

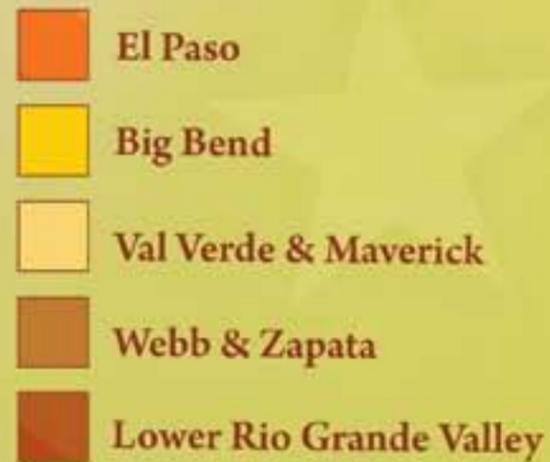


2007

**Health Risk Factors in the
Texas-Mexico Border**

Introduction

This report presents a summary of health-related risk factors and trends among residents of fifteen Texas counties along the US-Mexico border. Data were collected through the 2007 Behavioral Risk Factor Surveillance System (BRFSS), a nation-wide telephone-based survey of randomly-selected adults that gathers information on many conditions and behaviors known to influence personal health. Data from the fifteen counties were clustered into five areas: the Lower Rio Grande Valley - commonly known as 'The Valley' - (Hidalgo, Starr, and Cameron Counties), Webb and Zapata Counties, Val Verde and Maverick Counties, the Big Bend area (Brewster, Culberson, Hudspeth, Jeff Davis, Pecos, Presidio, and Terrell Counties), and El Paso County. For the purposes of this analysis, "the border" refers to these five areas.



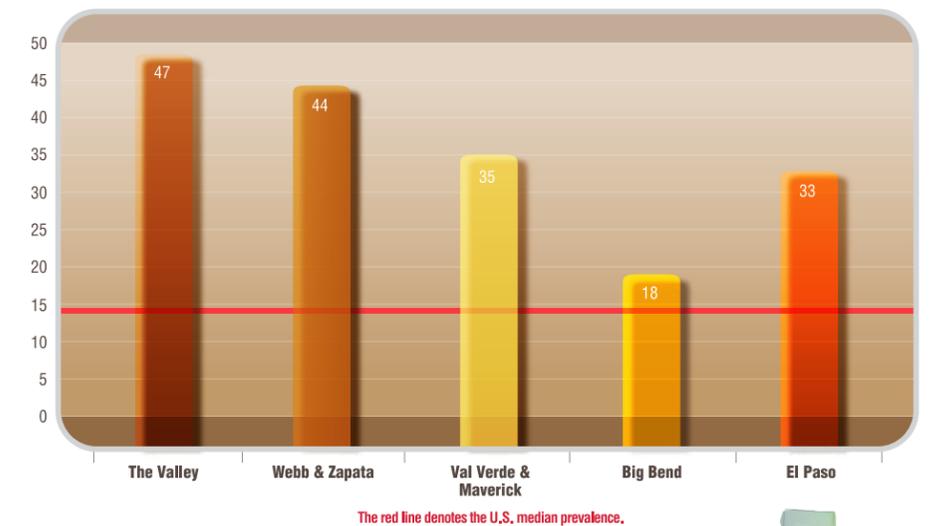
Access to Health Care

A. Medical Care Coverage

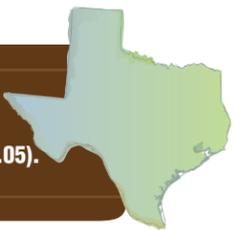
Medical care coverage is an important factor to an individual's ability to seek and receive timely medical health care. Therefore, medical conditions are often underrepresented in areas with poor medical care coverage because undiagnosed patients remain unaware of their condition. A variety of research studies have shown that people who lack medical insurance "receive less preventive care, are diagnosed at more advanced disease stages, and once diagnosed, tend to receive less therapeutic care" (1). As a result, the overall mortality rate among the uninsured is 10-15% higher than for those who have health care insurance (1).

Texas has the highest percent of residents lacking medical insurance (26%) of any state in the US, surpassing the national percent of uninsured residents (14%). The situation in the border region is significantly more severe with 40% of adults lacking any medical insurance. Of the border areas, the Valley (47%) reports the highest proportion of adults without medical insurance.

