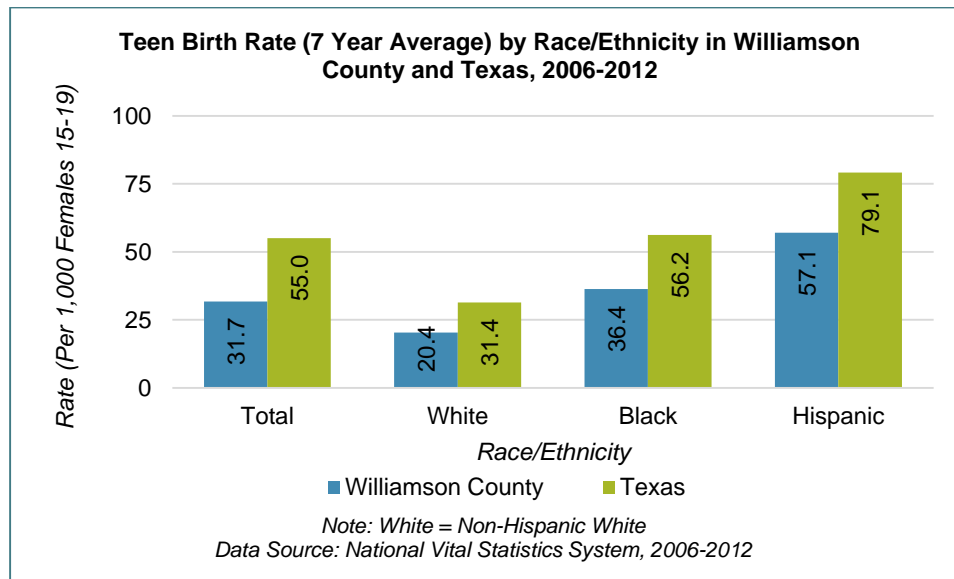
Prenatal Care

Prenatal care is an important part of improving birth outcomes and reducing pregnancy and childbirth problems. Infants born to mothers who had not received prenatal care are five times more likely to die and three times more likely to be born with low birth weight (40). The total percentage of mothers in 2013 who received early prenatal care in the first trimester (79.6%) met and exceeded the HP2020 goal (77.9%); however, percentages for both Black/African American (71.6%) and Hispanic (70.6%) mothers fell below the HP2020 target. Percentages after stratifying by race/ethnicity were higher in the county than in the state for all groups (Figure 40).

Figure 40: Percentage of Mothers who Received Early Prenatal Care by Race/Ethnicity in Williamson County and Texas, 2013

Percentage of Mothers who Received Early Prenatal Care by Race/Ethnicity in Williamson County and Texas, 2013

Percent

- Total: Williamson 79.6%, Texas 62.5%
- White: Williamson 83.9%, Texas 70.5%
- Black: Williamson 71.6%, Texas 53.5%
- Hispanic: Williamson 70.6%, Texas 57.6%

Race/Ethnicity

■ Williamson ■ Texas - - HP2020 = 77.9%

Note: White = Non-Hispanic White
Data Source: Texas Department of State Health Services Center for Health Statistics, 2013
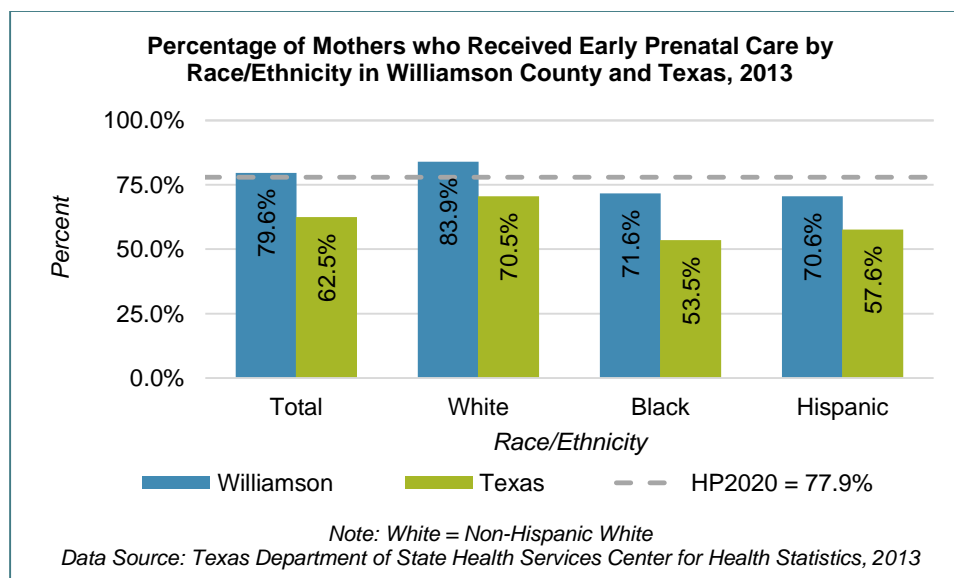
C9. Death, Illness, and Injury

Top 10 Causes of Death

Over the past century, the leading causes of death in the U.S. have shifted from infectious diseases and acute illnesses to chronic and degenerative illnesses (11). From 2004 to 2013, cancer and heart disease were responsible for over 40% of all attributed causes of death in Williamson County. However, influenza and pneumonia have continued to be a common cause of death in both the county and the state. In 2013, the top 10 causes of death in Williamson County were: 1. Cancer, 2. Heart Disease, 3. Stroke, 4. Lung Disease, 5. Accidents, 6. Alzheimer's Disease, 7. Kidney Disease, 8. Suicide, 9. Parkinson's Disease, and 10. Diabetes Mellitus **(Figure 41)**.

Figure 41: Leading Causes of Death in Williamson County by Year, 2004-2013

Leading Causes of Death in Williamson County by Year, 2004-2013

By relative age-adjusted mortality rate (attributed deaths per 100,000 population)

- Cancer
- Heart Disease
- Stroke
- Lung Disease
- Accidents
- Diabetes Mellitus
- Alzheimer's Disease
- Influenza and Pneumonia
- Suicide
- Kidney Disease
- Parkinson's Disease
- Pneumonitis

Data Source: Texas Department of State Health Services Center for Health Statistics, 2004-2013

In general, Williamson County (595.2 deaths per 100,000 population) had a lower age-adjusted death rate than in Texas (749.2 deaths per 100,000 population). Among the more common causes of death, Williamson County only had higher mortality rates in 2013 for Parkinson's disease and pneumonitis as compared to Texas as a whole. In contrast to Williamson County, the leading cause of death in Texas in 2013 was heart disease **(Figure 42)**.

Figure 42: Comparative Mortality Rates between Williamson County and Texas, 2013

Comparative Mortality Rates between Williamson County and Texas, 2013

Age-adjusted Mortality Rate (Attributed Deaths per 100,000 population)

Cause	Williamson County	Texas
All Causes	595.2	749.2
Cancer	129.8	156.1
Heart Disease	104.1	170.7
Stroke	34.3	40.1
Lung Disease	31.8	42.3
Accidents	29.2	36.8
Alzheimer's Disease	24.3	24.4
Kidney Disease	13.7	15.9
Suicide	11.9	11.6
Parkinson's Disease	10.5	7.9
Diabetes	10	21.6
Liver Disease	9.9	12.8
Septicemia	9.8	16.4
Pneumonitis	6.8	5.6
Influenza and Pneumonia	5.8	14.4

■ Williamson County ■ Texas

Data Source: Texas Department of State Health Services Center for Health Statisitics, 2013

Chronic Disease

Chronic diseases are one of the most "common, costly, and preventable of all health problems" (41). More than a quarter of all Americans and two out of every three older Americans have multiple chronic conditions, and treatment for this population accounts for 66% of the country's healthcare budget (11). Chronic diseases are complex and can involve many individual and environmental factors; however, persons can reduce their risk by reducing behavioral risk factors and by adopting a healthy lifestyle. Chronic diseases such as cancer, heart disease, stroke, chronic lower respiratory disease, and diabetes are the leading causes of death, disease, injury, and disability in Williamson County.

Cancer

Cancer was the leading cause of death in Williamson County (Table 16), and has been for ten years (Figure 41). Cancer occurs when abnormal cells divide uncontrollably and invade other parts of the body. Many different types of cancer exist including breast, cervical, colorectal, liver, lung, oral, ovarian, prostate, skin, uterine, vaginal, and vulvar.

Practicing certain preventative practices such as routine cancer screening, vaccinating for human papillomavirus (HPV) in males and females aged 9 to 26, avoiding tobacco use and excess alcohol consumption, increasing physical activity and healthy eating, and reducing sun exposure can reduce risk for cancer (42).

Death rates for all cancer, as well as breast, colorectal, lung, and prostate cancer for the county were below the rates for Texas and HP2020 targets in 2012 **(Table 16)**. From 2009-2013, death rates from all cancer in Williamson (136.3 deaths per 100,000 population) were below Texas (161.5 deaths per 100,000 population) and HP2020 (160.6 deaths per 100,000 population).

Table 16: Age-adjusted Cancer Death Rates by Cancer Type in Williamson County and Texas, 2012

Indicator	Williamson County	Texas	HP2020
All Cancer	142.3	164.6	160.6
Breast Cancer (Per 100,000 females)	19.3	21.0	20.7
Colorectal Cancer	12.9	15.4	14.5
Lung Cancer	37.6	43.5	45.5
Prostate Cancer (Per 100,000 males)	14.2	19.6	21.2
Data Source: Surveillance, Epidemiology, and End Results Program State Cancer Profiles, 2012			

Since 2005, death rates as indicated by 5-year rolling averages from all cancer in the county and in the state have slowly decreased with county rates consistently lower than the state **(Figure 43)**.

Figure 43: Age-Adjusted All Cancer Mortality Rate by Rolling 5-Year Average in Williamson County, 2005-2013

Data Source: Texas Department of State Health Services Center for Health Statistics, 2005-2013
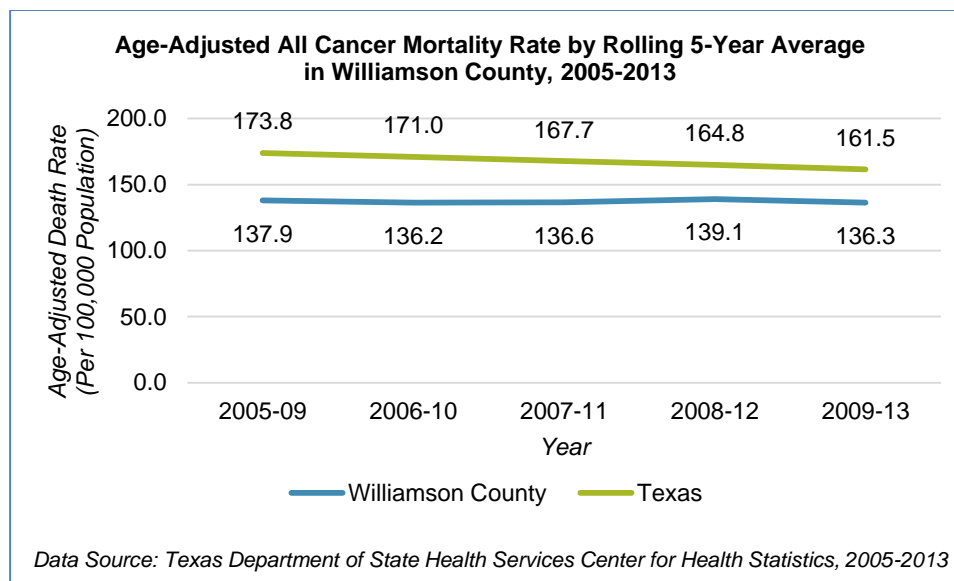
Furthermore, all cancer death rates in Williamson County for both genders and all races/ethnicities fell below the HP2020 target **(Figure 44 and Figure 45)**. Still, males (160.5 deaths per 100,000 population), non-Hispanic Whites (143.0 deaths per 100,000 population), and Blacks/African Americans (169.4 deaths per 100,000 population) had higher all-cancer death rates as compared to the rate for the general county population (136.3 deaths per 100,000 population).

Figure 44: Age-Adjusted All Cancer Mortality Rate by Gender in Williamson County and Texas, 2009-2013

Age-Adjusted All Cancer Mortality Rate by Gender in Williamson County and Texas, 2009-2013

Age-Adjusted Death Rate (Per 100,000 Population)

Gender	Williamson County	Texas
Total	136.3	161.5
Males	160.5	197.0
Females	118.4	135.5

HP2020 Target = 160.6

Data Source: Texas Department of State Health Services Center for Health Statistics, 2009-2013
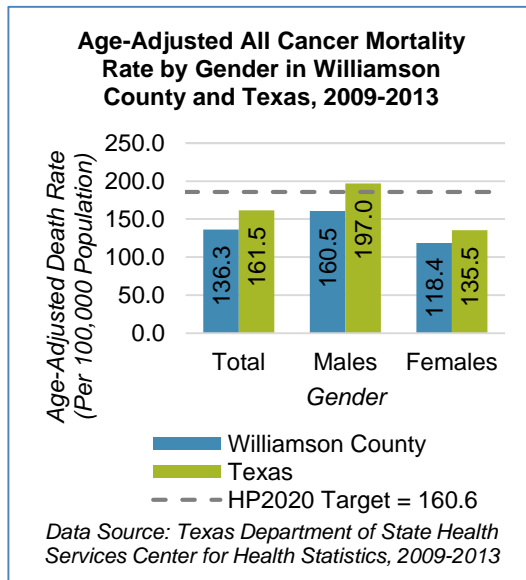
Figure 45: Age-Adjusted All Cancer Mortality Rate by Race/Ethnicity in Williamson County and Texas, 2009-2013

Age-Adjusted All Cancer Mortality Rate by Race/Ethnicity in Williamson County and Texas, 2009-2013

Age-Adjusted Death Rate (Per 100,000 Population)

Race/Ethnicity	Williamson County	Texas
Total	136.3	161.5
Non-Hispanic White	143.0	170.4
Black	169.4	205.0
Hispanic	92.4	128.0
Others	85.0	103.2

HP2020 Target = 160.6

Data Source: Texas Department of State Health Services Center for Health Statistics, 2009-2013
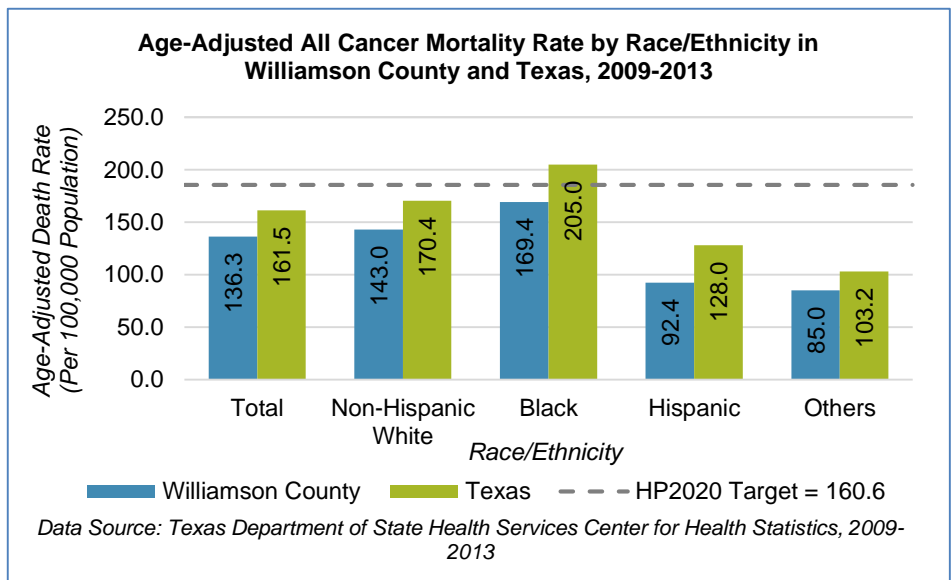
Heart Disease

Heart disease was the second leading cause of death in Williamson County **(Figure 42).** According to the CDC, heart disease includes many types of heart conditions. The most common in the United States is coronary artery disease (CAD) (43). CAD decreases blood flow to the heart and over time can weaken the heart muscle. This may lead to heart failure, an irregular heartbeat, arrhythmia, or heart attack. Many heart diseases, including CAD, can be controlled by making lifestyle changes (reducing risk factors), such as eating a healthier (lower sodium, lower fat) diet, increasing physical activity, and quitting smoking. However, certain risk factors cannot be controlled such as age and family history (43).

Heart disease mortality rates, as indicated by five-year rolling averages from 2005 to 2013, have been declining in both Williamson County and Texas **(Figure 46).**

Figure 46: Age-Adjusted Heart Disease Mortality Rate by Rolling 5-Year Average in Williamson County, 2005-2013

Age-Adjusted Heart Disease Mortality Rate by Rolling 5-Year Average in Williamson County, 2005-2013

Age-Adjusted Death Rate (Per 100,000 Population)

Year	Texas	Williamson County
2005-09	201.0	126.4
2006-10	193.2	124.7
2007-11	186.4	122.2
2008-12	180.1	120.2
2009-13	175.5	114.6

Data Source: Texas Department of State Health Services Center for Health Statistics, 2005-2013
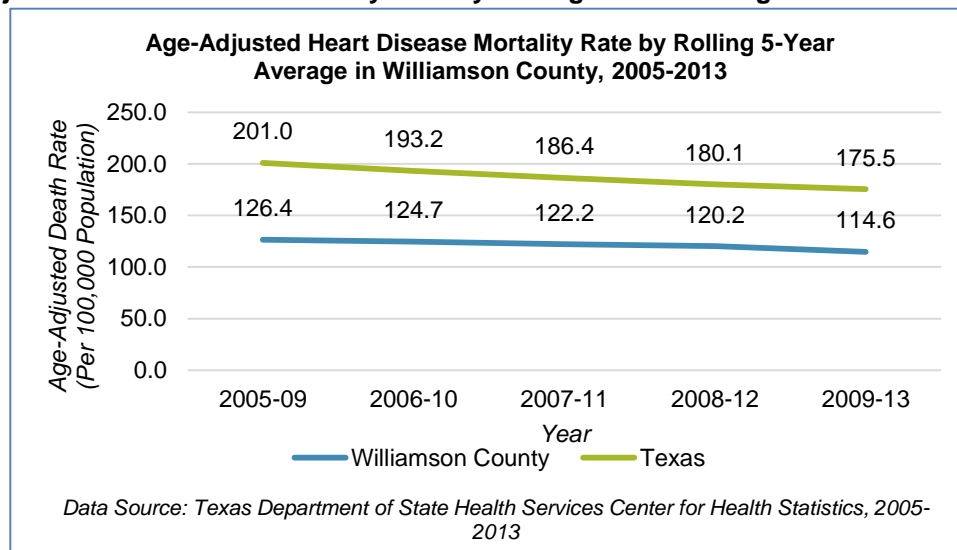
In Williamson County these rates have been consistently lower than in Texas as a whole (114.6 deaths per 100,000 population on average for the five-year period 2009-2013 in the county as compared to 175.5 deaths/100,000 in Texas). Males (144.1 deaths/100,000 population) and Black/African Americans (145.1 deaths/100,000 population) bore a disproportionate burden of mortality in the county as well as in the state (Figure 47 and Figure 48).

Figure 47: Age-Adjusted Heart Disease Mortality Rate by Gender in Williamson County and Texas, 2009-2013
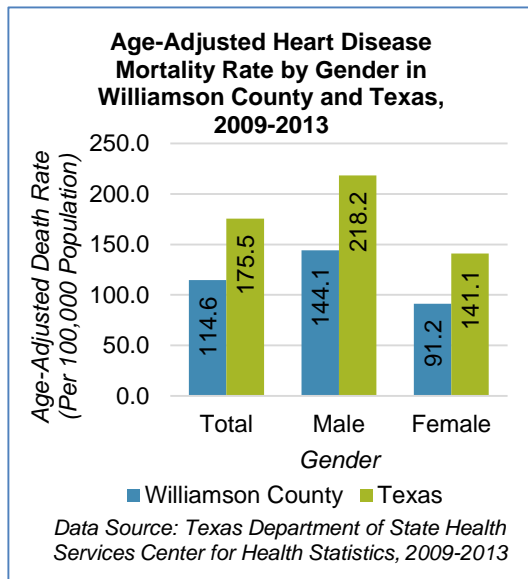
Figure 48: Age-Adjusted Heart Disease Mortality Rate by Race/Ethnicity in Williamson County and Texas, 2009-2013

Age-Adjusted Heart Disease Mortality Rate by Gender in Williamson County and Texas, 2009-2013

Data Source: Texas Department of State Health Services Center for Health Statistics, 2009-2013

Age-Adjusted Heart Disease Mortality Rate by Race/Ethnicity in Williamson County and Texas, 2009-2013

Data Source: Texas Department of State Health Services Center for Health Statistics, 2009-2013
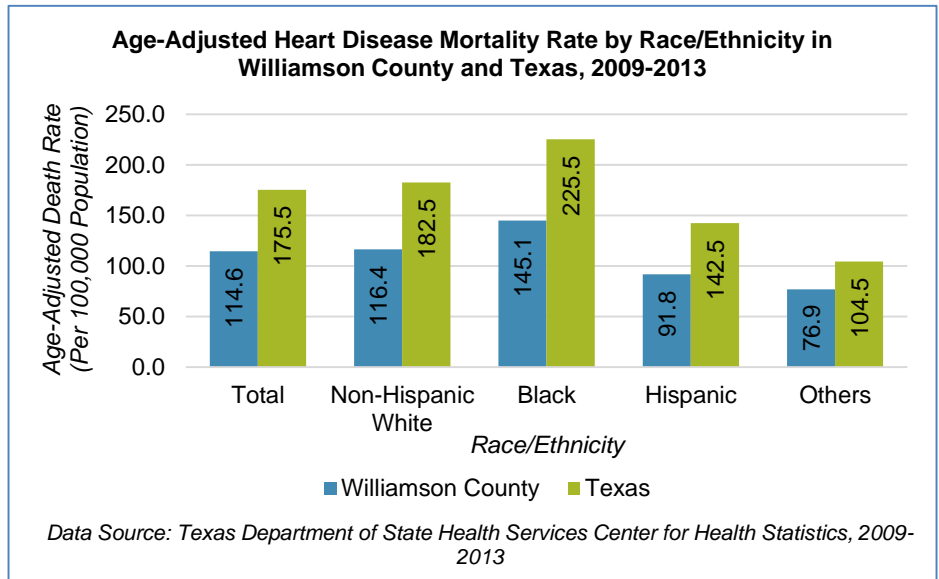
Stroke

Stroke was the third leading cause of death in Williamson County in 2013 and is a major cause of adult disability (44) (Figure 42). According to the CDC, stroke occurs when the flow of blood to the brain is interrupted and brain cells begin to die due to lack of oxygen. Like heart disease, certain risk factors, such as age and family history, cannot be controlled; however, certain risk factors such as tobacco and alcohol use, physical inactivity, and unhealthy eating can be controlled (44). Stroke mortality rates as indicated by 5-year rolling averages have decreased since 2005 for the both the county and the state; however, rates in the county have slightly increased during the 5-year average from 2009-2013 (Figure 49).

