HIV/AIDS en la Frontera:
U.S.-Mexico Border Epidemiologic Profile

Volume I, March 2009

NASTAD™
NATIONAL ALLIANCE OF STATE & TERRITORIAL AIDS DIRECTORS

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Executive Summary

Human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) epidemiologic research has been conducted in a number of key locations along the United States (U.S.)-Mexico border during recent years. However, a comprehensive, cross-state, bi-national HIV/AIDS epidemiologic profile of the border region is greatly needed. As a result, NASTAD convened a multi-state (California, Arizona, New Mexico, and Texas) and bi-national collaborative team in 2006-2007 in an effort to develop an epidemiologic profile focused on HIV/AIDS along the U.S.-Mexico border.

HIV/AIDS surveillance staff from county, state and national public health agencies collaborated to develop a framework for the epidemiologic profile and to conduct secondary analyses of existing data for counties and health jurisdictions in the border region. Data from the U.S. Census, vital statistics, HIV/AIDS surveillance systems, and infectious disease surveillance were aggregated and analyzed for the 23 contiguous U.S. border counties and the 36 contiguous Mexican border municipalities in order to assess the situation. Volume I of the *U.S.-Mexico HIV/AIDS Border Epidemiologic Profile* is comprised of three chapters. These chapters highlight: 1) the foundations of this collaborative effort; 2) the characteristics of the general U.S.-Mexico border population; and 3) the scope of the HIV/AIDS epidemic along the border.

Data indicate that from 2000 to 2005, the U.S.-Mexico Border population increased by 8.2 percent, from 11,550,077 to 12,501,780 people. In 2005, the ten most populous U.S. border counties comprised 96 percent of the total U.S. border population. The U.S. border population consisted primarily of Latinos[1] (51.5%), followed by Whites (38.8%), and with approximately half being female (53.6%). Approximately half (51.5%) of the population along the U.S. border was younger than 34 years of age and one in five individuals (20.8%) in the region were under the age of 13 years. Another 20 percent of the U.S. border population was older than 55 years. Education levels vary substantially from county to county within the U.S. border region. Nearly thirty-eight percent of the border population (25 years and older) in Texas had less than a high school education in 2005, followed by New Mexico (27.3%), California (16.2%) and Arizona (10.4%). Nearly one-fifth of the U.S. border population lived below the poverty level and 55.6 percent of these individuals were less than 25 years of age.

The ten most populous Mexican municipalities comprised 91 percent of the Mexican border population in 2005. Nearly two-thirds (64.5%) of the Mexican border population was younger than 34 years of age. More than one-quarter (28.0%) of the Mexican border inhabitants were less than 13 years old and only 8.6 percent of the population was older than 55 years of age. Race/ethnicity data are not collected in Mexico but approximately one percent of the Mexican border population speaks an indigenous language.

1 Latino is used as an umbrella term in this document and accounts for both men and women who come from or descend from a specific geographical area where the Spanish and Portuguese legacy is dominant but not exclusive. It embraces the influences over the past 500 years from Europe, Africa, Asia and the Middle East along with all the various indigenous cultures.

EXECUTIVE SUMMARY

In Mexican border municipalities, four in ten individuals (41.0%) twenty-five years of age and older had only completed elementary school (36.1%) or had not attended school at all (4.9%). While definitions for poverty may vary in neighboring U.S. counties, it is worth restating that nearly one fifth of U.S. border communities and more than a quarter of the Mexican border populace lived in poverty in 2005.

In 2005, there were 16,236 people known to be living with HIV/AIDS in the 23 U.S. border counties (239 per 100,000 population). Eighty-eight percent of the people living with HIV/AIDS were men, 65.7 percent were men who had sex with men (MSM), 9.1 percent were injection drug users (IDUs), and 7.5 percent were MSM/IDUs. Nearly 70 percent (68.8%) were between the ages of 35-54 years. Whites comprised the largest proportion of HIV/AIDS cases within U.S. border counties (48.6%), followed by Hispanics (37.9%) and Blacks (10.6%). HIV/AIDS rates per 100,000 were highest among Whites (226), individuals aged 35-44 years (466), and men (426). Geographically, prevalent HIV/AIDS rates per 100,000 were highest in San Diego, California (367), Pima, Arizona (192) and El Paso, Texas (177). The number of newly reported HIV cases along the U.S. side of the border decreased from 1,190 in 2001 to 878 in 2005, a decrease of 26.2 percent, and annual mortality among individuals with HIV/AIDS decreased by 21 percent, from 302 in 2001 to 238 in 2005.

In the 36 Mexican border municipalities, 2,102 people were diagnosed with HIV/AIDS in 2005. Nearly seventy-seven percent (76.8%) of people living with HIV/AIDS along the Mexican border were men and 66.9 percent were between the ages of 25 and 44 years. Among Mexican men living with HIV/AIDS on the border, 13.5 percent were younger than 25 years of age while 29.6 percent of Mexican women living with HIV/AIDS in border states were younger than 25 years old. Geographically, the largest proportion of total HIV/AIDS cases diagnosed in the six Mexican border states were found in Baja California, Mexico (42.0%) and Tamaulipas, Mexico (21.0%) —the western most and eastern most Mexican border states, respectively. The Mexican state with the lowest proportion of HIV/AIDS diagnoses in 2005 was Coahuila (6.1%).

Findings from the *U.S.-Mexico HIV/AIDS Border Epidemiologic Profile* can guide public health officials, researchers, policy makers and community-based organizations with future HIV/AIDS prevention, research and care decisions on both sides of the border. Data in the profile highlight areas of immediate need for improved HIV prevention interventions, as well as gaps in scientific data and literature that need to be filled, and can inform cross-border dialogue among “sister states,” “sister counties” and “sister cities” with similar prevention, care and research needs.

Acronym List

AIDS	Acquired Immunodeficiency Syndrome
AZ	Arizona, United States
BC	Baja California, Mexico
CA	California, United States
CENSIDA	Centro Nacional Para La Prevención y el Control del VIH/SIDA (Mexico)
CHIH	Chihuahua, Mexico
COAH	Coahuila, Mexico
CONAPO	Consejo Nacional de Población
GAO	Government Accountability Office
HARS	HIV/AIDS Reporting System
HIV	Human Immunodeficiency Virus
HIV C&T	HIV Counseling and Testing
HRH	High-Risk Heterosexual Contact
IDU	Injection Drug Use
INEGI	Instituto Nacional de Estadística y Geografía
MSM	Male to Male Sexual Contact
NASTAD	National Alliance of State and Territorial AIDS Directors
NIR	No Identified Risk
NL	Nuevo Leon, Mexico
NM	New Mexico, United States
SAS	Statistical Analysis Software
SES	Socioeconomic Status
SON	Sonora, Mexico
STDs	Sexually Transmitted Diseases
TAMPS	Tamaulipas, Mexico
TB	Tuberculosis
TX	Texas, United States
U.S.	United States