No Medical Insurance Including Medicare or Medicaid



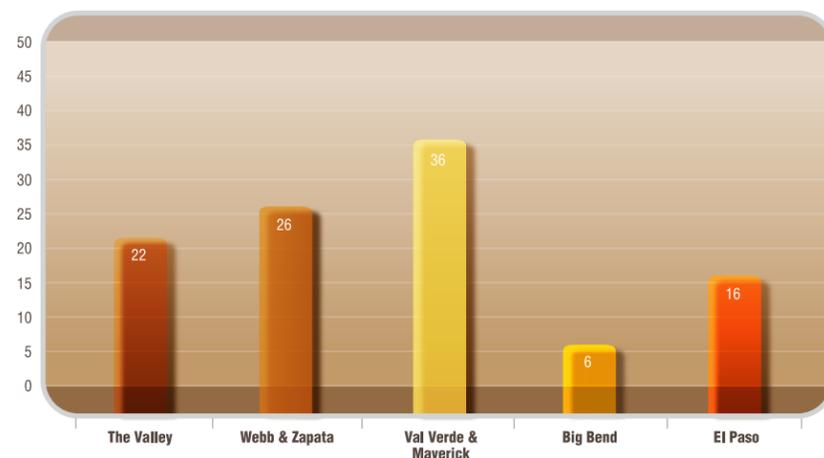
The disparity in medical insurance coverage between the border region (40%) and state of Texas (26%) is statistically significant (P<0.05).



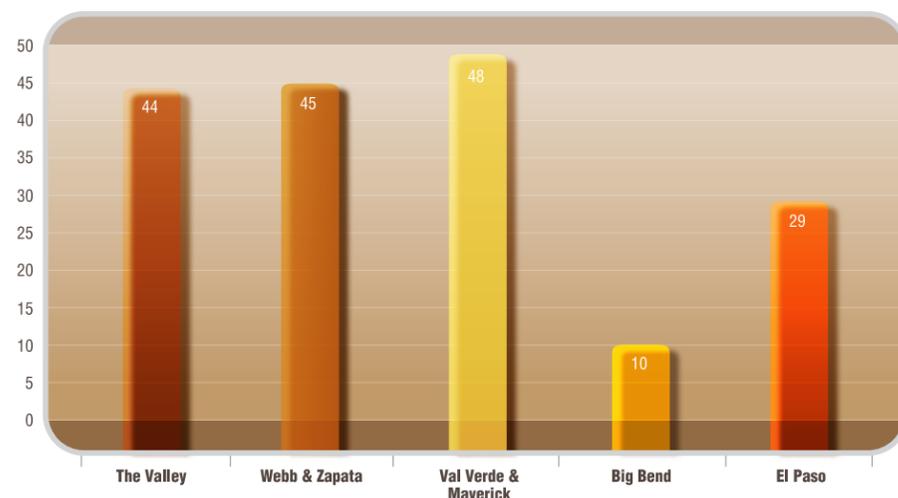
B. Cross-Border Utilization of Medical Services

The U.S. Department of Transportation (2) estimates that in 2007, over 200 million individuals crossed into the United States from Mexico as a pedestrian or vehicular passenger. Many of these individuals are U.S. residents living in the border region who travel to Mexico to receive medical treatment or to purchase medication (3).

Crossed to Mexico for medical treatment (past 12 months)



Member of household bought medications in Mexico (past 12 months)



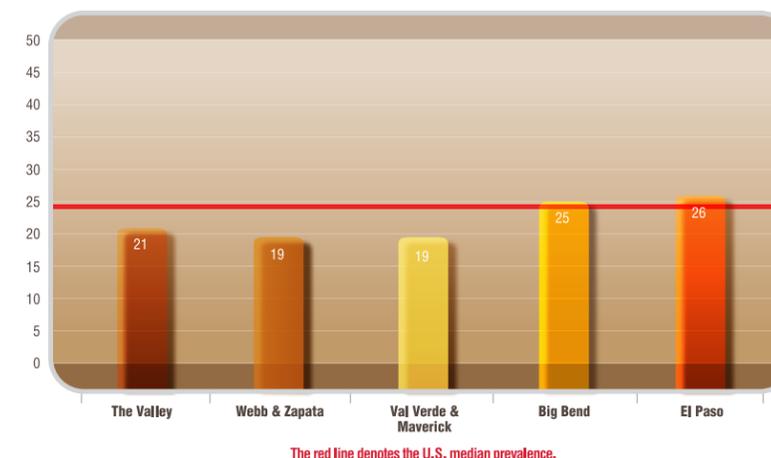
In the 2007 BRFSS, 20% of Texas border residents report seeking medical care in Mexico in the past year. Utilization of medical care in Mexico by U.S. residents is significantly less common in the Big Bend (6%) area and El Paso (16%), compared to Val Verde/Maverick (36%), Webb/Zapata (26%) and the Valley (22%). About 38% of border residents purchased medication from Mexico in the past year.

