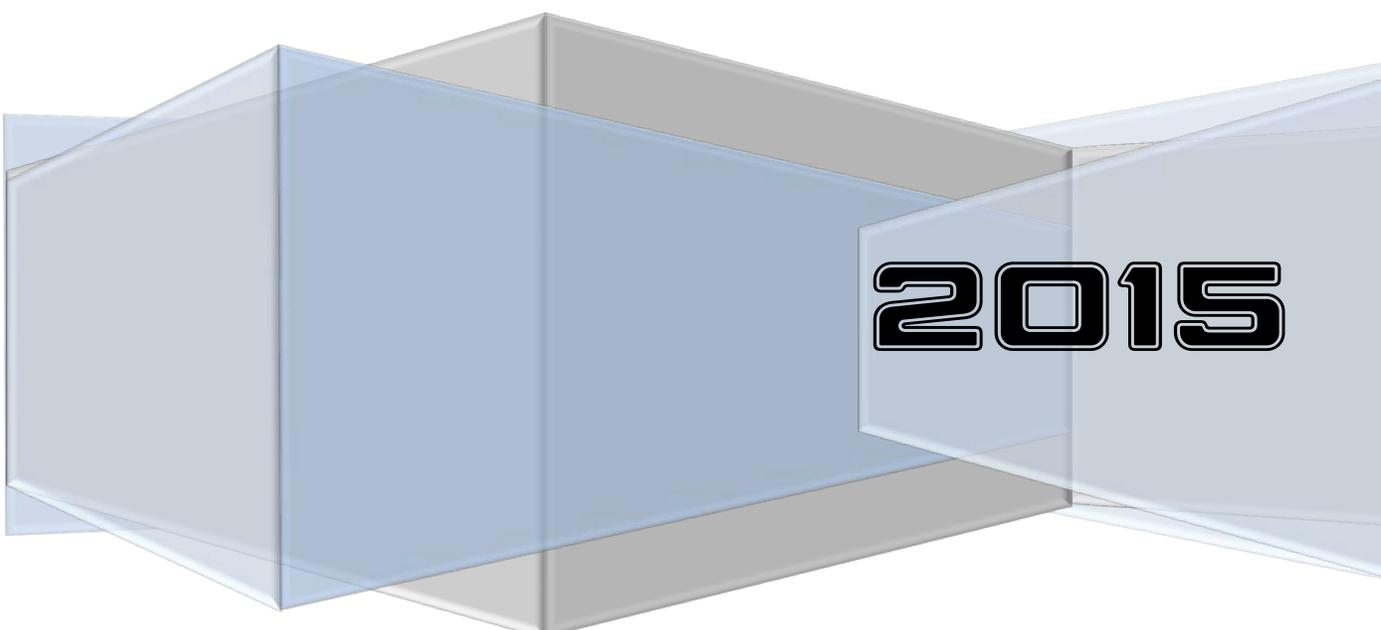


Chambers County Public Hospital District #1 *d.b.a.* Chambers Health

Community Needs Assessment



2015

Chambers County Public Hospital District #1
C o m m u n i t y N e e d s A s s e s s m e n t

Presented to:

Mr. Steven Gularte, CEO
and
Chambers Health
Board of Directors

Submitted by

Jeff Hatala, PhD, MMC
Tina T. Fields, PhD, MPH

July 2015

TABLE OF CONTENTS

Introduction	4
Location and History	4
Government	8
Geography and Weather	10
Demographics	10
Age and Gender	10
Race/Ethnicity	12
Workforce and Wages	13
Poverty and Insurance	15
Employment	17
Education	19
Health Indicators	20
Natality	20
Communicable Diseases	21
Mortality	23
Health Providers	28
Comparison with Other Communities	29
Focus Groups/Interviews	35
Recommendations	39
Sources	42
Attachment 1: Biosketches/Short Resumes	46
Attachment 2: List of Focus Group/Interview Participants	51

INTRODUCTION

Chambers County is geographically divided into three segments – East, Mid-, and West Chambers. West Chambers is separated from the remainder of the county by the Trinity River (usually referred to as “the bridge”). This body of water seems philosophically to separate the western part of the county from the remainder of the county, and residents of West Chambers seem to use Harris County for shopping, social activities, and major health care.

Both Mid Chambers and East Chambers have their own hospital district. The Mid Chambers’ Hospital District incorporates the largest landmass, and it also has numerous people from Liberty County who use the Bayside Community Hospital as well as health providers within the district.

Because most secondary data is limited to counties, this community health needs assessment will reflect Chambers County and to some extent Liberty County. With that in mind, the Community Health Needs Assessment may over- or under-reflect issues pertinent to Mid-Chambers. It will be up to the hospital administration to tease out the information which best meets its strategic planning needs. Specific issues that may be skewed include the following:

- Unemployment
- Wages
- Education attainment
- Racial/ethnic diversity
- Age distribution
- Morbidity/mortality

Despite the potential issues, the Community Health Needs Assessment can be used successfully by the hospital to identify areas in the community that directly and indirectly impact the health of the residents of the area.

The Community Health Needs Assessment will be divided into general information gleaned from review of secondary data. It will then go into a discussion of information gained from a number of focus groups that occurred in 2015 in Chambers and Liberty counties. Finally, based on the first two components, the community health needs assessment will present suggestions/recommendations to the hospital district.

LOCATION AND HISTORY

Chambers County

Chambers County (Figure 1) is located in southeastern Texas, about 20 miles east of Houston. Interstate 10 traverses the county, and there is heavy traffic from Houston eastward toward the Louisiana border. Chambers County is 871.2 square

miles, with 597.1 square miles being land area and 274.1 square miles being water. The 2010 population density per square mile is 58.77 (21). The Gulf of Mexico/Galveston Bay borders the county on the southern side. Other border areas include Harris County to the west, Jefferson County to the east, and Liberty County to the north.

Figure 1. Map of Texas Highlighting Chambers County



The area is low (altitude between sea level and 50 feet) and contains much marshland, which is not conducive to supporting large populations but is an excellent site for the county's main agricultural product – rice. The climate is subtropical, with high humidity and a long growing season (261 days per year). Because of its proximity to the Gulf of Mexico, hurricanes are a concern from June through November, and the county has had numerous hurricanes, with the last one being Hurricane Ike that struck in September 2008 (30).

Historically, the Trinity River has played an important part in the area. As early as 1754, the Spanish established a mission, Nuestra Senora de la Luz, as a protection from the French. Even without fear of the French, hurricanes and fear of Indians kept the area sparsely populated.

Mexican influence in the area became more pronounced after the Mexican War of Independence in 1821. The Mexican government issued land grants in this area, and many Texas historical figures (such as David Burnet, Lorenzo de Zavala, and Joseph Vehlein) were named to the land grants.

Most of Chambers County was originally in the Vehlein Land Grant (30). The land which today is Chambers County was given to T.J. Chambers for serving as the Chief Justice of the Supreme Court of Coahuila and Texas. The Mexican government, because of concern over Anglo influence, sought to diminish immigration and established Fort Anahuac. After the Turtle Bayou Resolutions, the Mexican soldiers left the area, but Anglo settlers kept resentment toward Mexican tariffs. Ultimately, this resentment added fuel to the Texas Revolution.

Chambers County was officially formed in 1858 from parts of Liberty and Jefferson counties. Since cotton was an important crop during the mid-1800s, the county had 344 slaves, but there were only about 70 slave owners (30). Few of the slave-owners kept many slaves, averaging less than 10 slaves each. This indicates that the plantations of this area were not the magnitude of the plantations of the “true South.” After steam sawmills were introduced into the region, cotton became less predominant and the need for slave ownership decreased.

During the 1870s, a meatpacking plant was built, which allowed ranching to become an important component of the economy. Railroads were limited, even as late as the 1890s, in the county. Because there was only one single branch line that provided freight service, Chambers County remained isolated, with most of its exports going through water transportation in Galveston County (30). The limited transportation contributed to the lack of growth of towns, with the exception being Bolivar Peninsula.

The Port of Bolivar completed the railroad link between Beaumont and the Bolivar Peninsula. Small towns developed in the northeast area of the county along this railroad line. Eventually, the western part of the county would develop its own railroad lines, built to accommodate the Goose Creek oilfield (30).

In the early 1990's, the Lone Star Canal Company developed canals that allowed farmers to begin rice farming. A total of 210,000 barrels of rice were harvested in 1903 (30); these canals, along with the marshlands, proved excellent areas to raise rice. Thus, the southern part of the county finally had a viable source of income. However, hurricanes affected the farming industry, and Chambers County has demonstrated a cycle of lost revenue due to hurricanes.

Liberty County

Lying directly north of Chambers County, Liberty County (Figure 2) technically is older than Chambers County. Liberty County was formed in 1836 in the new Republic of Texas. The original county was very large and included landmasses that today make up parts of Tyler, Chambers, San Jacinto, and Hardin Counties (31). The county has been divided, and today Liberty County has a total area of 1,176.3 square miles, with 1,158.4 square miles being land and 17.9 square miles being water (22).

Figure 2. Location of Liberty County in Comparison to Chambers County



Plantations along the Trinity River initially characterized Liberty County. The economy was based on cotton, lumber, and cattle (31). Many immigrants from Louisiana came to Liberty County, bringing slave labor with them. To encourage trade, many forms of transportation, especially railroads and river navigation, were attempted, but each met with limited success.

After the Civil War, the building of railroads continued, but efforts were placed in areas that would create “straight line” access to New Orleans. Although cattle and lumber were agriculture mainstays, during this time, rice farming became a major focus when irrigation systems were developed in the early 1900s, and the railroad industry proved to be beneficial for the exporting of this new cash crop (31).

Oil speculation, especially in southern Liberty County, began in 1901. This has continued to be an important industry in the area. For example, in 1990, the oilfields of Liberty County produced about 495 million barrels of oil (31). Because of the diversification of industry in Liberty County, this area did not suffer as much during the Great Depression as some nearby counties.

The number of industrial goods and food sources that were produced in Liberty County contributed to the need for better transportation. The building of Highway 59 greatly improved the ability to get goods exported from Liberty County. However, by the 1960s, the same highways created an exodus of residents. Many people had begun to work in Houston, some 40 miles west of the county, while maintaining their homes in Liberty County.

Today, about 36% of the county is cultivated in farm products, and forestry remains a major industry (31). Another important “industry” that has been created in the 1990s is conservation. In the 1990s, both the Big Thicket National Preserve and the Trinity River National Wildlife refuge had been established as a way to protect the natural environment. This, in turn, has created a tourism industry.

Common Characteristic

Although Liberty County is nearly twice as large as Chambers County, both have about the same amount of county roadways. According to the Texas Department of Transportation (21, 22), in 2013, Chambers County had 820.6 “lane miles”, with 321.0 of those miles having centerline stripes. Liberty County has comparable county highway miles – 852.4 total lane miles, with 373.4 of the miles being center lined. Both counties have a major highway traversing – Chambers has Interstate 10 which is a thoroughfare from the West Coast to the East Coast (especially the Houston-to-New Orleans corridor). Liberty County has Highway 59 that has long been the trade route between Houston (east Texas) to Canada, passing through Oklahoma, Kansas, Nebraska, Iowa, and Minnesota and ultimately arriving in Canada.

GOVERNMENT

Initially, much of southeast Texas was created through Spanish land grants, which were used as barriers between Mexico and the United States. People who came to this remote area were independent and self-reliant by nature. The rich soil attracted cotton farmers from Louisiana, who entered the space between Mexico and the U.S., bringing with them slaves to tend the cotton. The self-reliance, as demonstrated in the early history of southeast Texas, created a culture of independence and not depending on (and perhaps not trusting) the government.

Because of the issues surrounding Reconstruction after the Civil War, southeast Texas tended to vote Democratic until the 1920s. After this, the Republic Party began to take power, especially in elections for federal offices. Republicans carried the presidential races in 1928 (Hoover), 1952/1956 (Eisenhower), 1980/1984 (Reagan), 1988/1992 (Bush), 1996 (Dole), 2000/2004 (Bush). By the end of the 20th century, Chambers and Liberty counties were solidly Republican (30, 31).

Throughout the decades, Chambers and Liberty counties have continued to demonstrate this self-sufficiency and the ideals advocated by “small businesses.” The area has remained true to conservative values, including the belief in limited government involvement.

Today, residents continue to elect conservative Republicans to office. Although these elected officials may represent a fiscally conservative viewpoint, their vision of what is needed in the area reflects a concern for the welfare of all residents of the area. They have collaborated with federal and state funding sources to develop needed programs for the area, have collaborated between counties to develop programs that are better addressed across county boundaries rather than within counties, and have demonstrated the same “can do” spirit that was originally held by their forefathers/foremothers.

