

**Texas Department of State Health Services (DSHS)
Health Service Region (HSR) 8
Office of Border Health (OBH)**

Health Status Overview of the Texas-Mexico Border- Health Service Region 8

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Disclaimer: Information gathered for this report has been compiled from a number of different sources. Please refer to each individual source for further information.

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I. Executive Summary

The Texas Department of State Health Services (DSHS) Health Service Region (HSR) 8 includes ten border counties; 142 *colonias* with approximately one in four HSR 8 border residents residing in a *colonia*; and high rates of underinsurance and poverty which contribute to barriers and inequities in health.

Texas Behavioral Risk Factor Surveillance (BRFSS) data are provided throughout this report and demonstrate the following:

- A large disparity in the prevalence of medical insurance coverage with 32% of adults in Val Verde and Maverick counties lacking any medical insurance, resulting in increased numbers seeking health care in Mexico.
- Statistically significant disparities in the prevalence of adults in HSR 8 border counties with diabetes compared to the rest of Texas.
- Elevated prevalence of childhood obesity among adults and school aged children, a result of low consumption of fruits and vegetables and lack of engagement in physical activity.

Based on data available through the DSHS, the following key characteristics were also identified for HSR 8 border populations:

- Hispanics in the HSR 8 border counties had higher rates of cancer of the liver and intrahepatic bile duct, stomach, and the thyroid compared to the rest of Texas.
- Border populations receive late HIV diagnoses with 84% of residents in HSR 8 receiving a late diagnosis compared to 36% in the State. (2003-2007)
- The HSR 8 border has low rates of syphilis and gonorrhea but increasing rates of Chlamydia, similar to what is seen in the State.
- Higher rates of tuberculosis compared to the State (HSR 8 border rate: 26 cases per 100,000 population and Texas rate: 6 cases per 100,000 population) for year 2009
- A continued need to improve low vaccination coverage for the HSR 8 border counties among children.
- Statistically significant lower number of persons aged 65 years or older receiving the pneumonia vaccine in Val Verde and Maverick County compared to the rest of Texas.
- A higher morbidity of Campylobacteriosis, Salmonellosis and Shigellosis compared to other required notifiable conditions in the HSR 8 border region.

In order to address these chronic and infectious diseases which exist because of the particular challenges found in the border region: a rapidly growing region, with a majority Hispanic population, in addition to having lower educational attainment, lower income status, higher rates of unemployment and poverty, and a significant shortage of health care providers, unified prevention efforts are necessary to address these challenges.

II. Introduction

This is the first annual report generated by the Texas Department of State Health Services (DSHS) Health Service Region (HSR) 8-Office of Border Health (OBH). This report is a compilation of health data from a number of various state and federal sources and it is recommended that each documented source be referred for more detailed information regarding each of the topics presented as part of this report. This report is intended to be used as an informational resource for various agencies operating in HSR 8.

The Texas Department of State Health Services (DSHS) Health Service Region (HSR) 8 includes ten counties classified as border counties (Figure 1). Three of these counties (Val Verde, Maverick and Kinney) share a contiguous border with the state of Coahuila in Mexico and the other seven counties (Edwards, Real, Uvalde, Zavala, Frio, Dimmit, La Salle) are classified as border counties based on the La Paz Agreement (1983 Agreement on Cooperation for the Protection and Improvement of the Environment in the Border Area.) The La Paz Agreement defines the U.S.-Mexico border region as extending more than 3,100 kilometers (approximately 2,000 miles) from the Gulf of Mexico to the Pacific Ocean, and 100 kilometers (approximately 62.5 miles) on either side of the border. Based on this definition, there are 32 counties in Texas which are classified as border counties.

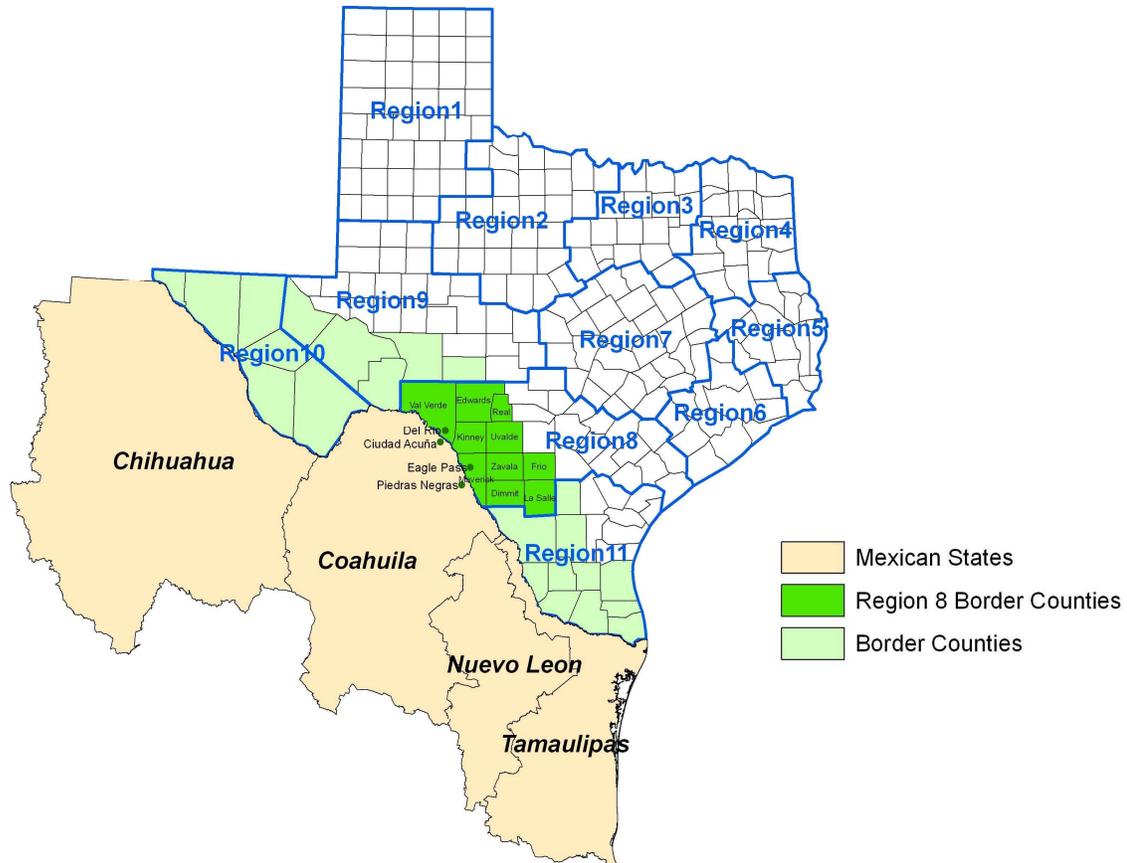
The ten HSR 8 border counties encompass approximately 15, 441 square miles with 177,059 inhabitants (U.S. Census Bureau 2004 Estimates) and 142 *colonias* with 45,486 residents (Office of the Secretary of State, 2005). Based on these population estimates approximately one fourth of residents in HSR 8 border counties reside in a *colonia*. (A *colonia* is defined by the Office of the Secretary of State as a residential area along the Texas-Mexico border that may lack some of the most basic living necessities, such as potable water and sewer systems, electricity, paved roads, and safe and sanitary housing.)

Further, the federal government has designated all ten HSR 8 border counties as medically underserved areas (MUA) and health professional shortage areas (HPSA). MUA are areas designated by the U.S. Department of Health and Human Services-Health Resources and Services Administration (HRSA) as having: too few primary care providers, high infant mortality, high poverty and/or high elderly population. HPSAs are designated by HRSA as having shortages of primary medical care, dental or mental health providers and may be geographic (a county or service area), demographic (low income population) or institutional (comprehensive health center, federally qualified health center or other public facility). Further according to the U.S. Department of Transportation, as of 8/5/2011, all ten HSR 8 border counties are considered economically distressed areas (EDA).

Statistics from the 2000 U.S. Census reveal that 25-30% of the U.S.-Mexico border population is uninsured; inhabitants have less private health insurance (40%, average for U.S., versus 60%, average for border states); and the average yearly income is approximately \$14,000, compared with the U.S. median household income in 2000 of \$41,994. As the busiest crossing in the world, the U.S.-Mexico border is vulnerable to the movement of pathogens, respiratory and gastrointestinal illnesses, HIV/AIDS, and

tuberculosis, as well as a high prevalence of chronic illnesses such as diabetes and heart disease.

Figure 1: HSR 8 Border Counties



III. Behavioral Risk Factor Surveillance System (BRFSS) Overview

The Texas Behavioral Risk Factor Surveillance System (BRFSS) data results are provided throughout this report. The Texas BRFSS initiated in 1987, is a federally funded telephone survey conducted on a monthly basis of randomly selected adult Texans to collect data on lifestyle risk factors contributing to the leading causes of death and chronic diseases. BRFSS is used nationwide under the direction of the Centers for Disease Control and Prevention (CDC) so that survey methods and much of the questionnaire are standardized across all 50 states, three territories, and the District of Columbia. As a result, comparisons can be made to other states and the national average. As part of this report, BRFSS survey results are presented for select health related risk factors and border areas in Texas. These border areas have been divided into three main categories including 1.) HSR 8 Border (10 counties) including the counties of Val Verde, Edwards, Real, Kinney, Uvalde, Maverick, Zavala, Frio, Dimmit, and La Salle 2.) Val Verde and Maverick Counties only 3.)Border (32 counties) including El Paso, Hudspeth, Culberson, Reeves, Pecos, Crockett, Sutton, Terrell, Jeff Davis, Presidio, Brewster, Val Verde, Edwards, Real, Kinney, Uvalde, Maverick, Zavala, Frio, Dimmit, La Salle, McMullen, Webb, Duval, Zapata, Jim Hogg, Brooks, Kenedy, Starr, Hidalgo, Willacy, Cameron 4.)Texas (all 254 counties).