Lifestyle Related Health Behaviors

A. Fruits and Vegetables

Fruits and vegetables contain vitamins, minerals, and fiber that are essential for a large variety of bodily processes. Compared with people who consume few fruits or vegetables, those who eat greater amounts are more likely to have lower risk of stroke and certain cancers. The 2005 Dietary Guidelines for Americans recommend that each individual consume 2½ to 6½ cups (5 to 13 servings) of fruits and vegetables daily (4). The 2005-2010 Strategic Plan for the Prevention of Obesity in Texas makes a similar recommendation: “The recommended amount varies with age, gender, and activity, but five cups a day is an appropriate target for most moderately active adults and teens” (5).

Estimated to eat 5 or more servings of fruits and vegetables daily

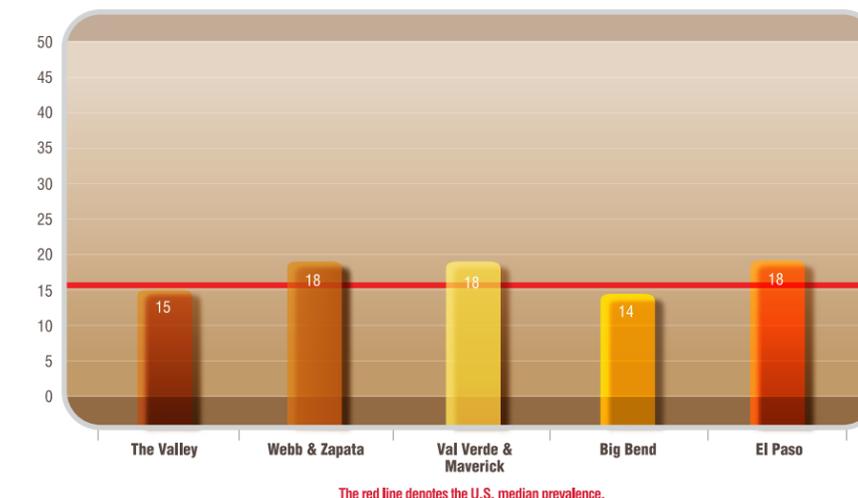


About one in every four Texans in the border region (25%) complies with the daily recommended minimum five servings of fruits or vegetables. El Paso (26%) and Big Bend (25%) are the border areas with the highest proportion of adults who reported eating five or more servings of fruits and vegetables each day. In the border counties persons of Hispanic background are significantly less likely than white individuals to eat five or more servings of fruits and vegetables daily (21% vs. 31%).

B. Alcohol Consumption

Excessive alcohol use increases the risk of injury and is a major health problem in the U.S. Binge drinking, defined as five or more drinks for men and four or more drinks for women on a single occasion, is a strong indicator of excessive alcohol use. Binge drinking may result in serious injuries such as car crashes, drowning, and falls. Chronic alcohol consumption increases risks of certain cancers, stroke, and liver diseases. Alcohol consumption among pregnant women also increases risk of damage to the fetus (6).

At risk for binge drinking (past 30 days)



In the U.S., one in every seven adults (16%) report binge drinking at least once during the previous 30 days. The state of Texas (15%) and the border region (16%) have similar rates. In all five border areas studied, about one of every six residents is estimated to binge drink.