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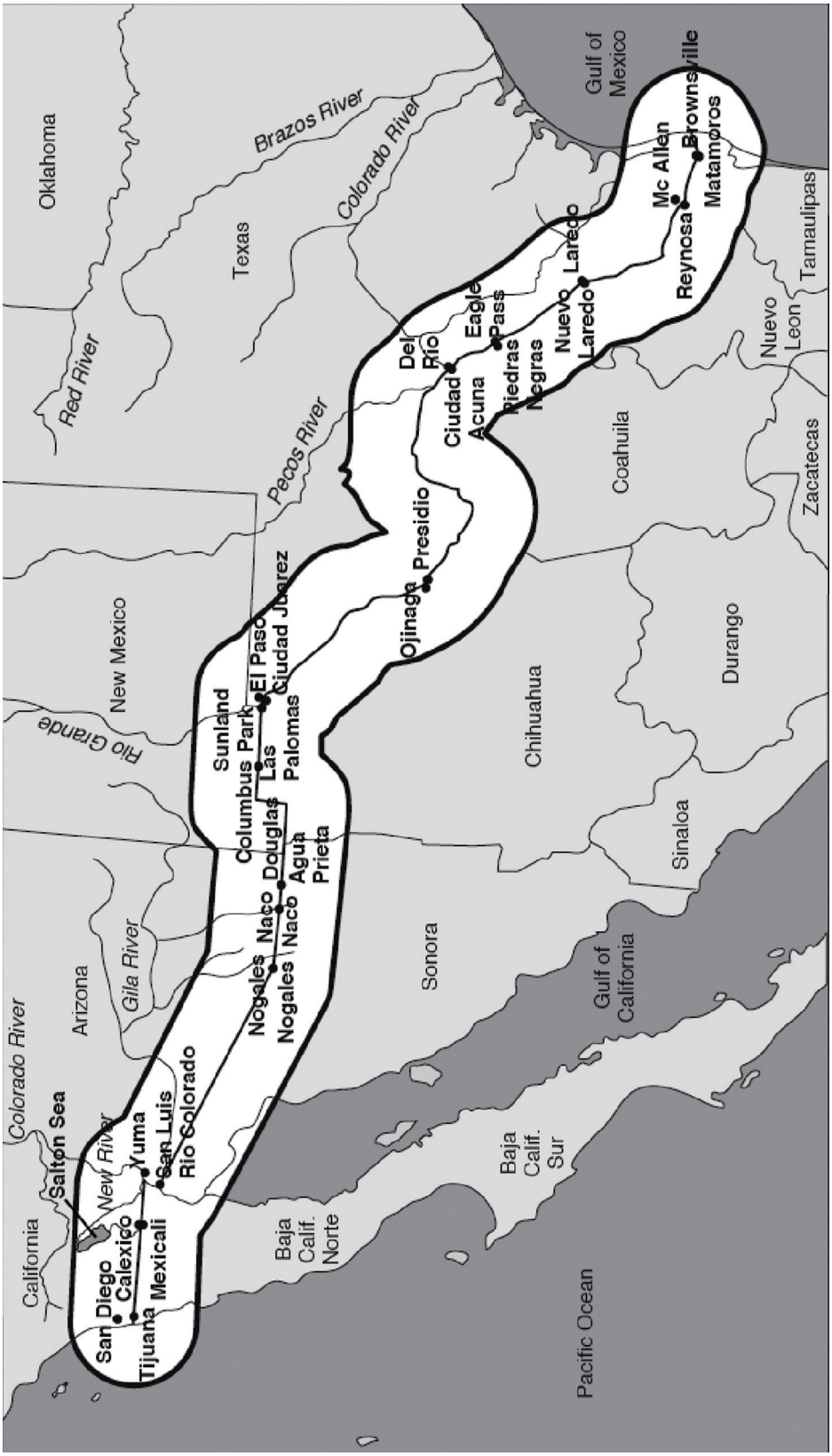
Map of the Border Region



Chapter 1: Introduction

In this chapter:

- **Background**
- **Understanding the Context**
- **Defining the U.S.-Mexico Border**
- **Methods**
- **Data sources**

I. Background

Consider, for a moment, the United States (U.S.) border with Mexico as if it were the fifty-first U.S. state. If the 23 U.S. border counties were combined into the 51st state, the population of this state would approach seven million people. It would have higher rates of AIDS (ranking 12th among the 51 States), hepatitis (third), tuberculosis (second), and diabetes (fifth) than the national average. It would rank among the highest for lack of insurance coverage (second), and it would have the fewest health care providers per capita (51st). On the favorable side, the 51st state would have lower rates of low-birth-weight babies (37th) and infant mortality (39th) than the national average (Nurseweek, 2006). This, however, would only tell part of the story, as this description does not include Mexican data, and it does not include other important socioeconomic, demographic, morbidity and mortality data that would more thoroughly describe the region. It does, however, portray a very distinct region of North America which, as yet, has not been assessed systematically, from both a macro and micro perspective, across state and county borders and across national boundaries. Particularly, when one considers HIV/AIDS and related morbidities and mortalities, one is hard-pressed to find academic and popular literature that comprehensively describes the variation that exists along the entire U.S.-Mexico border region.

Bearing in mind the relatively limited research that describes the HIV/AIDS epidemic along large expanses of the border, a multi-state (Arizona, California, New Mexico, and Texas) and bi-national (U.S., Mexico) collaborative team was convened by NASTAD in 2006-2007 in an effort to develop a comprehensive epidemiologic profile that would describe the HIV/AIDS epidemic along the U.S.-Mexico border. The border epidemiologic profile team endeavored to create a comprehensive report, presentations, and policy tools that portray salient findings, gaps in research, and recommendations that could assist public health officials, researchers, policy makers and community-based organizations with future HIV/AIDS prevention, research, care, and treatment decisions.

HIV/AIDS en la Frontera: U.S.-Mexico HIV/AIDS Border Epidemiologic Profile Volume I is comprised of three key chapters that address various aspects of the border population and the HIV/AIDS epidemic in the region. These chapters highlight the foundations of this collaborative effort, the characteristics of the general U.S.-Mexico border population, and the scope of the HIV/AIDS epidemic along the border. HIV/AIDS surveillance staff from a diverse mix of national,

state, and county public health agencies collaborated to create a framework for the epidemiologic profile, analyze data, record results, and report on findings.

Despite the lack of published data, there is much that is interesting and important about the population of individuals that live in the border region. Information about the regularity with which individuals cross state, municipal, and country lines for services, employment and recreation could assist in painting the picture of the HIV/AIDS epidemic along this region. While this first volume primarily utilized U.S. Census data and HIV/AIDS Reporting System (HARS) surveillance data to inform the current status of the epidemic, future U.S.-Mexico border epidemiologic profiles could incorporate additional datasets and special studies – particularly those focused on immigrant and Latino populations, further elucidating this complex and multi-faceted region of North America.

Throughout this report, aggregate findings that describe the border population, the HIV/AIDS epidemic related exposure factors, and associated contextual factors for the border region are highlighted. This is the first iteration of a much needed, potentially ongoing series of cross-state, U.S.-Mexico epidemiological profiles that would benefit from improved research methodologies, community guidance, and enhanced data sources and analyses during the years to come. The target audience for this report includes community members, public health officials, researchers and policy makers. It is our sincere hope that this report will assist people working in and around the U.S.-Mexico border region to make well informed public health policy and program decisions.

II. Understanding the Context

The U.S. is often regarded as a nation of immigrants—a characterization that is more appropriate today than at any time since the 1930s. According to the 2007 American Community Survey, it is estimated that 38.1 million of the nation's 301 million people are foreign-born—12.6 percent of the U.S. population.[2] This is the highest percentage of foreign-born people the U.S. Census Bureau has recorded in over 70 years. Among those, about 12 million people, or 31 percent of all foreign-born individuals, were born in Mexico.[3] What is more telling, the U.S. Census Bureau estimates that the Latino population will triple from 47 million to 133 million between 2008 and 2050.[4]

While there has been a recent trend of Latinos moving to cities and states which historically have not had a large Latino presence (e.g.: Arkansas, Georgia, and South Carolina), the border region is still experiencing an increase in its Latino population. Between 2006 and 2007, Texas had the largest numerical increase of its Latino population (308,000), followed by California (268,000).[2] Moreover, New Mexico has the highest proportion of Latinos of any U.S. state (forty-four percent), with California and Texas (36 percent each) next in line.[5] At least one-in-five residents of Arizona, California, New Mexico and Texas spoke Spanish at home in 2007.[5]

2 U.S Census Bureau. American Community Survey. 2007. Available at: *http://factfinder.census.gov*. Accessed on: September 25, 2008.
3 U.S Census Bureau. American Community Survey. 2007. Available at: *http://factfinder.census.gov*. Accessed on: September 25, 2008.
4 U.S. Census Bureau. Press Release: An Older and More Diverse Nation by Midcentury. Available at: *http://www.census.gov/Press-Release/www/releases/archives/population/012496.html*. Accessed on: September 18, 2008.
5 U.S Census Bureau. American Community Survey. 2007. Available at: *http://factfinder.census.gov*. Accessed on: September 25, 2008.