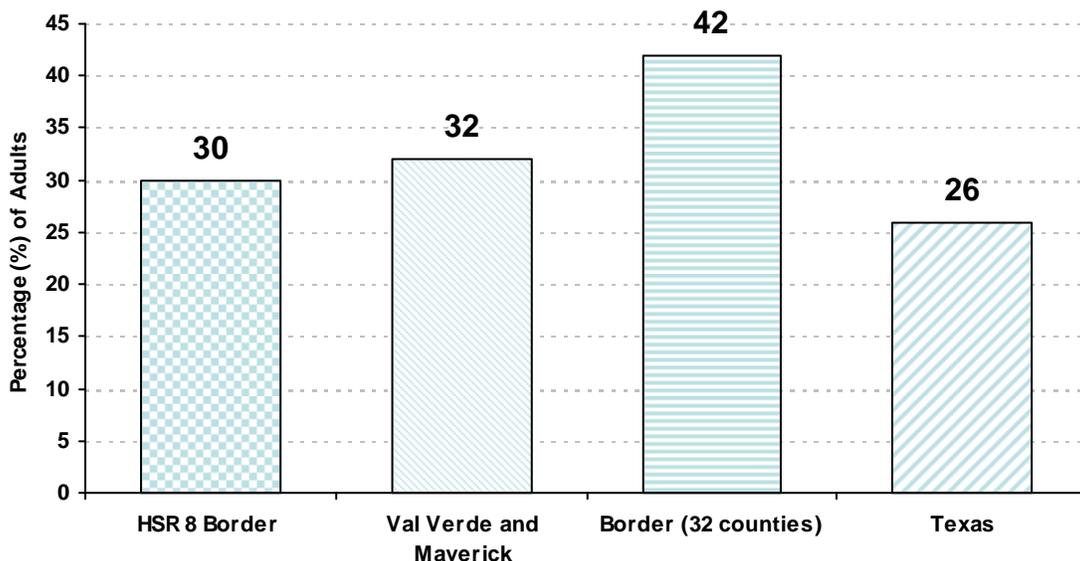
Prevalences are provided by each of these regional areas. Statistically significant findings, applicable to this report, are provided. Statistically significant findings are based on the comparison of the smaller geographical area to the rest of Texas (i.e. the rest of Texas would be “All of Texas” minus “the smaller geographical area”). If the comparison between the smaller regional area and the rest of Texas is significant, the p-value is indicated. (However, not all statistically significant p-values are reported in this report, only those that are applicable to the information presented here.)

IV. Access to Health Care

According to the Centers for Disease Control and Prevention (CDC) (<http://www.cdc.gov/Features/Uninsured/>), health insurance coverage improves access and quality of medical care and can contribute to the overall health of Americans. Consequently, health insurance coverage, access to health care and appropriate use of the health care system, can increase quality and years of healthy life and have a positive and direct impact on rates of cancer, chronic disease management, and health related behaviors (1). Literature suggests that lack of health insurance coverage and consequent delay and limited access to health care among Hispanics contribute to their age adjusted potential for life lost before 75 years of age, poor health status in general, and high rates of morbidity and mortality (2). Further, Hispanics living in the border region are more likely to experience barriers to access to and use of health care services than any other Hispanic group in the United States (1).

According to the BRFSS data collected from 2007-2009, 32% of adults in Val Verde and Maverick counties and 42% among the 32 Texas-Mexico border counties lacked any medical insurance (Figure 2) (3). The disparity in the prevalence of medical insurance coverage between adults in the border region and the *rest* of Texas is statistically significant ($p < 0.0001$). (3)

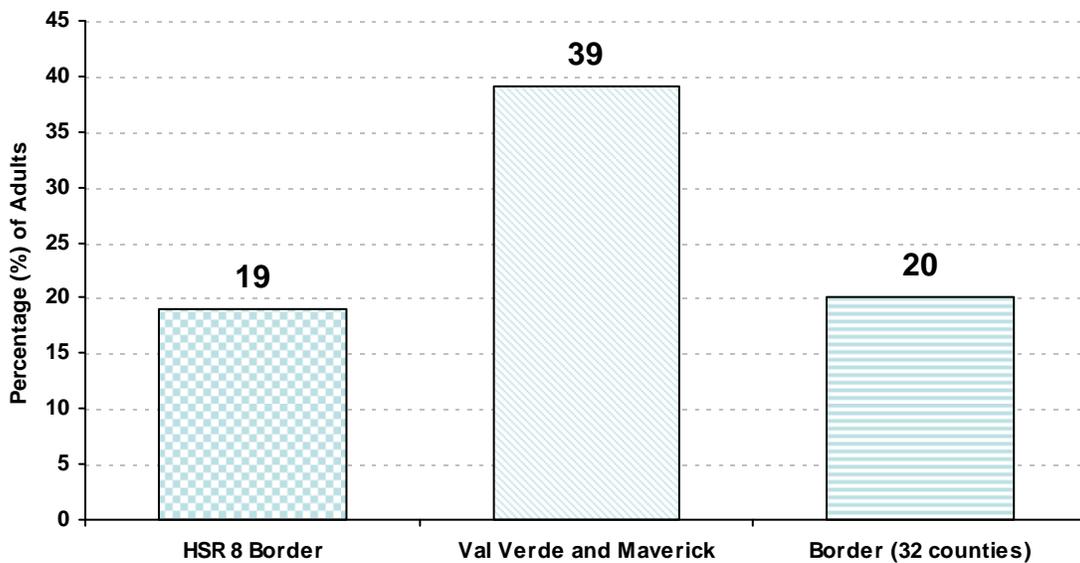
Figure 2: Proportion of Adults Aged 18 Years and Over with No Medical Insurance Including Medicare or Medicaid, Texas, BRFSS, 2007-2009 (3)



Given the high proportion of border residents lacking medical insurance coverage and inability to afford the rising cost of health care in the United States, millions of individuals cross into Mexico to receive medical treatment, dental services, or to purchase medications. The lower cost of procedures and medications in Mexico makes it an attractive alternative for low-income populations in the United States, especially those residing along the Texas-Mexico border.

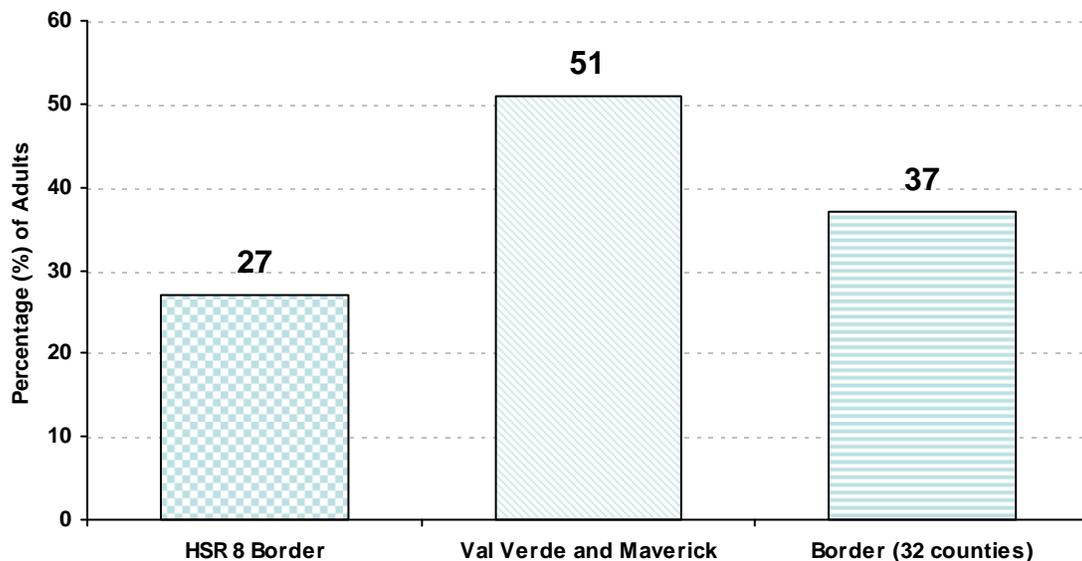
According to 2007 BRFSS data collected, a disproportionate number of adults in Val Verde and Maverick counties sought medical care in Mexico when compared to other border areas in Texas (Figure 3).

Figure 3: Proportion of Adults Aged 18 Years and Over Crossing to Mexico for Medical Treatment (past 12 months), Texas, BRFSS, 2007 (3)



BRFSS data for year 2007 also indicated that over half (51%) of adults in Val Verde and Maverick Counties lived in a household that purchased medication from Mexico in the past 12 months compared to 37% among the 32 border counties (Figure 4).

Figure 4: Proportion of Adults Aged 18 Years and Over Living in a Household that Bought Medications in Mexico (past 12 months), Texas, BRFSS, 2007 (3)



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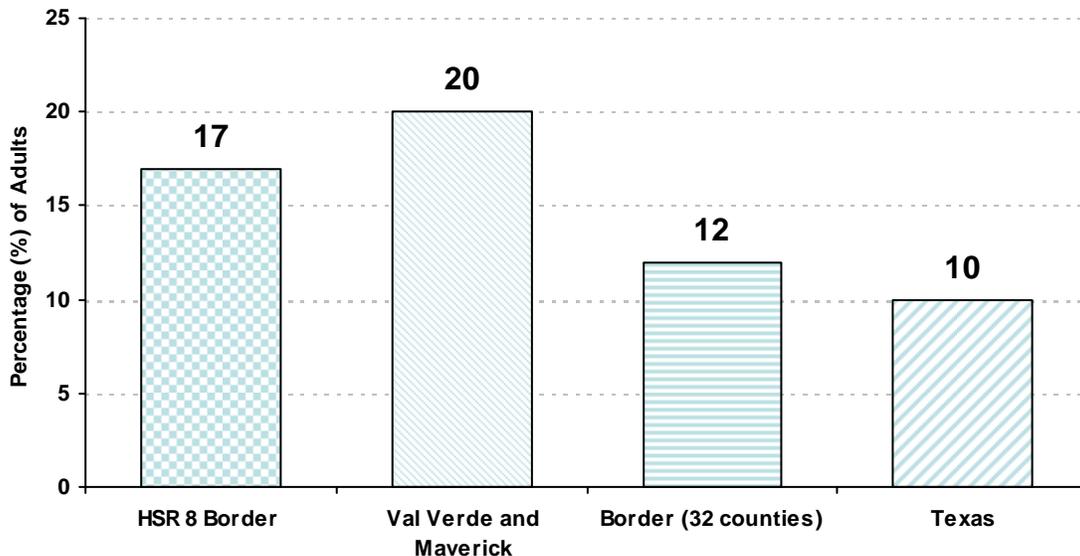
V. Overweight, Obesity, and Diabetes

According to the CDC, obesity is associated with increased health-care costs, reduced quality of life, and increased risk for premature death. Common morbidities associated with obesity include coronary heart disease, hypertension and stroke, type 2 diabetes, and certain types of cancer (1, 2). Because of the high prevalence and incidence of obesity and type-2 diabetes nationwide, and their long-term health implications for the U.S. population, the CDC has classified obesity and type-2 diabetes as major public health priorities (3). Obesity and diabetes are of concern especially since they occur at high rates among Hispanic populations, which coincidentally make up the majority of the population along the HSR 8 border.