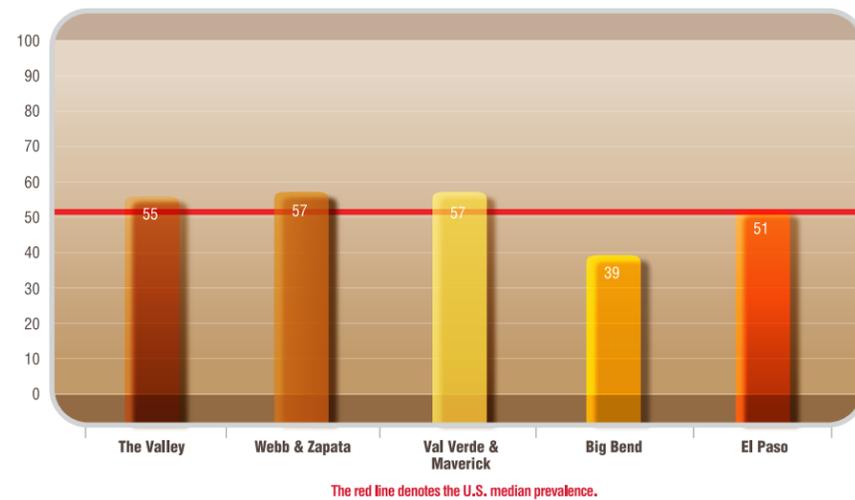
C. Physical Activity/Exercise

Regular physical activity has many health benefits. It lowers the risk of dying from coronary heart disease, the nation’s leading cause of death (6). Exercise also decreases the risk for stroke, colon cancer, diabetes, high blood pressure, and helps to control weight. Regular physical activity contributes to healthy bones, muscles, and joints, reduces falls among older adults, helps to relieve arthritis pain, and reduces symptoms of anxiety and depression (7).

Physical Activity need not be strenuous to be beneficial; health agencies recommend that everyone participate in 30 minutes of moderate physical activity (i.e. brisk walking) five days per week, or 20 minutes of vigorous physical activity (i.e. jogging) three days per week (5;8).

Across the nation, Texas, and the border region, just over half of the population does not meet the recommended level of physical activity. There is little variation in the proportion of individuals who meet the recommended physical activity level across the five border areas. About 16% of the border population report having no physical activity whatsoever, compared to 15% in the state of Texas.

Do not meet the recommended level of moderate or vigorous physical activity



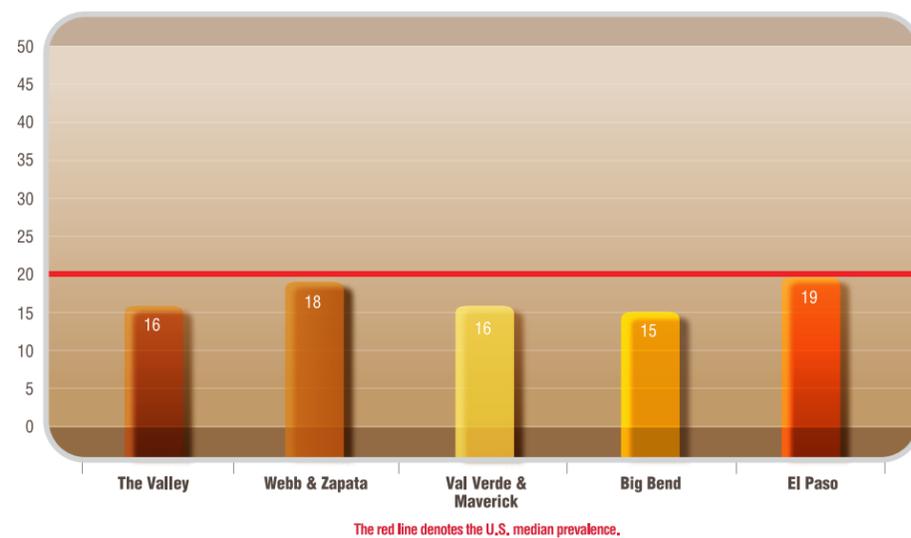
D. Tobacco Use

Cigarette smoking is the leading cause of preventable death in the United States. Over 24,100 Texans die from the effects of smoking annually. It is estimated that smoking costs the state of Texas \$10.6 billion in excess medical expenditures and lost productivity (9).

The prevalence of current smokers in the border region (17%) is lower than Texas (19%) and significantly lower than nationwide estimates (20%). In all five border areas studied, about one in six adults are estimated to be current smokers.

In the border counties, men (24%) are twice as likely as women (11%) to be current smokers. The prevalence of current smokers in the border region is about three times greater among 18-29 year olds (20%) compared to individuals 65 years of age and older (7%).