This growth in foreign-born people living in the U.S. has not been met without challenges for recent Latino immigrants as well as for other Latinos who have had families living in the U.S. for several generations. More than 500 pieces of legislation related to immigrants were presented in state legislatures across the country in 2005 alone. The legislation ranged from using local law enforcement officers to enforce federal immigration laws, to denying driver's license to the undocumented, to more supportive legislation such as allowing undocumented young people to attend university while paying in-state tuition.[6] In 2006, millions rallied in cities across the country to protest anti-immigrant legislation and to voice support and hope for legislation that moves to strengthen families and communities across the U.S.[7]

However, despite efforts made by human rights activists and average community members, the debate over immigration has been critical to the growth of the "hate movement" with many extremist groups turning to the tension around immigration reform to help with their recruitment. Reports have noted rises in hate groups and hate crimes across the nation. A report by the Southern Poverty Law Center — an Alabama-based non-profit organization that tracks racist, anti-immigrant and other extremist groups — noted that there were 803 such hate groups in the U.S. in 2005, up from 762 in 2004 and a 33 percent increase since 2000.[8]

While this report offers socio-economic and HIV/AIDS data, readers are encouraged to examine the statistics and consider how structural level issues contribute to the HIV/AIDS epidemic across the county and particularly the U.S.- Mexico border region. It is the intersection of structural barriers with risky behavioral choices that often put new Latino immigrants at risk for disease transmission and acquisition. Due to enhanced stress levels, Latino immigrants oftentimes resort to engaging in behaviors that increase the risk of sexually transmitted diseases (STDs), including HIV and viral hepatitis acquisition, such as an increased number of sex partners, greater incidence of unprotected sex, and higher likelihood of substance use.[9]

III. Defining the U.S.-Mexico Border

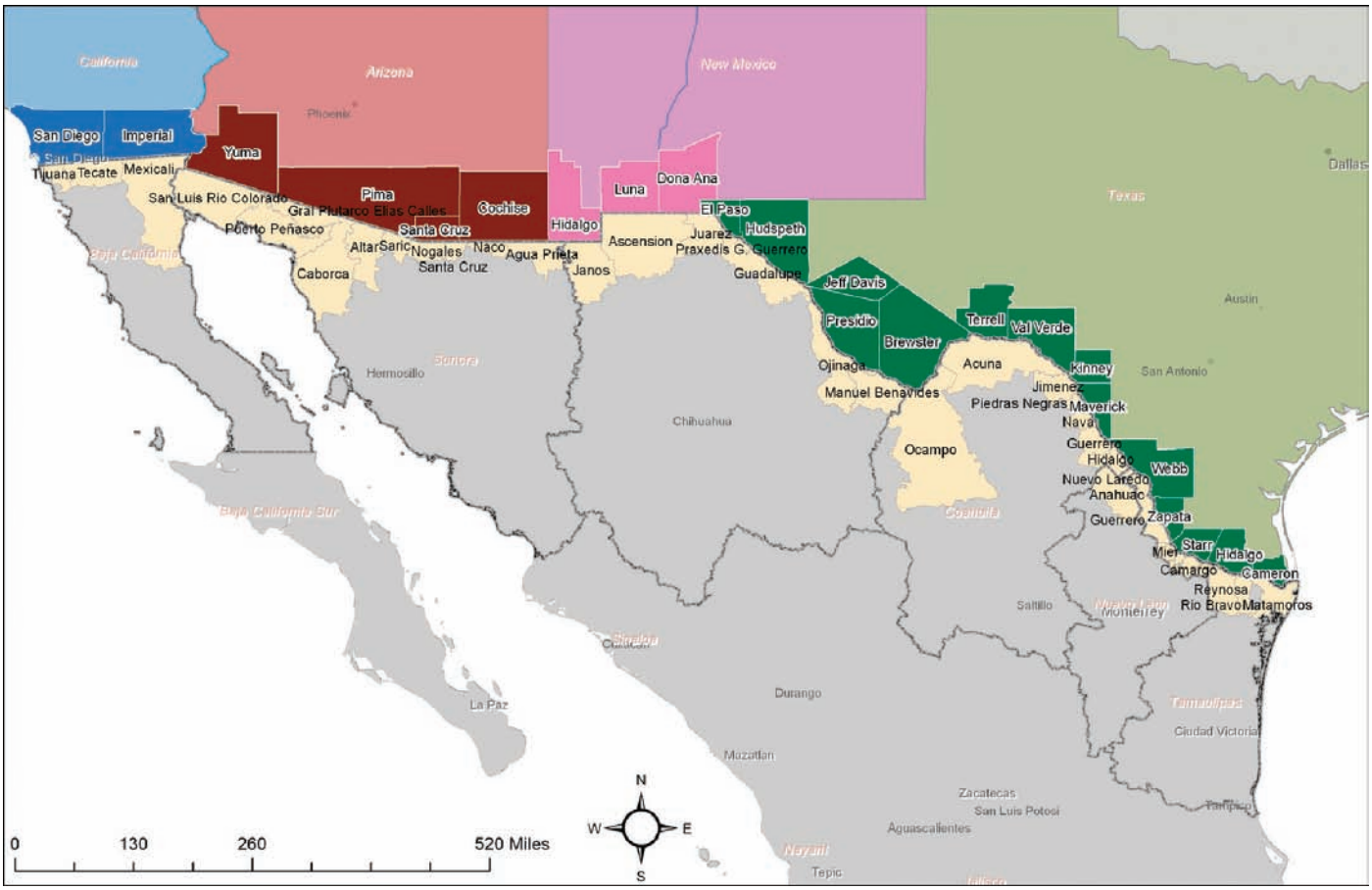
Over the last three centuries, the "border" has undergone several transformations. Inhabited originally by diverse Native American groups, people from the U.S.-Mexico border region have bore witness to treaties and agreements with the U.S. government that were made on their behalf, such as the Louisiana Purchase in 1804 by the French, the Adam-Onis Treaty of 1819 by the Spanish, and the Gadsden Purchase of 1853 by the Mexican government, which served as the final boundary adjustment between the U.S. and Mexico.[10] Today, the U.S.-Mexico border covers 2,000 miles, encompassing four U.S. states (California, Arizona, New Mexico, and Texas) and six Mexican states (Baja California, Sonora, Chihuahua, Coahuila, Nuevo León, and Tamaulipas).

6 *http://www.ncsl.org/programs/immig/06immigenactedlegis2.htm*; *http://www.lulac.org/advocacy/issues/immigration/comprehensivereform.html*
7 *http://www.cnn.com/2006/US/05/01/immigrant.day/index.html*
8 Potok, M. *The Year In Hate*, 2005. Southern Poverty Law Center. 2006 Available at: *http://www.splcenter.org/intel/intelreport/article.jsp?aid=627*. Accessed on: September 29, 2008.
9 Sanchez, MA, Lemp, GF, Magis-Rodriguez, C, Bravo-Garcia, E, Carter, S, Ruiz, JD. *The Epidemiology of HIV Among Mexican Migrants and Recent Immigrants in California and Mexico. The Journal of Acquired Immune Deficiency*. 2004.
10 *http://www.pbs.org/kpbs/theborder/history/index.html*

INTRODUCTION

For purposes of this report, we focus on the 23 contiguous U.S. counties that border Mexico and the 36 contiguous Mexican municipalities or health jurisdictions that border the U.S. This definition is considered relatively broad when compared to other definitions of the border and narrow when compared to the World Health Organization's definition of a border which includes a swath of land that is 100 miles to the north and 100 miles to the south of a territorial border. For analytical reasons, the county and municipal regions upon which we focus provide the most consistent and systematic unit of analysis for this epidemiologic profile. Figure 1 portrays a map comprised of the U.S. counties and Mexican municipalities/health jurisdictions of focus for the analyses.