The U.S. Representatives for Chambers County are Randy Weber (District 14) and Brian Babin (District 36). Both are Republican; both sit on the Science/Space/Technology Committee, which demonstrates their interest in the role of science/technology on the area's industries (especially oil/gas). Representative Weber sits on the Foreign Affairs Committee, and Representative Babin sits on the Transportation Committee. All of these committee memberships reflect economical interests of the area (43, 50).

In the Texas Senate, Brandon Creighton (Republican) represents District 4. He had been sworn into office in August 2014 and has gained a reputation as a very conservative Republican. He has announced he is against excessive taxation, wants to implement tort reform, and would like to require drug testing to collect unemployment benefits. Wayne Faircloth (Republican) represents District 23 in the Texas House of Representatives. This is his first term, yet he has been assigned to committees that reflect the interests of the area, as he sits on the Rules and Regulations committee, and the Economic and Small Business Development committee (43, 50, and 53).

Liberty County is represented by Representative Robert Nichols (District 3), an engineer in plastics manufacturing with 32 U.S. patents and 128 foreign patents, and Senator John C. Otto (District 18) who serves as the director of business development for a tax-consulting firm. Senator Otto sits on the powerful House Appropriations Committee and the Legislative Budget Board committee (43, 50, 53).

In addition, both Chambers and Liberty Counties are represented on the State Board of Education by another Republican, David Bradley (District 7), whose livelihood is from insurance and real estate. Mr. Bradley sits on the School Finance/Permanent School Fund, which is instrumental in determining allocations of education funding. The Permanent School Fund is of special interest since it remains vested in the two flagship university systems (Texas A&M University and University of Texas) (43).

Although southeast Texas is represented at all levels of government by Republicans who appear to maintain conservative values, their ability to work "across the boundaries" to ensure that southeast Texas receives needed programs and funding is laudable. An example of this ability to work together occurred after Hurricane Ike in 2008. The county developed an excellent strategic plan (1) of needs in the area, and methodically, these needs are being addressed. Examples of projects that came from the strategic plan are the Wellness Center and the new building for the Federally Qualified Health Center (1).

GEOGRAPHY AND WEATHER

Because of their proximity to the Gulf Coast, both Chambers County and Liberty County (southern part) are very flat in topography. The soil is such that there is poor drainage. In Chambers County, the Trinity River and some bayous offer some drainage (3); water accumulations are brackish, being a mixture of fresh and salt water. Liberty County is 58% coastal prairie, but the northern part of the county is considered "Flatwoods" where forestry is a predominant crop. Like Chambers County, surface runoff is slow because of the level land and the impermeable soil types (8).

Because of their southern latitude, both Chambers and Liberty counties have long growing seasons and warm weather. Both counties have hot and humid summers, although Chambers County has milder weather due to the offshore winds, which keep summer nights cool. Even daytime temperatures are lower in Chambers County than counties located farther from the coast. Both counties have predominant winds coming from the south/southeast; due to both of these locations being downwind of petrochemical plants and Houston, wind direction should be considered in light of diseases that may be associated with environmental conditions.

Both counties have high rainfall averages, with Chambers County having an average of 51.55" per year (3) and Liberty County having approximately 54" per year (8). The year-round warm temperatures, coupled with the amount of rain and the inability for standing water to drain contribute to high numbers of insects (i.e. mosquitoes) throughout the year, many of which can contribute to public health problems.

DEMOGRAPHICS

Population by Sex and Age Cohort

Chambers County, with 597.1 square miles of landmass, has a total of 35,570 residents (35), which means a population density per square mile in 2010 of 58.77 (21). The percent of females to males is equally divided with Chambers County having 17,913 (50.4%) males and 17,657 (49.6%) females. Liberty County, at twice the landmass, has a total of 76,013 residents (35). The percent of males to females also is equally divided, but the percent of males (49%) is less than the percent of females (51%) (22).

Figures 3 and 4 reflect the division of the population by five-year age cohorts. In these two charts, the left side (green color) of the pyramid reflects the male population, with the right side (gray color) reflecting the female population. Although there appears to be differences between the age cohorts, closer examination reflects that nearly all of the age cohorts fall in the 6%-8% range when male and female percentages are combined. Thus, the population of both counties is more of a cylinder shape than a pyramid. This indicates that the population is not increasing but remaining steady. This also may indicate that few people are migrating into the counties. Liberty County, especially, reflects the cylinder shape, whereas Chambers

County does reflect some minor decrease in the young working group (20-35). Although this is not statistically significant, it probably reflects young people who have left the county to attend college or seek employment in urban areas.

Figure 3. Population Pyramid of Chambers County by Sex and Age, 2010

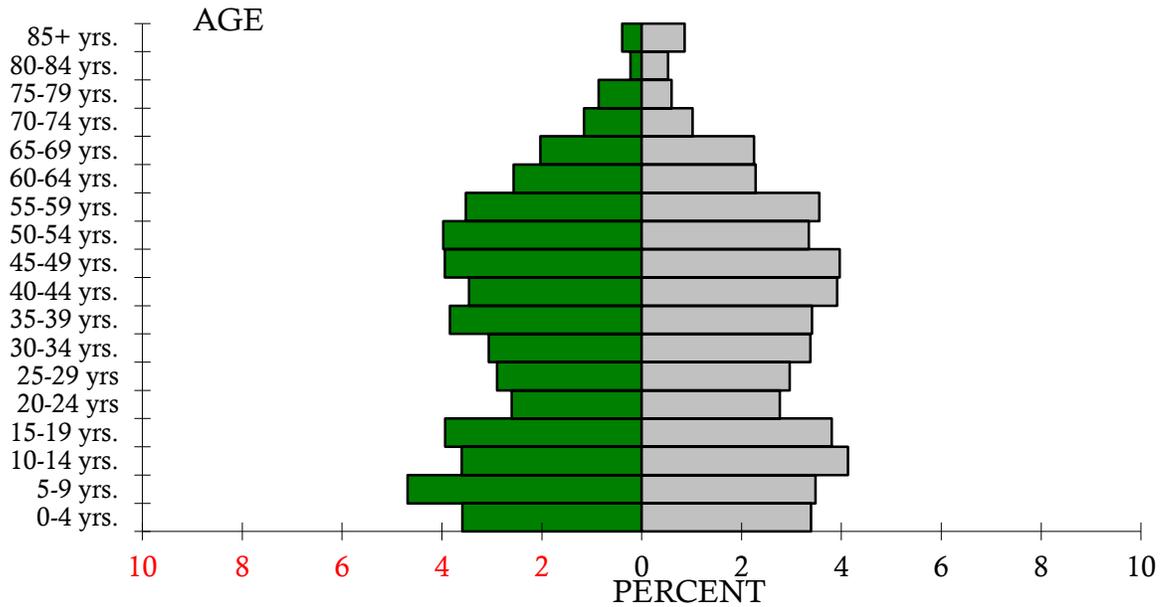
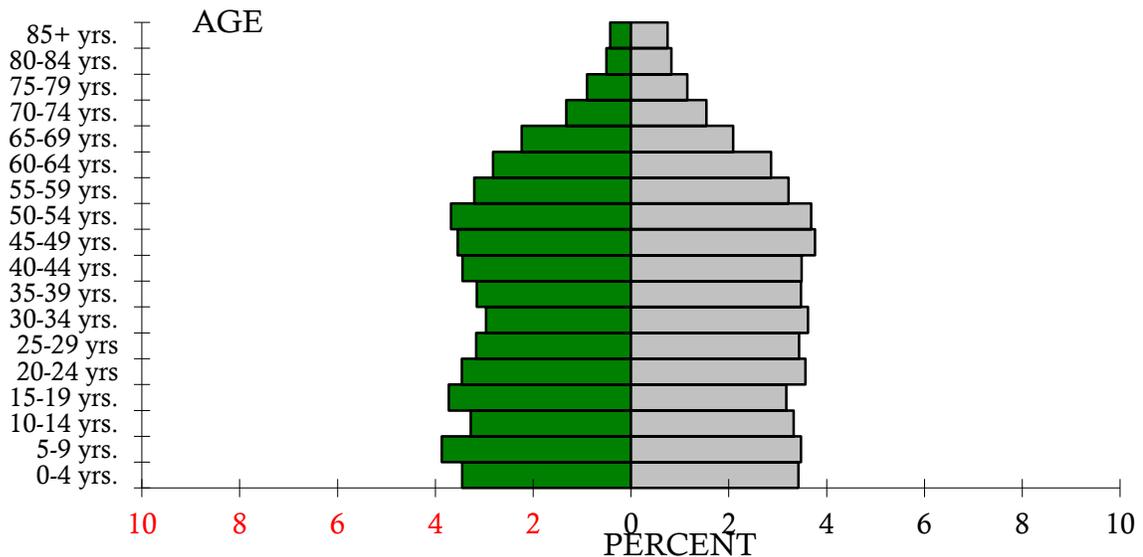


Figure 4. Population Pyramid of Liberty County, by Sex and Age Cohort, 2010



Source: U.S. Census Bureau, 2010 census

Another area of interest, especially in Chambers County, is the 85+ cohort. There are large numbers of males and (especially) females in this age cohort. This

growing number of the most-elderly residents should be a consideration in community health care planning – not just medical needs but also social and transportation needs. An increase in elderly populations is usually due to improved health care and extended life spans, which ultimately contributes to a heavier burden of disease and could potentially become public health concerns.

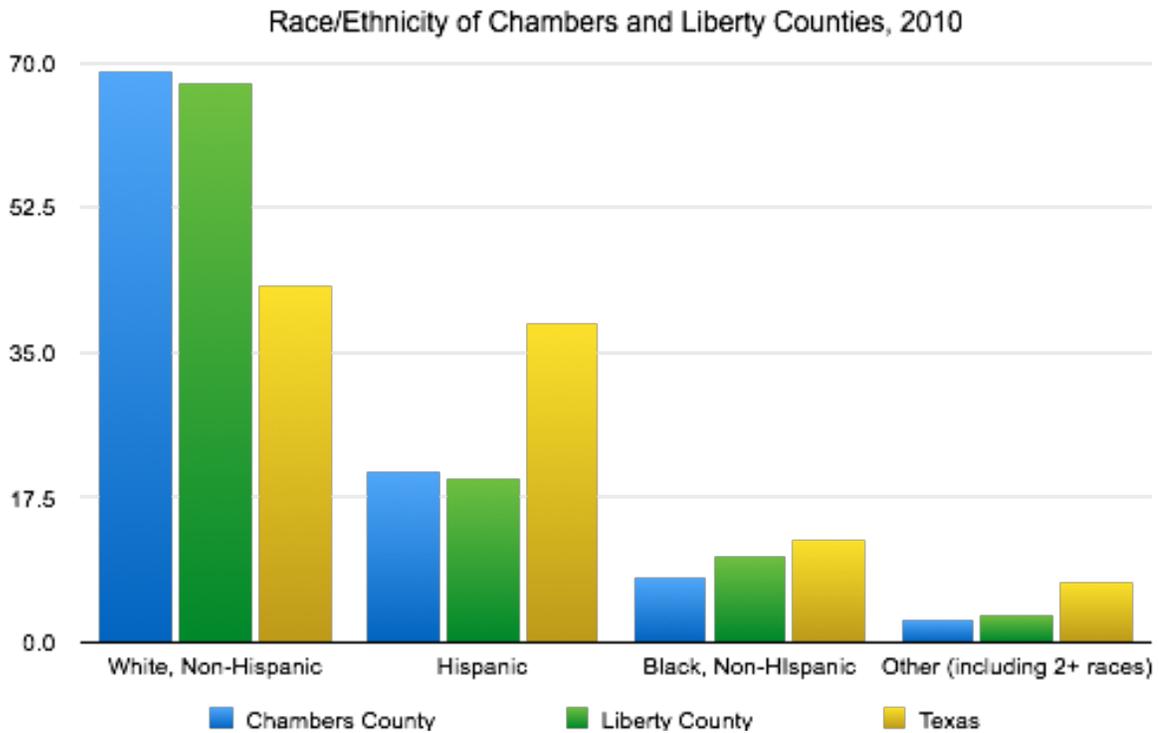
Population by Race/Ethnicity

As Figure 5 indicates, White/Non-Hispanic is the largest racial group in both Chambers and Liberty Counties, and both counties have nearly twice the percent of White/Non-Hispanics than Texas (69% for Chambers, 67.5% for Liberty vs. 44% for Texas) (21, 22, 39, 40). Although Texas became a “Majority Minority” state in 2003, the small amount of migration of people into Chambers and Liberty counties has limited the growth of Hispanics in the two counties. Furthermore, the percent of Hispanics in the two counties is approximately half the rate of Texas (20.6% for Chambers, 19.7% for Liberty vs. 38.4% for Texas).