Current Smoker



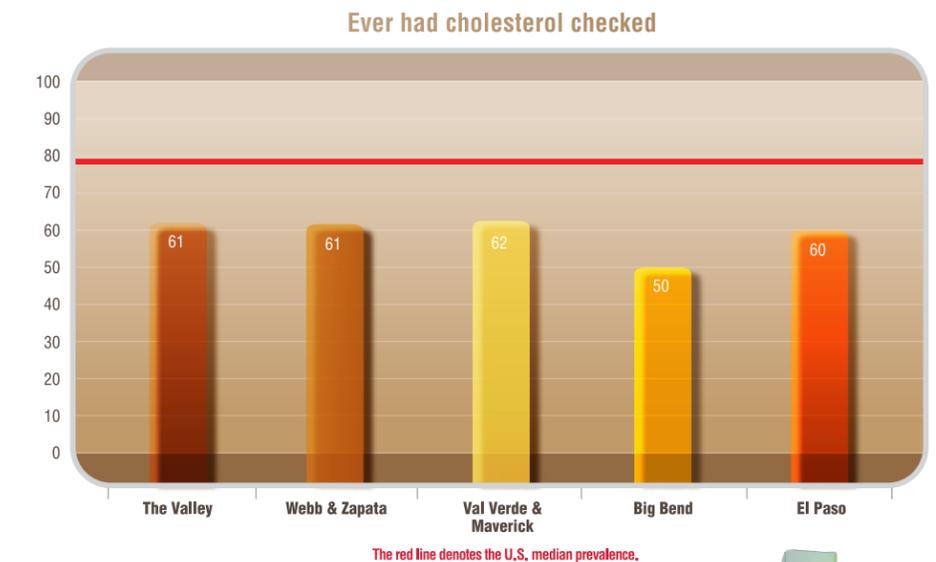
Preventive Care

A. Cholesterol Screening

Cholesterol is a waxy, fat-like substance that is needed for the body to function normally. Excessive cholesterol deposited in arteries due to dietary intake or genetic predisposition reduces blood flow to the heart and other vital organs (11). Lowering cholesterol by means of diet modification or medications can decrease the risk of developing blockage in these arteries and increase blood flow in vital organs throughout the body.

The Texas Department of State Health Services recommends that everyone 20 years of age and older have their cholesterol levels checked at least once every five years (11; 12).

Overall, significantly fewer border residents have ever had their cholesterol checked (60%) when compared to Texas (74%) and the nation (79%). In all five border areas studied, about 40% of adults have never had their cholesterol tested. Among border residents, Hispanics (55%) are significantly less likely to have their cholesterol tested than whites (84%). Among border residents who have had their cholesterol checked, well over a third (37%) has been told they have high cholesterol.



The disparity in the percentage of persons who 'ever had their cholesterol checked' between the border region (60%) and state of Texas (74%) is statistically significant (P<0.05).

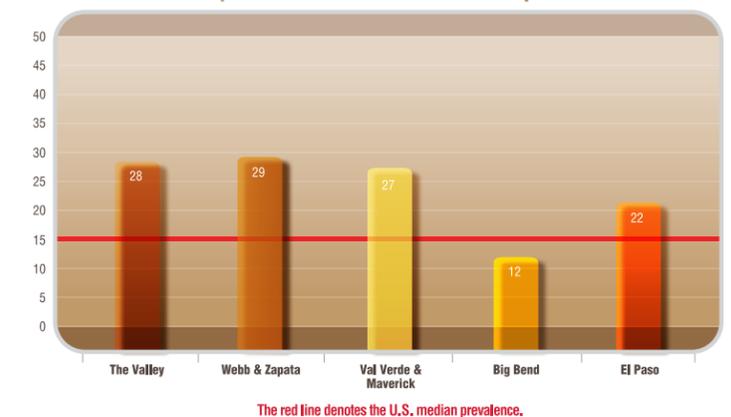


Chronic Disease and Mental Health

A. Health Status (overall)

A person's health and how well they feel about their life is an important indicator of their quality of life. Other quality of life indicators include employment, housing, schools, neighborhood, and cultural values such as religion and spirituality (13).

Report that health is "fair" or "poor"



In this survey, respondents were asked to rate their own health. A significantly higher proportion of border residents (26%) report 'fair' or 'poor' health when compared to Texas (20%) and the Nation (15%). Among the five areas studied, Webb/Zapata (29%), the Valley (28%), and Val Verde/Maverick (27%) have a higher proportion of individuals reporting that their general health was 'fair' to 'poor.' In the border region, Hispanics (27%) are significantly more likely to report 'fair' or 'poor' health than whites (20%).

The disparity in the percentage of persons who report 'fair' or 'poor' health between the border region (26%) and state of Texas (20%) is statistically significant (P<0.05).