Figure 49: Age-Adjusted Stroke Mortality Rate by Rolling 5-Year Average in Williamson County, 2005-2013

Age-Adjusted Stroke Mortality Rate by Rolling 5-Year Average in Williamson County, 2005-2013

Year	Williamson County	Texas
2005-09	34.2	49.4
2006-10	32.3	47.8
2007-11	31.4	46.0
2008-12	30.9	44.4
2009-13	32.1	42.6

Y-axis: Age-Adjusted Death Rate (Per 100,000 Population)
X-axis: Year

Data Source: Texas Department of State Health Services Center for Health Statistics, 2005-2013
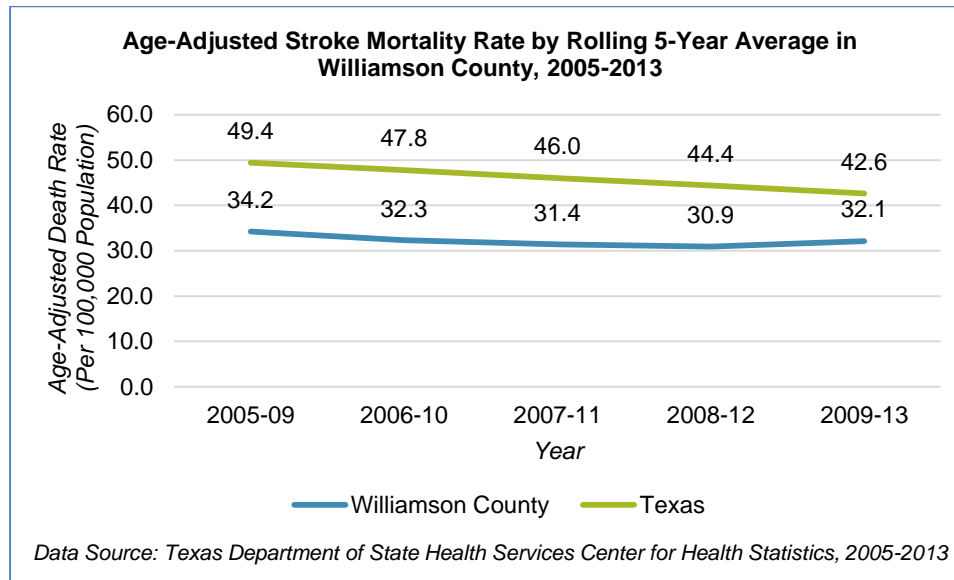
Still, stroke mortality rate in the county (32.1 deaths per 100,000 population) fell below both Texas (42.6 deaths per 100,000 population) and the HP2020 target (34.8 deaths per 100,000 population) (Figure 50). Hispanics (35.8 deaths per 100,000 population) and Black/African Americans (54.5 deaths/100,000 population) exceeded the HP2020 goal (Figure 51).

Figure 50: Age-Adjusted Stroke Mortality Rate by Gender in Williamson County and Texas, 2009-2013

Age-Adjusted Stroke Mortality Rate by Gender in Williamson County and Texas, 2009-2013

Gender	Williamson County	Texas
Total	32.1	42.6
Male	34.1	42.6
Female	30.1	41.8

HP2020 Target = 34.8

Y-axis: Age-Adjusted Death Rate (Per 100,000 Population)
X-axis: Gender

Data Source: Texas Department of State Health Services Center for Health Statistics, 2009-2013
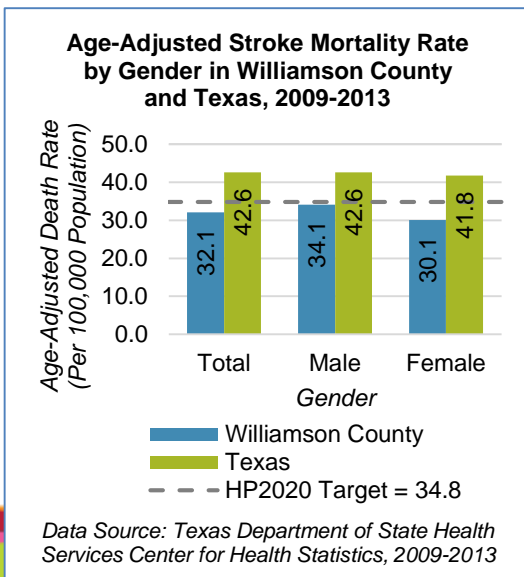
Figure 51: Age-Adjusted Stroke Mortality Rate by Race/Ethnicity in Williamson County and Texas, 2009-2013

Age-Adjusted Stroke Mortality Rate by Race/Ethnicity in Williamson County and Texas, 2009-2013

Race/Ethnicity	Williamson County	Texas
Total	32.1	42.6
Non-Hispanic White	30.9	41.3
Black	54.5	61.3
Hispanic	36.5	37.9
Others	*N/A	33.0

HP2020 Target = 34.8

Y-axis: Age-Adjusted Death Rate (Per 100,000 Population)
X-axis: Race/Ethnicity

*Note: * Rate N/A (not available) due to limited numbers*
Data Source: Texas Department of State Health Services Center for Health Statistics, 2009-2013

Lung Disease

According to the CDC, chronic lower respiratory disease (CLRD) or lung disease are conditions that block airflow and cause issues with breathing. One specific disease is Chronic Obstructive Pulmonary Disease (COPD). Lung disease can also involve emphysema, chronic bronchitis, and in some cases asthma. The main risk factor for lung disease is exposure to tobacco smoke; however, air pollution, family history, and respiratory infections can also increase risk (28). Since 2005, death rates in the county have increased from 31.7 deaths per 100,000 population in the 5-year average in 2007-2011 to 33.5 deaths per 100,000 population in 2009-2013. Still rates were lower in the county than in the state **(Figure 52)**.

Figure 52: Age-Adjusted Lung Mortality Rate by Rolling 5-Year Average in Williamson County, 2005-2013

Data Source: Texas Department of State Health Services Center for Health Statistics, 2005-2013
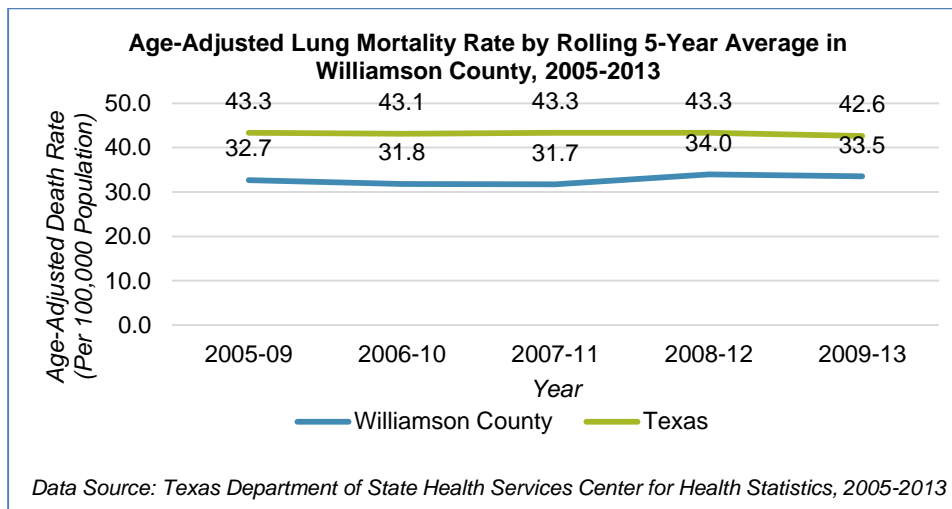
In Williamson County, lung disease disproportionately affected both males (38.3 deaths per 100,000 population) and non-Hispanic Whites (36.7 deaths per 100,000 population) **(Figure 53 and Figure 54)**.

Figure 53: Age-Adjusted Lung Disease Mortality Rate by Gender in Williamson County and Texas, 2009-2013

Age-Adjusted Lung Disease Mortality Rate by Gender in Williamson County and Texas, 2009-2013

Williamson County values: Total 33.5, Male 38.3, Female 30.8
Texas values: Total 42.6, Male 49.5, Female 38.1

Data Source: Texas Department of State Health Services Center for Health Statistics, 2009-2013
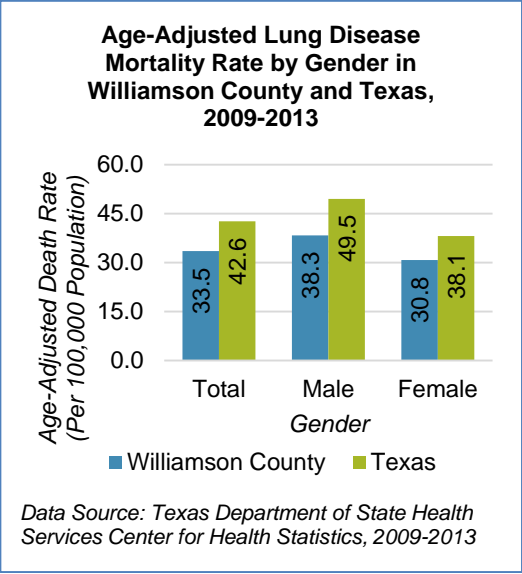
Figure 54: Age-Adjusted Lung Disease Mortality Rate by Race/Ethnicity in Williamson County and Texas, 2009-2013

Age-Adjusted Lung Disease Mortality Rate by Race/Ethnicity in Williamson County and Texas, 2009-2013

Williamson County values: Total 33.5, Non-Hispanic White 36.7, Black *N/A, Hispanic *N/A, Others *N/A
Texas values: Total 42.6, Non-Hispanic White 53.1, Black 30.6, Hispanic 18.6, Others 15.0

*Notes: * Rate N/A (not available) due to limited numbers*
Data Source: Texas Department of State Health Services Center for Health Statistics, 2009-2013
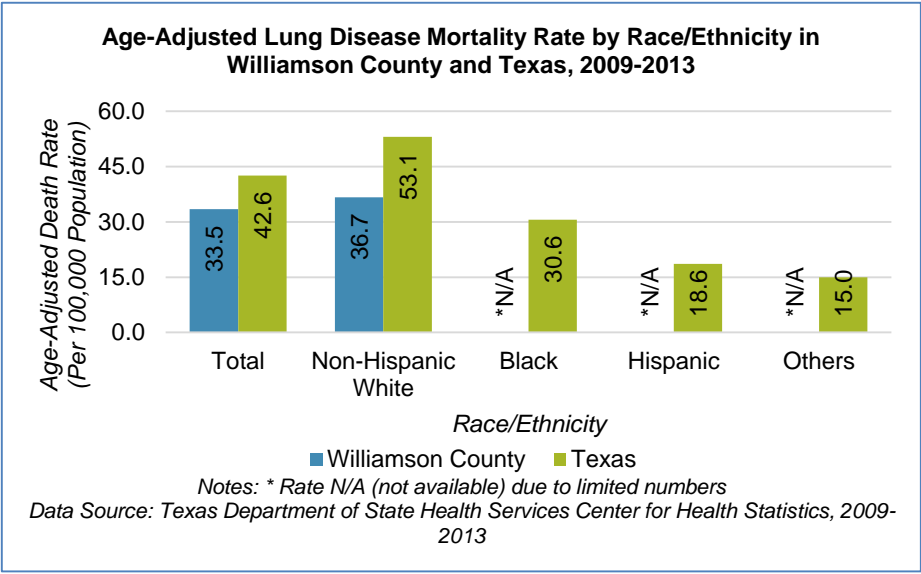
Diabetes Mellitus

> *"Well, more than anything, it's diabetes." (A disease that affects the community) –*
> Focus group participant

Diabetes mellitus (DM) is a disease where blood sugar levels are elevated above normal and can cause serious health complications including heart disease, blindness, kidney failure, and lower-extremity amputations. There are three types of DM: Type 1, Type 2, and gestational. Type 2 DM, accounts for about 90% to 95% of all diagnosed cases of diabetes (45). Obesity, family history, physical inactivity, older age, and reduced glucose intolerance can increase risk for Type 2 DM. Prevention and treatment involve a healthy diet, physical exercise, maintaining a normal body weight, and avoiding use of tobacco (45).

About 8.4% of adults in Williamson County were diagnosed with diabetes in 2012 (45). Total diabetes-related death rates in the county and the state fell far below the HP2020 target of 66.6 deaths/100,000 population **(Figure 55)**.

Figure 55: Age-Adjusted Diabetes Mellitus Mortality Rate by Rolling 5-Year Average in Williamson County and Texas, 2005-2013

Age-Adjusted Diabetes Mellitus Mortality Rate by Rolling 5-Year Average in Williamson County and Texas, 2005-2013

Data Source: Texas Department of State Health Services Center for Health Statistics, 2005-2013
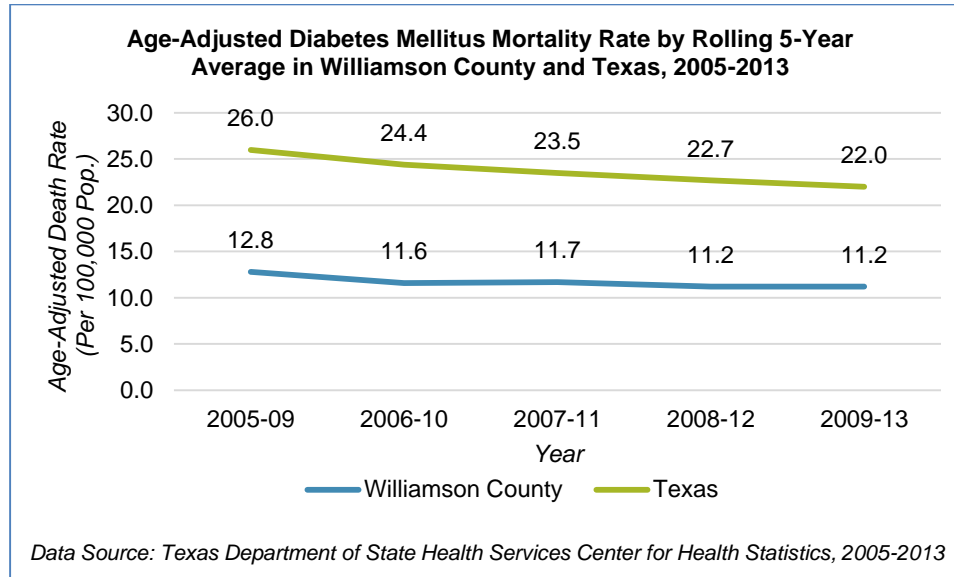
The average annual death rate in the county from diabetes from 2009 to 2013 was 11.2 deaths per 100,000 population, affecting more males (13.9 deaths per 100,000 population), Blacks/African Americans (41.4 deaths per 100,000 population), and Hispanics (21.5 deaths per 100,000 population). DSHS did not calculate mortality rates for other races/ethnicities (Figure 56 and Figure 57).

Figure 56: Age-Adjusted Diabetes Mellitus Mortality Rate by Gender in Williamson County and Texas, 2009-2013

Age-Adjusted Diabetes Mellitus Mortality Rate by Gender in Williamson County and Texas, 2009-2013

Data Source: Texas Department of State Health Services Center for Health Statistics, 2009-2013
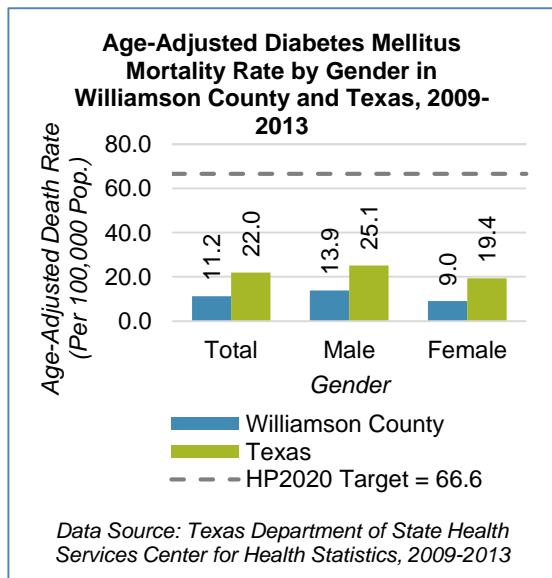
Figure 57: Age-Adjusted Diabetes Mellitus Mortality Rate by Race/Ethnicity in Williamson County and Texas, 2009-2013

Age-Adjusted Diabetes Mellitus Mortality Rate by Race/Ethnicity in Williamson County and Texas, 2009-2013

Notes: * Rate N/A (not available) due to limited numbers
Data Source: Texas Department of State Health Services Center for Health Statistics, 2009-2013
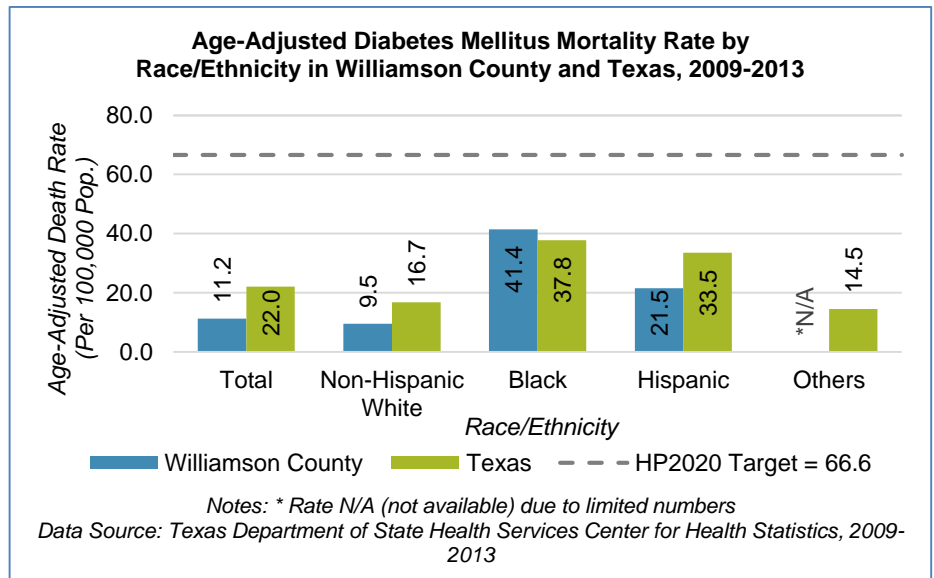
Unintentional Injuries (Accidents)

Deaths due to unintentional injuries (accidents) can result from car accidents, poisonings, drownings, and falls (46). Since 2005, death rates in the county and the state from unintentional injury have decreased (Figure 58). In total, the Williamson County age-adjusted death rates for unintentional injuries or accidents (27.7 deaths per 100,000 population) were lower in 2009 to 2013 than in Texas (38.1 deaths per 100,000 population annual average rate), and lower than the HP2020 goal (36.0 deaths per 100,000 population).

Figure 58: Age-Adjusted Unintentional Injury Mortality Rate by Rolling 5-Year Average in Williamson County and Texas, 2005-2013

Data Source: Texas Department of State Health Services Center for Health Statistics, 2005-
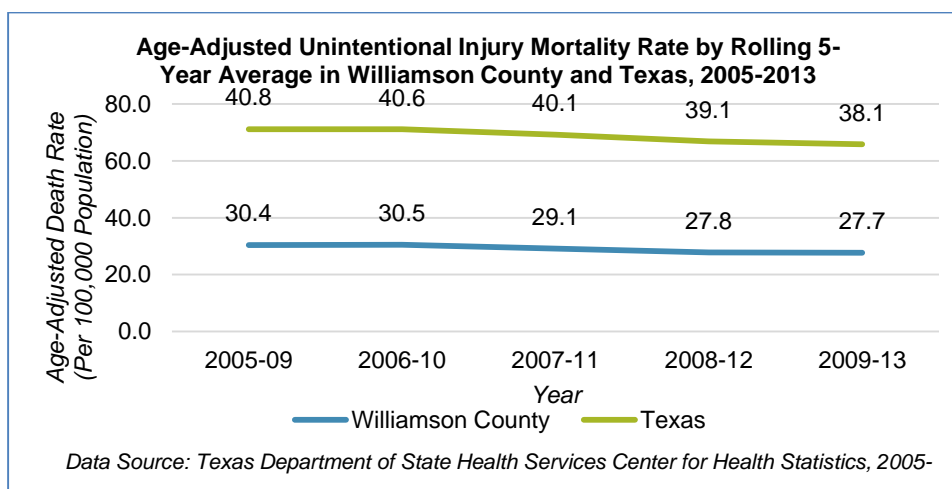
However, death due to unintentional injuries or accidents in the county disproportionately affected males (36.0 deaths per 100,000 population) and non-Hispanic Whites (29.7 deaths per 100,000 population) (Figure 59 and Figure 60).

Figure 59: Age-Adjusted Unintentional Injury Mortality Rate by Gender in Williamson County and Texas, 2009-2013

Data Source: Texas Department of State Health Services Center for Health Statistics, 2009-2013
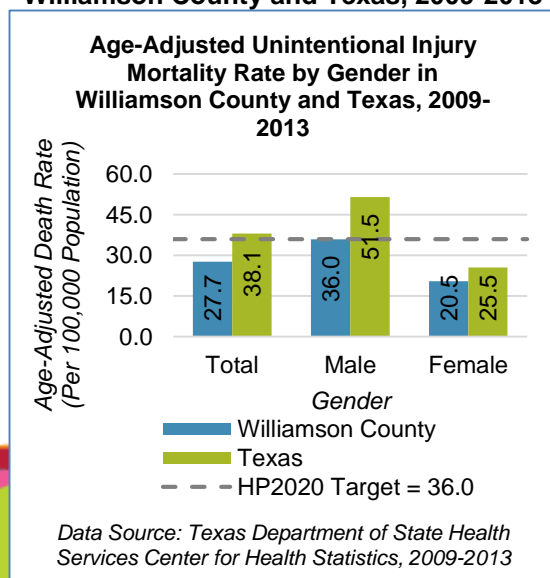
Figure 60: Age-Adjusted Unintentional Injury Mortality Rate by Race/Ethnicity in Williamson County and Texas, 2009-2013

Notes: * Rate N/A (not available) due to limited numbers
Data Source: Texas Department of State Health Services Center for Health Statistics, 2009-2013
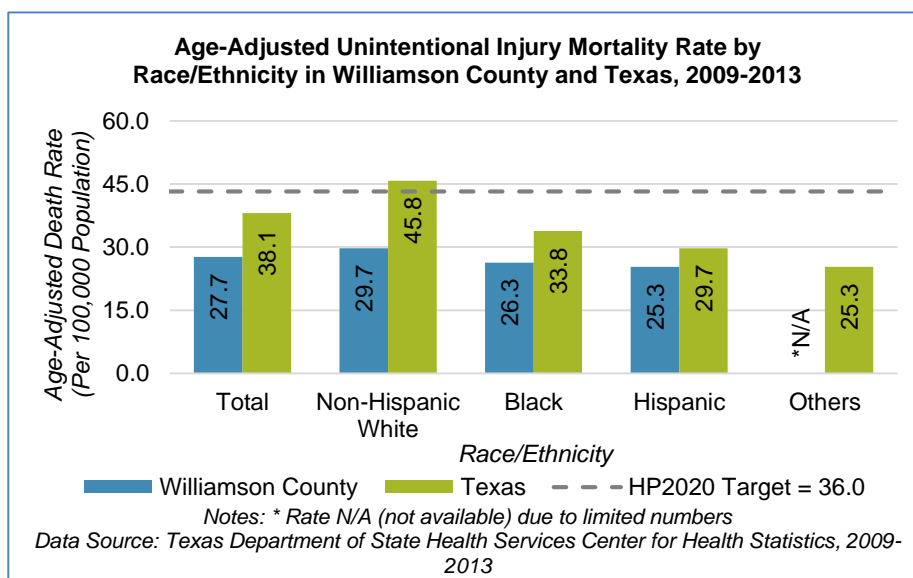
C10. Communicable Disease

Bacteria, viruses, or other microorganisms cause infectious diseases. In the 19th and early 20th century, the leading causes of death in the U.S. and Texas were attributed to infectious diseases, including influenza, smallpox, and certain enteric diseases. Public health and medical advances such as vaccine development, treatment for infectious diseases, improved disease screening and surveillance, and improvements in sanitation have facilitated the reduction in infectious disease incidence and mortality (47).

Despite the shift in causes of death, infectious diseases still pose a significant public health and medical concern in the United States, Texas, and indeed worldwide. Certain behaviors can greatly reduce the risk of spreading infections. Proper hand washing, for example, can prevent the transmission of many diseases. Vaccinations reduce illnesses and deaths from diseases such as influenza, pertussis (whooping cough), measles, mumps, and others. Avoidance of risky sexual behaviors reduces the spread of HIV, chlamydia, gonorrhea, syphilis, and other disorders (47).