From 2006-2008, United States BRFSS data indicated that close to one third (32%) of Hispanics in Texas were obese, compared to only 24% of non-Hispanic White Texans (4). Based on national BRFSS data from 2006-2008, the CDC estimates 26.3%-27.7% of adults 20 years of age or older to be obese for all HSR 8 border counties except Uvalde and Real which had a lower proportion of obesity (3). Further the CDC estimates based on national BRFSS data from 2006-2008, that 8.2-9.0% of adults 20 years or older are diabetic for all HSR 8 border counties except for Maverick and Val Verde, which had a higher proportion of diabetics at 9.1-10.5% (3).

This higher proportion of diagnosed diabetes in Maverick and Val Verde counties was also evident in Texas BRFSS data from 2007-2009. The diabetes prevalence rate was nearly twice as high in Maverick and Val Verde counties when compared to Texas (19.9% vs. 9.8%) (Figure 5) (5). The disparity in the prevalence of diabetes between adults in Maverick and Val Verde counties and the *rest* of Texas is statistically significant ($p=0.0002$) (5). Further, the prevalence of diabetes was higher among adults living in HSR 8 border counties when compared to Texas (17.0% vs. 9.8%) (Figure 5) (5). The disparity in the prevalence of diabetes between adults in HSR 8 border counties and the *rest* of Texas is statistically significant ($p=0.009$) (5). The border as a whole, also had a statistically significant higher proportion of adults to have been diagnosed as diabetic compared to the rest of Texas ($p<0.0001$) (5).

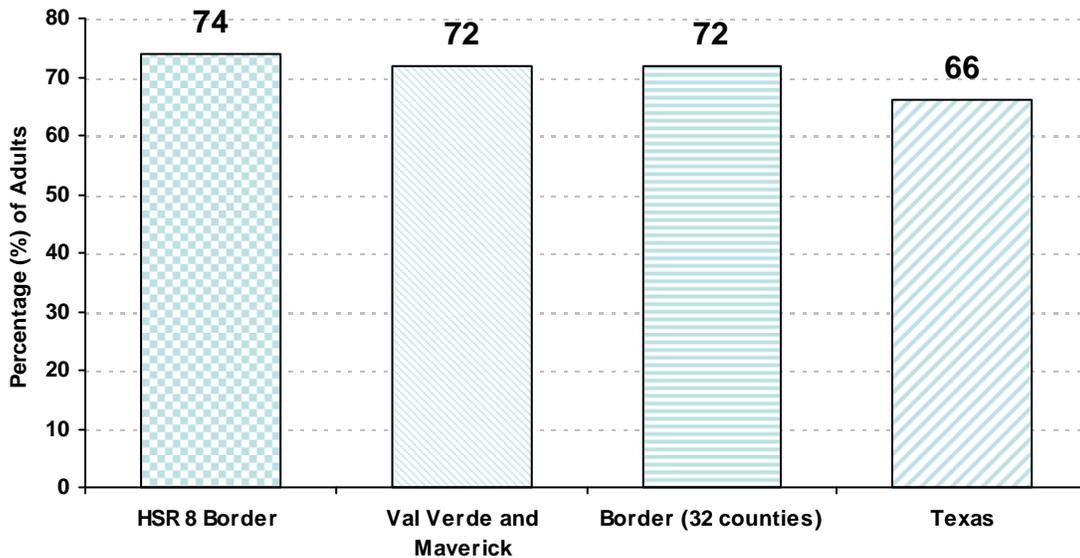
Figure 5: Doctor Diagnosed Diabetes for Adults Aged 18 Years and Over, Texas, BRFSS, 2007-2009 (5)



The prevalence and incidence of obesity and diabetes continues to increase given the high rates of overweight persons. Based on 2009 BRFSS data, DSHS estimates that 67% of Texas adults are either overweight or obese. According to 2007-2009 BRFSS data, there is a higher prevalence of adults living along the 32-county Texas-Mexico border who are overweight or obese, compared to the rest of Texas (72% vs. 66%) (Figure 6) (5). The

higher prevalence of adults living in the Texas-Mexico border is statistically significant when compared to the *rest* of Texas (p=0.0001) (5).

Figure 6: Proportion of Adults Aged 18 Years and who are Overweight or Obese (BMI \geq 25), Texas, BRFSS, 2007-2009 (5)



To further complicate the problem, the prevalence of *childhood* obesity was greater in Texas in 2004-2005 than the U.S. rates reported for the 2003-2004 National Health and Nutrition Examination Survey (NHANES) (6, 7). Among all counties in HSR 8 the overall prevalence of overweight and obesity in HSR 8 schoolchildren was 47% for fourth-graders, 32% for eighth-graders and 38% for eleventh-graders in 2004-2005 (6). The overall prevalence of overweight and obesity in Texas schoolchildren was 42% for fourth-graders, 39% for eighth-graders and 36% for eleventh-graders in 2004-2005 (6).

Some of the risk factors which contribute to increased trends in overweight and obesity include high caloric diets, lack of physical activity and some social and economic factors.

Diet

High consumption of sugar sweetened beverages (SSBs) has been associated with obesity. Many longitudinal studies, but not all, have shown an association between SSBs and various measures of increased body fat (8-15). Fruits and vegetables, as part of a healthy diet, are important for optimal child growth, weight management, and chronic disease prevention. Fewer than 1 in 10 American adolescents and adults consume recommended amounts of fruits & vegetables (16). The national *Healthy People 2010* fruit objective and vegetable objective are to increase the proportion of Americans aged at least 2 years consuming daily \geq 2 servings of fruit to 75% (objective 19-5) and \geq 3 servings of vegetables to 50% (objective 19-6), respectively (17).

Despite these recommendations, in Texas, only 14% of adults and 8% of adolescents consumed the recommended number of fruits and vegetables (Figure 7).

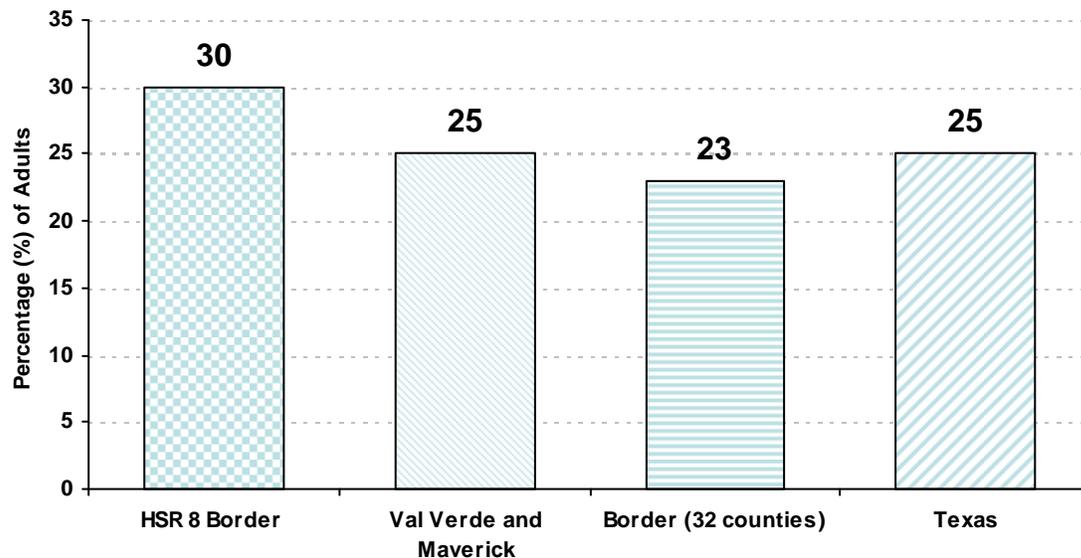
Figure 7: Consumption of Fruits and Vegetables by Adults and Adolescents, United States and Texas, 2007

State	Adults						Adolescents					
	Fruit (2+ Daily)	95% CI	Vegetable (3+ Daily)	95% CI	Both Fruit (2+Daily) and Vegetable (3+Daily)	95% CI	Fruit (2+ Daily)	95% CI	Vegetable (3+ Daily)	95% CI	Both Fruit (2+Daily) and Vegetable (3+Daily)	95% CI
United States	32.8	32.5, 33.2	27.4	27.1, 27.7	14.0	13.8, 14.2	32.2	30.2, 34.2	13.2	12.0, 14.5	9.5	8.6, 10.6
Texas	29.1	28.0, 30.3	30.0	28.9, 31.1	14.3	13.5, 15.2	28.1	26.4, 29.8	11.7	10.7, 12.8	8.3	7.6, 9.1

Data sources: 2007 BRFSS, 2007 YRBSS

County specific data available through the 2007 and 2009 BRFSS indicate that a little less than one third (30%) of adults residing in the HSR 8 border counties actually consumed the recommended 5 daily servings of fruits and vegetables (Figure 8) (5). (Five cups a day is the appropriate target for most moderately active adults and teens.)

Figure 8: Proportion of Adults Aged 18 Years and Over Consuming 5 or More Daily Servings of Fruits and Vegetables, Texas, BRFSS, 2007-2009 (5)



Physical Activity

Extensive research shows that regular physical activity is important for preventing and treating obesity and other chronic diseases (e.g., cardiovascular disease, diabetes mellitus, breast cancer, colon cancer), disabling conditions (e.g., osteoporosis, arthritis) and risk factors for chronic disease (e.g., hypertension, high cholesterol) (18). Health benefits from regular physical activity occur for children and adolescents, young and middle aged

adults, older adults, and those in every studied racial and ethnic group (19). In the United States, 35.5% of adults do not engage in the recommended levels of physical activity for health benefits (20) and 25.4% of adults report no leisure-time activity (19) (Figure 9). Similar patterns exist in Texas with 36% of adults not engaging in the recommended levels of physical activity for health benefits (20) and 29% of adults reporting no leisure-time activity (19) (Figure 9).