Figure 1: The U.S.-Mexico Border



Map courtesy of the Virginia Department of Public Health

IV. Methods

HIV/AIDS surveillance staff from national, state, and county agencies convened via conference calls and in-person meetings to develop the framework for the U.S.-Mexico Border Epidemiologic profile. The framework included: 1) border epidemiologic profile goals; 2) proposed epidemiologic profile chapters; 3) data shells; 4) data analyses; and 5) goals for final products.

During 2006 and 2007, existing data were compiled and analyzed for the 23 contiguous U.S. counties and the 36 contiguous Mexican municipalities along the border. Each of the four U.S. states that border Mexico was responsible for data collection and analyses for their border counties [e.g., Census data, vital statistics, HIV/AIDS Reporting System (HARS), Sexually Transmitted Diseases (STDs)]. The Mexican *Centro Nacional Para La Prevención y el Control del VIH/SIDA* (CENSIDA), the federal HIV/AIDS surveillance and prevention agency that serves as the repository for all local, state and national data in Mexico, was responsible for data collection and analyses for the Mexican border municipalities.

Secondary analyses of existing sociodemographic, HIV/AIDS and related morbidity and mortality data were conducted by each of our four U.S. states and CENSIDA Mexico. Whenever possible, similar or identical sources of data (e.g., U.S. Census Bridged Data, American Community Survey, HARS) were used across U.S. states and counties, and in Mexico. Primary data collection was not conducted for this report. Uniform Statistical Analysis Software (SAS) code for HIV/AIDS data analyses was created by border epidemiologic profile team members and used consistently across the U.S. states in order to assure comparability of data.

Once data analyses were completed for border counties, municipalities and states, data were aggregated in California and Washington, DC to allow for cross-border comparisons at the national, state, and local level.

V. Data Sources

Numerous local, county and national sources were utilized to obtain data to help portray the current sociodemographic and public health situation along the U.S.-Mexico Border. The details, strengths and limitations of each data source utilized are highlighted below (Table 1).

Table 1: Sources of Sociodemographic and Epidemiologic Data

Data Source	Owner	Population Description	Strengths	Limitations
Census Data	U.S. Government	U.S. Citizens	Standard data collection methods used across U.S. counties	May be less reliable on the local level in rural areas; does not include data on undocumented people
American Community Survey	U.S. Government	U.S. Citizens	Standard data collection methods used across U.S. counties	May be less reliable on the local level in rural areas; does not include data on undocumented people
Vital Statistics	U.S. Government; County governments	U.S. Citizens	Standard data collection methods used across U.S. counties	May be less reliable on the local level in rural areas
HARS	CDC; State Departments of Public Health; County Health Departments	Individuals infected with HIV and/or AIDS in the U.S.	Contains the most comprehensive county, state and national source of HIV/AIDS case data	Only contains HIV and AIDS cases that have been reported to State Departments of Public Health

Table 1 (Continued): Sources of Sociodemographic and Epidemiologic Data

HIV Counseling & Testing (C&T) Data	CDC; States; Counties	Includes data on all individuals who seek HIV counseling and testing at publicly funded sites	Contains the most comprehensive HIV testing data, as well as related risk behaviors, on the county, state and national level	Does not include data on individuals tested for HIV outside of the public health system; does not include data on individuals who do not seeking HIV C&T
Data Source	**Owner**	**Population Description**	**Strengths**	**Limitations**
CENSIDA	Mexican Government	Individuals infected with HIV and/or AIDS	Contains the most comprehensive HIV/AIDS case data on the municipal, state and national level	Only includes data reported to the Mexican government; data may not be representative of all individuals infected with HIV/AIDS
CONAPO	Mexican Government	Mexican Citizens	Standard data collection methods used across Mexican municipalities and states	May be less reliable on the local level in rural areas; does not include data on undocumented people
INEGI	Mexican Government	Mexican Citizens	Standard data collection methods used across Mexican municipalities and states	May be less reliable on the local level in rural areas; does not include data on undocumented people

Chapter 2: Introduction

In this chapter:

- **Summary: Border-Wide Population Characteristics**
- **Demographics: Population Characteristics for Subgroups Along the Border**
- **Socioeconomic Status: Education, Income and Health Status**
- **Natality: Birth Rates Among Border Populations**
- **Mortality: Deaths and Death Rates Among Border Populations**

The U.S.-Mexico border region is comprised of a land area in excess of 167,000 square miles. Demographic, socioeconomic, and health status characteristics of the population vary substantially from county to county, city to city, and community to community along the border. In this chapter, we will highlight the general characteristics of the border population along a number of parameters in order to provide background information for data and tables that focus on HIV/AIDS in Chapter Three.

I. Summary: Border-Wide Population Characteristics

The U.S.-Mexico border population totals nearly 12.5 million people (Table 2a). Approximately 6.8 million people live within the U.S. counties adjacent to the border while 5.7 million people populate the Mexican border municipalities. In aggregate, the border population in the U.S. is primarily Latino (51.5%), followed by White (38.8%), with more than half being female (53.6%). Nearly one fifth (19.4%) of the U.S. border population lives below the poverty level and 55.6 percent of these individuals are less than 25 years of age (Table 2b). Ten percent of the border population in California lives below the poverty level while over 35 percent of the border population in Texas lives below the poverty level. Education levels vary substantially from county to county within the U.S. border region. Nearly thirty-eight percent (38%) of the border population (25 years and older) in Texas has less than a high school education, followed by New Mexico (27.3%), California (16.2%), and Arizona (10.4%).

Table 2a: Characteristics of the U.S.-Mexico Border, 2005

	U.S. Border (2005)	Mexican Border (2005)	U.S.-Mexico Border
Number of Border States	4	6	10
Number of Border Counties/Municipalities	23	36	59
Square Miles	63,937	103,229	167,166
Total Population (millions)	6.8	5.7	12.5
Population Growth: 2000-2005 (%)	7.4	9.3	8.2

Table 2b: Demographic Information for the U.S. Border States, 2005

	California		Arizona		New Mexico		Texas		Total U.S. Border	
	2 Border Counties		4 Border Counties		3 Border Counties		14 Border Counties		23 Border Counties	
*Land Area (Sq. mi.)**	8,373		11,216		10,226		34,122		63,937	
Population Characteristics	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Total Population	3,089,285	100.0	1,274,178	100.0	221,081	100.0	2,202,695	100.0	6,787,239	100.0
Sex										
Male	1,561,254	50.5	625,987	49.1	108,813	49.2	1,064,553	48.3	3,360,607	49.5
Female	1,528,031	49.5	648,191	50.9	112,268	50.8	1,138,142	51.7	3,426,632	50.5
Age										
Median age	34	N/A	37	N/A	32	N/A	28	N/A	--	N/A
<13	583,643	18.9	231,571	18.2	43,174	19.5	551,148	25.0	1,409,536	20.8
13-24	568,120	18.4	228,454	17.9	46,394	21.0	442,654	20.1	1,285,622	18.9
25-34	454,818	14.7	163,190	12.8	28,784	13.0	297,575	13.5	944,367	13.9
35-44	460,816	14.9	164,681	12.9	27,231	12.3	283,390	12.9	936,118	13.8
45-54	412,376	13.3	166,396	13.1	27,556	12.5	244,606	11.1	850,934	12.5
55+	609,512	19.7	319,886	25.1	47,942	21.7	383,322	17.4	1,360,662	20.0
Race/Ethnicity										
Latino/Hispanic	981,508	31.8	468,443	36.8	141,444	64.0	1,904,083	86.4	3,495,478	51.5
White/Non-Hispanic	1,599,416	51.8	708,227	55.6	72,685	32.9	254,072	11.5	2,634,400	38.8
Black[11] /Non-Hispanic	165,427	5.4	38,970	3.1	3,183	1.4	24,095	1.1	231,675	3.4
Am. Indian/Al. Native/Non-Hispanic	19,412	0.6	30,292	2.4	2,011	0.9	4,367	0.2	56,082	0.8
Asian/Pacific Islander/Non-Hispanic	323,522	10.5	28,246	2.2	1,758	0.8	16,078	0.7	369,604	5.4
Socioeconomic Characteristics (>25 years)*							**N**	**%**	**N**	**%**
< High School Graduate	305,521	16.2	121,971	10.4	29,790	27.3	407,963	37.7	865,245	20.4
High School Graduate	379,615	20.1	379,283	32.3	24,844	22.8	261,071	24.1	1,044,813	22.7
Some College, no degree	424,197	22.4	447,277	38.1	22,431	20.6	184,771	17.1	631,399	29.6
Associates/Bachelors	538,095	28.5	186,975	15.9	20,776	19.1	174,580	16.1	920,426	35.9
Degree										
Graduate or Professional Degree	235,386	12.5	38,209	3.3%	11,161	10.2	53,474	4.9	338,230	20.6
Individuals below poverty level**	309,618	10.0	183,267	15.3	20624	18.9	703,837	35.7	1,217,346	19.5