The following sections address optional communicable disease topics as suggested by the NACCHO MAPP Core Indicator List. WCCHD and DSHS collect data through a passive surveillance system established to collect reports of conditions (diseases) contained on the "Texas Notifiable Conditions List," a set of diseases which are required by Texas law to be reported by health care providers, hospitals, laboratories, schools, and others to health departments in Texas. Several Texas laws (Health & Safety Code, Chapters 81, 84, and 87) require specific information regarding notifiable conditions be provided to DSHS. Health care providers, hospitals, laboratories, schools, and others are required to report patients who are suspected of having a notifiable condition (Chapter 97, Title 25, Texas Administrative Code) (48). Reports are gathered at local health departments, then are submitted to DSHS, and, ultimately for most conditions, to the CDC. A limitation is that this system only captures illnesses that are reported to health departments, potentially missing possible cases of undetected or unreported illnesses. Therefore, these data are helpful to observe trends and counts to apply interventions, but do not completely represent the actual burden of these illnesses. The following sections briefly summarize reports made by providers to WCCHD and/or DSHS of selected notifiable conditions that met DSHS case criteria.

Sexually Transmitted Infections

Syphilis

Syphilis is a sexually transmitted infection (STI) with the bacterium *Treponema pallidum* that can cause severe, long-term complications if not treated with antibiotics correctly (49). Syphilis is reported as primary, secondary or late (latent) stage, depending on the stage of illness at diagnosis. Primary and secondary (P&S) syphilis are the earliest stages, reflect symptomatic disease, and are indicators of more recent infection (49). Between 2007 and 2014, the annual rates of reported P&S and total syphilis (primary, secondary, late stage) in Williamson County remained mostly static and lower than Texas rates **(Figure 61 and Figure 62).**

Figure 61: Total Syphilis Rates by Year of Diagnosis in Williamson County and Texas, 2007-2014

Total Syphilis Rates by Year of Diagnosis in Williamson County and Texas, 2007-2014

Data Source: Texas Department of State Health Services, Texas 2014 STD Surveillance Report, 2015
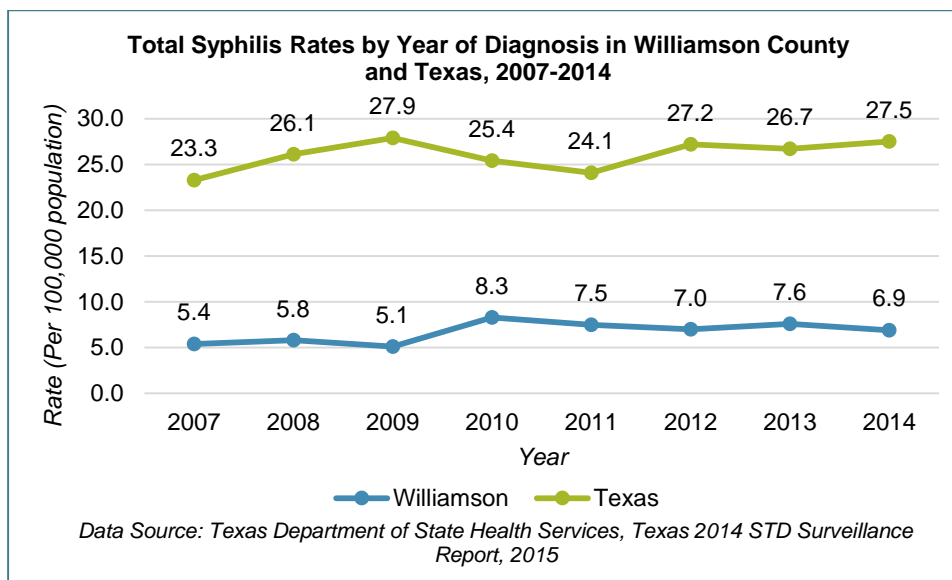
Figure 62: Primary and Secondary Syphilis Rates by Year of Diagnosis in Williamson County and Texas, 2007-2014

Primary and Secondary Syphilis Rates by Year of Diagnosis in Williamson County and Texas, 2007-2014

Data Source: Texas Department of State Health Services, Texas 2014 STD Surveillance Report, 2015
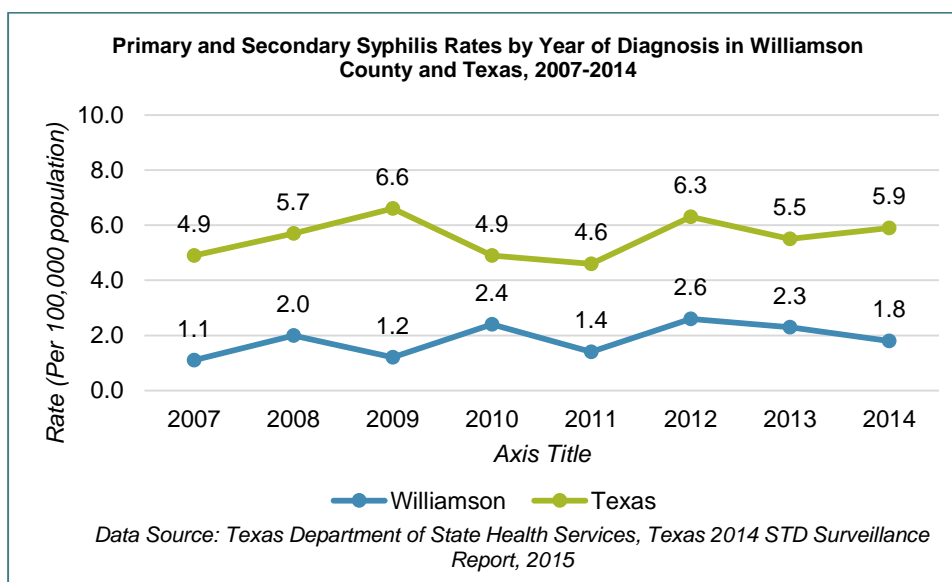
Among Williamson County males, the 2014 rate of reported P&S syphilis was 3.3 per 100,000 population, a rate lower than the HP2020 target of 6.7 P&S infections per 100,000 males. Females also met the HP2020 target of 1.3 P&S infections per 100,000 females for P&S syphilis with a rate of 0.4 per 100,000 population **(Figure 63)**. Blacks/African Americans had the highest rate for reported P&S syphilis at 3.1 per 100,000 population **(Figure 64)**.

Figure 63: Primary and Secondary Syphilis Rates by Gender in Williamson County and Texas, 2014

Primary and Secondary Syphilis Rates by Gender in Williamson County and Texas, 2014

Rate (Per 100,000 Population)

Male: Williamson County 3.3, Texas 10.1
Female: Williamson County 0.4, Texas 17.0

- Williamson County
- Texas
- HP2020 Target (Male) = 6.7
- HP2020 Target (Female) = 1.3

Data Source: Texas Department of State Health Services , 2014
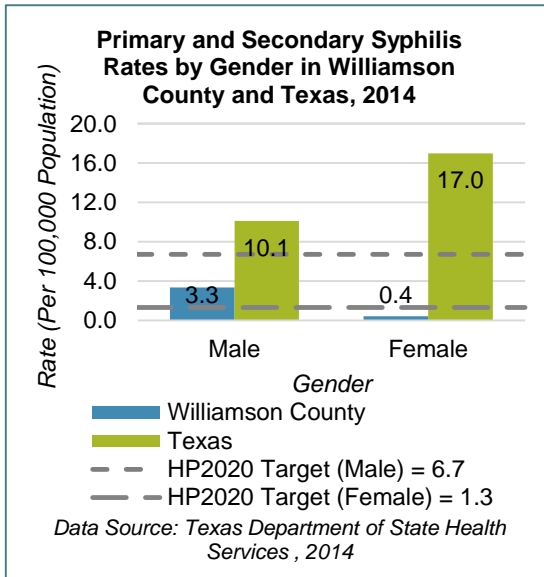
Figure 64: Primary and Secondary Syphilis Rates by Race in Williamson County and Texas, 2014

Primary and Secondary Syphilis Rates by Race in Williamson County and Texas, 2014

Rate (Per 100,000 Population)

White: 2.0, 3.6
Black: 3.1, 17.8
Hispanic: 1.7, 5.0
Other: 0.0, 2.7

- Williamson County
- Texas

Note: White = Non-Hispanic White
Data Source: Texas Department of State Health Services, 2014
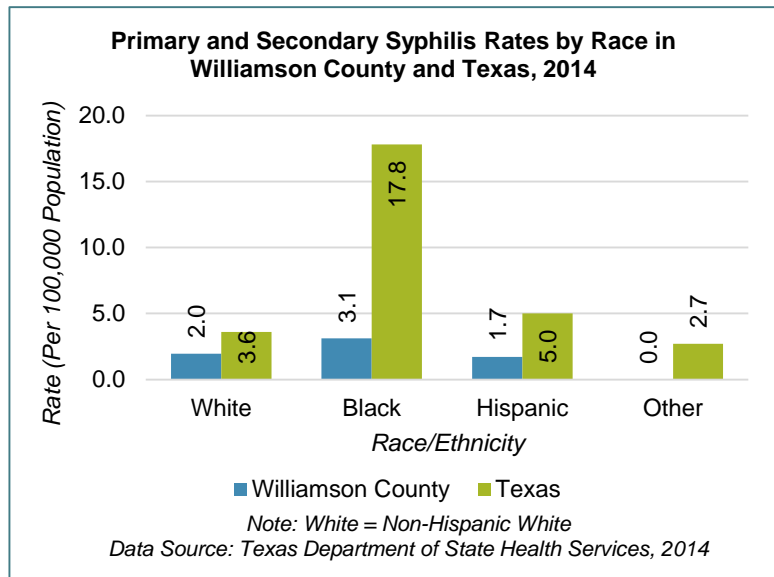
Furthermore, rates of reported syphilis were highest among 15-24 and 25-34 age groups during 2007-2014 (**Figure 65**).

Figure 65: Primary and Secondary Syphilis Rates by Age in Years in Williamson County, 2007-2014

Primary and Secondary Syphilis 5-year Rolling Average Rates by Age in Years in Williamson County, 2007-2014

Rate (Per 100,000 population)

15-24: 5.3, 4.7, 3.8, 4.0
25-34: 3.6, 4.4, 4.9, 5.2
35-44: 2.9, 3.2, 3.4, 4.0
45+: 0.7, 1.1, 1.3, 1.4

Years: 2007-11, 2008-12, 2009-13, 2010-14

Data Source: Texas Department of State Health Services, 2014
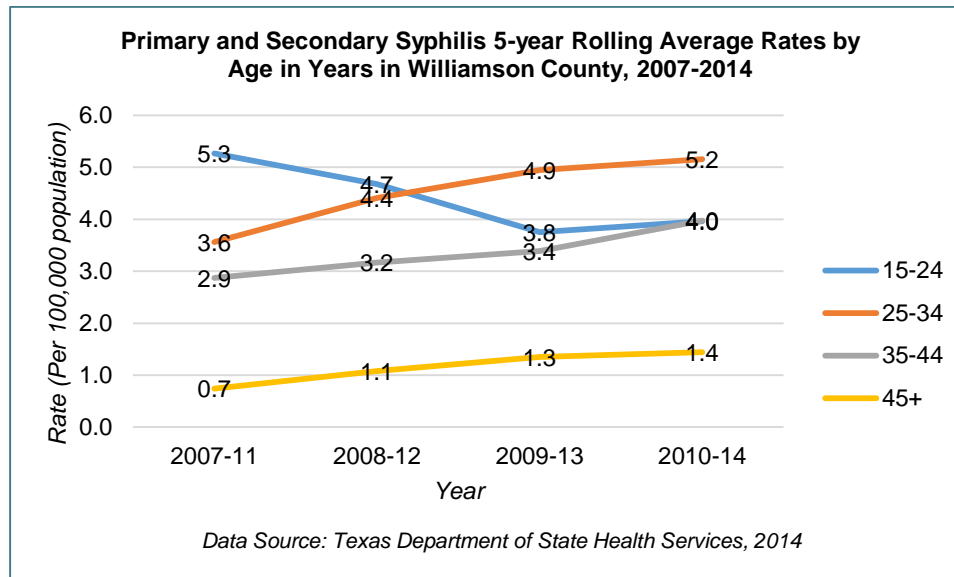
Chlamydia

Chlamydia is a sexually transmitted infection (STI) caused by the bacterium *Chlamydia trachomatis*. Chlamydia is the most commonly reportable cause of STIs in the United States and in Texas (50). It can cause inflammation of the cervix and urethra in women and inflammation of the urethra and rectal lining in men. Easily treatable with antibiotics, untreated infection can result in pelvic inflammatory disease (PID), which is a major cause of infertility, ectopic pregnancy, and chronic pelvic pain (50). Chlamydia is commonly asymptomatic and screening is necessary to identify most infections (51).

Despite rates being lower than in Texas, the reported chlamydia rates in Williamson County have steadily risen since 2007 **(Figure 66)**

Figure 66: Chlamydia Rates by Year in Williamson County and Texas, 2007-2014
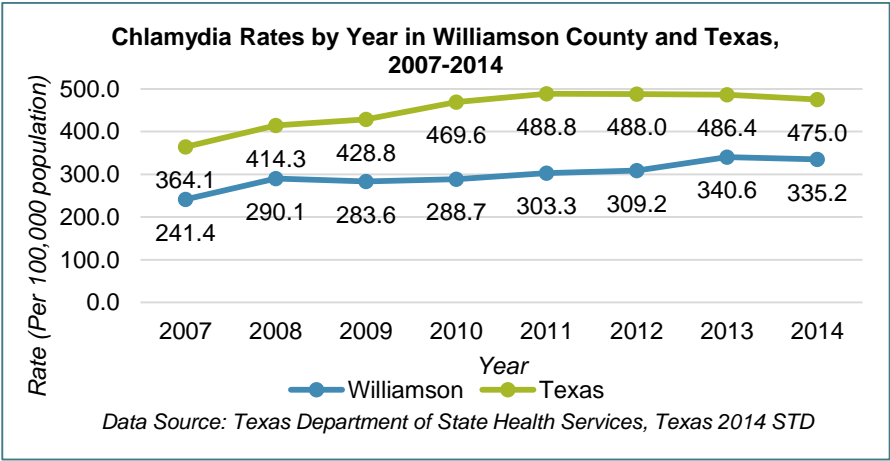
Additionally, the reported rate in Williamson County females (490.7 per 100,000 population) was higher than in males (173.0 per 100,000 population), which may be attributed to increased screening rates due to risk of severe outcomes for females (DSHS, 2012) **(Figure 67).** Chlamydia rates were disproportionately reported in Black/African Americans (615.2 per 100,000 population), more than double the rate in Hispanics (275.8 per 100,000 population), and followed by non-Hispanic Whites (141.3 per 100,000 population) **(Figure 68)**.

Figure 67: Chlamydia Rates by Gender in Williamson County and Texas, 2014

Chlamydia Rates by Gender in Williamson County and Texas, 2014

Rate (Per 100,000 Population)

Male: Williamson County 173.0, Texas 248.6
Female: Williamson County 490.7, Texas 696.8

Gender

■ Williamson County ■ Texas

Data Source: Texas Department of State Health Services, 2014
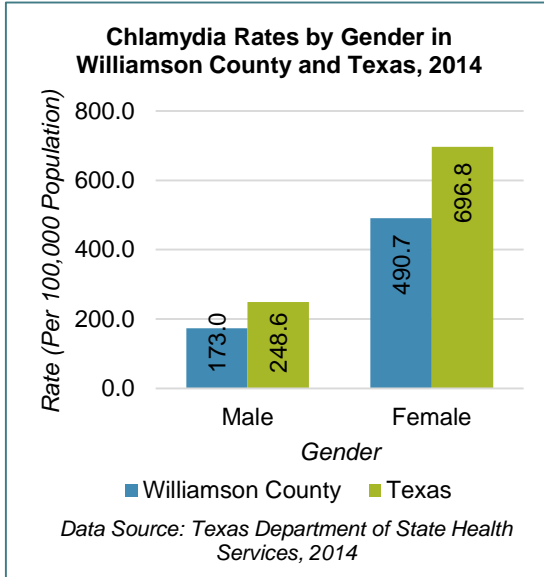
Figure 68: Chlamydia Rates by Race in Williamson County and Texas, 2014

Chlamydia Rates by Race in Williamson County and Texas, 2014

Rate (Per 100,000 Population)

White: Williamson County 141.3, Texas 233.0
Black: Williamson County 615.2, Texas 929.2
Hispanic: Williamson County 275.8, Texas 437.2
Other: Williamson County 55.9, Texas 191.7

Race/Ethnicity

■ Williamson County ■ Texas

Note: White = Non-Hispanic White
Data Source: Texas Department of State Health Services, 2014
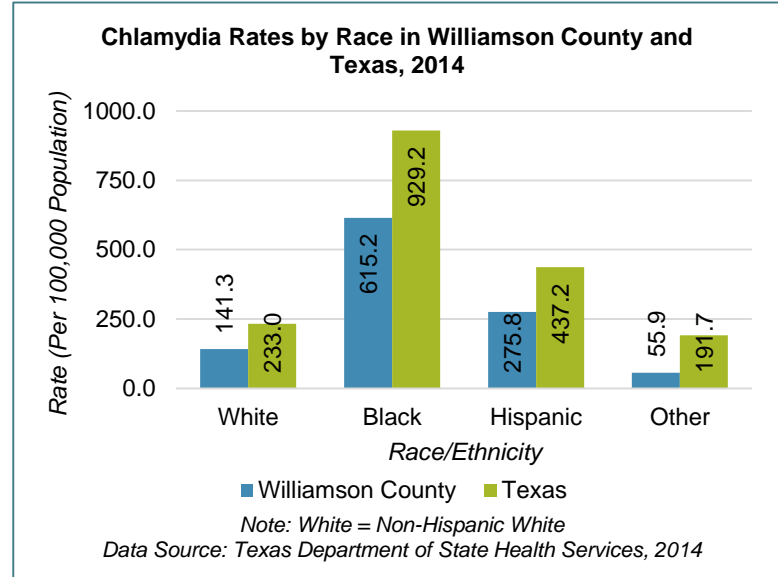
The 15-24 years age group had by far the highest rate compared to all other age groups (Figure 69).

Figure 69: Chlamydia Rates by Age in Years in Williamson County and Texas, 2014

Chlamydia Rates by Age in Years in Williamson County, 2014

Rate (Per 100,000 Population)

0-14: Williamson County 4.5, Texas 19.8
15-24: Williamson County 1731.4, Texas 2172.9
25-34: Williamson County 621.1, Texas 822.5
35-44: Williamson County 163.3, Texas 199.1
45+: Williamson County 16.0, Texas 25.5

Age

■ Williamson County ■ Texas

Data Source: Texas Department of State Health Services, 2014
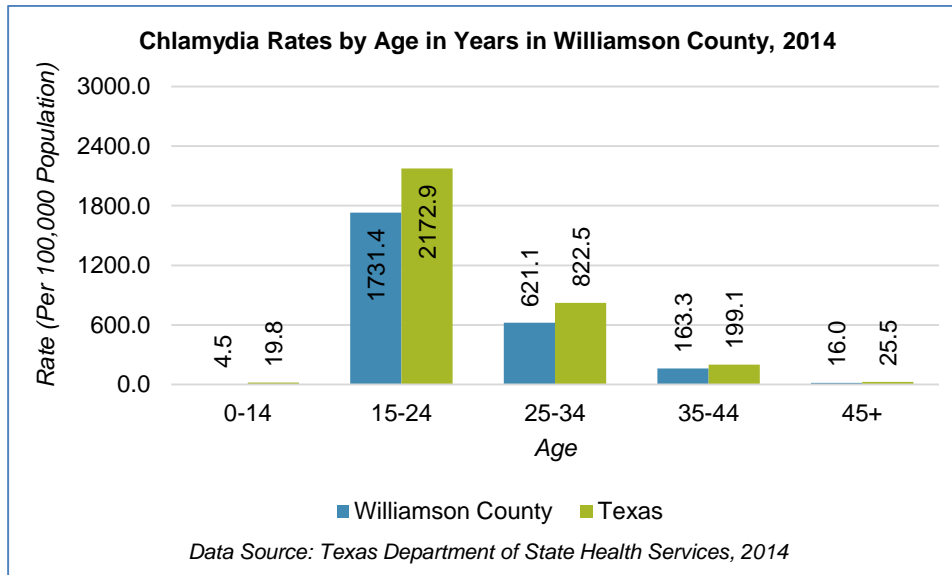
Gonorrhea

Gonorrhea is an STI caused by the bacterium *Neisseria gonorrhoeae* that infects the mucous membranes of the reproductive tract, the cervix, uterus, and fallopian tubes in women, and the urethra in women and men. Gonorrhea infection can also occur in the mouth, throat, eyes and anus (51). Much like chlamydia, gonorrhea can cause very serious complications when not treated, but can be cured with the right antibiotics. While lower than those in Texas as a whole, the rates of reported gonorrhea in Williamson County steadily rose during 2007-2014 (Figure 70).

Figure 70: Gonorrhea Rates by Year in Williamson County and Texas, 2007-2014

Data Source: Texas Department of State Health Services, Texas 2014 STD Surveillance
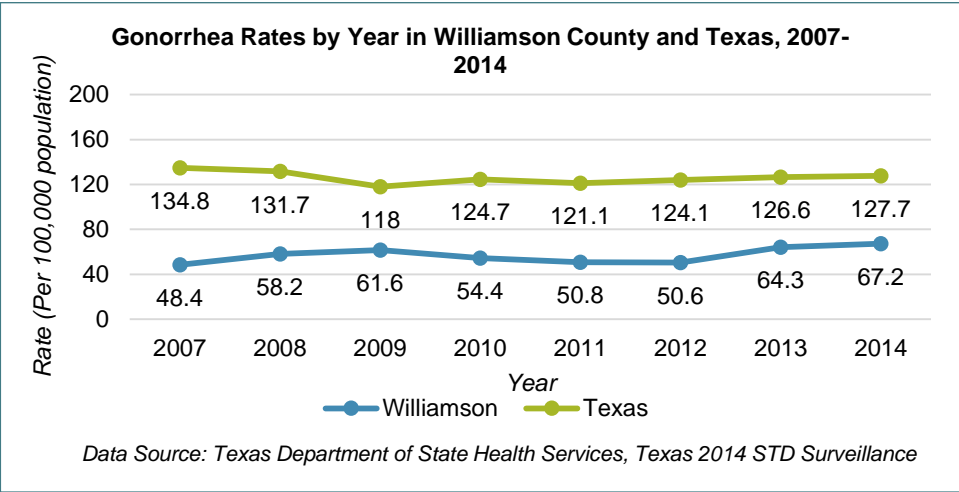
HP2020 targets for reported gonorrhea rates in males (194.8 per 100,000 population) and females (251.9 per 100,000 population), respectively, were achieved by Williamson County (68.2 and 66.3 per 100,000 population) (Figure 71). However, Blacks/African Americans (259.2 per 100,000 pop) had nearly triple the rates compared to non-Hispanic White, Hispanic, and Other combined race/ethnicity groups (Figure 72).

Figure 71: Gonorrhea Rates by Gender in Williamson County and Texas, 2014

Data Source: Texas Department of State Health Services, 2014
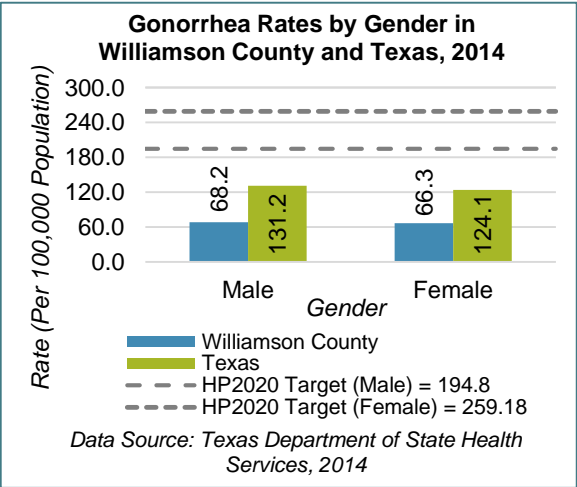
Figure 72: Gonorrhea Rates by Race in Williamson County and Texas, 2014

Data Source: Texas Department of State Health Services, 2014
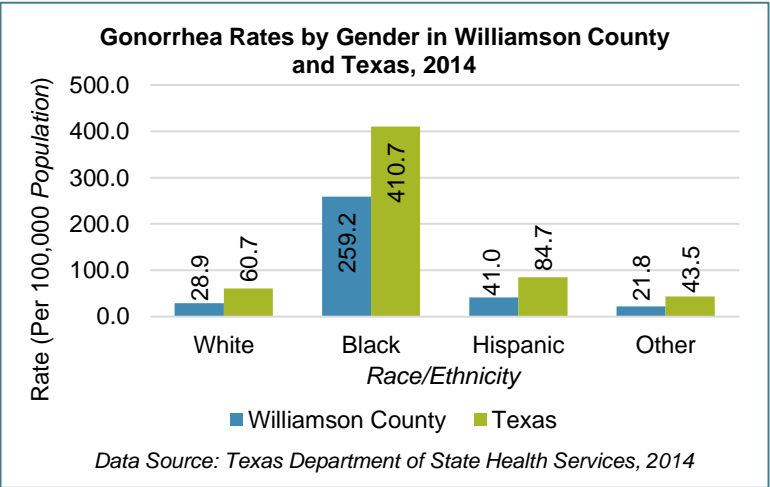
The highest rates were reported in the 15-24 year (307.8 per 100,000 population) and 25-34 year age groups (134.5 per 100,000 population) (Figure 73).