The percent of Blacks in the two counties is more closely aligned with the state rate (7.8% for Chambers, 10.5% for Liberty vs. 12.4% for Texas) (26, 27). The percent of people who self-declared into other categories in the 2010 census also differs between Texas and these two counties. The percent of people who have self-declared as “Asian” is 0.9% for Chambers and 0.7% for Liberty compared to 4.3% for Texas – a substantial difference. People who have declared to be two- or more races in the 2010 census are about equal percentages in Chambers (1.4%), Liberty (1.5%), and Texas (1.8%) (21, 22, 39, 40).

The race/ethnicity of a community is an important consideration for planning purposes. Historically, Hispanic Texas communities tend to be younger and have greater fertility rates. Although the percentage of Hispanics in Chambers and Liberty counties is approximately half of the Texas rate, having 20% of the population self-declaring Hispanic should suggest that issues associated with this ethnic group should be considered in any planning strategies.

Figure 5.



Source: Chambers County – <http://www.txcip.org/tac/census/profile.php?FIPS=27961>
 Liberty County – <http://www.txcip.org/tac/census/profile.php?FIPS=48291>
 Texas – <http://quickfacts.census.gov/qfd/states/48.html>

Workforce and Wages

Chambers County and Liberty County are in the Gulf Coast Workforce Development Area (WDA). This WDA includes 13 counties - Austin, Brazoria, Chambers, Colorado, Fort Bend, Galveston, Harris, Liberty, Matagorda, Montgomery, Walker, Wallis, and Wharton (32). Although many of these counties have similar demographics to Chambers and Liberty counties, others (especially Harris and Galveston) are urban areas with much industry and high wages. Thus, comparison between the Gulf Coast WDA may be skewed information. However, since these counties are in close proximity to Chambers and Liberty Counties, they could provide sources of employment for residents of Chambers/Liberty counties and could be potential emigration areas for local residents. This is especially true since the mean wage for the Gulf Coast WDA is \$24.33 (entry wage being \$9.67) that is much higher than Liberty County wages and slightly higher than Chambers County (29).

As reflected in Table 1, in March 2015, Chambers County had an average weekly salary (all wages/all industries) higher than the state average but not as high as the Gulf Coast WDA. Salaries in Chambers County reflect the higher wages paid in the petrochemical industries (west Chambers County). Salaries in Liberty County are substantially less than the region or the State.

Table 1 also reflects that for the fourth quarter of 2014, Chambers County had an unemployment rate slightly higher than the Gulf Coast WDA and Texas, but Liberty County had an unemployment rate 2% higher than the state average (6.4% vs. 4.2%).

Table 1. Unemployment and Wages (most current)

Factor	Chambers County	Liberty County	Gulf Coast WDA	Texas
March '15				
Labor force	17,771	31,484	3,326,070	13,087,881
Employed	16,894	29,475	3,185,705	12,533,32
Unemployed	4.9%	6.4%	4.2%	4.2%
4th Qtr., 2014				
ave. weekly wage	\$1,144.00	\$874.00	\$1,294.00	\$1,071.00

Source: Texas Workforce Commission. www.tracer2.com

There is some evidence that people in both Chambers and Liberty counties may be commuting to Houston or other places outside of the county for work purposes. The U.S. Census projected the 2013 (work) travel times (34, 35, 36). As Table 2 indicates, over 40% of the working people in Chambers County travel 40-90+ minutes to their job, and approximately a quarter of the working people in Liberty County travel between 40-90+ minutes to their work. This would seem to indicate that a large number of people work in Houston (or surrounding suburban areas). For planning purposes, people may be more inclined to seek health care in areas where they work, especially if these services are associated with things that can occur during “lunch hour.” This also may indicate that people, because of familiarity with the worksite area, may be inclined to address wellness needs closer to work (or may even have worksite wellness programs – especially in more progressive urban areas).

Table 2. Travel Time to Work, Chambers and Liberty Counties, 2013

Time in travel	Chambers County		Liberty County	
Total working	12,316		17,394	
5-10 minutes	1,948	15.8%	3,561	20.5%
40-60 minutes	2,124	17.2%	1,834	10.5%
60-90 minutes	2,510	20.4%	2,449	14.1%
90+ minutes	388	3.1%	251	1.4%

Source: U.S. Census Bureau, 2009-2015. American Community Survey.
<http://factfinder.census.gov>

Furthermore, of the Chambers and Liberty residents who responded to the American Community Survey (34), the majority of individuals indicated that their travel to work

was as solo occupants in their vehicles. As Table 3 illustrates, 91% of residents in Chambers County who responded to the survey indicated they were solo occupants in their vehicle during travel to work. For Liberty County, 85% of the respondents indicated they were solo occupants in their vehicles. From an environmental factor as well as a safety factor, this monotonous solo travel can be harmful for the environment as well as the human drivers.

Table 3. Mode of Transportation to Work, Chambers and Liberty Counties, 2013

Mode of Travel	Chambers County	Liberty County
Total respondents to survey	15,161	26,793
Drove car, truck, van	14,526	25,841
Drove alone	13,287	21,907
Carpooled	1,239	3,934
Work at home (no travel)	261	197

Source: U.S. Census Bureau, 2009-2015. American Community Survey. <http://factfinder.census.gov>

Poverty and Insurance

Unemployment rates and type of work (i.e. service versus professional) are key factors in poverty levels and percent of people covered by health insurance. Even with the advent of the Affordable Care Act (“Obamacare”), most people rely on employers for health insurance. When unemployment rates decrease and as people are employed in larger, more progressive, organizations that offer full fringe benefits, there should be an impact on poverty rates and percent of insured within the counties.

Poverty rates are based on a yearly federal Poverty Guidelines designation. The 2015 poverty guidelines slightly increased over the 2014 guidelines, as Table 4 reflects. Poverty guidelines are based on members in the family, and a full designation (by family size) can be found at the US Department of Health and Human Services’ website (45, 51).

Table 4. Federal Poverty Guidelines

Family size	2014	2015
1	\$11,670.00	\$11,770.00
2	\$15,730.00	\$15,930.00
3	\$19,790.00	\$20,090.00
4	\$23,850.00	\$24,250.00

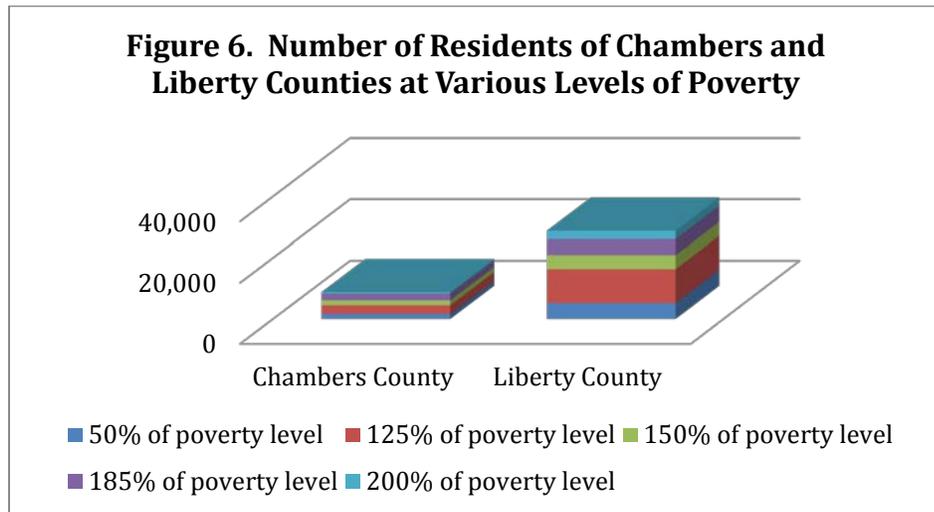
Source: US Department of Health and Human Services

The latest published statistics reflecting poverty rates for individual counties are based on 2013 data. As Table 5 reflects, the percent of Chambers County residents who are at/below poverty in 2013 was 9.7% while 18.4% of Liberty County residents are at/below poverty (35, 36). Using statistics from the American Community Survey (34), these percents would indicate that there are approximately 3,412 residents of Chambers County and 12,871 residents of Liberty County who are at/below poverty. Since many programs, including Federally Qualified Health Centers, have sliding fee scales based on percent of poverty, Table 4 reflects various levels of poverty, according to federal poverty guidelines. The levels of poverty range from 50% of poverty to 200% of poverty, and these amounts are cumulative. To better appreciate the levels of poverty, these numbers were analyzed in a non-cumulative manner, and are expressed in Figure 6.

Table 5. Number of Residents of Chambers and Liberty Counties Who are at Varying Levels of Poverty

Poverty status	Chambers County	Liberty County
50% of poverty level	1,607	5,181
125% of poverty level	4,460	16,285
150% of poverty level	6,098	20,825
185% of poverty level	8,340	26,096
200% of poverty level	8,776	28,749

Source: 2009-2013 American Community Survey 5-Year Estimates
<http://factfinder.census.gov>



Source: 2009-2013 American Community Survey 5-Year Estimate
<http://factfinder.census.gov>

As Figure 6 indicates, the largest number of people is in the category “below 125% of poverty.” This correlates to the findings of Chambers County having a poverty level (100% poverty) of 9.7% and Liberty County having a poverty level (100%) of 18.4%.

Considering that many federal programs have sliding fee scales that extend to 200% of poverty, there are potential of 37,525 (8,776+28,749) residents in the two counties who could qualify for some sliding fee scale assistance.

Of further interest is the number of children living in poverty. According to the American Community Survey (34), in 2013, there were 9,909 children under 18 years of age living in Chambers County; of that number, 12.6% lived in households that received public assistance (SSI, Food Stamps/SNAP, etc.) within the previous 12 months. Of the 9,748 children who lived in households where poverty had been determined, 11.3% of the children lived below poverty level (34, 35, and 36). These numbers show the differentiation between households that received some type of assistance from the number of children who are living in households below the federal poverty level. In comparison, Liberty County had 19,122 children less than 18 years of age living within the county in 2013. Of that number, 35.6% lived in families that received some type of public assistance within the previous twelve months. Of the 19,045 children whose family poverty level had been determined, 23.6% of the children lived below poverty in the last 12 months (36). In addition, comparing the percent of children eligible for free lunches, Texas reported that 44% of all children were eligible, whereas Chambers County had 29% and Liberty County reported 54% (17).

Employment

In 2013, of the 35,177 people living in Chambers County, 47.6% were over 16 years of age and in the civilian workforce. Of those in the workforce, 12,302 worked full-time and 4,853 work part-time (or part of the year) (35, 36); thus, approximately 65% of people in the county had at least part-time positions, with the majority of people holding full-time jobs. Of course, the part-time positions also include teenagers who may be in school and are choosing to work part-time during their education. However, it also includes people who may not be able to find full-time positions. Regardless of full-time or part-time status, more males (9,393) than females (6,076) worked despite the total population of Chambers County being evenly split between males and females (50.4% males and 49.6% females).

In Liberty County, of the 69,954 residents, 45.0% were over 16 years of age and in the civilian workforce. Of those in the workforce, 20,082 held full-time, year round jobs and 11,527 held part-time or part-of-the-year positions (36). In Liberty County, more males (16,110) worked than females (11,422) although the ratio of males: females in the county is equal (49% males vs. 51% females).

Paralleling employment is access to health insurance. Although the Affordable Care Act had been signed into law in 2010, most full-time employees still rely on their employers for health insurance. As Table 6 indicates, in 2012, Chambers County had a smaller percent of youth and working-age people without insurance compared to Texas, but Liberty County had a larger percent of both youth and working age people without insurance.

**Table 6. Comparison of Percent of Residents without Insurance
Chambers and Liberty Counties, 2013**

Data	Age	Chambers County	Liberty County	Texas
Without health insurance	0-17 years	10.2%	14.1%	12.4%
	0-64 years	17.5%	27.0%	25.2%
Living in Poverty	0-17 years	12.9%	26.3%	25.8%
	All ages	9.0%	18.6%	17.9%

Source: Health Facts Profile, 2012. <https://www.dshs.state.tx.us/chs/cfs/Texas-HealthProfiles.aspx>.

An equally important observation is that the percent of youth living in poverty in Chambers County is nearly half the percent of Texas, but Liberty County is slightly greater than the Texas percent of 17.9%. The same is observed for all ages of people living in poverty. In Chambers County, 9.0% of the population lives in poverty compared to 17.9% for Texas and 18.56% for Liberty County.

Types of Employment. The type of employment is important in considering health of the community. Some types of employment (i.e. construction) have more employees engaged in occupations where injury is paramount. Some jobs (i.e. petrochemical) may expose employees to environmental conditions that could create long-term health issues. Knowing the major types of employment in the community can be used in planning health care programs and planning for types of services. Chambers County and Liberty County differ in the industries that are most commonly represented by workers. Table 7 reflects the most common industry of employment for males and females in 2009 (11, 29, and 32).