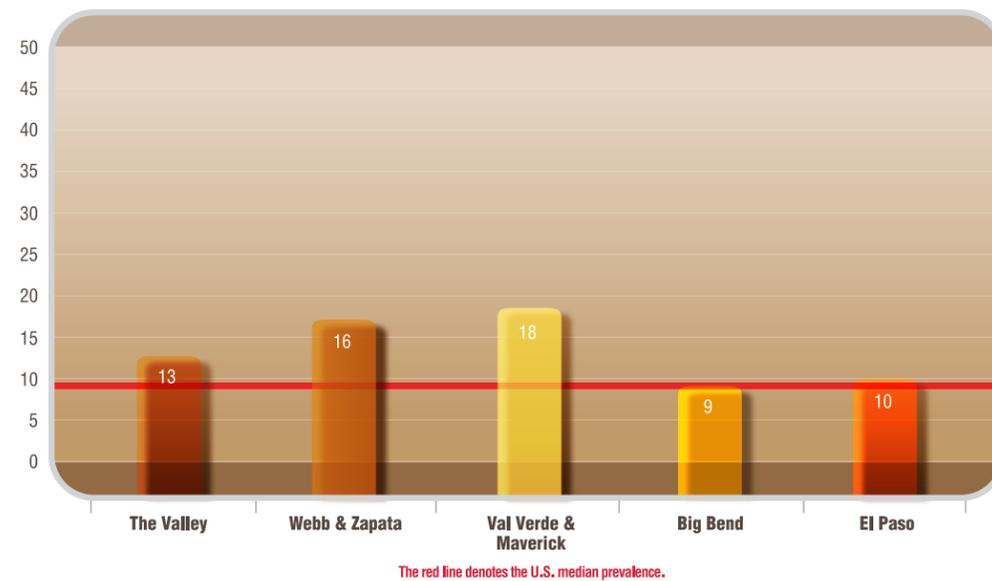
For older adults, maintaining independence is vital to sustaining well-being (14). Poor health and chronic disease can result in isolation, depression, alcohol abuse, and addiction to prescription medication (15). In the border region, 17% of adults 45 years of age and older report that poor physical or mental health interfered with daily activities on five or more days during the previous month, compared to 15% in the state of Texas.

B. Diabetes

Diabetes is one of the most serious health problems facing the nation today, ranking as the sixth leading cause of death (7). Diabetes can lead to serious vision difficulties and blindness, impaired circulation and sensation, kidney disease, gum disease, heart attack, and stroke (16). Research studies have found that the overall monetary cost attributed to diabetes in the U.S. exceeds \$130 billion per year (17). This includes direct health care costs as well as indirect costs such as lost wages.

About 9% of US adults and 10% of Texas adults report having been diagnosed with diabetes by a physician. Among the border areas, adults in Val Verde and Maverick counties (18%) report the highest prevalence of diabetes. Individuals with less than a high school education (22%) and those who earn less than \$15,000 per year (21%) are significantly more likely than others to report having diabetes.

Ever diagnosed with diabetes

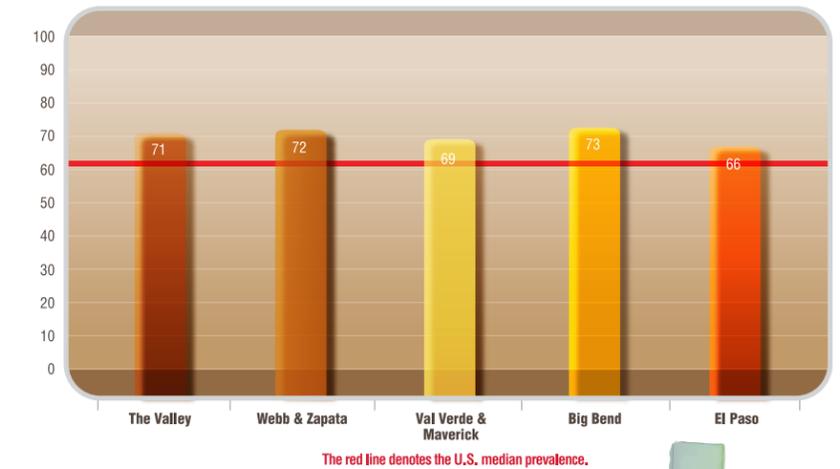


C. Obesity/Overweight

During the past 25 years there has been a striking increase in the number of adults who are obese or overweight. Obesity and being overweight are of great concern because these conditions increase risk for many serious diseases, particularly high blood pressure, coronary heart disease, stroke, and diabetes (18).

About 63% of U.S. adults and 66% of Texans are obese or overweight. Across all border areas studied, a significantly higher percentage of adults in the border counties (about 69%) are obese or overweight. In the border region, a significantly higher proportion of Hispanics (71%) are obese or overweight compared to whites (64%).

At risk obesity/overweight



The disparity in the percentage of persons 'overweight' or 'obese' between the border region (69%) and state of Texas (66%) is statistically significant (P<0.05).

