

South Texas Community Medical Needs Assessment

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Contents

- Contents..... 2
- Table of Tables 5
- Table of Figures..... 7
- I. Executive Summary..... 9
- II. South Texas Community Profile 12
 - A. 18-County Region Profile 13
 - Population 13
 - The Projection Scenarios..... 14
 - South Texas Income Data..... 16
 - County Employment 18
 - B. Current Health Issues by Ethnic Group and Topic 19
 - Overall: Disease and Death 19
 - Ethnic Breakouts: Disease and Death 22
 - C. Current Health Services 26
 - Hospital Breakdown by County and Type..... 26
 - D. Professional Healthcare Ratios and Utilization..... 29
 - Ratios and Shortages..... 29
 - Texas Acute Care..... 31
 - E. Clinic Breakdown by County 34
 - F. Federally Qualified Health Centers/Community Health Centers..... 35
 - FQHC/CHC breakdown by County..... 36
 - FQHC Patient Insurance Coverage 37
 - G. Alternate Services: Telemedicine..... 39
 - H. Infrastructure and Services..... 40
 - Roads..... 40
 - Fire and EMS 41
 - Cell Phone Coverage 43
 - I. Traffic Accidents..... 44
 - J. Work Place Injuries 48
 - K. Healthcare Reform 52

III.	Wave 1 Primary Data Collection Findings	53
L.	Hospitals.....	53
M.	Physicians and Subspecialists.....	53
N.	County Officials	55
O.	FQHCs and Community Health Centers	56
P.	EMS	57
Q.	Fire	57
R.	Industries	57
IV.	Wave 2 Primary Data Collection Findings	59
S.	Observations	63
	Limitations.....	63
	Comments.....	63
T.	Sub-Region Breakdown and County Analysis.....	64
	Northern Sub-Region.....	66
	Northwest Sub-Region	67
	Northeast Sub-Region.....	69
	Western Sub-Region	71
	Central Sub-Region	73
	Southern Sub-Region.....	75
	Southeast Sub-Region.....	77
	Atascosa County.....	79
	Bee County.....	80
	Bexar County.....	81
	DeWitt County.....	82
	Dimmit County.....	83
	Edwards County.....	84
	Frio County	85
	Gonzales County	86
	Karnes County.....	87
	Kinney County.....	88
	La Salle County.....	89
	Live Oak County.....	90

Maverick County	91
McMullen County	92
Uvalde County	93
Webb County	94
Wilson County	95
Zavala County	96

Table of Tables

Table 1: Population Density; sources: Texas State Demographer, http://www.digital-topo-maps.com/county-map/texas.html , CCBR.....	15
Table 2: Leading causes of death at the national level from 2007-2010; Source: Center for Disease Control	20
Table 3: 5 Leading causes of death in Texas 2010; Source: Texas Department of State Health Services ..	20
Table 4: 3 Chronic Diseases in the South Region for 2008-2010; Source: Center for Disease Control. For the Southern Region, the Census Bureau includes Arkansas, Louisiana, Oklahoma, and Texas. The chronic disease rankings reflect all four states.....	20
Table 5: Date rates - Texas vs. United States, 2009; Source: Center for Disease Control	21
Table 6: Hispanic Population – Leading Causes of Death 2010; Source: Texas State Health Services	22
Table 7: Hispanic Population - Chronic Diseases 2008-2010; Source: Center for Disease Control	22
Table 8: Anglo Population - Leading Causes of Death 2010; Source: Texas State Health Services	223
Table 9: Anglo Population - Chronic Diseases 2008-2010; Source: Texas State Health Services	23
Table 10: Black Population – Leading Causes of Death 2010; Source: Texas State Health Services	24
Table 11: Black Population - Chronic Diseases 2008-2010; Source: Center for Disease Control	24
Table 12: Other Population – Leading Causes of Death 2008-2010; Source: Texas State Health Services	25
Table 13: Other Population - Chronic Diseases 2007-2009; Source: Center for Disease Control	25
Table 14: Number of hospitals 18-County Region; Reference USA	26
Table 15: Hospital facility by Subtype 18-County Region; Center for Medicare and Medicaid Services ...	28
Table 16: Professional Ratio Keys Findings; Texas Department of State Health Services' Center for Health Statistics	29
Table 17: HPSA Key Findings; U.S. Department of Health and Human Services Health Resources and Service Administration.....	29
Table 18: 18-County Region; Reference USA.....	34
Table 19: FQHC Clinics and Centers; Texas Association of Community Health Centers.....	36
Table 20: source: TxDOT.	40
Table 21: source: TxDOT.	40
Table 22: Number of Fire Dept. per County; OSHA	41
Table 23: Number of EMS personnel per County; OSHA.....	41
Table 24: Sources: TMobile.com, AT&T.com, Verizon.com, Cricket.com, Sprint.com, Open Wi-Fi spots.com.....	43
Table 25: Traffic Accidents by county; Source: Texas Department of Transportation; Medicare.gov; Texas Association of Community Health Centers	45
Table 26: Source: Texas Department of Transportation; Medicare.gov; Texas Association of Community Health Centers	49
Table 27: Key Issues Mentioned by Physicians	56
Table 28: North Region	66
Table 29: Northwest Region	67
Table 30: Northeast Region	69
Table 31: Western Region.....	71

Table 32: Central Region	73
Table 33: Southern Region.....	75
Table 34: Southeastern Region	77
Table 35: HPSA Data - Atascosa; US Department of Health and Human Services Health Resources and Services Administration	79
Table 36: HPSA Data - Bee; US Department of Health and Human Services Health Resources and Service Administration	80
Table 37: HPSA Data - Bexar; US Department of Health and Human Services Health Resources and Services Administration	81
Table 38: HPSA Data - Dewitt; US Department of Health and Human Services Health Resources and Services Administration	82
Table 39: HPSA Data - Dimmit; US Department of Health and Human Services Health Resources and Services Administration	83
Table 40: HPSA Data - Edwards; US Department of Health and Human Services Health Resources and Services Administration	84
Table 41: HPSA Data - Frio; US Department of Health and Human Services Health Resources and Services Administration	85
Table 42: HPSA Data - Gonzales; US Department of Health and Human Services Health Resources and Services Administration	86
Table 43: HPSA Data - Karnes; US Department of Health and Human Services Health Resources and Service Administration.....	87
Table 44: HPSA Data - Kinney; US Department of Health and Human Services Health Resources and Services Administration	88
Table 45: HPSA Data - La Salle; US Department of Health and Human Services Health Resources and Services Administration	89
Table 46: HPSA Data - Live Oak; US Department of Health and Human Services Health Resources and Services Administration	90
Table 47: HPSA Data - Maverick; US Department of Health and Human Services Health Resources and Services Administration	91
Table 48: HPSA Data - McMullen; US Department of Health and Human Services Health Resources and Services Administration	92
Table 49: HPSA Data - Uvalde; US Department of Health and Human Services Health Resources and Services Administration	93
Table 50: HPSA Data - Webb; US Department of Health and Human Services Health Resources and Services Administration	94
Table 51: HPSA Data - Wilson; US Department of Health and Humman Services Health Resources and Services Administration	95
Table 52: HPSA Data - Zavala; US Department of Health and Human Services Health Resources and Services Administration	96

Table of Figures

Figure 1: Map of 18-County Region with EFS Sites	11
Figure 2: Map of the 18-County Region; CCBR	13
Figure 3 US Census: Total Population	16
Figure 4: Per Capita Income 2012; Census Bureau American Community Survey 2012	17
Figure 5: Average (Mean) Household Income 2012; Census Bureau American Community Survey 2012	17
Figure 6 US Census: Average Household Income	18
Figure 7: Employment Distribution 18-County Region;	19
Figure 8: Hospital Types Ratio.....	27
Figure 9: Hospitals by Subtype; Center for Medicare and Medicaid Services	28
Figure 10 Texas Board of Nursing: Nurse Practitioner.....	30
Figure 11 Texas Board of Nursing: Registered Nurses	30
Figure 12 Texas Department State of Health Services: Primary Care.....	31
Figure 13: Acute Care Staffed Bed Rate in Texas 2002-2011; Texas DSHS	32
Figure 14: Number of Licensed Beds 2002-2011; Texas Department of State Health Service Admissions.....	32
Figure 15: Hospital Admissions; Texas Department of State Health Services	33
Figure 16: Outpatient and Emergency Room Visits; Texas Department of State Health Services	33
Figure 17: Clinic Types 18-County Region; Reference USA.....	35
Figure 18: FQHC Distribution 18-County Region; Texas Association of Community Health Centers	37
Figure 19: 2013 FQHC/CHC Patient Insurance Status 18-County Region; Texas Association of Community Health Center	38
Figure 20 Texas Department State of Health Services: EMS licensed professionals	42
Figure 21: Accident Site; mywesttexas.com	44
Figure 22 Texas Department of Transportation: Traffic Accidents with EFS Wells2	46
Figure 23: 2010 Fatality Investigations; OSHA	47
Figure 24: Fatalities by State Region VI; OSHA	47
Figure 25: Applied Geographic Solutions (AGS) from BLS consumer expenditure survey	48
Figure 26: Focus Four Fatalities Region IV; OSHA.....	50
Figure 27 BLS: Workplace Injury with EFS Wells2.....	51
Figure 28: Healthcare Studies	64
Figure 29 Northern Sub-Region	66
Figure 30 Northwestern Sub-Region.....	68
Figure 31 Northeastern Sub-Region	70
Figure 32 Western Sub-Region	72
Figure 33 Central Sub-Region	74
Figure 34 Southern Sub-Region	76
Figure 35 Southeastern Sub-Region.....	78

South Texas Community Medical Needs Assessment

As any gambler knows, even hitting the jackpot has its costs. Oil and gas production in the Eagle Ford Shale Play area has brought a wealth of opportunity for residents and businesses. But along with them have come new challenges.

Most people in the region have heard about the need for employee housing and tougher roads to withstand oilfield supply trucks. They may not know, however, about the strain being put on the area's healthcare facilities, which were already spread thin. The booming population, rising cost of living and increase in oilfield-related health problems all impact healthcare delivery. Left unchecked, they could affect worker recruitment and productivity, and the health of all patients in the region.

The first step in addressing the needs of the region is dialogue. Government officials, healthcare providers, business leaders and citizens of the affected communities all can benefit from sharing ideas and viewpoints about the changes at hand.

In an effort to facilitate those discussions, Methodist Healthcare Ministries (MHM) of South Texas, Inc. commissioned a baseline study: South Texas Community Medical Needs Assessment 2013. Conducted by the Center for Community and Business Research (CCBR) at the University of Texas San Antonio, the study covers 18 counties that are affected by Eagle Ford Shale (EFS) activity: Atascosa, Bee, Bexar, DeWitt, Dimmit, Edwards, Frio, Gonzales, Karnes, Kinney, La Salle, Live Oak, Maverick, McMullen, Uvalde, Webb, Wilson and Zavala. Researchers gathered primary and secondary data on population, healthcare infrastructure and the changing demand for services.

The study reported on current health service capacity in the 18 county-region to provide projections reflecting population growth and changing health and healthcare needs in these areas. The CCBR collected a variety of demographic and infrastructure information, including topics such as income, health issues by ethnicity, traffic accidents, workplace injuries, operating hospitals and clinics, fire and EMS services and health professional services shortages.

The purpose of this study is to report the status of healthcare resources within this specific area only, not to outline or be construed as a policy document adhered to or suggested by any entity referred to in the study. A separate summary of the findings was developed along with a list of capacity- building strategies for stakeholders to consider. The hope is that this information will fuel discussion about sustainable ways to meet healthcare needs during and after this period of remarkable growth.

I. Executive Summary

The 18-counties within the study region is approximately 23,971 square miles. All but four of the counties are active Eagle Ford drilling areas; however, those counties not directly involved with drilling still experience the impacts of oil and gas activity growth. The growth associated with EFS has translated into more than \$19.2 billion in output, 38,000 full-time jobs supported, close to \$10.5 billion in gross regional product, \$211 million in local governments' revenues, and \$312 million in state revenues.¹

Although EFS development has continued to encourage economic stability in the region with jobs that offer health insurance, industries directly or indirectly related to EFS activity (i.e. subcontractors, hotels, restaurants, etc.) continue to retain chronically uninsured employees. While the impact of EFS on the delivery of countywide healthcare services varies across the area, the overall development of the shale has placed increased pressure on county level infrastructure. Within the context of healthcare, the increase in population in this region has also given rise to varying health needs. Attention to sustainability related to growth in the region includes a focus on adequate access to healthcare services. Dependency on payment and cost structures borne of insurance and scale of delivery may need to be tweaked and innovation implemented to support not only affordability, but availability.

Traditionally, health needs in this area have been related to an aging population and an overall lack of preventive and specialty care. However, the recent influx of workers and families has compounded the lack of access in these communities. Moreover, significant increases in traffic accidents and work place injuries, as well as social impacts stemming from alcohol, drug abuse and sexually transmitted diseases have led to a sharp increase in the need for emergency, OB/GYN and pediatric care, as well as specialty care including ambulatory and psychiatric services. While some areas have access to hospital care, service offerings are still limited due to advancements available only in urban areas such as cardiac surgery and trauma; trauma and ambulatory services are consistently lacking across the study region.

This study identified a baseline healthcare capacity that was very sparse across the region. Urban areas, such as Bexar and Webb counties showed more availability to, and greater variety of, specialized services. In rural areas, however, availability and access to hospital and specialty services, as well as funding issues are prominent problems. As populations age, cardiac, digestive and other geriatric health issues drive demand for specialists and secondary care. Likewise, as families move into the region, the demand for women's health, pediatric and obstetric services increases. An increase in labor force is also associated with an increase in accidents and social pressures, pointing to needs for trauma and mental health services. In some areas, the only medical personnel are nurses associated with schools, retirement homes, or jails. In addition, locales that are served by a single physician who is either recently retired, or near retirement, struggle to recruit replacements.

Increased healthcare service demands have influenced rural service providers financially as well. Counties with budget support for indigent services often exhaust those resources in a matter of weeks,

¹ October 2012. Center for Community and Business Research: UTSA Institute for Economic Development. *Eagle Ford Impact for Counties with Active Drilling*.

instead of the annual timeframe for which the funds are intended; bad debt and charity care charges are a given and a large part of service provision budget structure. For example, a county hospital administrator within the EFS study region who participated in primary data collection surveys reported that the annual county budget for indigent care in the respondent's county is normally depleted by the end of January, and the monthly amounts for indigent care (marked as bad debt) have gone from \$1,000,000 to \$2,000,000 per month.

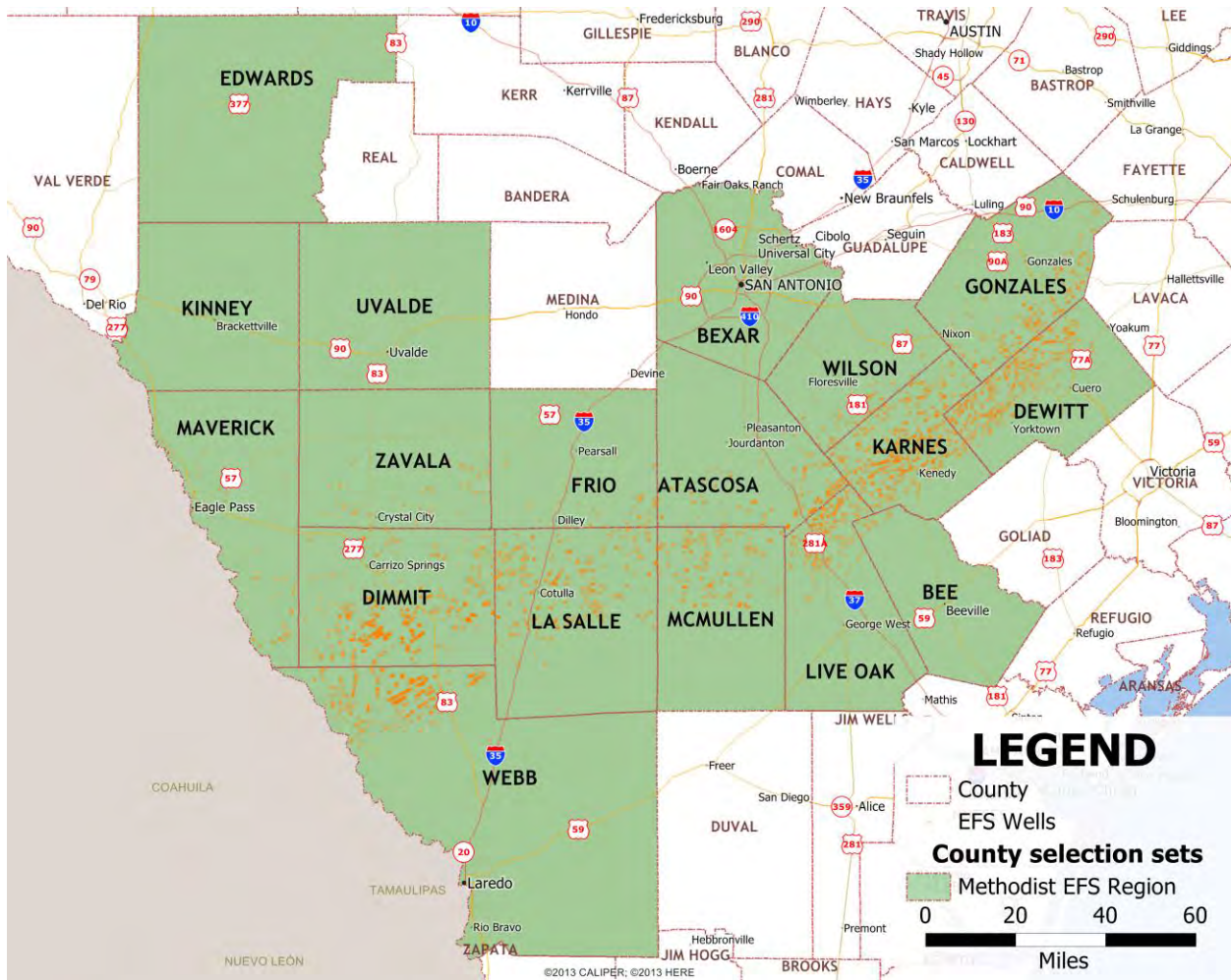
Budgets for healthcare compete with funding for other infrastructure under stress due to growth. However, health issues are influenced by additional factors affecting quality of life, and can adversely affect public health. For example, road damage related to accidents; isolation suffered by workers that can lead to suicide; and lack of communication networks all influence health outcomes. All the stakeholders who participated in this study shared a single viewpoint: the South Texas area has substantial needs and gaps in healthcare services, from the contexts of access and infrastructure to the pressures resulting from regional growth.

Whereas one consideration in designing strategies to improve access and delivery of healthcare services in response to EFS activities is that population and growth will eventually slow down as production decelerates, the projected period of activity spans 20 to 30 years. This is a long-range period, and the supposition that activity will 'eventually slowdown' is shortsighted. In light of the current dearth of services, improvements would support not only current levels of need but also address future essentials. Rather than consider that additional service supports might be temporary, only need limited financial support, or a shift of demand to current facilities—as types of stopgap measures—robust plans should consider localized development of facilities and services as permanent offerings.

Economic pressures across the country in conjunction with opportunities presented by EFS and other Texas growth industries point to continued growth in the region, surpassing initial projections based on Census and U.S. Department of Labor data. The estimated 2010 population for this 23,971 square mile area was 2,220,985; however, 2050 population projections range from 3,047,066 to 4,102,744—an increase of 28 to 46 percent. Note that these numbers do not count the influx in labor force due to EFS activities or support industries and family in-migration. For instance, De Witt, Dimmit, Frio, Gonzales, Karnes, La Salle, Uvalde, and Zavala Counties all show evidence of much higher population growth over the next 40 years.

The sheer amount of territory is a major consideration when framing plans for development and progress. Shortages in housing, retail outlets, water, transportation routes and other aspects related to economic development taken for granted in more urban areas are limiting factors in rural settings—but factors that current growth has been pushing to the forefront. Growth strategies should take local government, community businesses, schools, and healthcare industry structures into account.

Figure 1: Map of 18-County Region with EFS Sites



South Texas Community Medical Needs Assessment

II. South Texas Community Profile

This Medical Needs Assessment profiles the South Texas counties of Atascosa, Bee, Bexar, De Witt, Dimmit, Edwards, Frio, Gonzales, Karnes, Kinney, La Salle, Live Oak, Maverick, McMullen, Uvalde, Webb, Wilson, and Zavala (hereafter referred to as the 18-County region). The study looks at the current profile of healthcare issues and context of the region, and summarizes healthcare needs and services as reported by publically available sources, as well as by other agencies/organizations associated with healthcare services across these counties. Items looked at in the study include current delivery, federal healthcare reform policy, demographic data and some regional infrastructure. Additionally, reports on the area by government agencies have been compiled to provide a comparison of this region's healthcare as measured by general standards and reporting. Some data, provided by specialty groups, is also presented.

Based on non-standardized reporting across data sources not all data may agree, as its reporting body may use measurements and criteria that differs from that used by other reporting bodies. It is important to note that due to public policy and variation in reporting requirements across local, state and federal data, public sources reflect a variety of legal parameters and definitions. Data from private and interview sources may reflect information associated with local and regional interests and experiences, providing further differentiation. Some government and private sources do not have current data available; lastly only data available at the time of this study is shown.

The purpose of this study is to report only, not to outline or be construed as a policy document adhered to or suggested by any entity referred to in the study.

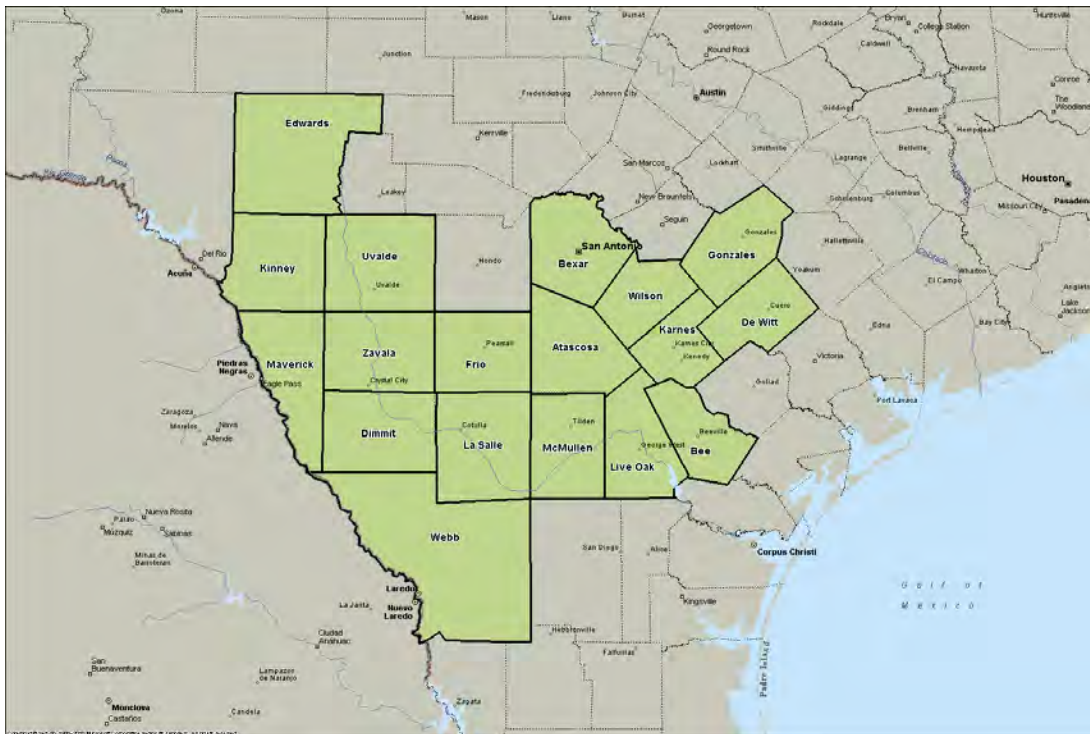
Part of the unique flavor that is South Texas is its long, rich history and the development of its resources as a main focus of economic sustenance. Those resources include proximity to an international border, agricultural and mining activities, transportation routes, and tourism. Important to an examination of the area is the understanding of the vast geographic territory involved, and the sparse populations across that terrain, clustered along transportation routes that track agriculture, mining, and tourism. Likewise, examinations of healthcare must include a look at relationships to aging as well as to mobile populations and to the generally rural environment. Development of healthcare services in South Texas may benefit from new technologies such as tele-medicine, public and private partnerships and networks, and the exploration of incentives for both providers and service populations. Relationship-building can be a vital component toward development across the South Texas area, which comprises an array of traditions, local interests, and unique circumstances.

A. 18-County Region Profile

For the purposes of this report, MHM and CCBR define the MHM Study Region as:

Atascosa County	Frio County	Maverick County
Bee County	Gonzales County	McMullen County
Bexar County	Karnes County	Uvalde County
De Witt County	Kinney County	Webb County
Dimmit County	La Salle County	Wilson County
Edwards County	Live Oak County	Zavala County

Figure 2: Map of the 18-County Region; CCBR



Population

Population density is shown in Table 1 as the ratio of population to county square mile area. 2010 Census figures are used as a baseline with 2050 population projection scenarios (calculated by the State Demographer from a B/D/M formula) used as future population targets for 2050 density calculations. An average of the three scenarios is provided for informational purposes only for perspective across the targets. The B/D/M formula takes into consideration the patterns of fertility, mortality and mobility of populations specific to an area. The patterns may be affected by culture, quality of life and other variables. The three scenarios of normal, conservative and aggressive weights on the B/D/M formula provide three population projection targets.

It is important to understand the interaction between the scenario and the base formula. For example, where a county has historically been losing population, an aggressive weight may show less population

in the future, based on the application of that county's B/D/M pattern in the formula in conjunction with the weight. The profile across counties in terms of population density shows the sparse nature of rural South Texas settlement in a very large geographic area.