Table 7. Most Common Industry in Chambers and Liberty Counties by Male/Female (2009)

Chambers		Liberty	
Male	Female	Male	Female
Chemicals (19%)	Education (18%)	Construction (15%)	Construction (1.5%)
Construction (15%)	Health care (15%)	Mining, Quarry, Oil/Gas Extraction (3%)	Mining, Gas/Oil (0.8%)
Petroleum/Coal Products (5%)	Accommodations & Food Service (10%)	Ag, Forestry, Fishing, Hunting (2%)	Food Service (0.65%)
Public Administration (4%)	Chemicals (5%)	Food Service (1%)	Ag, Forestry, Fishing, Hunting (0.3%)
Education Services (3%)	Public Administration (5%)		
Accommodations & Food Service (3%)	Finance/insurance (5%)		
Ag, Forestry, Fishing, Hunting (3%)	Professional, Science, Technical Service (4%)		

Source: http://www.city-data.com/county/Chambers_County-TX.html
<http://www.city-data.com/county/Liberty-TX.html>

As Table 7 indicates, chemicals and oil/petroleum production is a major focus for male employment in Chambers County. Construction, which may be associated with the oil/petroleum industry, is also an important industry. Injuries and environmental diseases should be considered in the planning of services. Women seem to be in less injurious positions, with nearly half of the women being in education, health care, accommodations/food services. However, it is interesting to note that chemicals account for 5% of women in industry.

The main industry in Liberty County is construction, accounting for 15% males and 1.5% females. Industry associated with mining, quarrying and oil/gas extraction accounts for less than 5% of positions in Liberty County. Again, with such a large emphasis on construction, there should be planning for such occupational issues as trauma, falls, and electrocutions. In addition, because both construction and the oil/gas industry tend to have many employees traveling great distances to the job sites, there should be concern for vehicular accidents.

Education

The ability to keep young people in the county and the ability to attract new residents to the area is dependent on the school system. Education is a driving force for the job market; without a good education system, people with young children will not migrate to the community, and current residents may move to areas that offer better schools. Not only does the school system need to respond to the types of

education that will be needed in the current workforce, the school system must also analyze future trends in order to prepare the workforce in the longer term.

In Texas, school districts are independent entities, with the potential of some overlapping in counties. In large cities, there may be numerous independent school districts that have their own policies, procedures, and taxing mechanism. There are over 1200 independent school districts in Texas; Chambers and Liberty Counties have a total of 10 independent school districts (28).

The Texas Academic Performance Report designates school district performance based on 4 indexes: student achievement, student progress, closing performance gaps, and postsecondary readiness. Based upon these four indexes, the school district is assigned either a “Met” or “Improvement Required” standard. Of the 10 school districts in Chambers and Liberty Counties, all except one had ratings of “Met Standard” (28).

The ability to keep students in school is equally important. In the 2014 school year, in the three Chambers County school districts, there were very few dropouts (Anahuac ISD had no dropouts, East Chambers had no dropouts, and Barber Hills ISD had a dropout rate of 0.1% for the 9-12th grade compared to the Texas annual dropout rate in 2012-2013 of 1.6%). The dropout rates in Liberty County vary from no dropouts (in three of the school districts) to a high of 3.5% in Cleveland ISD (28). Other factors that contribute to school success can be found in the annual district reports on the TEA website (28). However, Table 8 reflects some factors that may contribute to education attainment within the various school districts in Chambers and Liberty Counties.

Table 8. Select Factors for Chamber/Liberty County School Districts

District #	36901	36902	36903	146901	146902	146903	146904	146905	146906	146907
Size	1202	4533	1372	3642	5067	178	1281	521	2121	1850
% Black	15.3%	3.2%	7.3%	10.8%	8.3%	2.8%	4.1%	13.4%	17.8%	50.0%
% Hispanic	29.1%	20.3%	36.7%	42.0%	32.2%	19.1%	11.1%	6.1%	30.6%	7.0%
% White	49.3%	73.2%	53.4%	43.7%	56.1%	76.4%	82.1%	76.4%	49.0%	90.6%
% Asian	2.5%	0.7%	0.9%	0.9%	0.3%	0.6%	10.0%	0.0%	60.0%	10.0%
Eco. Disadv.	55.5%	22.9%	57.6%	76.7%	61.8%	38.2%	54.8%	70.2%	59.5%	46.4%
ELL	8.9%	2.8%	19.5%	19.4%	13.8%	10.7%	2.3%	0.6%	13.9%	1.2%
ESL/biling.	8.8%	2.6%	19.5%	18.7%	12.7%	10.7%	2.6%	0.6%	13.1%	1.2%
G/T	8.2%	3.4%	3.4%	2.7%	4.0%	1.7%	2.7%	3.6%	9.3%	3.4%
STAAR ave	77.0%	90.0%	79.0%	60.0%	72.0%	84.0%	73.0%	68.0%	74.0%	76.0%
Student:Teach	13.5:1	14.8:1	16:01	16.6:1	16.2:1	13.6:1	14.6:1	12.5:1	14.2:1	13.9:1

Source: Texas Education Agency. <http://ritter.tea.state.tx.us>

For example, nearly all of the school districts have a high percent of economically disadvantaged children. This would also seem to indicate the families may not have

funds for access to health care, and thus there should be an emphasis in determining ways to get children signed into CHIP. In addition, a number of the school districts have fairly high percentages of children categorized as students with English as a Second Language (ESL) or English Language Learner (ELL). A poor grasp of the English language can put these children at higher risk of dropping out of school or poor job futures. Without good communication skills, many of these youth may be relegated to job areas that do not afford health coverage.

On the other hand, two school districts (Anahuac ISD and Liberty ISD) have close to 10% of their students enrolled in the Gifted and Talented (G/T) courses. Other school districts have less than 4% of their students enrolled in G/T courses. Gifted and Talented courses seem to make students more prepared for higher education, although being in such programs does not guarantee success in college. However, exposure to “critical thinking” courses, of which many G/T are, helps students to prepare for more advanced curriculums which require more from students.

HEALTH INDICATORS

Note: The most current data on health indicators from the Texas Department of State Health Services is from 2012. Thus, the majority of this section will be based on 2012; if data from other years are used, it will be noted.

Natality

In 2012, there were a total of 459 live births in Chambers County and 1,052 live births in Liberty County (Table 9). Of this number, and compared to the 3.5% for Texas, 4% of the births in Liberty County were to females younger than 18 whereas Chambers County births to females under 18 was negligible (25, 26).

Table 9. Natality Rates, Select Counties, 2012

	Chambers County	Liberty County	Texas
Total Live Births	459	1,052	
Adolescent Mothers		4.0%	3.5%
Unmarried Mothers	37.9%	46.9%	42.3%
Low Birth Weight	7.8%	7.7%	8.3%
First Trimester Prenatal Care	58.6%	50.4%	62.6%

Source: Texas Department of State Health Services

These percentages are important because they may reflect women who may have less access to care due to lower financial means. The same can be said for the percent of teenagers younger than 18 years of age who gave birth in 2012. Although Chambers County had a low percent of teenagers giving birth, Liberty County had a greater

percent than the state average (4.0% vs. 3.5%). Again, for economic reasons, these females are at higher risk of not having adequate health care.

Low Birth Weight (LBW) is defined as births below 5 pounds, 8 ounces. Babies born at low birth weights are more susceptible to respiratory distress, heart issues as well as long-term health problems. Later in life, LBW babies are more prone to diabetes, heart disease, and high blood pressure. Risk factors associated with LBW include both chronic health issues and social factors of the mother. Health issues of the pregnant woman include high blood pressure, diabetes, uterine infections, and not gaining enough weight during pregnancy. Social factors may include use of tobacco, alcohol, and/or street drugs. Other social factors include the mother having low education attainment and low income.

Entering prenatal care during the first trimester of pregnancy is an indicator of access to care and health status. Physicians are better able to provide the most helpful medical advice if women receive their initial care during the first trimester of pregnancy, as fetal development can be monitored and appropriate tests/screenings can occur. Healthy People 2020 (49) set a goal of having 77.9% of women enter prenatal care during the first trimester. As noted in Table 8, Chambers County had 58.6% and Liberty County had 50.4% in 2012, compared to Texas' 62.6%. Factors that may contribute to not seeking earlier care include lack of transportation, not feeling a need (had other children and know about pregnancy), lack of funds, or even not knowing of the pregnancy (especially important for young females and women nearing menopause).

Communicable Diseases

In Texas, there are 83 conditions that are required to be reported to the Texas Department of State Health Services. The reporting times for these diseases range between "immediate" to one month. Hospitals, clinics, provider offices are required to submit the information to the local/regional health department. These diseases serve as sentinel diseases to indicate potential disease outbreaks and overall status of health. As shown in Table 10, residents of Chambers and Liberty Counties have very few communicable diseases that are required to be reported to the health department. For the reported diseases, Liberty County had only one disease (tuberculosis) with a rate higher than the state rate.

**Table 10. Rates of Select Communicable Diseases (per 100,000)
in Chambers and Liberty Counties, 2012**

Disease	Chambers County	Liberty County	Texas
AIDS	-	-	9.7
Chlamydia	84.4	267.9	478.3
Gonorrhea	19.1	54.6	123.1
Pertussis (Whooping Cough)	-	-	8.5
Primary/Secondary Syphilis	0	0	6.3
Tuberculosis	0	7.8	4.7
Varicella (chickenpox)	0	7.8	9.2

Source: Texas Department of State Health Services (24, 25)

Although lower than state average, the rate of varicella reported by Liberty County should be of concern since chickenpox is a disease that can be controlled through immunization. This may reflect a need to review policies and procedures for immunizations of children.

Mortality

In 2012, the death rate (from all causes) for Chambers and Liberty Counties exceeded the Texas rate (890 and 938.4 vs. 751.3 per 100,000). Specific causes of deaths that greatly contributed to these higher rates are shown in Table 11 (24, 25).

**Table 11. Select Mortality in Chambers/Liberty County in 2012
(age adjusted death rates/100,000)**

Cause	Chambers County	Liberty County	Texas
All Causes	890	938.4	751.3
Accidents	69.8	67.1	37.2
Motor Vehicle	(less than 10)	30.3	13.4
Alzheimer	(less than 10)	38.1	24.6
Cancer (all)	174.4	190.2	159.5
Lung Cancer	72.5	57.5	40.6
Chronic Lung Respiratory Disease	88.2	75.4	42.5
Heart Disease	234.3	217.3	170.8

Source: Texas Department of State Health Services (24, 25)

Compared to Texas' rates, accidents were twice as likely to lead to death in Chambers/Liberty Counties. Although many have related accidents with motor vehicular deaths, in Chambers County, there were less than 10 deaths contributed to vehicles whereas Liberty County had three times the rate compared to Texas. The large number of people who commute long distances to work in Liberty County may be a contributing factor to the high rate of deaths associated with vehicles.

Both Chambers and Liberty Counties had higher overall rates of death from cancer than rest of Texas. A special concern should be toward the rate of deaths from lung cancer where both Chambers and Liberty Counties had higher rates than Texas. The rate of lung cancer (72.5 per 100,000) for Chambers County should be of enhanced concern. This seems to be a continuation of a high rate of lung cancer that was first identified in a pilot study reported in 1985 which found that Chambers County "...amid one of the country's largest concentrations of petrochemical facilities, had the highest rate of respiratory cancer in the study" (4, paragraph 6). Although this was a preliminary study of environmental risks associated with proximity to petrochemical plants, the study did not draw conclusions on the findings. However, the rates of death for lung cancer and other chronic respiratory diseases in Chambers County continue to be higher than the state rate.

In addition, the rate of deaths from heart disease is higher in both Chambers and Liberty Counties than rest of Texas. Environmental issues as well as nutrition and sedentary lifestyle could be contributors to this.

Many of the diseases associated with Chambers and Liberty Counties' mortality rates are chronic conditions, and some may be more associated with age or aging. However, many of the deaths have a lifestyle/behavior component to the disease; these behaviors should be considered when developing strategies for the county.

The Potentially Preventable Hospitalizations for Chambers and Liberty Counties, as shown on the Texas Department of State Health Services' website (27), reflect the number of hospitalizations for conditions that are "potentially preventable." Over a five-year period (2008-2013), these hospitalizations have led to costs of \$35,259,387 in charges for diseases that are potentially preventable. Table 12 duplicates the information found on the TDSHS website (27). This information demonstrates the impact of human behavior on health in a community, and efforts to address behaviors that lead to disease should be an important component of any strategic plan. Addressing these issues through community partnering can potentially save the hospital, and ultimately the county, millions of dollars.