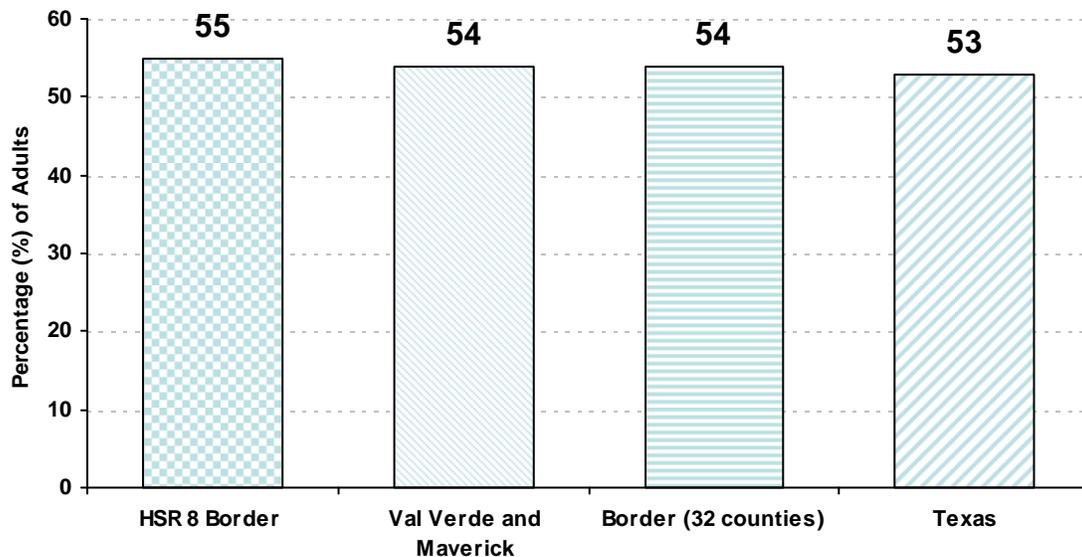
Figure 9: BRFSS and YRBSS Data on Physical Activity, United States and Texas, 2010

State	Adults			Students in Grades 9-12	
	Physically Active (1)	Highly Active (1)	No Leisure-time physical activity (1)	Physically Active(2)	Daily Physical Education (2)
United States	64.5	43.5	25.4	17.1	30.3
Texas	63.7	43.0	28.8	25.7	40.5

(1) Weighted percentage; (2) National percentage from national YRBSS survey; state percentages from state YRBSS surveys; both are weighted percentages

Based on 2007 and 2009 BRFSS data, similar patterns were noted. 55% of adults residing in the HSR 8 border counties did not engage in the recommended physical activity levels (Figure 10) (5).

Figure 10: Proportion of Adults Aged 18 Years and Over not Engaging in the Recommended level of Moderate or Vigorous Physical Activity*, Texas, BRFSS, 2007 & 2009 (5)



*Moderate physical activity is 30 minutes for five days and vigorous physical activity is 20 minutes for three days per week.

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VI. Cancer

Following are the incidence rates of the ten leading causes of cancer from the general Texas population compared to the incidence rates for the HSR 8 border counties (Figure 11) (I). The rates for Texas were higher for all cancer sites except for the kidney and renal pelvis site. (I). (Among persons of the general Texas population and the HSR 8 border counties, this difference does not appear to be statistically significant given the overlapping confidence intervals for both geographic regions.) (I).

Figure 11: Number of Cases Diagnosed, Age Adjusted by Cancer Site Incidence Rates, 95% Confidence Intervals, General Populations in Texas, 2004-2008 Average Annual Rates Texas Statewide—Texas Leading Sites (I).

Cancer Sites (Top 10 Sites in Texas)	Texas				HSR 8 Border Counties			
	Cases	Rate	95% CI		Cases	Rate	95% CI	
			Lower	Upper			Lower	Upper
Prostate (Males)	64,545	142.1	141.0	143.3	463	114.8	104.5	125.7
Breast (Females)	63,950	113.2	112.4	114.1	390	85.6	77.2	94.6
Lung and Bronchus	63,548	63.9	63.4	64.4	366	40.7	36.6	45.1
Colon and Rectum	45,862	45.2	44.7	45.6	359	40.6	36.5	45.1
Non-Hodgkin Lymphoma	19,248	18.8	18.5	19.0	121	13.6	11.3	16.3
Kidney and Renal Pelvis	17,684	16.9	16.7	17.2	157	17.8	15.1	20.8
Urinary Bladder	16,238	16.5	16.2	16.7	101	11.1	9.1	13.5
Melanoma of the Skin	14,236	13.5	13.3	13.8	59	6.9	5.2	8.9
Leukemia	13,536	13.0	12.8	13.2	89	9.9	7.9	12.2
Pancreas	11,161	11.2	11.0	11.4	78	8.6	6.8	10.8

Further, the top ten leading cancer sites among the *general* Texas population were the same as for *non-Hispanic Whites* from the general Texas population (I). When comparing incidence rates for the top ten leading cancer sites among non-Hispanic Whites in Texas to Hispanics in the HSR 8 border counties, the rates were higher among the non-Hispanic Whites in Texas, except for the kidney and renal pelvis site (I). For cancer of the kidney and renal pelvis site, the incidence rate among Hispanics in the 32 border counties (Incidence Rate: 17.8; 95% CI: 16.1-16.7) may be statistically higher to the incidence rate among non-Hispanic Whites in Texas (Incidence Rate: 16.4; 95% CI: 16.8-18.8) given the non-overlapping confidence intervals (I).

In comparing the ten leading cancer sites among the general Texas population (Figure 11) to the ten leading cancer sites among Hispanics in HSR 8 border counties (Figure 12), the top ten leading cancer sites were not entirely the same for both groups. Hispanics in the HSR 8 border counties had higher rates of cancer of the liver and intrahepatic bile duct, higher rates of cancer to the stomach, and higher rates of cancer to the thyroid. (These cancers were not among the top ten leading cancers for the general Texas population.) Hispanics in the HSR 8 border counties reported lower rates of cancer to the pancreas, lower rates of leukemia, and lower rates of melanoma of the skin which were actually among the leading cancer sites in the general Texas population. The rates of liver and intrahepatic bile duct cancer and stomach cancer were over twice as high among HSR 8 border Hispanics and Hispanics in Maverick and Val Verde Counties when compared to non-Hispanic Whites from the general Texas population (I). These higher rates may be statistically significant given the non-overlapping confidence intervals.

Figure 12: Number of Cases Diagnosed, Age Adjusted by Cancer Site Incidence Rates, 95% Confidence Intervals, General Populations in Texas, 2004-2008 Average Annual Rates Texas Statewide--Ten Leading Sites among HSR 8 Border Hispanics (1)

Cancer Sites (Top 10 Sites in HSR 8 Border Hispanics)	Texas Non-Hispanic Whites				HSR 8 Border Counties Hispanics				Maverick and Val Verde Counties Hispanics			
	Cases	95% CI			Cases	95% CI			Cases	95% CI		
		Rate	Lower	Upper		Rate	Lower	Upper		Rate	Lower	Upper
Prostate (M)	43,030	139.8	138.4	141.1	311	113.9	101.6	127.3	197	118.0	102.1	135.6
Colon and Rectum	29,710	44.5	44.0	45.0	264	42.0	37.1	47.4	140	37.0	31.1	43.6
Breast (F)	42,683	121.0	119.9	122.2	261	77.6	68.4	87.7	147	72.0	60.8	84.7
Lung and Bronchus	47,922	71.8	71.2	72.5	198	31.3	27.1	35.9	105	27.0	22.0	32.6
Kidney and Renal Pelvis	10,944	16.4	16.1	16.7	115	18.2	15.0	21.8	69	18.2	14.2	23.1
Non-Hodgkin Lymphoma	13,139	20.1	19.7	20.4	96	14.9	12.1	18.2	61	15.5	11.9	20.0
Liver & Intrahepatic Bile Duct	3,969	5.9	5.7	6.1	80	12.6	10.0	15.7	55	14.1	10.6	18.4
Stomach	3,270	4.9	4.7	5.1	66	10.3	8.0	13.1	37	9.5	6.7	13.1
Thyroid	6,843	11.1	10.8	11.3	63	10.2	7.8	13.0	32	8.5	5.8	12.0
Urinary Bladder	12,890	19.3	19.0	19.7	60	9.5	7.2	12.2	37	9.5	6.7	13.1

Section References

(1) Texas Department of State Health Services, Cancer Epidemiology and Surveillance Branch, Texas Cancer Registry, Incidence-Texas, 1995-2008, Cut-off 11-24-2010, SEER*Prep 2.4.3

VII. Human Immunodeficiency Virus (HIV)

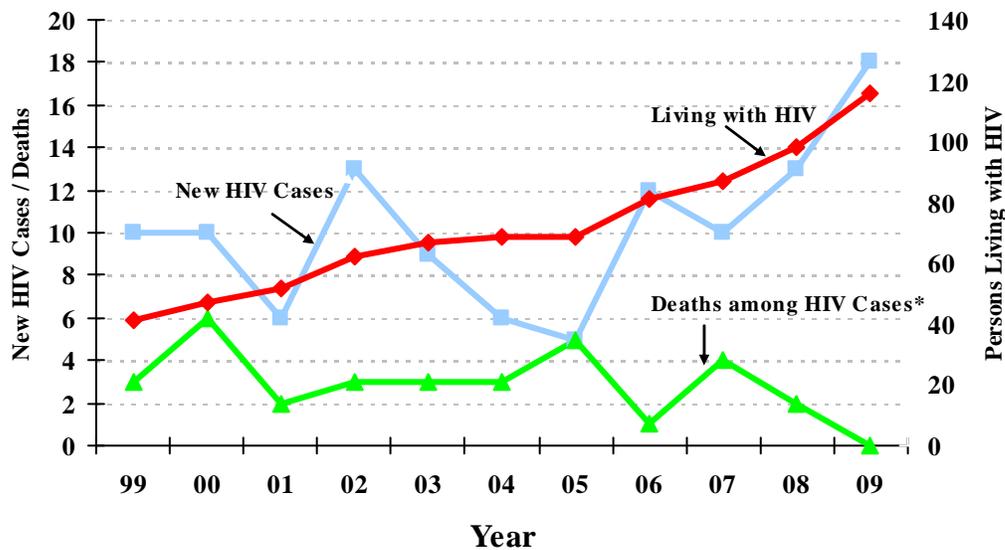
All data provided in this section has been provided by the Texas Department of State Health Services, TB/HIV/STD Epidemiology and Surveillance Branch.