The Projection Scenarios

Three projection scenarios which produce three alternative sets of population values for the State and each county are presented in these projections. These scenarios assume the same set of mortality and fertility assumptions in each scenario but differ in their assumptions relative to net migration. The net migration assumptions made for two scenarios are derived from 2000-2010 patterns which have been altered relative to expected future population trends. This is done by systematically and uniformly altering the adjusted (as noted above) 2000-2010 net migration rates by age, sex and race/ethnicity. The scenarios produced are referred to as the zero migration (0.0) scenarios, the one-half 2000-2010 (0.5) scenario, and the 2000-2010 (1.0) scenario.

The Zero Migration (0.0) Scenario

The zero scenario assumes that immigration and outmigration are equal (i.e., net migration is zero) resulting in growth only through natural increase (the excess or deficit of births relative to deaths). This scenario is commonly used as a base in population projections and is useful in indicating what an area's indigenous growth (growth due only to natural increase) will be over time. In general, this scenario produces the lowest population projection for counties with historical patterns of population growth through net in-migration and the highest population projection for counties with historical patterns of population decline through net outmigration.

The One-Half 2000-2010 Migration (0.5) Scenario.

This scenario has been prepared as an approximate average of the zero migration (0.0) and 2000-2010 (1.0) migration scenarios. It assumes rates of net migration one-half of those of the post-2000 decade. The reason for including this scenario is that many counties in the State are unlikely to continue to experience the overall levels of relative extensive growth of the 2000 to 2010 decade. This scenario projects rates of population growth that are slower than 2000-2010 changes, but with steady growth.

The 2000-2010 Migration (1.0) Scenario

The 2000-2010 scenario assumes that the trends in the age, sex and race/ethnicity net migration rates of the post-2000 decade will characterize those occurring in the future of Texas. The 2000 to 2010 period was characterized by rapid growth in many areas of the state. It is seen here as the high growth alternative because it's overall total decade pattern one of substantial growth (i.e., 20.6% for the 2000-2010 decade for the State). Because growth was so extensive during the 2000-2010 decade, it is likely to be unsustainable over time and thus this scenario is presented here as a high growth alternative. For counties that experienced net outmigration during the 2000 to 2010 period, this scenario produces continued decline.

These numbers do not take into account possible changes due to the mining activities that began in 2008, and may not be tracked under normal U.S. Census procedures due to standard enumeration policies and the mobility of the associated labor force.

Table 1: Population Density; sources: Texas State Demographer, <http://www.digital-topo-maps.com/county-map/texas.html>, CCBR

GEOGRAPHIC AREA		U.S. Census		TEXAS STATE DEMOGRAPHER POPULATION PROJECTION SCENARIO TARGETS						STDMG
		2010		2050.0		2050.5		2050.1		2050
	Square Mile Area	County Pop	Pop Density	County Pop	Pop Density	County Pop	Pop Density	County Pop	Pop Density	AVE POPDNSTY
Atascosa	1232.120525	44,911	36.45	59,053	47.93	78,481	61.26	87,117	70.70	59.96
Bee	880.14332	32,359	36.77	37,106	42.16	35,545	40.39	30,588	34.75	39.10
Bexar	1246.824281	1,714,773	1375.31	2,195,644	1760.99	2,695,668	2162.03	3,180,782	2551.11	2158.04
Dewitt	909.181559	20,097	22.1	22,003	24.2	22,216	24.44	21,770	23.94	24.19
Dimmit	1330.91118	9,996	7.51	14,414	10.83	12,825	9.64	10,042	7.55	9.34
Edwards	2119.754685	2,162	1.02	2,098	0.99	1,939	0.91	1,674	0.79	0.90
Frio	1133.022198	17,217	15.2	22,136	19.54	24,488	21.61	26,160	23.09	21.41
Gonzales	1067.749907	19,807	18.55	27,079	25.36	28,330	26.53	28,239	26.45	26.11
Karnes	750.317191	14,824	19.76	15,735	20.97	15,697	20.92	16,609	22.14	21.34
Kinney	1363.43944	3,379	2.48	3,773	2.77	3,616	2.65	3,476	2.55	2.66
La Salle	1488.848949	6,886	4.63	9,178	6.16	9,987	6.71	10,835	7.28	6.72
Live Oak	1036.298018	12,309	11.88	11,681	11.27	11,101	10.71	10,334	9.97	10.65
Maverick	1280.075258	47,297	36.95	92,743	83.33	90,304	81.14	80,715	72.52	78.99
McMullen	1113.000076	851	0.76	658	0.51	641	0.50	553	0.43	0.48
Uvalde	1556.547637	26,405	16.96	37,440	24.05	36,257	23.29	31,631	20.32	22.56
Webb	3356.83337	193,117	57.53	433,129	129.03	500,553	149.11	530,330	157.99	145.38
Wilson	806.985883	42,918	53.18	43,786	54.26	71,683	8.83	108,349	134.26	92.45
Zavala	1298.481257	11,677	8.99	19,410	14.95	17,521	13.49	13,540	10.43	12.96

The State Demographer’s office publishes population projections at the county level of Texas (<http://txsdc.utsa.edu/Data/TPEPP/Index.aspx>). Using U.S. Census data, a B/D/M formula based on local differential patterns of fertility, mortality and mobility was used to project populations out to 2050. Three weights were used for three scenarios: “0” for normal, “0.5” for conservative, and “1” for aggressive. A past study² of population projections used the population projections published by the State Demographer and compared them to population projections for a selected number of counties based off of labor force and school enrollment, and household multiplier figures; housing units were also used, though data was limited.

² Center for Community and Business Research. (2013). South Central Texas Region L Population Projection Study. San Antonio, TX: Institute for Economic Development, University of Texas at San Antonio; available: cbr.iedtexas.org.

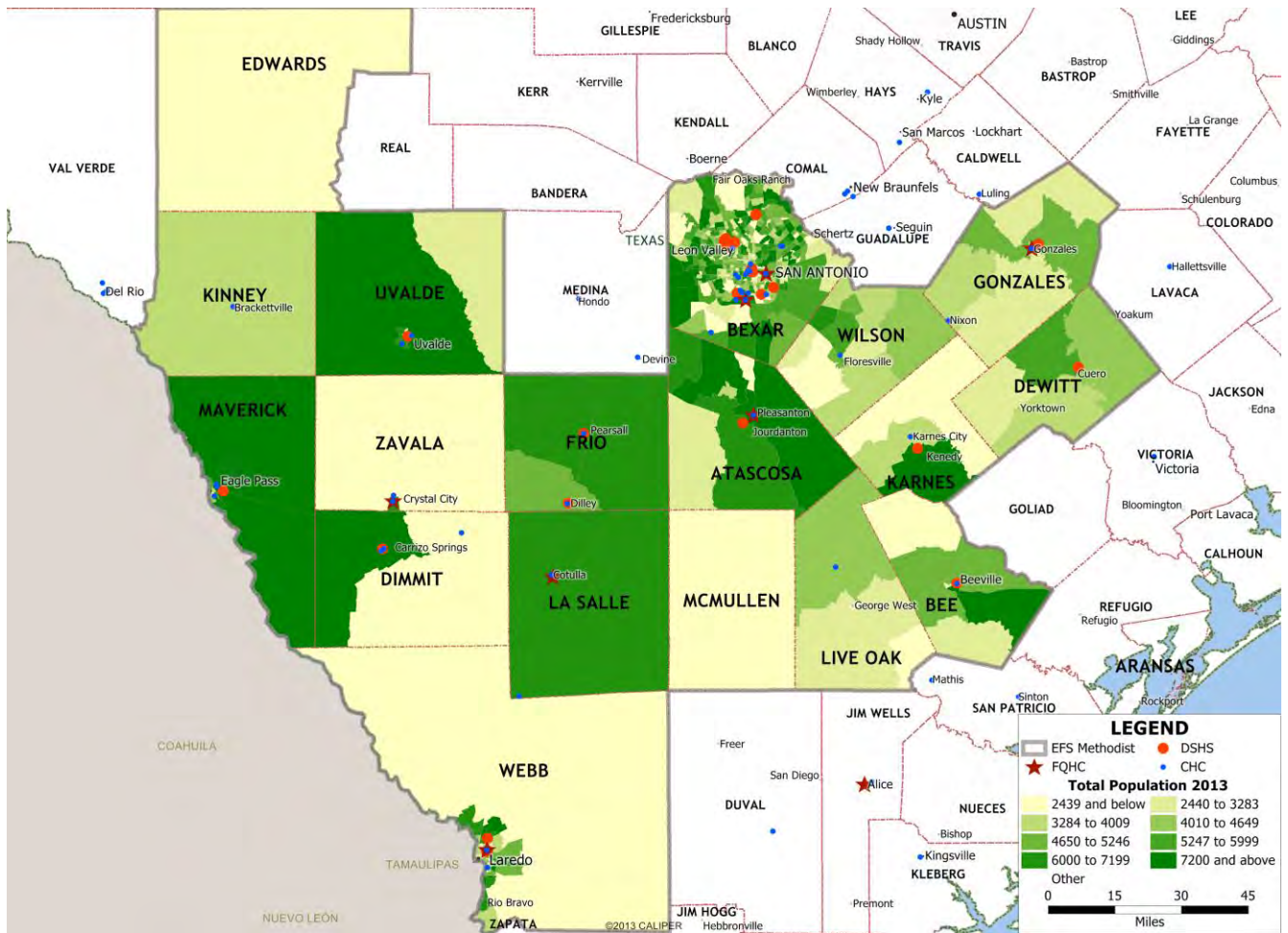


Figure 3 US Census: Total Population

South Texas Income Data

The 2012 per capita income levels in the 18-county study region are shown below. McMullen County shows the highest per capita income in 2012. The average (mean) household income for the 18-county region is also shown. Zavala has the lowest mean household income at \$10,775 while McMullen has the highest at \$74,211.

Figure 4: Per Capita Income 2012; Census Bureau American Community Survey 2012

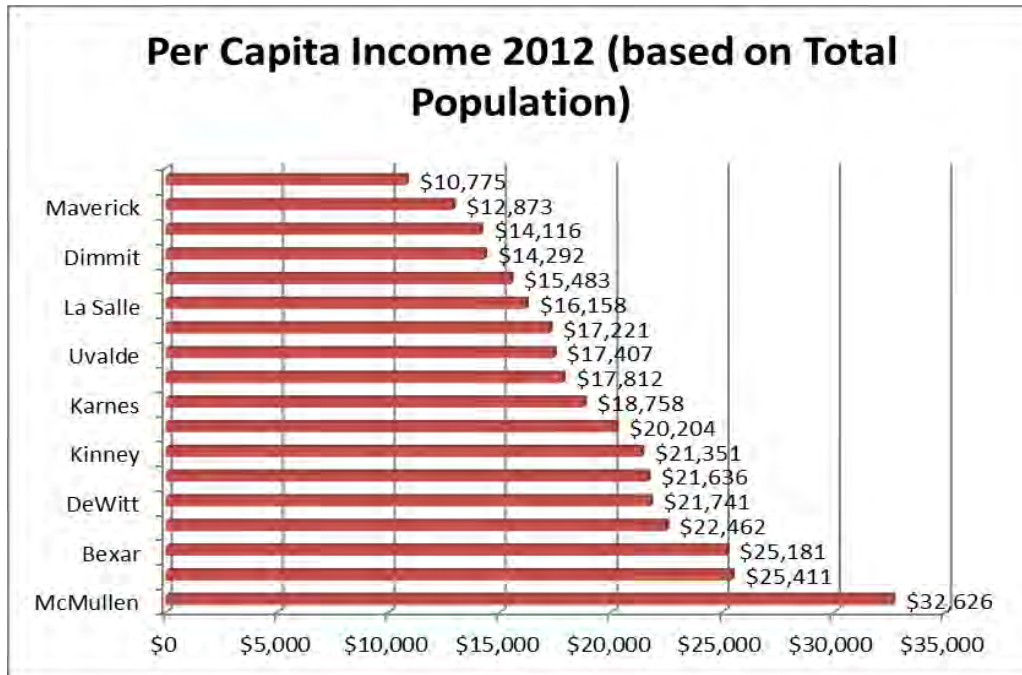
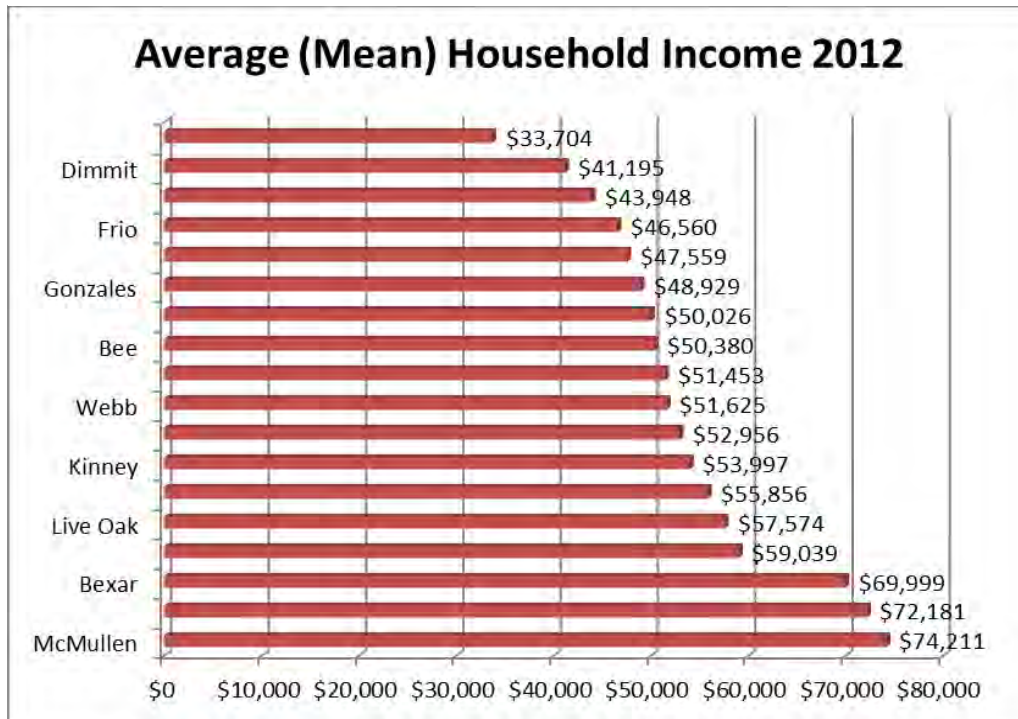


Figure 5: Average (Mean) Household Income 2012; Census Bureau American Community Survey 2012



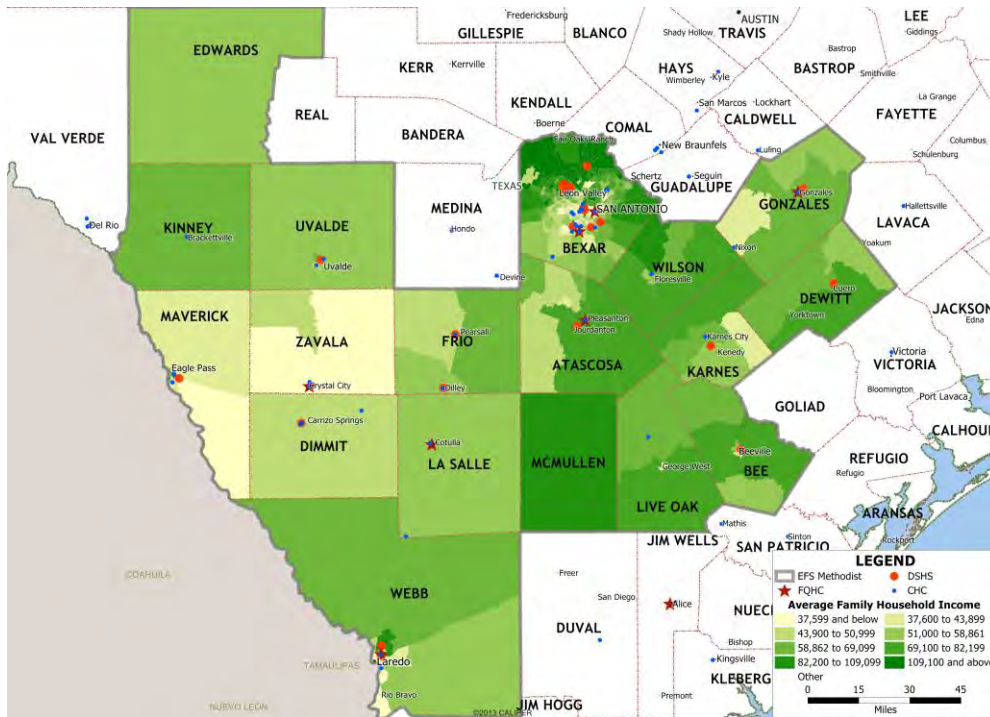


Figure 6 US Census: Average Household Income

County Employment

Data from the Census Bureau’s County Business Pattern and the Bureau of Economic Analysis databases was collected to show the approximate number of part-time employees in the 18-county region.³ This data takes into account standard employers, non-employers (A non-employer business is one that has no paid employees, has annual business receipts of \$1,000 or more [\$1 or more in the construction industries], and is subject to federal income taxes), and proprietary establishments (an unincorporated business owned and run by one individual with no distinction between the business and you, the owner).⁴ There are approximately 357,101 part-time employees in the 18-county region. Figure 7 shows the employment distribution in the 18-county region. Excluding those who seek private insurance or who qualify for some type of public health plan, these part-time workers are largely uninsured.

³ Methodology: Data is taken from County Business Patterns who counts standard employers and non-employers and proprietary establishments from the BEA to estimate the total number of employees in the region. The difference is taken from these two numbers to estimate the number of part-time employees in the 18-county region.

⁴ Small Business Administration.gov. Retrieved May 25, 2013 from <http://www.sba.gov/category/navigation-structure/starting-managing-business/starting-business/choose-your-business-stru>

Figure 7: Employment Distribution 18-County Region;



B. Current Health Issues by Ethnic Group and Topic

Overall: Disease and Death

The records of the health disparities among the different U.S populations were collected by the Centers for Disease Control and Prevention (CDC). The leading causes of death and disease are listed in Table 2. The two most prevalent causes of death for all but the “Other” population are heart disease and cancer. Moreover, they all in varying orders share the same top five causes of death, the two aforementioned, chronic liver respiratory disease, stroke and unintended injuries.

The Texas Department of State Health Services shows that in 2010 disease of the heart and malignant tumors were the leading causes of death for the three listed ethnic categories.⁵ When looking at specific ethnicities, malignant tumors are the leading cause for two groups, Hispanics and African Americans. The Anglo (which also includes the Other category in this set of data) population’s leading cause of death in 2010 was disease of the heart.

⁵ The Texas Department of State Health Services incorporates both the Anglo and the Other populations into the Anglo group.

Table 2: Leading causes of death at the national level from 2007-2010; Source: Center for Disease Control

5 LEADING CAUSES OF DEATH 2007-2010 (National)			
ANGLO	HISPANIC	BLACK	OTHER
Heart Disease	Cancer	Heart Disease	Cancer
Cancer	Heart Disease	Cancer	Diabetes
Chronic Liver Respiratory Disease	Unintentional Injuries	Stroke	Suicide
Stroke	Stroke	Unintentional Injuries	Unintentional Injuries
Unintentional Injuries	Diabetes	Diabetes	Stroke

Table 3: 5 Leading causes of death in Texas 2010; Source: Texas Department of State Health Services

5 LEADING CAUSES OF DEATH 2010 (Texas)		
ANGLO	HISPANIC	BLACK
Disease of the Heart	Malignant Tumors	Malignant Tumors
Malignant Neoplasms	Disease of the Heart	Disease of the Heart
Chronic Lower Respiratory Diseases	Accidents	Cerebrovascular Diseases
Cerebrovascular Diseases	Cerebrovascular Diseases	Accidents
Accidents	Diabetes Mellitus	Diabetes Mellitus

CDC records also show the most prevalent chronic diseases for the U.S populations. However, this data was collected from the Census division in the South region which includes four states: Arkansas, Louisiana, Oklahoma, and Texas. Table 4 shows that the three most prevalent chronic diseases are arthritis, diabetes and heart disease.

Table 4: 3 Chronic Diseases in the South Region for 2008-2010; Source: Center for Disease Control. For the Southern Region, the Census Bureau includes Arkansas, Louisiana, Oklahoma, and Texas. The chronic disease rankings reflect all four states.

3 CHRONIC DISEASES 2008-2010 (South Region)			
ANGLO	HISPANIC	BLACK	OTHER
Arthritis	Arthritis	Arthritis	Arthritis
Heart Disease	Diabetes	Diabetes	Diabetes
Diabetes	Heart Disease	Heart Disease	No Reliable Data

Table 5 shows the death rates for Texas and the nation with respect to the leading causes of disease. In Texas, although the Black population has substantially higher incidents of death from the three diseases Hispanics rates are slightly higher than the national rates. In light of the future growth of the Hispanic population (see Sub Region data) in the study region, these rates may have a significant impact on future healthcare delivery systems.

Table 5: Date rates - Texas vs. United States, 2009; Source: Center for Disease Control

Death Rates - Texas vs. United States, 2009 (per 100,000)			
Disease	Ethnicity	State	National
Heart Disease	All Races	360.4	359.1
	Black	478.0	483.8
	White	377.3	365.9
	Hispanic	280.0	254.5
Cancer	All Races	202.1	211.9
	Black	280.1	274.7
	White	198.5	209.8
	Hispanic	154.1	140.3
Stroke	All Races	90.8	78.6
	Black	139.0	116.4
	White	88.6	77.1
	Hispanic	77.1	61.1

Ethnic Breakouts: Disease and Death

Tables 6 through 13 below show the leading causes of death by ethnic group for the state of Texas in 2010, along with the seven nationally most prevalent chronic diseases by ethnic group from 2008-2010. Texas Department of State Health Service data incorporates both the Anglo and “Other” population’s data into one figure. The Center for Disease Control breaks these two groups up to give disease figures for each.

Table 6: Hispanic Population – Leading Causes of Death 2010; Source: Texas State Health Services

HISPANIC POPULATION	
Leading Causes of Death 2010	
1	Malignant Tumors
2	Disease of the Heart
3	Accidents
4	Cerebrovascular Diseases
5	Diabetes Mellitus
6	Chronic Liver Disease and Cirrhosis
7	Nephritis, Nephrotic Syndrome and Nephrosis
8	Septicemia
9	Chronic Lower Respiratory Diseases
10	Alzheimer’s Disease

Table 7: Hispanic Population - Chronic Diseases 2008-2010; Source: Center for Disease Control

HISPANIC POPULATION		
Chronic Diseases 2008-2010		
1	Arthritis	12.2%
2	Diabetes	10.4%
3	Heart Disease	5.7%
4	Coronary Heart Disease	3.6%
5	Cancer, in general	2.6%
6	Stroke	1.8%
7	Heart Attack	1.4%

Table 8: Anglo Population - Leading Causes of Death 2010; Source: Texas State Health Services

ANGLO POPULATION	
Leading Causes of Death 2010	
1	Disease of the Heart
2	Malignant Neoplasms
3	Chronic Lower Respiratory Diseases
4	Cerebrovascular Diseases
5	Accidents
6	Alzheimer's Disease
7	Diabetes Mellitus
8	Intentional Self-Harm
9	Nephritis, Nephrotic Syndrome and Nephrosis
10	Influenza and Pneumonia

Table 9: Anglo Population - Chronic Diseases 2008-2010; Source: Texas State Health Services

ANGLO POPULATION		
Chronic Diseases 2008-2010		
1	Arthritis	20.8%
2	Heart Disease	11.5%
3	Diabetes	10.5%
4	Cancer, in general	9.0%
5	Coronary Heart Disease	6.7%
6	Heart Attack	2.9%
7	Stroke	2.9%

Table 10: Black Population – Leading Causes of Death 2010; Source: Texas State Health Services

BLACK POPULATION	
Leading Causes of Death 2010	
1	Malignant Tumors
2	Disease of the Heart
3	Cerebrovascular Diseases
4	Accidents
5	Diabetes Mellitus
6	Nephritis, Nephrotic Syndrome and Nephrosis
7	Chronic Liver Disease and Cirrhosis
8	Septicemia
9	Assault
10	Human Immunodeficiency Virus

Table 11: Black Population - Chronic Diseases 2008-2010; Source: Center for Disease Control

BLACK POPULATION		
Chronic Diseases 2008-2010		
1	Arthritis	24.5%
2	Diabetes	13.9%
3	Heart Disease	11.4%
4	Coronary Heart Disease	6.3%
5	Cancer, in general	4.7%
6	Stroke	4.3%
7	Heart Attack	2.7%

Table 12: Other Population – Leading Causes of Death 2008-2010; Source: Texas State Health Services

OTHER POPULATION		
Chronic Diseases 2008-2010		
1	Arthritis	11.5%
2	Diabetes	5.8%

Table 13: Other Population - Chronic Diseases 2007-2009; Source: Center for Disease Control

OTHER POPULATION	
Leading Causes of Death 2007-2009	
1	Cancer
2	Diabetes
3	Suicide
4	Unintentional Injuries
5	Stroke
6	Chronic Lower Respiratory Disease
7	Influenza and Pneumonia
8	Heart Disease
9	Homicide
10	Chronic Liver Disease and Cirrhosis
11	Alzheimer’s Disease

C. Current Health Services

Hospital Breakdown by County and Type

According to the Center for Medicaid and Medicare Services (CMS) reports there are 36 hospitals in the 18 county EFS study region. For emergency services and other time sensitive injuries, hospitals provide services that cannot be carried out in an office of general practice, such as scans, X-rays and surgery. Moreover, hospitals operate emergency rooms which may see high use in areas that have high numbers of uninsured.