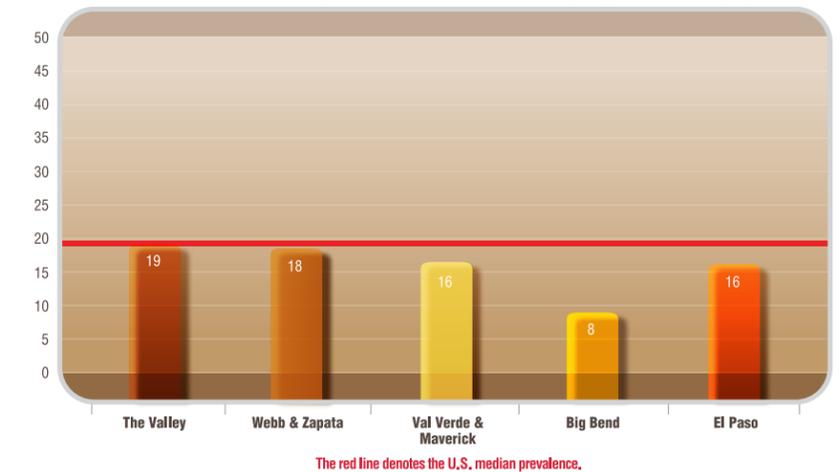


D. Mental Health

According to the World Health Organization (19), people with psychiatric and behavioral disorders often experience social isolation, poor quality of life and increased mortality. Mental illness also affects and is affected by cancer, heart diseases, diabetes, Human Immunodeficiency Virus (HIV) infection, Acquired Immunodeficiency Syndrome (AIDS), and substance abuse.

Overall, 17% of respondents report that their mental health was not good for five or more days in the previous month, similar to Texas (19%) and the nation (19%). Of the border areas, Big Bend (8%) reports the lowest proportion of adults with poor mental health for five or more days in the previous month. Across the border region, women were significantly more likely than men to report that their mental health was not good for five or more days in the previous month (21% vs. 14%).

Mental Health not good for five or more days (past 30 days)



Technical Note:

The Behavioral Risk Factor Surveillance System (BRFSS) is the largest telephone health survey in the world. It was first administered in 1984 by the Centers for Disease Control and Prevention (CDC) to collect data at the state and national level about preventable health conditions. BRFSS has since emerged as one of the few systems available to track behavioral risk factors and health practices associated with the leading causes of death, morbidity and medical care expenditures.

The Texas BRFSS increased the sample size in the border area to provide data that policy makers and public health professionals can utilize to identify major health risks and to address health issues affecting Texas-Mexico border area residents. The sampling design emphasized gathering precise estimates for five border areas: the Valley (Hidalgo, Starr, and Cameron Counties), Webb and Zapata Counties, Val Verde and Maverick Counties, the Big Bend area (Brewster, Culberson, Hudspeth, Jeff Davis, Pecos, Presidio, and Terrell Counties), and El Paso County. The sample size needed for each of the five areas in this survey were determined using adult population estimates, telephone coverage rates, and historic response rates in previous BRFSS. The final sample size was 4,397 for all five areas.

Texas BRFSS gathered data from non-institutionalized individuals over the age of 18. The data were collected from January 2007 through December 2007. The BRFSS relied on random digit dialed telephone interviews from area residents through a survey process that strictly adhered to CDC methods and standards for quality assurance. The data collection contractor conducted the telephone interviews using computerized procedures that determined which questions to ask during the interview. These procedures are known as Computer Assisted Telephone Interviewing (CATI). Data were analyzed using Stata version 9.1 (College Station, TX), statistical software for complex survey data.

Data for Texas and the United States cited in this brochure were taken from the CDC website, www.cdc.gov/brfss, available on November 2, 2008 and the Texas Department of State Health Services website, <http://www.dshs.state.tx.us/chs/brfss/>, on the same date. For the purposes of this report, disparities were not statistically significant unless the term 'significantly' or 'significant' was used. Statistical significance was determined by non-overlap of 95% confidence intervals.

Survey Sample Characteristics

In probability surveys, the people interviewed generally represent the population from which they were sampled. The statistical techniques used in this survey produced socio-demographic estimates that resemble those from the U.S. Bureau of the Census. The sample slightly over-represented women and older persons. About a quarter of respondents (24%) chose to be interviewed in Spanish. About 70% were Hispanic. Almost half (47%) of the respondents earned less than \$25,000 per year; 27% earned over \$50,000 per year. The respondents were nearly equally distributed across education categories (less than high school, high school graduate, some college education, and college graduate). Just over half of the sample was currently married. A representative sample was drawn for each of the five areas in the border region: the Valley (n=1,549), Webb and Zapata Counties (n=515), Val Verde and Maverick Counties (n=484), Big Bend (n=423), and El Paso County (n=1,426).