***http://quickfacts.census.gov**

Source: National Center for Health Statistics, Bridged-Race Population Estimates, 2005.

****Individuals below poverty level are for all ages.**

11 The term "Black" is used to be inclusive of persons of African descent, including those who are originally from Africa or the Caribbean.

Race/ethnicity data are not collected in Mexico but 49 percent of the Mexican border population is female. In Mexican border jurisdictions, four out of ten individuals (41.0%) twenty-five years of age and older have only completed elementary school (36.1%) or have not attended school at all (4.9%). Four percent of the population in border jurisdictions in Mexico are living below the minimum necessary income to cover nutritional needs, eight percent live below the minimum income level necessary to cover basic nutritional, health and education needs and 26 percent of the Mexican border population lives below the aggregate poverty level for nutrition, clothing, shelter, health, public transportation, and education (Table 2c). While definitions for poverty may vary in neighboring U.S. counties, it is worth restating that nearly one fifth of U.S. border communities and more than a quarter of the Mexican border populace lives in poverty.

Table 2c: Demographic Information for the Mexican Border States, 2005

Border State	Baja California		Sonora		Chihuahua		Coahuila		Nuevo León		Tamaulipas		Total	
Number of Municipalities	3 Border Municipalities		9 Border Municipalities		7 Border Municipalities		7 Border Municipalities		1 Border Municipality		9 Border Municipalities		36 Border Municipalities	
Land Area (Sq. Kms)(1)	71,098		178,375		246,686		151,062		64,069		76,574		787,864	
Population Characteristics(2)	N	%	N	%	N	%	N	%			N	%	N	%
Total Population	2,357,683	100.0	516,377	100.0	1,384,360	100.0	319,353	100.0	17,983	100.0	1,118,785	100.0	5,714,541	100.0
Sex														
Male	1,187,557	50.4	260,824	50.5	694,474	50.2	160,353	50.2	8,991	50.0	558,529	49.9	2,870,728	50.2
Female	1,170,126	49.6	255,553	49.5	689,886	49.8	159,000	49.8	8,992	50.0	560,256	50.1	2,843,813	49.8
Age														
Median Age	23		23		23		23		24		24		23	
<13	584,321	24.8	143,449	27.8	367,980	26.6	93,097	29.2	4,991	27.8	294,626	26.3	1,488,464	26.0
13-24	496,004	21.0	110,854	21.5	287,401	20.8	70,083	21.9	3,778	21.0	241,995	21.6	1,210,115	21.2
25-34	405,429	17.2	91,043	17.6	237,767	17.2	55,644	17.4	2,588	14.4	196,644	17.6	989,115	17.3
35-44	308,846	13.1	67,440	13.1	182,583	13.2	41,296	12.9	2317.0	12.9	143,329	12.8	745,811	13.1
45-54	186,001	7.9	42,792	8.3	105,760	7.6	25,612	8.0	1715.0	9.5	87,179	7.8	449,059	7.9
55+	191,101	8.1	46,068	8.9	112,574	8.1	27,816	8.7	2570.0	14.3	102,829	9.2	482,958	8.5
Unknown	185,981	7.9	14,731	2.9	90,295	6.5	5,805	1.8	24.0	0.1	52,183	4.7	349,019	6.1
Indigenous language (Pop 5+ yr)														
Speak indigenous language	15,584	0.8	3,634	0.8	8,031	0.7	923	0.3	54	0.3	7,143	0.8	35,369	0.7
Do not speak indigenous language	1,934,314	99.2	441,442	99.2	1,138,558	99.3	276,487	99.7	16,020	99.7	941,790	99.2	4,748,611	99.3

Table 2c (Continued): Demographic Information for the Mexican Border States, 2005

Educational level (Pop 5+ yr)														
Pop.5+ yr	1,949,898	100.0	445,076	100.0	1,146,589	100.0	277,410	100.0	16074.0	100.0	948,933	100.0	4,783,980	100.0
No school	68,051	3.5	16,373	3.7	34,927	3.0	9,906	3.6	794.0	4.9	39,172	4.1	169,223	3.5
Elementary school	748,653	38.4	182,700	41.0	522,473	45.6	128,395	46.3	8872.0	55.2	405,477	42.7	1,996,570	41.7
Secondary and High School	888,488	45.6	202,015	45.4	457,102	39.9	115,696	41.7	5538.0	34.5	391,836	41.3	2,060,675	43.1
Professional	186,939	9.6	32,776	7.4	97,772	8.5	18,666	6.7	634.0	3.9	85,291	9.0	422,078	8.8
Master and doctorate	9,852	0.5	1,452	0.3	5,073	0.4	778	0.3	39.0	0.2	3,153	0.3	20,347	0.4
Unknown	47,915	2.5	9,760	2.2	29,242	2.6	3,969	1.4	197.0	1.2	24,004	2.5	115,087	2.4
Type of Poverty (Total Pop) (3)														
Persons living in nutritional poverty*	20,855	0.9	36,969	7.2	73,654	5.3	28,658	9.0	1,250	7.0	78,853	7.0	240,239	4.2
Persons living in socioeconomic poverty**	40,029	1.7	67,801	13.1	140,207	10.1	51,582	16.2	2,526	14.0	153,431	13.7	455,576	8.0
Persons living in overall poverty***	195,038	8.3	201,294	39.0	466,855	33.7	142,891	44.7	8,104	45.1	469,115	41.9	1,483,297	26.0

Source:

(1) SEMARNAT. Compendio de Estadísticas Ambientales, 2002. México, D.F., 2003. (Compendium of Environmental Statistics.) Not including bodies of water.

(2) INEGI. II Conteo de población y vivienda 2005. México, 2006 (Population and living census)

(3) CONEVAL. Mapas de la pobreza en México. México, 2007. (Mexican poverty maps)

* Nutritional poverty: Proportion of people whose per capita household income is below what is required to cover basic nutritional needs corresponding to recommended dietary allowances