In the 18-county area, Bexar County has the majority of hospitals (83.6%) and the majority of specialty centers (academic, cancer, acute care, etc.); likewise, Bexar County with the majority of hospitals has over 1,000 employees (91%), with two hospital systems having over 8,000 employees. The vast majority of other counties have employee sizes of less than 500 (See Hospital and Clinic Charts and Tables for full data).⁶

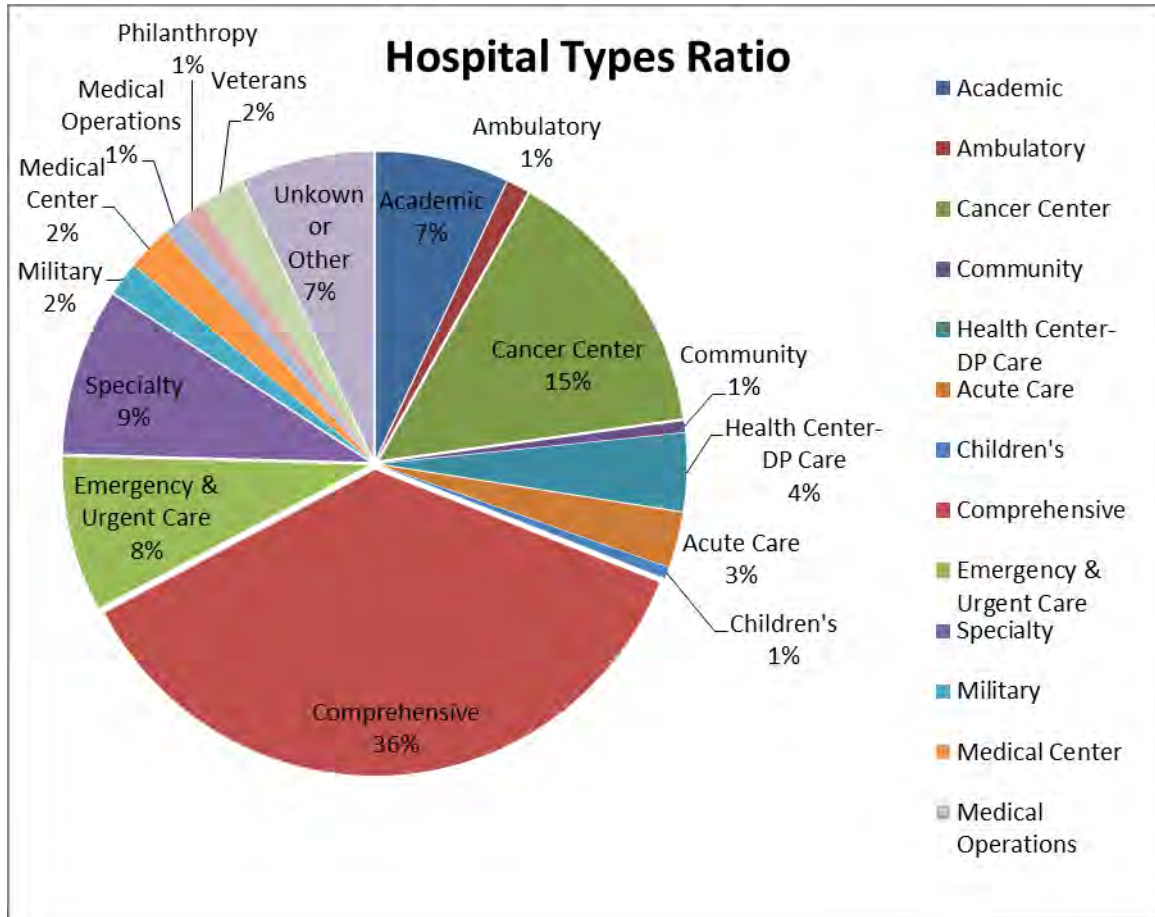
Table 14: Number of hospitals 18-County Region; Reference USA

Number of Hospitals 18-County Region	
County	# of Hospitals
Bexar	23
Maverick	1
Uvalde	1
Gonzales	1
Dimmit	1
Webb	3
Atascosa	1
Bee	1
De Witt	1
Frio	1
Karnes	1
Live Oak	0
Wilson	1
Edwards	0
Kinney	0
La Salle	0
McMullen	0
Zavala	0

⁶ Texas Department of State Health Services.

The distribution of hospital types in the 18-county region are illustrated below.

Figure 8: Hospital Types Ratio

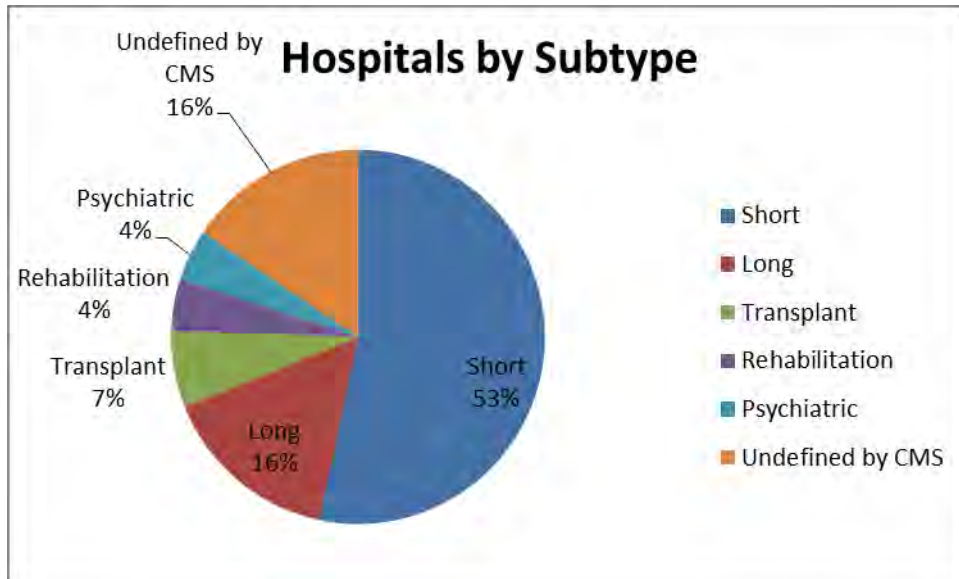


Hospitals have several different subtypes that determine the length of care they provide (Definitions are found in the endnote section).¹ The CMS data below shows the count and type for the 18-county region.⁷

Table 15: Hospital facility by Subtype 18-County Region; Center for Medicare and Medicaid Services

Hospitals by Subtype 18 County Region					
<u>Short</u>	<u>Long</u>	<u>Transplant</u>	<u>Rehabilitation</u>	<u>Psychiatric</u>	<u>Undefined by CMS</u>
26	7	3	2	2	7

Figure 9: Hospitals by Subtype; Center for Medicare and Medicaid Services



⁷ CMS gives each facility a single count that may reflect multiple providers operating within a facility.

D. Professional Healthcare Ratios and Utilization

Ratios and Shortages

The Texas Department of State Health Services uses population data from the Texas State Data Center in order to calculate health profession ratios for each county. This ratio is a way to assess the capacity of a county health system with regard to the population it serves. The data below are key findings in the 18-county region regarding the four primary occupations from 2010 to 2011—EMS, Primary Care Physicians, Physician Assistants and Licensed Occupational Therapists.

Table 16: Professional Ratio Keys Findings; Texas Department of State Health Services' Center for Health Statistics

Professional Ratio Key Findings
McMullen County is the most underserved with the fewest professionals in a given area
Bexar County showed steady increases in all 4 scored profession ratios
There were substantial decreases in primary care physicians and licensed occupational therapists in Live Oak (both -100%) and a decrease in EMS workers in Zavala County (-33.2%)
Frio County has increased its number of Licensed Occupational Therapists by 98%

Health professional shortage areas are designated by the U.S. Health Resource and Services Administration (HSRA) as regions with shortages in primary medical care, dental or mental health providers. The HPSA assigns scores to counties, specific populations, census tracts, facilities, and full-time equivalent employee numbers with respect to the population it serves. Scores range from 0 to 25 for primary care and mental health, and zero to 26 for dental. The higher the HPSA score is, the greater the need for health professionals within a specific population, census tract, facility or county.⁸ Below in Table 17 are the key findings.

Table 17: HPSA Key Findings; U.S. Department of Health and Human Services Health Resources and Service Administration

HPSA Key Findings
With the exception of Dewitt, all 18 counties in their entirety are designated primary medical shortage areas.
Excluding Wilson and McMullen, all counties are designated dental care shortage areas.
All counties are mental care shortage areas.

⁸ Satellite sites of Comprehensive Health Centers automatically assume the HPSA score of the affiliated grantee. They are not listed separately

The following maps show current medical personnel locations.

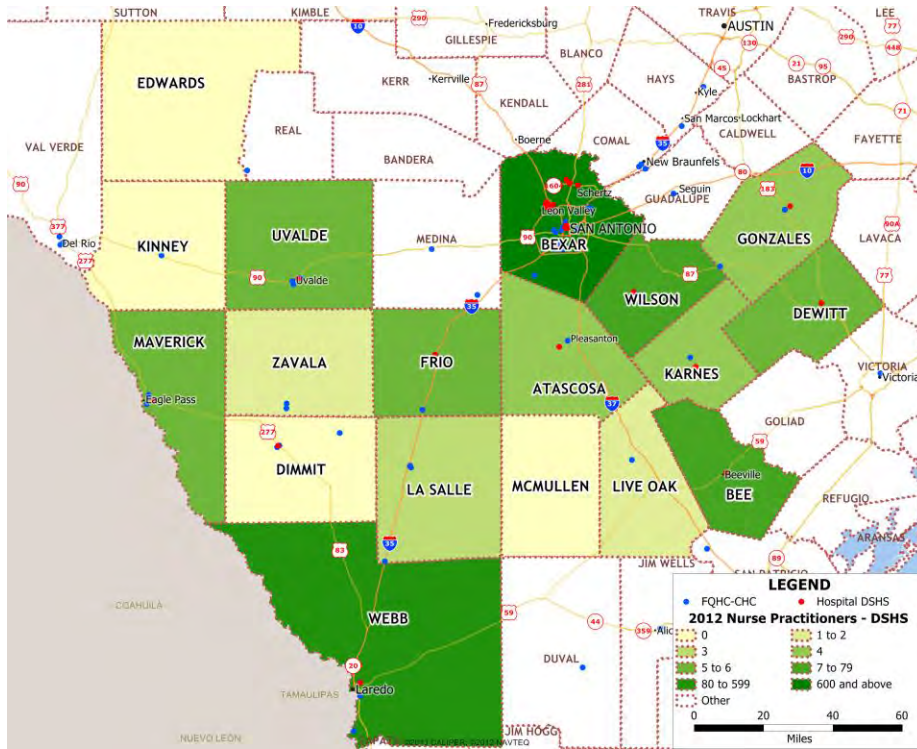


Figure 10 Texas Board of Nursing: Nurse Practitioner

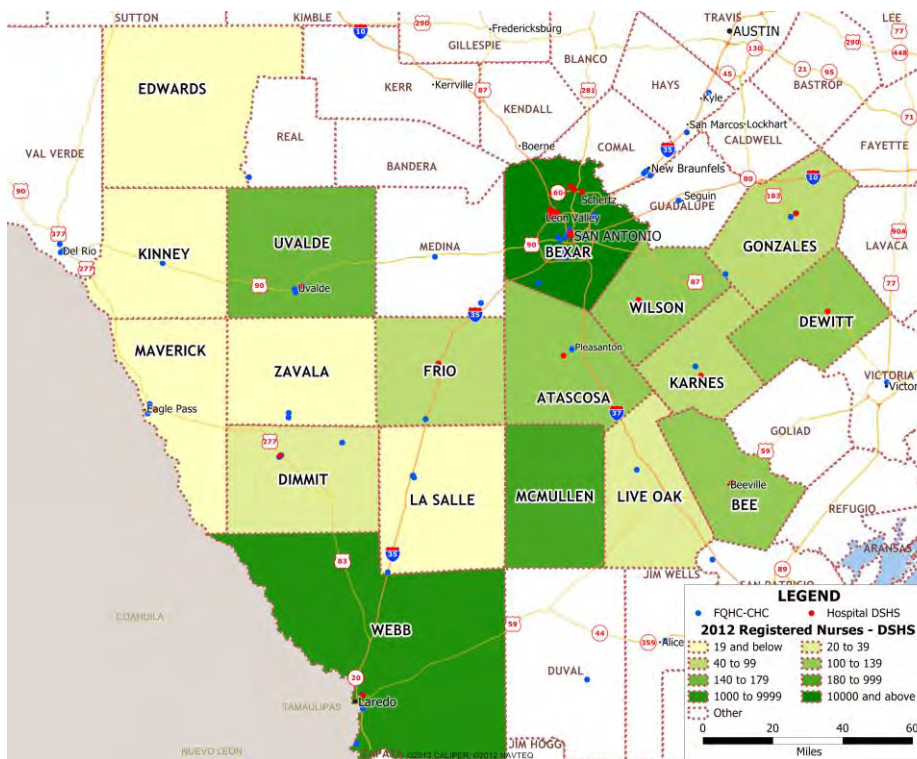


Figure 11 Texas Board of Nursing: Registered Nurses

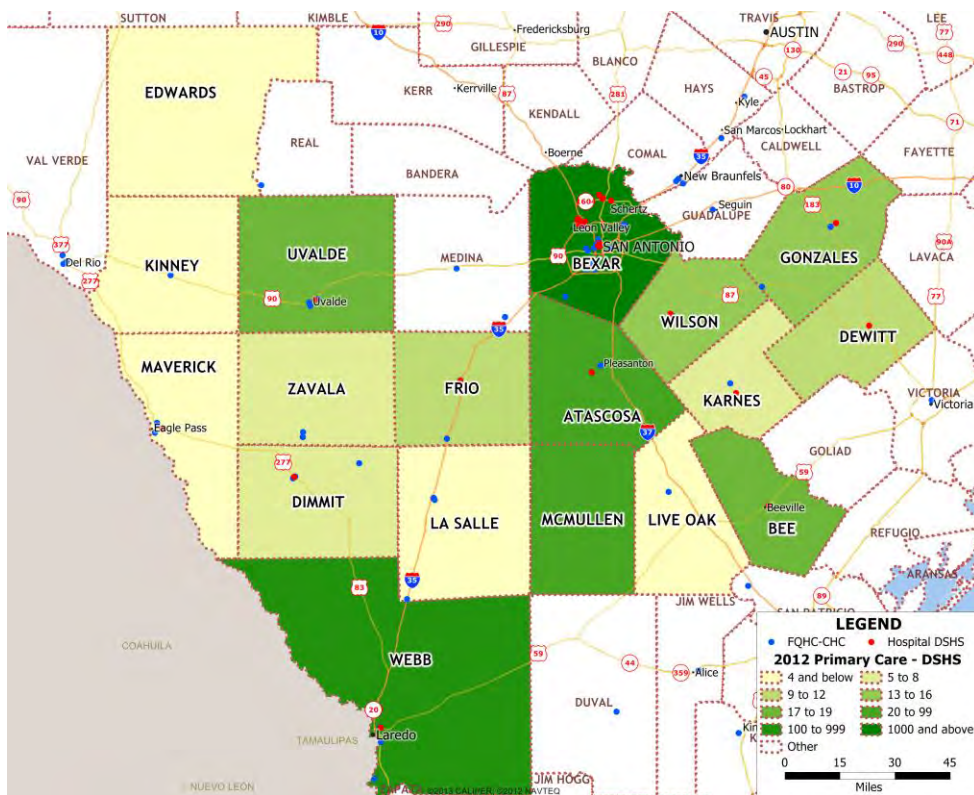


Figure 12 Texas Department State of Health Services: Primary Care

Texas Acute Care

Acute long-term care involves providing specialized, acute hospital care to medically complex patients who are critically ill, have multisystem complication and/or failure, and require hospitalization averaging 25 days, in a facility offering specialized treatment programs and therapeutic intervention on a 24 hour/ seven-day a week basis.⁹ Listed below are definitions and numbers for staffed bed occupancy rates, licensed bed occupancy rates, inpatient days, and average length of stay, which are typical measures assessing the capacity of a hospital.

Staffed Beds

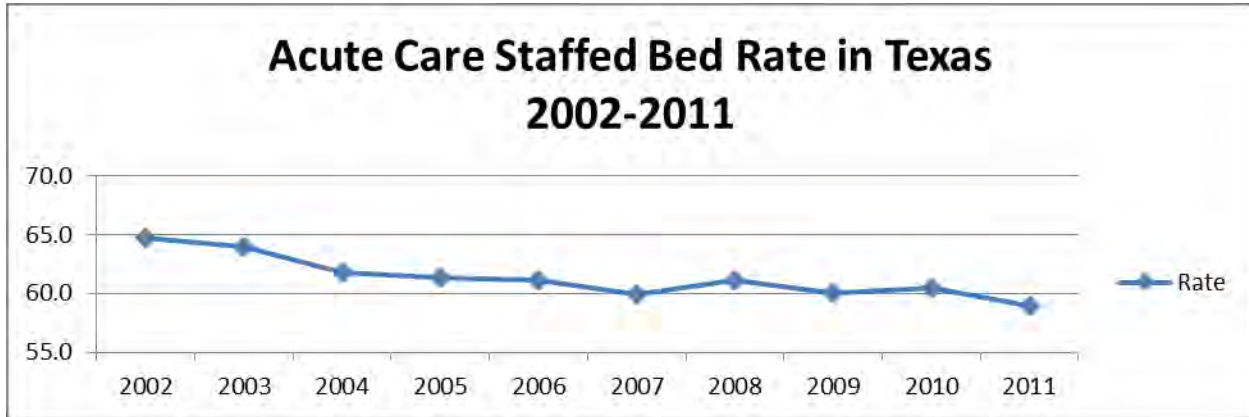
The term “staffed bed” refers to those beds in service and patient ready during a reporting period while the occupancy rate refers to the average percent of staffed beds occupied during a reporting period. From 2002 to 2011, the staffed bed occupancy rate for Texas acute care hospitals decreased nine percent. Looking specifically at the time that Eagle Ford Shale drilling began, from 2010 to 2011, the staffed bed occupancy rate in Texas fell from 60.5 to 58.9.¹⁰

⁹ January 2013. Texas Department of State Health Services. *Financial and Utilization Data from the Cooperative DSHS/AHA/THA Annual Survey Hospitals*

¹⁰ January 2013. Texas Department of State Health Services. *Financial and Utilization Data from the Cooperative DSHS/AHA/THA Annual Survey Hospitals*

The level of emergency a hospital is certified to handle relates to short-term and long-term facilities including the type of injuries these facilities are equipped and staffed to deal with.

Figure 13: Acute Care Staffed Bed Rate in Texas 2002-2011; Texas Department of State Health Services

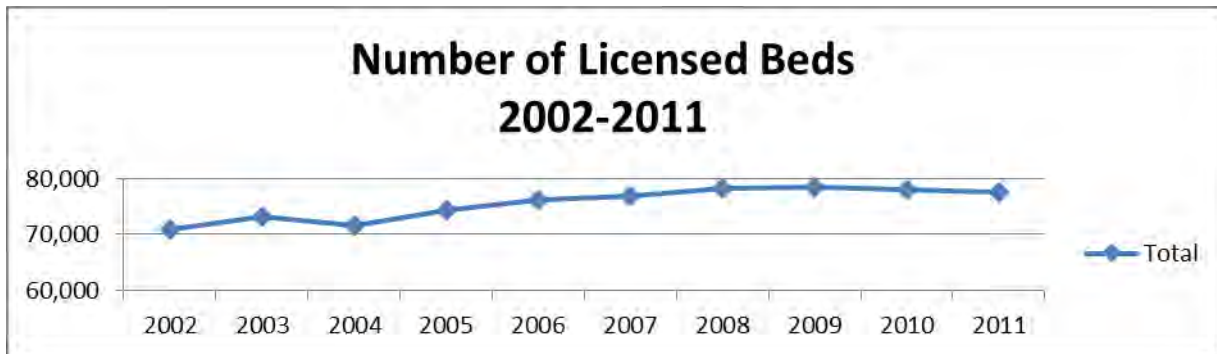


Gonzales, Karnes, Webb and Wilson Counties all show increases in staffed occupancy rates, the largest found in Webb County. With a higher occupancy rate, the facility can accept more patients. This is good unless it is so high that the hospital does not have the capacity to deal with emergency situations. This balance is known as surge capacity. Bexar County shows no change during this period and the remaining counties have no acute care facilities to evaluate (See Hospital and Clinic charts and tables for full table).¹¹

Licensed Beds

A “licensed bed” is defined as the number of beds licensed by the Department of State Health Services, Health Facilities Licensing. From 2002 to 2011, the overall trend has been upward, from 70,939 to 77,685, an increase of 9.5 percent.¹²

Figure 14: Number of Licensed Beds 2002-2011; Texas Department of State Health Service Admissions



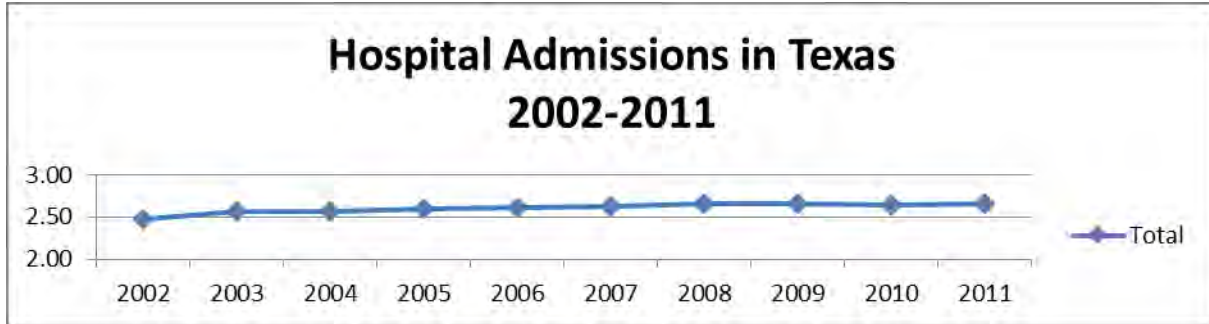
¹¹ Ibid

¹² Ibid

Hospital Admissions

Admissions are defined as all patients accepted for inpatient services during the reporting period. This includes adult, pediatric, neonatal and swing admissions, but excludes newborns. The figure below show that from 2002 to 2011, admissions in Texas have increased by 7.3 percent and looking specifically at Eagle Ford Shale years—2009 to 2011—admissions fell from 2.66 to 2.65

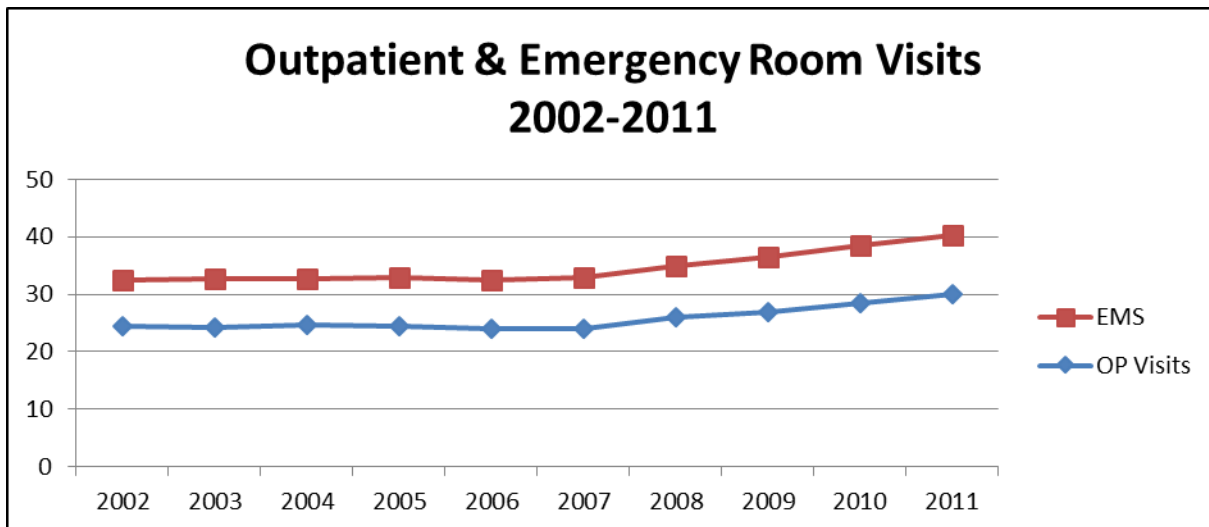
Figure 15: Hospital Admissions; Texas Department of State Health Services



Outpatient and Emergency Room Visits

Outpatient visits are visits by a patient who is not lodged in the hospital while receiving medical, dental or other services. Emergency room numbers reflect the number of visits to emergency units by patients in Texas. Outpatient visits increased by 22.4 percent from 2002 to 2011 and emergency room visits increased by 27.5 percent during the same time period.

Figure 16: Outpatient and Emergency Room Visits; Texas Department of State Health Services



E. Clinic Breakdown by County

With approximately 4,202 clinics within the 18-county area, Bexar County has the majority of clinics (95.5%), and the majority of specialty clinics (podiatry, mental health, speech therapy, etc.). It also has the only 20 family planning centers in the 18-county region. Bexar County has the majority of clinics comprised of over 100 employees (97%), eight of which have over 500 employees and one with over 3,000 employees.