Table 12. Texas Department of State Health Services

Chambers County

POTENTIALLY PREVENTABLE HOSPITALIZATIONS

www.dshs.state.tx.us/ph

From 2008-2013, adult residents (18+) of **Chambers County** received **\$35,259,387** in charges for hospitalizations that were potentially preventable. Hospitalizations for the conditions below are called **potentially preventable**, because **if the individual had access to and cooperated with appropriate outpatient healthcare, the hospitalization would likely not have occurred.**

Potentially Preventable Hospitalizations for Adult Residents of Chambers County	Number of Hospitalizations							2008-2013		
	2008	2009	2010	2011	2012	2013	2008 - 2013	Average Hospital Charge	Hospital Charges	Hospital Charges Divided by 2013 Adult County Population
Bacterial Pneumonia	84	76	76	33	27	19	315	\$25,641	\$8,077,003	\$288
Dehydration	30	22	25	11	12	8	108	\$15,411	\$1,664,387	\$59
Urinary Tract Infection	49	59	81	14	15	21	239	\$15,739	\$3,761,580	\$134
Angina (without procedures)	0	0	0	0	0	0	0	\$0	\$0	\$0
Congestive Heart Failure	71	75	70	21	29	28	294	\$30,818	\$9,060,435	\$324
Hypertension (High Blood Pressure)	8	8	15	12	0	5	51	\$20,772	\$1,059,375	\$38
Chronic Obstructive Pulmonary Disease or Asthma in Older Adults	67	87	55	36	23	18	286	\$25,669	\$7,341,363	\$262
Diabetes Short-Term Complications	0	7	8	5	7	5	32	\$25,725	\$823,188	\$29
Diabetes Long-Term Complications	10	9	8	12	5	10	54	\$64,297	\$3,472,054	\$124
TOTAL	319	343	338	144	118	114	1,379	\$25,569	\$35,259,387	\$1,259

Source: Center for Health Statistics, Texas Department of State Health Services

The number of hospitalizations is likely greater than what is reported, because there is no hospital in the county or the hospital(s) is not required to report data to DSHS. Annual hospitalizations less than 5 and hospitalizations less than 30 for 2008-2013 are reported as 0.

The purpose of this information is to assist in improving healthcare and reducing healthcare costs.

This information is not an evaluation of hospitals or other healthcare providers.

Key components for preventing these potentially preventable hospitalizations include education and behavior modification. Many of these conditions have smoking cessation, changing eating habits, and increasing exercise as underlying behavior factors. Such factors should be considered as community activities and not the sole responsibility of the hospital or health facility.

Because of the impact of human behavior on health, many government and non-government organizations have developed databases by which to explore numerous health factors. Because these databases are inclusive of counties throughout the United States, the data are somewhat dated. However, these databases reflect a good snapshot of health within a county. One model, a joint venture between the Robert Wood Johnson Foundation and the University of Wisconsin’s Population Health Institute (17) analyzes numerous factors at the county level. Subsequently, counties are given a state ranking in four areas: Health Behavior, Clinical Care, Socioeconomics, and Physical Environment as well as a “Health Outcomes” ranking. In Texas, a total of 233 counties (of the 254 counties in Texas) are ranked, and Chambers County has received a health outcome ranking of 81 which is in the second quartile; Liberty County ranked 181 which is in the fourth (bottom) quartile (17). A partial summary of the County Health Ranking, along with statewide comparisons and county rankings, are shown in Table 13.

Table 13. The 2015 County Health Rankings - Chambers and Liberty Counties

	TEXAS	CHAMBERS	LIBERTY
HEALTH OUTCOMES (Total)		68	181
LENGTH OF LIFE		83	171
QUALITY OF LIFE		78	184
Poor/fair health	185	n.r.	20%
# days poor physical health in last 30 days	3.7	n.r.	3.9
# days poor mental health in last 30 days	3.3	n.r.	6
HEALTH BEHAVIORS		54	217
Adult smoking	17%	n.r.	32%
Adult obesity	29%	31%	32%
Food Environment index	6.4	7.6	6.5
Physical Inactivity	23%	28%	26%
Access to exercise opportunities	84%	66%	53%
Alcohol impaired driving deaths	33%	19%	23%
Sexually Transmitted Infections (per 100,000)	488	88	265
Food Insecurity	18.0%	15.0%	18.0%
Limit access to healthy food	9.0%	4.0%	6.0%
Motor vehicle crashes/100,000	14	27	32
CLINICAL CARE			

Primary Care Physicians	1,7008:1	7,239:1	3.646:1
Dentists	1,940:1	12,271:1	4,524:1
Mental Health Providers	1,034:1	5,259:1	6,409:1
Preventable Hospital Stays (rate/1000 Medicaid)	63	110	108
Diabetic Monitoring (% HbAC1c screening)	83%	80%	79%
Mammography screening	58.9%	54.4%	47.2%
PHYSICAL ENVIRONMENT		192	167
Air pollution-particulate matter	9.6	9.2	9.1
Drinking water violations	7%	17%	0%

Source: www.countyhealthrankings.org
n.r. = no response provided

Information gleaned from the County Rankings is useful as the information delves into factors that have components that can be addressed through community awareness, education, and policy development.

In “Quality of Life,” Chambers County does not address this area; however, Liberty County exceeds the State average; this parallels with the ratio of mental health providers in the county (1 provider for each 6,409 patients compared to Texas’ 1 provider for each 1,034 patients). Along the same lines, Chambers County also has a high patient:provider ratio (5,259:1). Overall, the State has tried to address the mental health provider shortage by establishing Mental Health Regions, of which Chambers County is in the Spindletop Center region (out of Beaumont) and Liberty County is part of the Tri-County region. With the two counties being in different mental health regions, coordination of services may be difficult. Both counties are designated Health Professional Shortage Area (Mental Health) (50) which can be beneficial for recruitment of providers (i.e. physician loan repayment).

Food insecurity, obesity, limited access to healthy foods, and physical inactivity may have some linking. As Table 13 indicates, both Chambers and Liberty Counties have obesity rates slightly higher than the State average, with over 30% of both adult populations being obese. Both counties have food insecurity in the 15-18% range. As defined by the US Department of Agriculture (USDA), food insecurity is the “consistent access to adequate food is limited by a lack of money and other resources at times during the year” (5) Because fast food (“junk food”) has high satiability and cheaper costs, people will turn to high caloric/non substantial food sources as a way to “stretch their money.”

The Economic Research Service of the USDA (5) found that nationwide, in 2013, food insecurity was more likely to occur in single women with children (34%); Blacks, non-Hispanic (25%); people at 100% poverty level (42%); people under 130% poverty (38%); people under 185% poverty (35%). Of interest, the researchers found that in 9.6% of households with children, only adults were food insecure. However, in another 9.9% of households, researchers found that both adults and children were food insecure. This seems to imply that households attempt

to protect children from food insecurity. It also may reflect that communities have recognized the problem and developed programs to address food insecurity in children (i.e. “school” lunches offered during the summer months).

Obesity is also associated with physical inactivity. As Table 13 indicates, in Chambers County, 31% are obese and 28% of people are physically inactive. In Liberty County, 32% of the adults are obese, and 26% are physically inactive. The County Health Rankings (17) also determined that in these counties there were a large percent of people who felt they did not have access to exercise opportunities (66% in Chambers and 53% in Liberty). These percentages are less than the state average, which might reflect the warm weather and proximity to the coast and beaches which people use as a source of physical activity.

Health Providers

Despite some positive health outcomes in the counties, both Chambers and Liberty Counties lack medical providers. One way to assess the shortage of providers within an area is to consider federal designations of shortages (45, 46). Health Professional Shortage Area (HPSA) is a federal designation that a county has established based upon a number of factors (i.e. number of providers, distance to hospital, topography, roadways, and overuse of providers in contiguous areas). This designation can be allocated to the entire county, to parts of a county, or even to certain areas (i.e. census tracts) of a county. HPSAs can be divided into three major forms: primary care, dental, and mental health. Primary care HPSA is based on a physician to population ratio of 1:3,500. The dental HPSA is based on a dentist to population ratio of 1:5,000. The mental health HPSA is based on a psychiatrist to population ratio of 1:30,000 (45, 46). Other federal designations of health shortage include the Medically Underserved Area (MUA), which means the residents have a shortage of personal health services and the Medically Underserved Population (MUP) means there is a high number of persons who face economic, cultural, or linguistic barriers to health care.

Both Chambers and Liberty Counties are designated full county primary care HPSAs (46). According to the Texas Department of State Health Services, Chambers County is in the lowest range for ratio of physician to population and Liberty County is in the mid-range (Table 14).

Table 14. Ratio of Population to Primary Care Providers, 2014

Site	Population: Primary Care Provider
Texas	1:1,409
Chambers County	1:6,706-12,355 (lowest range)
Liberty County	1:2,978-6075 (mid range)

Source: Health Professions Resource Center

Because of the HPSA designation, Chambers County has an established Federally Qualified Health Center (FQHC) that has two offices, one in Anahuac and one in Mont Belvieu as well as a school-based clinic (47). In 2013, the facilities served a total patient population of 10,005, with 30% of the patients being children under the age of 18. Of the patient population, 27% were below 100% poverty, and 21.3% were uninsured (54). These primary care facilities provide service on a sliding fee scale; the facility in Anahuac has recently (2013) recruited a dentist.

Both Chambers and Liberty Counties are designated full Mental Health HPSA as well. The ratio of psychiatrists-to-population in Texas (2015) is 1:13,794. Both Chambers and Liberty Counties do not have a psychiatrist in county, thus their HPSA (mental health) status (45, 46, and 51).

Another area of provider service that is limited in Chambers and Liberty Counties is public health. Both Chambers and Liberty Counties are in the Region 6/5 of the Texas Department of State Health Services (23). Because many counties in Texas do not have county health departments (or have limited service health departments), Texas has established eleven regional health departments that address public health needs. The Region 6/5, headquartered in Houston, provides public health services.

While Liberty County does not have a county/local health department, Chambers County does have a public health department. The health department is limited in scope, with the emphasis apparently being WIC services. The health department staff maintains offices in three locations, with the Anahuac and Mont Belvieu offices being open one day per week; and the Winnie public health office is open two days per week (48).

COMPARISON WITH OTHER COMMUNITIES

The intent of community health needs assessments is to identify needs within a specific community. However, as a barometer, most communities compare their strengths and weaknesses with similar communities. Historically, communities compare themselves with neighboring communities because they share many of the same attributes. However, as migration patterns have changed – with urban residents moving to suburbia or even rural communities, the ability to compare trends with neighboring communities may not be as helpful today as in previous decades.

With better technology being readily available, many organizations have created databases that allow communities to compare themselves with communities who may not be within the same geographical area but may have more similarities. An excellent example of comparison surveys, which allow counties to compare with other counties, is the Community Health Status Indicators (CHSI)(2).

The Community Health Status Indicators 2015 is an offshoot of a survey that began 15 years ago. The Centers for Disease Control used existing databases to develop a website that would allow individual counties to compare a number of health indicators with counties of similar size, demographics, socioeconomics, etc. The CHSI has continued to evolve and be refined to better fit identified needs of community stakeholders.

The CHSI 2015 contains information from all 3,143 counties in the U.S. Individual counties can view its data, a compilation of numerous databases, in order to make sound statistical decisions for health plans. The CHSI 2015 also has the capacity of allowing counties to compare their statistics with Healthy People 2020 targets.

An exciting component of CHSI 2015 is the ability for a county to be compared to similar (“peer”) counties throughout the United States. CDC has categorized counties by 19 separate variables, such as size, growth, density, percent of children, percent of elderly, and housing stress (2). Using these 19 indicators, CDC identifies “peer counties” – counties that have high similarity in these 19 indicators with the county of inquiry.

Chambers County is paired with the following 14 peer counties: Shelby County, AL; Clay County, FL; Cherokee County, Coweta County, GA; Henry County, GA; Paulding County, GA; Grundy County, IL; Boone County, IN; Hancock County, IN; Hendricks County, IN; Johnson County, IN; Porter County, IN; Miami County, KS; and Boone County, KY. These counties closest resemble Chambers County in the 19 indicators (2).

Liberty County is paired with the following 15 counties: Bibb County, AL; Chilton County, AL; Walker County, AL; Crittenden County, AR; Baker County, FL; Carroll County, GA; Haralson County, GA; Heard County, GA; Jasper County, GA; Lamar County, GA; Meriweather County, GA; Spalding County, GA; Washington County, IN; and Bracken County, KY. These counties closest resemble Liberty County in the 19 indicators (2).

The CHSI 2015 county reports provides a summary of how the chosen county compares to its peer counties in a number of specific areas: mortality, morbidity, health access and quality, health behaviors, social factors, and physical environment. Within each of these areas are numerous specific indicators that further allow the county to be compared with its peers.

Mortality: Alzheimer’s, cancer(s), Chronic Kidney Disease, Chronic Lower Respiratory Disease; coronary heart disease; diabetes, female life expectancy; male life expectancy, motor vehicle, and stroke.