In 1980, the first Texas resident was diagnosed with AIDS. During the three decades since that time, over 109,000 Texans have been diagnosed with HIV, and among those cases, more than 42,000 have died. At the end of 2009, there were nearly 66,000 Texans known to be living with HIV. In contrast, for the HSR 8 Border counties, 202 residents

have been diagnosed with HIV as of the end of 2009. Of these, 86 persons have died and 116 residents are known to be living with HIV as of the end of 2009. These 116 HSR 8 Border county persons living with HIV/AIDS (PLWHA) represent less than 1% of the entire Texas population of PLWHA.

The HSR 8 border counties have also experienced an increase in the number of PLWHA, similar to what is being seen in Texas statewide (Figure 13). Since 2002, the number of PLWHA in the HSR 8 Border counties has increased steadily, about 10% each year (slightly higher than the increase seen for the State at 4%). For the HSR 8 Border counties, the number of persons living with HIV/AIDS in 2009 (n=116) was about 87% higher than in 2002 (n=62).

Figure 13: Newly Diagnosed HIV Cases, Deaths, and Persons living with HIV, HSR 8-Border Counties, 1999-2009



Each year the HSR 8 border counties as a whole had an HIV diagnoses case rate lower than the State (Figure 14). The HSR 8 border counties with higher HIV diagnoses case rates compared to Texas were Frio and Kinney counties. However, Kinney County had only one reported case in 2009 and the majority of cases from Frio County were detainees from the U.S. Immigration and Customs Enforcement Detention Center.

Figure 14: New HIV Infection Diagnoses by County of Residence, 2002-2009

County	2002		2003		2004		2005		2006		2007		2008		2009	
	Cases	Rate*														
Dimmit	0	0.0	0	0.0	0	0.0	2	19.8	0	0.0	0	0.0	2	20.1	0	0.0
Kinney	0	0.0	1	29.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	29.0
Maverick	5	10.3	3	6.0	1	2.0	3	5.8	3	5.8	3	5.7	4	7.6	2	3.7
Val Verde	2	4.3	3	6.5	1	2.1	0	0.0	2	4.2	2	4.2	0	0.0	1	2.0
Edwards	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	52.1	0	0.0
Frio	3	18.2	0	0.0	1	6.2	0	0.0	5	30.6	1	6.1	1	6.1	10	56.2
La Salle	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Real	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Uvalde	2	7.8	2	7.7	1	3.8	0	0.0	0	0.0	1	3.9	2	7.8	1	3.6
Zavala	1	8.7	0	0.0	2	17.1	0	0.0	2	17.1	3	25.3	2	16.9	0	0.0
HSR 8 Border Counties	13	4.9	9	5.0	6	3.1	5	2.6	12	5.8	10	4.5	12	11.1	15	9.5
Texas	4,998	22.9	4,329	19.6	4,398	19.6	4,326	18.9	3,957	16.8	4,098	17.1	4,162	17.1	4,355	17.5

*Rates represent cases per 100,000 population.

Data from the 2009 Annual Report-TB/HIV/STD Epidemiology and Surveillance Branch

According to data available as of November 2010 through the DSHS, there were a total of 18 newly diagnosed persons for year 2009 for HSR 8. Based on this available data, the following characteristics were found for HSR 8 border county residents newly diagnosed with HIV:

- 83% of newly diagnosed persons were male
- 88% of newly diagnosed persons were Hispanic
- 17% were 15-24 year olds, 17% were 25-34 year olds, 44% were 35-44 year olds, 22% were 45+ years of age
- Mode of transmission: 53% were men who have sex with men (MSM); 18% were MSM+intravenous drug users (IDU); 29% had high risk heterosexual contact with a person known to have HIV or a higher risk of acquiring HIV

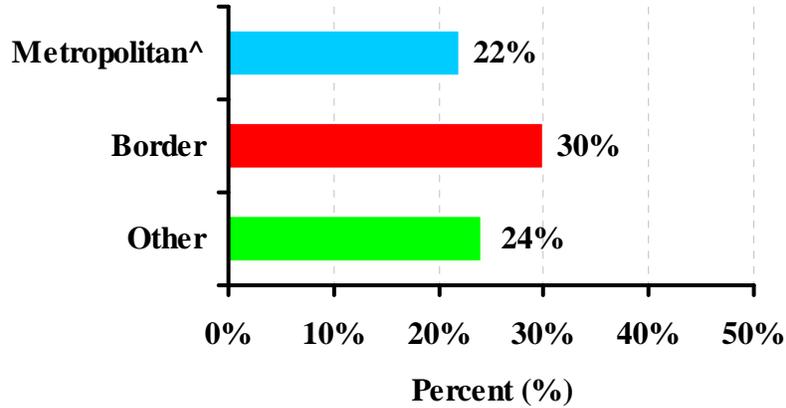
Late HIV Diagnoses

In 2009, the Texas Department of State Health Services estimated there were about 66, 126 persons living with HIV. However, the CDC estimates that one in five persons living with HIV do not know of their infection. For HSR 8 border counties, this means that about 31 residents are infected with HIV, but do not know of their infection. For Texas, this means that about 17, 582 Texans are infected with HIV, but do not know of their infection. Those who are diagnosed often find out after years of living with HIV, which is especially true among Hispanic and border populations.

In HSR 8, 84% of residents received a late HIV diagnoses from 2003-2007 compared to only 36% in the State. And persons living in other Texas border counties were also more

likely to receive a late diagnosis when compared to persons living in other counties in Texas (Figure 15).

Figure 15: Late HIV Diagnoses* by Geographic Area, Texas, 2009



*AIDS diagnosis occurred within 1 month of HIV diagnosis
[^]Dallas, Harris, Bexar, Tarrant, and Travis counties

VIII. Sexually Transmitted Diseases (STDs)

The case rates among sexually transmitted diseases (syphilis, gonorrhea, and Chlamydia) were highest for Chlamydia both in the State and for the HSR 8 border counties (Figure 16 and Figure 17).

Figure 16: STD Case Rates, Texas, 2003-2009

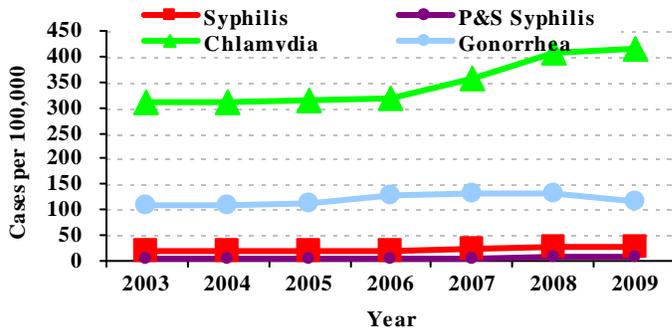
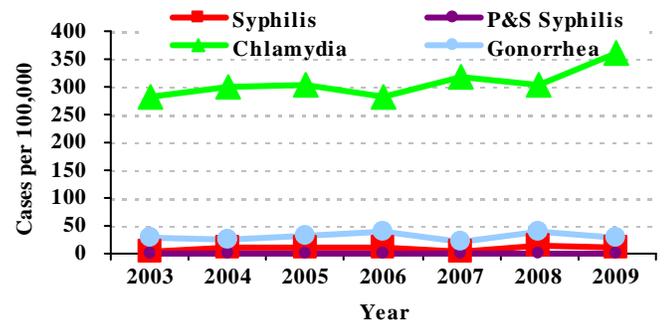


Figure 17: STD Case Rates, R8 Border, 2003-2009



Following are the case numbers and rates (per 100,000 population) for sexually transmitted diseases reported from 2002 through 2009 (Figure 18-Figure 21). This data was provided by the Texas Department of State Health Services and is dated November 2010.

Figure 18: P&S Syphilis Cases and Rates by County of Residence, 2002-2009

County	2002		2003		2004		2005		2006		2007		2008		2009	
	Cases	Rate*														
Dimmit	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Kinney	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Maverick	0	0.0	0	0.0	1	2.0	0	0.0	1	1.9	0	0.0	0	0.0	0	0.0
Val Verde	0	0.0	1	2.2	0	0.0	2	4.2	1	2.1	2	4.2	0	0.0	0	0.0
Edwards	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Frio	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
La Salle	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	16.8	0	0.0
Real	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Uvalde	0	0.0	1	3.8	1	3.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Zavala	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
HSR 8 Border	0	0.0	2	1.1	2	1.1	2	1.1	2	1.1	2	1.1	1	0.6	0	0.0

*Rates represent cases per 100,000 population.

Figure 19: Total Syphilis Cases and Rates by County of Residence, 2002-2009

County	2002		2003		2004		2005		2006		2007		2008		2009	
	Cases	Rate*														
Dimmit	1	9.9	0	0.0	1	9.8	2	19.8	1	10.0	0	0.0	0	0.0	0	0.0
Kinney	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Maverick	4	8.2	1	2.0	10	19.7	2	3.9	10	19.2	3	5.7	10	19.0	8	14.7
Val Verde	0	0.0	2	4.3	3	6.3	10	21.2	6	12.7	4	8.4	10	20.9	5	10.1
Edwards	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Frio	3	18.2	2	12.3	1	6.2	3	18.3	1	6.1	0	0.0	0	0.0	4	22.5
La Salle	0	0.0	0	0.0	0	0.0	1	16.7	2	33.8	1	16.9	2	33.5	1	16.6
Real	0	0.0	0	0.0	0	0.0	2	61.4	1	30.3	0	0.0	0	0.0	0	0.0
Uvalde	1	3.9	3	11.5	1	3.8	1	3.7	1	3.9	1	3.9	1	3.9	1	3.6
Zavala	2	17.4	0	0.0	1	8.5	1	8.6	0	0.0	0	0.0	1	8.4	2	15.7
HSR 8 Border	11	6.4	8	4.6	17	9.6	22	12.4	22	12.4	9	5.0	24	13.4	21	11.2

*Rates represent cases per 100,000 population.