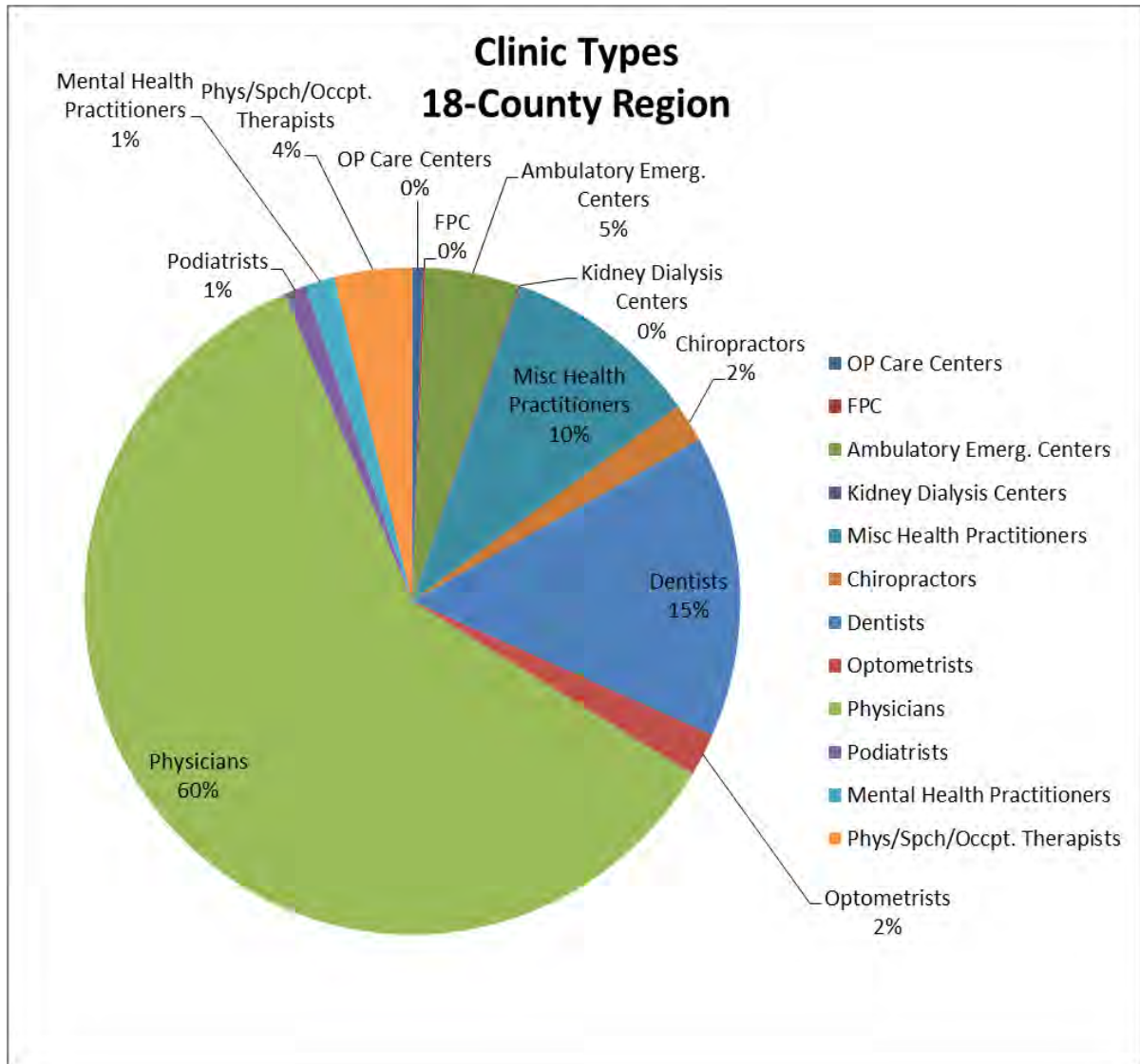
The vast majority of clinics outside Bexar County in the region have fewer than 20 employees (see Hospital and Clinic Charts and Tables for full table).¹³ It is important to note this because some doctors and nurses are splitting their time among different hospitals and clinics—some of which do not operate 40 hours a week—thus providing limited access. Clinic numbers reflect Federally Qualified Health Centers (FQHCs)/Community Health Centers (CHCs); school based clinics; satellite clinics; mobile clinics; immunization sites; Women, Infants, and Children (WIC) sites; and pharmacies.

Table 18: 18-County Region; Reference USA

<u>18-County Region</u>	
<u>County</u>	<u>Clinic#</u>
Bexar	4013
Atascosa	32
Maverick	32
Bee	21
Uvalde	18
Gonzales	8
De Witt	6
Frio	24
Dimmit	14
Karnes	9
Webb	10
La Salle	6
Live Oak	2
Kinney	2
Wilson	3
Edwards	1
Zavala	1
McMullen	0

¹³ This data comes from Reference USA and uses the NAICS code system to identify service providers. In Reference USA's counting system, providers may be counted more than once if they are operating under multiple facilities or out of multiple offices.

Figure 17: Clinic Types 18-County Region; Reference USA



F. Federally Qualified Health Centers/Community Health Centers

An FQHC is a designation by CMS and entitles qualified organizations to set reimbursement rates controlled or influenced by CMS. Section 1905(l) (2) (B) of the Social Security Act identifies three types of FQHCs:(1) those receiving a grant, directly or through sub-recipient arrangements, under section 330 of the Public Health Service (PHS) Act; (2) those determined to meet the requirements of a grant but do not receive federal funding (i.e., FQHC Look-Alikes); and (3)an outpatient health program or facility operated by a tribe or tribal organization under the Indian Self-Determination Act (Public Law 93-638), or by an urban Indian organization receiving funds under title V of the Indian Health Care Improvement

Act for the provision of primary health services.¹⁴ FQHC's or Community Health Centers provide high quality, affordable primary care and preventive services to populations who remain isolated from other forms of medical care because of where they live. As non-profits or public community owned health care providers serving low-income and medically underserved communities. Health centers provide health care services to those who are most vulnerable. FQHC's offer services many other health care providers do not, i.e. transportation, translation and culturally sensitive health care aimed at overcoming common barriers to care. Texas has a total of 71 FQHC's and two FQHC look-a-likes that are serving over 330 primary care delivery sites in 113 counties, as well as dozens of enabling sites such as WIC and senior activity centers.¹⁵

FQHC/CHC breakdown by County

There are 22 FQHCs and 49 service delivery sites in the 18-county area (See Federally Qualified and Community Health Centers for full list of service delivery sites).¹⁶ Data shows the majority of FQHCs are mainly located in Bexar County (34%). ***It is important to note that the data below includes facilities that do not provide direct healthcare services, such as: Administrative and policy centers; WIC centers; dental clinics; pharmacies; and activity and fitness centers.*** These distinctions are as follows:

Table 19: FQHC Clinics and Centers; Texas Association of Community Health Centers

FQH Clinics and Centers									
County	Clinics	Policy Centers	Admin Center	Dental	Pharmacy	WIC Centers	Fitness	Women Centers	Jail Centers
Bexar	19	1		1	1	2	1		
Bee	2								
Dimmit	2					1			
Gonzales	2			1		2		1	
Kinney	1					1			
Maverick	4			1					
Uvalde	3					1			1
Zavala	2					1			
Atascosa	1								
Frio	2								
Webb	4								
La Salle	3		1			1			
Karnes	2								
Wilson	1								
Live Oak	1								

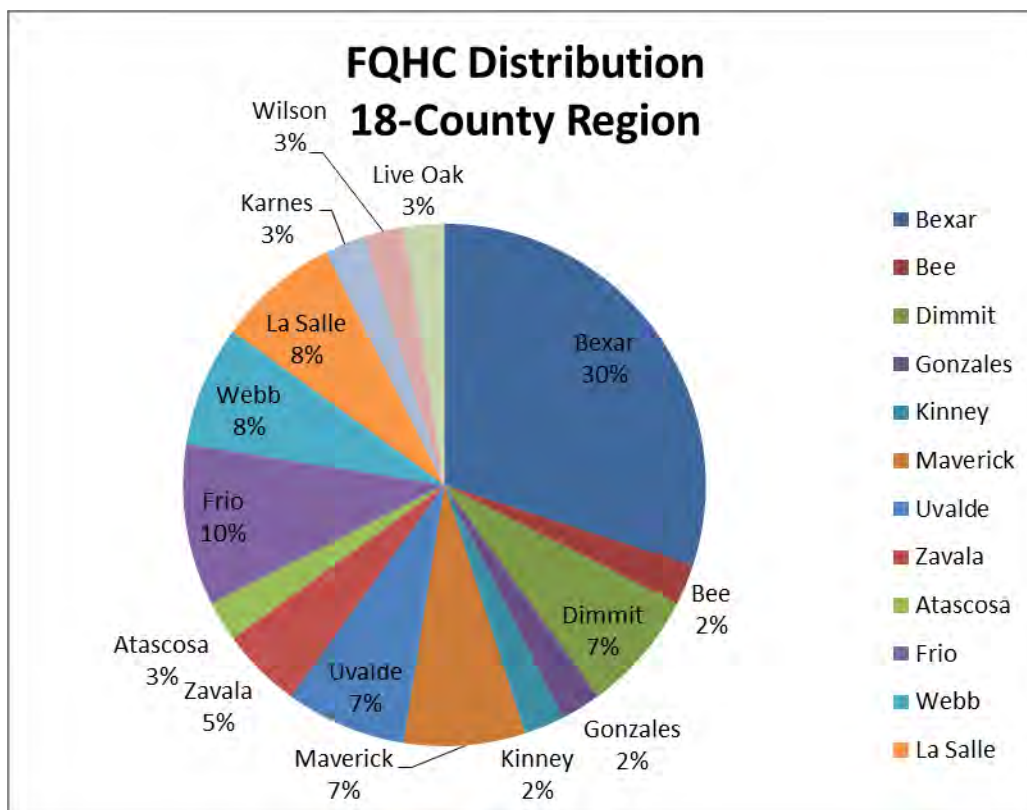
¹⁴ U.S. Department of Health and Human Services Health Resources and Services Information Office of Rural Policy. *A Manual on Effective Collaboration Between Critical Access Hospitals and Federally Qualified Health Centers*. April 2010. Retrieved May 23, 2013 from <http://www.hrsa.gov/ruralhealth/pdf/qhcmanual042010.pdf>.

¹⁵ Carlos E. Moreno, MD, MBA, Chief Executive Officer, Vida Y Salud-Health Systems, Inc.

¹⁶ Texas Association of Community Health Centers

Figure 18 shows the distribution of delivery sites in the region. Counties such as Dewitt, Edwards and McMullen have no FQHC/CHC service delivery sites and are not listed.

Figure 18: FQHC Distribution 18-County Region; Texas Association of Community Health Centers



FQHC look-a-likes are generally called Community Health Centers. These centers are federally designated community, migrant, public housing primary care and health care for the homeless centers that meet all federal requirements, but do not receive federal grant funding. In order for a FQHC look-alike to qualify as a grant-funded FQHC, health centers must meet strict federal requirements¹⁷:

- Must have a consumer-based governance structure
- Provide a comprehensive set of services
- Be a private, non-profit organization or public entity
- Be located in a medically underserved area (MUA) or serve a medically underserved population (MUP)

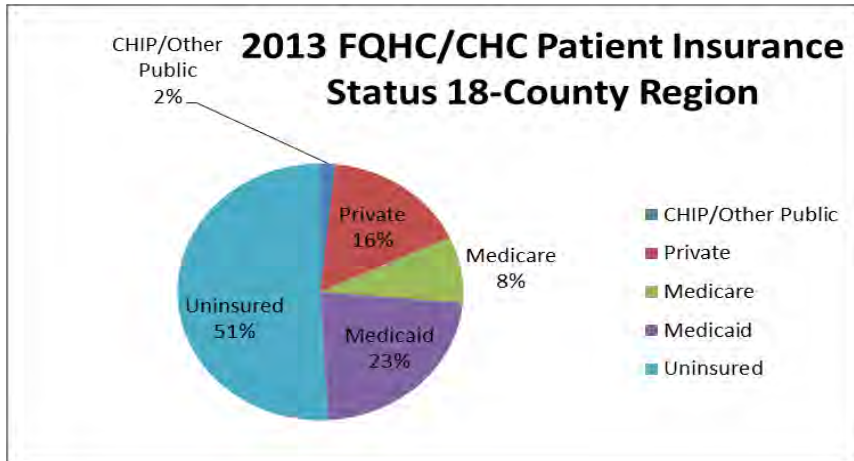
FQHC Patient Insurance Coverage

The following graph reflects the distribution of patients with respect to insurance status of FQHC/CHC patients. This data was collected from the Texas Association of Community Health Centers Membership Directory (2013). The majority of the patients that the health centers serve are either uninsured or have public health plans. In 2013, just over half (51%) of the patients these health centers serve are uninsured

¹⁷ Texas Association of Community Health Centers Membership Directory. 2013.

and 23% are Medicaid (public insurance) patients (see Federally Qualified and Community Health Centers for full data).

Figure 19: 2013 FQHC/CHC Patient Insurance Status 18-County Region; Texas Association of Community Health Center



G. Alternate Services: Telemedicine

Telemedicine is a rapidly growing field that extends medical services to patients in remote areas by transferring medical information from one site to another using electronic communications in order to improve a patient's clinical health status. According to the American Telemedicine Association telemedicine includes a growing variety of applications and services using two-way video, email, smart phones, wireless tools and other forms of telecommunications technology."¹⁸ The benefit of telemedicine is that can be mobile, and can better service rural areas within the Eagle Ford Shale area that suffer deficiencies in health care services.

With telemedicine, patients—particularly oil and gas workers, can video conference with healthcare professionals from the comfort of a mobile van, which can service individual rigs or provide a central location for services within a county. Vans may have nurse practitioners to take blood and vital sign checks. "Patient consultations via video conferencing, transmission of still images, e-health including patient portals, remote monitoring of vital signs, continuing medical education, consumer-focused wireless applications and nursing call centers, among other applications, are all considered part of telemedicine and telehealth."¹⁹ Table 48 explains the business model of telemedicine.

¹⁸ American Telemedicine Association, "What is Telemedicine." Last modified 2012. Accessed May 6, 2013. <http://www.americantelemed.org/learn>.

¹⁹ American Telemedicine Association, "What is Telemedicine."

H. Infrastructure and Services

Roads

In 2008, Texas voters overwhelmingly approved Proposition 14, making it possible for the Texas Department of Transportation (TxDOT) to fund additional transportation projects, including those specifically designed to improve safety.

In the last five years, TxDOT has dedicated \$1.2 billion toward state highway safety projects. In 2004, 644 safety projects valued at \$605 million were implemented. The 2009 Safety Bond program provided an additional \$605 million for 355 new projects to improve highway safety. The program has helped TxDOT to do the following:

Table 20; source: TxDOT.

TxDot Program Includes:
Widening 2,188 miles of narrow, two-lane roads
Installing 1,030 miles of cable or concrete median barrier to help prevent head-on collisions
Installing 272 left-turn lanes or continuous turn lanes on rural highways
Converting 9 existing four-lane undivided highways to four-lane divided highways
Constructing 38 highway overpasses

Table 21; source: TxDOT.

Other Safety Initiatives Include:
Cable barrier installations
Left lane restrictions for large commercial vehicles in metro areas
Wider travel lanes and shoulders
Divided highways
Dedicated left-turn lanes
Teen driver awareness program
Clearer highway signs
Keeping up with maintenance

Fire and EMS

Emergency Medical Services (EMS) services for the region include both private, public and volunteer entities. There are a total of 4,477 EMS licensed professionals, 3042 of which are located in Bexar and Webb Counties, according to the Department of State Health Services; 916 professionally licensed individuals serve the other 16 counties. Table 22 shows the number of EMS personnel.

There are a total of 123 fire service entities in the region, including volunteer fire departments. Table 23 shows the number of fire service companies.

Table 23: Number of Fire Dept. per County; OSHA

County	Number of Fire
Bexar	41
Wilson	8
DeWitt	6
Atascosa	2
Uvalde	3
Karnes	5
Webb	9
Gonzales	6
Maverick	3
Bee	8
Edwards	16
Frio	1
Kinney	1
Live Oak	5
Dimmit	2
La Salle	3
Zavala	3
McMullen	1

Table 22: Number of EMS personnel per County; OSHA

County	Number of EMS
Bexar	3,042
Webb	519
Maverick	139
Atascosa	139
Dimmit	19
Bee	58
Wilson	238
Uvalde	59
Frio	39
Karnes	29
Live Oak	23
DeWitt	76
Gonzales	37
Zavala	17
Edwards	9
Kinney	13
La Salle	12
McMullen	9

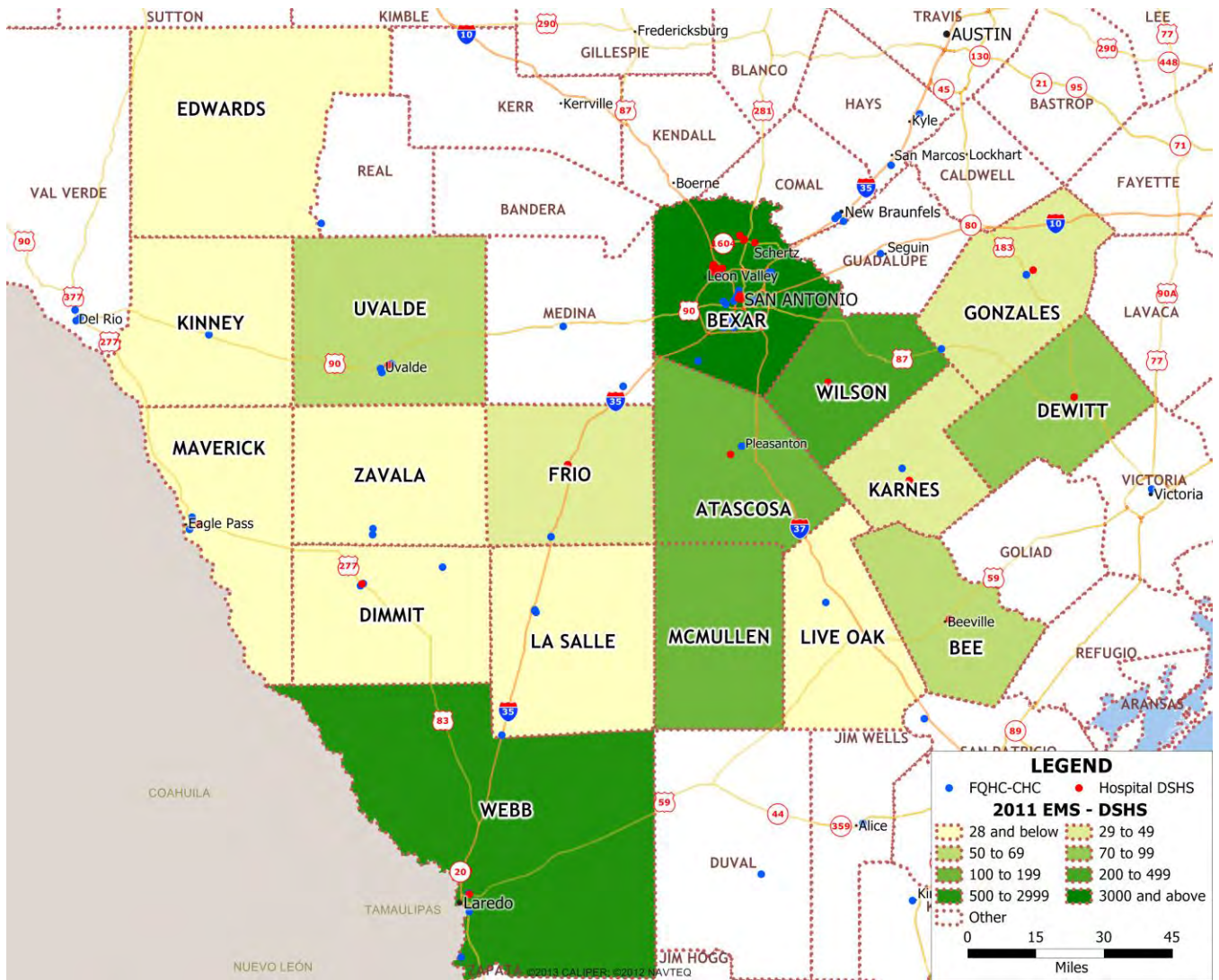


Figure 20 Texas Department State of Health Services: EMS licensed professionals

Cell Phone Coverage

Of the 18 counties, 16 have cellphone coverage. Cellphone coverage is a critical step necessary in the development of new facilities, particularly in rural regions. Access to this infrastructure is a boon to population growth and in turn further development of health facilities. Table 8 shows the cellphone coverage areas and the number of free Wi-Fi hotspot locations in the counties.

Table 24: Sources: TMobile.com, AT&T.com, Verizon.com, Cricket.com, Sprint.com, Open Wi-Fi spots.com

County	TMobile	AT&T	Verizon	Cricket	Sprint	Wi-Fi Hotspots
Atascosa	2G	4G	none	covered	covered	1
Bee	Service partner	4G	none	covered	roaming	2
Dewitt	Service partner	Not found	none	roaming	none	1
Dimmit	Service partner	2G	none	roaming	roaming	1
Edwards	n/a	n/a	n/a	n/a	n/a	n/a
Frio	Service partner	2G	none	covered	none	n/a
Gonzales	2G	4G	none	covered	covered	n/a
Karnes	Service partner	4G	none	covered	covered	n/a
Kinney	n/a	n/a	n/a	n/a	n/a	n/a
La Salle	2G	4G	none	not covered	roaming	n/a
Live Oak	excellent	4G	none	covered	covered	1
Maverick	Service partner	3G	none	covered	roaming	2
McMullen	Service partner	not found	none	not covered	none	n/a
Webb	2G	2G	none	roaming	none	28
Wilson	2G	4G	none	covered	covered	1
Uvalde	n/a	3G	n/a	covered	Covered	2
Zavala						1

I. Traffic Accidents

Data collected on traffic accidents from the Texas Department of Transportation between 2009 and 2011 shows an increase in overall traffic accidents. The counties with the largest increases in traffic accidents were McMullen, Karnes and La Salle—all of which are important production areas within the EFS. The largest increase was in McMullen County, a county also without a hospital facility, local EMS or fire service provider. Following are Karnes—the most productive EFS County in 2011 in terms of total output—and LaSalle counties. The map illustrates the rate of change in traffic accidents from 2009 to 2011. The darker colors indicate a higher numbers and the medium colors of traffic accidents.

Figure 21: Accident Site; mywesttexas.com



Karnes and LaSalle are high Eagle Ford Shale output counties. The increased economic activity is likely a large contributor to the increased traffic. In the counties experiencing growth that do not have a hospital or limited local EMS service, facilities and staff must be shared across counties. If the county has no clinic or hospital, patients must drive to the nearest facility to access services. In the event that no EMS providers are located within the county, providers in other counties will transport patients to the nearest facility. All of these trends may contribute to increases traffic counts and accidents.

The following table represents traffic accidents by county.

Table 25: Traffic Accidents by county; Source: Texas Department of Transportation; Medicare.gov; Texas Association of Community Health Centers

Traffic Accidents						
COUNTY	2009	2010	2011	% CHANGE	Hospitals	FQHCs Service Delivery Sites
McMullen	17	49	87	412.0%	0	0
Karnes	130	180	307	136.0%	1	2
La Salle	85	84	187	120.0%	0	3
Zavala	28	25	41	46.0%	0	2
DeWitt	270	320	351	30.0%	2	0
Live Oak	216	246	281	30.0%	0	1
Maverick	506	639	636	26.0%	1	4
Gonzales	274	313	334	22.0%	1	2
Wilson	366	386	433	18.0%	1	1
Kinney	18	21	21	17.0%	0	1
Frio	192	151	215	12.0%	2	2
Atascosa	485	505	521	7.0%	1	1
Webb	5,157	4,964	5,181	0.5%	2	4
Dimmit	70	35	69	-1.0%	1	2
Bee	381	312	361	-5.0%	1	2
Uvalde	403	353	366	-9.0%	1	3
Edwards	39	34	35	-10.0%	0	0
Bexar	40,263	33,809	32,524	-19.0%	12	19

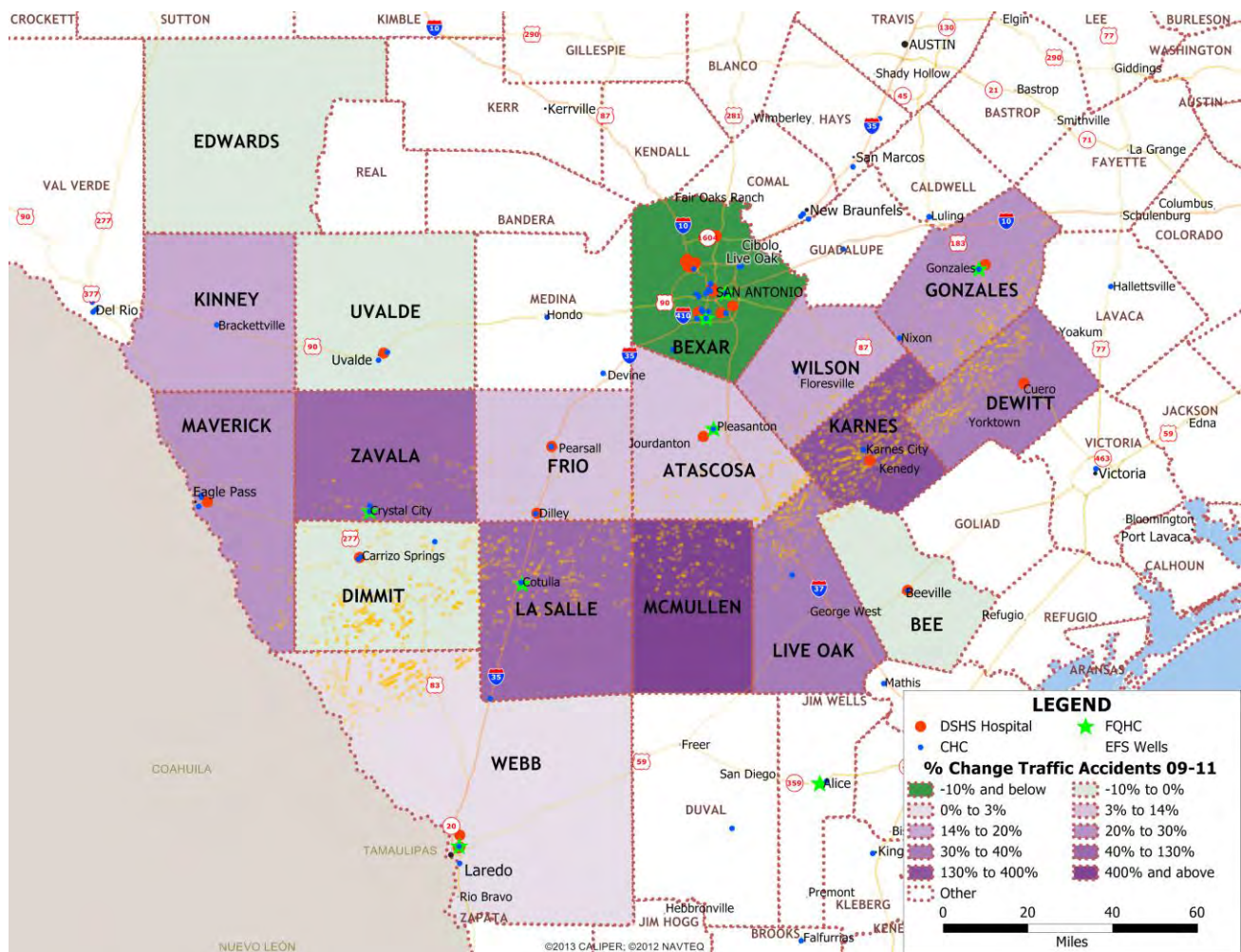


Figure 22 Texas Department of Transportation: Traffic Accidents with EFS Wells2

Motor vehicle accidents are the number one cause of oil and gas injuries and fatalities. Previous reports show that compared to workers in all industries, workers in the oil and gas extraction industry experienced seven times the rate of work-related death due to all causes (CDC, 2008), and six times the rate of work-related motor vehicle-related deaths (5.7 deaths per 100,000 workers) (CDC, 201 1a). Potential risk and exposure factors for fatal motor vehicle crashes in the oil and gas extraction industry includes frequent travel between well sites; travel on rural roads, which often lack firm shoulders and rumble strips; low levels of safety belt use; and long and irregular hours of work that contribute to driver fatigue.