Morbidity: adult diabetes; Alzheimer’s disease/dementia; cancer; gonorrhea; chlamydia; HIV; older adult asthma; older adult depression; preterm birth/low birth

weight. Some of these morbidities are further broken down into subsets (i.e. cancer is broken into colon, breast, lung, and prostate cancers) for comparison purposes.

Health access and quality: older adult preventable hospitalization; primary care provider access; uninsured.

Health behaviors: adult physical inactivity; teen births.

Social Factors: children in single parent households; high housing cost; on-time high school graduation; poverty (children, adults); unemployment; violent crimes.

Physical Environment: access to parks; annual good air (ozone days; PM2.5 days); housing stress (houses built before 1950; houses built between 1950-1979); limited access to healthy food; living/going to school near highways.

CDC analyzes these indicators and divides outcomes into quartiles. It takes the number of peer counties and divides their scores into quartiles. The first quartile is consider “better” community health. The second and third quartiles are considered “moderate” community health. The fourth quartile is the least favorable community health. Each of the indicators listed above are then placed into the various categories (better, moderate, worse) for the individual county.

Thus each indicator will be separately compared; the individual county’s value for each indicator is placed into the better/moderate/worse categories. By doing this, a county is able to determine specific areas in which to focus its priority. It also will have knowledge of counties who have identified ways to address issues (that is, counties who have “better” classification) and thus may be able to access “best practices” and apply them within their own counties.

Table 14. CHSI 2015 Comparison of Chambers County with Peers

CHSI Indicator	Better	Moderate	Worse
Mortality (deaths)		Cancer Chronic kidney disease Diabetes	Alzheimer's disease CLRD Coronary heart disease Female life expectancy Female life expectancy Stroke Unintentional injury
Morbidity	Adult diabetes Gonorrhea HIV Older adult depression Syphilis	Cancer Older adult asthma	Alzheimer/dementia Preterm births
Health Care Access and Quality			Older adult prevent. Hosp. Primary care provider access Uninsured
Health Behaviors			Adult physical inactivity Teen births
Social Factors	Children, single-parent house High housing costs On-time high school grad	Poverty	Unemployment Violent crime
Physical Environment	Housing stress Limited access to healthy food Living near highways	Annual average PM2.5	Access to parks

Source: www.cdc.gov/CommunityHealth/profile/currentprofile/TX/Chambers

As Table 14 illustrates, compared to similar counties throughout the United States, Chambers County has better morbidity rates, including control of adult diabetes, Gonorrhea, HIV, adult depression, and syphilis. It also seems to have control over social factors such as children in single-parent households, high housing costs, and on-time high school graduation. Chambers County, despite having Interstate-10 traversing it, seems to have good indicators of living near highways, housing stress, and access to healthy food.

Chambers County does not fair as well as its peer counties in a number of indicators, especially mortality issues. In that category, Chambers County had eight factors that are worse than its peer counties – deaths from Alzheimer’s, CLRD, Coronary heart disease, female life expectancy, male life expectancy, motor vehicle deaths, stroke deaths, unintentional injuries. Although Chambers County does have

a large 85+ cohort, the peer counties also have large populations of elderly; thus a large elderly population should not be “an excuse.”

Chambers County also fairs well in social and environment factors. This should be an indication of community efforts to address root causes of health issues. Root causes include education, housing, and work/industry. This reflects well on the county’s ability to identify issues and develop programs/initiatives. An example would be the excellent 2009 Strategic Plan (1) that had been developed after Hurricane Ike. The on-going and methodical approach that the strategic plan has advocated truly demonstrates cohesiveness of the community.

In summary, Chambers County seems to be a leader in addressing many morbidities, social factors, and environmental factors which impact health for peer counties. It has made strides in addressing deaths from cancer, chronic kidney disease, and diabetes as well as addressing the conditions of adult asthma and cancer within the county. It seems to be addressing poverty and environmental factors such as PM2.5 and ozone. Because Chambers County ranks in the lowest quartile for a number of mortalities and morbidities, some of which have preventable components, efforts should be placed on identifying “best practices” from other counties and applying them to Chambers County. All three of the healthcare access/quality issues fall in the lowest quartile. The issue of attracting primary care providers to the area remains hard; Chambers County has successfully recruited a dentist and its new federally qualified health center should also be an attraction to medical providers completing their residencies and needing loan repayment. Two issues of health behaviors remain problems – adult physical inactivity and teen births. Both of these concerns have community components, and the hospital district should continue to work with other community organizations to address the underlying root causes of these issues. One such issue seems to be reflected in the “physical environment” component of the CHSI 2015; Chambers County is in the lowest quartile for “access to parks” (2). Although the county has nice parks, either there is a perception of not being able to use the parks (perhaps a cost associated with usage) or people feel parks are not needed since the county has easy access to the beach and water sports.

Liberty County, as shown in Table 15, also has areas within the CHSI 2015 (2) where it reflects a better status than its 14 peer comparison counties. It is in the top quartile for chronic kidney disease mortality, reflecting perhaps better access to dialysis centers. It also shows moderate (mid-quartile) success in a number of mortality issues – Alzheimer’s, CLRD, diabetes, female and male life expectancy, motor vehicle deaths, and stroke, but it fared poorly in mortalities due to cancer, coronary heart disease, and unintentional injury.

Table 15. CHSI2015 Comparison of Liberty County with Peers

CHSI Indicator	Better	Moderate	Worse
Mortality (deaths)	Chronic kidney disease	Alzheimer's CLRD disease Diabetes Female life expectancy Male life expectancy Motor vehicle deaths Stroke	Cancer Coronary heart disease Unintentional injury
Morbidity	Adult obesity Cancer Syphilis	Adult diabetes Adult overall health Alzheimer's/dementia Gonorrhea Preterm births	HIV Older adult asthma Older adult depression
Health Access & Quality		Cost barrier to care Primary care provider access	Older adult prev. hospt. Uninsured
Health Behaviors	Adult physical inactivity	Adult smoking	Adult female routine PAP
Social Factors	Kids in single parent house High housing cost On-time hi school grad	Poverty Unemployment Violent crime	Inadequate social support
Physical Environment		Access to parks Annual ave. PM2.5 Housing stress Limited access, healthy food Living near highways	

Source: www.cdc.gov/CommunityHealth/profile/currentprofile?TX/Liberty

Unlike Chambers County, Liberty County seems to be making strides in attracting primary care providers to the area (2). Of course, the CHSI does not indicate in which communities the providers may be locating, and current census indicates that Liberty County towns along Highway 59 may be growing and thus attracting providers to the area. Also, unlike Chambers County, Liberty County is in the “better” quartile for adult physical inactivity (with Chambers being in the worse category). Again, part of the reason may reflect the growing Highway 59 corridor where people who work in Houston/Harris County may be residing. If such people have migrated from urban areas like Houston, they may expect recreation areas and have been in the practice of exercising prior to moving to Liberty County, especially if these are young people who are moving to the area to establish homes and raise children.

On the other hand, Liberty County lags behind Chambers County in housing stress, access to healthy food, and living near highways. Again, this may be a

reflection of recent migration of people from Houston to communities along Highway 59 corridor.

Focus Groups/Interviews

In order to understand the health needs of Chambers and Liberty Counties (Anahuac and Liberty), Bayside Community Hospital contracted Dr. Jeff Hatala and Dr. Tina Fields (biosketches/short resumes included in Attachment 1) to perform a community health needs assessment. The consultants gathered existing data and information based on the counties from numerous secondary sources and worked with the hospital to establish focus groups to learn the community's perception of the county's health status. The community health needs assessment was based on a community health model that had been developed and validated by the Centers for Disease Control and Prevention and has been used throughout the United States to assist communities to determine issues that impact health. The suggested CDC model is not based on medical care but is a mechanism to allow community residents to identify areas in the community that impact health and that can be modified through community efforts and/or policy enactment.

After gathering secondary data about Chambers and Liberty counties, the consultants then worked with Bayside Community Hospital to identify focus group participants. The focus group participants included representatives from the school system, business community, health care, community leaders and the general population. Some focus group participants have lived in Chambers/Liberty counties all of their lives or most of their lives while others has recently moved to the area. Due to scheduling challenges, participants from Chambers County attended sessions in the morning or afternoon on June 11 at the Bayside Wellness Center. Participants from Liberty County attended a session held at the Liberty county school district offices on June 12. In addition, some health care representatives from Bayside Community Hospital participated in a focus group between the morning and afternoon sessions while other Bayside Community Hospital staff participated in individual interviews based on scheduling needs. Attachment 2 provides the names of those who provided input about the community for this needs assessment.

Results of Focus Groups/Interviews

The focus groups and interviews provided insights about perceptions and beliefs about the health needs of the community and, in many cases, were aligned with the statistics supplied in this report. However, for some insight, the focus groups' perceptions did not align with secondary data. Focus groups shed additional detail useful for understanding the status of the community as well as ideas for improving the community in the short and long term.

The community is marked by a strong sense of pride that seems to have existed for generations. Community members work hard to make the community a nice place to live. Chambers and Liberty counties provide a number of picturesque areas,

including quaint homes, scenic lakes, and large trees. The people in the community are willing to maintain and even enhance the surroundings. They care about the community and its residents. Taking care of each other seems to be part of the community culture. Community organizations seem proud to serve area residents.

Findings: Health Concerns – Diseases and Conditions

Focus group participants summarized the biggest health concerns in the community, which ranged from a variety of health conditions to issues with access to care and to factors that, on the surface, have little connection to health. The biggest health concerns stated included diabetes, stroke, cancer, COPD, kidney disease and mental health. Other concerns include the lack of health insurance among community residents, especially those not working at the area's largest employers (the county and the hospital). The inability to pay for health care is a significant problem for a portion of the Anahuac population.

Findings: Health Services

To combat health conditions, the community offers Bayside Community Hospital located in Anahuac, that supplies a number of services, including MRIs, CAT scans, mammograms, x-rays, and uses tele-radiology to help patients with issues outside the scope of what the hospital offers. Focus group members report that the hospital is very responsive to the needs of the community and is devoted to supporting the community. The Anahuac EMS offers EMS services, which is well regarded per focus group participants. The hospital operates a wellness center that serves as a community center and offers physical therapy, a small movie theater, kitchen and large dining area. The wellness center hosts activities, such as movies for children on Fridays, activities for seniors, and exercise classes (SPIN, free weights, swimming). FQHC clinics in Anahuac and Mont Belvieu offer primary care, dental and mental health services. Focus group participants noted that there is a new dentist in town, the counselor at the FQHC is also new, and a cardiologist comes to town to see patients twice a month.

Other organizations in town work to support the health needs of the community in different ways. Focus group attendees stated that the county provides a health fair for its employees and the library offers health education classes as well as teen activities and reading programs. For a small fee, the school allows access to its swimming pool and provides swim lessons. In addition, the school organizes an inexpensive camp for kids and is one of five schools in Texas to offer Rocket Camp, a science enrichment camp. The new school superintendent, per the focus groups, is a welcome addition to the community and has encouraged parental involvement in the schools. The new school athletic director has been reported to also be a welcome addition to the community. The deputy from the sheriff's office runs a program designed to instill positive self esteem and educate kids about the dangers of bullying and gang activity. One of the EMS drivers is spearheading an effort to provide transportation for non-emergency health care services.

Smaller organizations also support the community in a number of ways. United Way has an office in Anahuac. The Chamber of Commerce organizes GatorFest, which attracts more than 35,000 people in one weekend and is getting more involved in creating events for local small businesses. Meals on Wheels provides meals to seniors in Anahuac and Liberty is in the process of starting Meals on Wheels in its community. The Lions Club funds parking tokens for radiation treatment at the Texas Medical Center (Houston), provides eye glasses and eye exams, and supports summer camp participation for 20 children. The Christian Caring Center donates clothes to those in need. Some of the churches are more involved in the community than others; a church in Oak Island helps with addictions. Met Head Start offers a number of health-related services to young children at a number of locations in the Anahuac area. All in all, the community has much to be proud of.

Focus group contributors appreciate the services that are available to them both in breadth and depth, but acknowledge that resources are not adequate to meet the needs of the community. Resources related to transportation are scarce. The hospital EMS has one vehicle for emergency use. As the hospital does not provide health care for all possible conditions, EMS may have to transport patients to other hospitals; when this occurs, the vehicle is “out of commission” for a potential of 2+ hours and thus is unable to provide services to other residents who might be in need of ambulance services. The distance between these outlying hospitals can increase the time before a patient receives health care. This lack of transportation may be an issue depending on the nature and timing of the call. Focus group respondents report that patients have trouble accessing other types of health-related services outside of EMS. Residents without transportation must rely on family and friends to take them to the grocery store, to the pharmacy and to doctors’ appointments as there is no public transportation in the county. If the community member needs to see a specialist provider, then the challenges to see the provider increase significantly. It is challenging to get patients to see doctors outside of the area, but it is even more challenging to provide transportation for follow-up appointments for those patients. There is no transportation available for mental health patients to Spindletop, the mental health facility located in Beaumont. Focus group respondents report that non-profit organizations outside of the hospital’s catchment area, such as the American Cancer Society (ACS), provide transportation services for patients with certain conditions, but ACS no longer serves the Anahuac area. Meals on Wheels in Liberty has a van, but the organization is presently not operating. Although some senior citizen services do include transportation, no public transportation is available in the area.