Figure 73: Gonorrhea Rates by Age in Years in Williamson County and Texas, 2014

Data Source: Texas Department of State Health Services, 2014
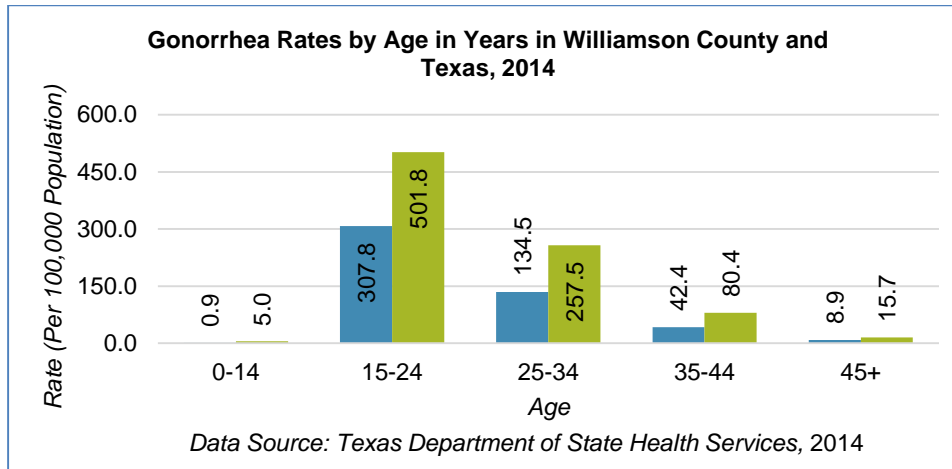
HIV and AIDS

The human immunodeficiency virus (HIV) causes HIV infection and over time, acquired immunodeficiency syndrome (AIDS). HIV is transmitted from one person to another through blood, semen, vaginal secretions, and breast milk. HIV cannot be cured, but effective antiviral treatment is available to reduce the consequences of infection. If untreated, HIV reduces certain white blood cells known as CD4 cells in the body and causes damage to the immune system, which may lead to AIDS. AIDS results in progressive failure of the immune system and allows life-threatening opportunistic infections and cancers to thrive (52).

Between 2005 and 2014, the reported rate of newly diagnosed HIV infection in Williamson County remained mostly constant and below the Texas rate (Figure 74).

Figure 74: HIV Diagnoses Rate by Year in Williamson County and Texas, 2005-2014

*Data Source: Texas Department of State Health Services,
Texas 2014 HIV Surveillance Report, 2015*
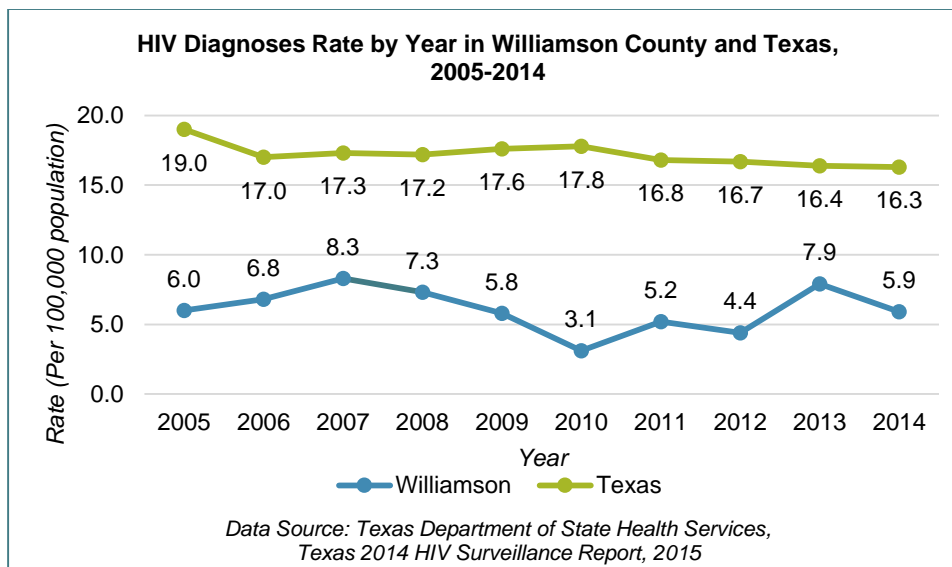
The rate for newly diagnosed AIDS in the county and in Texas has decreased over the same time period **(Figure 78)**. This may be attributed to advances in treatment, which prevent HIV infections to progressing to AIDS. In 2014, the rate of HIV diagnoses by gender was higher in males (10.8 per 100,000 population) **(Figure 75)**, in Blacks and Hispanics (12.5 and 8.5 per 100,000 population) **(Figure 76)**, and in 15-24 year and 25-34 year age groups (16.5 and 13.2 per 100,000 population) **(Figure 77)**.

Figure 75: HIV Diagnoses Rate by Gender in Williamson County and Texas, 2014

HIV Diagnoses Rate by Gender in Williamson County and Texas, 2014

Data Source: Texas Department of State Health Services, 2014
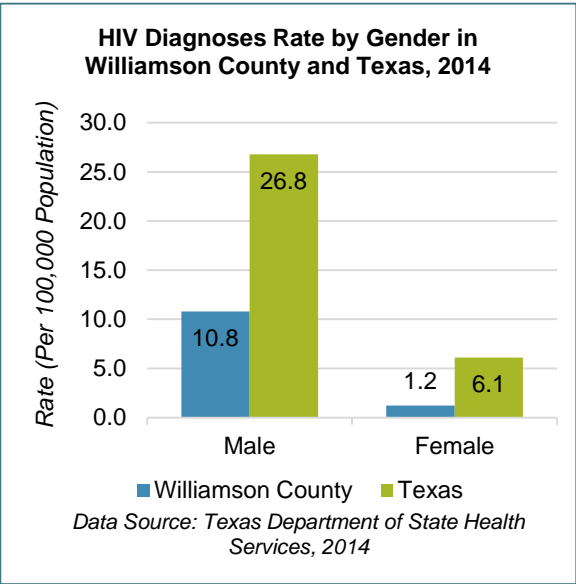
Figure 76: HIV Diagnoses Rate by Race/Ethnicity in Williamson County and Texas, 2014

HIV Diagnoses Rate by Race/Ethnicity in Williamson County and Texas, 2014

Notes: White = Non-Hispanic White
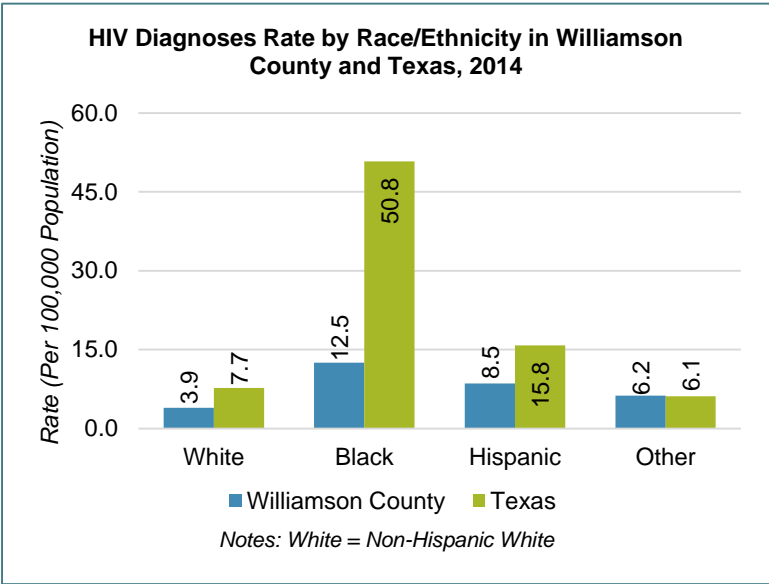
Figure 77: HIV Diagnoses Rate by Age in Years in Williamson County and Texas, 2014

HIV Diagnoses Rate by Age in Years in Williamson County and Texas, 2014

Data Source: Texas Department of State Health Services, 2014
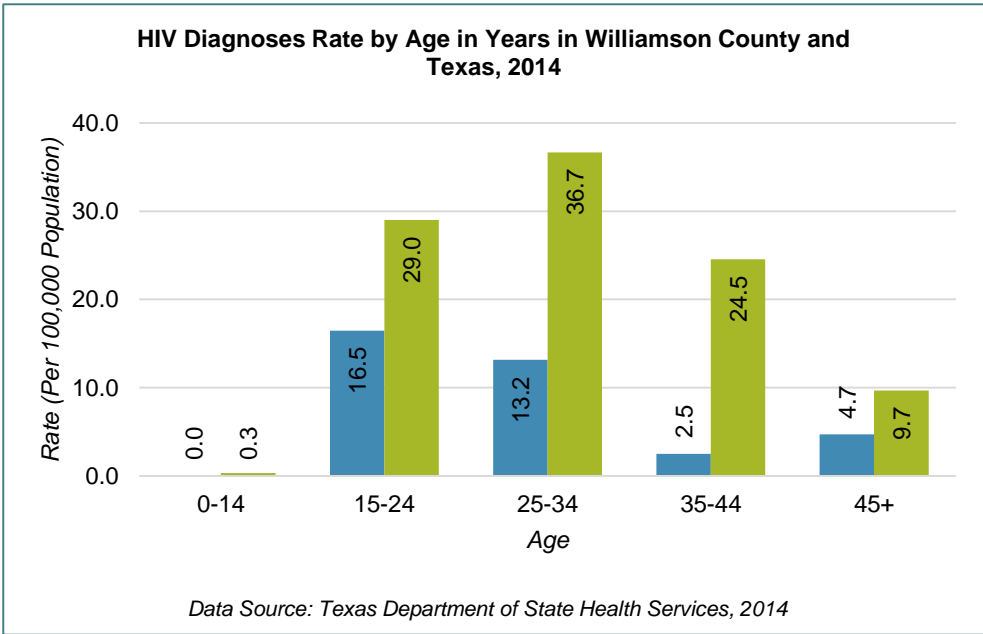
Figure 78: New AIDS Diagnosis Rate by Year in Williamson County and Texas, 2005-2014

New AIDS Diagnosis Rate by Year in Williamson County and Texas, 2005-2014

Williamson: 4.5, 5.1, 4.5, 5.3, 3.7, 2.1, 3.2, 2.8, 2.3, 2.2

Texas: 12.5, 12.0, 11.4, 11.4, 11.5, 11.2, 10.1, 9.8, 9.4, 7.7

Data Source: Texas Department of State Health Services, Texas 2014 HIV Surveillance Report, 2015
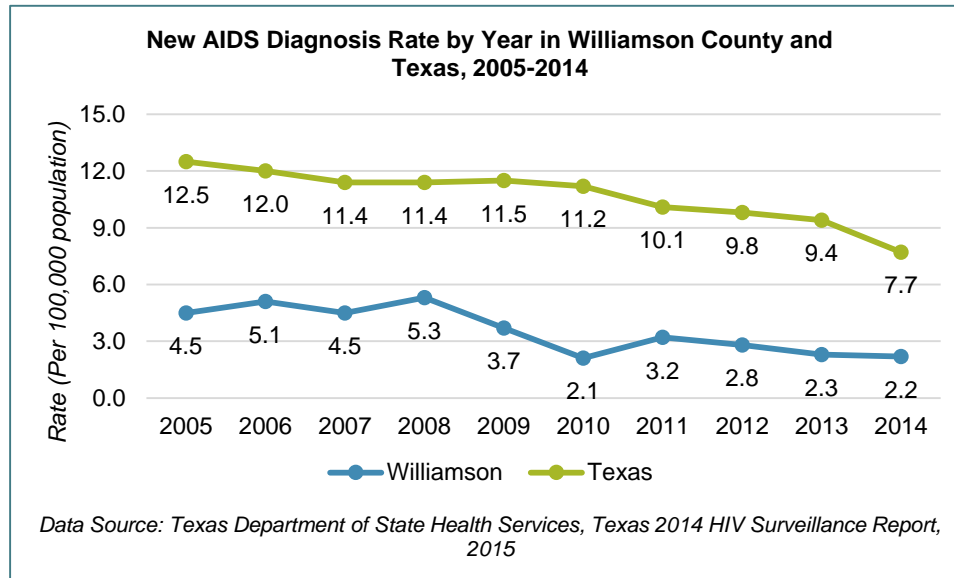
In 2014, the rate of AIDS diagnoses in the county by gender was higher in males (3.7 per 100,000 population) **(Figure 79)**, in Blacks and Hispanics (6.3 and 3.4 per 100,000 population) **(Figure 80)**, and in 15-24 year and 25-34 year age groups (4.9 and 5.9 per 100,000 population) **(Figure 81).**

Figure 79: New AIDS Diagnosis Rate by Gender in Williamson County and Texas, 2014

New AIDS Diagnosis Rate by Gender in Williamson County and Texas, 2014

Male: Williamson County 3.7, Texas 12.0
Female: Williamson County 0.8, Texas 3.6

Data Source: Texas Department of State Health Services, 2014
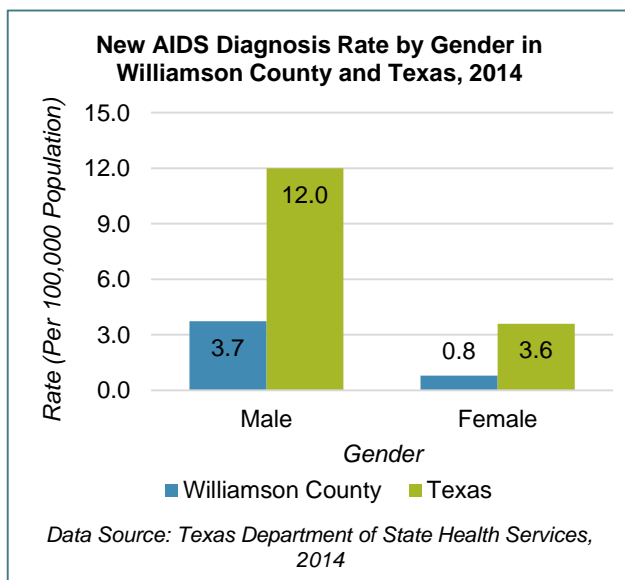
Figure 80: New AIDS Diagnosis Rate by Race/Ethnicity in Williamson County and Texas, 2014

New AIDS Diagnosis Rate by Race/Ethnicity in Williamson County and Texas, 2014

White: Williamson County 1.6, Texas 3.5
Black: Williamson County 6.3, Texas 24.5
Hispanic: Williamson County 3.4, Texas 7.2
Other: Williamson County 0.0, Texas 2.4

Data Source: Texas Department of State Health Services, 2014
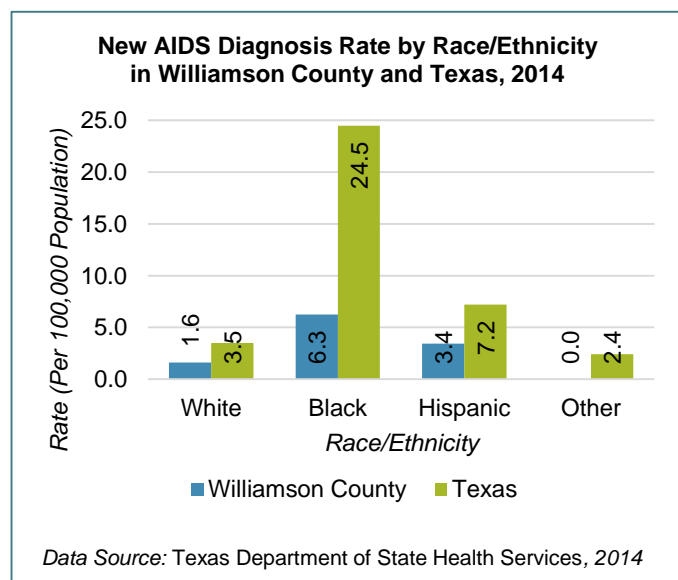
Figure 81: New AIDS Diagnosis Rate by Age in Years in Williamson County and Texas, 2014

New AIDS Diagnosis Rate by Age in Years in Williamson County and Texas, 2014

Rate (Per 100,000 Population)

Age	Williamson	Texas
0-14	0.0	0.2
15-24	4.9	5.2
25-34	5.9	14.9
35-44	3.7	15.3
45+	0.6	7.7

Data Source: Texas Department of State Health Services, 2014
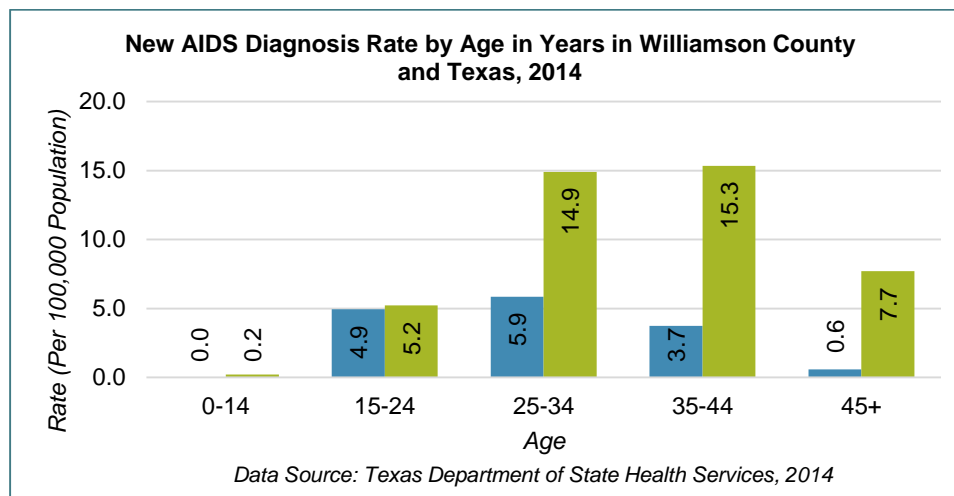
Tuberculosis (TB)

Tuberculosis (TB) is a bacterial disease caused by *Mycobacterium tuberculosis*. The bacteria usually attack the lungs and can be transmitted when a person with TB in the lungs or throat talks, coughs, or sneezes (51). Fever, night sweats, weight loss, difficulty breathing, and a cough characterize pulmonary TB, the most common form of the disease. TB bacteria can infect any part of the body, including the kidneys, joints, spine, and brain. If not treated properly, TB can be fatal (51).

TB can affect anyone but is more likely to be diagnosed in persons born in a foreign country where TB is prevalent, persons living with diabetes or HIV/AIDS, persons who abuse alcohol and other drugs, persons who live in congregate settings (including prisons and other detention centers), the homeless, and health care workers (51). In 2014, 1,269 cases of tuberculosis (TB) were reported in Texas, a rate of 4.7 per 100,000 population. From 2010 – 2014, TB rates in Williamson County have remained mostly static. In 2014, Williamson County had a reported TB rate of 1.6 per 100,000 population, which was lower than the rate in Texas (Figure 82).

Figure 82: Tuberculosis Rate by Year in Williamson County and Texas, 2010-2014

Tuberculosis Rate by Year in Williamson County and Texas, 2010-2014

Rates (Per 100,000 population)

Year	Texas	Williamson
2010	5.5	1.7
2011	5.1	2.5
2012	4.7	2.4
2013	4.6	2.3
2014	4.7	1.6

Data Source: Texas Department of State Health Services, 2010-2014 TB Counts and Rates
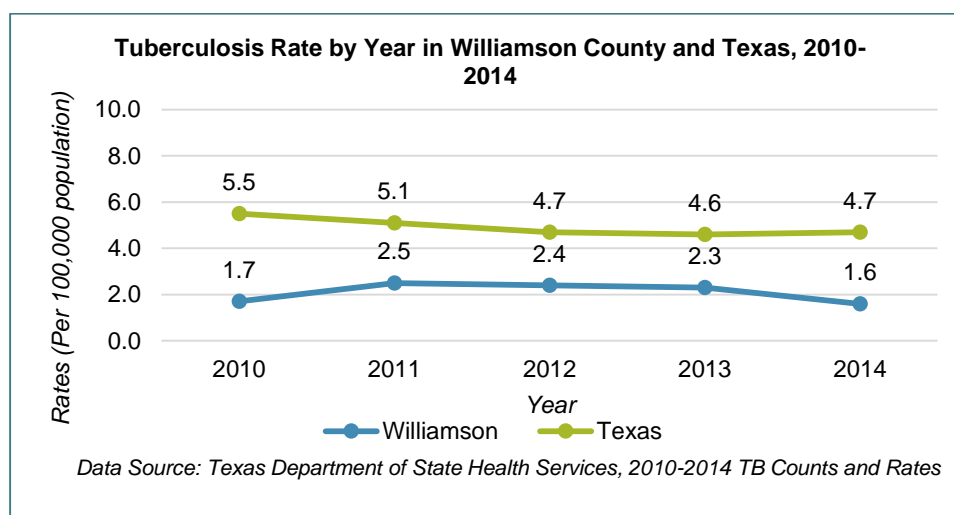
In 2014, rates by gender for reported TB were similar **(Figure 83)**. TB disproportionately affects Asian Americans compared to African Americans, Hispanics, and non-Hispanic Whites. In 2014, the rate of TB for Asian Americans (9.9 per 100,000 population) was three times that of African Americans and Hispanics (3.1 and 2.6 per 100,000 population, respectively) **(Figure 84)**. In addition, rates were fairly similar in 2014 across adult age groups **(Figure 85)**.