Oil and gas extraction workers often work up to 12-hour shifts, and seven to 14 days in a row (CDC, 2008).²⁰ One study points out that motor vehicle-related fatalities accounted for 28% of all oil and gas

²⁰ Retzer, Kyla D. et al, "Motor vehicle fatalities among oil and gas extraction workers." 2013 (168).

extraction work-related fatalities during a seven year period and were the leading cause of death.²¹ The following slides are from a 2010 OSHA report and illustrate the number of fatalities in the state and the type of incident.

Figure 23: 2010 Fatality Investigations; OSHA

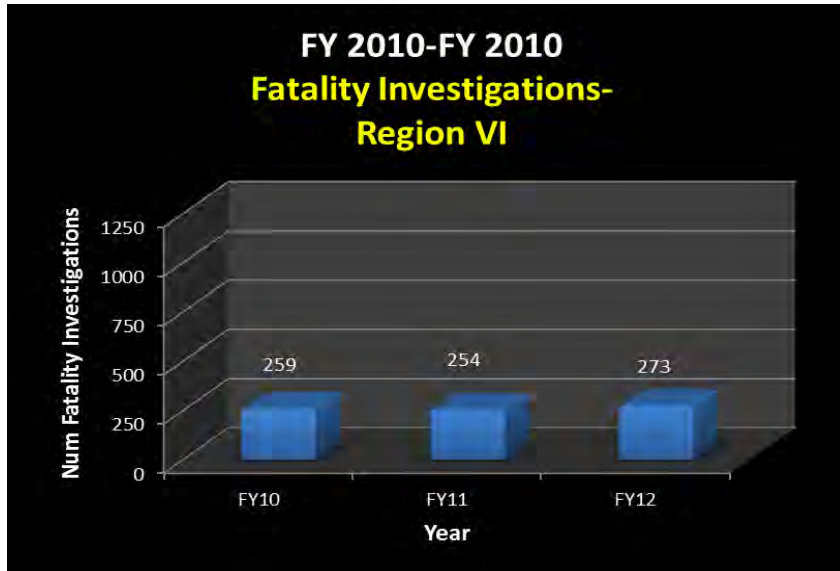
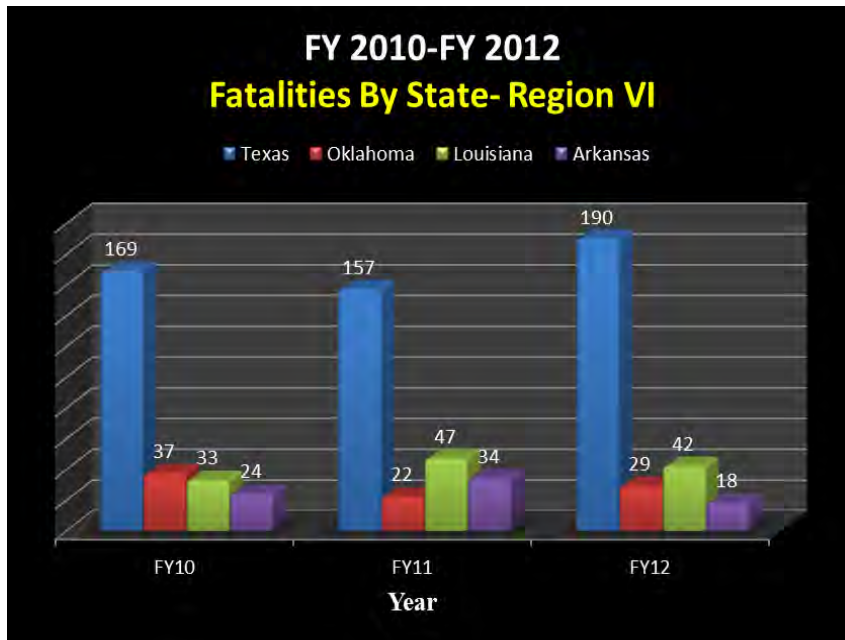


Figure 24: Fatalities by State Region VI; OSHA

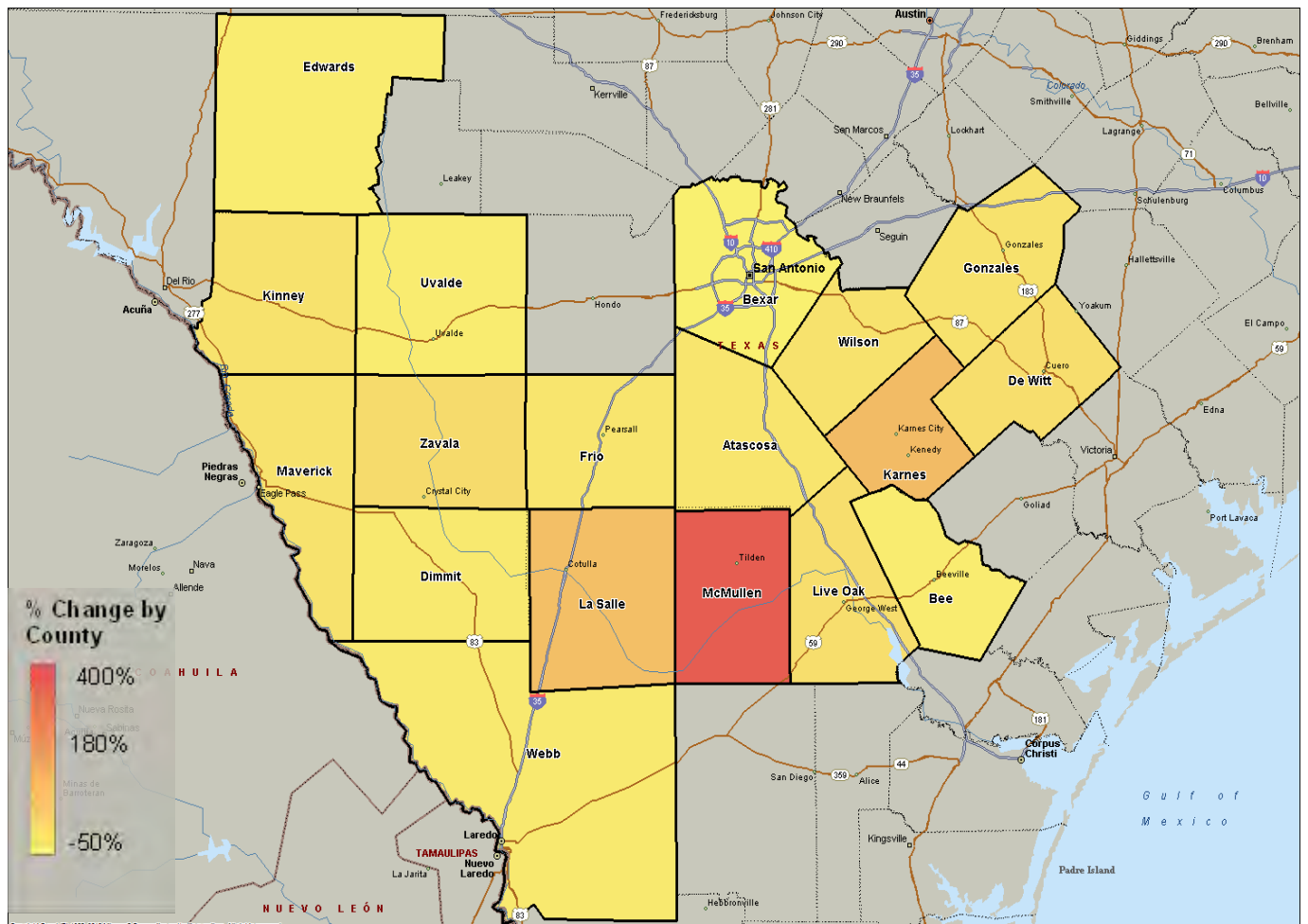


²¹ Retzer, Kyla D. et al, "Motor vehicle fatalities among oil and gas extraction workers." 2013 (169).

J. Work Place Injuries

Given the variety of injuries reported within the study region, the data in this section was calculated using only the work-related injuries for each county from 2010 to 2011. The map below illustrates the rate of change in reported workplace injuries during this time. The darker colors indicate a larger increase in work-related injuries. (See Work Injury Data for full tables, where is this). McMullen County's increase is significantly higher than the other counties. Specifically, McMullen County reported 12 mining, 12 mining-support, and 14 construction work-place accidents. The county contains the Olmos and Wilcox hydrocarbon formations, making the county central to the Eagle Ford Shale development. McMullen's relative higher increases in work related injuries and traffic accidents are exacerbated by the fact that there are no hospitals in the county.

Figure 25: Applied Geographic Solutions (AGS) from BLS consumer expenditure survey



The following table shows workplace injuries by county.

Table 26: Source: Texas Department of Transportation; Medicare.gov; Texas Association of Community Health Centers

COUNTY	2010	2011	% CHANGE	Hospitals	FQHC Service Delivery Sites
McMullen	7	33	371.4%	0	0
Dimmit	65	117	80.0%	1	2
Kinney	8	14	75.0%	0	1
Karnes	64	103	60.9%	1	2
DeWitt	55	82	49.1%	2	0
Gonzales	69	103	49.0%	1	2
La Salle	44	63	43.2%	0	3
Edwards	7	9	28.6%	0	0
Live Oak	47	56	19.1%	0	1
Bee	191	224	17.3%	1	2
Frio	99	106	7.1%	2	2
Uvalde	110	114	3.6%	1	3
Webb	1,088	1,051	-3.4%	2	4
Atascosa	99	95	-4.0%	1	1
Bexar	6,882	6,518	-5.3%	12	19
Wilson	81	75	-7.4%	1	1
Maverick	176	156	-11.4%	1	4
Zavala	61	53	-13.1%	0	2

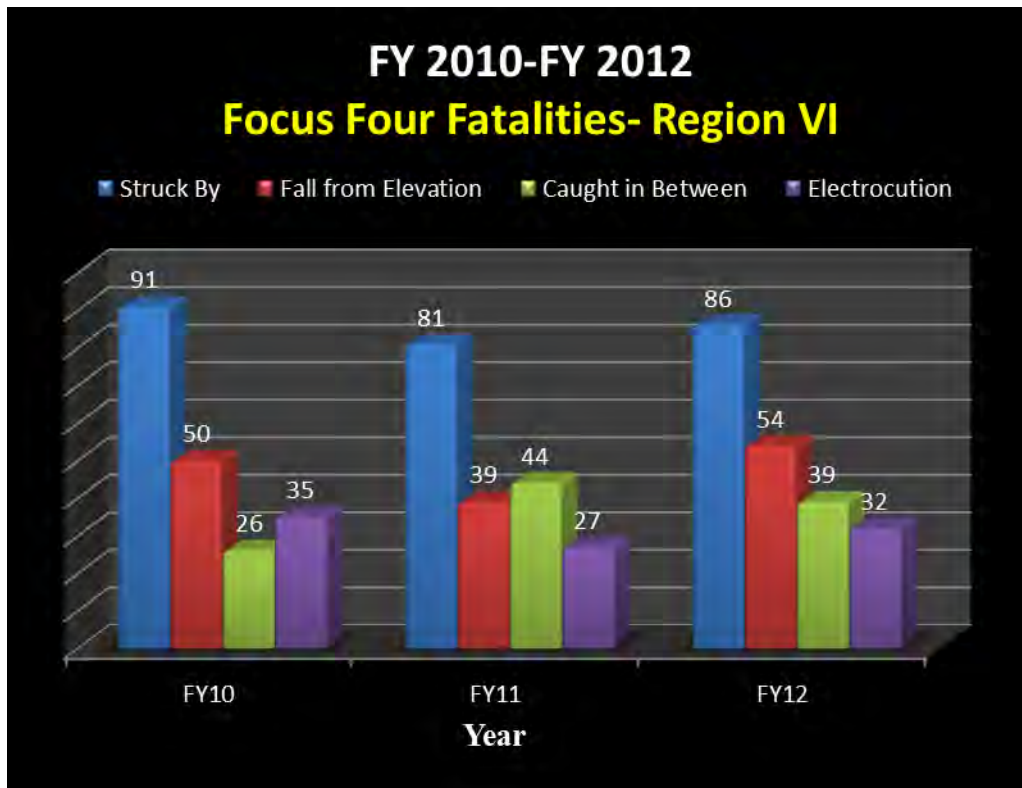
For the counties within the Eagle Ford Shale region, there are three OSHA field offices in the following cities: Corpus Christi, Austin, and San Antonio. OSHA handles workforce safety regulations, data collection and workforce injury and fatality by industry. Region VI encompassing these three field offices represents the counties within the shale play.

According to OSHA, “caught-in” or “between hazards” are defined as: Injuries resulting from a person being squeezed, caught, crushed, pinched, or compressed between two or more objects, or between parts of an object. This includes individuals who get caught or crushed in operating equipment, between other mashing objects, between a moving or stationary object, or between two or more moving objects.

²²

²² Construction Focus Four: Caught in or Between Hazards
https://www.osha.gov/dte/outreach/construction/focus_four/caught/caught_iorb_ig.pdf

Figure 26: Focus Four Fatalities Region IV; OSHA



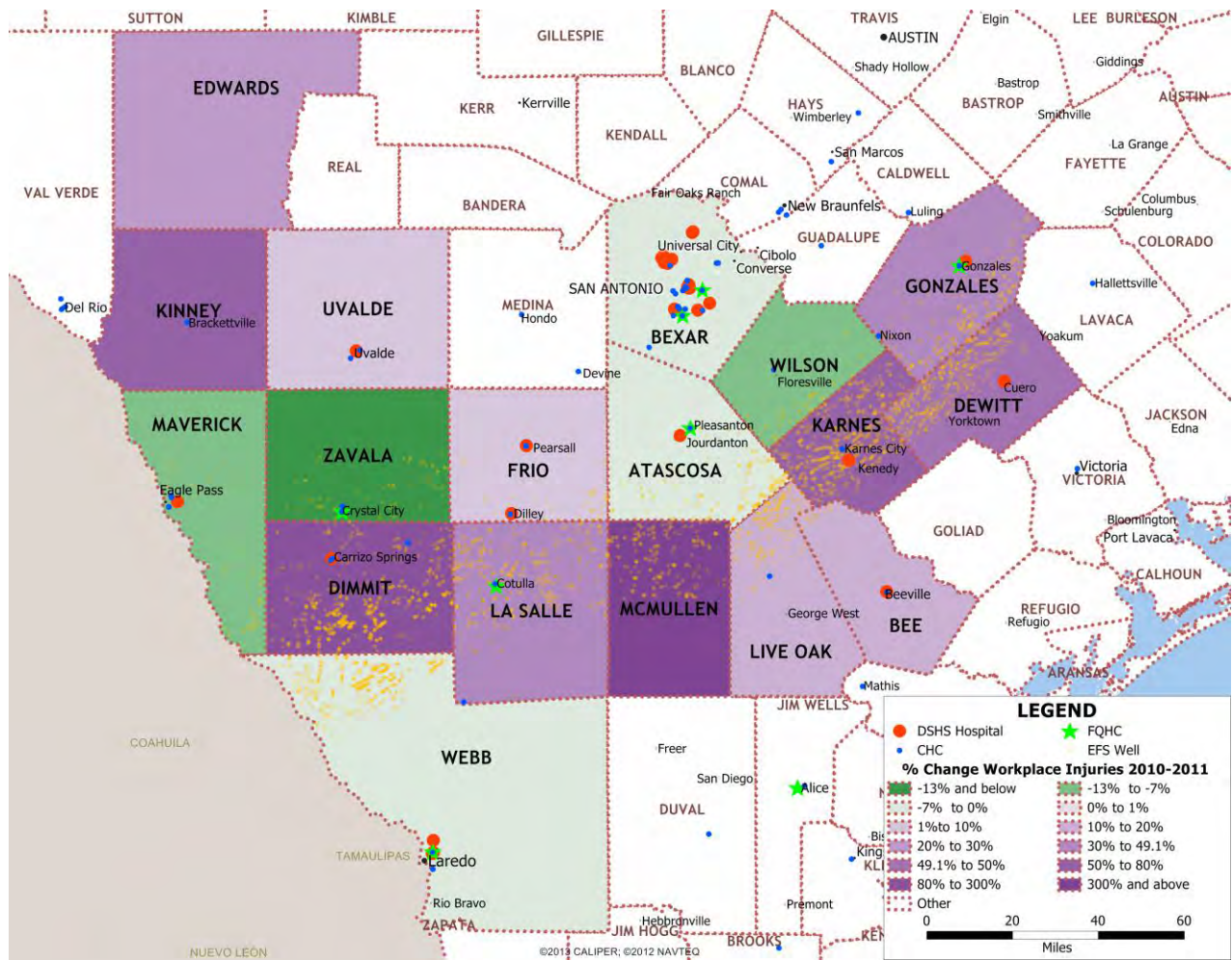


Figure 27 BLS: Workplace Injury with EFS Wells2

K. Healthcare Reform

On March 23, 2010, the Patient Protection and Affordable Care Act (ACA), was signed into law. The ACA approach to expanding access to coverage requires U.S. citizens and legal residents to have qualifying healthcare coverage. The goals of the ACA were to increase the quality of health insurance by reducing the per capita costs of care for the population, and improving the overall individual experience of care. More specifically, the law focused on ten topics that encompass this concept as a whole:²³

- Quality Health Care for all Americans
- Role of Public Programs (how care is delivered)
- Improving the Quality and Efficiency of Health Care
- Prevention of Chronic Disease and Improving Health
- The Health Care Workforce
- Transparency and Program Integrity
- Improving Access to Innovative Therapy
- Community Living Assistance Services and Support
- Revenue Provisions
- Strengthening Quality Affordable Health Care for all Americans

The ACA also sought to increase coverage by requiring states to expand their public programs, like Medicaid, to all non-Medicare eligible persons under age 65. Those eligible would be children, pregnant women, parents, and adults without dependent children all with incomes up to 133% of the Federal Poverty Level (FPL). All newly eligible adults would be guaranteed a benchmark benefit package that meets the essential health benefits available through the health insurance exchanges established in each state.

However, on June 20, 2012 the U.S. Supreme Court ruled that each state could decide how they would participate in the ACA regarding Medicaid Expansion. As a result, in 2013, the Texas Legislature did not authorize the expansion of its Medicaid program for U.S. citizen adults under the ACA.²⁴ Texas also opted not to create its own exchange, forcing consumers to rely on the exchange established by the federal government.

Health Exchanges

The health insurance exchanges allow individuals to purchase healthcare coverage, with premium and cost-sharing credits available to individuals/families from 100-400% of the FPL. Those without coverage will pay a tax penalty that will be phased-in one of two ways: 1) a flat fee of \$95 in 2014; \$325 in 2015; and \$695 in 2016; or 2) by paying 1.0% of taxable income in 2014; 2.0% of taxable income in 2015; and 2.5% of taxable income in 2016.²⁵

²³ <http://www.forbes.com/sites/carolynmclanahan/2012/07/09/cliffs-notes-version-of-the-affordable-care-act/>

²⁴ http://www.upi.com/Health_News/2013/12/05/States-that-decided-not-to-expand-Medicaid-to-lose-billions/UPI-54731386256280/

²⁵ <http://kaiserfamilyfoundation.files.wordpress.com/2011/04/8061-021.pdf>

III. Wave 1 Primary Data Collection Findings

There were two waves of primary data collection conducted. The first wave of primary data collection was performed at a population level by service type per 18-county region. The second wave of primary data collection was done by service type per County.

In the first wave of primary data collection the majority of responses came from industry, first-responders, elected officials, and safety types only. Types primarily responsible for direct healthcare delivery and services overall lacked participation in the primary data collection activities. Outside of legally mandated reporting collected by government and oversight agencies and secondary data pulled by the study researchers, data directly from healthcare service representatives and facilities was essentially cut off from this research study.

Reasons given by potential respondents in the healthcare service provision types that demonstrated a lack of willingness to participate included: Lack of information or ability to provide responses related to the questions (even for information legally required for government publication); corporate privacy concerns; and a lack of trust of outside inquiries concerning the respondent's organization and service population.

The summary of findings reflects qualitative and subjective responses to support the secondary data gathered through public sources. Qualitative primary data is exploratory and non-projectable and is best used to understand or gain additional perspective on the condition and context of healthcare services in the region. The information herein should be used for insight, and supplemented by other data to support decisions by elected officials and policymakers. As stated earlier in the study, many areas are not represented by all types of service provision.

L. Hospitals

Hospital directors were contacted in four consecutive rounds of first wave interviews. In the first wave only one Bexar County hospital responded to questions. The current utilization levels provided for that hospital showed that there has been an increase in the number of staffed beds, admissions, emergency room visits, and staffed bed occupancy, though there has been little change in length of stay or outpatient visits. This hospital provides comprehensive healthcare services, such as medical, surgical, and pediatric, and services Bexar County. Healthcare needs expressed include a need for outpatient psychiatry services, fewer inpatient facilities and more outpatient programs.

M. Physicians and Subspecialists

This category included healthcare specialists such as dental, physical therapy, chiropractic, and optometry. Out of the 85 physicians and subspecialists contacted in the first wave, seven responded.

Respondents comprised the following specialty services: OB/GYN (1); Dental (2); Chiropractic (1); Physical Therapy (1); Internal Medicine (1); and Optometry (1). There is a serious deficiency in the number of healthcare providers, particularly in McMullen, Wilson, and Zavala Counties, and in the existence of comprehensive healthcare, urgent care, and specialty care. Subspecialists interviewed indicated that they ran smaller practices with less than six staff members, including supporting staff. All providers interviewed in the first wave were accepting new patients without restriction by type of payment. Some providers had indicated an increase in self-payers or uninsured patients, while others experienced consistency in patient's method of payment.

Providers interviewed listed a number of important healthcare needs and issues, including lack of specialists (particularly hypertension, gestation, diabetes, and prenatal), shortage of physical therapists and support staff, and an increase in funding cuts to Medicare, which has forced many providers to look for an increase in self-payers. High populations of Medicare/Medicaid patients limit the ability to refer patients out or confine practice to an area.

Providers have reported that Eagle Ford Shale activities have had an influence on the healthcare needs of the region. There has been an increase in workers and their families coming into the region, which has led to an increase in the demand for specialty or family services, such as dental, physicals, hypertension, and diabetic services. There also has been an increase in self-payers from oil workers for short-term rehabilitation, as many oil workers go back home for long-term treatment.

N. County Officials

The Healthcare Needs Assessment interview process was extended to the government officials representing the counties involved in the development of the Eagle Ford Shale. In many areas, the local municipal or county government is the “go-to” authority for a variety of services across the county proper. Government officials, identifying various aspects of county involvement and awareness of medical, dental, and mental needs and services, provided the responses shown in the following tables and notes. Across the counties, 13 responses were collected in the first wave from officials, including: county commissioners (3); chambers of commerce (3); county attorneys (1); county judges (1); EDC (1); city administrators (1); city mayors (1); city managers (1); and public health administrators (1).

County and city government officials, as well as regional healthcare directors, indicated a lack of hospitals and clinics with comprehensive services available in many of the counties within the EFS region. Urgent care centers and specialty providers are also deficient in number, according to these respondents. Needs identified by local government officials for the counties and cities within the region include:

- Urgent care clinics;
- More healthcare practitioners (particularly specialty providers);
- Hospitals and clinics with comprehensive services that are close by; and
- Chronic disease prevention and care services for the elderly.

Other needs identified included:

- More nurse practitioners and medical staff;
- EMS services, supported with more funding, made available nearer to the serviced population;
- Emergency clinics with EMS services;
- Trauma centers;
- Women’s health services;
- Pediatricians;and
- More primary care and preventative care physicians that accept Medicare.

There are serious deficiencies in the number of healthcare providers in these counties and there are vacancies in clinics because of the funding pressures associated with servicing a largely uninsured population. There is also a lack of EMS services in rural areas due to a split between city and county EMS services recently. Eagle Ford Shale areas have had a noticeable impact on the healthcare needs of the region.

Likewise, workers have begun to bring their families into the area, increasing the need for pediatricians and obstetrics/gynecology providers—prenatal care is lacking.

According to respondents in the first wave, there has been an increase in vehicular accidents/fatalities related to higher traffic counts and damage to roads from abnormal amounts of industrial traffic related to increased EFS activities as well as increased population, and there has been an increase in the number of injuries requiring urgent care attention.