Figure 20: Gonorrhea Cases and Rates by County of Residence, 2002-2009

County	2002		2003		2004		2005		2006		2007		2008		2009	
	Cases	Rate*														
Dimmit	2	19.9	2	19.7	3	29.5	13	129.0	15	149.5	7	70.6	6	60.2	4	40.7
Kinney	0	0.0	2	59.8	0	0.0	0	0.0	1	30.1	0	0.0	0	0.0	1	29.0
Maverick	6	12.3	1	2.0	10	19.7	4	7.8	9	17.3	7	13.3	28	53.1	8	14.7
Val Verde	7	15.2	7	15.1	8	16.9	17	36.0	12	25.3	11	23.1	11	23.0	16	32.2
Edwards	0	0.0	1	51.1	1	48.6	0	0.0	0	0.0	0	0.0	0	0.0	1	45.2
Frio	6	36.5	11	67.5	9	55.7	9	55.0	15	91.9	4	24.4	4	24.5	5	28.1
La Salle	0	0.0	1	17.1	3	50.4	3	50.2	3	50.7	2	33.8	3	50.3	3	49.8
Real	0	0.0	0	0.0	0	0.0	0	0.0	2	60.7	1	30.4	0	0.0	0	0.0
Uvalde	3	11.6	18	69.0	7	26.3	9	33.7	9	35.0	4	15.5	8	31.1	10	36.1
Zavala	4	34.7	8	70.0	1	8.5	2	17.1	7	59.9	4	33.7	8	67.5	7	55.0
HSR 8 Border	28	16.2	51	29.2	42	23.7	57	32.0	73	41.1	40	22.4	68	38.0	55	29.4

*Rates represent cases per 100,000 population.

Figure 21: Chlamydia Cases and Rates by County of Residence, 2002-2009

County	2002		2003		2004		2005		2006		2007		2008		2009	
	Cases	Rate*														
Dimmit	30	297.8	33	325.7	32	314.8	43	426.5	36	358.8	45	454.0	44	441.6	37	376.9
Kinney	5	144.1	6	179.3	6	179.9	8	239.8	4	120.2	3	91.0	2	61.1	5	145.1
Maverick	95	195.3	73	146.0	108	213.3	100	195.0	115	220.5	97	184.7	109	206.6	158	290.1
Val Verde	130	282.5	129	277.6	149	315.1	150	317.3	161	339.9	158	331.3	157	328.1	192	387.0
Edwards	2	95.3	4	204.3	2	97.1	1	48.6	0	0.0	3	158.6	2	104.1	2	90.5
Frio	55	334.5	60	368.2	36	222.8	46	280.9	56	343.1	50	305.3	61	373.5	81	454.9
La Salle	10	171.7	21	358.1	15	252.2	35	585.9	26	439.6	14	236.6	24	402.5	13	215.6
Real	3	97.0	4	129.9	4	126.3	4	122.9	3	91.0	9	273.2	10	303.8	15	452.2
Uvalde	88	341.6	116	444.7	138	519.1	118	442.5	75	291.6	119	462.0	80	310.5	109	393.6
Zavala	40	347.2	46	402.6	40	341.9	38	325.8	24	205.2	68	572.7	57	481.3	63	494.7
HSR 8 Border	458	264.8	492	281.7	530	299.4	543	305.1	500	281.3	566	317.1	546	305.1	675	360.7

*Rates represent cases per 100,000 population.

Section References

Texas Department of State Health Services, TB/HIV/STD Epidemiology and Surveillance Branch, Data Requests from 11/2010-7/2011.

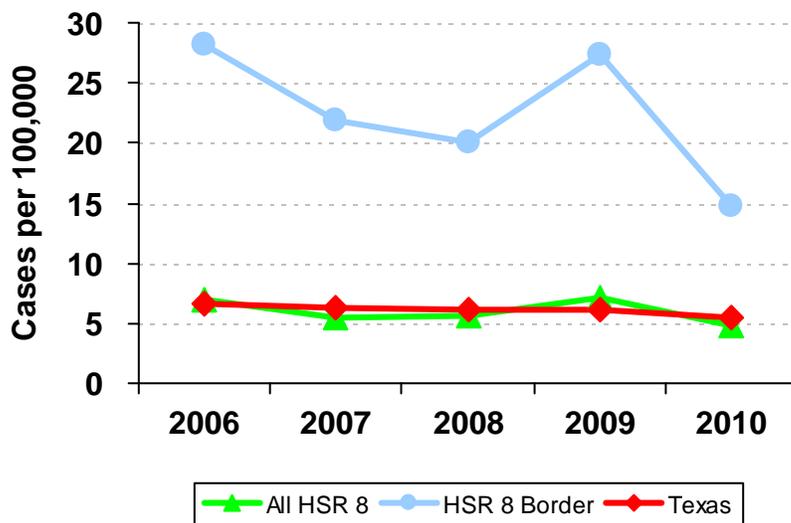
IX. Tuberculosis

All data provided in this section has been provided through the Texas Department of State Health Services, TB/HIV/STD Epidemiology and Surveillance Branch.

According to the CDC, in the United States, the rates of tuberculosis have gradually been declining since 1992. In 2009 (3.8 cases per 100,000 persons and 11,545 reported cases), the case rate declined by approximately 11.3% from year 2008. Despite this decrease, the CDC reports that the proportion of total cases occurring in foreign born persons has increased every year from 1993-2008 and remained at 59% from 2008 to 2009. In Texas, the Texas Department of State Health Services reported that 53% of all TB cases in 2009 were foreign-born and Texas reported a case rate of 3.2 per 100,000 population among the foreign born population.

The Texas-Mexico border has increased rates of TB. The rate of TB in the HSR 8 border counties for year 2009 was 11.2 and rate of TB for the State of Texas was 6.0 (Figure 22). Factors that may contribute to the increased rates include: large volume of population flow, the lack of access to health care among migrants, the association of TB with other diseases/problems (e.g. HIV/AIDS, alcohol and drug use), the labor and housing conditions of migrants, as well as other social and economic factors.

Figure 22: Tuberculosis Case Rates, Texas and HSR 8, 2006-2010



In 2009, among the HSR 8 border counties, Frio County had the highest rate of TB (123.5) (Figure 23) however this high rate of TB is attributed to the high rates of TB among detainees at the Immigration and Customs Enforcement (ICE) detention facility. La Salle County had the second highest rate of TB, however only four cases were reported in this county (Figure 23).

Figure 23: Tuberculosis Case Counts and Case Rates, HSR 8 Border Counties and Texas, 2009

	2009 New Diagnoses		U.S. Born Cases		Foreign Born Cases	
	Number	Rate*	Number	Rate*	Number	Rate*
Dimmit	0	0.0	0	0.0	0	0.0
Edwards	0	0.0	0	0.0	0	0.0
Frio	22	123.5	1	5.6	21	117.9
Kinney	0	0.0	0	0.0	0	0.0
La Salle	4	66.3	0	0.0	4	66.3
Maverick	2	3.7	1	1.8	1	1.8
Real	0	0.0	0	0.0	0	0.0
Uvalde	3	10.8	3	10.8	0	0.0
Val Verde	17	34.3	7	14.1	10	20.2
Zavala	0	0.0	0	0.0	0	0.0
HSR 8 Border Counties	48	25.6	12	6.4	36	19.2
Val Verde and Maverick Only	19	18.3	8	7.7	11	10.6
32 Border Counties Combined*	288	11.2	87	3.4	201	7.8
Texas Total	1501	6.0	703	2.8	798	3.2

*Rates represent cases per 100,000 population.

From 2005-2009, there were a total of 196 new cases of TB reported in HSR 8 border counties, of these cases 73% (144/196) were among foreign born persons (Figure 24). However among the foreign born cases, one in four cases was among persons living in the U.S. for at least five years.

Figure 24: New Diagnoses by Area, Cases by Country of Birth, and Years Living in U.S. among Foreign born Populations, Texas and HSR 8 Border Counties, 2005-2009

	New Diagnoses (Number)	U.S. Born Cases (Number)	Foreign Born Cases (Number)	Number of Years Living in U.S. among Foreign Born Cases			
				<1 year	1-4 years	>=5 years	Unknown
Dimmit	3	1	2	0	1	1	0
Edwards	0	0	0	0	0	0	0
Frio	83	5	78	36	33	9	0
Kinney	3	1	2	0	2	0	0
La Salle	17	2	15	9	4	2	0
Maverick	32	16	16	1	4	11	0
Real	0	0	0	0	0	0	0
Uvalde	7	7	0	0	0	0	0
Val Verde	46	17	29	12	5	12	0
Zavala	5	3	2	0	1	1	0
HSR 8 Border Counties	196	52	144	58	50	36	0
Val Verde and Maverick Only	78	33	18	1	5	12	0
32 Border Counties Combined*	1479	474	1005	211	236	557	1
Texas Total	7598	3803	3795	431	1011	2338	15

Among the foreign born cases in the HSR 8 border counties, less than half (46%; 66/144) of foreign born cases were born in Mexico (Figure 25).

Figure 25: Number of Tuberculosis Cases Born in Mexico and Years Residing in U.S, Texas and HSR 8 Border Counties, 2005-2009

County/Area	Total Cases born in Mexico	Number of Years Living in U.S. among Mexican Born Cases			
		<1 year	1-4 years	>=5 years	Unknown
Dimmit	2	0	1	1	0
Edwards	0	0	0	0	0
Frio	10	5	1	4	0
Kinney	2	0	2	0	0
La Salle	14	9	3	2	0
Maverick	14	1	2	11	0
Real	0	0	0	0	0
Uvalde	0	0	0	0	0
Val Verde	22	6	4	12	0
Zavala	2	0	1	1	0
HSR 8 Border Counties	66	21	14	31	0
Val Verde and Maverick Only	16	1	3	12	0
32 Border Counties Combined*	783	107	140	535	1
Texas Total	1970	164	392	1403	11

Section References

Texas Department of State Health Services, TB/HIV/STD Epidemiology and Surveillance Branch, Data Requests from 2/9/2011-7/2011.