Figure 83: Tuberculosis Rate by Gender in Williamson County and Texas, 2014
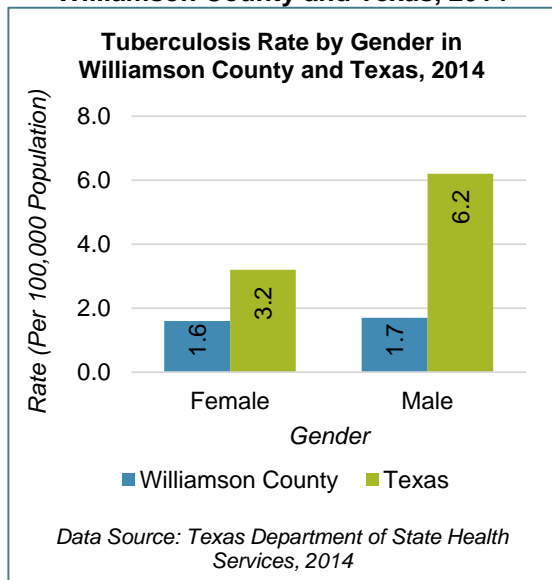
Figure 84: Tuberculosis Rate by Race/Ethnicity in Williamson County and Texas, 2014
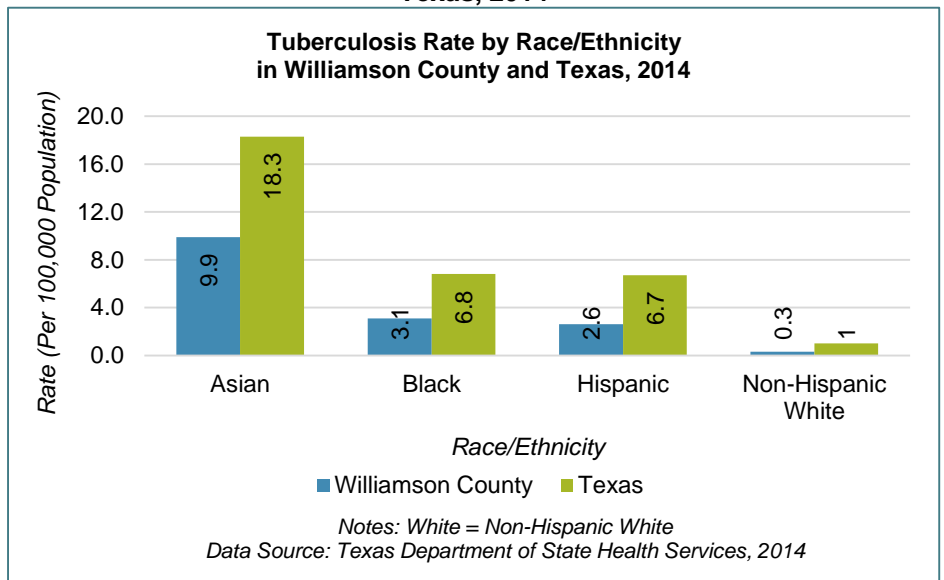
Figure 85: Tuberculosis Rate by Age in Years in Williamson County and Texas, 2014
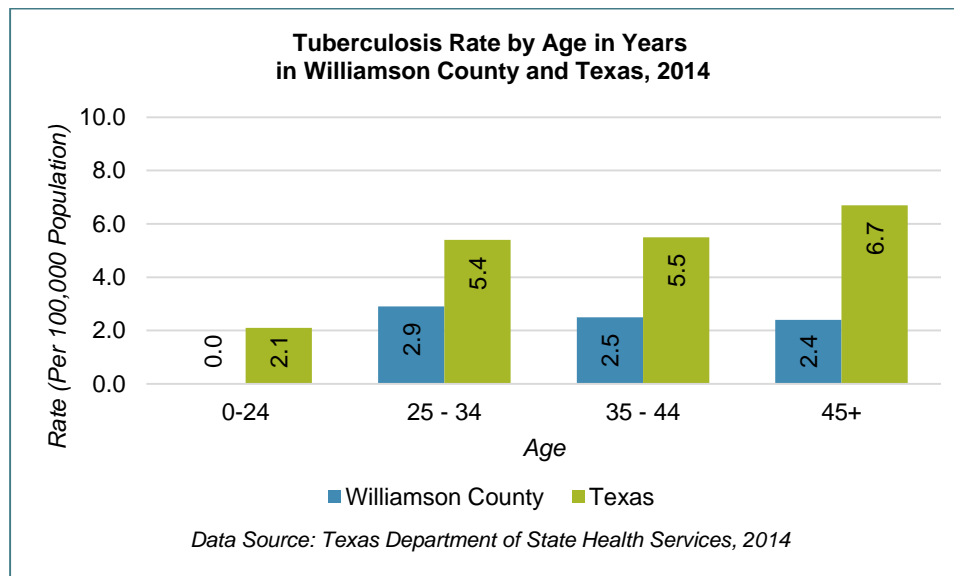
C11. Sentinel Events

According to the NACCHO MAPP Core Indicator List, "sentinel events are those cases of unnecessary disease, disability, or untimely death that could be avoided if appropriate and timely medical care or preventive services were provided. These include select vaccine preventable illness and unexpected syndromes or infections. Sentinel events may alert the community to health system problems such as inadequate vaccine coverage, lack of primary care and/or screening, a bioterrorist event, or the introduction of globally transmitted infections." The following section briefly summarizes available data for diseases on the NACCHO MAPP Core Indicator List.

Measles

Measles is a vaccine preventable and highly contagious respiratory disease that causes fever, cough, runny nose and a rash over the entire body. Although county-level data is unavailable, appropriate vaccination coverage with the Measles, Mumps and Rubella (MMR) vaccine is a likely reason for the current lack of measles cases (53). The most recent data from the National Immunization Survey (NIS) indicates coverage in Texas (exclusive of Bexar and El Paso Counties and the City of Houston) to be 89.7±4.1% for 1 dose MMR vaccine for children aged 19-35 months and 84.5±4.4% for 2 doses MMR vaccine for adolescents 13-17 years of age (53). The HP2020 goal for 19-35 month old children is 90.0%, and for children by entry into kindergarten, 95.0%. There have been no confirmed cases of measles reported in Williamson County since 1999, which saw two cases reported (Table 17).

Mumps

Mumps is a vaccine preventable and highly contagious disease that causes swelling of the salivary glands and is accompanied by fever, muscle aches, headache, tiredness and loss of appetite (54). The most recent laboratory-confirmed mumps case in Williamson County was in 2011 (Table 17). Since then, Williamson County has had no reported cases of mumps. MMR coverage rates for infants and teens, as well as the HP2020 goals are as shown above under Measles.

Rubella

Rubella, sometimes called German measles or three-day measles, is a contagious viral disease that is also MMR vaccine preventable. The infection is usually mild with fever and rash. Rubella infection in a pregnant woman, however, can cause birth defects such as deafness, cataracts, heart defects, mental retardation and liver and spleen damage (55). Rubella incidence last peaked in Texas in the 1970s, and the last reported case was in 2004. Reliable county-level data for Williamson County does not exist from DSHS prior to 2004, so it is unknown when the last case occurred in Williamson County (Table 17). MMR coverage rates for infants and teens, as well as the HP2020 goals are as shown above under Measles.

Table 17: Case Counts of Select Vaccine Preventable Diseases by MMWR Year in Williamson County, 2010-2014

Disease	Case Counts by Morbidity and Mortality Weekly Report (MMWR) Year				
	2010	2011	2012	2013	2014
Measles	0	0	0	0	0
Mumps	0	1	0	0	0
Rubella	0	0	0	0	0
Data Source: National Electronic Disease Surveillance System, Texas Department of State Health Services, 2015					

Pertussis

Pertussis, or whooping cough, is a vaccine preventable and highly contagious disease causing uncontrollable and violent coughing. Pertussis can affect people of all ages, but can be very serious, even deadly for babies less than a year old (56).

Pertussis infection rates in Williamson County remained mostly static from 2006 – 2008, until WCCHD detected a large outbreak in 2009. During the 2009 outbreak, the rate for pertussis rose from 18.4 cases per 100,000 population in 2008 to 259.7 cases per 100,000 population, one of the highest reported for a county in the United States (Figure 86). Both the number of cases reported and the outbreak duration made it a sentinel event. The outbreak lasted nearly two years and had a dramatic impact on the lives of many residents. It was not uncommon for multiple household members to have suffered from pertussis by the end of the outbreak, amplifying the economic impact on families. The direct medical costs incurred included visits to the emergency department, admission to hospitals, visits to clinics, and cost of prescription and over-the-counter medications. Indirect costs included the cost of unpaid absences from work due to illness in the family and loss of revenue due to student absenteeism.

Pertussis rates began to decline, but remained high until the outbreak subsided in 2010. From 2011 – 2014, pertussis rates remained stable, with the lowest rate since 2006 being reported in 2014 (13.9 cases per 100,000 population). However, pertussis generally follows a three to five year cycle, so a rise in incidence may occur in the near future.

Figure 86: Pertussis Incidence Rate by Year in Williamson County and Texas, 2006-2014

Pertussis Incidence Rate by Year in Williamson County and Texas, 2006-2014

Incidence Rate (Per 100,000 population)

Year	Williamson	Texas
2006	31.4	4.1
2007	29.4	4.4
2008	18.4	8.4
2009	259.7	13.5
2010	166.5	11.3
2011	20.1	3.7
2012	17.6	8.4
2013	18.5	14.8
2014	13.9	9.4

Data Source: Texas Department of State Health Services, Pertussis Cases Incidence Rate by County, 2006-2014
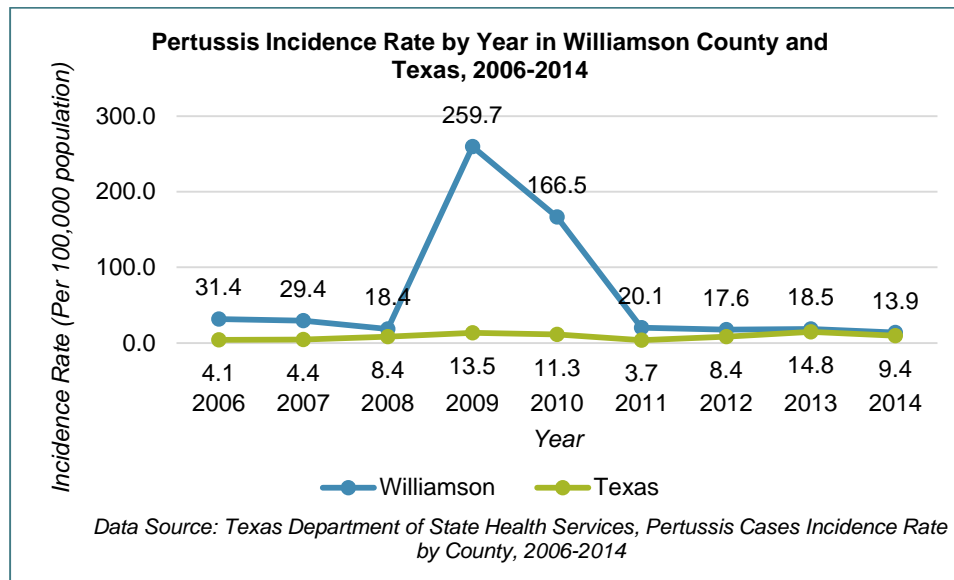
Conscientious Exemptions

According to Texas law, individuals can be exempt from vaccinations because of reasons based off conscience including religious beliefs (57). The percentage of K-12 students with conscientious exemptions in the county has increased over time from 1.20% in 2010-11 to 2.12% in 2014-15 (Figure 87). These percentages have been consistently higher in the county than in the state. An increase in the percentage of conscientious exemptions means an increase in the number of individuals at risk for vaccine-preventable illness or infections, although the exact vaccine or vaccines chosen for exemption are not documented. In addition, a higher proportion of residents that have elected exemption from vaccine reduces the overall "herd" immunity of the community and places those who cannot receive vaccine due to medical contraindications also at higher risk for infection.

Figure 87: Student Conscientious Exemptions by Year in Williamson County and Texas, 2010-2014

Student Conscientious Exemptions by Year in Williamson County and Texas, 2010-2014

Percent

Year	Williamson	Texas
2010-2011	1.20%	0.45%
2011-2012	1.55%	0.57%
2012-2013	1.79%	0.64%
2013-2014	2.11%	0.76%
2014-2015	2.12%	0.79%

Data Source: Texas Department of State Health Services, Texas Conscientious Exemption Rates by County and School Year, 2010-2015
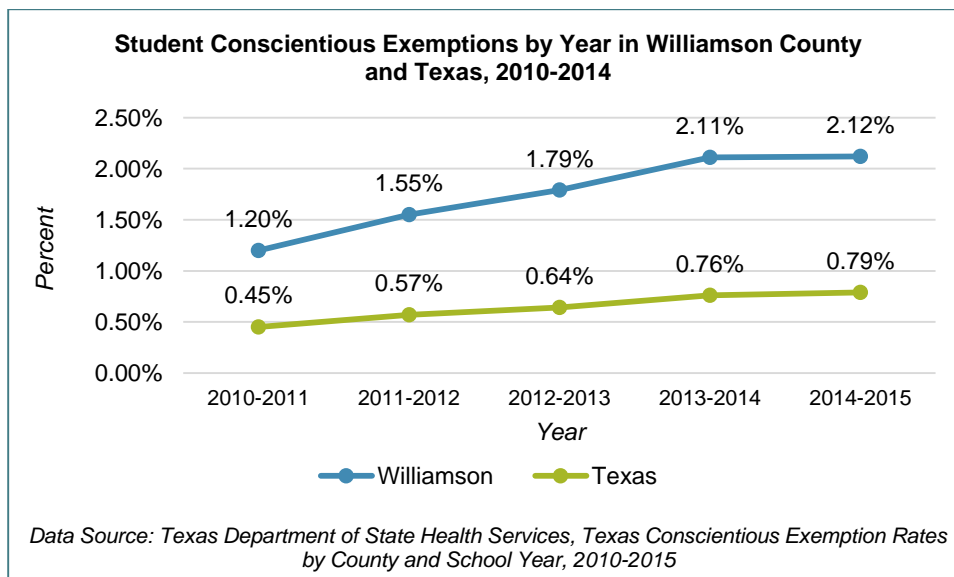
Unexpected Syndromes

Ebola

Ebola is a rare and deadly disease caused by infection with Ebola Virus. Ebola is spread through direct contact with a person or animal infected with Ebola. Introduced into the U.S. in September 2014 via a single case in a person who travelled to Texas from a West African country experiencing an unprecedented outbreak, Ebola challenged the very core of healthcare and public health emergency response (58). The threat of this high consequence infectious disease came to Williamson County through county residents exposed to a case in a healthcare worker who provided care to the introduced case, as well as additional travelers from the affected countries in Africa. Both the primary healthcare as well as the public health community had to enhance their isolation and quarantine capacities.

Both are now in the process of taking the lessons learned from their experiences with this high consequence disease and applying them to plans to strengthen the response infrastructure in order to reduce the potential for devastating consequences in the future.

Novel and Emerging Pathogens

Recent introductions of infectious agents from other parts of the world into Central Texas and Williamson County such as viruses like West Nile (first cases in Williamson County in 2003, re-emergence in 2012), Chikungunya (2015), and Zika (2016) have demonstrated repeatedly the vulnerability of the county to global infectious disease threats. In the recent CDC report Global Health Strategy 2012-2015 (59), "The health of Americans is integrally connected to the health of the world." With the expected increase in growth of the population and influx of travelers and new residents from virtually anywhere on the globe, the appearance of these novel and emerging pathogens will only increase in frequency. Each pathogen will bring its own challenges and impact on the community's health, potentially taking resources away from established health challenges and decreasing local health security.

Pandemic Influenza

Seasonal influenza is a significant contributor to illness and death every year. When a non-human strain of influenza, such as those found in pigs or birds, gains the ability to infect humans efficiently, the "novel" strain has the capacity for causing a global epidemic, also known as a "pandemic." The potential for devastating levels of illness and death increases when the human population has little to no immunity to these pandemic strains. The most recent influenza pandemic occurred in 2009 (60). Public health's pandemic preparedness keeps watch on influenza viruses with the potential for causing these global events. The CDC is watching a number of strains of bird origin (avian influenza). One of these strains is causing significant levels of illness in commercial poultry flocks in the U.S., and persons exposed to the sick birds are being watched closely by public health for the possibility of illness, even though the risk for transmission to humans is thought to be low.

Community Themes and Strengths Assessment

This assessment aimed to answer the following questions:

What community barriers affect quality of life?

How is quality of life perceived in the community?

What assets are available to improve community health?

The Community Themes and Strengths Assessment (CTSA) focuses on identification of current community issues, perceptions about quality of life, and community assets through feedback from community stakeholders and the general public.

The questions posed in the sidebar are valuable for two reasons. First, community members become vested in the community health improvement process when they have a sense of ownership and responsibility for the outcomes. This occurs when their concerns are genuinely considered and visibly affect the process. Second, the themes and issues identified by asking these questions offer insight into the information and statistics identified in the other assessments.

Methods

The CHA Team identified the themes in this section through feedback from focus groups with Williamson County residents as well as stakeholders.

In September 2015, WCCHD and the WWA hosted the Health Education Summit at Texas A&M Health Science Center. The purpose of the event was to increase capacity of local professionals to engage in effective health promotion activities and increase collaboration for evidence-based improvements. The CHA team contracted with Truven Health Analytics to lead eight focus groups modeled after standards from NACCHO. Participants in the focus groups represented multiple sectors: healthcare, local government, school districts, non-profit, higher education, and business.

In October 2015, Truven Health Analytics held four focus groups with community members. Recruitment was based on priority populations through community partners. Each focus group contained one facilitator, one scribe from WCCHD or the community, and used a guide modeled after standards from the NACCHO MAPP framework (Appendix F). Truven Health Analytics held one focus group in each of the four geographic areas of Williamson County, with three focus groups conducted in English and one in Spanish. The following sections summarize overall responses from all these groups.

Community Values

Williamson County residents and stakeholders were asked to list topics and themes that were important and valued in the community. This information was useful because understanding the community is key to any community-wide initiative. The impressions and thoughts of community residents helped to pinpoint important issues and highlight possible solutions.

Family

Participants often mentioned family, children, and a family-oriented environment as important values in the community. This is especially important in the context of health improvement because the family unit is one of the key social contexts where residents develop and live.

Health

Participants identified access to affordable healthcare, mental healthcare, healthy food options, affordable insurance, and health education as important components of the community.

Recreation and Leisure Opportunities

Participants highlighted the importance of fitness facilities, parks, trails, amateur sports, sidewalks, music, and entertainment in the community. With many residents not meeting the recommended daily amount of physical activity, there is a need for more opportunities.

Transportation

Residents and stakeholders identified access to public transportation as an important component of the community to ensure resident access to available services, healthcare, and places of employment. Better transportation options would lead to residents leading healthier lives.

Leadership and Community Connection

Participants expressed desire for a connection between the community and its leaders though effective communication, and the ability to give input on community, political, educational, and neighborhood matters.

Safety

Participants discussed the importance of safety in a community, including in neighborhoods, schools, and public areas. Residents said they would be more likely to engage in physical activity and become connected when they feel safe in their community.

Employment

Residents expressed jobs and employment that provide a livable wage for employees as important components of the community to provide income for housing, transportation, healthcare, childcare, and food, among other needs.

Issues in the Community

The focus group asked Williamson County residents and stakeholders to identify the key issues that affected their quality of life. Questions about quality of life in the community would help to pinpoint specific concerns and to highlight aspects of neighborhoods and/or communities that either enhance or diminish residents' quality of life.

Issue	Representative Quote
Access to healthcare Most participants agreed that access to affordable healthcare was a major concern in their community. Many participants also expressed frustration with insurance eligibility requirements and the lack of awareness regarding coverage. In addition, participants expressed concern over the cost of and access to dental and vision services in the county.	*"Affordable is out of the question. You either have no coverage at all, or go to the emergency room. Then they charge you an arm and a leg and you spend the rest of your life paying that off." – Focus group participant*
Affordable childcare Participants frequently expressed concerns about affordability and accessibility of child care programs. Many participants discussed that lack of transportation and lack of awareness of existing programs were barriers to getting children into daycare and other after-school or summer programs.	*"This one I had, my one was $940 and when you're bringing home a paycheck of 1,200 and $940 goes to daycare just for one kid. When I had my second kid, I literally was like, I don't know." – Focus group participant*
Awareness of resources The majority of participants expressed that a key need in the community was an increase in the awareness of what resources and services were available regarding health care, dental care, vision care, and child care.	*"And here, one thinks that it's going to be really expensive. I mean, you don't know about the assistance. You don't know about the support. More than anything, it's lack of information." - Focus group participant*
Barriers to healthy lifestyles Participants noted that many barriers existed within their communities that prevented them from living healthy lifestyles. These barriers included lack of opportunities for physical activity for all ages and abilities, lack of sidewalks, lack of access to healthy eating options, cultural traditions, and lack of health education.	*"It's also hard to get out and be active when you're in a different financial setting. My mom has to work a lot. She can't think about when we're going to go out and take a walk or take a run." – Focus group participant*
Affordable housing Community members were concerned about housing, especially in regards to affordability. Many participants expressed frustration over the increases in housing prices because of the growth of the county.	*"Ten years ago it was okay. We've got affordable housing 10 years ago. Now they don't." – Focus group participant*
Transportation Participants discussed the need for public transportation options. Transportation was necessary for meeting basic needs such as doctor's appointments, childcare, school, groceries and other errands. Participants noted the lack of connectivity between the cities in Williamson County and especially in the more rural areas.	*"I wish there was buses too" – Focus group participant*
Bilingual resources Participants noted the lack of social services, such as health, housing, and education, as well as other resources in Spanish. With an increasing Spanish-speaking population in the county, participants voiced a greater need for increased resources, including English as a second language classes and materials.	*"If you don't speak English, you lost the work. So, it's important to really know that language to communicate and to know about the other places where we might have assistance." – Focus group participant*

Assets and Strengths

Asset mapping is an important tool for mobilizing community resources. It is the process by which the capacities of individuals, civic associations, and local institutions are inventoried. Residents and stakeholders in Williamson County listed all the assets they were aware of in the county. A summary of those assets by sector were listed below.

Non-profit Organizations

Participants recognized that an extensive network of non-profit organizations that addressed not only health care issues, but also sought to improve the status of the social determinants of health existed in the county. Many participants described positive experiences with non-profits in the county and voiced that the organizations were cornerstones for many communities in the county.

Faith-based Organizations

Participants identified that Williamson County had multiple ministerial alliances and a strong faith-based community that they depended on for services. The county would need to better understand how various organizations could coordinate with the faith community in the future.

Healthcare System

The increase in population in Williamson County has led to an increase in healthcare providers and a robust healthcare system with hospitals, clinics, behavioral health hospitals, and urgent care centers. Despite the extensive system that includes three major hospital systems, focus group members acknowledged that many challenges existed such as creating awareness of resources and increasing care coordination across all healthcare venues, including inpatient, ambulatory, and home care.

Community Partnerships

With the strong network of organizations within Williamson County, residents saw that the collaborations and partnerships among those organizations were assets to the community. Residents and community members identified the WWA, Public Health and Medical Preparedness Committee, Substance Abuse Collaborative, Systems of Care, Interagency Council of East Williamson County, WilCo Non-Profits, and the Mental Health Task Force as a few examples of strong partnerships and coalitions.

Education System

Focus group members acknowledged that the education system was an asset in the community. Williamson County consisted of 15 independent school districts fully or partially located in the county and many higher education campuses like Austin Community College, Southwestern University, Texas State University, and Texas A&M Health Science Center,

Parks and Recreation

With over 280 miles of existing trails and plans for new parks and trails, residents and community members identified the parks, trails, and recreation system as a major community asset. Building connectivity between trails and communities will need to be a priority.

Participants recognized the business community as a major strength of the community because it created connectedness among businesses, encouraged economic development, and provided community information. Williamson County has approximately seven Chambers of Commerce: Cedar Park, Georgetown, Hutto, Leander, Liberty Hill, Round Rock, and Taylor. The county is also home to several large employers, like Dell and The Electric Reliability Council of Texas (ERCOT).

Conclusions and Implications

While the Community Themes and Strengths Assessment revealed many positive aspects and an overall good perception of quality of life in Williamson County, participants identified many areas for improvement.

Throughout this assessment process, the CHA Team was able to engage with key leaders, a wide variety of community stakeholders, a youth population, a Spanish speaking population, an elder population, and both urban and rural residents. These diverse populations shared perceptions of their communities and the county as a whole. According to the data collected, the most important values Williamson County residents held were:

- Family
- Health
- Recreation and Leisure Opportunities
- Transportation
- Leadership and Community Connection
- Safety
- Employment

Williamson County residents were most concerned about:

- Access to Healthcare
- Affordable Childcare
- Awareness of Resources
- Barriers to Healthy Lifestyles
- Affordable Housing
- Transportation
- Access to Bilingual Resources

Our residents and stakeholders listed the following categories of resources as the most important assets in improving health and quality of life of residents:

- Non-profit Organizations
- Faith-based Organizations
- Healthcare System
- Business Community
- Community Partnerships and Collaborations
- Education System
- Parks and Recreation

The CTSA process revealed multiple ways to leverage existing resources and provided a comprehensive understanding of the perceptions of values, concerns, and assets in the county. While most acknowledged the many challenges that lay ahead, community members, stakeholders, and leaders in this assessment anticipated improvements in the health and wellness where they live, work, worship, play, or learn in Williamson County.