O. FQHCs and Community Health Centers

Of the twenty-two FQHCs/CHCs contacted in the first wave, four responded. Respondents were from Webb (2), Bexar (1) and Zavala (1) Counties. Healthcare specialties for those FQHCs/CHCs range from OBGYN and family medicine, to pediatrics, and dentistry. Also available at some clinics is specialty staff, such as podiatrists, psychiatrists, and dieticians. Key issues mentioned by those directors include:

Table 27: Key Issues Mentioned by Physicians

Key issues mentioned by Physicians
Uninsured Patients
Provider Shortages
Reductions in State Funds for Family Planning
Lack of Family and Women’s Care Doctors
Difficulty attracting Physicians and Mental Health providers to rural locations in these counties

Eagle Ford Shale activities have had a great impact on the healthcare of the region. Families brought into the area by workers have led to an increased need for family care and women’s care doctors, especially for wellness, physicals, and immunizations. There are also escalating health problems associated with man camps, such as the rise of STDs (ex. Chlamydia), and the sharing of community waters.

Maladies associated with these labor force populations include heat exhaustion, dehydration, sleep deprivation, and dehydration. Other problems tied to Eagle Ford Shale activities include vehicular accidents, an increase in workers without insurance, and environmental health issues, such as exposure to oil and gas spills and other chemicals associated with the workplace.

Some centers expressed needs in the first wave for collaboration between healthcare centers and oil and gas companies such as potential donations; better communication on needs of workers; and investments in facilities as the company’s primary care center for its workers. Centers also expressed a desire to leverage opportunities presented by the National Health Corporation’s efforts to recruit recent healthcare graduates seeking to reduce loans through a commitment to a Minority Underserved Area (MUA)—which encompasses the EFS area.

Centers report being primarily served by a combination of private and federal dollars and are attempting to switch to quality based (cost-effective) health care. A large percentage of the population serviced by FQHC/CHCs is below the poverty line, approximately 1/5 of which are unemployed, according to CHC respondents.

All providers responding to the first wave indicated that they are accepting new patients and do not have restrictions by payment type for patients accepted. All operate on a sliding-fee-scale and have generally experienced an increase in Medicare, Medicaid, and uninsured patients.

P. EMS

Out of the eleven EMS companies contacted in the first wave, four responded. Respondents were from Atascosa (2) and Dimmit (2) Counties. EMS companies contacted in the first wave reported a number of key issues related to impact on healthcare services related to Eagle Ford Shale activities. For instance, there has been a reported increase in LifeFlight services for Atascosa and Dimmit Counties, as injured oil and gas workers are transported to San Antonio for treatment. Yoakum City Ambulance in Dewitt and Lavaca Counties indicated an increase in the number of oil & gas truck accidents.

Quality Ambulance in Atascosa County reported a decrease in Medicare and Medicaid patients serviced, as private ambulance services are unable to pay the cost of transportation for these patients. Atascosa County will not transport patients to San Antonio, so the burden of service falls on private EMS companies for transport.

Q. Fire

Out of the seventeen fire service entities contacted in the first wave, four responded. Respondents were from Bee (1), Dewitt (1), Dimmit (1), and Frio (1). Table 38 shows the number of fire service companies and counties without centrally located services. Fire companies indicated that there has been an increase in motor vehicle/truck accidents both related to Eagle Ford Shale activities and otherwise. Dilley Volunteer Fire Department mentioned a three-fold increase in the number of wrecks. The increase in wrecks places additional strain on emergency and urgent care services, not to mention pressure to provide services in areas that are already lacking them. Road damage caused by the influx of large oil trucks carrying heavy loads has yielded a large increase in traffic-related fatalities and accidents.

R. Industries

Out of the one hundred fifty-three companies contacted, sixty-five responded. Respondents were from Atascosa (1), Bee (4), DeWitt (4), Dimmit (2), Edwards (6), Frio (4), Gonzales (5), Karnes (2), Kinney (3), La Salle (5), Live Oak (5), Maverick (4), McMullen (2), Uvalde (5), Webb (4), Wilson (3), and Zavala (6) Counties.

The companies indicated deficiencies in the number of healthcare facilities in counties, such as Zavala, McMullen, Live Oak, La Salle, Karnes, and Edwards Counties. Facilities in short supply include urgent care centers, specialty clinics, and hospitals with comprehensive services, causing employees who experience a serious injury on the job to be transported nearly 30 minutes away to the nearest hospital for treatment.

There has been an increase in a number of injuries and diseases noticed by company representatives, including allergies, influenza, diabetes (including diabetes related amputations), obesity, hypertension, and chronic asthma. There has also been an increase in renal and cancer care, heart attacks and heart disease, and motor vehicle accidents. There has been an increase in on-the-job injuries as well as more ER cases and demand for general medical services as population has increased, particularly among the

EFS population. The consensus among the industries is the number of primary care physicians has not kept up with demand.

Common on-the-job injuries include slips and falls; automobile accidents; cuts, burns, sprains and strains; back, wrist and lifting injuries; sunburn; and fractures. Facilities and providers that industry representatives would like to see in their area include vision, dental, hospital, specialty providers, primary care physicians, urgent care, and ER services. Clinics for the uninsured and underinsured, as well as elder care services were requested as well.

IV. Wave 2 Primary Data Collection Findings

After assessing the first wave, a second wave was undertaken in order to obtain representation from all counties, and to attempt to obtain responses representing the four types of organizations that deal with the facets of medical services provisions by county: 1) Physicians and Clinics, 2) Hospitals, 3) Government Officials, and 4) Federally Qualified Health Care systems.

For the Wave 2 process an electronic survey was created based on the original questionnaire, breaking it down into subtopics that mirrored the original question sequence and topical matter. Results from Wave 2 supported findings from Wave 1 and secondary data highlighted earlier in the report. The following is a summarized review of the responses received from hospitals, physicians, county officials, FQHCs, fire service and EMS providers and industry representatives.

Offices that responded at the county level included county government, municipal government, and economic development agencies. Some of these offices represent or are associated with county or municipal healthcare services-related programs. Additionally, information from officials allowed representation from a public service viewpoint on a variety of possible public health concerns not usually directly tied to medical facility structure and operation, such as: hazardous road conditions; adverse context impacts on mental health; social pressures on families, mothers and children; and economic pressures on government agencies and taxpayers. Officials reported that in many rural areas there was only one physician, or the only physician had retired; annual budgeting for indigent care was depleted in a matter of weeks; and that fatalities and accident rates had soared in the past few years, exacerbating safety concerns as well as taxing public law enforcement and first responders.

Although law enforcement may be the default first responder, this study was not directed to include this important source of information. Future consideration should include law enforcement as a resource as it is often the first responder to events and accidents, including violent crime. County law enforcement may be the only service available in some rural areas.

Likewise, issues that were uncovered as direct or indirect threats to public health should be considered. These include the isolation and stress suffered by mobile workers reportedly associated with high rates of suicide. They also include road hazards and traffic safety issues, evidenced by poor and deteriorating road conditions and the increase in accidents. Also relative as a public health issue is the amount of accidental injury due to work-sites and lifestyle, such as alcohol and substance use, work-site conditions and safety factors.

Another issue that was commonly reported was the inability to recruit medical personnel in highly rural areas, due to a lack of quality of life and other supports. There may be a lack of suitable facilities to augment practices. Influxes of families that require healthcare for women and children, as well as aging residents that require specialty attention such as cardiac and digestive services was commonly reported. The ability to use technology for virtual medical services may be an initiative that warrants attention for these areas. The service population itself was not included in this study.

In the response set several items were identified that may point to innovative solutions for healthcare. These include: preventive medicine and wellness-related programs; design and facilitation of services by organizations and communities—gaining input from the service population themselves to help identify causal factors behind demand and utility—integration of alternative licensed medical personnel; mobile and digital services; and service agreements for cost effective provider solutions.

Again, the following findings are meant to support the secondary data gathered through public sources. Qualitative primary data is exploratory and non-projectable and is best used to understand or gain additional perspective on the condition and context of healthcare services in the study region.

The information attained should be used for insight but should not be the sole source of information for decision. As stated earlier in the study, many areas are not represented by all types of service provision.

- The majority of respondents (8) stated not being affiliated with a hospital system with only some mentioning that they were.
- The majority of respondents (49 duplicated) classified their hospital or facility as a primary care hospital/facility.
- Among the top classifications, most respondents (51 duplicated) self-identified their facility as a hospital/facility, clinic, general practice or emergency facility.
- When asked about the level of healthcare services offered, the majority of respondents (67 duplicated) mentioned offering mostly primary healthcare, with a few noting secondary and Level 4 care among the other levels of care available in the region.
- When asked about the type of healthcare series offered, the majority of respondents (94 duplicated) noted offering primary and specialty care with some offering first responder and emergency care.
- Among those identifying themselves as clinics, the majority of respondents (7) stated they were full-service clinics with only a few stating they were satellite facilities.
- An overwhelming majority of respondents (21) agreed that there are specific healthcare facilities and services which counties do not currently have, but for which communities are in need of.
 - Of those services noted, mental health, dental and additional primary care services were specifically mentioned.
 - With regard to facilities, urgent care centers were most frequently cited as lacking, with a few mentions of the need for facilities addressing the need of family planning, prenatal care and pediatrics.
- The majority of respondents (23) stated the facilities in their areas had eligibility criterion patients must meet to receive services.
 - Restrictions mentioned (5) included needing to be low-income, below 100% FPL or uninsured patients who can pay on a sliding-fee-scale.

- Respondents (21) appeared to be servicing the Bexar County area at a higher level than any other of the 18 counties in the study region.
 - Other counties noted as geographic areas serviced by respondents included:
 - Atascosa, Dimmit and Webb and a lower level than Bexar but higher than the following:
 - Bee, Big Wells, Collin, Eagle Pass, Edwards, Frio, Hays, Hallettsville, Jim Hogg, Karnes, Laredo, McMullen, Shine, Uvalde, Wilson, Yoakum and Zapata.
- Healthcare needs noted by respondents (12) included:
 - Diagnosis and treatment: diabetes, hypertension, obesity, kidney issues
 - Workforce shortage: primary care, dental care, mental health (outpatient psychiatry)
 - Hard to attract to area; existing doctors near retirement with no doctors in pipeline.
 - Specialty care: internists, vascular services, urology, OBGYN, dermatology.
 - Urgent care facilities (nearest urgent care facilities in some areas is in San Antonio which requires use of Tele-Vac)
 - Family planning – state cut backs in family planning having an impact
 - EMS services; drivers
- Whereas a workforce shortage was noted as a healthcare need by respondents (14), some were split on their view of whether there are any physician or staff vacancies in healthcare services and facilities in the study region. However, of those (4) that did believe there were vacancies it appears the question may have been misunderstood to imply “need” versus “vacancies.”
- With regard to future needs, respondents (4) believed Colonias may have an impact on which location would have the highest need.
- Future healthcare needs, not associated with a particular location, respondents (21) felt this will be motivated by:
 - Change in population:
 - Future population growth due to EFS:
 - Seeing a need for more urgent care facilities due to injuries/accidents;
 - Need emergency clinics with comprehensive services, with EMP services that have chemical and oil field experience
 - EFS workers bringing their families: higher need women’s services (family planning, OB/GYN), pediatricians
 - Also growth in senior population – there will be a need for geriatric care.
 - High incidence of comorbidities (obesity, diabetes, hypertension) among current population.
 - There is a need for prevention and wellness approach to healthcare.
 - Lack of current medical facilities; less inpatient facilities and more outpatient
 - Current medical facilities are understaffed; need more family practitioners
 - Currently low funding and budgets
 - Large number of uninsured population
 - Fear that there is no interest in investing in healthcare in the study region because of recent passage of healthcare reform.
 - Large population with no regular healthcare provider

- There is need to survey the current population the facilities that serve them before new facilities are constructed to ensure the correct need is being met/filled
- Respondents (35) felt that Eagle Ford Shale activity will affect the future healthcare needs in the study region in the following ways:
 - The most overwhelming affect that the EFS activity will have on future healthcare needs will be due to the high increase in traffic accidents--both those involving commercial oil/gas trucks and those not involving oil/gas vehicles.
 - Damage to roads, said to be caused by the wear and tear of large commercial oil/gas vehicles on county and feeder roads not meant to be used by heavy commercial trucks, was thought to contribute to the increase in traffic accidents.
 - The EFS activity was seen as increasing the demand for, and putting additional pressure on, the healthcare services in the study region.
 - The increase in demand for services will exasperate the healthcare workforce shortage in the study region.
 - Currently the Texas Medical school graduation rate for Latino and African Americans do not reflect the population of the state or the study region when looking specifically at the Latino population.
 - There is need to explore expanding the scope of work to include other mid-level healthcare professionals such as nurse practioners, physicians' assistants, etc.
 - Explore alternative modes of delivery healthcare; such as telemedicine.
 - One example cited an oil and gas company (Pioneer) utilizing telemedicine illustrated a potential strategy: Clinics operated by paramedics who do triage communicating with physicians in Lafayette who provide diagnosis, and if necessary, arranging for the patient to be airlifted to San Antonio.
 - A rise in public health issues (e.g., rise in STDs) resulting from "man camps" was an affect that should be quickly addressed.
 - Other worker related healthcare needs were: heat exhaustion, dehydration (due to lack of hydration and protective clothing worn), sleep deprivation, depression with a notable rise in suicide rates.
 - A concern was expressed that current healthcare professionals may not be equipped to respond to potential gas or oil spill accidents in the area; a question was raised whether an evacuation response plan was in place in case of environmental catastrophe.
 - A few respondents felt there would be some economic benefit resulting form EFS activity. However, even though those earning higher wages might be covered by health insurance, support industry workers (hotels, restaurants, etc) would not be. This support industry would see an increase in workers and subsequently an increase in the number of uninsured.

S. Observations

Limitations

Data from secondary sources is often aged, as it goes from the initial report by the facility/provider to a government clearing house or agency, and is then processed before being published; publically available data can see a reporting lag of two- to-three years, meaning that data on this industry is, from its publication, dated and not representative of current circumstances. Although the data behind these reports should be accessible at the local facility level, most respondents did not pass this data on in interviews. Often, responses were in the form of summary answers. For future investigations, field visits may offer the opportunity to gather more complete and timely data.

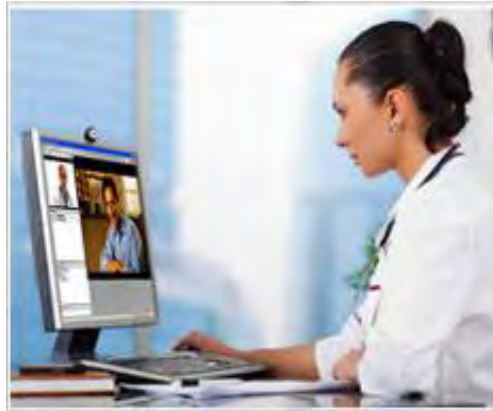
Comments

Distinct issues were discovered in this study. The geographic area, with sparse clusters of population presents isolated and underserved contexts that make access to health care information difficult. Relationship building and a stance of externally based public interest, rather than internally based corporate interests may be the key to understanding, cooperating and delivering substantive health care services to these areas.

Tactics and behaviors will need to reflect rural service locales and cultures, rather than urban ones. Field visits are highly recommended. A brief simple surface level comparison of population profiles and available services in this vast rural Texas area illustrate large gaps in health care service availability and levels.

Despite the existence of public policy and government sponsored programs, such as Medicare/Medicaid, and affordable insurance, if there is no doctor, there is no care.

Figure 28: Healthcare Studies



T. Sub-Region Breakdown and County Analysis

The following is a county analysis of the 18 county study region. The Northern region consists only of Bexar County while the Northwestern region contains Edwards, Kinney, and Uvalde counties. The Northeast region consists of DeWitt, Gonzales, Karnes and Wilson counties. The Western region consists of Dimmit, Maverick, and Zavala; and the Central region contains La Salle, Frio, Atascosa and McMullen counties. The Southern region has only Webb County; and finally, the Southeast region consists of Live Oak and Bee counties.

This sub-region breakdown uses both the disease and death data along with future migration pattern data to show the movement of the diseases and causes of death associated with each ethnic group. This reflects the projected future health trends and ethnic make-up of the sub-regions. Following the sub-region information section is a section of information pertaining to each county.

The Texas State Data Center's 2000-2010 net migration rates reflect movement in the projections of the four major populations for this region and were used for county analysis. Populations in-migrate and out-migrate of the region due to normal living patterns, work patterns and other considerations. Out-migration²⁶ entails moving out to reside in other places. In-migration entails moving from other regions into this new region. These projections help to forecast and identify some of the strategies that each county can develop to address the health concerns of the population in the area. In the county breakdown, there is a brief description of the movement of each population in each county for the next 10 years. Projections for 2013 population reflect the moderate 0.5 migration scenario.

²⁶ Definition of in-migration and out-migration

<http://www.dshs.state.tx.us/Layouts/ContentPage.aspx?PageID=35617&id=8589967643&terms=GLOSSARY>

Northern Sub-Region

This region contains only Bexar County and has 23 hospitals (including 2 Veteran hospitals), 19 FQHCs/CHCs service sites, 41 fire service and 3,042 EMS personnel servicing a population of 1,791,455.²⁷

Table 28: North Region

North Region	
Bexar	
Hospital	23
Clinics	4,013
FQHC/CHC Delivery Sites	19
Fire Stations	41
EMS Personnel	3,042

Projected population of 2,052,494 by 2023, a 12.7 percent increase from 2013 and projected to continue to increase through 2033.

- Most prevalent causes of death 2023: Cancer, Heart Disease, Unintentional Injuries
- Most prevalent chronic diseases 2023: Arthritis, Diabetes, Heart Disease

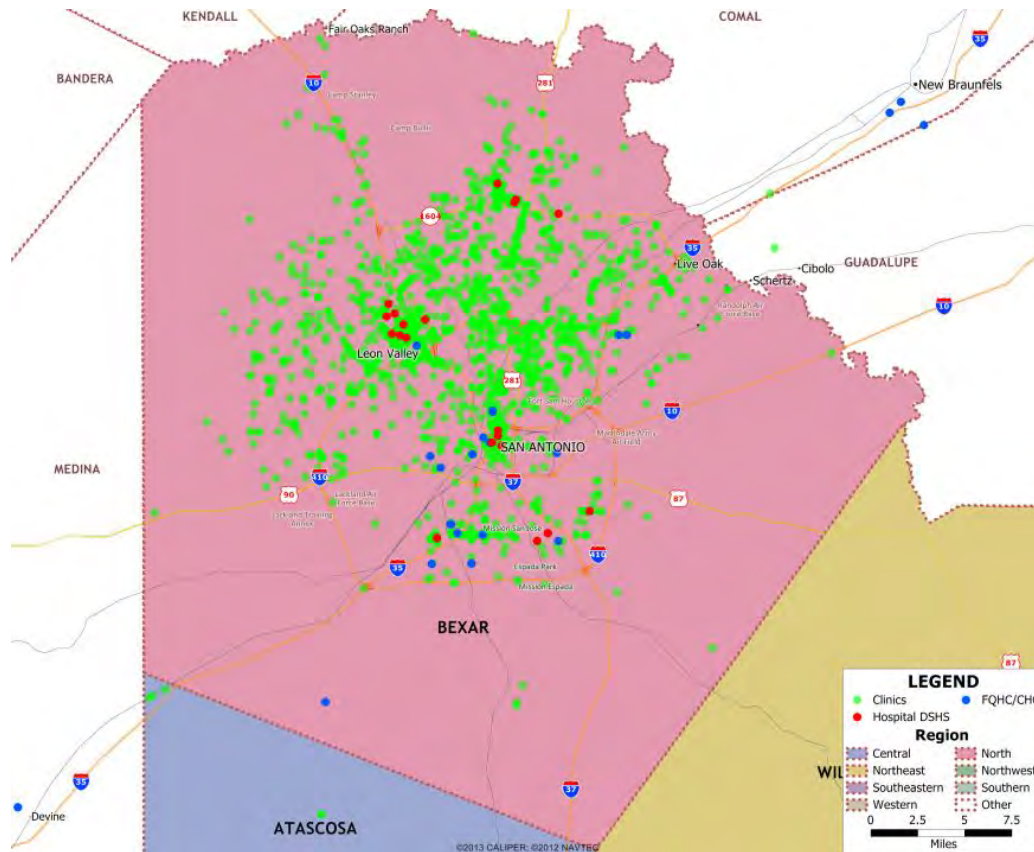


Figure 29 Northern Sub-Region

²⁷ This reflects the moderate 0.5 migration scenario.

Northwest Sub-Region

This region consists of Edwards, Kinney, and Uvalde Counties and has 1 hospital, 4 FQHC/CHC delivery sites, 15 fire stations and 81 EMS personnel servicing a population of 32,755.²⁸

Table 29: Northwest Region

Northwest Region	
Edwards, Kinney, Uvalde	
Hospital	1
Clinics	21
FQHC/CHC Delivery Sites	4
Fire Stations	15
EMS Personnel	81

Projected population 2023: 35,497, an 8.4 percent increase from 2013. The largest population is found in Uvalde County and projected to increase through 2033. Uvalde is also the only county with a hospital facility in this sub-region.

- Most prevalent causes of death 2023: Cancer, Heart Disease, Unintentional Injuries
- Most prevalent chronic diseases 2023: Arthritis, Diabetes, Heart Disease

Gap Needs:

- Kinney County has the third highest increase in workplace injuries in the region.
- Any facility or professional development in this county should address these trends.

²⁸ This reflects the moderate 0.5 migration scenario.

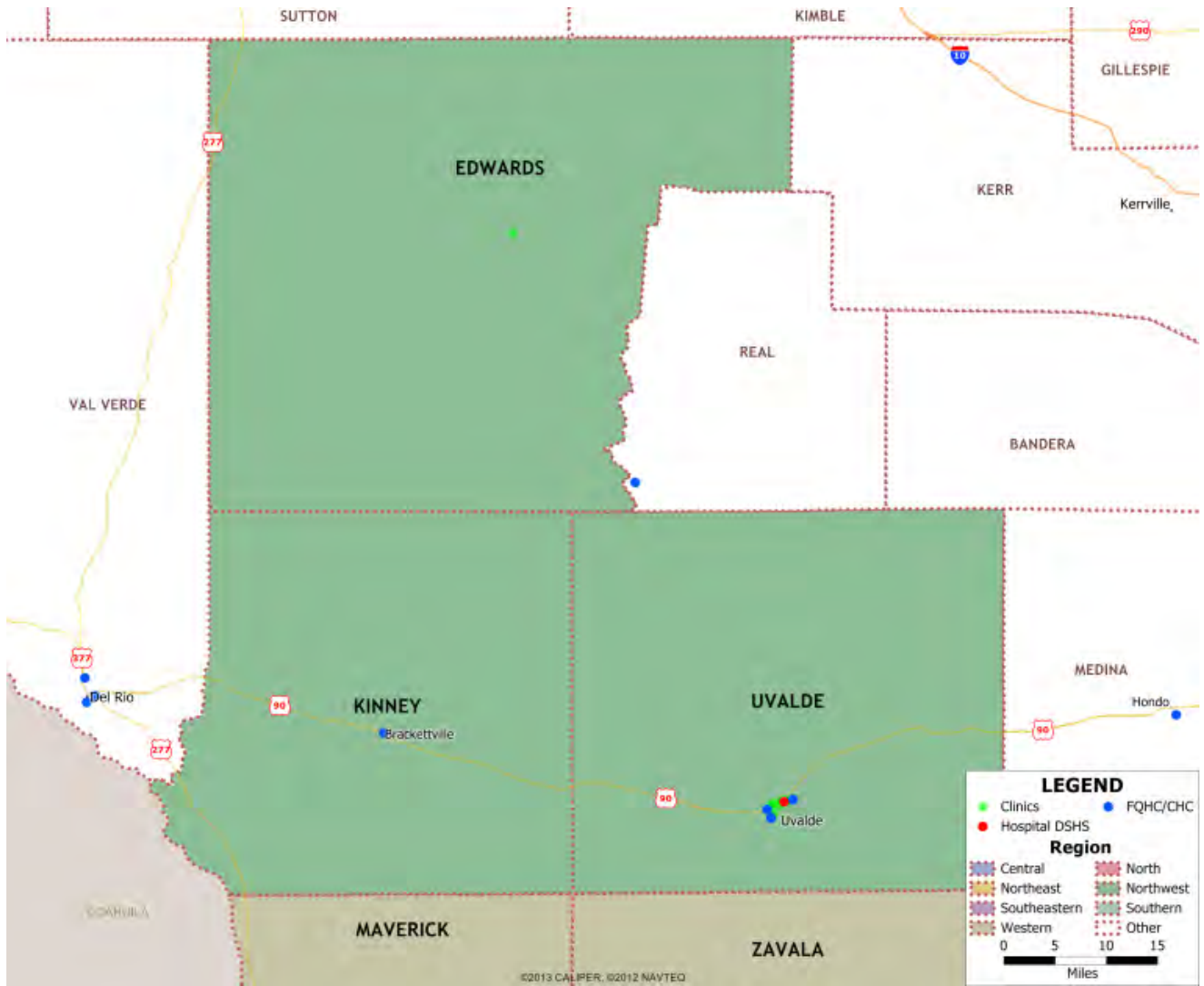


Figure 30 Northwestern Sub-Region

Northeast Sub-Region

This sub-region consists of DeWitt, Gonzales, Karnes and Wilson Counties, has 4 hospitals, 5 FQHC/CHC delivery sites, 25 fire stations and 380 EMS personnel servicing a population of 100,933.²⁹

Table 30: Northeast Region

Northeast Region	
Dewitt, Gonzales, Karnes, Wilson	
Hospital	4
Clinics	26
FQHC/CHC Delivery Sites	5
Fire Stations	25
EMS Personnel	380

Projected Population 2023: 112,147, an 11.1 percent increase from 2013. The largest population is found in Wilson County.