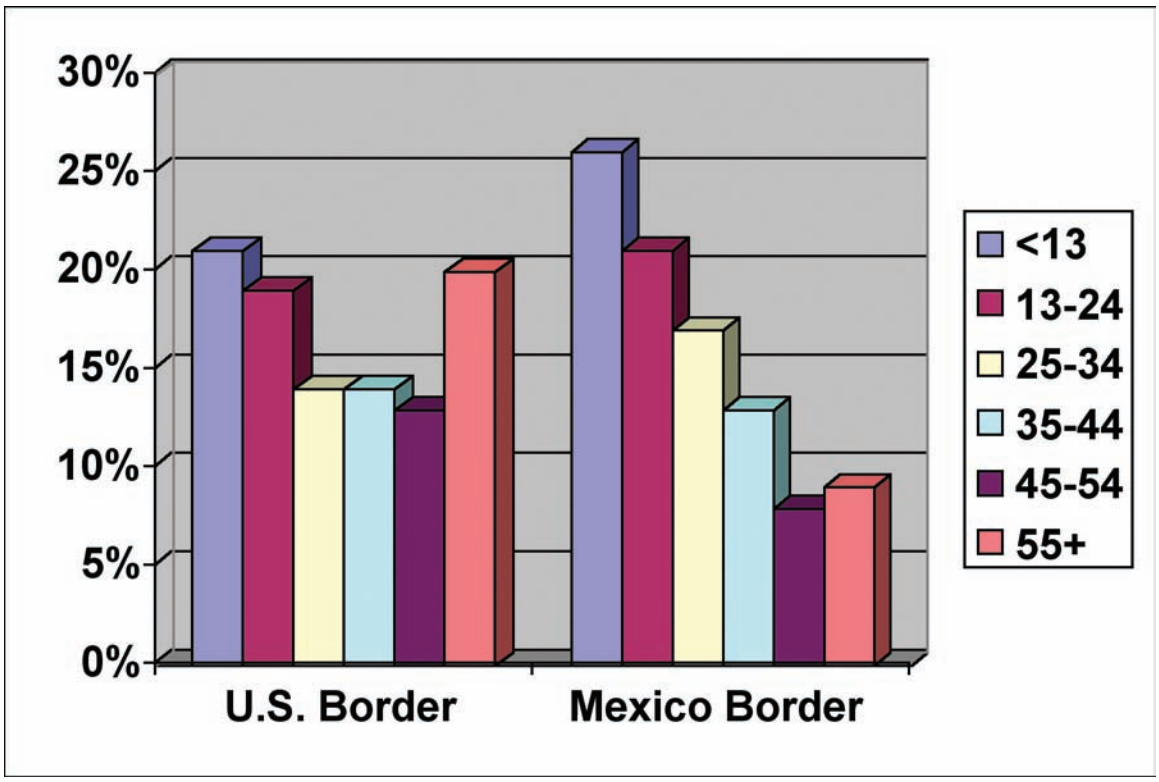
** Socioeconomic poverty: Proportion of people whose per capita household income is below the level necessary to cover basic nutritional, health and education needs.

*** Overall poverty: Proportion of people whose per capita household income is below the level necessary to cover basic consumption needs for nutrition, clothing, footwear, shelter, health, public transportation and education.

Population by Age

Approximately half (51.5%) of the population along the U.S. border is younger than 34 years of age and one in five individuals (20.8%) in the region are under the age of 13 years. Another 20 percent of the U.S. border population is older than 55 years. The Mexican border population, by comparison, is younger with nearly two-thirds (64.5%) of the population younger than 34 years old. More than one-quarter (28.0%) of the Mexican border inhabitants are less than 13 years of age and only 8.6% of the population is older than 55 years of age (Figure 2).

Figure 2: Population by Age Along the U.S.-Mexico Border, 2005



II. Demographics: Population Characteristics for Subgroups Along the Border

From 2000-2005, the U.S. border population increased by 7.4 percent from 6.3 million to 6.8 million inhabitants. The largest relative population growth took place in Hidalgo, Texas (19.1%) and Webb, Texas (16.4%). The rural counties of Hidalgo, New Mexico and Terrell, Texas saw population decreases of 13.4 percent and 7.9 percent respectively, and San Diego, California experienced a modest relative population growth of 3.9 percent but the largest gross increase in population (108,875) between 2000 and 2005 (Table 3a). Of note, the ten most populous U.S. border counties comprise 96 percent of the total U.S. border population.

Table 3a: Population Growth in U.S. Border Counties, 2000-2005

County	Total Pop. (April 1, 2000)	Total Pop. (July 1, 2005)	Change (%)
San Diego, CA**	2,824,587	2,933,462	3.9
Imperial, CA**	142,534	155,823	9.3
Yuma, AZ	164,023	181,277	10.5
Pima, AZ	863,392	924,786	7.1
Santa Cruz, AZ	39,269	42,009	7.0
Conchise, AZ	119,031	126,106	5.9
Hidalgo, NM	5,932	5,139	-13.4
Luna, NM	25,016	26,498	5.9
Doña Ana, NM	174,682	189,444	8.5
El Paso, TX	679,622	721,598	6.2
Hudspeth, TX	3,344	3,295	-1.5
Jeff Davis, TX	2,207	2,306	4.5
Presidio, TX	7,304	7,722	5.7
Brewster, TX	8,866	9,079	2.4
Terrell, TX	1,081	996	-7.9
Val Verde, TX	44,856	47,596	6.1
Kinney, TX	3,379	3,327	-1.5
Maverick, TX	47,297	51,181	8.2
Webb, TX	193,117	224,695	16.4
Zapata, TX	12,182	13,373	9.8
Starr, TX	53,597	60,941	13.7
Hidalgo, TX	569,463	678,275	19.1
Cameron, TX	335,227	378,311	12.9
Total U.S. Border Pop.	**6,320,008**	**6,787,239**	**7.4**

****Source: National Center for Health Statistics, Bridged-Race Population Estimates, 2005.**

From 2000-2005, the Mexican border population increased by 9.3 percent, from 5.2 to 5.7 million people. The largest relative population growth occurred in Puerto Peñasco, Sonora (38.6%) and Reynosa, Tamaulipas (19.3%). Tijuana, Baja California experienced a population increase of 13.9 percent and the largest gross increase in population with an increase of 172,630 people from 2000 to 2005. Jurisdictions with the most notable relative decreases in population size were primarily rural. Thus, it appears that an urbanization of the border population is occurring (Table 3b). The ten most populous Mexican border municipalities comprise 91 percent of the total Mexican border population.

Table 3b: Population Growth in Mexican Border Health Jurisdictions, 2000-2005

Health Jurisdiction (from West to East)	Total Pop. (2000)	Total Pop. (2005)	Change (%)
Tijuana, BC	1,238,057	1,410,687	13.9
Tecate, BC	79,640	91,034	14.3
Mexicali, BC	779,154	855,962	9.9
San Luis Río Colorado, Son	150,732	157,076	4.2
Puerto Peñasco, Son	32,374	44,875	38.6
Caborca, Son	71,657	70,113	-2.2
Altar, Son	7,482	8,357	11.7
Sáric, Son	2,330	2,486	6.7
Nogales, Son	166,198	193,517	16.4
Santa Cruz, Son	1,684	1,786	6.1
Cananea, Son	33,083	32,157	-2.8
Naco, Son	5,561	6,010	8.1
Janos, Chih	10,385	8,211	-20.9
Ascensión, Chih	22,508	22,392	-0.5
Juárez, Chih	1,255,844	1,313,338	4.6
Praxedis G. Guerrero, Chih	9,120	8,514	-6.6
Guadalupe, Chih	10,303	9,148	-11.2
Ojinaga, Chih	24,875	21,157	-14.9
Manuel Benavides, Chih	1,768	1,600	-9.5
Ocampo, Coah	12,406	10,183	-17.9
Acuña, Coah	116,022	126,238	8.8
Jiménez, Coah	10,086	9,768	-3.2
Piedras Negras, Coah	132,919	143,915	8.3
Nava, Coah	23,879	25,856	8.3
Guerrero, Coah	2,127	1,877	-11.8
Hidalgo, Coah	1,503	1,516	0.9
Anáhuac, NL	18,813	17,983	-4.4
Nuevo Laredo, Tamps	325,494	355,827	9.3
Guerrero, Tamps	4,579	3,861	-15.7
Mier, Tamps	7,088	6,539	-7.7
Miguel Alemán, Tamps	26,905	24,020	-10.7
Camargo, Tamps	17,565	17,587	0.1
Gustavo Díaz Ordaz, Tamps	16,941	15,028	-11.3
Reynosa, Tamps	441,567	526,888	19.3
Río Bravo, Tamps	108,486	106,842	-1.5
Valle Hermoso, Tamps	60,934	62,193	2.1
Total Mexico Border Pop.	**5,230,069**	**5,714,541**	**9.3**

Source: CONAPO. Proyecciones de población por sexo, grupos de edad y entidad federativa 2000-2050. México, 2002. INEGI. II Conteo de población y vivienda 2005. (Population projections by sex, age group and federal entity 2000-2005. Mexico, 2002. INEGI. II Population and living census 2005).