Forces of Change Assessment

The purpose of the Forces of Change Assessment (FoCA) is to identify trends, factors, or events that influence the health and quality of life of the community and the local public health system. The health of a community is affected by many factors. Social determinants of health are the complex, integrated, and overlapping social structures and economic systems that are responsible for most health inequities. These external social structures and economic systems include the social environment, physical environment, health services, and structural and societal factors.

Methods

The CHA Team identified the challenges and opportunities in this section through feedback from focus groups with Williamson County residents as well as stakeholders. This feedback was obtained at the same time as the CTSA described previously and recapped here.

In September 2015, WCCHD and the WWA hosted the Health Education Summit at Texas A&M Health Science Center. The purpose of the event was to increase capacity of local professionals to engage in effective health promotion activities and increase multi-sector collaboration for evidence-based improvements. Truven Health Analytics led eight focus groups with questions modeled after standards from NACCHO. Participants in the focus groups represented multiple sectors in the community: healthcare, local government, school districts, non-profit, higher education and business.

In October 2015, Truven Health Analytics held four focus groups with community members. Recruitment was based on priority populations through community partners. Each focus group contained one facilitator, one scribe from WCCHD or the community, and used a guide modeled after standards from the NACCHO MAPP framework (Appendix F). Truven Health Analytics held one focus group in each of the four geographic areas of Williamson County, with three focus groups conducted in English and one in Spanish. The forces of change highlighted in the pages that follow are the most common themes that emerged.

Findings

Force of Change: Growth of Williamson County	
Challenges	Opportunities
- Rapid population growth has strained all levels of the infrastructure, including: - Public schools - Healthcare infrastructure - Data systems - Law enforcement - Fire safety - Air quality - Parks development - Road infrastructure, traffic management - Public transportation - Access to basic needs—food, affordable housing, transportation and childcare - Pressure to plan for projected population increases - Local governments challenged in formerly rural or suburban areas to serve populations with new and different needs (e.g., poverty, language, race and ethnicity, aging, etc.) - Property values were higher in urban/suburban areas of the county leading to less resources in rural areas - Provision of necessary preventive services - Lack of adequate public transportation options, which led to lack of connectivity	- Economic growth and increase in incomes create opportunities related to: - Infrastructure growth (road and bridge or data systems) creates employment opportunities - Increasing incomes help provide residents with the economic means to be healthy - More businesses and resources coming into the area - Form partnerships to offer more opportunities to underserved and under resourced communities in the county - More healthcare providers coming into the county - Growth of higher education campuses - Growth of farmers markets and farm-to-table initiatives

Force of Change: Role of Technology	
Challenges	Opportunities
Technology has replaced physical activity leading to sedentary behavior	- Social media promotes communication and provides channel to reach more people - Provides opportunity for telemedicine - Patient portals allow patients better access to their medical records

Force of Change: Demographic Changes, Urban Population, Hispanic Population, Aging Population	
Challenges	Opportunities
- Unequal distribution of resources in county lead to increasing disparity between rural and urban populations - Lack of bilingual resources and services - Lack of understanding of variations in values and traditions by public health community - Decreased ability to disseminate health messages - Aging workforce - Increased need for social service coordination - Increased need for caretakers	- Increased investment in parks and recreation with parks department becoming more involved in program planning - Increased cultural sensitivity within the community - Diversity among those involved in planning - Improved coordination of services - Improved transportation opportunities for non-mobile seniors - Increasing numbers of well-educated retirees have a high level of engagement and volunteerism

Force of Change: Changes in Access to Healthcare	
Challenges	Opportunities
- Texas did not expand Medicaid waiver which left gaps of uninsured residents - Medicaid 1115 Waiver (DSRIP) funding is ending in 2016 and future of funding is uncertain - Unequal distribution of providers of county with highest concentrations in urban areas - Rising cost of healthcare services - Providers not taking on new patients - Long wait times for appointments	- More hospitals in the county, including two new behavioral health providers - Affordable Care Act provides insurance options for those who were previously uninsured - Increase in urgent care providers - Improved access to specialists - DSRIP funding providing access to health care and prevention from many organizations

Force of Change: Community Preparedness	
Challenges	Opportunities
- Draft of State Annex H Public Health and Medical Plan placed increased responsibility on Public Health and Medical at the City/County level - Current grant funding expires in 2017 for Public Health Emergency Planning - Increase in infectious disease outbreaks in the county requires greater commitment of state and local resources - Increase in flooding due to high rainfall levels	- Increased visibility of public health community in disaster responses - Anticipation that the grant funding will be continued - Public Health and Medical Preparedness Committee has increased coordination, capacity, and plans for Williamson County

Force of Change: Economic Changes	
Challenges	Opportunities
- Increased cost of living, including housing prices - Economic fluctuation among large employers	Economic benefits from more property tax dollars, school funding, and revenue for local businesses

Conclusions and Implications

The purpose of this assessment was to identify the external factors that affect the environment in which the Williamson County public health system operates and the challenges and opportunities created by these factors. The focus group participants identified six forces of change. Within each of these focus areas, participants identified specific challenges and opportunities that each of these forces creates for the local public health system. The main forces of change identified through this assessment were:

- Growth of Williamson County;
- Demographic Changes;
- Role of Technology;
- Changes in Access to Healthcare;
- Increasing Need for Community Preparedness; and
- Economic Changes.

The information gathered through the FoCA was an important component of the MAPP process because it provided context for many of the key issues in the community. As community partners come together to identify key strategic issues and priorities for action in Williamson County, they will use these findings in conjunction with the other three MAPP assessments for a comprehensive picture of the community's health status.

Local Public Health Systems Assessment

Acknowledgements

This assessment aimed to answer the following questions:

What are the components, activities, competencies, and capacities of our public health system?

How well are the Ten Essential Public Health Services being provided in our system?

Background

The NPHPS was a partnership effort to improve the practice of public health and the performance of public health systems. The NPHPS assessment instruments guide state and local jurisdictions in the evaluation of current performances against a set of optimal standards. Through these assessments, responding sites can consider the activities of all public health system partners, thus addressing the activities of all public, private, and voluntary entities that contribute to public health within the community. The dialogue that occurrs in the process of the assessment could also help to identify strengths and weaknesses, determine opportunities for immediate improvements, and establish priorities for long-term investments to improve the public health system.

NPHPS designed three assessment instruments to assist state and local partners in assessing and improving their public health systems or boards of health. The CHA utilized one of these assessments: the Local Public Health System Performance Assessment Instrument. The information obtained from this assessment may then be used to improve and better coordinate public health activities at local levels. In addition, the results gathered provided an understanding of how local public health systems are performing. This information will help local partners make better and more effective policy and resource decisions to improve the community's public health as a whole.

Methods

WCCHD District Leadership Team (DLT): In October 2015, DLT completed the Priority of Model Standards questionnaire online via Survey Monkey (Appendix G) and components of the Local Public Health System Performance Assessment Instrument (Appendix H) via a two-hour facilitated discussion. The online survey identified two priorities that were addressed in detail during a subsequent facilitated discussion.

Through the survey, DLT provided insight into the priority of each of the Ten Essential Public Health Services to the overall Williamson County Public Health System. Through the facilitated discussion, DLT rated the component model standards for the top 2 Essential Public Health Services that were of priority.

Eleven participants were present for the assessment and represented the following WCCHD Divisions:

- Administration
- Clinical Services
- Disease Control and Prevention
- Environmental Health Services
- Information Technology
- Public Health Initiatives and Planning
- Social Services
- WIC

Participants in the WCCHD DLT meeting used the Socrative mobile application to respond to each of the questions in the assessment. All performance scores were an average. Model Standard scores were an average of the question scores within that Model Standard. Each performance measure was compared to the identified Model Standard or "gold standard" and scores were classified as No Activity (0% of activity described within the question was met), Minimal Activity (1-25%), Moderate Activity (26-50%), Significant Activity (51-74%), and Optimal Activity (76-100%). Essential Service scores were an average of the Model Standard scores within that Essential Service, and the overall assessment score was the average of the Essential Service scores. According to NPHPS, the overall assessment score can be interpreted as the "as the overall degree to which your public health system meets the performance standards (quality indicators) for each Essential Service." The higher the assessment score, the better.

WWA Leadership Team: In October 2015, the WWA Leadership Team completed the Priority of Model Standards questionnaire online and components of the Local Public Health System Performance Assessment Instrument during a two hour facilitated discussion. Eight members completed the survey online and four were present for the later assessment. Participants represented the following sectors:

- Healthcare
- Local government
- Non-profit organization
- Education system

Participants from the WWA Leadership meeting used discussion to come to a consensus for the performance of each standard. The responses to the questions within the assessment were based upon input from diverse participants with different experiences and perspectives in regard to the local public health system.

Priorities

The CHA Team sent the Priority of Model Standards questionnaire to participants via Survey Monkey. The survey was designed to evaluate the priority of each of the Ten Essential Public Health Services to the Williamson County Public Health System as a whole, including all community partners (hospitals, non-profit organizations, health service providers, community organizations, mental health organizations, law enforcement, social services, faith based organizations, and many more). Participant scored Essential Public Health Services from 10 for highest

priority to 1 for lowest priority. Participants were asked to consider past and current activity in each of these sectors when thinking about the priorities. **Table 18** lists the results from the priority survey.

The eleven division directors from WCCHD who completed the survey designated Essential Public Health Service #2: Diagnose and Investigate, and Essential Public Health Service #4: Mobilize Community Partnerships, as the two priority areas to be completed for the assessment. The WWA Leadership Team members who completed the survey designated Essential Public Health Service #4: Mobilize Community Partnerships, and Essential Public Health Service #1: Monitor Health Status, as the two priority areas for the assessment.

Table 18: Ten Essential Public Health Services Priorities

#	Essential Public Health Service	Overall Average
4	Mobilize community partnerships to identify and solve health problems	7.74
2	Diagnose and investigate health problems and health hazards	7.48
1	Monitor health status to identify health problems	7.32
8	Assure a competent public health and personal health care workforce	7.28
3	Inform, educate and empower people about health issues	7.28
5	Develop policies and plans that support individual and community health efforts.	7.24
6	Enforce laws and regulations that protect health and ensure safety	7.01
9	Evaluate effectiveness, accessibility, and quality of personal and population-based health services	6.98
7	Link people to needed personal health services and assure the provision of health care when otherwise unavailable	6.98
10	Research for new insights and innovative solutions to health problems	6.75

Key Findings

The following sections provide the results from the two facilitated discussions held with WCCHD DLT and WWA Leadership Team that assessed the top three priorities for Williamson County.

Essential Public Health Service #1: Monitor Health Status

Participants discussed the current and historical processes for the CHA and the CHIP. Results are shown in **Table 19 and Table 20**. While the local public health system had a well-established community health improvement committee and regularly conducted CHAs, there was room for improvement. Specifically, participants agreed that the results of the CHA needed to be more widely disseminated in the community and used to engage more partners.

Table 19: Essential Public Health Service #1 (Monitor Health Status) Assessment Results

Model Standard	Performance Measure	Activity Level	Rating
At what level does the Local Public Health System:			
1.3.2	Use information from population health registries in CHAs or other analyses?	Optimal	100
1.1.1	Conduct regular CHAs?	Significant	87.5
1.2.2	Analyze health data, including geographic information, to see where health problems exist?	Significant	87.5
1.1.2	Update the CHA with current information continuously?	Significant	75
1.2.1	Use the best available technology and methods to display data on the public's health?	Moderate	75
1.2.3	Use computer software to create charts, graphs, and maps to display complex public health data?	Significant	75
1.3.1	Collect timely data consistent with current health standards on specific health concerns in order to provide the data to population health registries?	Significant	75
1.1.3	Promote the use of the CHA among community members and partners?	Moderate	50

Table 20: Notes Summary for Essential Public Health Service #1: Monitor Health Status

Strengths	Weaknesses	Short Term Improvements	Long Term Improvements
1.1 Population-Based Community Health Assessment			
• CHA completed on regular basis • Hospital partners engaged in CHA Healthy Williamson County website updated with CHIP progress and most recently available data	• Promotion of CHA among partners and community as a whole	• Set up opportunities for sharing CHA results in community meeting and events	• Write promotion and dissemination of CHA into project plan and Strategic Plan
1.2 Current Technology to Manage and Communicate Population Health Data			
• Healthy Williamson County website newly redesigned and includes health indicators	• Lack of zip code level data for more detailed maps • Promotion of website	• Seek out forums to share data through community meetings	• Share relevant health data through press releases and guest editorials that to increase communication
1.3 Maintaining Population Health Registries			
• Immunization registries utilized by WCCHD • WCCHD reports required conditions to CDC	• No chronic disease registries		

Essential Public Health Service #2: Diagnose and Investigate

For EPHS #2, DLT discussed that although WCCHD exceled at effectively responding to positive laboratory results of notifiable disease conditions, WCCHD needed to increase outreach and communication activities to medical providers. Because Williamson County's growth rate was high, many new medical facilities might not be aware of reporting requirements. DLT acknowledged that the Public Health and Medical Preparedness Committee was another strength of WCCHD in providing EPHS#2. While preparedness was more integrated into WCCHD's procedures than in previous years, there was still a need for more detail in preparedness planning and increased coordination across divisions. Another need identified was an improved quality improvement process for after action reports. Results were identified in **Table 21 and Table 22**.

Table 21: Essential Public Health Service #2 (Diagnose and Investigate) Assessment Results

Model Standard	Performance Measure	Activity Level	Rating
At what level does the Local Public Health System:			
2.1.1	Use only licensed or credentialed laboratories?	Significant	81.8
2.1.2	Maintain a written list of rules related to laboratories, for handling specimens, determining who is in charge of the samples at what point, and reporting the results?	Significant	79.5
2.1.3	Designate a jurisdictional Emergency Response Coordinator?	Significant	77.1
2.2.1	Have ready access to laboratories that can meet routine public health needs for finding out what health problems are occurring?	Moderate	68.2
2.2.2	Participate in a comprehensive surveillance system with national, state, and local partners to identify, monitor, and share information and understand emerging health problems and threats?	Moderate	63.5
2.2.3	Maintain written instructions on how to handle communicable disease outbreaks and toxic exposure incidents, including details about case finding, contact tracing, and source identification	Moderate	62.5

	and containment?		
2.2.4	Prepare to rapidly respond to public health emergencies according to emergency operations coordination guidelines?	Moderate	62.5
2.2.5	Develop written rules to follow in the immediate investigation of public health threats and emergencies, including natural and intentional disasters?	Moderate	58.3
2.2.6	Maintain constant (24/7) access to laboratories that can meet public health needs during emergencies, threats, and other hazards?	Moderate	54.5
2.3.1	Provide and collect timely and complete information on reportable diseases and potential disasters, emergencies, and emerging threats (natural and manmade)?	Moderate	54.2
2.3.2	Evaluate incidents for effectiveness and opportunities for improvement (such as After Action Reports, Improvement Plans, etc.)?	Minimal	47.9
2.3.3	Ensure that the best available resources are used to support surveillance systems and activities, including information technology, communication systems, and professional expertise?	Minimal	39.6
2.3.4	Identify personnel with the technical expertise to rapidly respond to biological, chemical, or/and nuclear public health emergencies?	Minimal	39.6

Table 22: Notes Summary for Essential Public Health Service #2: Diagnose and Investigate

Strengths	Weaknesses	Short Term Improvements	Long Term Improvements
2.1 Identification and Surveillance of Health Threats			
• With notifiable conditions, WCCHD does very well, with an average 4.7 day turnaround • Williamson County Public Health and Preparedness Committee • High level of professional expertise with staff	• Timing of reporting out is a challenge because of the timeline which WCCHD receives reports • Passive collecting of samples • Need up-to-date contact information because there are many new facilities which are not aware of reporting requirements	• Implement Core Point as an integrated real time data system • Optimize new eClinicalWorks electronic health record system to help with secure communication	• Outreach and clarification to providers and community partners of notifiable conditions • Include more onsite sample collection
2.2 Investigation and Response to Public Health Threats and Emergencies			
• Preparedness SOP (Standard Operating Procedures) and SOG (Standard Operating Guidelines) documents are very comprehensive and have become integrated within WCCHD recently • High access to resources in the region • Coordinated education for Haz-Mat team	• Though there is a robust umbrella structure, the preparedness plan needs more detail • Disconnect between preparedness and other divisions • Social services needs to be involved outbreaks and threats • After Action Report process is inconsistent and QI is not fully incorporated • Lack manpower for after action report	• More diverse representation from other divisions of the health district in preparedness coalition • More agency internal preparedness drills	• More holistic response plan and coordination between divisions of WCCHD • Increase in personnel to fully incorporate QI through after action review
2.3 Laboratory Support for Investigation of Health Threats			
• WCCHD uses Clinical Pathology, Oxford Labs, and DSHS for high priority samples	• Timeline with DSHS labs is a challenge, especially over the weekends • No process for tracking unsatisfactory samples that are sent to labs		• Development of a monitoring system for rates of unsatisfactory samples

Essential Public Health Service #4: Mobilize Community Partnerships

During the discussion for EPHS #4, DLT articulated the need for a comprehensive list of community partners that would be coordinated across all WCCHD divisions. Participants expressed that while WCCHD exceled at initially engaging community partners through the WWA, there was a need to evaluate the structure of the coalition to fully maximize its potential. WWA successfully facilitated the CHIP process in the past even though outcome measurement posed a challenge. Participants also discussed the need for improved communication between community partners, especially among medical providers. Results were identified in **Table 23 and Table 24**.

Table 23: Essential Public Health Service #4 Assessment Results

Model Standard	Performance Measure	Activity Level	Rating
At what level does the Local Public Health System:			
4.2.2	Establish a broad-based community health improvement committee?	Significant	70.9
4.2.1	Establish community partnerships and strategic alliances to provide a comprehensive approach to improving health in the community?	Moderate	57.0
4.1.3	Encourage constituents to participate in activities to improve community health?	Moderate	52.8
4.1.1	Maintain a complete and current directory of community organizations?	Minimal	43.8
4.1.2	Follow an established process for identifying key constituents related to overall public health interests and particular health concerns?	Minimal	40.0
4.2.3	Assess how well community partnerships and strategic alliances are working to improve community health?	Minimal	38.9
4.1.4	Create forums for communication of public health issues?	Minimal	34.7

Table 24: Notes Summary for Essential Public Health Service #4: Mobilize Community Partnerships

Strengths	Weaknesses	Short Term Improvements	Long Term Improvements
4.1 Constituency Development			
• Utilization of pre-existing forums (Williamson County Medical Society) as a way to reach practitioners • Inclusion of constituents in CHA process • Have a database of WWA contacts and members	• List of community organizations and contacts is disjointed and spread out across divisions • Sustainability • Lack of defined process for identifying key constituents in the county • Low social media engagement • Directory of partners and key constituents has turnover and is outdated • Turnover in support staff from WWA	• Increase focus groups and formal opportunities for feedback • Involve *promotoras* and other community health workers • Send annual survey to assess level of engagement and update distribution list • Engage with Chambers of Commerce • Engage with Community Relations departments at school districts	• Coordinate the list of community partners across WCCHD and develop an auto-update process • Engage the CSRs and WIC in the public health centers to capture constituent feedback • Recruit recognizable figure to increase social media engagement • Incorporate identifying key constituents as a priority in strategic planning efforts.

4.2 Community Partnerships			
- Engaging and recruiting partners through the WWA - CHIP and progress reports facilitated by WWA Leadership team - Community Health Improvement Committee became the WWA Leadership Team	- Outcome measurement is a challenge because WWA groups and meetings need a clear, shared agenda - Burden of action items from WWA meetings on WCCHD support staff rather than broad community collaboration - Lack of metrics and tools to assess WWA - Structure of WWA can be improved to increase engagement and accountability	- WWA meeting facilitation with the goal of more community partner action items - Set terms for WWA chair positions - Revise SOP and SOG for WWA - Coalition monthly update emails to increase engagement	- Identify key stakeholders and champions for the WWA - Reassess the structure and facilitations of the WWA to fully utilize the robust network of partners - Set WWA goals at a systems level - Merge efforts of the groups - Engage with decision makers in community

Conclusions and Implications

The Local Public Health Systems Assessment was a useful process for both the WCCHD DLT and the WWA Leadership Team. The CHIP will use these findings to improve the local public health system's provision of the Ten Essential Public Health Services through the implementation of short and long term improvement recommendations from participants.

Recommendations based on the assessment included:

- Increase community dissemination and promotion of the CHA
- Incorporate outreach and external communications as a core component of Disease Control and Prevention
- Increase inclusion and coordination in preparedness planning across all WCCHD divisions
- Develop health district-wide community partner contact list
- Establish process for identifying key constituent partners in the community
- Recruit key stakeholders for the WWA, and provide robust facilitation for community and working groups
- Re-assess the structure of the WWA
- Set WWA goals at the policy, systems, and environmental level

The local public health system will use the results of this report to plan for and implement community health improvement activities. Community partners will use these results in conjunction with the other MAPP assessments to develop the CHIP.

Health Priorities

With so many competing needs in the community, determining health priorities will help direct resources and collaborative efforts to the issues that matter most to the community and that will have the greatest impact on health status.

The CHA Team used the qualitative and quantitative data collected and analyzed by the four MAPP assessments to identify the issues to bring to the community to determine health priorities. To solicit community input, the CHA team along with other community partners organized eight focus groups with community stakeholders and four focus groups with community residents during September and October 2015. The CHA team designed these focus groups to gain qualitative insight on the most important health issues in the community.

The CHA Team used the issues and ideas generated through the focus groups to develop a quantitative survey for community members and stakeholders to vote on the most critical priorities for Williamson County and then sent the Community Survey to community partners via email. The CHA Team collected a total of 291 surveys between November 13 and December 9, 2015. The survey asked participants to choose the five issues they felt were the most pressing and what areas they would most like to see county-wide efforts to change and improve health. The five focus areas with the highest number of recorded votes will be addressed in the CHIP.

Participant Demographics

A large portion of participants reported living or working in Georgetown or Round Rock. Almost a quarter of participants lived in Georgetown, with another 17% of participants residing in Round Rock. Overall, thirteen cities in Williamson County were represented in addition to multiple unincorporated areas (Figure 88).

Figure 88: Williamson County Statistical Areas Distribution of Health Priority Survey Participants

Williamson County Statistical Areas Distribution of Health Priority Survey Participants

- North Williamson County: 34.0%
- South Williamson County: 40.0%
- East Williamson County: 11.1%
- West Williamson County: 14.9%

Data Source: 2016 CHA Community Survey
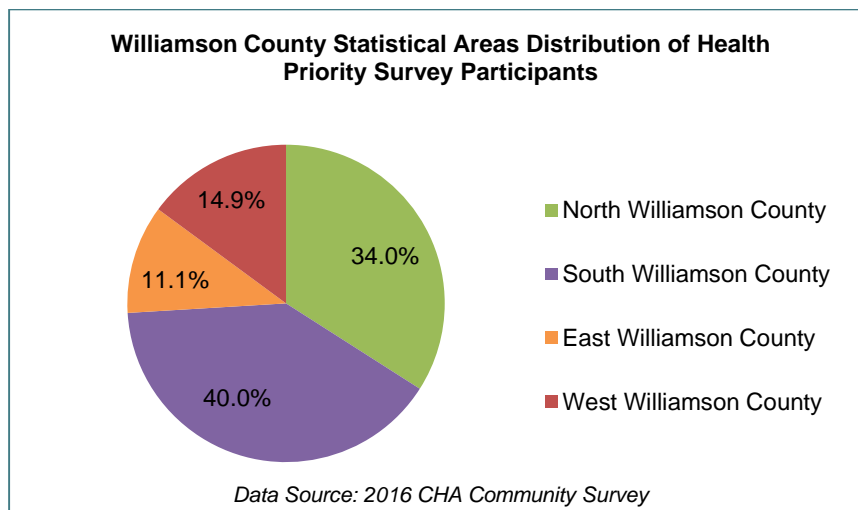
The majority of participants (78%) were women, 20% were men and 2% declined to answer. Half of participants in the survey were between the ages of 45 and 64 years and 26% of participants were between 31 and 44 years (Figure 89).