- Most Prevalent causes of death 2023: Heart Disease, Cancer, Chronic Lower Respiratory Disease
- Most prevalent chronic diseases 2023: Arthritis, Heart Disease, Diabetes
- DeWitt County: is only county with no FQHC; among top 5 counties with largest increase in work place injuries and traffic accidents.
- Karnes County: has the second highest increase (136%) in traffic accidents in the 18-county region.
- Three of the four counties in this sub-region (Karnes, DeWitt and Gonzales) among the top six counties with the highest increases in workplace injuries.
- Any facility or professional development in this sub-region should address these trends.

²⁹ This reflects the moderate 0.5 migration scenario.

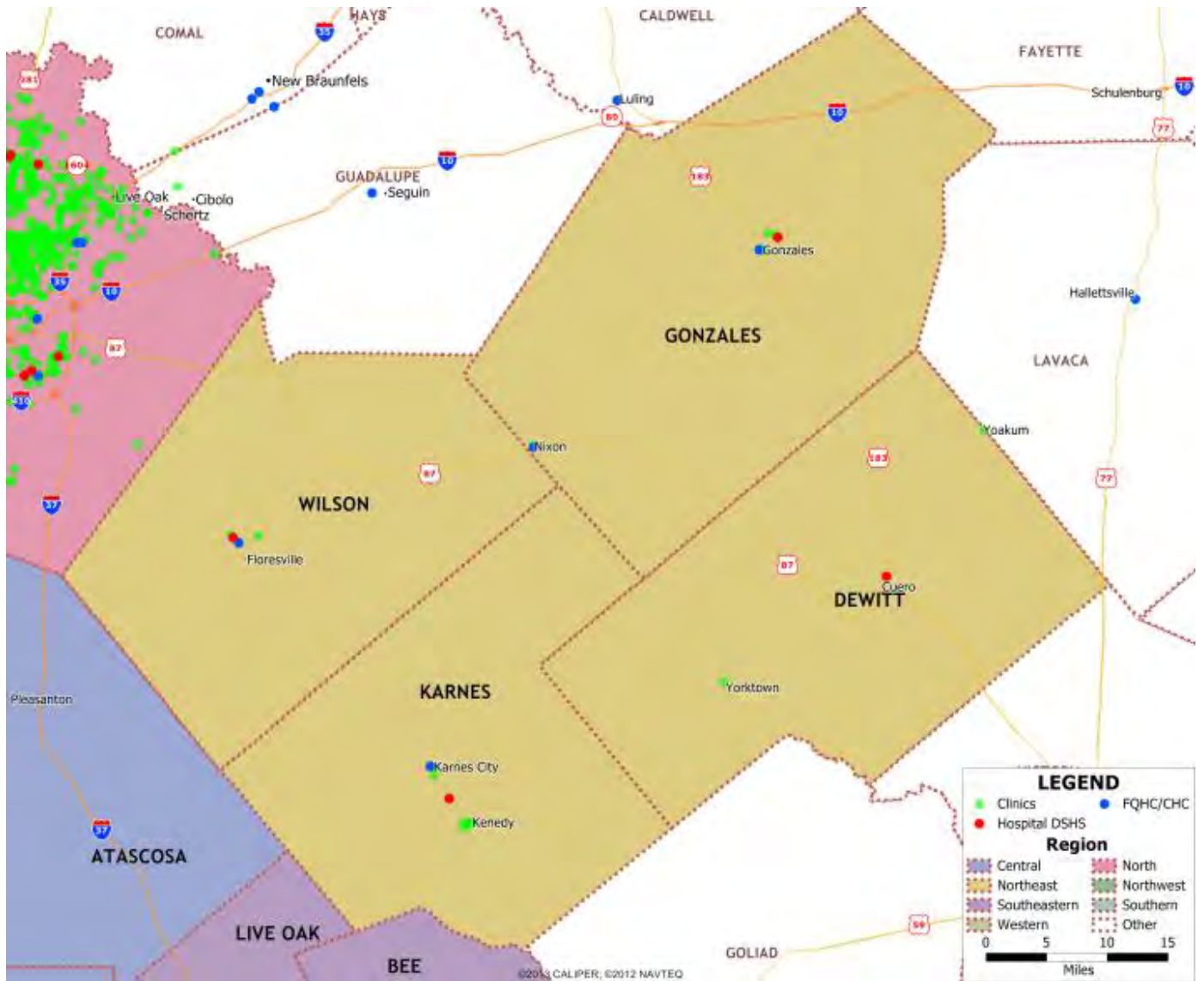


Figure 31 Northeastern Sub-Region

Western Sub-Region

This region consists of Dimmit, Maverick and Zavala Counties, has 2 hospital, 8 FQHC/CHC delivery sites, 8 fire stations and 175 EMS personnel servicing a population of 79,178 with the vast majority (71%) residing in Maverick County.³⁰

Table 31: Western Region

Western Region	
Dimmit, Maverick, Zavala	
Hospital	2
Clinic	47
FQHC/CHC Service Delivery Sites	8
Fire Stations	8
EMS Personnel	175

Projected Population 2023: 90,729, a 15 percent increase from 2013. Maverick County will increase to 65,895 residents.

- Most prevalent causes of death 2023: Cancer, Heart Disease, Unintentional Injuries
- Most prevalent chronic diseases 2023: Arthritis, Diabetes, Heart Disease
- Dimmit County: is second highest in workplace injuries (80% increase).
- Zavala: of the 3 counties in this region is the only one with no hospital facility.
- Maverick: projected to reach a population of 65,895 by 2023, will be the third most populated in the 17 county-region.

³⁰ This reflects the moderate 0.5 migration scenario.

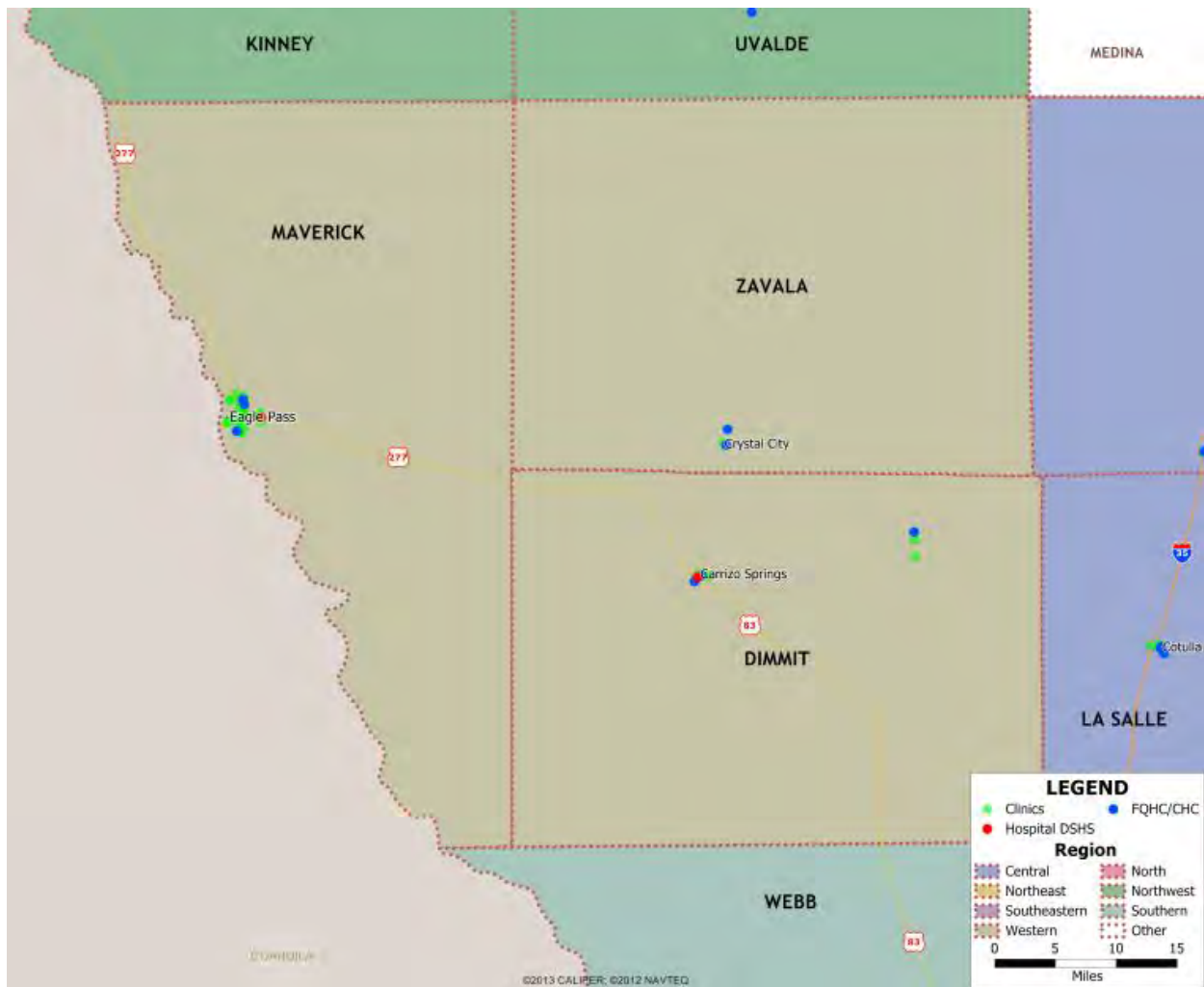


Figure 32 Western Sub-Region

Central Sub-Region

This region consists of La Salle, Frio, Atascosa and McMullen Counties, have 2 hospitals, 6 FQHC/CHC delivery sites, 7 fire stations and 199 EMS personnel servicing a population of 72,805.³¹

Table 32: Central Region

Central Region	
La Salle, Frio, Atascosa, McMullen	
Hospital	2
Clinic	62
FQHC/CHC Delivery Sites	6
Fire Stations	7
EMS Personnel	199

Projected Population 2023: 83,625, a 15 percent increase from 2013. Atascosa will be the most populated county at 55,076 residents.

- Most prevalent causes of death 2023: Cancer, Heart Disease, Unintentional Injuries
- Most prevalent chronic diseases 2023: Arthritis, Diabetes, Heart Disease
- McMullen currently has no hospital or FQHC facility, fire or EMS provider and has the largest increase in traffic accidents and workplace injuries.
 - Eagle Ford Shale drilling will expand into the southern portion of the McMullen County as natural gas prices increases.
- La Salle County saw a 120 percent increase in traffic accidents and currently has 1 FQHC and no hospital facility.

³¹ This reflects the moderate 0.5 migration scenario.

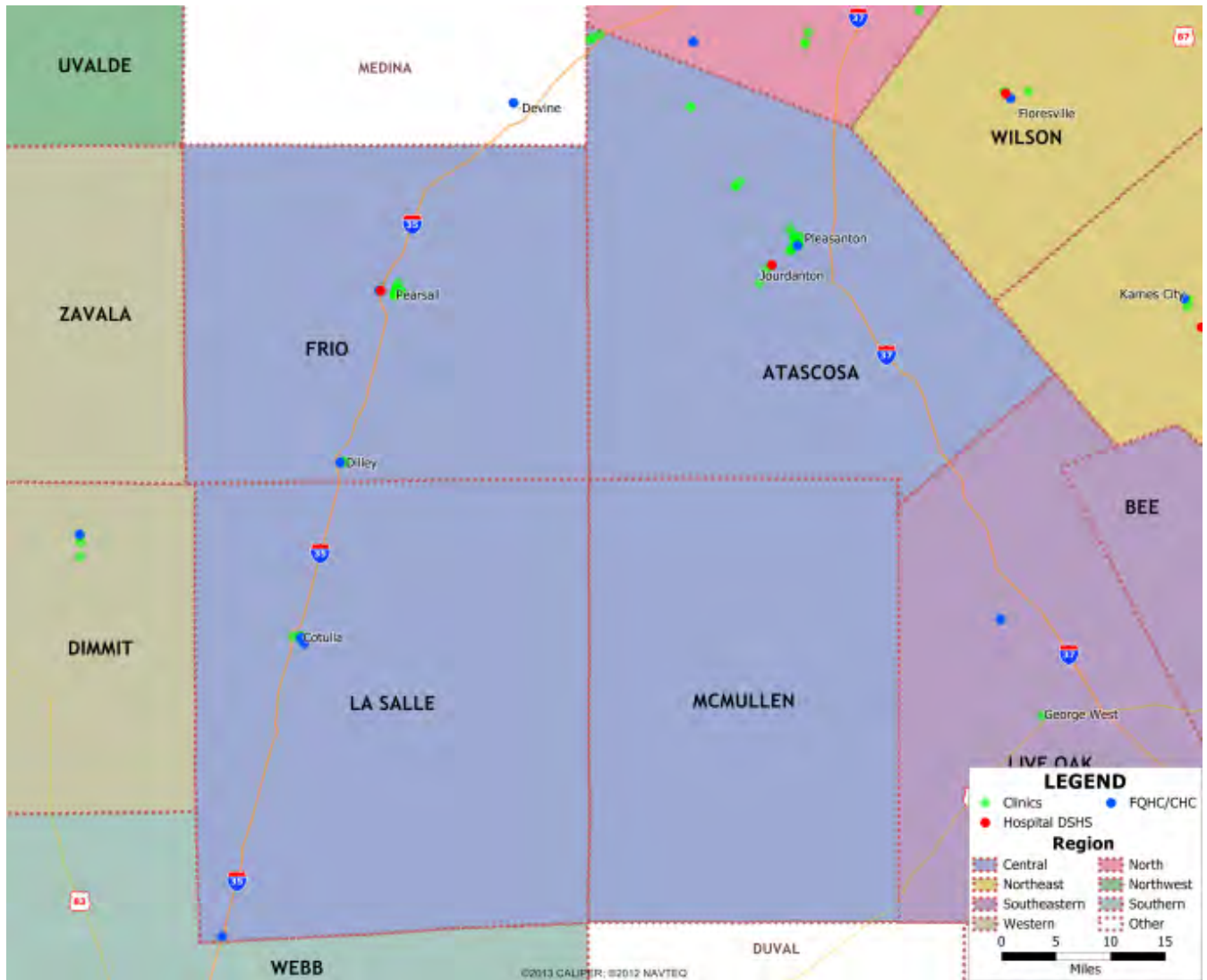


Figure 33 Central Sub-Region

Southern Sub-Region

This region consists of Webb County, has 3 hospitals, 4 FQHC/CHC delivery sites, 9 fire stations and 519 EMS personnel servicing a population of 265,932.³²

Table 33: Southern Region

Southern Region	
Webb	
Hospital	3
Clinic	10
FQHC/CHC Delivery Sites	4
Fire Stations	9
EMS Personnel	519

Projected Population 2023: 324,934, a 22.1 percent increase from 2013.

- Most prevalent causes of death 2023: Cancer, Heart Disease, Unintentional Injuries
- Most prevalent chronic diseases 2023: Arthritis, Diabetes, Heart Disease
- Webb County saw only minor increases in reported traffic accidents, and decreases in reported work place injuries.
- Based on Health Professional Shortage scores (HPSA), the most underserved area within this sub-region is the south Laredo area.

³² This reflects the moderate 0.5 migration scenario.

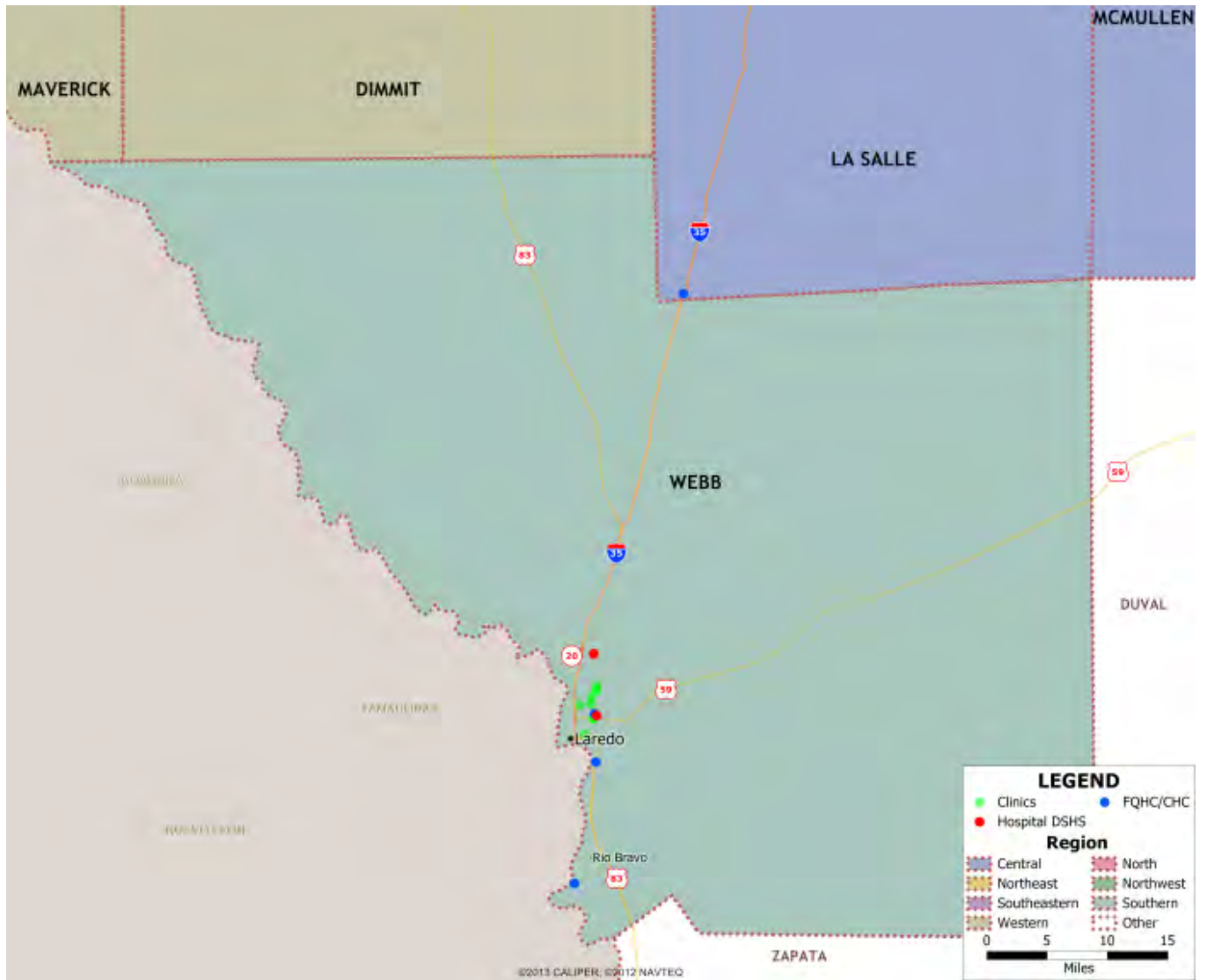


Figure 34 Southern Sub-Region

Southeast Sub-Region

This region consists of Bee and Live Oak Counties, has 1 hospital, 3 FQHC/CHC delivery sites, 13 fire stations and 81 EMS personnel servicing a population of 43,943.³³

Table 34: Southeastern Region

Southeastern Region	
Live Oak, Bee	
Hospital	1
Clinic	23
FQHC/CHC Delivery Sites	3
Fire Station	13
EMS Personnel	81

Projected Population 2023: 45,667, a 4 percent increase from 2013.

- Most prevalent causes of death 2023: Cancer, Heart Disease, Unintentional Injuries
- Most prevalent chronic diseases 2023: Arthritis, Diabetes, Heart Disease
- Live Oak County currently has no hospital and 1 FQHC; with a projected population of 11,734.
- Bee County saw a 17.3 percent increase in workplace injuries; with a projected population of 33,933.

³³ This reflects the moderate 0.5 migration scenario.

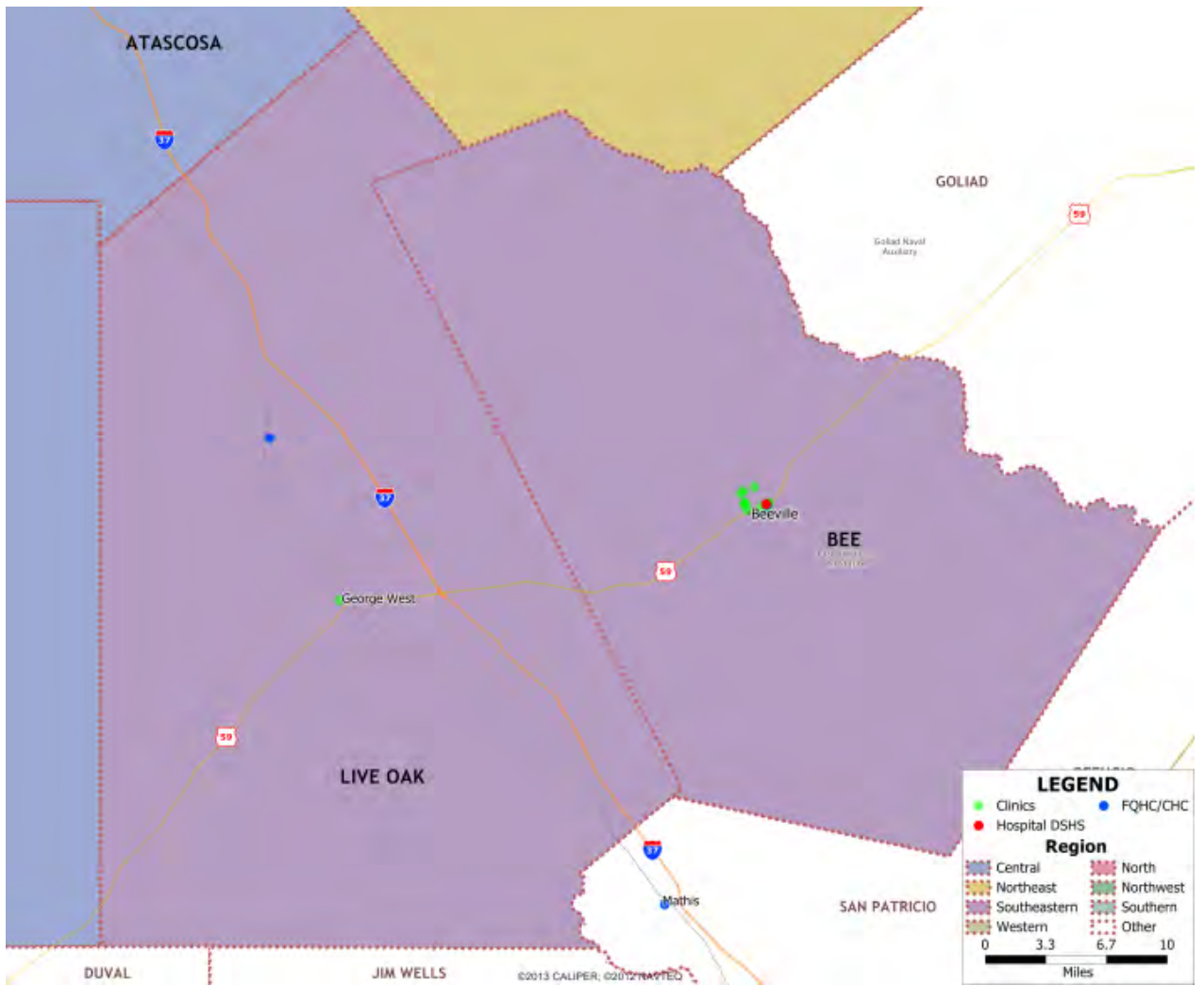


Figure 35 Southeastern Sub-Region

Atascosa County

Demographic and Migration Data

With a 22.8% increase in population from 2013 to 2023, the Hispanic group will be the most populated segment, with the largest in-migration in Atascosa County. The Anglo population of Atascosa County will increase by 6.9% and will be the second most populated segment in the county. The Other population is projected third most populated with a 9.2% increase and finally the African American population will increase 8.8%.

(2023: Hispanics: 36,353 / Ang. 17,796 / Other: 643 / AA: 284)

Traffic Data 2009-2011

The traffic data from Atascosa County shows that between 2009 and 2011 Atascosa County experienced a 56.4 % increase in commercial traffic accidents and 7 % overall. Atascosa is just south of Bexar County in an area known for its oil richness, which makes it the major drilling area for Eagle Ford Shale developers.

HPSA Data 2013

Table 35: HPSA Data - Atascosa; US Department of Health and Human Services Health Resources and Services Administration

	Discipline	ID	Type	FTE	# Short	Score
Atascosa	Primary Care	148013	Single County	12	1	11
	Dental	648013	Single County	8	1	11
	Mental Health	748013	Single County	1	0	15

Workplace Injuries Data 2010-2011

In Atascosa County, the workplace injuries decreased by 4% from 2010 to 2011. The most prevalent injuries that occurred in both years were fall or slip injuries, increasing by 3.8% and those caused by being struck by different objects decreased in 2011 by 15.8%.

Hospitals and Clinics

There is one hospital located in the city of Jourdanton, classified as an acute care facility. There are 32 clinics, 1 of which is a FQHC/CHC delivery site.

EMS

Currently there are 139 EMS service personnel in Atascosa County.

Fire

Atascosa County has 2 fire stations serving the area.

Bee County

Demographic and Migration data

Bee County will experience an out-migration from two of the four groups. These groups are the Anglo population decreasing by 2% and the Black population projected to decrease by 1.6% by 2023. The remaining groups that will continue in-migrating are the Other population, increasing 13.1% and the Hispanic group increasing 9.7%.

(2023: Hispanics: 20,186 / Ang. 10,723 / AA: 2,480 / Other: 544)

Traffic Data 2009-2011

While overall traffic accidents in Bee County have decreased by 5% between 2009 and 2011, commercial vehicle accidents have shown an increase. From 2009 through 2011, traffic accidents involving commercial vehicles increased by 60%.

HPSA Data 2013

Table 36: HPSA Data - Bee; US Department of Health and Human Services Health Resources and Service Administration

	Discipline	ID	Type	FTE	# Short	Score
Bee	Primary Health	148025	Single County	8	1	11
	Dental	648025	Single County	6	1	7
	Mental Health	748025	Single County	0	1	8

Workplace Injuries Data 2010-2011

The total of workplace injuries in Bee County increased from 2010 to 2011 by 17.3%. The most common injuries were those caused by a fall or slip, increasing 39.6% and strains or injuries by different objects decreasing 30.4% by 2011.