Population by Race/Ethnicity

Within U.S. border counties, variation in the proportional make-up of racial and ethnic communities is substantial. In aggregate, Latinos are predominant across the region, comprising 51.5 percent of the population. The border counties within New Mexico (64.0%) and Texas (86.4%) have substantially higher proportions of Latinos than Arizona (36.8%) and California (31.8%) [Table 4a]. Analysis on a county-by-county level among the ten most populous U.S. border counties illustrates that the racial/ethnic composition of local border communities is quite heterogeneous. In Doña Ana, New Mexico and El Paso, Texas, for instance, between 65 percent and 82 percent of the population, respectively, is Latino compared to much lower proportions in Pima, Arizona (31.9%) and San Diego, California (29.5%), where the majority of residents are White (59.4% and 53.6%

respectively). The Asian and Pacific Islander population is relatively small along the entire U.S.-Mexico border except in San Diego, where Asian and Pacific Islanders comprise 10.9 percent of the population. Overall, 3.4 percent of the border population in the U.S. is Black, with the largest proportion of Blacks living in San Diego (5.5%). Less than one percent of the U.S. border inhabitants are American Indian or Alaska Native (Figure 3, Table 4a).

Figure 3: Population by Race/Ethnicity for Selected U.S. Border Counties, 2005

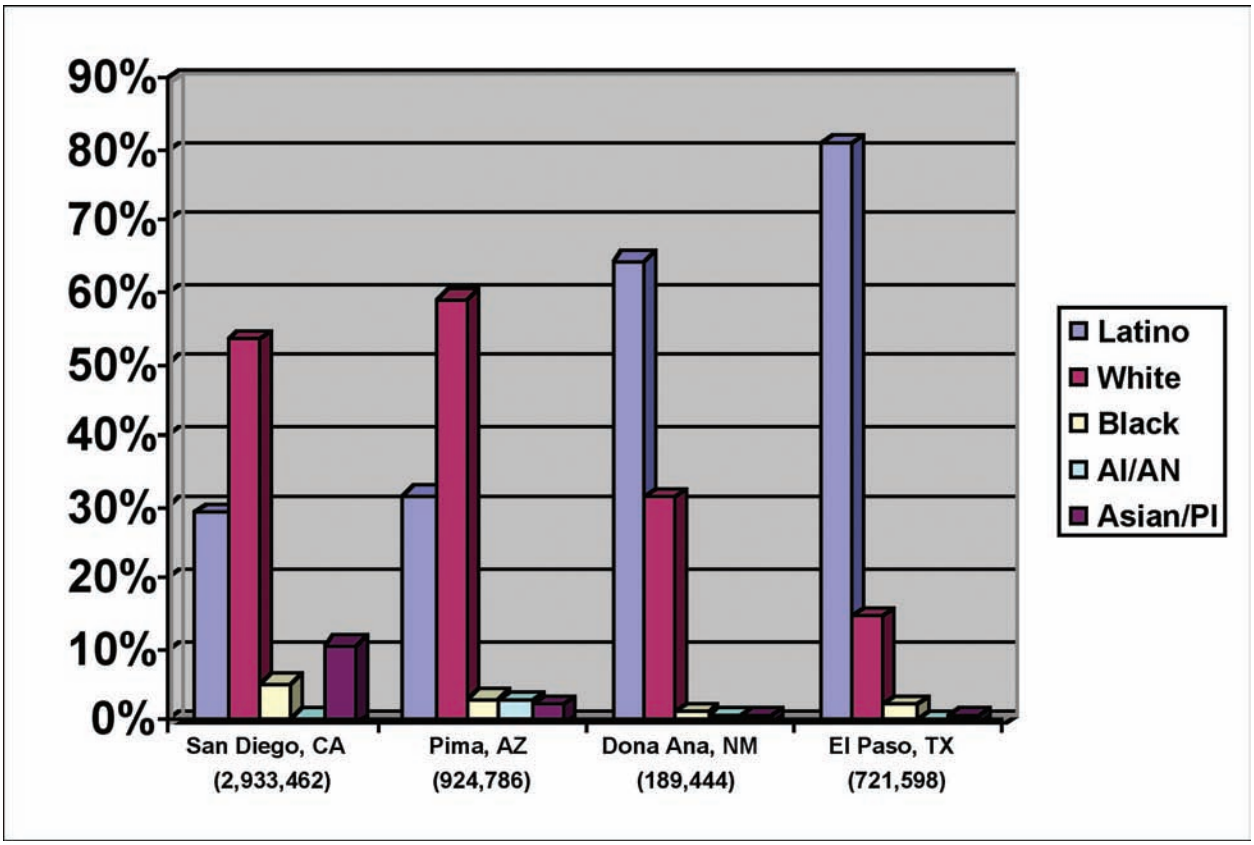


Table 4a: Population by Race/Ethnicity for the 10 Most Populous U.S. Border Counties, 2005

County	Total Pop.	% of Total				
		Latino/Hispanic	White	Black or African American	American Indian/ Alaskan Native	Asian/ Pacific Islander
San Diego, CA	2,933,462	29.5	53.6	5.5	0.6	10.9
Pima, AZ	924,786	31.9	59.4	3.3	2.9	2.5
El Paso, TX	721,598	81.2	14.8	2.6	0.3	1.1
Hidalgo, TX	678,275	89.4	9.4	0.4	0.1	0.7
Cameron, TX	378,311	86.0	13.0	0.3	0.1	0.5
Webb, TX	224,695	94.9	4.4	0.2	0.1	0.4
Doña Ana, NM	189,444	64.8	31.8	1.5	1.0	0.9
Yuma, AZ	181,277	55.1	40.8	1.9	1.3	1
Imperial, CA**	155,823	75.3	18.3	3.4	1.0	1.9
Cochise, AZ	126,106	31.2	61.3	4.3	1.1	2.1
Total U.S. Border Pop. (10 Counties)	**6,513,777**					
Total U.S. Border Pop.	**6,787,239**	**51.5**	**38.8**	**3.4**	**0.8**	**5.4**

**Source: National Center for Health Statistics, Bridged-Race Population Estimates, 2005.

Race/ethnicity data are not collected in Mexico. Mexican census data does, however, capture whether the general populace speaks an indigenous language or not, which may serve as a proxy for ethnic diversity in Mexico. The vast majority (99.3%) of the Mexican border population does not speak an indigenous language (Table 4b).

Table 4b: Population Who Speak an Indigenous for the 10 Most Populous Mexico Border Municipalities, 2005

Municipality	Pop. 5+ yr	Speak an indigenous language	Do not speak an indigenous language
Tijuana, BC	1,146,065	0.9	99.1
Juárez, Chih	1,085,264	0.7	99.3
Mexicali, BC	726,114	0.5	99.5
Reynosa, Tamps	432,981	1.0	99.0
Nuevo Laredo, Tamps	306,739	0.6	99.4
Nogales, Son	163,327	0.9	99.1
San Luis Río Colorado, Son	136,487	0.5	99.5
Piedras Negras, Coah	125,026	0.3	99.7
Acuña, Coah	108,966	0.5	99.5
Río Bravo, Tamps	94,603	0.6	99.4
Total Mexico Border Pop. (10 Municipalities)	**4,325,572**	**0.7**	**99.3**
Total Mexico Border Pop.	**4,783,980**	**0.7**	**99.3**

Source: INEGI. II Conteo de población y vivienda 2005. (INEGI. II Population and living census 2005)

III. Socioeconomic Status: Education, Income and Health Status

People Living Below the Poverty Line

Overall, 19.4 percent of the population living in U.S. border counties lives below the poverty level, with the largest proportion among those in younger age groups. Nearly one-third (31.5%) of the 1.28 million individuals who live below the poverty level in border counties are under 13 years of age, with a higher proportion of males (35.5%) than females (28.2%). Approximately one-quarter (24.1%) of inhabitants living below the poverty level in U.S. border counties are 13 to 24 years old. Eleven percent (11.1%) of the U.S. border population living in poverty are 35-44 year-olds and 8.3 percent are between the ages of 45-54 years (Figure 4, Table 5a, Table 5b).