Figure 89: Age Distribution in Years of Health Priority Survey Participants

Data Source: 2016 CHA Community Survey
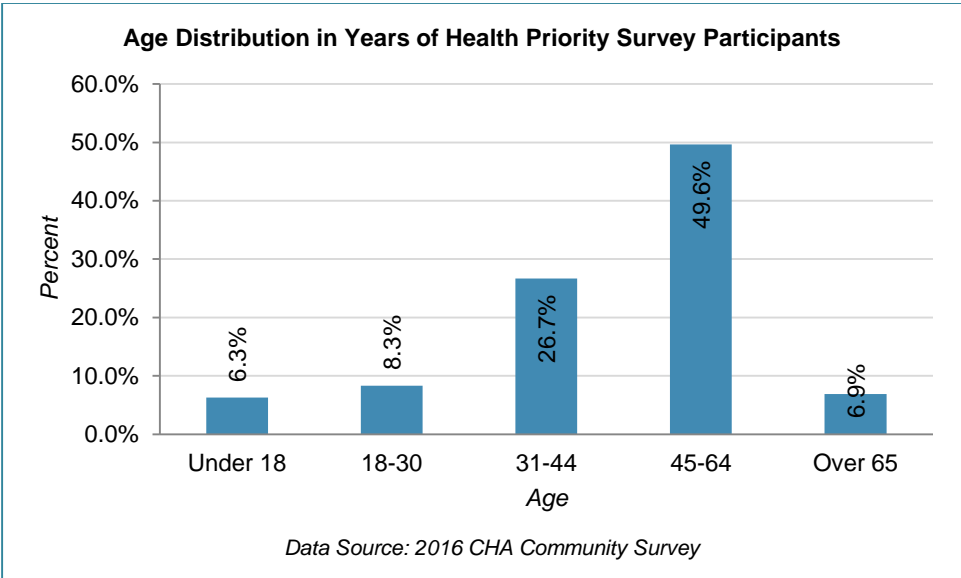
Findings

After one month of polling, Williamson County residents and stakeholders determined the following five focus areas as the top priorities for county-wide efforts to improve health status in the county. Action plans to address these five priorities will be developed in the CHIP.

1. **Mental Health:** Prevention, support and treatment for mental illness
2. **Access to Healthcare:** Basic, affordable healthcare available for all residents
3. **Awareness of Healthcare Resources:** Available information and communication channels for resources
4. **Active Living:** Resources, access and awareness for physical activity opportunities
5. **Chronic Disease:** Prevention, treatment and management of chronic diseases

Full results of the ten identified focus areas are shown in **Figure 90**.

Figure 90: Health Priority Survey Results

Health Priority Survey Results

Data Source: 2016 CHA Community Survey
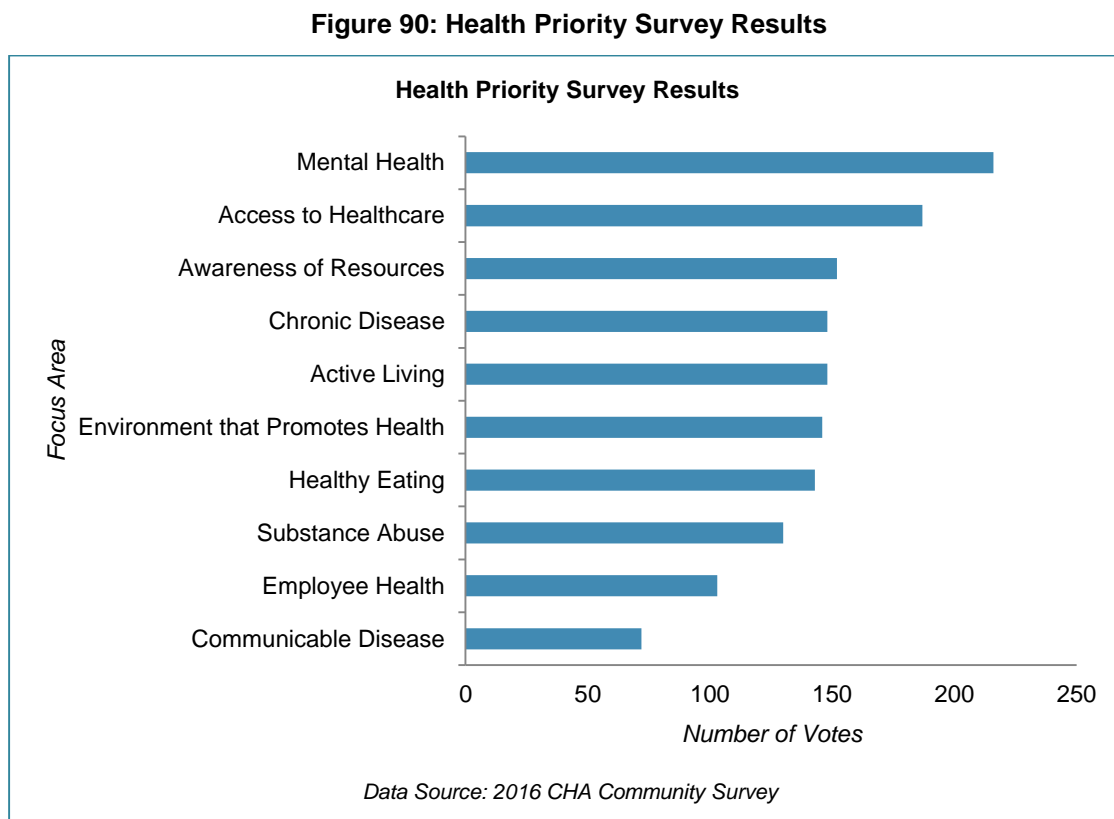
Participants also took the opportunity to use the survey to identify priorities for the community that weren't listed in the ten focus areas. The most common responses were:

- Transportation options for residents who don't drive
- Needs of older adults and their caregivers
- Maternal health, including prenatal information, postpartum emotional support, and breastfeeding support
- Hunger and food insecurity
- Access to dental services

Participants were also asked to include suggestions for health improvement efforts that addressed health priorities. Many participants expressed the need for collaboration within the county through concerted efforts to improve health and educate the community about resources that already exist. The need for better and ongoing promotion of the efforts undertaken in Williamson County were also mentioned. Another common suggestion for health improvement efforts was prioritizing low income, rural and minority communities to increase health equity within the county.

Conclusions and Implications

The 2016 Williamson County Community Health Assessment (CHA) provided an updated analysis of available data to describe the health and quality of life of Williamson County residents since the last assessment in 2013. Throughout the 2016 assessment process, the CHA Team engaged with key leaders, community stakeholders, the youth population, the Spanish speaking population, the elderly population, and urban and rural residents in Williamson County to gather well-rounded feedback. The feedback, paired with quantitative data, described the current health status and shared perceptions about the health and well-being of the community.

The 2016 CHA will be utilized as the foundational document by WCCHD, stakeholders, and community partners for evidence-based goal setting and decision making regarding the health of the county. The document will be used to educate and mobilize community partners and residents, develop priorities, gather resources, and plan actions to improve health (3). In addition, the results from the four MAPP assessments will be used to drive the development of the CHIP to address the top issues in the county.

Though Williamson County consistently ranks among the healthiest in Texas, the assessment revealed health conditions, behaviors, and disparities that require additional resources and attention. These existing and emerging community health needs include: heart disease, cancer, intentional self-harm (suicide), chlamydia and gonorrhea, lack of access to health insurance, obesity, and unhealthy eating. Additionally, health disparities existed across the east/west sides of IH-35 and affect individuals with low SES and in certain demographic groups.

To improve the health of Williamson County citizens, community agencies and partners must also address various social determinants of health and work cohesively to focus county resources and attention to identified priorities. Health is influenced by environmental conditions and forces of change in the county and across the state. The community must address the challenges created by the current and future forces of change including: the growth of the county, demographic changes, role of technology, changes in access to healthcare, increasing need for community preparedness, and economic changes. Other key issues expressed by residents that should be taken into consideration include: access to healthcare, affordable childcare, awareness of resources, barriers to a healthy lifestyle, affordable housing, transportation, and access to bilingual resources.

Furthermore, a better understanding of the local public health system will help improve and better coordinate public health activities at local levels. Local partners will be able to make more effective policy and resource decisions to improve the community's public health as a whole. Three essential services of public health were identified for improvement in the local public health system: 1) mobilize community partnerships to identify and solve health problems, 2) diagnose and investigate health problems and health hazards, and 3) monitor health status to identify health problems.

The CHA and CHIP processes are community-driven and need to be led by a strong collaboration between community partners and organizations. The residents have identified many resources and assets that are available to contribute to the CHIP: non-profit organizations, faith-based organizations, the healthcare system, community partnerships and collaborations, education system, parks and recreation, and the business community.

Based on feedback from stakeholders across the county, the top five health priorities for future health improvement efforts will be:

1. **Mental Health:** Prevention, support and treatment for mental illness
2. **Access to Healthcare:** Basic, affordable healthcare available for all residents
3. **Awareness of Healthcare Resources:** Available information and communication channels for resources
4. **Active Living:** Resources, access and awareness for physical activity opportunities
5. **Chronic Disease:** Prevention, treatment and management of chronic diseases

Identification of priorities is the first step in improving the health of the community. Future steps involve developing action plans with the community during the CHIP process to address each of these priorities. This collaborative effort will be the common agenda the county will use to improve the health of all residents. Additionally, the 2016 assessment and recommendations can be used in the development of the following:

- Community health changes and trends
- Hospital-based community benefit plans
- Organizational strategic planning
- Evidence base for grant applications

WCCHD, the WWA, and our community partners hope this CHA will increase engagement in supporting the health of the people of Williamson County and maintain efforts to continue to be one of the healthiest counties in Texas. Sustained and broad community involvement is necessary to address the strategic health issues within the community and the solutions, like the issues, require the resources of multiple agencies and individuals. This shared ownership of community health among diverse stakeholders offers better mobilization and utilization of resources to achieve improvement. Even though challenges lay ahead, we strive to make Williamson County a healthy place where residents live, work, worship, play, and learn.

Appendices
Appendix A: Works Cited

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Appendix B: List of Tables and Figures

Figures

Tables

Appendix C: List of Acronyms

AIDS - Acquired Immune Deficiency Syndrome

ACS - U.S. Census Bureau 5-Year American Community Survey

AHRF - Area Health Resource File

BMI - Body Mass Index

BRFSS - Behavioral Risk Factor Surveillance System

CHA - Community Health Assessment

CHIP - Community Health Improvement Plan

CHSA - Community Health Status Assessment

CDC - Centers for Disease Control and Prevention

CLRD - Chronic Lower Respiratory Disease

CNI - Community Need Index

COPD - Chronic Obstructive Pulmonary Disease

CTSA - Community Themes and Strengths Assessment

DLT - District Leadership Team

DM - Diabetes mellitus

DSHS – (Texas) Department of State Health Services

DSHS CHS – (Texas) Department of State Health Services Center for Health Statistics

ERCOT - Electric Reliability Council of Texas

EPHS - Essential Public Health Services

FoCA - Forces of Change Assessment

FQHC - Federally Qualified Health Center

HIV - Human Immunodeficiency Virus

HFZ - Healthy Fitness Zone (in relation to FITNESSGRAM®)

HP2020 - Healthy People 2020

LPHSA - Local Public Health System Assessment

MAPP - Mobilizing for Action through Planning and Partnerships

MERS - Middle East Respiratory Syndrome

MMWR - Morbidity and Mortality Weekly Report

MVPA - Moderate to Vigorous Physical Activity

NACCHO - National Association of County and City Health Officials

NCCDPHP - National Center for Chronic Disease Prevention and Health Promotion

NI - Needs Improvement (in relation to FITNESSGRAM®)

NIH - National Institutes of Health

NI- HR - Needs Improvement- Health Risk (in relation to FITNESSGRAM®)

NIS - National Immunization Survey

NPHPS - National Public Health Performance Standards

NVSS - National Vital Statistics System

OSD - Office of the State Demographer

PID - Pelvic Inflammatory Disease

PM - Particulate Matter

PPH - Potentially Preventable Hospitalization

QOL - Quality of Life

SARS - Severe Acute Respiratory Syndrome

SEER SCP - Surveillance, Epidemiology, and End Results Program State Cancer Profiles

SES - Socioeconomic Status

SNAP - Supplemental Nutrition Assistance Program

SOG – Standard Operating Guidelines

SOP – Standard Operating Procedures

STD - Sexually Transmitted Disease

STI - Sexually Transmitted Infection

TB - Tuberculosis

TEA - Texas Education Agency

USDA - U.S. Department of Agriculture

WCCHD - Williamson County and Cities Health District

WIC - Women, Infant, and Children Program

WHO - World Health Organization

WWA - WilCo Wellness Alliance

Appendix D: Glossary of Terms

Age-adjusted rate - A rate of morbidity or mortality in a population that is statistically modified to eliminate the effect of age differences in a population.

American Community Survey (ACS) - A nationwide survey that collects and produces information on demographic, social, economic, and housing characteristics about our nation's population every year

Asset mapping - A tool for mobilizing community resources. It is the process by which the capacities of individuals, civic associations, and local institutions are inventoried

Behavioral Risk Factor Surveillance System (BRFSS) - A telephone (landline and cellphone) survey that collects data on health-related risk behaviors, chronic health conditions, and use of preventive services from U.S. residents 18 years of age and older.

Behavioral risk factors - Behavior which is believed to cause, or to be a contributing factor to, accidents, injuries, disease, and death during youth and adolescence and significant morbidity and mortality in later life

Body Mass Index (BMI) - A common measure of body fat calculated from a person's weight and height. In adults, a BMI between 18.5 and 24.9 is considered healthy. A BMI of 25 to 29.9 is overweight and a BMI of 30 or more is obese. A child's (ages 2 to 19 years) BMI is calculated using a height and weight calculation, and the category is determined by plotting the BMI value on a gender and age specific growth chart.

Built environment - Human-made surroundings in which people live, work, and play.

Cause of death - Any condition which leads to or contributes to death and is classifiable according to the tenth revision of The International Classification of Diseases (ICD-10).

Census tract - Small subdivisions of a county used by the U.S. Census to provide a geographic boundary in which to collect statistical data. The average population size of a census tract is 4,000 people, but it can range between 1,200 and 8,000 people.

Communicable diseases - Diseases that spread from one person to another or from an animal to a person. The spread often happens by air-, water-, or food-borne viruses, fungi , parasites or bacteria, but also through blood or other bodily fluid.

Community Need Index - Score is an average of five different barrier scores that measure various socioeconomic indicators of each community

Demographic characteristics - Include measures of total population as well as percent of total population by age group, gender, race and ethnicity, where these populations and sub-populations are located, and the rate of change in population density over time, due to births, deaths and migration patterns.

Department of Health and Human Services (HHS) - The federal agency that oversees CMS (Centers for Medicare&Medicaid Services), which administers programs for protecting the health of all Americans, including Medicare, the Marketplace, Medicaid, and the Children's Health Insurance Program.

Disproportionate(ly) - Characteristic in which an individual or a population has a greater or smaller risk for certain disease, health behavior, or health outcome.

Essential Public Health Services - The public health activities that all communities should undertake and serve as the framework for the NPHPS instruments

Ethnicity - The classification of a population that shares common characteristics, such as, religion, traditions, culture, language, and tribal or national origin.

Focus group - A small-group discussion guided by a trained leader. It is used to learn more about opinions, perceptions, beliefs, and attitudes on a designated topic, and then to guide future action.

Food desert - Urban neighborhoods and rural towns without ready access to fresh, healthy, and affordable food. Instead of supermarkets and grocery stores, these communities may have no food access or are served only by fast food restaurants and convenience stores that offer few healthy, affordable food options.

Health - State of complete physical, mental and social well-being and not merely the absence of disease or infirmity

Health behaviors - Activity undertaken by an individual, regardless of actual or perceived health status, for the purpose of promoting, protecting or maintaining health, whether or not such behavior is objectively effective towards that end

Health disparities - Preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by socially disadvantaged populations

Health equity - Attainment of the highest level of health for all people

Health indicator - Characteristic of an individual, population, or environment which is subject to measurement (directly or indirectly) and can be used to describe one or more aspects of the health of an individual or population (quality, quantity and time)

Health outcomes - Change in the health status of an individual, group or population which is attributable to a planned intervention or series of interventions, regardless of whether such an intervention was intended to change health status

Healthy People 2020 (HP2020) - Provides science-based, 10-year national objectives for improving the health of all Americans

Hispanic/Latino Ethnicity - Hispanic or Latino origin includes persons of Mexican, Puerto Rican, Cuban, Central and South American, and other or unknown Latin American or Spanish origins, almost always self-reported.

Incidence - The number of newly diagnosed cases of a disease.

Incidence rate - An estimate of the number of new cases of disease in a population, expressed as the number of cases in a unit of time (for example, a year) for a population of a given size (for example, per 100,000 people).

Infant mortality rate - The number of infant deaths (less than 1 year of age) for every 1,000 live births.

Infectious diseases - Diseases caused by pathogenic microorganisms, such as bacteria, viruses, parasites or fungi; the diseases can be spread, directly or indirectly, from one person to another

Medicaid - A joint federal and state program that helps with medical costs for some people with limited income and resources. Medicaid programs vary from state to state, but most health care costs are covered if you qualify for both Medicare and Medicaid.

Medicare - Medicare is the federal health insurance program for people who are 65 or older, certain younger people with disabilities, and people with End-Stage Renal Disease (permanent kidney failure requiring dialysis or a transplant, sometimes called ESRD).

Morbidity - A term used to refer to an illness or illnesses in a population.

Mortality - A term used to refer to death or deaths in a population.

Mortality rate (Death Rate) - A measure of the frequency of death in a defined population during a specified interval of time.

National Association of County and City Health Officials (NACCHO)- An association with members from 2,800 local health departments across the United States that seeks health, equity, and security for all people in their communities through public health policies and services. NACCHO's mission is to be a leader, partner, catalyst, and voice for local health departments in order to ensure the conditions that promote health and equity, combat disease, and improve the quality and length of all lives.

Percent - A ratio "out of 100." Example: 75% means 75 out of 100.

Population - The total of all individuals in a given area.

Population projections – Population projections are estimates of the population for future dates. They are typically based on an estimated population consistent with the most recent decennial census and are produced using the cohort-component method. Projections illustrate possible courses of population change based on assumptions about future births, deaths, net international migration, and domestic migration. In some cases, several series of projections are produced based on alternative assumptions for future fertility, life expectancy, net international migration, and (for state-level projections) state-to-state or domestic migration.

Poverty status - Family income expressed as a percent of the poverty threshold. Each member of a family is classified according to the total income of the family. Unrelated individuals are classified according to their own income. Reported and imputed income levels are grouped into categories relative to the poverty threshold. The poverty threshold for each year is based on definitions originally developed by the Social Security Administration. These include a set of money income thresholds that vary by family size and composition. Families or individuals with income below their appropriate thresholds are classified as below the poverty threshold. These thresholds are updated annually by the U.S. Census Bureau to reflect changes in the Consumer Price Index for all urban consumers (CPI-U).

Prevalence - The total proportion of disease within a population.

Primary data – Original data collected for a specific research goal and collected by the researchers themselves.

Qualitative data - Non-numerical information often presented in narrative form.

Quantitative data – Numerical information often called "statistics."

Race - A group of people united or classified together on the basis of common history, nationality, or geographic distribution.

Rate - Occurrence of a disease within a population in a given time period expressed as a ratio. Example: 5.0 per 100,000 means 5 cases for every 100,000 people.

Risk factor - Any characteristic or exposure of an individual that increases the likelihood of developing a disease or injury.

Secondary data - Information that has already been collected by someone else. Often secondary data already have been analyzed and disseminated and can be used without any additional calculations.

Social determinants of health - Conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks

Socioeconomic Status (SES) - Social standing or class of an individual or group often measured as a combination of education, income, and occupation.

Stakeholders - All persons, agencies and organizations with an investment or stake in the health of the community and the local public health system.

Supplemental Nutrition Assistance Program (SNAP) - A program that offers nutrition assistance to eligible, low-income individuals and families and provides economic benefits to communities.

Women, Infants, and Children (WIC) Program - A federal program that provides nutritious foods, breastfeeding support and nutrition education to low-income pregnant, postpartum and breastfeeding women, and infants and children until 5 years of age who are found to be at nutritional risk.

Appendix E: Stakeholder Focus Group Results from Truven Health Analytics

Baylor Scott & White

Williamson County & Cities Health District

Williamson County, Texas Focus Group September 24, 2015

Executive Summary

Baylor Scott & White (BSW) engaged Truven Health Analytics, Inc. (Truven) to conduct a series of focus groups as a means to assess the perception of health needs in Williamson County, Texas. Individuals from varied backgrounds represented Williamson County, from five perspectives; consumers, community leaders / community groups, public organizations, providers and experts in public health. The participants were randomly divided into three large groups, each moderated by two Truven representatives. Each group was then divided into 2-3 breakout groups. The breakout groups were posed with three questions to discuss. This document represents the summarization of the discussions and themes by group.

An overarching goal of community health and wellness was evident throughout each group's discussions. The focus was on the two major populations that need to be cared for: those with a higher socioeconomic status (SES) and those with a lower SES. There is agreement between all groups that the population of Williamson County is growing by leaps and bounds - which is increasing the challenges of a socioeconomic divide between urban/suburban and rural areas.

The disparity between these groups has highlighted health and wellness challenges for all areas despite a positive overall health status for the county. Barriers to healthcare identified include lack of public transportation, cultural and language differences, lack of resources (physicians and other healthcare providers and multi-lingual support resources) and health literacy. Health status concerns identified included obesity (adults and children), diabetes, cardiac, mental health, senior health, and chronic disease management and prevention. Discussions around the Williamson County healthcare system identified the need for care coordination across the all venues (inpatient, ambulatory, home) and health education. Within the underserved population suggestions for education include programs such as: current trends in healthcare, child safety practices, mental health awareness, STDs and "living healthy". Many assets were identified as available to collaborate with on improving the health status of Williamson County.

Breakout Group Red

Williamson County is experiencing rapid population growth in both rural and urban areas. Significant growth has been noted in the Spanish speaking and aging populations. The group believes that much of the growth is attributed to good schools and educational opportunities, available green space, employment opportunities and

social media advertising the city of Austin as one of the "Top 10" cities to live in the United States.

Urban areas are focused more on health and wellness. The growth of a higher SES within these areas have contributed to a robust healthcare infrastructure, good education and higher education options, access to green space, fitness facilities and healthy eating. Increase in population density has contributed to traffic congestion due to the lack of public transportation and limited sidewalks. There is a need for better public education to promote awareness of chronic disease such as obesity, cardiac health and diabetes.

The rural locations struggle with meeting their basic needs such as access to food, clothing, shelter, safety and affordable housing. Access to healthcare and educational opportunities are not perceived as an immediate need. If basic needs were met, there are still the challenges of no public or personal transportation to get to their healthcare appointments. Cultural attitudes and beliefs play a role in not seeking immediate help for an illness. The lack of bi-lingual/multilingual resources impacts potential education opportunities to support the community. Access to specialty physicians is a problem. With Medicaid or without insurance the wait time can be up to a year.

Across Williamson County there are challenges that impact both urban and rural areas. Due to the rapid population growth resource availability for seniors is not adequate. The communication and education processes are fragmented and it is not clear what information gets out to the community, for example, available classes, locations, timing and the latest vaccination information needed to support parental decision making. The available channels of communication to impact the perception of mental health (cultural beliefs and attitudes) are missing. Access to patient portals such as "MyChart" is limited by availability and the knowledge to use technology. There is a lack of available resources to care for and support mental health issues.

The top three health needs identified for Williamson County were different between the two smaller breakout groups. Breakout 1 identified obesity and associated conditions, mental health and senior health (not all physicians accept Medicare). Breakout 2 identified bridging the gap between cultural beliefs/habits and healthcare needs, healthcare costs, access to an environment that promotes a healthy lifestyle.

Breakout Group Green

Williamson County is experiencing rapid population growth, especially in the Hispanic and Asian American communities. The retirement community in Georgetown is expanding rapidly as well.