X. Immunizations

The Texas Department of State health services coordinates the Texas County Retrospective Immunization School Survey (TCRISS), a school-based study that measures vaccination coverage levels of kindergartners retrospectively at 24 months of age at the county level. The TCRIS assesses vaccination coverage with the 4:3:1 vaccine series (4 doses of diphtheria-tetanus-pertussis vaccine, 3 doses of polio vaccine, 1 dose of measles-mumps-rubella vaccine), the 4:3:1:3:3:1 vaccine series (4 doses of diphtheria-tetanus-pertussis vaccine, 3 doses of polio vaccine, 1 dose of measles-mumps-rubella vaccine, 3 doses of *Haemophilus influenzae* type b vaccine, 3 doses of hepatitis B vaccine and 1 dose of Varicella vaccine on or after the first birthday and unadjusted for Varicella disease history), and coverage with each individual vaccine is assessed. Based on Figure 26, continued attention is needed to meet *Healthy People 2010* vaccination

coverage levels and improve coverage in select counties with lower vaccination coverage for the HSR 8 border counties.

Figure 26: Estimated Vaccination Coverage for the 4:3:1 and 4:3:1:3:3:1 Vaccination Series and Selected Individual Vaccines among Children aged 24 months, by HSR 8 Border County --- Texas County Retrospective Immunization School Survey (TCRISS), 2006 and 2007 (2)

County	Year	4 DTP/DTaP/DT	3 Polio	1 MMR	3 Hib	3 Hep B	1 Var	3 PCV	4-3- 1*	4-3-1-3-3- 1**
Val Verde	2007	75.6	91.0	90.9	89.3	91.5	80.9	34.0	72.8	62.7
Edwards	2006	67.7	82.4	73.5	82.4	91.2	76.5	58.8	61.8	58.8
Real	2006	47.1	64.7	76.5	70.6	76.5	76.5	35.3	35.3	35.3
Kinney	2006	73.3	86.7	88.9	86.7	88.9	82.2	42.2	68.9	64.4
Uvalde	2007	76.4	86.4	87.1	91.9	86.2	81.2	38.3	70.7	61.0
Maverick	2006	77.8	92.0	91.2	94.1	94.3	86.7	57.5	74.3	68.3
Zavala	2007	86.3	93.8	92.5	95.9	89.7	86.3	0.0	80.1	67.8
Frio	2007	69.5	87.9	85.9	93.4	88.3	76.2	30.9	66.0	59.0
Dimmit	2007	78.1	94.9	92.7	94.9	92.7	93.4	79.6	75.2	70.8
La Salle	2007	65.2	85.4	84.3	85.4	86.5	81.0	56.2	65.2	60.7

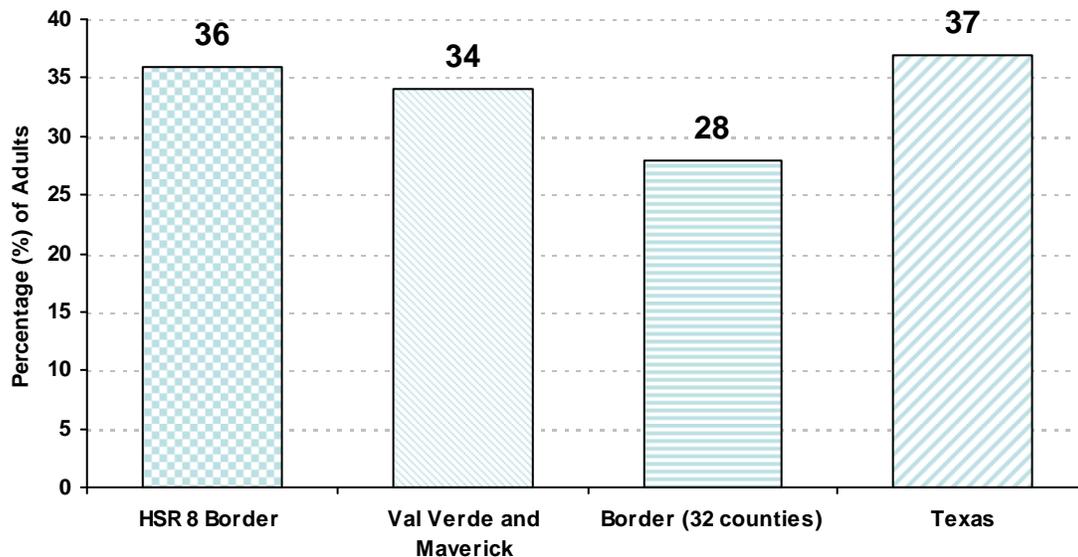
*4 doses of diphtheria-tetanus-pertussis-containing vaccine (DTaP/DTP or DT), 3 doses of polio vaccine, 1 dose of measles-mumps-rubella vaccine (MMR)

**4 doses of diphtheria-tetanus-pertussis-containing vaccine (DTaP/DTP or DT), 3 doses of polio vaccine, 1 dose of measles-mumps-rubella vaccine (MMR), 3 doses of Haemophilus influenzae type b vaccine (Hib), 3 doses of hepatitis B vaccine (HepB), and 1 dose of varicella vaccine on or after the 1st birthday and unadjusted for varicella disease history

Data Source: Texas County Retrospective Immunization School Survey

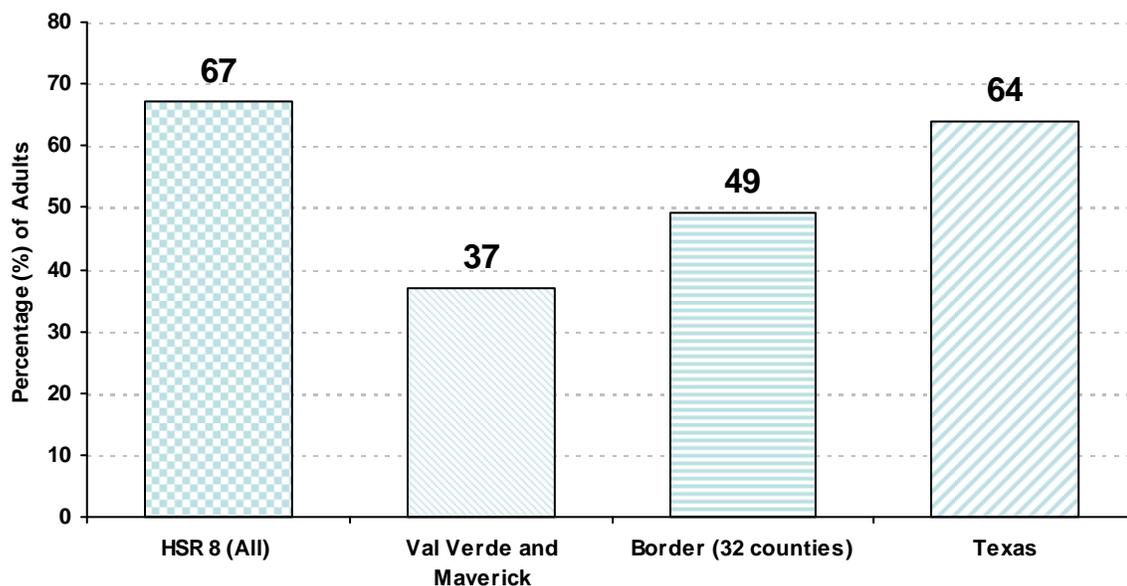
Further, approximately 50,000 adults die each year from vaccine-preventable diseases in the U.S (3). Pneumonia and influenza are the fifth leading cause of death in older adults in the U.S (3). Influenza, also called the "flu," is a contagious respiratory illness caused by influenza viruses. There are over 200,000 hospitalizations from influenza on average every year (3). There are over 40,000 cases of invasive pneumococcal disease in the U.S. and approximately one-third of these cases occur in people 65 and older (3). Based on BRFSS data, 36% of adults over 17 years of age have received the flu vaccine in the HSR 8 border counties, similar to what is seen in Texas at 37% (Figure 27) (4) .

Figure 27: Proportion of Adults Aged 18 Years and over who had a Flu Vaccine (Shot or Spray) Within the Past 12 Months, Texas, BRFSS, 2007-2009 (4)



As far as receipt of the pneumonia vaccine among persons aged 65 years or older, there is a disproportionately lower number of persons receiving the pneumonia vaccine in Val Verde and Maverick County when compared to the *rest* of Texas ($p < 0.05$) (4). In Val Verde and Maverick counties, the percentage of persons 65 years of age or older who 'have ever received a pneumonia shot' was 37% compared to 64% in Texas and 67% in HSR 8 (Figure 28) (4).

Figure 28: Proportion of Adults Aged 65 Years and Over Who Have Ever Had a Pneumonia Shot, Texas, BRFSS, 2007-2009 (4)



Section References

(1) Centers for Disease Control and Prevention. [National, State, and Local Area Vaccination Coverage Among Children Aged 19-35 Months-United States, 2008]. MMWR 2009;58:[1259-1290].

(2) Texas Department of State Health Services, Immunization Branch, Texas County Retrospective Immunization School Survey

(3) Centers for Medicare and Medicaid Services. (2011, May 9). Adult Immunization Overview. Retrieved from: <http://www.cms.gov/AdultImmunizations/>

(4) Texas Behavioral Risk Factor Surveillance System, Statewide BRFSS Survey, 2007-2009 combined

XI. Notifiable Conditions

Several Texas laws (Health Safety Code, Chapters 81, 84 and 87) require the reporting of specific information regarding notifiable conditions. Information on these notifiable conditions is provided to the Texas Department of State Health Services. The information provided for this section is based on reports provided to HSR 8 and includes information only for notifiable conditions (excluding STDs and HIV/AIDS and TB) with higher morbidity within the HSR 8 border counties.

Higher morbidity notifiable conditions included Campylobacteriosis, Salmonellosis and Shigellosis. (Case numbers and rates are provided in Figure 29-Figure 31.)

Figure 29: Total Campylobacteriosis Cases and Rates by County of Residence, 2006-2010

County	2006		2007		2008		2009		2010	
	Cases	Rate*								
Dimmit		0.00		0.00		0.00	1	10.19		0.00
Edwards		0.00		0.00		0.00		0.00		0.00
Frio	2	12.25	2	12.21	3	16.98	4	22.46	9	50.12
Kinney		0.00	1	30.35	1	29.06		0.00	1	28.99
La Salle	1	16.91		0.00		0.00	2	33.17		0.00
Maverick		0.00	1	1.90	4	7.45	4	7.34	8	14.49
Real		0.00		0.00		0.00		0.00		0.00
Uvalde		0.00		0.00	1	3.64		0.00	2	7.18
Val Verde	4	8.48	10	20.97	7	14.24	14	28.22	19	37.95
Zavala	2	17.10	1	8.42		0.00		0.00		0.00
HSR 8 Border Counties	9	5.1	15	8.4	16	8.6	25	13.4	39	20.7
All HSR 8 Counties	49	5.83	65	7.59	48	5.44	65	7.22	134	14.60

*Rates represent cases per 100,000 population.

Figure 30: Total Salmonellosis Cases and Rates by County of Residence, 2006-2010

County	2006		2007		2008		2009		2010	
	Cases	Rate*								
Dimmit	2	19.93	7	70.62	9	91.07	4	40.75	2	20.49
Edwards		0.00		0.00	0	0.00	1	45.23		0.00
Frio	5	30.63	3	18.32	4	22.63	6	33.69	4	22.28
Kinney	1	30.06	1	30.35	3	87.18	3	87.03		0.00
La Salle		0.00		0.00	5	83.03	3	49.75	4	66.35
Maverick	1	1.92	4	7.62	12	22.36	13	23.87	17	30.79
Real		0.00		0.00	3	91.41		0.00		0.00
Uvalde	7	27.22	3	11.65	13	47.26	9	32.50	5	17.95
Val Verde	7	14.84	21	44.03	23	46.80	24	48.37	18	35.95
Zavala	5	42.76	1	8.42	6	47.53	3	23.56	3	23.36
HSR 8 Border Counties	28	15.8	40	22.4	78	42.1	66	35.3	53	28.1
All HSR 8 Counties	210	24.98	214	24.99	367	41.58	346	38.44	336	36.60

*Rates represent cases per 100,000 population.

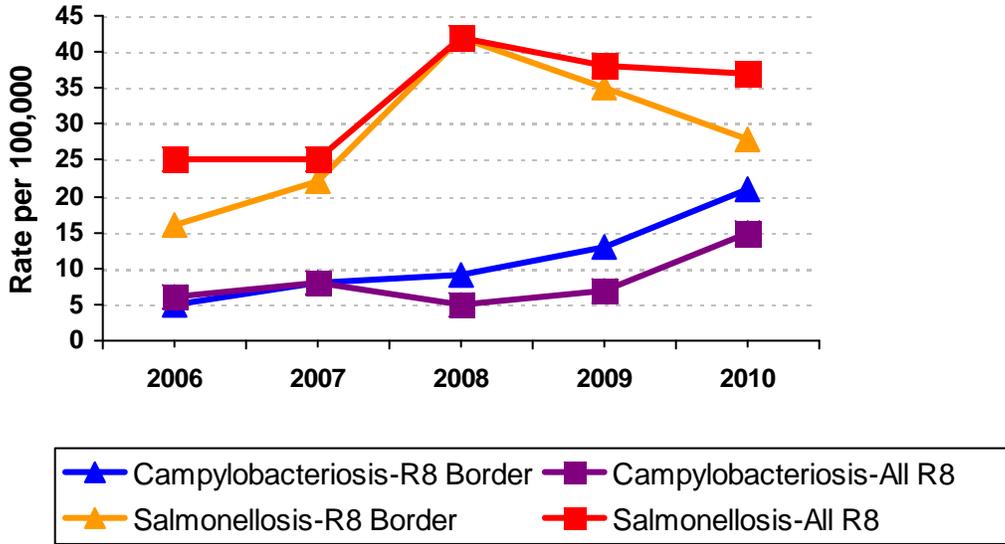
Figure 31: Total Shigellosis Cases and Rates by County of Residence, 2006-2010

County	2006		2007		2008		2009		2010	
	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*
Dimmit		0.00		0.00	17	172.01	4	40.75	1	10.24
Edwards		0.00		0.00		0.00		0.00		0.00
Frio		0.00		0.00	2	11.32	3	16.85	8	44.55
Kinney	1	30.06		0.00	6	174.37	3	87.03		0.00
La Salle		0.00		0.00	3	49.82	1	16.58	1	16.59
Maverick	3	5.75		0.00	9	16.77	10	18.36	6	10.87
Real	1	30.35		0.00		0.00		0.00		0.00
Uvalde	6	23.33		0.00	2	7.27	25	90.27	6	21.54
Val Verde	16	33.92	1	2.10	3	6.10	5	10.08	5	9.99
Zavala	1	8.55	1	8.42	100	792.20	2	15.70	2	15.57
HSR 8 Border Counties	28	15.8	2	1.1	142	76.6	53	28.3	29	15.4
All HSR 8 Counties	77	9.16	23	2.69	278	31.50	103	11.44	108	11.77

*Rates represent cases per 100,000 population.

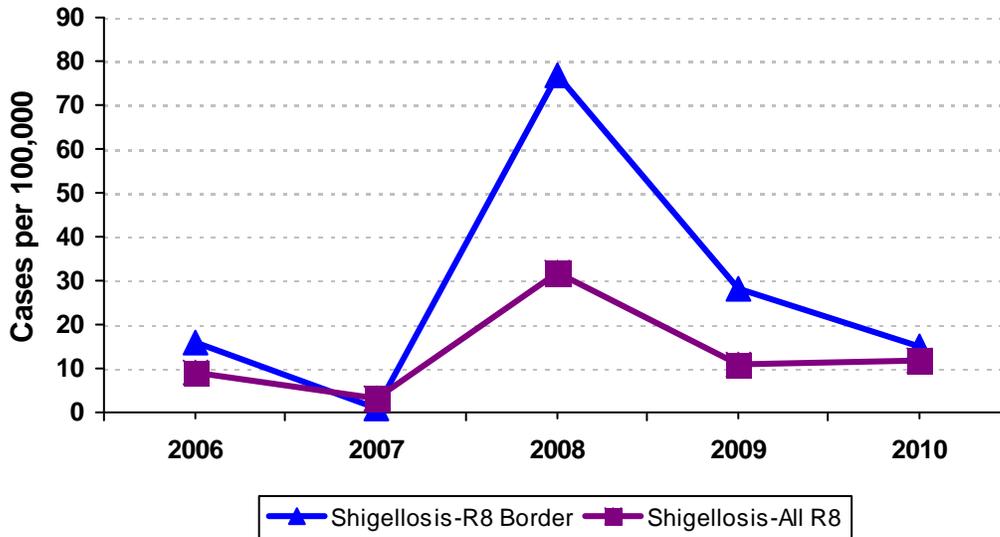
On average, from 2006-2007, HSR 8 border counties had a higher rate (per 100,000) of Campylobacteriosis and a lower rate (per 100,000) of Salmonellosis than did the entire HSR 8 counties (Figure 32).

Figure 32: Campylobacteriosis and Salmonellosis Case Rates, HSR 8 and HSR 8 Border Counties, 2006-2010



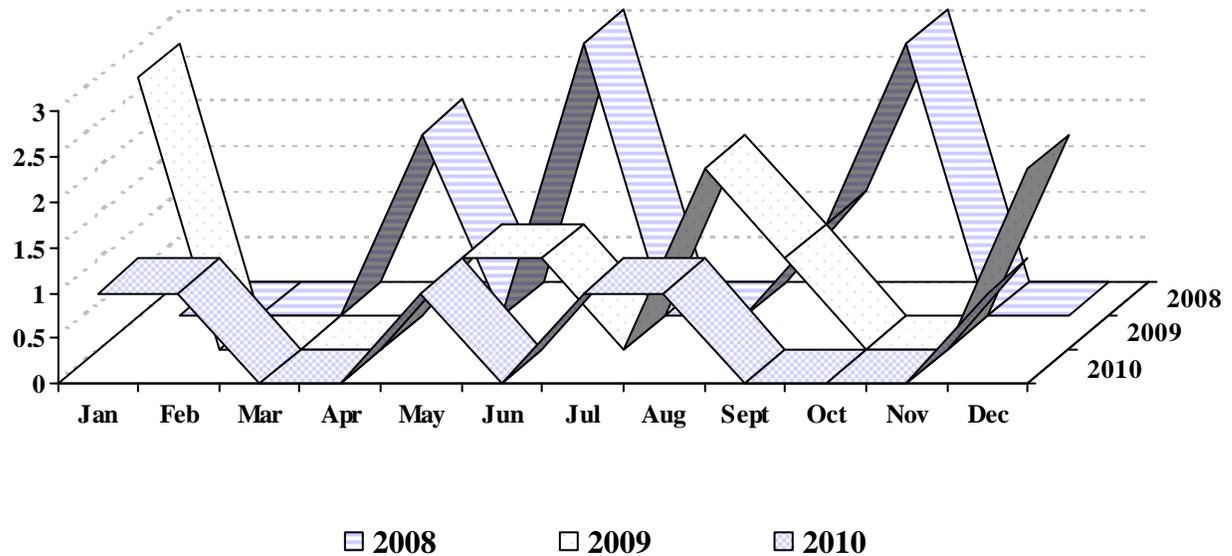
In general case rates for Shigellosis have been higher in the HSR 8 border counties when compared to all of HSR 8. The HSR 8 border counties have a rate of 65 per 100,000 population in 2011 (as of 7/18/2011), 23% higher than in 2010 (15 per 100,000) (Figure 33).

Figure 33: Shigellosis Case Rates, HSR 8 and HSR 8 Border Counties, 2006-2010



Specifically in Maverick County, from January-June 2011, the number of reported cases of Shigellosis has been higher than the reported numbers in previous years for these same months (Figure 34).

Figure 34: Reported cases of shigellosis by month, Maverick County: 2008 (N=9), 2009 (N=10), 2010 (N=6)



Section References

Texas Department of State Health Services, HSR-8 Epidemiology Program, Data Requests dated 7/2011.

XII. Summary

Based on the information presented in this report, the Health Service HSR 8 border counties require coordinated approaches in public health to reduce morbidity and mortality related to chronic and infectious diseases. In comparison to the State of Texas, HSR 8 border counties have increased rates of diabetes, a higher proportion of adults with no medical insurance, a higher proportion of adults classified as overweight or obese, higher rates of liver and intrahepatic bile duct cancers among Hispanics when compared Texas non-Hispanic Whites, a higher proportion of persons receiving a late HIV diagnoses, higher rates of TB, and no county meeting the 80% immunization recommendation for the 4:3:1:3:3:1 series.