Hospitals and Clinics

There is one hospital in Bee County, located in the city of Beeville, classified as an acute care facility. There are 2 FQHC/CHC delivery sites in the county operated by the Community Action Corporation of South Texas servicing Bee, Brooks, Duval, Jim, Wells, Kleberg, and San Patricio Counties. There are 21 clinics.

EMS

The county has 58 EMS registered personnel throughout the county.

Fire

Bee County has 8 fire stations.

Bexar County

Demographic and Migration data

Bexar County will experience an in-migration from all four groups within the next 10 years. The Hispanic group will remain the most populated segment in Bexar County with a 20.1% increase. The Anglo segment will have the lowest increase in this county with a 0.6%, but make-up the second most populated group. The next most populated segment will be the African American population with a 14.2% increase. Even though the Other population segment will have the largest increase, 32.9%, this group will be the least most populated.

(2023: Hispanics: 1,283,661 / Ang. 525,246 / AA: 141,391 / Other: 102,196)

Traffic Data 2009-2011

Traffic data in Bexar County shows decreases both in overall traffic accidents and commercial traffic accidents at 19% and 17.2% respectively.

HPSA Data 2013

Table 37: HPSA Data - Bexar; US Department of Health and Human Services Health Resources and Services Administration

	Discipline	ID	Type	FTE	# Short	Score
Bexar	Primary Health	148999481X	Geographical Area (Far East Side)	8	1	11
		1489994827	Geographical Area (West Side)	51	1	9
		148999484C	Geographical Area (Northwest Bexar)	4	4	13
		148999489A	Population Group (Low Income-Southside)	8	40	16
	Dental Health	6489994820	Geographical Area (West Side)	40	3	12
	Mental Health	74899948MG	Geographical Area (South East)	4	2	15
		74899948MH	Geographical Area (South West)	9	5	18

Work Injuries Data 2010-2011

Bexar County's records show that there has been a decrease in overall injuries in the workplace. By 2011, total workplace injuries decreased by 5.3%. Some of the most common were strains or injuries by different activities, which decreased 8.4% and injuries caused by being struck by different objects decreased 10.3% in 2011.

Hospitals and Clinics

There are 23 Hospitals in Bexar County all of which are located in San Antonio. There are 19 FQHC/CHC delivery sites servicing Bexar County. There are also a total of 4,013 clinics in the county.

EMS

Bexar County has a total of 3,042 EMS personal, most of which are located in San Antonio.

Fire

Bexar County has a total of 41 fire stations.

DeWitt County

Demographic and Migration data

De Witt County is projected to have an out-migration of 3.1% from the Anglo population by 2023. However this group will remain the most populated in the County. The Hispanic population will show an increase of 15.3% in population by 2023. The Black population will only increase by 1.7%, making this group the third most populated. Lastly the other group is projected to show the largest percentage of increase of 18.2%. Lastly, (2023: Anglos: 10,997 / Hispanics: 7,861 / Blacks: 1,842 / Other: 402)

Traffic Data 2009-2011

From 2009 to 2011 Dewitt County has experienced an increase of 316.7% in commercial traffic accidents. Overall, there has been a 30% increase in traffic within the county.

HPSA Data 2013

Table 38: HPSA Data - Dewitt; US Department of Health and Human Services Health Resources and Services Administration

	Discipline	ID	Type	FTE	# Short	Score
Dewitt	Primary Health	No Primary Care HPSAs in this county				
	Dental	648123	Single County	4	1	9
	Mental Health	748123	Single County	0	1	15

Workplace Injuries Data 2010-2011

In DeWitt County, overall injuries increased by 49.1% from 2010 to 2011. Fall or slip injuries were the most prevalent in both years; however, it increased 118.2% by 2011. The next most common injury is strain or injury by different activities; however, it decreased 13.3% from 2010 to 2011.

Hospitals and Clinics

There is 1 hospital, No FQHC/CHS delivery sites, and 6 clinics in the county.

EMS

DeWitt County has a total of 76 EMS personal registered in the county.

Fire

DeWitt has a total of 6 fire stations throughout the county.

Dimmit County

Demographic and Migration data

By 2023, Dimmit County projects to have a total amount of 11,158 people residing in the county. Among which the Hispanic group is projected to be the most populated segment in the county with a total of 9,721 people making-up 9.8% of the total population. The Anglo group is the next most populated segment increasing by 2% followed by the Black population, predicted to increase by 1.2%. Lastly, the other population will be the fourth most populated segment, increasing 1.2% by 2023. (2023: Hispanics: 9,721 / Anglos: 1,257 / Blacks: 94 / Other: 86)

Traffic Data 2009-2011

Traffic data for 2009 through 2011 for Dimmit County shows an increase of 340% in commercial traffic accidents. However, during the same time-span overall traffic accidents have decreased by 1%.

HPSA Data 2013

Table 39: HPSA Data - Dimmit; US Department of Health and Human Services Health Resources and Services Administration

	Discipline	ID	Type	FTE	# Short	Score
Dimmit	Primary Health	148127	Single County	3	0	11
	Dental	648127	Single County	1	2	20
	Mental Health	748127	Single County	0	1	14

Workplace Injuries Data 2010-2011

Dimmit County has the second largest increase in workplace injuries reported in the 18-county region. From 2010-2011, Dimmit County's workplace injuries increased by 80%. The injury that increased the most within the county were those inflicted by being struck or injured with different objects, rising by 200%. The injuries with the second largest increase of 50% were strains or injuries by different activities. The third largest injuries were fall or slip injuries increasing by 16.7%.

Hospitals and Clinics

There is 1 hospital, and 2 FQHC/CHC delivery sites . The county has 14 standard clinics.

EMS

There are 19 EMS personnel in Dimmit

Fire

Dimmit County has 2 fire stations.

Edwards County

Demographic and Migration data

The only group projected to in-migrate is the Hispanic population with an increase of 14.4% resulting in the most populated segment in the county. The Anglo population of Edwards County will show out-migration of 8.3% by 2023. However, this segment will remain the second most populated in the county. The next two segments are projected to have no in-migration or out-migration within the next 10 years. The other population is projected to have a total 18 people and the Black population projects to have a total of 10 people residing in the county.

(2023: Hispanics: 1,229 / Anglos: 864 / Other: 18 / Blacks: 10)

Traffic Data 2009-2011

Edwards County had a 2 accident increase—from 1 to 3 non-injury collisions reported—from 2009 to 2011. Overall accidents decreased by 10%.

HPSA Data 2013

Table 40: HPSA Data - Edwards; US Department of Health and Human Services Health Resources and Services Administration

	<u>Discipline</u>	<u>ID</u>	<u>Type</u>	<u>FTE</u>	<u># Short</u>	<u>Score</u>
Edwards	Primary Health	148137	Single County	0	1	19
	Dental	648137	Single County	0	1	9
	Mental Health	748137	Single County	0	0	12

Workplace Injuries Data 2010-2011

In Edwards County, the overall workplace injuries increased by 28.6% from 2010 to 2011.

Hospitals and Clinics

There are no hospital facilities and FQHC/CHC delivery site in the county. There is 1 clinic.

EMS

There are 9 EMS personnel located within Edwards County.

Fire

Edwards County has 16 fire stations serving in the area.

Frio County

Demographic and Migration data

By 2023, the Hispanic and the Other populations are projected to have an in-migration increase of 14.4% and 9.6% respectively. The Hispanics will remain the most populated segment and the Other group will be the third most populated in Frio County by 2023. The Anglo and the Black populations are the segments, which are projected to experience an out-migration of 0.9% and 5.7%, respectively. These patterns make these segments the second and fourth most populated in the county. (2023: Hispanics: 15,947 / Anglos: 2,792 / Other: 558 / Blacks: 494)

Traffic Data 2009-2011

Commercial traffic accidents within Frio County have increased by 223.1% and overall traffic accidents have increased by 12%.

HSPA Data 2013

Table 41: HPSA Data - Frio; US Department of Health and Human Services Health Resources and Services Administration

	Discipline	ID	Type	FTE	# Short	Score
Frio	Primary Health	148163	Single County	5	1	10
	Dental	648163	Single County	3	2	14
	Mental Health	748163	Single County	0	1	15

Workplace Injuries Data 2010-2011

In Frio County, the overall workplace injuries increased by 7.1% from 2010 to 2011. The most prevalent injuries that occurred in both years is struck or injured by different objects increasing by 43%. The next two most common injuries present in this county are strain or injury by different activities decreasing by 18% and fall or slips injury decreasing by 3% by 2011.

Hospitals and Clinics

There is 1 hospital in Frio County one of which is located in the city of Dilley. There are 2 FQHC/CHC delivery sites operating in the county. The county has 24 clinics.

EMS

There are 39 EMS personal in Frio County.

Fire

There is 1 fire station serving the Frio County area.

Gonzales County

Demographic and Migration data

With a 22.1% increase from 2013 to 2023, the Hispanics will make-up the most populated segment in Gonzales County. Although the Anglo population projects to experience out-migration of 3.5%, this segment will remain to be the second most populated in Gonzales County by 2023. The Black population will comprise at 4.6%, making this segment the third most populated. Lastly the other population will increase by 9.5%.

(2023: Hispanics: 12,205 / Anglos: 8,448 / Blacks: 1,444 / Other: 299)

Traffic Data 2009-2011

Traffic accidents involving commercial vehicles in Gonzales County have increased by 169.2 % from 2009 to 2011. Overall traffic accidents have increased by 22%.

HPSA Data 2013

Table 42: HPSA Data - Gonzales; US Department of Health and Human Services Health Resources and Services Administration

	Discipline	ID	Type	FTE	# Short	Score
Gonzales	Primary Health	148177	Single County	5	1	8
	Dental	648177	Single County	2	3	13
	Mental Health	748177	Single County	0	1	15

Workplace Injuries Data 2010-2011

Gonzales County's records show that the overall workplace injuries have increased by 49.3% from 2010 to 2011. Fall or slip injuries increased by 106.7%, injuries caused by being struck by different objects increased by 90.9%, and strain injuries caused by different activities increased by 11.8% in 2011.

Hospitals and Clinics

There is one hospital in Gonzales County located in the city of Gonzales. Gonzales has 2 FQHC/CHC delivery sites operating in the county. Gonzales County has 8 clinics serving the county.

EMS

There are 37 EMS personnel in Gonzales County.

Fire

Gonzales County has 6 fire stations serving the area.

Karnes County

Demographic and Migration data

Karnes County will experience out-migrations from two groups and in-migration from the two remaining groups. With a 9.1% increase from 2013 to 2023, the Hispanic group will be the segment with most in-migration and with the largest amount of people residing in Karnes County. The Anglo population is projected to decrease in population by 1.8%, making it the second most populated in the county. Moreover, the Black population will experience an out-migration of 3.1%, making this segment the third most populated. The Other segment will experience a 6.9% increase in its population, totaling 154 people in the county.

(2023: Hispanics: 8,299 / Anglos: 5,847 / AA: 1,315 / Other: 154)

Traffic Data 2009-2011

Commercial vehicle traffic accidents from 2009 to 2011 rose from 8 to 75 reported collisions during that three year period, an 837.5% increase. Overall traffic accidents rose by 136%.

HPSA Data 2013

Table 43: HPSA Data - Karnes; US Department of Health and Human Services Health Resources and Service Administration

	Discipline	ID	Type	FTE	# Short	Score
Karnes	Primary Health	148255	Single County	3	1	9
	Dental	648255	Single County	2	1	8
	Mental Health	748255	Single County	0	0	12

Workplace Injuries Data 2010-2011

The total workplace injuries in Karnes County increased from 2010 to 2011 by 60.9%. The most common injuries were fall or slips, increasing 61.9%, strains caused by different activities increased 46.2%, and injuries caused by being struck by different objects decreased 12.5%.

Hospitals and Clinics

There is one hospital in Karnes County located in the city of Kennedy. There are 2 FQHC/CHC delivery sites in the county located and operating only in Karnes County. There are 9 clinics.

EMS

There are a total of 29 EMS personnel in Karnes County

Fire

Karnes County has a total of 5 fire stations in the area.

Kinney County

Demographic and Migration data

By 2023, Kinney County will experience an aggregate 21.7% out-migration. The Hispanic population will be the only segment to in-migrate, showing a 13.4% increase. The Anglo segment will decrease by 13.2%, but remain second most populated. The Other and the African American populations are also projected to out-migrate, decreasing 5.1% and 3.4%, making these segments the third and the fourth most populated in the county, respectively.

(2023: Hispanics: 2,366 / Anglos: 1,260 / Other: 57 / AA: 37)

Traffic Data 2009-2011

Commercial Vehicle traffic accidents from 2009 to 2011 rose from 0 to 3 reported collisions. Overall accidents increased 17%.

HPSA Data 2013

Table 44: HPSA Data - Kinney; US Department of Health and Human Services Health Resources and Services Administration

	Discipline	ID	Type	FTE	# Short	Score
Kinney	Primary Health	148271	Single County	0	1	20
	Dental	648271	Single County	0	1	20
	Mental Health	748271	Single County	0	0	11

Workplace Injuries Data

Total workplace injuries in Kinney County increased by 75% from 2010 to 2011. However, this county has the second least reported injuries in the 18-county region with a total of 14 workplace injuries in 2011.

Hospitals and Clinics

There are no hospital facilities in Kinney County. There is 1 FQHC/CHC delivery site located in Eagle Pass servicing Kinney, Maverick, and Val Verde Counties. There are 2 clinics.

EMS

There are presently 13 EMS personnel in Kinney County.

Fire

Kinney County has a total of 1 fire station.

La Salle County

Demographic and Migration data

There will be an aggregate out-migration rate of 7.8% in La Salle County by 2023. Hispanics will be the only segment projected to in-migrate, increasing 13.6% and comprising the majority of the population. The Anglo and the Other population will experience out-migrations of 0.4% and 1.8%, respectively making them the second and third most populated in the county. The African American population will out-migrate at a rate of 5.6%, making this segment the fourth most populated in the county. (2023: Hispanics: 7,046 / Anglos: 903 / Other: 54 / AA: 17)

Traffic Data 2009-2011

Commercial traffic accidents reported in La Salle County between 2009 and 2011 rose 307.1% (include raw numbers). Overall accidents rose by 120% in the county.

HPSA Data 2013

Table 45: HPSA Data - La Salle; US Department of Health and Human Services Health Resources and Services Administration

	Discipline	ID	Type	FTE	# Short	Score
La Salle	Primary Health	148283	Single County	1	1	19
	Dental	648283	Single County	0	1	22
	Mental Health	748283	Single County	0	0	13

Workplace Injuries Data 2010-2011

In La Salle County, the overall workplace injuries increased by 43.2% from 2010 to 2011. The two most prevalent injuries that occurred in both years were fall or slip injuries increasing 216.7% and strains caused by different activities decreasing 8%.

Hospitals and Clinics

There are currently no hospital facilities and 3 FQHC/CHC delivery sites located within La Salle County. There are 6 clinics.

EMS

There are presently 12 EMS personnel within La Salle County.

Fire

Currently, there are only 3 fire stations in La Salle County.

Live Oak County

Demographic and Migration data

Live Oak County is one of the three counties in the 18-county region where the majority of its population is Anglo. Even though this group is projected to experience an out-migration of 6.4%, it will still be the most populated segment in the county. The second most populated segment is the Hispanic group increasing 13.2%. The Black and the Other populations will also experience in-migration of 4.2% and 1.5%, respectively.

(2023: Anglos: 6,258 / Hispanics: 4,785 / AA: 467 / Other: 224)

Traffic Data 2009-2011

Reported commercial vehicle traffic accidents in Live Oak County rose 50% from 2009 to 2011. Traffic accidents overall in Live Oak rose by 30%.

HPSA Data 2013

Table 46: HPSA Data - Live Oak; US Department of Health and Human Services Health Resources and Services Administration

	Discipline	ID	Type	FTE	# Short	Score
Live Oak	Primary Health	148297	Single County	2	1	13
	Dental	6489994837	Correctional Facility	0	1	12
	Mental Health	748297	Single County	0	0	9

Workplace Injuries Data 2010-2011

Live Oak County's records show that the overall workplace injuries have increased by 19.1% from 2010 to 2011. The two types of injuries that decreased were fall or slip injuries, decreasing by 21.4% and other/unknown injuries decreasing 13.3%. The type of injury that increased from 2010 to 2011 was strains caused by different activities, increasing 16.7%.

Hospitals and Clinics

There are currently no hospital facilities in Live Oak County and 1 FQHC/CHC delivery site. There are 2 standard clinics in the county.

EMS

There are currently a total of 23 EMS personnel in Live Oak County.

Fire

Live Oak County has 5 fire stations.

Maverick County

Demographic and Migration Data

In Maverick County, the Hispanic group will be the segment most populated with a total of 63,256 people, a 16.3% increase. The second most populated will be the Anglo population with a total of 1,681 people and an increase of 4.9% by 2023. The Other and the African American populations will show an increase of 16.4% and 13.2% respectively; these percentages will make these segments third and fourth most populated segments in Maverick County.

(2023: Hispanics: 63,256 / Ang. 1,681 / Other: 872 / AA: 86)

Traffic Data 2009-2011

Traffic accidents involving commercial vehicles increased 25% in Maverick County and overall accidents increased 26%.

HPSA Data 2013

Table 47: HPSA Data - Maverick; US Department of Health and Human Services Health Resources and Services Administration

	Discipline	ID	Type	FTE	# Short	Score
Maverick	Primary Health	148323	Single County	12	7	14
	Dental	648323	Single County	4	10	20
	Mental Health	748323	Single County	0	3	20

Workplace Injuries Data 2010-2011

Total workplace injuries in Maverick County decreased by 11.4% from 2010 to 2011. Fall or slip injuries decreased by 21.6% and strains from different activities also decreased 2.8%. The type of injury that increased were those associated with being struck by different objects increasing by 22.7%.

Hospitals and Clinics

There is 1 hospital facility in Maverick County, located in the city of Eagle Pass and 4 FQHC/CHC delivery sites. There are however 32 clinics.

EMS

There are a total of 139 registered EMS personnel in Maverick County

Fire

In Maverick County, there are 3 fire stations in the area.

McMullen County

Demographic and Migration Data

McMullen county will have a relatively low number of people living within the county. The Anglo population of McMullen County will decrease its population by 5.1% by 2023, but this percentage will still make this segment to remain as the most populated in the county with a total of 414 people. The next two segments are projected to have no in-migration or out-migration within the next 10 years. The African American population is projected to have a total 8 people and the other population projects to have a total of 6 people residing in the county. Therefore, the only group that is projected to keep in-migrating is the Hispanic population with a total of 310 people, increasing by 14.8%.

(2023: Ang. 414 / Hispanics: 310 / AA: 8/ Other: 6)

Traffic Data 2009-2011

Commercial vehicle traffic accidents increased by 820% and overall accidents increased by 412% in McMullen County.

HPSA Data 2013

Table 48: HPSA Data - McMullen; US Department of Health and Human Services Health Resources and Services Administration

	Discipline	ID	Type	FTE	# Short	Score
McMullen	Primary Health	148311	Single County	0	0	9
	Dental	No HPSAs in this county				
	Mental Health	748311	Single County	0	0	11

Workplace Injuries Data 2010-2011

McMullen County is the county that shows the largest increase in work injuries from 2010 to 2011. The overall injuries increased by 371.4%.

Hospitals and Clinics

There are currently no hospitals, FQHC/CHC delivery sites, and clinics in McMullen County.

EMS

There are presently 9 EMS personnel in McMullen County.

Fire

There is 1 fire station in McMullen County.

Uvalde County

Demographic and Migration data

In Uvalde County, the only segment that will experience out-migration is the Anglo group decreasing 3.6%. The African American population is the segment with the highest increase at 15.0%, the fourth most populated in the county. The Hispanic and the Other populations are also projected to in-migrate at a rate of 14.6% and 14.2% respectively, making the Hispanic group the most populated with a total of 21,869 people and the Other group the third most populated with a total of 387 people residing in Uvalde County by 2023.

(2023: Hispanics: 21,869 / Ang. 7,270 / Other: 387 / AA: 130)

Traffic Data 2009-2011

Traffic accidents involving commercial vehicles increased by 60% and overall accidents decreased by 9% in Uvalde County.

HPSA Data 2013

Table 49: HPSA Data - Uvalde; US Department of Health and Human Services Health Resources and Services Administration

	Discipline	ID	Type	FTE	# Short	Score
Uvalde	Primary Health	1489994860	Population Group (low income)	1	4	19
	Dental	648463	Single County	5	2	13
	Mental Health	748463	Single County	0	1	15

Workplace Injuries Data 2010-2011

In Uvalde County, the overall workplace injuries increased by 3.6% from 2010 to 2011. The most prevalent injuries that decreased by 2011 were fall or slip injuries, decreasing 11.1% and injuries caused by being struck by different objects, decreasing 41.2%. The next most prevalent injury, strains caused by different activities increased 69.6%.

Hospitals and Clinics

There is 1 hospital facility in Uvalde County. The county has 3 FQHC/CHC delivery sites. There are 18 clinics in the county.

EMS

Currently, there are 59 EMS personnel in Uvalde County.

Fire

In Uvalde County, there are 3 fire stations providers in the area.

Webb County

Demographic and Migration data

In Webb County, all four populations' in-migration rates are projected to increase by 2023. The Anglo group will make-up the lowest increase at 5.7%, making this segment the second most populated in the county. The next most populated segment will be the Other population, increasing 17.5%. The African American population is projected to be the fourth most populated segment with a 22.8% increase. With a 22.4% increase the Hispanic group is projected to remain the most populated in Webb County by 2023.

(2023: Hispanics: 313,053 / Ang. 9,016 / Other: 2,247 / AA: 618)

Traffic Data 2009-2011

Traffic accidents involving commercial vehicles increased by 39.2% and overall accidents showed an increase of less than 1%.

HPSA Data 2013

Table 50: HPSA Data - Webb; US Department of Health and Human Services Health Resources and Services Administration

	Discipline	ID	Type	FTE	# Short	Score
Webb	Primary Health	148999487W	Geographical Area (South Laredo)	20	25	14
		14899948P3	Geographical Area	3	8	17
	Dental	648479	Single County	32	29	15
	Mental Health	748479	Single County	5	7	19

Workplace Injuries Data 2010-2011

Webb County had a total of 1,051 injuries reported in 2011, a 3.4% decrease from 2010. The three most prevalent injuries that occurred in this county decreased from 2010 to 2011. Injuries caused by being struck by different objects decreased 10.5%, strain injuries from different activities decreased 9.8%, and fall or slip injuries decreased 0.3%.

Hospitals and Clinics

There are 3 hospital facilities in the county and 4 FQHC/CHC delivery sites. There are 10 health related clinics.

EMS

Currently, there are a total of 519 EMS personnel in Webb County.

Fire

Webb County has a total of 9 fire service providers in the area.

Wilson County

Demographic and Migration data

Wilson County is among the three counties where the majority of its population is Anglo. This county will experience in-migration from the four populations by 2023. The Black population will have the lowest increase of 6.8%. The other population is the next segment with the lowest increase of 9.6%. The Anglo and the Hispanic populations will also experience in-migration increasing by 24.4% and 13.3% respectively, which make these segments the most populated and the second most populated in Wilson County.

(2023: Ang. 29,742 / Hispanics: 21,835 / Other: 762 / AA: 695)

Traffic Data 2009-2011

Traffic accidents involving commercial vehicles increased 113.3% and overall traffic accidents increased 18%.

HPSA Data 2013

Table 51: HPSA Data - Wilson; US Department of Health and Humman Services Health Resources and Services Administration

	Discipline	ID	Type	FTE	# Short	Score
Wilson	Primary Health	148493	Single County	11	1	7
	Dental	No Dental HPSAs in this county				
	Mental Health	748493	Single County	1	0	13

Workplace Injuries Data

In Wilson County, the overall workplace injuries decreased by 7.4% from 2010 to 2011. The most prevalent injury that occurred in both years were fall or slip injuries increasing by 23.5%. The next most prevalent injuries were those associated with strains during different activities decreasing by 11.5% in 2011.

Hospitals and Clinics

There is 1 hospital facility located in Floresville. There is 1 FQHC/CHC delivery site and 3 clinics.

EMS

Wilson County has a total of 238 EMS personnel.

Fire

There are 8 fire stations in Wilson County.

Zavala County

Demographic and Migration data

Zavala County will experience a total decrease in its population of 8.7% by 2023. The Other population will show the highest decrease, 5.9% but remaining the fourth most populated. The African American population will also experience out-migration of 2.9%, which makes this segment the third most populated. The two remaining segments will experience a net population increase by 2023. The Anglo population is projected to have a total of 659 people, comprising a 1.8% increase in its population. The Hispanic segment will have the highest increase rate of 13.7% and will remain the most populated segment in Zavala County with a total of 12,951 people by 2023.

(2023: Hispanics: 12,951 / Ang. 659 / AA: 34/ Other: 32)

Traffic Data 2009-2011

Traffic accidents involving commercial vehicles increased by 57.1% and overall accidents increased by 46%.

HPSA Data 2013

Table 52: HPSA Data - Zavala; US Department of Health and Human Services Health Resources and Services Administration

	Discipline	ID	Type	FTE	# Short	Score
Zavala	Primary Health	148507	Single County	3	2	17
	Dental	648507	Single County	0	4	23
	Mental Health	748507	Single County	0	1	16

Workplace Injuries Data

From 2010 to 2011 the total workplace injuries in Zavala County decreased 13.1%. The most common injuries were those associated with falls or slips increasing 81.8%, strain injuries from different activities increasing by 12.5%, and unknown injuries decreased 30.8%.

Hospitals and Clinics

There are no hospital facilities in the county and 2 FQHC/CHC delivery sites. There is 1 clinic in the county.

EMS

Currently Zavala County has 17 EMS personnel.

Fire

Zavala County has 3 fire stations.