Resources for area youth are lacking. The schools provide the focus for student time during the school year. The library provides a number of after-school reading programs for all ages, which focus group members say are excellent services. Focus group participants report that younger children can participate in summer breakfast and lunch programs. However, youth have a range of interests and there are few outlets in the county related to these various activities. Without a public theater, a public swimming pool, YMCA or other venues for social and other activities, focus

group members feel that youth are more likely to engage in questionable behaviors that can lead to unwelcome health conditions and unsafe actions.

Knowledge of resources is lacking. Focus group participants identified a number of services in the area, and other members heard about these services for the first time at the focus group meeting. Focus group participants expressed appreciation for the opportunity to learn more about their community. While there are a greater number of services available than any one person is aware of or can cite resources for, there is no single source of information about such services.

The area has two main employers – the county and the hospital. Workers at most other organizations do not have health insurance. In today's world and the passage of the Patient Protection and Affordable Care Act, a large majority of Americans are required to have employer-based health insurance, buy health insurance through the private market, or pay a penalty. Focus group participants noted that some community residents seeking health services in the community are enrolled in Medicaid or are undocumented, suggesting that there is a sizeable number of uninsured or underinsured patients in the area. This lack of employer-based health insurance, coupled with the transportation challenge mentioned earlier, can greatly deter people from accessing physical, pharmaceutical and/or mental health care they need.

Mental health services are also lacking in the area as they are in the rest of the country. As stated earlier, focus group members report that mental health is one of the biggest concerns in the community and transportation to Spindletop is lacking. In fact, the focus group indicated the jail does not have the resources to evaluate mental health status of inmates. The hospital emergency department has transferred 6-7 mental health patients to other facilities in Beaumont and Houston in the last six months. There is a counselor who works at the clinic and at the school, and churches in Oak Island support addiction recovery, but more resources are needed. In Liberty, focus group members reported that MHMR has recently purchased the local bowling alley, but it was unknown as to how the property would be used. Focus group participants stated that there is no psychiatric doctor that provides services in the area.

Accessing nutritious food and outlets for physical activity are also challenges for community residents. Focus group members report that many people in the community will drive out of town to grocery shop; the produce prices are reported to be high in Anahuac and there is little variety of produce. In addition, the Wellness Center sells biscuits and gravy for \$3.00; the focus group believes the sale of unhealthy food at the Wellness Center is due to people not wanting healthy food. Focus group members also stated that while there are running tracks at the schools in both Liberty and Anahuac and at the park in Anahuac, there are not enough sidewalks in town and too many vehicles at the park to take advantage of the year-round good climate. There has been vandalism at the Liberty school, which resulted in the closing of the track until recently. Sidewalks, per the focus groups, would help

to complete the Anahuac Park. Existing sidewalks by the canal are not well taken care of, and thus the site is not conducive to exercise.

Air and water quality is also a concern. Focus group participants report that there is red water coming from Trinity Bay and that the city is trying to address this issue through its own water system. One focus group member stated that the water is not the issue, but the pipes should be the concern. Focus group members also stated that the agricultural runoff water contains unsafe chemicals that are affecting the health of the community. Well water in the area cannot be used for dialysis offered through home health services. Air pollution is an issue. The petrochemical operations west of the area, per the focus group members, bring emissions to the area. The county incinerator is also a source of air pollution.

The rumors about the county seat moving out of Anahuac were pervasive among some of the focus group members. Some believe that the passing of the Senate Bill will allow the city to handle judicial needs more efficiently while others feel the change will result in the “death of Anahuac” if all services provided within the infrastructure would be going elsewhere (i.e. county courts and related offices). All members felt there was a lack of communication on the issue from local leaders; this seems to have created a lack of trust for many community residents.

Recommendations

Based on the statistical data obtained and results of the focus groups and interviews held, there are a few key recommendations.

- 1) Establish a community health advisory board that will continue to prioritize the health needs of the community. This advisory board will serve as a conduit for continuity of support in the community. The advisory board can serve in a pure advisory role; this board would not be charged with enacting programs, but would allow and encourage the appropriate parties to enact or implement programs and policies needed in the community. The board would be responsible for collecting information about the community and advocating for changes based on community input. It could work much like other boards whereby members serve for a specified period of time at which time others can serve on the board or existing members can elect to stay on the board. The board should be comprised of different aspects of the community such as media, EMS, AgriLife Extension, business community, someone highly involved in serving the community, and someone knowledgeable in environmental issues. There are several people who participated in the focus groups who could be considered for roles on the board.
- 2) Communication was a theme heard in all data gathering sessions held. Some people were aware of services and programs offered in the community, while others were not. The sharing of knowledge in these sessions made participants feel more empowered to make change. While the focus groups

provided added benefit to the community, they provide a temporary fix. There are many websites that pertain to events, programs, etc. in the community. Consider developing a new website that connects all of these other sites, and have it maintained by a student or group of students attending an area college or university. Consider adding information from outlying communities, like Liberty, in the future.

- 3) There is a lack of healthy food and physical activity outlets. Diet and physical activity are said to be linked to 70-80% of chronic diseases, including heart disease, stroke, and diabetes – all of which are significant concerns in the community. Lack of community outlets for physical activity are associated with increased illegal drug use, unsupervised teen recreation, increased teen pregnancy and sexually transmitted diseases. One focus group participant said that Subway was the healthiest food option in town. With such efforts, it is best in many cases to build on existing infrastructure. Encourage community residents to use existing facilities, like parks, track at the schools, etc. Consider holding exercise challenges between community groups as a way to bring awareness to existing facilities. Consider expanding sidewalks and walking paths throughout the community, especially in areas connecting to local parks or existing exercise areas.
- 4) Consider increasing the amount of youth activities, particularly those that are low cost or free. Explore grants and other sources of funding to develop and/or implement those requiring greater financial support. Focus group participants noted that “there is nothing for kids to do” in town. Leverage existing activities to allow for the provision of positive health-related messages and minimize the presence of non-healthy refreshments at these activities. In a tourist area where fishing is paramount to the local economy, consider developing an Angler Club for youth. The weather in the community can be conducive to a number of outdoor events for youth that could provide activities for youth to stay out of trouble and can increase prospects for increased physical activity. Investigate opportunities, both within the community and in neighboring counties, to sell healthy food options at community events, like GatorFest.
- 5) Mental health is a significant concern for communities across the nation. Examine ways to address root causes related to mental health, such as unemployment and homelessness. With a new mental health counselor in the area, leverage her knowledge and experience to understand the social and environmental factors that affect mental health. Also, consider developing an interfaith council if one does not exist. Leverage the clergy who provide spiritual support.
- 6) With the hospital and county being the major employers in the community, other employment opportunities are scarce. The hospital and the county are also the major sources of employer-based health insurance. While PPACA

requires that all Americans purchase health insurance, the amount of low-wage positions in town prohibit minimum-wage workers to purchase coverage that would meet their health needs, especially if they have chronic condition(s). The lack of suitable health insurance leads to a number of issues found in the community that impacts people's ability to maintain and restore their health. Ensure that residents have easy access to obtaining the needed insurance; this could include PSAs/information in newspaper that the local library has computer access to help people enroll. Consider ways to bring companies with high-paying positions, such as IT firms, to the area; consider such business that have a natural fit with the community, such as rice or agriculture-based plants, publications about tourism, particularly fishing and hunting. Develop a long-range plan (similar in format to the 2009 Strategic Plan) that would entice companies to relocate to Anahuac based on its strengths, including proximity to Houston, low cost of living, ample recreational opportunities, and larger plots of land for residences.

- 7) Investigate the possibility of getting student interns from state universities who would serve in a marketing capacity. These students could develop a computer website that would serve as a clearinghouse for all existing websites. They could also develop other social media activities via Twitter, Instagram, and others to bring awareness of the area to people who might be new to southeast Texas.

In conclusion, there are a number of great things in place with great people who are concerned about the community they call home. People in the community are very willing to help the community to thrive. The community works well together in times of crisis. Thriving will require a few small changes and will require a more coordinated effort. This statement is related to the section on communication presented earlier in this section of the document. Individual knowledge of the community is vast but incomplete. Assembling local resources will provide the community with current and comprehensive information to help the community. The community has a number of committed residents involved in a number of highly visible and important efforts. However, people can get burned out. To minimize this possibility, working with students in neighboring colleges or universities can result in successfully completed projects that help the community to thrive. In addition, students who spend time supporting the community can be interested in relocating to the community after graduation if jobs are present. New residents, whether they are students or new workers in the area, can provide an infusion of ideas and energy. Residents with the historical perspective can team with newer residents to benefit the community. Consider having the advisory board (Recommendation #1) identify opportunities for projects for students and new residents to support. Once this effort yields positive results, momentum can build, thus creating more success in the community.

SOURCES

1. Chambers County, Texas (2009, April). Long-term community recovery plan. Prepared in coordination with FEMA's Long-Term Recovery Program (ESF-14).
2. Centers for Disease Control and Prevention (2015). Community Health Status Indicators (CHSI) 2015. Retrieved from www.cdc.gov
3. Crout, J.D. (1969). Soil Survey of Chambers County, Texas. In conjunction with USDA and Texas Ag Experiment Station. Retrieved from www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/texas/TX071/chambers.pdf
4. Diamond, S. (1989, July 22). Study suggests link of chemical plants and types of cancer. New York Times.
5. Economic Resources Service (ERS), USDA. (2013). Food insecurity. Retrieved from www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/key-statistics-graphics.aspx#insecure
6. Environmental Protection Agency (EPA). Petro-chemical systems, Inc. (Turtle Bayou) Texas. EPA Publication, EPA ID# TXD980873350.
7. GoodGuide (2011). Scorecard: The Pollution Information Site: Liberty County, TX. Retrieved from http://scorecard.goodguide.com/envreleases/cap/county.tcl?fips_county_code=48291#maps
8. Griffith, K.L. (1969). Soil Survey of Liberty County, Texas. In conjunction with USDA, Texas Ag Experiment Station and Texas State Soil and Water Conservation Board. Retrieved from www.nrcs.usda.gov/Internet?FSE_MANUSCRIPTS/texas/libertyTX1996/LibertyTX1996.pdf
9. Indiana University. Overview for Chambers County, Texas. STATS – USA Counties IN Profile. Retrieved from http://www.stats.indiana.edu/uspr/a/usprofiles/48/us_over_sub_pr48071.htm
10. Indiana University. Overview for Liberty County, Texas. STATS – USA Counties IN Profile. Retrieved from http://www.stats.indiana.edu/uspr/a/usprofiles/48/us_over_sub_pr48291.htm
11. Liberty County, Texas. (2015). Retrieved from http://www.city-dat.com/county/Liberty_County-TX.html
12. Liberty County, Texas Property Tax – 2015. Retrieved from http://www.tax-rates.org/texas/liberty_county_property_tax

13. Liberty County, Texas. Retrieved from <https://maps.google.com/maps?q+Liberty+County,+TX&hl=en&t=m&ie=UTF8&z=9&vpsrc=6&ei=SsUaVc37G4mywAHOuYDYDA&pw=2>
14. Potter, L. (2014). Texas, Liberty County, Liberty and Dayton Demographic Characteristics and Trends. Office of the State Demographer. Presentation presented to Liberty-Dayton Chamber of Commerce.
15. Profile of Chambers County, Texas (2015). Retrieved from www.epodunk.com/cgi-bin/gen/info.php?locindex=22611
16. Profile of Liberty County, Texas (2015). Retrieved from www.epodunk.com/cgi-bin/geninfo.php?locindex=22721
17. Robert Wood Johnson Foundation (2015). County Health Rankings. Retrieved from www.countyhealthrankings.org
18. State of Texas Industrial and Commercial Sites and Buildings. (2015). Chambers County, Texas. Retrieved from <http://www.texassitesearch.com>
19. State of Texas Industrial and Commercial Sites and Buildings. (2015). Liberty County, Texas. Retrieved from <http://www.texassitesearch.com>
20. Texas Almanac. (n.d.). Liberty County. Retrieved from <http://texasalmanac.com/topics/government/liberty-county>
21. Texas Association of Counties (2015). Retrieved from www.txcip.org/tac/census/profile.php?FIPS=48071
22. [government/politics]. Texas Association of Counties (2015). Retrieved from www.txcip.org/tac/census/profile.php?FIPS=48291
23. Texas Department of State Health Services (n.d.). Region 6/5. Retrieved from www.dshs.state.tx.us/region6-5
24. Texas Department of State Health Services. (2009). Chambers County community health assessment. Retrieved from www.dshs.state.tx.us/chambers
25. Texas Department of State Health Services (2012). Health facts profile – Chambers County, 2012. Retrieved from <https://www.dshs.state.tx.us/chs/cfs/Texas-Health-Profiles.aspx>
26. Texas Department of State Health Services (2012). Health facts profile – Liberty County, 2012. Retrieved from <https://www.dshs.state.tx.us/chs/cfs/Texas-Health-Profiles.aspx>
27. Texas Department of State Health Services. (2015). Potentially Preventable Hospitalizations – Chambers County. Retrieved from www.dshs.state.tx.us/ph
28. Texas Education Agency (2015). School district profiles. Retrieved from <http://ritter.tea.state.tx.us/perfreport/account/2014/index.html>