Healthcare and higher education have become major factors in the growth of the county. With growth in population comes a greater diversity of need from the community. The increasing need of services and bi/multilingual resources were discussed.

Urbanization in the central area of the county has led to an increase in hospitals, urgent care facilities, physicians and green space which has improved health and wellness leading to a ranking of the 3rd healthiest county in Texas. Increased density has contributed to traffic congestion which highlights the need for improved public transportation and sidewalk areas. One of the concerns identified is increasing congestion and urbanization is leading to less healthy diet due to the easier access to fast food options.

There is an increase in the disparity of access and quality of care between suburban/urban and rural parts of county. The communities located east of I-35 are primarily low socioeconomic, underinsured and underserved. Public transportation is unavailable, there are unsafe roads, no sidewalks and no ability to get to the services they need such as preventative (includes education), acute and post-acute care and support. The group expressed a concern that there was not enough representation from the rural areas within the focus groups.

The top three health needs identified for Williamson County revolve around access to healthcare, transportation and life style modifications in support of chronic disease management and prevention.

Breakout Group Blue

Williamson County is experiencing rapid population growth which is having both positive and negative effects on the quality of life within the county. Migrations from Travis to Williamson County have contributed to a fast growing under-privileged population increasing the socioeconomic divide between the urban and rural populations. Property values are much higher in the urban/suburban areas, and this is where new resources are made available. The rural areas are not attracting needed resources.

For those with higher SES, the major problems are related to health education. For example, many people choose to decline vaccinations for their children based on inaccurate information causing a decrease in vaccination rates. This population is very involved in current health and wellness trends and has the infrastructure available to support their needs such as access to good schools, higher education, parks, trails, healthy food options and a robust healthcare system. Public transportation is lacking which is causing major traffic congestion and impacting the ease of access. The group also expressed concerns regarding the medical school being in the community, stating that it decreases the number of attending physicians available to care for patients (residents are available, not many primary care physicians).

Populations in rural areas are more focused on meeting basic needs such as food, safety, jobs and affordable housing. Healthcare and education are not a priority. Language barriers impact an understanding of available programs and services. These areas have access issues primarily due to a lack of public and private transportation. Services are not in the immediate area and are often under-utilized due to access challenges. The county is currently developing a program focusing on women's health, but they expect transportation challenges to limit participation. There is also a need for education on being healthy within the underprivileged population; education on child safety practices, STDs (high chlamydia rates), create tobacco restrictions in public places and provide additional services for mental health. Food deserts are a challenge, as well as, lack of healthy food options or access to green space.

The top three health needs identified for Williamson County revolve around access to healthcare and transportation, health literacy and child development around the indigent populations.

Appendix F: Community Member Focus Group Guide

Date: _____ Location: _____ Facilitator: _____

Welcome

Hi, my name is _____ and I am with (organization). Thank you for taking the time to speak with me today.

In collaboration with community members and partners, Williamson County and Cities Health District is in the process of developing a community health assessment to understand the health of Williamson County.

As part of this process, we are having discussions like these around the county with community members, government officials, health care providers, and staff from a range of community organizations. We are interested in hearing about health priorities, strengths and needs of the community, and suggestions for improvement

I want everyone to know there isn't right or wrong answers and it is ok that your opinions might differ from one another. Please feel free to share your opinions, both positive and negative.

Ground Rules and Consent Review

As you can see, I have a colleague with me, _____who will take notes during our discussion. I want to give full attention, so she is helping me out by taking notes during the group and she doesn't want to distract from our discussion.

Just in case we miss something in our note-taking, we are also audio-taping the discussion. We are conducting several of these types of groups, and want to make sure we capture everyone's opinions. After all of the groups are complete, we will be writing a summary report of the themes that have come up. In that report, we might provide some general information on what we discussed tonight, but I will not include any names or identifying information. Nothing you say here will be connected to your name.

Lastly, please turn off your cell phones or at least put them on vibrate mode. The group will last only about 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?

Introductions

Before we begin our discussion about the community, let's spend some time getting to know each other. Let's go around and introduce ourselves by sharing:

Your name

What city or town you live in

When you hear the word "health" what is the first thing that comes to mind?

Community Issues

We are going to be talking a lot about community during this discussion. How would you describe your community?

What is important about community?

What are some of the biggest strengths or most positive things about your community? (**Probe**: community and organizational assets)

What are some of the biggest problems or concerns in your community (**Probe if needed:** health, economic, social, safety etc.)

(If not discussed) What challenges around transportation have you faced, or believe others in the community face day to day?

Challenges around housing? Employment? Education? Environment? Discrimination?

Over the last two to three years, what changes have you seen in your community? (For example: demographic shifts, aging population, migration, recession etc.)

Health Priorities

You mentioned some health concerns in the community are _____. What programs, or services do you know of that are available?

What are some barriers to receiving these services in your area?

What's missing? What programs, services, or policies are needed to better serve your community?

What do you think the community should do to address these issues?

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 transportation)

Probe if needed: What part of getting health care was the most challenging? Was it finding a doctor? Making an appointment? Getting to the office/clinic? Being at the office/clinic and understanding the doctor?

What else makes it hard for you to be healthy or make healthy choices?

We've talked a lot about important health issues in the community, including _____. The last time we conducted a health assessment like this one, the community ranked the issues by priority, which we used to take action to help improve health. These were the top 10 issues in 2013 in no particular order: (show health priorities from 2013 CHA on poster board). Let's brainstorm all the health priorities you can think of and then we will pick the top five.

I'd like you to think ahead about the future of your community. When you think about the community three to five years from now, what is your vision for a healthy community?

Closing

Thank you so much for your time. That's all the questions we have. Is there anything else you would like to mention that we didn't already cover? Please stay to collect your gift card for spending time with us and sharing your opinions. Thank you again.

Appendix G: Priority of Model Standards

Local Public Health System Assessment- Priority Rating

This survey is designed to evaluate the priority of each of the 10 Essential Public Health Services to the Williamson County Public Health System as a whole, which includes all community partners (hospitals, non-profit organizations, health service providers, community organizations, mental health organizations, law enforcement, social services, faith based organizations, and many more).

Please consider past and current activity in each of these sectors when thinking about these priorities for the county as a whole.

INSTRUCTIONS: In the response column, select your priority rating for the next 3 years from the drop down menu options for the Model Standards under each Essential Service. Response options range on a scale of 1 to 10, with 1 being the lowest and 10 being the highest.

* 1. Essential Service #1 - Monitor health status to identify health problems

On a scale of 1 to 10, what is the priority of each of the following to our local public health system?

- Population-based Community Health Assessment
- Population-based Community Health Assessment Response menu
- Current Technology to Manage and Communicate Population Health Data
- Current Technology to Manage and Communicate Population Health Data Response menu
- Maintenance of Population Health Registries
- Maintenance of Population Health Registries Response menu

* 2. "Essential Service #2 - Diagnose and investigate health problems and health hazards

On a scale of 1 to 10, what is the priority of each of the following to our local public health system?"

- Identification and Surveillance of Health Threats
- Identification and Surveillance of Health Threats Response menu
- Investigation and Response to Public Health Threats and Emergencies
- Investigation and Response to Public Health Threats and Emergencies Response menu
- Laboratory Support for Investigation of Health Threats
- Laboratory Support for Investigation of Health Threats Response menu

* 3. "Essential Service #3 - Inform, educate and empower people about health issues

On a scale of 1 to 10, what is the priority of each of the following to our local public health system?"

- Health Education and Promotion
- Health Education and Promotion Response menu
- Health Communication
- Health Communication Response menu
- Risk Communication
- Risk Communication Response menu

* 4. "Essential Service #4 - Mobilize community partnerships to identify and solve health problems

On a scale of 1 to 10, what is the priority of each of the following to our local public health system?"

- Constituency Development
- Constituency Development Response menu
- Community Partnerships
- Community Partnerships Response menu

* 5. "Essential Service #5 - Develop policies and plans that support individual and community health efforts

On a scale of 1 to 10, what is the priority of each of the following to our local public health system?"

- Governmental Presence at the Local Level
- Governmental Presence at the Local Level Response menu
- Public Health Policy Development
- Public Health Policy Development Response menu
- Community Health Improvement Process and Strategic Planning
- Community Health Improvement Process and Strategic Planning Response menu
- Plan for Public Health Emergencies
- Plan for Public Health Emergencies Response menu

* 6. "Essential Service #6 - Enforce laws and regulations that protect health and ensure safety

On a scale of 1 to 10, what is the priority of each of the following to our local public health system?"

- Review and Evaluation of Laws, Regulations and Ordinances
- Review and Evaluation of Laws, Regulations and Ordinances Response menu
- Involvement in the Improvement of Laws, Regulations, and Ordinances
- Involvement in the Improvement of Laws, Regulations, and Ordinances Response menu
- Enforcement of Laws, Regulations, and Ordinances
- Enforcement of Laws, Regulations, and Ordinances Response menu

  * 7. "Essential Service #7 - Link people to needed personal health services and assure the provision of health care when otherwise unavailable

On a scale of 1 to 10, what is the priority of each of the following to our local public health system?"

- Identification of Personal Health Service Needs of Populations
- Identification of Personal Health Service Needs of Populations Response menu
- Linkage of People to Personal Health Services
- Linkage of People to Personal Health Services Response menu

* 8. "Essential Service #8 - Assure a competent public health and personal health care workforce

On a scale of 1 to 10, what is the priority of each of the following to our local public health system?"

- Workforce Assessment, Planning and Development
- Workforce Assessment, Planning and Development Response menu
- Public Health Workforce Standards
- Public Health Workforce Standards Response menu
- Life-Long Learning through Continuing Education, Training and Mentoring
- Life-Long Learning through Continuing Education, Training and Mentoring Response menu
- Public Health Leadership Development
- Public Health Leadership Development Response menu

* 9. "Essential Service #9 - Evaluate effectiveness, accessibility, and quality of personal and population-based health services

On a scale of 1 to 10, what is the priority of each of the following to our local public health system?"

- Evaluation of Population-based Health Services
- Evaluation of Population-based Health Services Response menu
- Direct contribution of the local health department to evaluation.
- Direct contribution of the local health department to evaluation. Response menu
- Evaluation of the Local Public Health System
- Evaluation of the Local Public Health System Response menu

* 10. "Essential Service #10 - Research for new insights and innovative solutions to health problems

On a scale of 1 to 10, what is the priority of each of the following to our local public health system?"

- Fostering Innovation
- Fostering Innovation Response menu
- Linkage with Institutions of Higher Learning and/or Research
- Linkage with Institutions of Higher Learning and/or Research Response menu
- Capacity to Initiate or Participate in Research
- Capacity to Initiate or Participate in Research Response menu

Appendix H: Local Public Health System Performance Assessment Instrument

Adapted from the NACCHO instrument.

Essential Service 2: Diagnose and Investigate

Health Problems and Health Hazards

Are we ready to respond to health problems or health hazards in our county?

How quickly do we find out about problems?

How effective is our response?

Diagnosing and investigating health problems and health hazards in the community encompass the following:

• Accessing a public health laboratory capable of conducting rapid screening and high-volume testing.

• Establishing active infectious disease epidemiology programs.

• Creating technical capacity for epidemiologic investigation of disease outbreaks and patterns of the following: (a) infectious and chronic diseases, (b) injuries, and (c) other adverse health behaviors and conditions.

Partners gathered to discuss the performance of the local public health system (LPHS) in diagnosing and investigating health problems and health hazards include, but are not limited to:

- The local health department or other governmental public health agency
- The local board of health or other local governing entity
- Hospitals
- Long-term care facilities
- Preschool and day care programs
- Public and private schools
- Colleges and universities
- Employers
- Managed care organizations
- Primary care clinics, including Federally Qualified Health Centers (FQHCs)
    - Physicians
    - Public safety and emergency response organizations
    - Public health laboratories

Model Standard 2.1: Identifying and Monitoring Health Threats

The LPHS conducts surveillance to watch for outbreaks of disease, disasters, and emergencies (both natural and manmade), and other emerging threats to public health. Surveillance data include information on reportable diseases, potential disasters and emergencies, or emerging threats. The LPHS uses surveillance data to notice changes or patterns right away, determine the factors that influence these patterns, investigate the potential dangers, and find ways to lessen the effect on public health. The best available science and technologies are used to understand the problems, determine the most appropriate solutions, and prepare for and respond to identified public health threats. To ensure the most effective and efficient surveillance, the LPHS connects its surveillance systems with state and national systems. To provide a complete monitoring of health events, all parts of the system work together to collect data and report findings.

To accomplish this, members of the LPHS work together to:

- Participate in a comprehensive surveillance system with national, state, and local partners to identify, monitor, and share information and understand emerging health problems and threats.
- Provide and collect timely and complete information on reportable diseases, potential disasters and emergencies, and emerging threats (natural and manmade).
- Ensure that the best available resources are used to support surveillance systems and activities, including information technology, communication systems, and professional expertise.

Discussion Questions for Model Standard 2.1

Awareness

a. How many of you are aware of the LPHS contributions to surveillance system(s) designed to monitor health problems and identify health threats?

Frequency

a. What is the time frame for submitting reportable disease information to the state or the LPHS?

Quality and Comprehensiveness

a. Which data sets are included in the surveillance system?
b. How well is the surveillance system integrated with national and/or state surveillance systems?
c. Is the surveillance system compliant with national and/or state health information exchange guidelines?
d. What types of resources are available to support health problem and health hazard surveillance and investigation activities within the LPHS?

Usability

a. How does the LPHS use the surveillance system(s) to monitor changes in the occurrence of health problems and hazards?

At what level does the LPHS... (Ranked "No activity", "Minimal", "Moderate", "Significant", or "Optimal")

> 2.1.1 Participate in a comprehensive surveillance system with national, state, and local partners to identify, monitor, and share information and understand emerging health problems and threats?

> 2.1.2 Provide and collect timely and complete information on reportable diseases and potential disasters, emergencies, and emerging threats (natural and manmade)?

> 2.1.3 Ensure that the best available resources are used to support surveillance systems and activities, including information technology, communication systems, and professional expertise?

Discussion Notes for Model Standard 2.1

Strengths Weaknesses:

Short-Term Improvement:

Opportunities:

Long-Term Improvement:

Opportunities:

Model Standard 2.2: Investigating and Responding to Public Health

Threats and Emergencies

The LPHS stays ready to handle possible threats to public health. As a threat develops—such as an outbreak of a communicable disease, a natural disaster, or a biological, chemical, nuclear, or other environmental event—a team of LPHS professionals works closely together to collect and understand related data. Many partners support the response, with communication networks already in place among health-related organizations, public safety, rapid response teams, the media, and the public. In a public health emergency, a jurisdictional Emergency Response Coordinator leads LPHS partners in the local investigation and response. The response to an emergent event is in accordance with current emergency operations coordination guidelines.

To accomplish this, members of the LPHS work together to:

- Maintain written instructions on how to handle communicable disease outbreaks and toxic exposure incidents, including details about case finding, contact tracing, and source identification and containment.
- Develop written rules to follow in the immediate investigation of public health threats and emergencies, including natural and manmade disasters.
  - Designate a jurisdictional Emergency Response Coordinator.
  - Rapidly and effectively respond to public health emergencies according to emergency operations coordination guidelines.
  - Identify personnel with the technical expertise to rapidly respond to possible biological, chemical, or nuclear public health emergencies.

- Evaluate emergency response exercises and incidents for effectiveness and opportunities for improvement (e.g., using hot washes, After Action Reports, and Improvement Plans).

Discussion Questions for Model Standard 2.2

Involvement

a. Who is the LPHS designee serving as the Emergency Response Coordinator within the jurisdiction?
b. How does the Emergency Response Coordinator coordinate emergency activities within the LPHS?
c. Does the LPHS maintain a current list of personnel with the technical expertise to respond to natural and intentional emergencies and disasters?
d. How does the LPHS ensure a timely response from emergency personnel, including sufficient numbers of trained professionals?
e. How does the LPHS mobilize volunteers during a disaster?

Quality and Comprehensiveness

a. How does the LPHS use written processes and standards for implementing a program of case finding, contact tracing, source identification, and containment for communicable diseases or toxic exposures?
b. How prepared are LPHS personnel to rapidly respond to natural and intentional disasters?

Usability

a. How does the LPHS evaluate public health emergency response incidents for effectiveness and opportunities for improvement (e.g., After Action Reports, Improvement Plans)?
b. How are the findings used to improve emergency plans and response?

At what level does the LPHS… (Ranked "No activity", "Minimal", "Moderate", "Significant", or "Optimal")

2.2.1 Maintain written instructions on how to handle communicable disease outbreaks and toxic exposure incidents, including details about case finding, contact tracing, and source identification and containment?

2.2.2 Develop written rules to follow in the immediate investigation of public health threats and emergencies, including natural and intentional disasters?

2.2.3 Designate a jurisdictional Emergency Response Coordinator?

2.2.4 Prepare to rapidly respond to public health emergencies according to emergency operations coordination guidelines?

2.2.5 Identify personnel with the technical expertise to rapidly respond to possible biological, chemical, or and nuclear public health emergencies?

2.2.6 Evaluate incidents for effectiveness and opportunities for improvement (such as After Action Reports, Improvement Plans, etc.)?

Discussion Notes for Model Standard 2.2

Strengths Weaknesses:

Short-Term Improvement:

Opportunities:

Long-Term Improvement:

Opportunities:

Model Standard 2.3: Laboratory Support for Investigating Health Threats

The LPHS has the ability to produce timely and accurate laboratory results for public health concerns. Whether a laboratory is public or private, the LPHS sees that the correct testing is done and that the results are made available on time. Any laboratory used by public health meets all licensing and credentialing standards.

To accomplish this, members of the LPHS work together to:

- Have ready access to laboratories that can meet routine public health needs for finding out what health problems are occurring.
- Maintain constant (24/7) access to laboratories that can meet public health needs during emergencies, threats, and other hazards.
- Use only licensed or credentialed laboratories.
- Maintain a written list of rules related to laboratories, for handling samples (including receiving, collecting, labeling, storing, transporting, and delivering), determining who is in charge of the samples at what point, and reporting the results.

Discussion Questions for Model Standard 2.3

Quality and Comprehensiveness

a. Where does the LPHS maintain ready access to laboratories able to meet routine diagnostic and surveillance needs including analysis of clinical and environmental specimens?
b. How does the LPHS use laboratory services to support time-sensitive investigations of public health threats, hazards, and emergencies?
c. What mechanisms are in place to ensure the laboratories used are all licensed and/or credentialed?
d. What current guidelines or protocols are in place for the handling of laboratory samples?
e. Are the current procedures able to stand up in a court of law, (e.g., chain of custody, coordination with law enforcement officials, Health Insurance Portability and Accountability Act (HIPAA)?) if the health event is part of a criminal act?

At what level does the LPHS… (Ranked "No activity", "Minimal", "Moderate", "Significant", or "Optimal")

2.3.1 Have ready access to laboratories that can meet routine public health needs for finding out what health problems are occurring?

2.3.2 Maintain constant (24/7) access to laboratories that can meet public health needs during emergencies, threats, and other hazards?

2.3.3 Use only licensed or credentialed laboratories?

2.3.4 Maintain a written list of rules related to laboratories, for handling samples (including collecting, labeling, storing, transporting, and delivering), determining who is in charge of the samples at what point, and reporting the results?

Discussion Notes for Model Standard 2.3

Strengths Weaknesses:

Short-Term Improvement:

Opportunities:

Long-Term Improvement:

Opportunities:

Essential Service 4: Mobilize Community Partnerships to Identify and Solve Health Problems

How well do we truly engage people in local health issues?

Mobilizing community partnerships to identify and solve health problems encompasses the following:

- Convening and facilitating partnerships among groups and associations (including those not typically considered to be health related).
- Undertaking defined health improvement planning process and health projects, including preventive, screening, rehabilitation, and support programs.
- Building a coalition to draw on the full range of potential human and material resources to improve community health.

Partners gathered to discuss the performance of the local public health system (LPHS) in mobilizing community partnerships to identify and solve health problems include, but is not limited to:

- The local health department or other governmental public health agency
- The local board of health or other local governing entity
- Hospitals and clinics
- Public and private schools
- Colleges and universities
- Health educators
- Local businesses and employers
- Managed care organizations
- Faith-based organizations
- Non-profit organizations/advocacy groups
- Civic organizations
- Neighborhood organizations
- Other community/grassroots organizations
- Public Information Officers
- Media
- Community members
- Substance abuse or mental health organizations
- City and county governmental agencies
- Ministerial alliances
- United Way
- Worksite wellness councils
    - Local chambers of commerce
    - State and federal programs
    - Health-related coalition leaders

Model Standard 4.1: Constituency Development

The LPHS actively identifies and involves community partners—the individuals and organizations (constituents) with opportunities to contribute to the health of communities. These stakeholders may include health, transportation, housing, environmental, and non-health related groups, and community members. The LPHS manages the process of establishing collaborative relationships among these and other potential partners.

Groups within the LPHS communicate well with one another, resulting in a coordinated, effective approach to public health, so that the benefits of public health are understood and shared throughout the community.

To accomplish this, members of the LPHS work together to:

- Follow an established process for identifying key constituents related to overall public health interests and particular health concerns.
- Encourage constituents to participate in CHA, planning, and improvement efforts.
- Maintain a complete and current directory of community organizations.
- Create forums for communication of public health issues.

Discussion Questions for Model Standard 4.1

Awareness

a. How is awareness regarding the importance of public health issues developed with the community-at-large and organizations within the LPHS?

Involvement

a. What organizations are active parts of the LPHS?
b. How are new individuals/groups identified for constituency building?
c. How are constituents encouraged to participate in improving community health?
d. How are community members engaged to improve health?

Quality and Comprehensiveness

a. Does the LPHS maintain a current and accessible directory of organizations that comprise it?
b. What is the LPHS' process for identifying key constituents or stakeholders?
c. How does the LPHS maintain names and contact information for individuals and key constituent groups?

Usability

a. How accessible is the directory of LPHS organizations?
b. How does the LPHS create forums for communication of public health issues?

At what level does the LPHS… (Ranked "No activity", "Minimal", "Moderate", "Significant", or "Optimal")

4.1.1 Maintain a complete and current directory of community organizations?

4.1.2 Follow an established process for identifying key constituents related to overall public health interests and particular health concerns?

4.1.3 Encourage constituents to participate in activities to improve community health?

4.1.4 Create forums for communication of public health issues?

Discussion Notes for Model Standard 4.1

Strengths Weaknesses:

Short-Term Improvement:

Opportunities:

Long-Term Improvement:

Opportunities:

Model Standard 4.2: Community Partnerships

The LPHS encourages individuals and groups to work together so that community health may be improved. Public, private, and voluntary groups—through many different levels of information sharing, activity coordination, resource sharing, and in-depth collaborations—strategically align their interests to achieve a common purpose. By sharing responsibilities, resources, and rewards, community partnerships allow each member to share its expertise with others and strengthen the LPHS as a whole. A community group follows a collaborative, dynamic, and inclusive approach to community health improvement; it may exist as a formal partnership, such as a community health planning council, or as a less formal community group.

To accomplish this, members of the LPHS work together to:

- Establish community partnerships and strategic alliances to provide a comprehensive approach to improving health in the community.
- Establish a broad-based community health improvement committee.
- Assess how well community partnerships and strategic alliances are working to improve community health.

Discussion Questions for Model Standard 4.2

Involvement

a. What types of partnerships exist in the community to maximize public health improvement activities?
b. How do organizations within these partnerships interact?
c. If there is a broad-based community health improvement committee, what does the committee do?

Quality and Comprehensiveness

a. In what types of activities does the LPHS engage?
b. How does the LPHS review the effectiveness of community partnerships and strategic alliances?

At what level does the LPHS... (Ranked "No activity", "Minimal", "Moderate", "Significant", or "Optimal")

4.2.1 Establish community partnerships and strategic alliances to provide a comprehensive approach to improving health in the community?

4.2.2 Establish a broad-based community health improvement committee?

4.2.3 Assess how well community partnerships and strategic alliances are working to improve community health?

Discussion Notes for Model Standard 4.1

Strengths Weaknesses:

Short-Term Improvement:

Opportunities:

Long-Term Improvement:

Opportunities: