

# Texas Primary Care Needs Assessment 2016



Texas Department of State Health Services

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## Overview

### Texas Primary Care Office

The Texas Primary Care Office (TPCO) is currently located within the Primary Care Group of the Family and Community Health Services Division at the Texas Department of State Health Services (DSHS). Through the support of the United States Health Resources and Services Administration (HRSA) Cooperative Agreement for State Primary Care Offices, TPCO works to improve access to comprehensive and quality primary, dental, and mental health care services, a goal of Healthy People 2020. Work toward this goal begins with assessing the primary medical, dental, and mental health needs of communities in the state.

In Texas, the need for improved access can be demonstrated by the designation of 205 counties as primary care Health Professional Shortage Areas (HPSAs), 117 counties as dental HPSAs, and 215 counties as mental HPSAs, either in whole or in part (partial county shortage areas or shortage areas among low income populations). Additionally, 235 counties are either wholly or partially designated as Medically Underserved Areas/Populations (MUA/Ps). While the percentage of uninsured Texans dropped to 19 percent in 2014, Texas still has the highest uninsured population in the nation [1].

The HRSA Cooperative Agreement supports TPCO activities that improve access to comprehensive quality health care services in HPSAs. The National Health Service Corps (NHSC) and several state programs address the maldistribution of health professionals. The state supports this effort with state- and privately funded loan repayment programs, as well as the Conrad State 30 J-1 Visa Waiver program. Work in recruiting and retaining health professionals is led by TPCO and coordinated among several Texas agencies, which share access to <http://www.TexasHealthMatch.com>, a web based site for matching health professionals with job opportunities statewide. Also partnering in this effort are the Texas Association of Community Health Centers (TACHC), the State Office of Rural Health (SORH), and the Area Health Education Centers (AHEC). Other partners include, but are not limited to, the Texas Higher Education Coordinating Board (THECB), State Hospitals, certified Rural Health Clinics (RHCs), State Supported Living Centers (SSLCs), Federally Qualified Health Centers (FQHCs), and the Texas Medical Board (TMB). These partnerships result in improved access to health care, reduction of disparities, and development and distribution of members of the health workforces to serve the underserved. As of August 2015, Texas has just over 1,000 health professionals providing obligated service through the NHSC, NURSE Corps, state and regional loan repayment, or the J-1 Visa Waiver program.

TPCO also addresses improving access through technical assistance that supports the development and expansion of Federally Qualified Health Centers (FQHCs). State funds provided grants through the FQHC Incubator Program to develop and expand FQHCs. This program was administered by TPCO until the funding was cut in the 2011 Texas Legislative Session. Even though the grant program is no longer funded, TPCO continues to work with communities to develop sites in underserved areas that are committed to improving access to comprehensive, quality, community-based health care. Through this initiative and continued Technical Assistance, the number of FQHC organizations in Texas has increased from 31 to 73 in fifteen years.

TPCO major program activities—shortage designation coordination and oversight, recruitment and retention, and administration of the Texas Conrad 30 J-1 Visa program—work together to improve access to health care services.

### Objectives of Needs Assessment

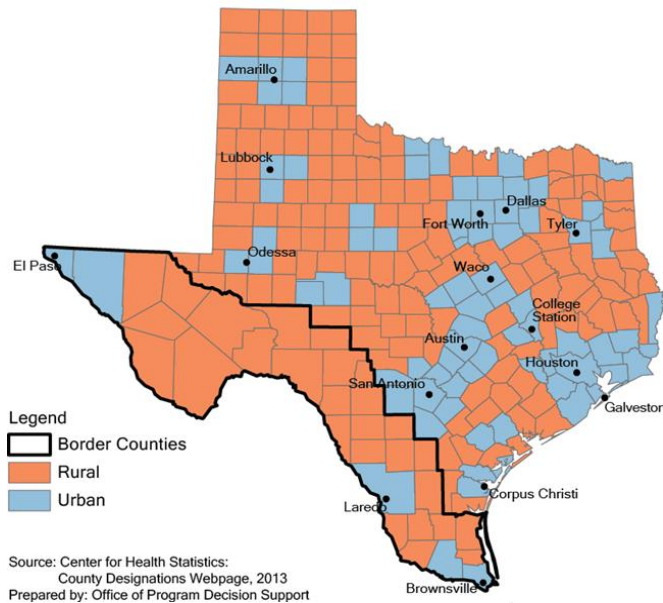
This statewide needs assessment outlines the mission of TPCO to improve the health of Texans who live in underserved areas by working to increase access to primary care providers of medical, dental, and mental

health services. In addition, it describes the role that TPCO plays in measuring access to care, assisting with retention, recruiting and loan repayment activities, and administering the Texas Conrad 30 J-1 Visa program. This report provides a snapshot of Texas demographics, health status and risk indicators, health care shortages, and medical, dental, and mental health care access issues. The report also helps to identify priority geographic areas and populations for DSHS to focus efforts on access to health care.

## Texas Population

Texas is a vast state, with regional differences in geography, population size, and demographic and socioeconomic characteristics. This section provides a brief overview of these variations and relates them to the challenges that exist for health care availability and access.

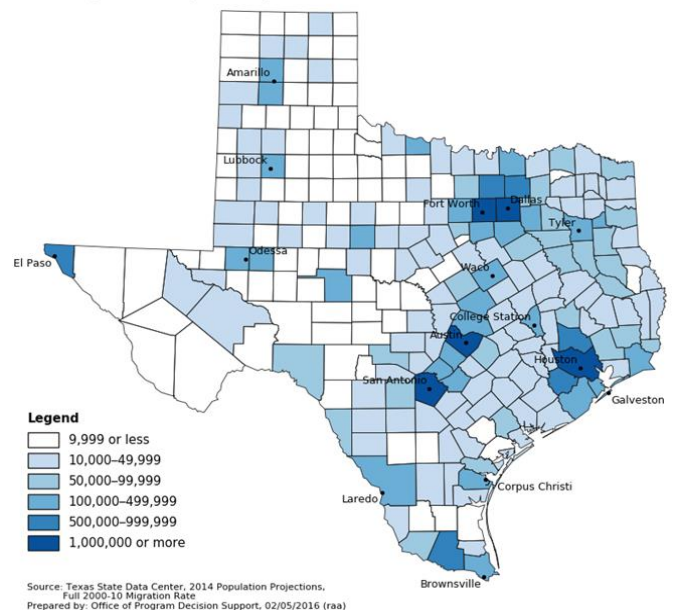
**Figure 1.**  
2013 Rural, Urban, and Border County Designations in Texas



Texas is the second largest state in the United States (behind Alaska) in terms of land. The Lone Star State encompasses approximately 262,000 square miles, and accounts for 7.4 percent of the total U.S. land area. Texas includes 254 counties that are classified as either rural or urban (see Figure 1; [2]), with 88.5 percent of the population residing in urban counties [3]. The five largest metropolitan areas in Texas are located around the cities of Houston, San Antonio, Dallas, Austin, and Fort Worth, and these areas encompass multiple counties. Given the immense size of Texas, the distance that some individuals, especially those living in rural counties, must travel to receive health care services can be a significant challenge to accessing and receiving those services.

Texas also has the second-largest population in the U.S. (behind California), with an estimated population of over 27 million in 2014 [3]. Texas has been one of the fastest-growing states in the nation since 2010, according to U.S. Census annual estimates. There has been a 7.2 percent increase in the Texas population from 2010 to 2014 [4]. The Texas State Data Center predicts that the population in Texas will exceed 31 million people by using a zero migration scenario and exceed 50 million people by using a full 2000-2010 migration scenario by 2050 [3]. The majority of Texans live in the northeast, east, central, south, and gulf coast regions of the state (see Figure 2).

**Figure 2.**  
Total Population by County, 2014



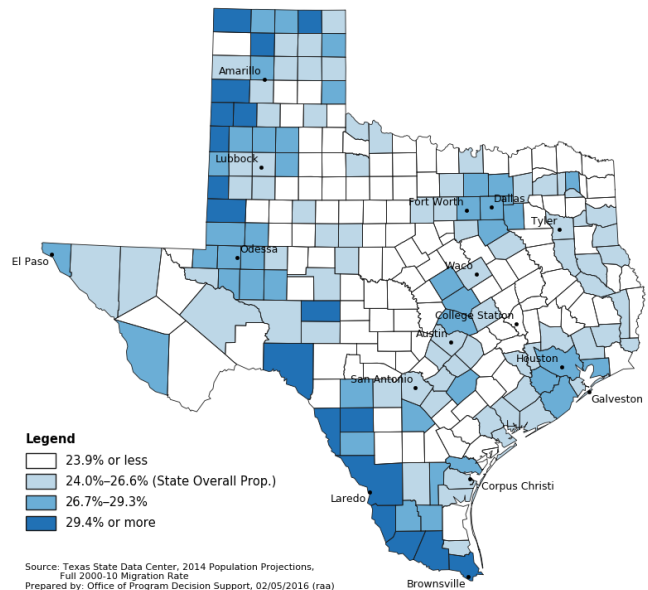
## Demographic Characteristics

Regional variations exist in age, gender, race/ethnicity, and nativity of residents across the state of Texas. These differences in race/ethnic composition, along with the high percentage of foreign-born residents in Texas, present certain cultural challenges when it comes to accessing primary health care.

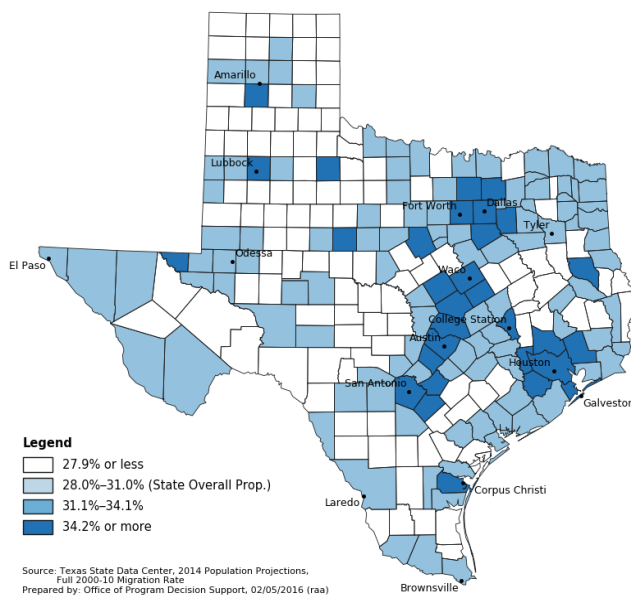
### Age and Gender

According to 2010-2014 American Community Survey data, Texas has the third youngest population in the United States, with a median age of 33.9 years, behind Alaska (median age 33.1 years) and Utah (median age 29.9 years) [5]. Texas was second only to California in the number of births occurring in the state in 2010-2014, and accounted for almost 10 percent of all births in the nation [6]. Counties with the youngest populations (with highest proportions of individuals younger than 18 years of age) in 2014 were concentrated in northwest Texas and the Texas panhandle, near the border with New Mexico, and in south Texas, especially along the Texas-Mexico border (see Figure 3).

**Figure 3.**  
Percent of Population Younger than 18 Years of Age, 2014



**Figure 4.**  
Percent of Population 18-64 Years of Age and Female, 2014

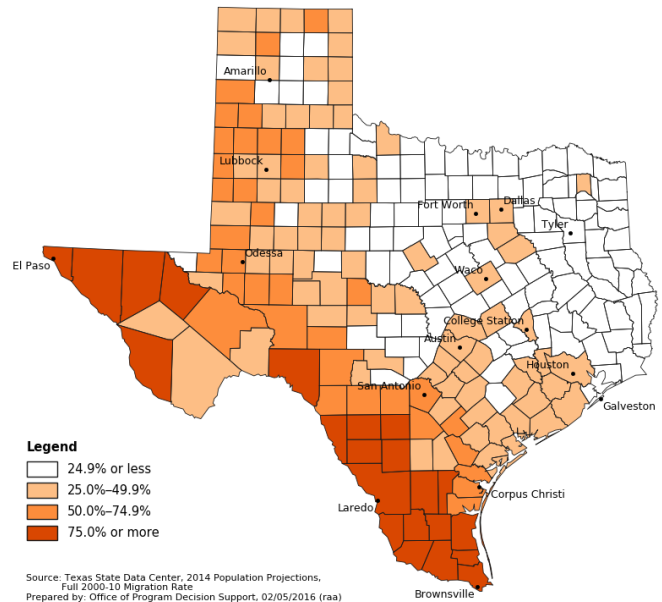


In 2014, women comprised half of the adult population 18-64 years of age in Texas [5]. However, the distribution of adult women in Texas differed by location. For the most part, urban counties with large metropolitan areas (including counties containing the cities of Houston, Dallas-Fort Worth, San Antonio, Austin, and surrounding areas) had the highest proportions of women 18-64 years old (see Figure 4).

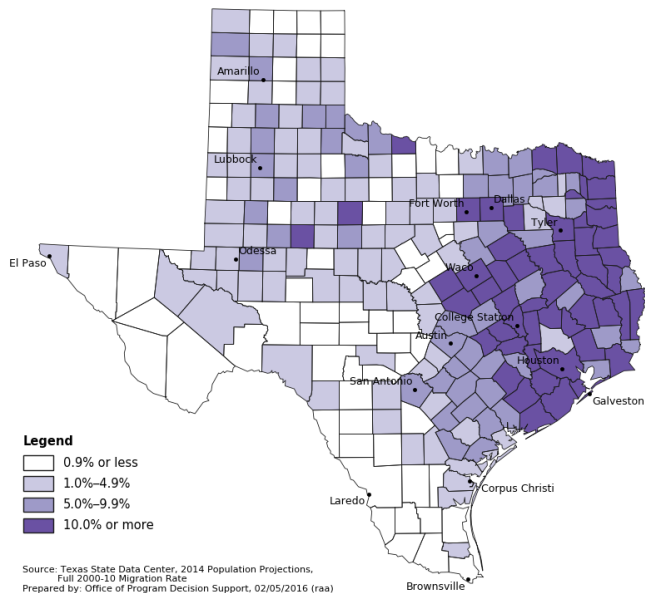
## Race/Ethnicity

Counties with the highest proportions of Hispanic populations are primarily located in the southern and western regions of Texas, along the border. In 2014, six major cities in Texas were located in counties where over 50 percent of the population were Hispanic: San Antonio, Corpus Christi, Brownsville, Laredo, El Paso, and Odessa (see Figure 5). Hispanics made up more than 80 percent of the population in the counties containing the cities of Brownsville, Laredo, and El Paso.

**Figure 5.**  
Percent of Population who are Hispanic by County, 2014



**Figure 6.**  
Percent of Population who are Black by County, 2014



Regional concentrations of the black population in Texas (see Figure 6) were quite different from that of the Hispanic population. Counties with the highest proportions of black populations in 2014 were largely concentrated in the northeastern, eastern, and north gulf-coast regions of the state. Blacks made up more than 17 percent of the population in the counties containing the cities of Dallas, Tyler, and Houston.

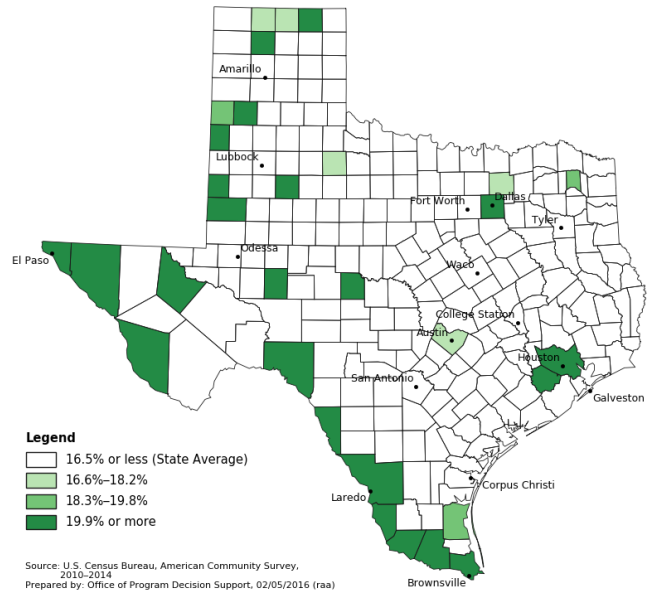
## Foreign-Born

Texas had a higher percentage of foreign-born residents (16.5 percent) compared to the nationwide average (13.1 percent) in 2010–2014 [5]. Almost 70 percent of foreign-born residents in Texas were not United States citizens. More than 70 percent of foreign-born Texas residents were born in Latin American countries—almost 20 percentage points more than the nationwide average. Therefore, it is not too surprising that 35 percent of Texans spoke a language other than English at home in 2010–2014. About 30



percent of Texans spoke Spanish at home, compared with 13 percent of U.S. residents. Within four of the metropolitan statistical areas (MSAs) in Texas — Laredo, McAllen-Edinburg-Mission, Brownsville-Harlingen, and El Paso — between 72 and 92 percent of persons spoke a language other than English at home, with the vast majority of these residents speaking Spanish. Texas border counties had high percentages of foreign-born residents in 2010-2014, as did several other counties in west and northwest Texas (see Figure 7). Counties containing the non-border cities of Houston, Dallas, and Austin also had high concentrations of foreign-born residents.

**Figure 7.**  
Percent of Population who are Foreign Born, 2010-2014



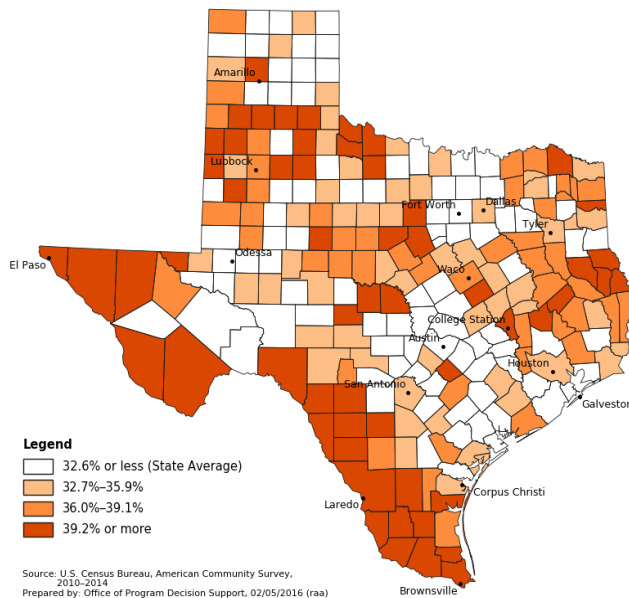
### Socioeconomic Characteristics

Socioeconomic characteristics such as poverty, education, unemployment, and lack of health insurance present added challenges for meeting the health needs of Texans.

#### Income and Poverty

Income inequalities exist within different areas in Texas, and largely reflect gender and race/ethnic differences. In 2010-2014, the median household income in Texas was \$52,576, which was slightly lower than the national median income of \$53,482 [5].

**Figure 8.**  
Percent of Adult Population with Income Below 200% of Federal Poverty Level, 2010-2014



To determine who lives in poverty, the U.S. Census Bureau uses a set of income thresholds that vary by family size and composition. If a family’s total income is less than their determined income threshold, then that family and every individual in it is considered to be in poverty. These poverty thresholds are used throughout the U.S. and do not vary geographically; however, they are updated each year to account for inflation [7].

Texas has a higher poverty rate than the country as a whole. According to 2010-2014 U.S. Census Bureau American Community Survey five-year estimates, Texas as a whole had a higher proportion (38.7 percent) of people living below 200 percent of the Federal Poverty Level (FPL) than the national average of 34.5 percent [5]. Figure 8 shows county-level poverty rates among adults aged 18 and older living below 200 percent FPL. Many of the counties with the highest poverty rates among the adult population were located in the border region.

with the highest poverty rates among the adult population were located in the border region.

## Education

Lower educational attainment is associated with poverty and is consequently related to poor health outcomes. Among those 25 years and older, a greater percentage of both men (19.0 percent) and women (17.9 percent) in Texas had less than a high school education in 2010-2014, compared to men (14.4 percent) and women (13.1 percent) nationwide [5]. Approximately a quarter of Texas residents aged 25 and older had a high school diploma or equivalent as their highest level of educational attainment, and 27 percent had a bachelor’s degree or higher. Overall, the educational attainment level for the Texas population is just slightly lower than the rest of the U.S. Educational attainment levels are not evenly distributed throughout the state, however.

There are five counties where the educational attainment of a bachelor’s degree or higher for individuals 25 years of age and older was 40 to 50 percent in 2010-2014, namely Denton and Collin counties outside of Dallas, Fort Bend county outside of Houston, Kendall County in the Texas Hill Country (northwest of San Antonio), and Travis county in Austin. Counties where less than 10 percent of the people aged 25 and older had a bachelor’s degree or higher were largely clustered in south Texas, east Texas, and northwest Texas.

## Unemployment

While Texas had a higher percentage of adults without a high school diploma compared to the nation as a whole, it had a lower rate of unemployment (7.7 percent) than was seen nationwide (9.2 percent) in 2010-2014. Even among adults without a high school diploma, Texas had a lower rate of unemployment (9.2 percent) compared to the national average for this educational attainment group (14.0 percent) [5]. As was seen nationwide, the Texas unemployment rate decreased as education level increased. The unemployment rate in Texas was as low as 3.5 percent among those with a bachelor’s degree or higher in 2010-2014.

Although Texas as a whole had a relatively low unemployment rate, 40 Texas counties had an unemployment rate of 10 percent or higher in 2010-2014. Texas counties with higher unemployment rates were predominantly located in east Texas, south Texas, along the border, and in several rural counties in northwest Texas.

## Health Insurance

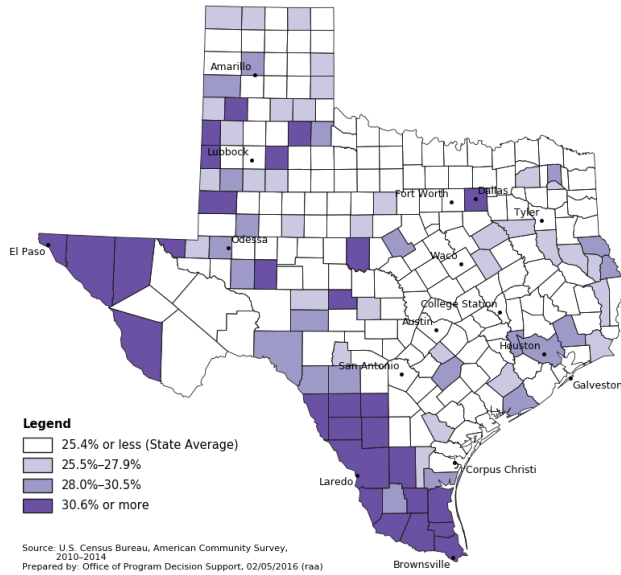
Health insurance and access to health care are fundamental to the health of Texans. Yet, Texas led the nation in the proportion of the population without health care coverage in 2010-2014, with 21.9 percent uninsured. The national average was 14.2 percent [5]. Texas also had higher proportions of uninsured children, women ages 18-64, and adults living below 200 percent FPL, compared to corresponding uninsured percentages for these groups nationwide (Table 1).

**Table 1.**  
**Health Insurance Coverage by Population Group and Type of Insurance, 2010-2014**

	Covered by Health Insurance*		Uninsured
	Private (Employer/Individual)	Public (Medicaid/Medicare/Other)	
<b>U.S.: Total Population</b>	<b>65.8%</b>	<b>31.1%</b>	<b>14.2%</b>
US: Children 0-17 Years	59.0%	37.5%	7.1%
US: Adults 18-64 Years	68.8%	14.5%	19.8%
US: Women 18-64 Years	69.4%	15.5%	17.7%
US: Adults below 200% FPL	35.3%	31.6%	36.5%
<b>Texas: Total Population</b>	<b>58.4%</b>	<b>27.9%</b>	<b>21.9%</b>
Texas: Children 0-17 Years	49.9%	39.9%	12.6%
Texas: Adults 18-64 Years	62.3%	10.8%	29.5%
Texas: Women 18-64 Years	62.9%	11.2%	28.0%
Texas: Adults below 200% FPL	31.1%	19.7%	51.6%

\*Because some individuals are covered by both private and public health insurance, row percentages add up to more than 100%.  
Source: U.S. Census, American Community Survey (ACS) 5-year estimates 2010-2014.

**Figure 9.**  
Percent of Adult Population without Health Insurance, 2010-2014

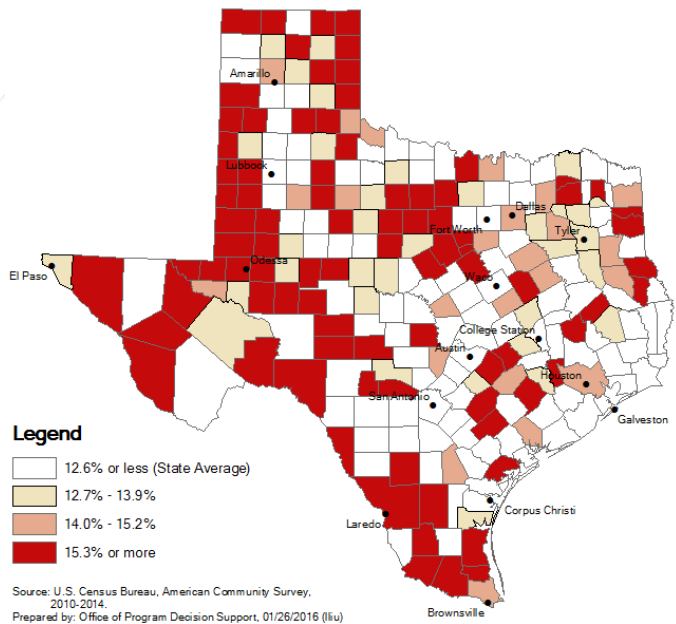


This high rate of uninsured individuals places a burden on both state and national public health services, as they are less likely to have a regular source of medical care and are more likely to delay or forgo needed health care services [8]. Counties with high proportions of uninsured adult populations were concentrated along the Texas-Mexico border, in south Texas, and in several counties in northwest Texas (see Figure 9).

In terms of race/ethnicity, slightly higher rates of uninsured were observed among Whites (12.7 percent), Blacks (19.6 percent), and Hispanics (33.7 percent) in Texas in 2010-2014, compared to corresponding uninsured rates for these race/ethnic groups in the U.S. (Whites = 9.9 percent; Blacks = 16.7 percent; Hispanics = 28.1 percent).

Counties with high proportions of uninsured children and youth (younger than 18 years of age) were more evenly geographically distributed (see Figure 10). In 30 Texas counties, one-fifth (20 percent) or more of the child and youth population were uninsured in 2010-2014.

**Figure 10.**  
Percent of Children Younger than 18 Years without Health Insurance, 2010-2014



## Health Indicators

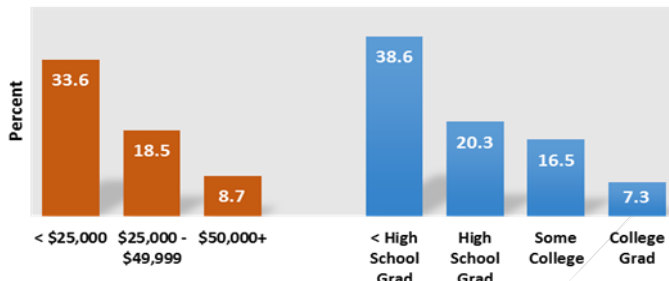
This section focuses on general health issues in Texas, including primary care, dental care, and mental health. Selected health outcomes such as health status, infant mortality, low birth weight, diabetes, and hypertension are presented. Three crucial health risk behaviors — obesity, smoking, and teen births — are included as well. Preventive services received in mammography screening and immunizations are also assessed to help identify potential causes of unmet health needs and disparities among Texans.

## Self-Reported Health Status

In 2013, the average life expectancy for Texans at birth was 78.3 years, while U.S. life expectancy was 78.8 years [9]. A male infant born in 2013 could expect to live 75.8 years, while a female infant could expect to live 80.7 years in Texas [10]. Overall life expectancy at birth for black Texas residents (74.7 years) was lower than that for Hispanic residents (79.5 years) and for white and other racial/ethnic residents (78.3 years). Racial/ethnic disparities in life expectancy at birth exist but continue to narrow. Between 2003 and 2013, life expectancy at birth increased more for black residents (2.5 years) than for Hispanic, white, and other residents (0.9 years) in Texas, thereby narrowing the racial/ethnic gap in life expectancy.

When asked to assess their own health in the Behavioral Risk Factor Surveillance System (BRFSS), about 19.5 percent of Texans 18 years and over in 2014 reported that their health in general was fair or poor. This rate was slightly higher than that in 2013 (19.2 percent). Self-reported health status varied by demographic and socioeconomic factors. Adult females (20.6 percent) were more likely than males (18.3 percent) to be in fair or poor health. While a similar proportion of both females and males aged 18-44 reported being in fair or poor health (13.2 percent), 27.4 percent of females aged 45-64 had fair or poor health compared with 22.4 percent of males aged 45-64. In terms of race/ethnicity, 25.1 percent of Hispanic adults reported fair or poor health, compared with 23.8 percent of black adults and 15.4 percent of white adults.

**Figure 11.**  
**Percent of Adults Reporting Fair or Poor Health Status by Income and Education Level, Texas 2014**



Source: 2014 Behavioral Risk Factor Surveillance System (BRFSS)  
Prepared by: Office of Program Decision Support

When evaluated by income level, a much higher proportion of low-income adults (income < \$25,000) had fair or poor health compared to adults with an income greater than \$50,000 (see Figure 11). Perception of fair or poor health was also associated with education level. For example, adult Texans without a high school diploma (38.6 percent) were five times more likely to report being in fair or poor health than those who had a college degree (7.3 percent).

Regarding children's health status in Texas, only 3.8 percent of children younger than 17 years of age were in fair or poor health, while 14.2 percent were in good health and 82.0 percent were in excellent or very good health, based on the 2011-12 National Survey of Children's Health (NSCH) for Texas. Some 4.4 percent of males aged 0-17 had fair or poor health in Texas, compared with 3.1 percent of females aged 0-17.

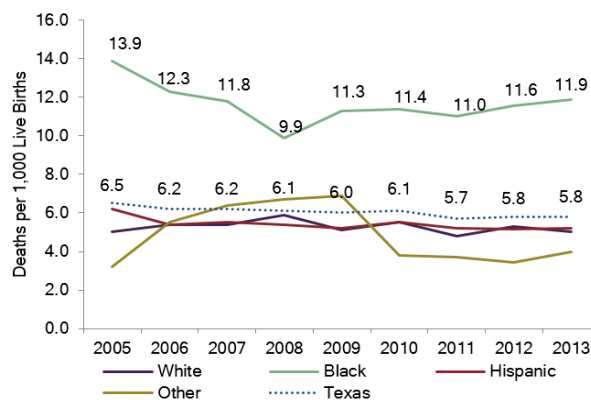
## Infant Mortality

Infant mortality is defined as a death occurring during the first year of life. The infant mortality rate (IMR), defined as the number of infant deaths under one year old per 1,000 live births, is an important health outcome that is often used as a measure of the overall health of a given population. It also reflects the health status of mothers and children, and serves as an indication of underlying racial/ethnic, socioeconomic, and geographic disparities.

The total number of infant deaths in Texas was 2,253 in 2013, a slight increase from 2,224 infant deaths in 2012. The IMR in 2013 remained the same as in 2012, at 5.8 per 1,000 live births. The IMR was 6.4 per 1,000 live births among male infants and 5.2 per 1,000 live births among female infants. Texas' IMR has been below the national rate for the past ten years [11]. However, it has only been since 2008 that the state has approached or met the Healthy People 2020 (HP2020) target of 6.0 infant deaths per 1,000 live births.

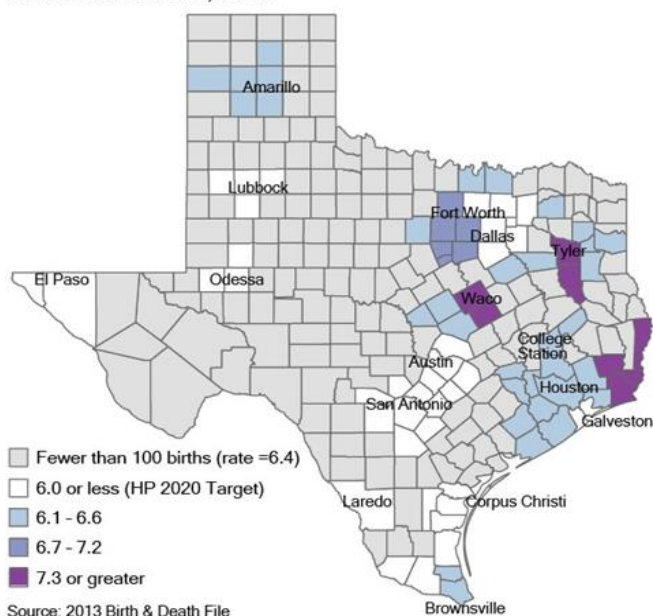
Though infant mortality continues to decline in Texas, the racial/ethnic disparity in IMR has persisted and it is clear that the decrease in IMR over the past five years for the state was not distributed across all racial/ethnic groups (see Figure 12). Infant mortality remains a significant public health issue for black families. The IMR for black mothers (11.9) is more than two times higher than the rates for white mothers (5.0) and Hispanic mothers (5.2).

**Figure 12.**  
Infant Mortality Rate in Texas by Race/Ethnicity, 2005-2013



Source: 2005-2013 Birth & Death Files  
Prepared by: Office of Program Decision Support  
February 2016

**Figure 13.**  
Infant Mortality Rate per 1,000 Live Births by Select Communities, 2013



Source: 2013 Birth & Death File  
Prepared by the Office of Program Decision Support  
Sept 2015

Geographic variations in IMR could also indicate that communities may differ in the effectiveness of their health care delivery systems. Figure 13 shows that substantial regional differences in IMR persist within the state. In 2013, ten of the twenty largest communities in Texas with a calculated IMR either met or had a lower IMR than the HP2020 target. The Austin-Round Rock, Odessa-Midland, and Laredo regions had the lowest IMRs, with these communities all having fewer than 3.9 infant deaths per 1,000 live births. In contrast, four communities (Tyler-Jacksonville, Waco, Beaumont-Port Arthur, and Fort Worth) had IMRs above 6.7 infant deaths per 1,000 live births in 2013.

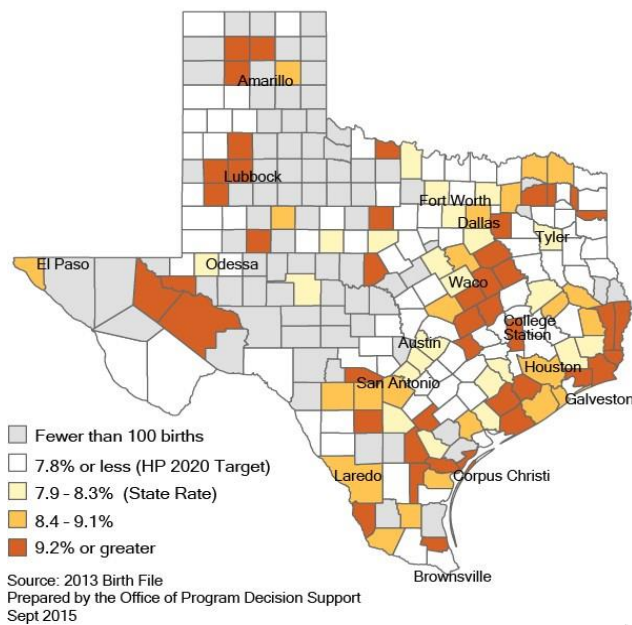
### Low Birth Weight

Low birth weight is an important marker for the well-being of infants and is a major predictor of infant mortality. In 2013, the leading cause of death for black infants in Texas was short gestation and low birth weight, while the leading cause of death for white or Hispanic infants was congenital abnormalities, followed by short gestation and low birth weight [11]. The percentage of babies born weighing less than 2,500 grams has not profoundly changed in Texas since 2005. Texas has been above the national rate and is currently not meeting the HP2020 target of 7.8 percent of live births weighing less than 2,500 grams. For example, in 2013, the rate of low birth weight in Texas was 8.3 percent compared with the national rate of 8.0 percent.



As with IMR, black mothers have a disproportionately high percentage of infants being born with low birth weight. The rate of low birth weight infants among black mothers has continued to be twice that of white or Hispanic women in Texas. In 2013, about 13.2 percent of infants born to black mothers had low birth weights, compared with 7.3 percent of babies born to white mothers and 7.7 percent of babies born to Hispanic mothers [11]. The low birth weight rate was also high among mothers in the ‘other’ racial/ethnic group (9.7 percent).

**Figure 14.**  
Percent of Infants Born Low Birth Weight (less than 2500g), 2013



Throughout the state, there were individual counties that met the HP2020 target, but they are not clustered geographically; implying that there are no clear regional disparities in the low birth weight rate (see Figure 14). However, disparities exist in several individual counties across Texas.

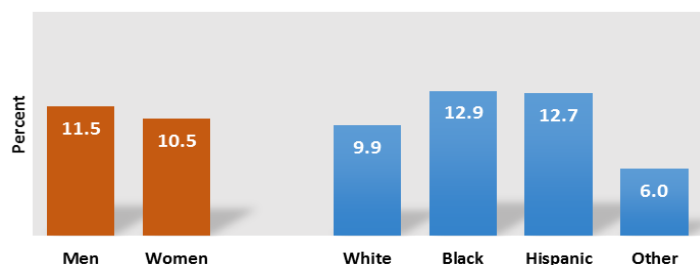
Texas birth certificate data also reveal that several maternal risk factors were found to be associated with low birth weight [12]. Factors such as tobacco use and late prenatal care during pregnancy greatly increased the risk for low birth weight, independent of the infant’s gestational age.

### Diabetes and Hypertension

Diabetes has remained the seventh leading cause of death in Texas since 2008. There were 5,262 deaths caused by diabetes in 2013, which comprised about 2.9 percent of the total deaths to Texas residents [10]. Blacks were more likely to die from diabetes than any other racial/ethnic group. Men were about one and half times more likely to die from diabetes than women at age 35-74.

According to 2014 Texas BRFSS data, 11.0 percent of adults 18 years and older reported that they had been diagnosed with diabetes by a doctor. This proportion was the same in 2013. While prevalence of diagnosed diabetes did not differ much by gender, diabetes was more common among blacks and Hispanics than among whites and other racial/ethnic groups (see Figure 15). Blacks (12.9 percent) and Hispanics (12.7 percent) were two times more likely than the ‘other’ racial/ethnic group (6.0 percent) to report diagnosed diabetes in 2014. In terms of educational attainment, prevalence of diagnosed diabetes was lower among adults with higher levels of education, which may be reflective of greater awareness of prediabetes among this population. For example, 16.6 percent of adult Texans who did not earn a high school diploma reported

**Figure 15.**  
Percent of Adults Having Diagnosed Diabetes by Gender and Race/Ethnicity, Texas 2014



Source: 2014 Behavioral Risk Factor Surveillance System (BRFSS)  
Prepared by: Office of Program Decision Support

having been diagnosed with diabetes, compared to 7.2 percent of those who were college graduates. Household income level was also associated with the prevalence of diagnosed diabetes. In 2014, about 15.0 percent of adults with an income less than \$25,000 said they had ever been diagnosed with diabetes, compared to only 7.5 percent of adults with an income greater than \$50,000.

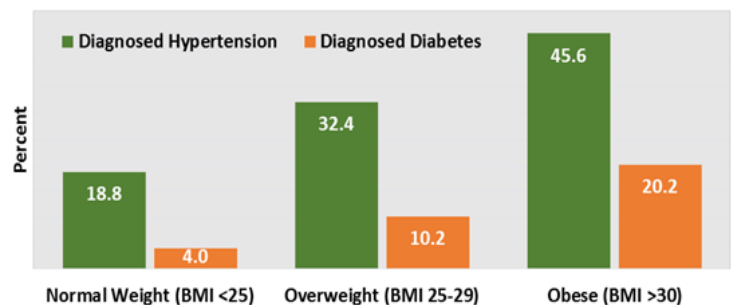
In terms of geography, prevalence of diagnosed diabetes among adults was higher in the border area (15.2 percent) than the rest of Texas (that is, non-border area: 11.2 percent). The border area includes 32 counties within 50 miles of the Texas-Mexico border. While women (16.3 percent) were more likely than men (14.1 percent) to report diagnosed diabetes in these border counties, men (12.2 percent) had a higher rate of diagnosed diabetes than women (10.3 percent) in the non-border area. Income disparities in diagnosed diabetes were even more substantial in the border area than in the non-border area of Texas.

Many people with diabetes also develop high blood pressure (hypertension) during their lifetime. Compared to people with normal blood pressure readings, persons with hypertension more often have heart disease (such as coronary heart disease, heart attack, congestive heart failure, and congenital heart disease), which is the leading cause of death for men and women, both in Texas and in the nation [13]. Hypertension also ranks as the single-most common reason to visit a doctor’s office for adults 18 years and over [14].

The most recent self-reported hypertension data among adult Texans is based on the 2013 BRFSS. About one-third (31.2 percent) of adults 18 years and over in Texas reported that they had been told by a doctor or other health professional that they had high blood pressure in 2013. Prevalence of diagnosed hypertension was 32.2 percent among men, compared with 30.2 percent among women. Racial disparities exist for diagnosed hypertension. Black adults (43.8 percent) had the highest prevalence of diagnosed hypertension, followed by whites (34.2 percent), Hispanics (25.0 percent), and the ‘other’ racial/ethnic group (22.7 percent). Much like diabetes, socioeconomic factors such as educational attainment, income level, and employment status have an important impact on hypertension. Adults who are less educated, at a low income level, or unemployed are more likely to have diagnosed hypertension than their counterparts. Unlike diabetes, diagnosed hypertension among adults was more prevalent in the non-border area (32.9 percent) than in the border area (29.5 percent) of Texas.

Additionally, obesity is closely related to the prevalence of diagnosed hypertension (see Figure 16). A Body Mass Index (BMI) value was calculated from self-reported height and weight information in BRFSS to measure obesity and overweight. In 2013, almost half of adult Texans who were obese (BMI >30) had been diagnosed with hypertension, compared to one-third of adults who were overweight but not obese (BMI 25-29) and one-fifth of adults who were in the normal weight range (BMI < 25). This pattern was observed for both men and women. Figure 16 also shows a similar increasing relationship between obesity and the prevalence of diagnosed diabetes; obese or overweight adults were much more likely to report diagnosed diabetes than normal-weight adults.

**Figure 16.**  
**Percent of Adults Having Diagnosed Hypertension and**  
**Diagnosed Diabetes by Body Mass Index (BMI), Texas 2013**



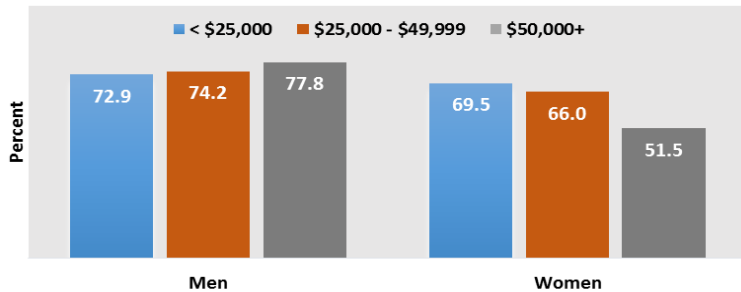
Source: 2013 Behavioral Risk Factor Surveillance System (BRFSS)  
 Prepared by: Office of Program Decision Support

## Obesity

Not only is obesity recognized as one of the most important risk factors for the development of hypertension and diabetes, but this condition also puts adults and children at increased risk for many other diseases and health problems, such as heart disease, cancer, sleep apnea and breathing problems, and liver and gallbladder disease [15] [16]. As mentioned above, BMI is a practical measure of an individual's weight in relation to height. The terms 'overweight' and 'obese' refer to body weight that is greater than what is considered healthy for a certain height.

Texas has the 11<sup>th</sup> highest adult obesity rate in the nation [17]. More than 13 million adults aged 18 years and older in Texas (67.8 percent of this age group) were classified as overweight or obese, according to 2014 Texas BRFSS data. About 35.9 percent of adults reported that they were overweight but not obese (BMI 25-29) and 31.9 percent reported being obese (BMI >30). The BRFSS survey results also showed differences in self-reported overweight or obesity among different gender and racial/ethnic groups. For women, the prevalence of overweight or obesity was highest among black women (79.0 percent), followed by 69.3 percent for Hispanic women, 54.2 percent for white women, and 33.2 percent for women of 'Other' race/ethnicity. In contrast, about 78-79 percent of black or Hispanic men were overweight or obese, followed by 73.5 percent of white men and 47.7 percent of men reporting a race/ethnicity of 'Other'.

**Figure 17.**  
Percent of Adults who were Overweight (BMI 25-29) or Obese (BMI >30) by Gender and Income Level, Texas 2014



Source: 2014 Behavioral Risk Factor Surveillance System (BRFSS)  
Prepared by: Office of Program Decision Support

The relationship between poverty and obesity is more evident in women than in men [18]. As compared to higher income women, those from low income backgrounds were more likely to be overweight or obese. Texas BRFSS data also support the finding that prevalence of overweight or obesity was highest among women with an income less than \$25,000 (69.5 percent) in 2014, compared with a prevalence of 66.0 percent among those with an income of \$25,000-\$50,000 and a prevalence of 51.5 percent for

those with an income greater than \$50,000 (see Figure 17). Prevalence of obesity (BMI > 30) alone for low income women (40.8 percent) was double the prevalence observed for high income women (20.7 percent). Among men, however, both overweight and obesity tended to increase with income levels.

Childhood obesity is also a serious problem in the nation. For children and adolescents, obesity is defined as a BMI at or above the 95<sup>th</sup> percentile of the gender-specific BMI-for-Age growth charts from the Centers for Disease Control and Prevention (CDC), and overweight is defined as a BMI between the 85<sup>th</sup> and 94<sup>th</sup> percentile [19]. According to Youth Risk Behavior Surveillance System (YRBS) data, 15.7 percent of Texas students in grades 9-12 were obese in 2013. Male adolescents (19.4 percent) were more likely to be obese than female adolescents (11.8 percent). Hispanic adolescents (19.0 percent) had a higher prevalence of obesity than black adolescents (14.6 percent) or white adolescents (12.1 percent). In addition, 15.6 percent of students in grades 9-12 were overweight in Texas.

Among children aged 10-17, Texas has the 10<sup>th</sup> highest obesity rate nationally [17]. The 2011-2012 NSCH results showed that 19.1 percent of children aged 10-17 in Texas were obese, and an additional 17.5 percent were overweight. By age group, 25.0 percent of 10-13 year old children were obese compared with 13.0 percent of 14-17 year old children. On the other hand, being overweight but not obese was more common among older children aged 14-17 (19.6 percent) than among those aged 10-13 (15.4 percent).

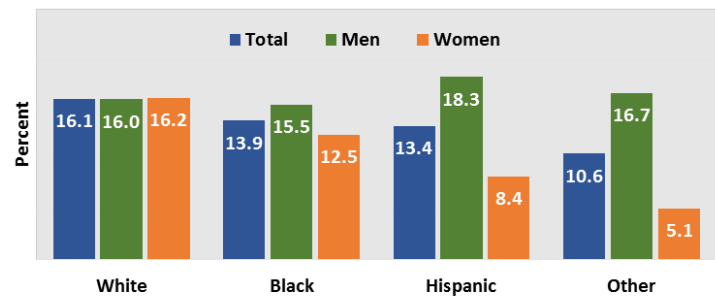


## Smoking

Smoking has been reported to be the leading cause of disease, as well as a contributor to the poor outcomes of many diseases. Smoking increases the risk of several types of cancer, including cancers of the throat, lung, mouth, nasal cavity, esophagus, stomach, pancreas, kidney, bladder, and cervix, and acute myeloid leukemia. Smokers also have a six-fold increased chance of a heart attack as compared to non-smokers [20]. Although much progress has been made to reduce the prevalence of smoking for several years, smoking among adolescents and young adults is still of concern.

According to 2014 BRFSS data, about 16.8 percent of adults 18 years or older in the U.S. were current smokers, who reported having smoked 100 cigarettes in their lifetime and were currently smoking every day or some days [21]. Adults in Texas reported a lower smoking rate (14.5 percent) than their national counterparts, but this rate was still higher than the HP2020 target of 12.0 percent. By age group, the prevalence of current cigarette smoking was higher among adult Texans aged 18-44 (16.0 percent) and aged 45-64 (16.1 percent) than among those aged 65 and older (7.4 percent). Substantial differences in smoking also existed between men and women and different races/ethnicities. Men (16.7 percent) were more likely to be current smokers than women (12.5 percent). These gender differences were even larger when race/ethnicity was considered (see Figure 18). Hispanic women and women in the 'other' race/ethnicity group had much lower smoking rates than white women or men of any race/ethnicity.

**Figure 18.**  
Prevalence of Current Smoking among Adults by Gender and Race/Ethnicity, Texas 2014



Source: 2014 Behavioral Risk Factor Surveillance System (BRFSS)  
Prepared by: Office of Program Decision Support

For adolescent smoking, 2013 YRBS results found that 14.1 percent of Texas students in grades 9-12 smoked cigarettes at least one day during the past month before the survey. High school seniors (21.8 percent) were two and half times more likely than 9<sup>th</sup> graders (8.6 percent) to report current smoking. Like adults, male adolescents (16.5 percent) were more likely to be current smokers than female adolescents (11.7 percent).

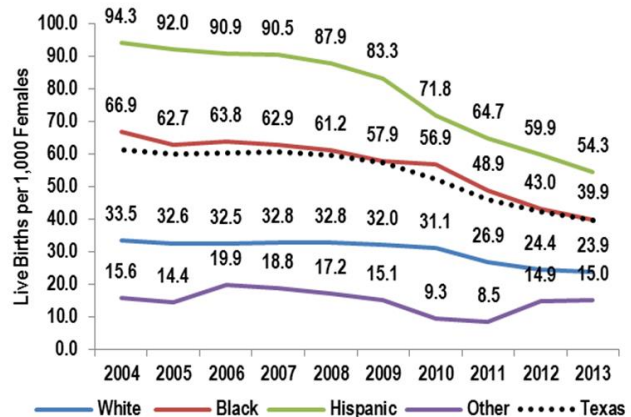
## Teen Births

Teen pregnancy and childbearing have both short- and long-term adverse effects for teen parents, their children, and their community. Teen childbearing in Texas cost taxpayers at least \$1.1 billion in 2010, according to an analysis by The National Campaign [22]. Most of the costs of teen childbearing are associated with negative consequences for the children of teen mothers, including increased costs for health care, foster care, incarceration, and lost tax revenue. Teen pregnancy and childbirth are also significant contributors to drop out rates among high school girls. A study analyzing National Longitudinal Survey of Youth data (1997 cohort) found that only one-half of teen mothers received a high school diploma by 22 years of age, versus almost nine in ten young women who had not given birth during adolescence [23].

In 2013, a total of 37,504 babies were born to females aged 15-19 in Texas, for a live birth rate of 39.7 per 1,000 females in this age group. This rate was a record low for Texas since 2004, but was still substantially higher than the corresponding 2013 teen birth rate in the nation (26.5 per 1,000) [24]. In Texas, the teen birth rate was much higher among adolescent females aged 18-19 (67.8 per 1,000) than among adolescent females aged 15-17 (20.7 per 1,000).

Texas, like the nation as a whole, has seen a decline in the teen birth rate over the past decade (see Figure 19). In particular, the birth rate among Hispanic teens has declined by 42.4 percent from 2004 to 2013. The teen birth rate also decreased by 40.3 percent among blacks and by 28.8 percent among whites within the past ten years.

**Figure 19.**  
Teen (15-19 years old) Birth Rate per 1,000 Females by Race/Ethnicity, 2004-2013



Source: 2004-2013 Birth Files; 2004-2013 population estimates  
Prepared by: Office of Program Decision Support  
Sept 2015

**Figure 20.**  
Teen Birth Rate per 1,000 Females Age 15 - 18 Years Old, 2013

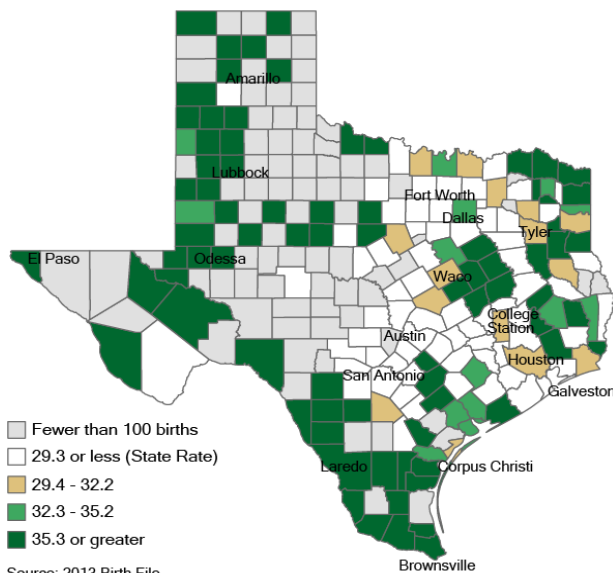


Figure 20 shows the teen birth rate among females 15 to 18 years old by county in 2013. Counties were reported and ranked if there were 100 or more documented births in the county. There were several areas of the state where the teen birth rate was high in comparison to the rest of the state. As would be expected, Texas-Mexico border regions, where there were large concentrations of Hispanic women, had the highest teen birth rates.

## Mammography Screening

One important preventive health service that women receive is mammography screening. Screening mammograms can be used to check for breast cancer in women who have no signs or symptoms of the disease, and to find microcalcifications that sometimes indicate the presence of breast cancer. Early detection of breast cancer with mammography screening implies that treatment can be started earlier in the course of the disease, possibly before it has spread. Mammography screening can help reduce the number of deaths from breast cancer among women aged 40-74, especially for those over age 50 [25].

Texas BRFSS results showed that in 2014, about 29.0 percent of women aged 40 years and older did not have a mammogram (i.e., an x-ray of each breast to look for breast cancer) during the past two years. A higher proportion of Hispanic women 40 years and older (31.7 percent) reported that they did not have a mammogram in the last two years, compared to white women (28.8 percent) and black women (24.3 percent) in this age group. When assessed by income level, 36.4 percent of low income (income less than \$25,000) women 40 years and older did not have a mammogram within the past two years. In comparison, only 21.8 percent of women aged 40 years and older with an income greater than \$50,000 did not have a mammogram in the last two years. Substantial differences in mammography screening also existed between those with and without health insurance coverage. Uninsured women 40 years and older (48.9 percent) were two times more likely than those with health insurance coverage (24.5 percent) to report that they did not have mammography services in the past two years.

### Immunizations

Influenza remains a major threat to public health. According to the National Institute of Allergy and Infectious Diseases, the flu affects between 5 to 20 percent of the U.S. population each year [26]. Flu shots are not 100 percent effective in preventing the flu. However, a seasonal flu shot is still the single best way to protect against the flu and its related complications.

Adult influenza immunizations are also queried in the BRFSS. In 2014, about 37.9 percent of Texas adults aged 18 and older reported that they had either received a seasonal flu shot or a seasonal flu vaccine that was sprayed in their nose during the past year. On the other hand, 62.1 percent of adult Texans (65.0 percent of men vs. 59.4 percent of women) did not obtain influenza vaccines within the past year. A higher proportion of Hispanic adults (69.6 percent) and black adults (65.2 percent) reported not receiving flu shots during the past year, compared to white and other racial/ethnic adults (56-57 percent). As would be expected, uninsured adults were less likely than their insured counterparts to receive influenza vaccines. About 81.3 percent of uninsured adults said that they did not have flu shots in the past year, compared to 55.9 percent of adults with health insurance coverage.

According to CDC influenza vaccination coverage estimates from the 2014-2015 National Immunization Survey-Flu [27], about 64.4 percent of children aged 6 months-17 years in Texas had flu vaccinations, compared to 59.3 percent in the nation. The flu vaccination coverage among Texas children in 2014-2015 increased by 1.9 percentage points compared to the 2013-2014 season.

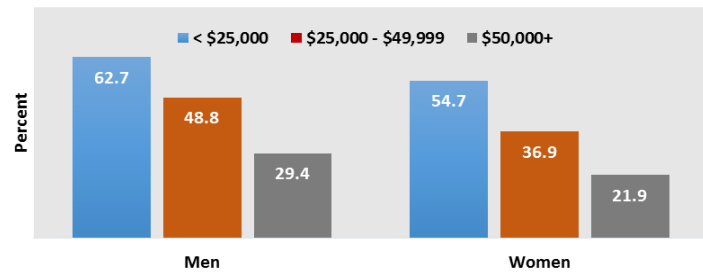
### Dental Care

Oral health affects overall health and well-being throughout life. Oral diseases and infections are associated with various health problems, such as heart and lung disease, diabetes, and negative pregnancy outcomes including preterm births and low birth weight infants [28] [29]. To improve the oral health of underserved people, HRSA has been exploring the integration of oral health care and primary care to help improve access to affordable dental care in communities that lack a sufficient number of dental providers [30].

Regular dental care is essential to promote oral health and to prevent and treat tooth decay and infection. Based on 2014 BRFSS data, 58.2 percent of adults aged 18 and over in Texas said that they had visited a dentist or dental clinic for any reason within the past year, while 41.8 percent said they had no past-year dental visit. This measure is only a basic indicator of dental care utilization since it does not capture any information on the type of care received, the total amount of care received, or whether a treatment plan was completed. However, it is an informative measure of whether an individual is accessing dental care or not.

Texas BRFSS data for 2014 also indicated that men (45.3 percent) were more likely than women (38.5 percent) to lack dental care within the past year. A higher proportion of Hispanic adults (50.8 percent) did not have a past-year dental visit, compared to black adults (43.6 percent), white adults (34.5 percent) and adults of other races/ethnicities (38.5 percent). Low income adults were much more likely than those with greater household incomes to report not visiting a dentist or dental clinic within the past year (see Figure 21), indicating that financial barriers keep many from receiving timely dental care. This pattern held for both men and women. For example, 54.7 percent of women with an income less than \$25,000 did not have a past-year dental visit, compared to only 21.9 percent of women with an income greater than \$50,000. Dental care utilization is also associated with years of schooling. Adults without a high school diploma (62.0 percent) were almost three times more likely to indicate not visiting a dentist or dental clinic within the past year, compared with college graduates (23.7 percent). In addition, adult current smokers (56.4 percent) were more likely to report a lack of dental care in the past year than were current non-smokers (39.3 percent).

**Figure 21.**  
Percent of Adults who had No Dental Visit in the Past Year by Gender and Income Level, Texas 2014



Source: 2014 Behavioral Risk Factor Surveillance System (BRFSS)  
Prepared by: Office of Program Decision Support

In terms of geography, adults in border counties (48.1 percent) were more likely than those living in the rest of Texas (40.9 percent) to report not visiting a dentist or dental clinic for any reason within the past year. Income or poverty level played a significant role in lack of dental care in both border and non-border areas.

Regarding children’s oral health in Texas, about eight out of ten children aged 1 to 17 years old had no oral health problems, based on 2011-2012 NSCH data for Texas. According to responses from parents of children in this age group, 10.5 percent of Texas children had teeth that were in fair or poor condition, 23.1 percent had teeth in good condition, and 66.3 percent had teeth in excellent or very good condition. On the other hand, 37.3 percent of Texas children aged 1-5 had received no preventive dental care in the previous year, compared to 15.0 percent of children aged 6-11 and 17.0 percent of children aged 12-17. Lack of preventive dental care varied by health insurance status. Children without health insurance (50.2 percent) were more likely to have received no preventive dental care in the previous year than those with either private health insurance (20.8 percent) or public health insurance (17.3 percent).

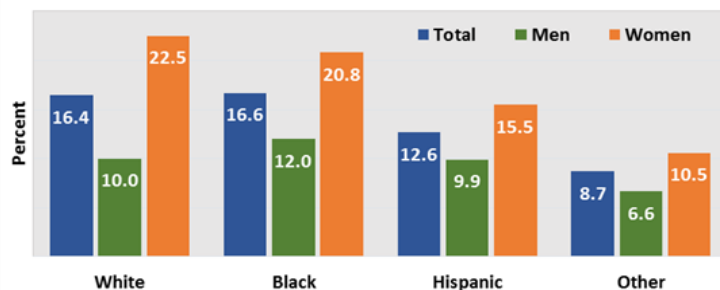
According to data from the Texas Basic Screening Survey, 21.4 percent of all newly-enrolled Head Start preschool children in 2013 were documented as having untreated dental decay, and 25.9 percent of third grade students in school years 2012-2013 were reported to have untreated dental decay [31]. These high percentages of unmet dental care needs among children indicate that more referrals and preventive services from a young age are clearly warranted.

## Mental Health

Mental illness is a public health problem that is also critical to address. Mental illnesses, such as depression and anxiety, affect people’s ability to participate in health-promoting behaviors. Depression is not only associated with substance use and the development of hypertension, heart disease, diabetes, and stroke, but is also a risk factor for suicide attempts [32]. Mental health disorders are the leading cause of disability, accounting for 25 percent of all years of life lost to disability and premature mortality [33].

When asked to assess their own mental health status, including stress, depression, and problems with emotions, about 17.1 percent of adult Texans surveyed in the 2014 BRFSS said that their mental health was not good for 5 or more days during the past 30 days. Self-reported poor mental health was more common among women (20.3 percent) than men (13.7 percent). Black adults (24.0 percent) reported the highest prevalence of poor mental health, compared to Hispanics (17.0 percent), whites (16.1 percent), and adults of other races/ethnicities (13.1 percent). Survey results also indicated that 14.6 percent of adults in Texas had ever been diagnosed as having a depressive disorder (such as depression, major depression, dysthymia, or minor depression) by a doctor, nurse, or health professional. The prevalence of diagnosed depressive disorders among women (19.1 percent) was nearly double that of the rate among men (10.0 percent). Both

**Figure 22.**  
**Percent of Adults Having Diagnosed Depressive Disorders**  
**by Gender and Race/Ethnicity, Texas 2014**



Source: 2014 Behavioral Risk Factor Surveillance System (BRFSS)  
 Prepared by: Office of Program Decision Support

black and white adults reported a similar prevalence of diagnosed depressive disorders (16-17 percent); these prevalence estimates were higher than those reported for Hispanics and adults of other races/ethnicities. Racial disparities for diagnosed depressive disorders were more substantial when gender was considered (see Figure 22). Also, adults living in border counties (13.6 percent) were somewhat less likely to report diagnosed depressive disorders than their counterparts in the rest of Texas (15.1 percent).

The 2013-2014 National Survey of Drug Use and Health (NSDUH), conducted by Substance Use and Mental Health Services Administration, found that 6.2 percent of adults aged 18 and older in Texas had experienced at least one major depressive episode in the past 12 months before the survey [34], which was higher than the HP2020 target of 5.8 percent. A major depressive episode in NSDUH is defined as a period of at least 2 weeks when an individual had a depressed mood or loss of interest or pleasure in daily activities, and had a majority of specified depression symptoms. A major depressive episode is not the same as having a diagnosis of depression. In addition, 3.4 percent of adults in Texas reported that they had serious thoughts of suicide in the past year. This prevalence differed by age; 6.2 percent of Texas adults aged 18-25 reported serious suicidal thoughts, compared to 2.9 percent of adults aged 26 and older.

Suicide (and suicide attempts) in teens is also a serious public health issue. In Texas, suicide was the second-leading cause of death for adolescents 15 to 19 years old (this was also the same for young adults aged 20-34) in 2013, and the third-leading cause of death for adolescents 10 to 14 years old [10]. According to 2013 Texas YRBSS data, about 16.7 percent of students in grades 9-12 reported that they had seriously considered attempting suicide during the past 12 months before the survey, and 10.1 percent of students in these grades reported making at least one suicide attempts in the past year. This rate of attempted suicide varied by gender and race/ethnicity. Female adolescents (11.6 percent) were more likely than male adolescents (8.6 percent) to report making suicide attempts in the past year. Hispanic adolescents (11.4 percent) reported a higher rate of attempted suicide, compared to black adolescents (8.7 percent) and white adolescents (8.0 percent). Also, younger students had a higher rate of attempted suicide than students in upper grades. Students in grades 9-10 (11.9 percent) were almost two times more likely than high school seniors (6.3 percent) to have had at least one suicide attempt within the past year.



## Health Care Workforce and Shortage Designation

The vast and varied geography and demography in the state of Texas presents a unique challenge in terms of adequate access to health care services across the state. TPCO evaluates and identifies geographic areas and populations at county and sub-county levels with the greatest unmet health care needs, disparities, and health workforce shortages. Recruiting and retaining health care professionals is an ongoing challenge not only in rural areas, but in some urban areas as well. In rural areas, population size is often a factor in health workforce shortages. In some urban areas, the access is limited because many of the providers do not accept Medicaid or there are patients not enrolled in Medicaid that are unable to self-pay. There are very few areas in the state that are not designated as a HPSA, mostly in urban areas with large hospital organizations or medical training programs.

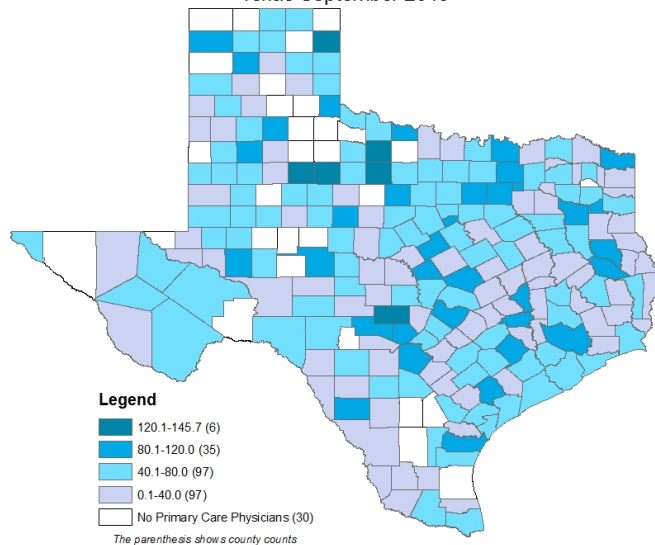
As of December 31, 2015, there are 386 primary care medical, 268 dental, and 362 mental health unduplicated HPSA designations, as well as 316 MUA/P designations in Texas [35]. These designations indicate unmet needs, disparities, and health workforce issues. The primary care HPSAs suggest that over 31 percent of Texans have unmet primary care needs; the dental HPSAs indicate almost 37 percent of Texans have unmet dental care needs; and the mental HPSAs reflect just over 54 percent of Texans with unmet mental health needs.

TPCO responds to requests for designation status, as well as requests for information about requirements and the process for designation. As part of the implementation of the Shortage Designation Management System (SDMS), staff conduct ongoing assessments for primary care, dental, and mental health access by systematically surveying providers across the state to ensure data accuracy. Designated areas are reviewed every three years. Areas that no longer meet the HPSA designation criteria have the designation proposed for withdrawal. Once the information is published in the Federal Register, the areas that no longer meet the criteria for a designation are officially withdrawn.

## Health Practitioners

**Figure 23.**

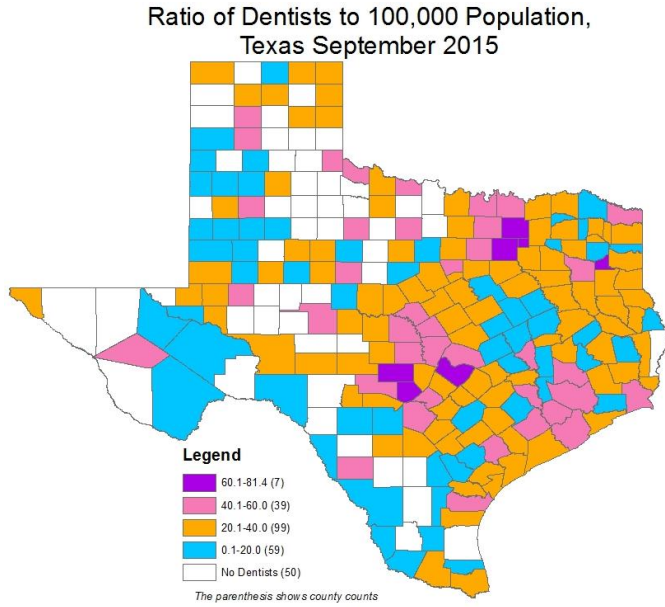
Ratio of Primary Health Care Physicians to 100,000 Population,  
Texas September 2015



Map prepared by Texas Primary Care Office, TX DSHS – February 2016  
Data Source: Texas Medical Board - September 2015  
Prepared by: Texas Department of State Health Services, Center for Health Statistics, Health Professions Resource Center, November 15, 2015

In 2015, Texas had 72 primary care physicians per 100,000 population. The total number of primary care physicians increased from 19,277 in 2014 (71.0 per 100,000), to 19,902 in 2015 (71.9 per 100,000), a 3 percent increase. This minimal increase is not sufficient to keep up with the demands of a growing population, especially in a state with so many counties already experiencing primary care physician shortages. Additionally, with the mixture of urban/rural and border/non-border populations, the increase in physician supply is unlikely to be evenly distributed among these different types of settlement patterns (see Figure 23). Note the areas throughout the state with no primary care physician, or those with 0.1- 40.0 primary care physicians per 100,000 population. Given the size of the state, access to primary care remains a challenge.

**Figure 24.**

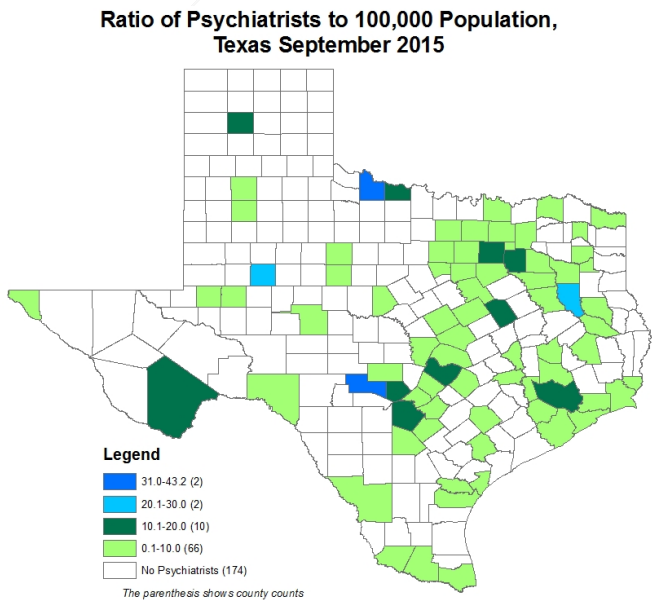


Map prepared by Texas Primary Care Office, TX DSHS – February 2016  
Data Source: Texas State Board of Dental Examiners - September 2015  
Prepared by: Texas Department of State Health Services, Center for Health Statistics, Health Professions Resource Center, November 15, 2015

In Texas in 2015, there was an average of 47 dentists per 100,000 population. The total number of dentists increased from 12,767 in 2014 (47.0 per 100,000) to 13,018 in 2015 (also 47.0 per 100,000). This increase was equivalent to the 2 percent increase in the Texas population. An adequate number of dentists to serve the Texas population is a continuing problem for the state, especially along the border and rural counties (see Figure 24).

In 2015, Texas had 7 psychiatrists per 100,000 population. The total number of psychiatrists increased from 1,971 in 2014 (7.3 per 100,000) to 2,052 in 2015 (7.4 per 100,000), a 4 percent increase. Having an adequate number of psychiatrists to serve the population is a continuing problem for the state and the nation as a whole. A significant number of Texas counties (174 or 69 percent) do not have a psychiatrist in the area (see Figure 25).

**Figure 25.**



Map prepared by Texas Primary Care Office, TX DSHS – February 2016  
Data Source: Texas Medical Board - September 2015  
Prepared by: Texas Department of State Health Services, Center for Health Statistics, Health Professions Resource Center, November 15, 2015

### Health Professional Shortage Areas

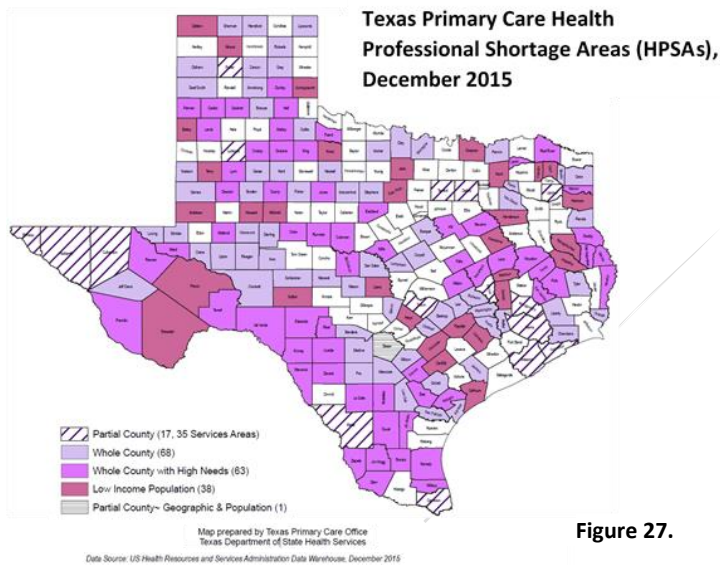
The Health Professional Shortage Area (HPSA) designation employs a ratio of population to primary care physicians to determine whether or not an area has a shortage of physicians. The ratio threshold is 3,500:1 and is reduced to 3,000:1 in areas with high needs, such as poverty level above 20 percent or more than 20 infant deaths per 1,000 live births. Different ratios are used for mental health and dental designations. Areas that exceed these ratios may qualify for designation. Other factors that are included in the federal HPSA criteria are: 1) time and distance to the nearest accessible provider; 2) the socio-economic make-up of the population of the service area; and 3) the percentage of patients served by local providers who are

Medicaid eligible and uninsured. HPSA designations are required to be updated with current data every three years.

There are three categories of HPSAs: primary health care; dental health care; and mental health care. Within each HPSA category, there are four types of HPSAs: geographic; low-income population; specialty population; and facility [36]:

- A *geographic* HPSA is a region determined to be a sound Rational Service Area (RSA). A Geographic HPSA can be a portion of a city or a county, or it can be an entire county. Each is based on primary care hours for the general population.
- A *low-income population* HPSA is a region determined to be a sound RSA that has a population living below 200 percent FPL. This HPSA is based on the amount of time primary care physicians spend serving this population.
- A *specialty population* HPSA is a region determined to be a sound RSA that has a Medicaid population below 100 percent FPL, a homeless population, or a migrant worker population.
- A *facility* HPSA includes state and federal prisons, correctional facilities, community health centers, rural health clinics, and Federally Qualified Health Centers (FQHCs).

Figure 26.



Primary Health Care Professional Shortage Areas (see Figure 26) indicate a physician shortage in the service area. This refers to physicians that practice in pediatrics, obstetrics/gynecology, general internal medicine, and family practice. The ratio threshold for primary care is 3,500:1 and 3,000:1 (in areas with high needs).

Dental Health Care Professional Shortage Areas (see Figure 27) indicate a shortage of dentists within a service area. It is important to note that the assessment only includes “general dentists,” not orthodontists or other dental care professionals. The ratio threshold for dental health is 4,000:1.

Figure 27.

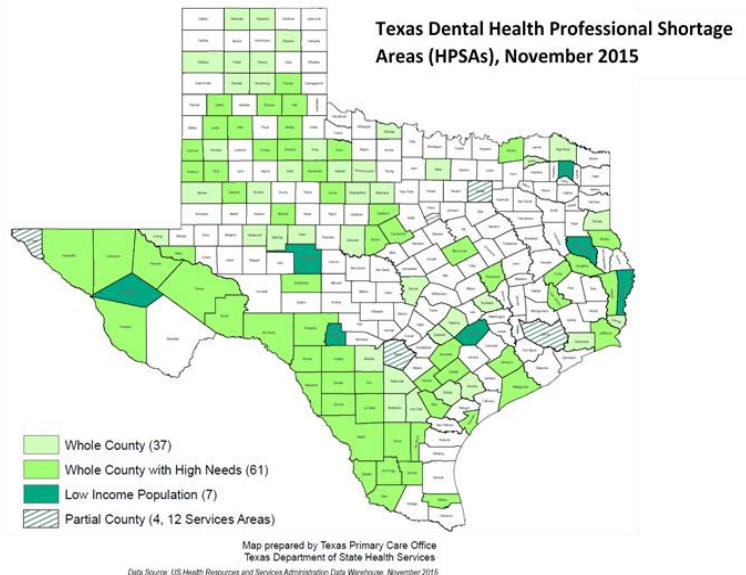
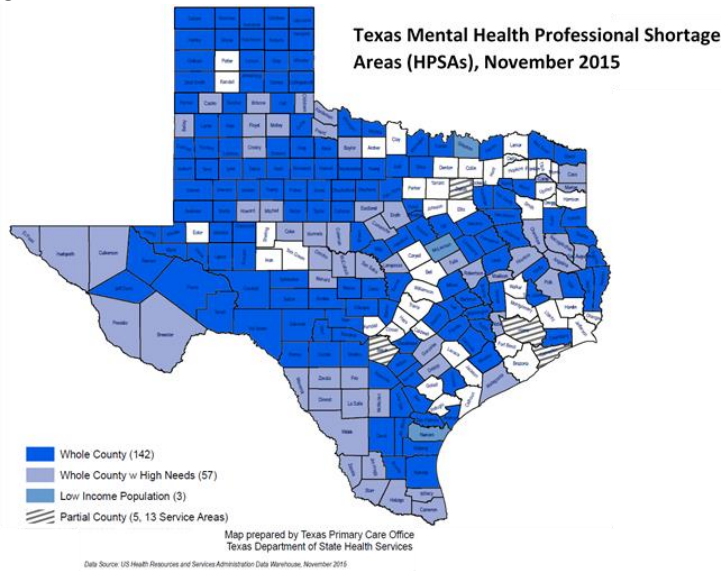




Figure 28.

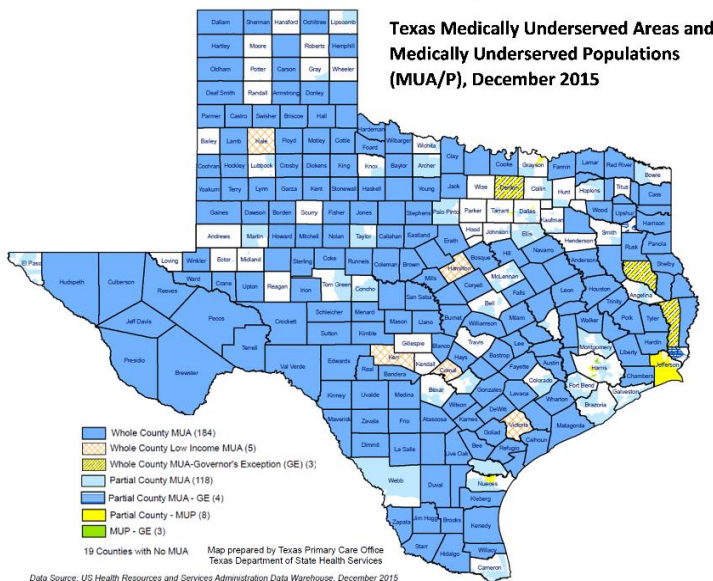


Mental Health Care Professional Shortage Areas (see Figure 28) indicate a shortage of psychiatrists within a service area. Although other core mental health professionals (psychologists, licensed professional counselors, and so on) may be taken into account when assessing Mental Health Care HPSAs, Texas uses the number of psychiatrists only in the particular service area. The ratio threshold for mental health is 20,000:1.

### Medically Underserved Areas and Medically Underserved Population

Medically Underserved Area (MUA) and Medically Underserved Population (MUP) designations employ a weighted scoring method to establish an Index of Medical Underservice (IMU) score, either for the entire population within an area (to determine MUA status) or for a specific population alone (to determine MUP status). Four health status indicators are analyzed and weighted in order to determine the IMU score. These indicators are: poverty; percent elderly population; infant mortality rate; and the ratio of population to physicians. MUA/Ps are for primary medical service, not for dental health or mental health. Figure 29 shows the MUA/Ps in Texas. MUA/P designations are not updated regularly, and hence, are a less accurate measure of underservice than is a HPSA designation.

Figure 29.



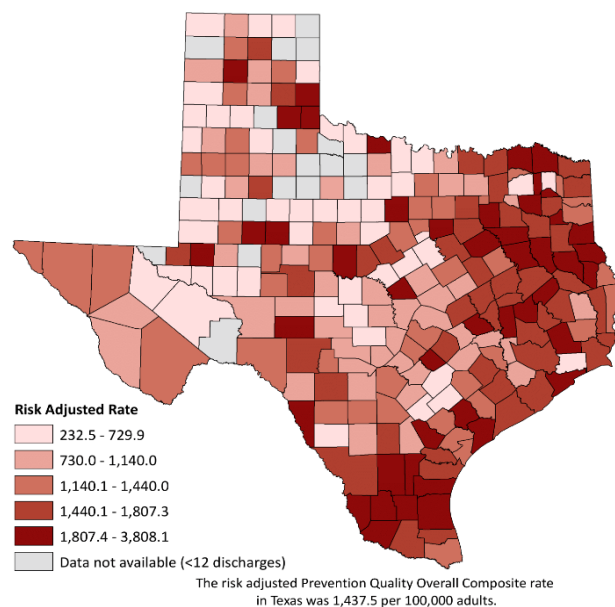
## Potentially Preventable Hospitalizations

This assessment includes information on Texas Potentially Preventable Hospitalizations (PPHs), or Prevention Quality indicators (PQIs), to further demonstrate how access to preventive healthcare impacts individuals' health and hospitalizations. PPHs/PQIs are a set of measures that make use of hospital inpatient discharge data. These measures are often tracked to assess the quality of the health care system as a whole, and especially ambulatory care, in preventing hospitalizations due to potentially-avoidable medical complications [37].

An overall composite measure of PQIs is generated that includes hospital admissions among individuals ages 18 and older for any of the following twelve conditions defined by the Agency for Healthcare Research and Quality (AHRQ): diabetes short-term complications; diabetes long-term complications; chronic obstructive pulmonary disease or asthma in older adults; hypertension; congestive heart failure; dehydration; bacterial pneumonia; urinary tract infection; angina (without procedures); uncontrolled diabetes; asthma in younger adults; and lower-extremity amputation among patients with diabetes [38]. These are conditions for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications. With high-quality, community-based primary care, hospitalization for these conditions or illnesses frequently can be avoided.


In 2014, the statewide age-sex adjusted Prevention Quality Overall Composite rate was 1,437.5 per 100,000 adults in Texas [39]. The composite rate at the county level (see Figure 30) can also be used to evaluate whether the shortage of primary care providers might impact potentially preventable hospitalizations. Figure 30 shows that county level composite rates ranged from 232.5 to 3,808.1 per 100,000 adults, and 95 counties (37.4 percent) of 254 counties had composite rates higher than the statewide rate. These counties with higher composite rates (higher rates of preventable hospitalizations) are largely concentrated in the eastern and southern areas of the state, where many counties also contain an inadequate number of primary care health professionals.

**Figure 30.**  
Risk Adjusted Prevention Quality Overall Composite Rate  
Per 100,000 Adults by County, Texas, 2014



Data Classification: Quantiles  
Data Source: Inpatient Hospital Discharge Public Use Data File, 2014  
Center for Health Statistics, Texas Department of State Health Services.  
Population Estimate File, 2014, U.S. Census Bureau.  
Prevention Quality Indicators, Agency for Healthcare Research and Quality,  
[http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V50/TechSpecs/PQI\\_90\\_Prevention\\_Quality\\_Overall\\_Composite\\_.pdf](http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V50/TechSpecs/PQI_90_Prevention_Quality_Overall_Composite_.pdf)  
Risk adjusted rates are adjusted to the 2012 US population by age and sex.

Created by Haruna Miyakado 02/23/16  
Reviewed by Erin Wu

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Office of Surveillance, Evaluation, and Research Department of State Health Services

## Health Care Resources

Texas has a variety of programs to address the shortage of health care providers and improve access to care for unserved and underserved populations. These programs are a collaborative effort between DSHS and other agencies and organizations that are also dedicated to improving access to health care. The following is a list of funding and incentive programs in Texas:

**Bureau of Health Workforce (BHW) Shortage Designations:** TPCO compiles, analyzes and submits requests to HRSA for designations of MUA/Ps and primary care, dental, and mental HPSAs.

**J-1 Visa Waiver Physicians:** Designated state public health departments are authorized under the Conrad 30 Waiver Program to support up to 30 international medical graduates, per year, to serve in designated HPSAs, or MUA/Ps. In exchange for serving underserved areas or populations for three years, the requirement for a physician (a J-1 Visa Waiver Physician) to return to his home country for two years is waived. As per United States Department of State (DOS) application instructions, only foreign medical doctors who received their exchange visitor J-1 status to pursue graduate medical education or training may apply for this waiver.

**National Health Service Corps (NHSC):** Health professionals or students may apply for financial assistance through NHSC in return for providing direct patient care services at approved NHSC sites with a primary care, dental, or mental HPSA.

**State Office of Rural Health (SORH) Grants:** This grant focuses on maintaining and increasing quality health care services to rural and underserved areas of the state. By partnering with other agencies and organizations, the initiative improves access to health care services. The SORH in Texas is located within the Texas Department of Agriculture (TDA). Programs through the SORH include:

- **Medicare Rural Hospital Flexibility (FLEX) Program:** This federal program was created to help limited service hospitals become eligible as Critical Access Hospital (CAHs) for Medicare reimbursement. Currently, there are 79 CAHs in Texas.
- **The Rural Communities Health Care Investment Program (RCHIP):** This program provides funds to assist rural communities with a MUA or HPSA designation in recruiting health care providers, other than physicians, to practice in their community by providing partial student loan reimbursements or stipend payments to non-physicians.
- **The Rural Health Facility Capital Improvement Program (CIP):** CIP provides funds for rural hospitals for various projects aimed at improving health services and health care infrastructure.
- **Small Rural Hospital Improvement Grant Program (SHIP):** The purpose of SHIP is to help small rural hospitals of 49 beds or less to do one or more of the following: 1) purchase equipment and/or training to help hospitals attain value-based purchasing provision in the Patient Protection and Affordable Care Act (ACA); 2) aid small rural hospitals in becoming accountable care organizations, or create shared savings programs per the ACA; and 3) enable small rural hospitals to purchase health information technology, equipment and/or training to comply with meaningful use, ICD-10 standards, payment bundling, and care transition.

**State-funded Student Loan Repayment Programs (LRPs):** The Texas Higher Education Coordinating Board (THECB) administers the 4 LRPs, listed below, that provide incentives for clinicians to work in the underserved areas of Texas:

- **Physician Education Loan Repayment Program (PELRP):** This program provides loan repayment funds for up to \$160,000 over a period of four years to qualifying physicians. While there are provisions for physicians serving those enrolled in Medicaid and/or the Texas Women's Health Program, physicians providing services in a State Correctional Facility, and subspecialty physicians,

priority is given to primary care physicians who agree to practice in a primary care or mental HPSA for at least four years.

- **Dental Education Loan Repayment Program (DELRP):** The purpose of the DELRP is to recruit and retain qualified dentists to provide dental services in dental HPSAs in Texas on a year by year basis.
- **Loan Repayment Program for Mental Health Providers (LRPMHP):** In 2015, the Texas Legislature authorized the LRPMHP to encourage certain mental health professionals to provide services for 5 years in designated mental HPSAs.
- **St. David's Foundation Public Health Corps Loan Repayment Program (SDFLRP):** The purpose of this program is to recruit and retain qualified primary care and behavioral health providers at eligible sites located in the five-county central Texas area served by the Foundation if they agree to provide eligible services for 4 years.

**Texas HealthMatch:** This website (<http://www.texashealthmatch.com/>) is a collaborative effort between TPCO, Texas Area Health Education Center (AHEC) East, SORH, and TACHC. It is a recruitment resource that is free to health care facilities and providers seeking positions in Texas.

**Health Centers Grant Program:** The HRSA Bureau of Primary Health Care (BPHC) provides funds to non-profit private or public entities that serve designated MUA/Ps or special medically underserved populations. This serves to increase delivery of direct services to patients of Community Health Centers, preserve and strengthen the 73 FQHC organizations, and increase Texans' access to quality primary and preventative health care in Texas.

**Rural Health Clinic (RHC) Program:** RHCs address an inadequate supply of physicians serving Medicare patients in rural areas by increasing the use of non-physician practitioners such as nurse practitioners (NP) and physician assistants (PA) in rural areas. The Centers for Medicare and Medicaid Services (CMS) certify the RHCs. There are currently 291 RHCs providing access to primary care services in rural areas of Texas.

#### **Governor's Certified Shortage Area Criteria**

A county in Texas is seeking to become a RHC in order to improve its financial viability. A RHC is a federally qualified health clinic certified to receive special Medicare and Medicaid reimbursement. The CMS provides advantageous reimbursement as a strategy to increase rural Medicare and Medicaid patients' access to primary care services. In order to qualify as a RHC, a clinic must be located in a Primary Care Population-Group HPSA, an MUA, or a Governor's Certified Shortage Area.

The county seeking to become a RHC does not have a HPSA or MUA designation, and therefore, cannot be federally certified as a RHC. This county contacted the Governor, who, in turn, notified TPCO to draft Governor's Certified Shortage Area criteria for review and approval. To this end, following adjournment of the 84<sup>th</sup> Texas Legislature, TPCO developed criteria for Governor's Certified Shortage Areas, and these criteria are currently under review with DSHS administration and the Governor's office. When the Governor approves these criteria, they will then be forwarded to HRSA for final approval.

Application of the proposed Texas Governor's Certified Shortage Area criteria would permit six Texas counties to qualify for designation. Of those, five currently have a RHC in their county under a previous HPSA/MUA designation. The county currently seeking a Governor's Certified Shortage Area designation is the sole county without a RHC. Since most MUA designations were last updated in the 1970s, if they were

updated with current data, it is unlikely that the remaining five counties would retain their MUA designation; therefore, they may also seek a Governor's Certified Shortage Area designation in the future.

## Barriers to Accessing Health Care

Many Texans face significant barriers to accessing health care. However, stakeholder feedback and identification of the needs and challenges can lead to policy improvements and strategic planning initiatives for improving access across the state. Physician shortages and limited ability to obtain health care services are the most substantial challenges.

### DSHS Stakeholder Perceived Needs

As part of the DSHS 2015 Title V Needs Assessment, a report that is submitted every five years under the Maternal and Child Health (MCH) Block Grant program, qualitative information on community needs was gathered through focus groups and stakeholder meetings [12]. In the summer of 2014, SUMA Social Marketing, Inc. (SUMA) conducted 16 focus groups statewide to gather qualitative data on the health needs of mothers, men, children, and youth in various communities. Twelve of the focus groups were held with women between the ages of 19 and 30 who have at least one child three years of age or younger. An additional four focus groups (in San Antonio and San Angelo) were held with men between the ages of 19 and 30 who work in the oil and gas field or in an industrial environment. SUMA also facilitated eight meetings across the state with providers and other stakeholders, to gather their perceptions of the needs of the clients and patients they serve.

A central theme that emerged from the stakeholder meetings and focus groups was the need to improve access to a variety of services. Stakeholders enumerated many different types of factors that they believed limited access to health care. Although many common barriers were encountered by focus group participants throughout the state, some barriers appeared to be more specific to certain cultural groups or to certain areas within Texas.

Focus group participants and stakeholders cited the following factors as limiting access to health care:

- **Cost (inability to pay, due to lack of insurance coverage or inadequate insurance coverage):** Many women and men go without health insurance because they cannot afford it, although in most cases, Medicaid provides coverage for their children. Men in San Antonio stated that health care is unaffordable and that they go without it unless they are faced with an extreme situation. Mothers in Brownsville mentioned that even policies available through the Affordable Care Act are out of reach financially; therefore, many travel to Mexico for health care. Several mothers in the Killeen focus group also said their families go without health care because insurance is too expensive, even after federal health care reform. Some focus group participants also mentioned how their families' ability to get health insurance is influenced by their marital status or their receiving child support.
- **Limited number of Medicaid providers:** The limited number of providers who participate in Medicaid is problematic. Mothers in Brownsville indicated that they are able to access services for their children through Medicaid; however, they often face long waits for their children to be seen at local clinics. Some Fort Worth moms also said their health care is compromised when providers learn they are Medicaid recipients. Mothers in the Nacogdoches focus groups expressed concerns about the difficulty of finding specialists who accept Medicaid, and stakeholders noted that many of the specialists practicing in Tyler, an East Texas health care hub, do not accept Medicaid or CHIP (Children's Medicaid). Also, stakeholders in Houston noted that many mental health providers do not participate in Medicaid.

- Transportation issues: Stakeholders in Laredo and the Panhandle mentioned that lack of access to transportation hindered access to health care services. Men in San Antonio stated that larger issues, such as lack of transportation or housing, can overwhelm families and divert attention away from health concerns.
- Lack of awareness about available services: Many families are not connected to services, even when those services exist, simply because they did not know about them. Stakeholders in Houston mentioned that both providers and families are often unaware of available services and programs. They noted that when providers are unaware of services their clients may need to access, referrals are made in an untimely manner or not at all. Stakeholders in El Paso also agreed that families and providers are generally not aware of available services and resources.
- Lack of primary care providers: Even individuals who do have financial resources may not have timely access to health care because of a shortage of primary care providers in certain areas of the state. Stakeholders in Dallas/Fort Worth pointed out that the shortage of primary care providers and specialists limits access even for those who are insured or covered by Medicaid or CHIP.
- Lack of specialists: East Texas patients must often travel to Dallas or Houston to see a specialist, such as a cardiologist, pulmonologist, or immunologist. Several mothers in Amarillo said that they have to travel to Dallas to access providers for their children's special health care needs. Stakeholders in San Antonio and El Paso also indicated that a lack of specialists was an issue.
- Limited access to mental health services: Stakeholders in Dallas/Fort Worth noted that access to mental health services is limited, particularly for people who cannot pay. They mentioned that low reimbursement rates and low salaries for mental health service providers were factors that limit the number of providers, and therefore, access. Sadly, these stakeholders noted that children often access mental health services only through the juvenile justice system. Stakeholders in East Texas acknowledged that mental health services, as well as resources for substance abuse and prevention, are lacking, and that the emergency room has become the default provider.
- Lack of culturally-sensitive providers: Stakeholders in Laredo noted that a lack of culturally sensitive providers can discourage women from accessing services for themselves and their families. East Texas providers mentioned that there are few mental health resources or support groups for Spanish speakers. Stakeholders in Houston noted that providers are often not knowledgeable of or sensitive to cross-cultural issues, and that the racial and cultural diversity of the Houston area further complicates access to the already limited mental health services available. El Paso stakeholders also agree that culturally sensitive mental health materials and services are critical.
- Difficulty of navigating affordable insurance/Medicaid system: Mothers in the Fort Worth area mentioned that navigating the system to find affordable health insurance or to qualify for Medicaid or CHIP is complex and exhausting. Mothers in the Houston area stated that they had sought prenatal care during their first trimester but faced delays because of the long Medicaid approval process or the time it took to get other insurance coverage in place. Stakeholders in Lubbock noted that some families give up trying to access health care because of complicated bureaucratic barriers. These same bureaucracies also discourage providers from participating in Medicaid and other programs, which limits or delays clients' access.
- Increased difficulty for undocumented persons: Because of enhanced border security, undocumented individuals who live on the Texas–Mexico border can no longer travel to Mexico to

take advantage of the more affordable health care offered there, nor can they travel inland for health care, because security has been tightened there as well.

The aforementioned factors suggest areas in which stakeholders and focus group participants believe that funding and activities could make the biggest difference. In addition to access to health care, focus group participants consistently identified obesity and diabetes as other top health care concerns. Several of the focus groups and stakeholders identified areas that, if better funded, could potentially improve access to services: health education for parents and children, case management and other forms of support in navigating the system, improved coordination and collaboration among providers, better continuity of care, and a shift to a focus on the whole person across the life course.

## TPCO-Identified Challenges

### **Physician Shortages**

The size, geography, and demography of Texas illuminate several barriers to accessing health care within the state, and one of which is a shortage of physicians. This shortage is further exacerbated by a limited number of residency slots in Texas for the number of physicians graduating from Texas medical schools. Even if other barriers were addressed and removed, Texas would still be unable to meet the health care needs of Texans with the current number, distribution, and capacity of primary care physicians. In addition to primary care, a shortage of specialists, dentists, and mental health professionals also exists in many areas throughout the state of Texas.

### **Limited Ability to Access Health Care**

Transportation can be a hindrance to accessing health care for rural and underserved communities. For one, Texas has a large percentage of rural areas. There are 185 counties in Texas that have a population under 50,000. Thirty of these counties have no primary care physician, and 25 have no primary care physician, dentist, or psychiatrist. Many Texans must travel over a half an hour for medical services, creating significant transportation challenges for the underserved and rural populations to access care.

With the highest uninsured population in the nation, insurance status is also a barrier to care in Texas. There are many providers that do not accept Medicaid, and many individuals without health care coverage are unable to self-pay. Both a lack of insurance and having insurance coverage that is not accepted at accessible health facilities are significant hindrances to accessing needed health care for many individuals.

The diverse racial and ethnic composition of the Texas population also creates complex challenges for meeting the overall health needs of the population. Not only can culture and language barriers impact access to care, but they can also create challenges to receiving effective care.

## Conclusions

This primary care needs assessment outlines the current measurable indicators that have an impact on the health of the general Texas population, as well as potential causes of health disparities and health care access issues. The assessment serves as a tool to help the state and communities to identify unmet health needs, understand program eligibility, prioritize resources, and make policy decisions.

The dynamic population growth, expansive size of the state, limited health resources, and various disparities from identified health indicators are important factors that make program implementation challenging but necessary. TPCO will continue to improve access to health care services in Texas, as well as continue analyses on shortage designations. TPCO will also continue to monitor health status and outcomes, and plans to update this needs assessment report, given available resources.



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