Credits:

This 2007 Texas Border BRFSS publication is a product of the Texas Department of State Health Services (TDSHS) Health Service Region 9/10 and the Office of Border Health (OBH). We thank the TDSHS Center for Health Statistics for assistance in the development of the sampling strategy and administration of the questionnaire, the Texas State Epidemiologist for assistance framing themes for this report, and the Paso del Norte Health Foundation for analysis and presentation of data in this report.

Works Cited

1. Hadley, Jack. Sicker and Poorer: the consequences of being uninsured - Executive Summary. Kaiser Family Foundation Commission on Medicaid and the Uninsured. [Online] 2002. [Cited: February 3, 2008.] www.kff.org.
2. U.S. Department of Transportation. U.S. Border Crossings. Research and Innovative Technology Administration, Bureau of Transportation Statistics. [Online] 2006. [Cited: August 27, 2008.] <http://www.transtats.bts.gov/BorderCrossing.aspx>.
3. Escobedo, L and Cardenas V. Utilization and purchase of medical care services in Mexico by residents in the United States of America, 1998-1999. *Rev Panam Salud Publica*. 2006 May; 19(5):300-5.
4. U.S. Department of Health and Human Services and U.S. Department of Agriculture. Dietary Guidelines for Americans, 2005. Washington D.C. : U.S. Government Printing Office, 2005.
5. Center for Health Statistics. BRFSS Risk Factor Notes. Texas Department of State Health Services. [online] 2008. [Cited February 12, 2009] http://www.dshs.state.tx.us/chs/brfss/pages/rf_notes2.shtm.
6. Centers for Disease Control and Prevention. Alcohol: Frequently Asked Questions. Centers for Disease Control and Prevention. [Online] 2008. [Cited: August 28, 2008.] <http://www.cdc.gov/alcohol/faqs.htm#11>.
7. National Center for Health Statistics. Deaths-Leading Causes. Centers for Disease Control and Prevention. [Online] 2008. [Cited: August 28, 2008.] <http://www.cdc.gov/nchs/FASTATS/lcod.htm>.
8. National Center for Chronic Disease Prevention. Physical Activity for Everyone. Centers for Disease Control and Prevention. [Online] 2008. [Cited: August 28, 2008.] <http://www.cdc.gov/nccdphp/dnpa/physical/everyone/recommendations/index.htm>.
9. Texas Department of State Health Services. Progress on Achieving Texas Tobacco Reduction Goals: A Report to the 80th Legislature, [Cited: November 13, 2008.] http://www.dshs.state.tx.us/tobacco/reports/80th_Legislature/Rider-67-Report_Dec2006.pdf.

10. Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Productivity Losses --- United States, 1997--2001. *MMWR Weekly*. [Online] July 1, 2005. [Cited: August 5, 2008.] <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5425a1.htm>.

11. American Heart Association. What is Cholesterol? American Heart Association. [Online] April 3, 2008. [Cited: August 26, 2008.] <http://www.americanheart.org/presenter.jhtml?identifier=3046103>.

12. Texas Department of Health. Texas Plan to Reduce Cardiovascular Disease and Stroke. Austin : Texas Department of Health, 2002.

13. Centers for Disease Control and Prevention. Measuring Healthy Days. Atlanta, Georgia : CDC, 2000.

14. Rowe, JW and Kahn, R.L. Successful Aging: The MacArthur Foundation Study. New York : Dell Publishing, 1998.

15. Livable Communities as an AARP Priority. Novelli, W. Washington, D.C. : Universal Village Conference, 2005.

16. Centers for Disease Control and Prevention. Effects of Diabetes. Diabetes Public Health Resource. [Online] 2008. [Cited: August 28, 2008.] http://www.cdc.gov/diabetes/human_body.htm.

17. Songor, Thomas and Ettaro, Lorraine. Studies on the Cost of Diabetes. Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. [Online] June 1998. [Cited: August 28, 2008.] <http://www.cdc.gov/diabetes/pubs/costs/intro.htm#comparisons>.

18. Centers for Disease Control and Prevention. Overweight and Obesity. Centers for Disease Control and Prevention. [Online] July 28, 2008. [Cited: August 26, 2008.] <http://www.cdc.gov/nccdphp/dnpa/obesity/>.

19. World Health Organization. Mental Health. World Health Organization. [Online] 2008. [Cited: August 26, 2008.] http://www.who.int/mental_health/en/



Texas Department of State Health Services
1100 West 49th Street
Austin, Texas 78756-3199
www.dshs.state.tx.us

Stock #56-13186