29. Texas Labor Market (2015). Employment and Wages – Chambers and Liberty Counties. Retrieved from <http://www.tracer2.com/cgi/databrowsing/LocalAreaProfileComQSResults.asp>
30. Texas State Historical Association (n.d.). Chambers County. Retrieved from <https://tshaonline.org/handbook/online/articles/hcc09>
31. Texas State Historical Association (n.d.). Liberty County. Retrieved from <http://tshaonline.org/handbook/online/articles/hcl108>
32. Texas Workforce Commission. (2015). Texas Labor Market Information. Retrieved from www.tracer2.com
33. Theis, M. (2015, May). Texas hotspots: Mapping the state's economic health, county by county. Austin Business Journal. Retrieved from www.bizjournals.com/Austin/news/2015/05/11/texas-hotspots-mapping-the-states-economic-health.html?s=sprint
34. U.S. Census Bureau. (2013). American Community Survey. Retrieved from <http://factfinder.census.gov>
35. U.S. Census Bureau. (2013). American Fact Finder: Chambers County, Texas. Retrieved from http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.html
36. U.S. Census Bureau. (2013). American Fact Finder: Liberty County, Texas. Retrieved from http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml
37. U.S. Census Bureau. (2015). Comparative Demographic Estimates 2011-2013 – Chambers and Liberty Counties, Texas. Retrieved from http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_13_3YR_CPO5&prodType=table
38. U.S. Census Bureau (2013). Education Attainment (Chambers and Liberty Counties, Texas). Retrieved from http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_13_5YR_S1501&src=pt
39. U.S. Census Bureau (2015). State & County QuickFacts. Chambers County, Texas. Retrieved from <http://quickfacts.census.gov/qfd/states/48/48071>
40. U.S. Census Bureau (2015). State & County QuickFacts. Liberty County, Texas. Retrieved from <http://quickfacts.census.gov/qfd/states/48/48291.html>
41. U.S. Department of Health and Human Services (USDHHS). Centers for Disease Control and Prevention. (2015). Community Health Status Indicators 2015. Retrieved from www.cdc.gov/CommunityHealth/profile/currentprofile/Tx/Chambers

42. U.S. Department of Health and Human Services (USDHHS), Centers for Disease Control and Prevention. (2015). Community Health Status Indicators 2015. Retrieved from www.cdc.gov/CommunityHealth/profile/currentprofile/Tx/Liberty
43. Who represents me? Districts by County. (2015). Retrieved from <http://www.fyi.legis.state.tx.us/County.aspx?CountyCode=291&CountyName=Liberty>
44. Workforce Development Area (2015). Gulf Coast Workforce Development Area. Retrieved from www.tracer2.com/cgi/databrowsing/LocalAreaProfileComQSResults.asp

Additional Websites and Blogs

45. www.aspe.hhs.gov
46. www.bphc.hrsa.gov
47. www.chambershealth.org
48. www.co.chambers.tx.us
49. www.healthypeople.gov
50. www.house.state.tx.us/member/member-page
51. www.hrsa.gov
52. www.livability.com/tx/anahuac/business/major-industries
53. www.senate.state.tx.us/member/member-page
54. www.bphc.hrsa.gov/databrowsing/reporting
55. <https://texaswideopenforbusiness.com>

Attachment 1: Biosketches/Short Resumes

Jeffrey J. Hatala, PhD
2015 short resume

Current Position: Assistant Professor & MPH Program Director
Department of Health Policy and Management
School of Public Health
Texas A&M Health Science Center
212 Adriance Lab Rd.
College Station, TX 77843-1266
979.436.9489
hatala@sph.tamhsc.edu

Education:

Degree	Year	University	Major	Thesis/Dissertation
PhD	2013	University of South Carolina	Health Services Policy and Management	Factors Influencing Local Public Health Agency Participation in Core Public Health Functions Related to Obesity Prevention
MPH	2007	University of Colorado Health Sciences Center	Public Health	Participated in graduate certificate in public health.
MBA	2005	University of Phoenix	Business	NA
MMC	1994	University of South Carolina	Mass Communication, emphasis in public relations	Feasibility Study of Desktop Publishing Businesses
BA	1988	West Virginia University	English	Minors in psychology and journalism

Health-Related Experience:

Position	Organization	Dates
Assistant Professor and MPH Program Director	Texas A&M Health Science Center, School of Public Health	2015-present
Assistant Professor	Texas State University-San Marcos	2011-2015
Graduate Research Associate	South Carolina Rural Health Research Center	2008-2011
Proposal Manager	Policy Studies Inc, Denver, CO	2006-2007
Certified Fitness Trainer	24 Hour Fitness	2006
Regional Director	American Heart Association	1991-1992
Public Relations Assistant	Chernoff/Silver (now Chernoff/Newman) and Associates	1990-1991

Recent publications:

- Factors associated with Southern and non-Southern LPHA participation in obesity prevention.* **Hatala, J.** & Fields, T. (2014, June). *Southern Medical Journal*. 108(5): 283-289.
- That, That, But Not That...Using a Cafeteria Plan to Enhance Writing Skills:* Fields, T., **Hatala, J.** *Administrative Issues Journal*. 4(2):3-11.
- Assessing Health Services Organizations' Perceptions of Students Writing Skills: A Pilot Study.* Fields, T., **Hatala, J.**, Nauert, R. *Administrative Issues Journal*, 4(1):19-29.
- Factors Associated with LPHA Participation in Core Public Health Functions Related to Obesity Prevention, 2008.* **Hatala, J.**, Probst, J., Byrd, M., Hale, N., Hardin, J. *Journal of Management Policy and Practice* 14(6):92-106.
- The collaboration of not-for-profit hospitals and public health departments to perform community needs assessments that meet PPACA requirements.* Fields, T., Johnson, P., & **Hatala, J.** *Journal of Management Policy and Practice* 14(5):39-46.
- Challenges and Opportunities within a University/Community Partnership: Development of the Soldier Health Promotion to Examine and Reduce Health Disparities (SHPERHD) Project Coordinating Center.* Williams EM, Lee MD, Preston G, Williams A, Wigfall LT, Wilkinson L, **Hatala J**, Hassan R, Glover SH. *Military Medicine*, 2011 Jul;176(7):757-62.

Technical Reports:

- Martin AB, Bellinger J, **Hatala J**, Mitchell, J, Probst J. *State Policy Levers for Addressing Preventive Dental Care Disparities for Rural Children: Medicaid Reimbursement to Non-Dental Clinicians for Fluoride Varnish and Dental Hygiene Supervision in Primary Care Safety Net Settings.* August 2012
- Martin AB, **Hatala J**, Shaw, K, Probst JC. *South Carolina Public School Nurses' Perceptions of Oral Health Status and Dental Partnerships in their Schools.* January 2009.

Recent presentations at professional meetings:

- Hatala, J.**, Probst, J., Byrd, M., Hale, N., Hardin, J. (2013, March). Factors Associated with LPHA Participation in Core Public Health Functions Related to Obesity Prevention, 2008. Southwest Academy of Management, March 2013.
- Martin AB, **Hatala J**, Veschusio, C, Probst JC. Oral Health in SC: Importance of the Relationship between School Nurses and Dentists. American Public Health Association, November 2010. Poster.
- Martin AB, **Hatala J**, Veschusio, C, Probst JC. Oral Health in SC: Importance of the Relationship between School Nurses and Dentists. Academy for Health Equity, August 2010. Poster.
- Martin AB, **Hatala J**, Veschusio, C, Probst JC. Oral Health in SC: Importance of the Relationship between School Nurses and Dentists. National Rural Health Association, June 2010. Oral.

Tina Taylor Fields, PhD, MPH
2015 Short Resume

Current Position: Private Consultant

Educational Background:

<u>Degree</u>	<u>Year</u>	<u>University</u>	<u>Major</u>	<u>Thesis/Dissertation</u>
MPH	1981	University of Texas	Health	Patterns of Low Birth Weights in Selected Census Tracts in Bexar County, Texas
PhD	1979	Texas A&M University	Health Education	Attitudes of Family Planning Workers Toward Teenage Sexual Permissiveness
MS	1974	Texas A&M University	Health Education	A Study of Attitudes of Arkansas School Superintendents Concerning Sex Education Classes
BA	1971	Texas A&M University	Education	Specialties: Russian and History

University Experience:

<u>Position</u>	<u>University</u>	<u>Dates</u>
Associate Professor	Texas State University – San Marcos	2008-2015
Lecturer	Texas State University – San Marcos	2008 (spring)
Visiting Professor	University of Texas at Brownsville	2004 (summer)
Assistant Professor	University of Texas Health Science Center-San Antonio	2001-2007
Associate Professor	Southwest Texas State University	1998-2000
Assistant/Associate Professor & Texas Tech University		1983-1994
Division Head		

Relevant Professional Experience:

<u>Position</u>	<u>Entity</u>	<u>Dates</u>
Executive Director	Center for South Texas Programs University of Texas Health Sciences Center	2007-2008
Interim Director	Center for South Texas Programs University of Texas Health Sciences Center	2006-2008
Associate Director	Center for South Texas Programs University of Texas Health Sciences Center	2001-2006

Executive Director	Western Colorado Area Health Education Center	2000-2001
County Public Health Administrator	Cameron County, Texas	1996-1998
Planner/Grant Writer	Brownsville Community Health Center	1994-1996
Health Education Specialist	Texas Department of Health	1982-1984
Health Promotion Bureau Chief	New Mexico Health and Environment Department	1981-1982

Grants and Contracts:

Source: DHHS - HRSA (contract, Valley Primary Care Network)
Title: Healthy Start
Period: June 2000 – June 2009
Direct Costs: \$235,000
Role: External Evaluator

Source: JOVAN, Inc.
Title: Adolescent Abstinence Program
Period: October 2006 – September 2007
Role: External Evaluator

Source: Hispanic Serving Health Professions Schools, Inc.
Title: Survey of Physicians Knowledge and Practice of Environmental Medical Assessments
Period: October 2004-September 2005
Direct Costs: \$50,000
Role: PI

Publications:

Hatala, J. & Fields, T. (2014, June). Factors associated with Southern and non-Southern LPHA participation in obesity prevention. *Southern Medical Journal*, 108(5), 283-289.

Fields, T.T., Hatala, J. Nauert, R. (2014). Perceptions of preceptors and students on importance of writing. *Administrative Issues Journal* 14(1), 19-29.

Fields, T.T., Johnson, P.A., Hatala, J. (2013). The collaboration of not-for-profit hospitals and public health departments to perform community needs assessment that meet PPACA requirements. *Journal of Management Policy and Practice*, 14(5), 39-47.

Nauert, R. & Fields, T.T. (2012). Adoption of information technology in Texas nursing homes. *Texas Public Health Journal*, 64(3), 5-11.

Fields, T.T. (2012). Making diversity activities your own. *National FORUM of Multicultural Issues Journal*, 9(2), 59-66.

Fields, T.T., Morrison, E.E., & Greene, L. (2010). Intragenerational focused mentoring: Engaging graduate and undergraduate health administration students in learning. *The Journal of Health Administration Education*, 27(4), 311-321.

Attachment 2: List of Focus Group/Interview Participants

Patti Nauman	Anahuac ISD
Valerie Jensen	Chambers County Library System
Jean Abshier Forrest	Senior Citizens of Chambers County
Amy Price	Bay Area Turning Point
Linda Tinnerman	School Administrator (Retired)
Daniel Burke	Anahuac EMS
John Willey	Anahuac Fire Dept/Anahuac EMS
Dayne Haynes	The Progress
Robbie King	Anahuac Area Chamber of Commerce
Marsha Tuha	Lee College Center for Workforce and Community Development
Kristan Anderson	Mane Street Hair Studio
Mary Beth Bess	Chambers County
John Redman	Bayside Clinic
Christi Morris	Bayside Community Hospital
Kim Rawlinson	Bayside Clinic
Danielle Tate	Bayside Community Hospital
Donna Alpers	Angels Above Us Home Health, Liberty
Cory Abshier	Liberty ISD