Figure 4: Population Living Below the Poverty Level by Age for the 10 Most Populous U.S. Border Counties, 2005

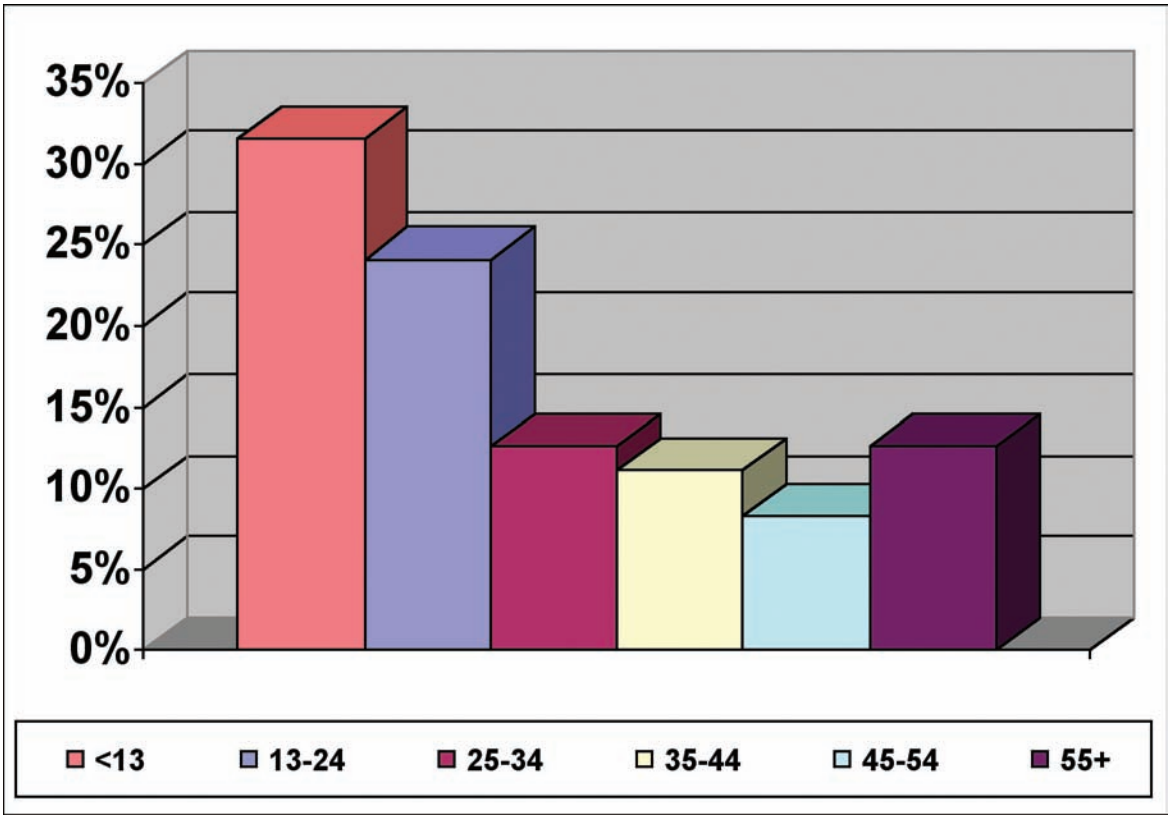


Table 5a: Age Group Distribution of Males and Females Living Below the Poverty Level During the Past 12 Months for the 10 Most Populous U.S. Border Counties, 2005

	Males Below Poverty		Females Below Poverty		Total Below Poverty	
Age Group	N	%	N	%	N	%
<13	201,564	35.5	198,968	28.2	400,532	31.5
13-24	140,392	24.7	165,959	23.5	306,351	24.1
25-34	63,103	11.1	96,731	13.7	159,834	12.6
35-44	54,359	9.6	87,178	12.4	141,537	11.1
45-54	46,610	8.2	58,519	8.3	105,129	8.3
55+	62,465	11.0	97,702	13.9	160,167	12.6
Total	**568,493**	**100.0**	**705,057**	**100.0**	**1,273,550**	**100.0**

Source: US Census Bureau, American Community Survey, 2005 Estimates
Data included for the following counties: San Diego, Imperial, Yuma, Pima, Cochise, Hidalgo, Doña Ana, El Paso, Webb, Cameron.

Table 5b: Distribution of Males and Females Living Below the Poverty Level During the Past 12 Months for the 10 Most Populous U.S. Border Counties, 2005

	Male		Female	
County	% of Population Below Poverty	2005 General Population Estimate	% of Population Below Poverty	2005 General Population Estimate
San Diego, CA	9.3	1,480,526	11.8	1,452,936
Pima, AZ				
El Paso, TX	26.3	346,835	31.9	374,763
Hidalgo, TX	38.5	330,702	43.3	347,573
Cameron, TX	39.9	181,847	42.4	196,464
Webb, TX	31.3	108,426	31.4	116,269
Doña Ana, NM	24.8	89,889	29.9	93,576
Yuma, AZ				
Imperial, CA	17.2	80,728	22.8	75,095
Cochise, AZ				
Total U.S. Border Pop.	6.7	2,618,953	8.1	2,656,676

Source: US Census Bureau, American Community Survey, 2005
Source: National Center for Health Statistics, Bridged-Race Population Estimates, 2005.

Poverty by Geographic Location

Generally, in looking at poverty levels geographically, the proportion of the border population living in poverty increases from west to east in both U.S. and Mexican border states. States to the north (Texas) and south (Chihuahua, Coahuila, Nuevo Leon and Tamaulipas) of the Rio Grande possess the highest relative poverty levels with a range of 33.7 percent living in poverty in Chihuahua to 45.1 percent in Nuevo Leon. The states of Baja California, Mexico (8.3%) and California, U.S (10%), by contrast, have the lowest relative poverty rates.

Figure 5: Population Living Below the Poverty Level in U.S. Border States, 2005

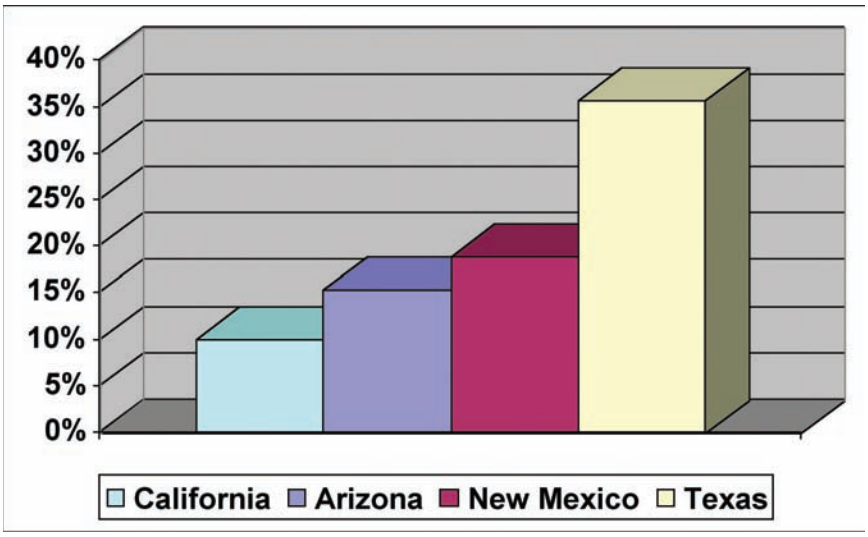
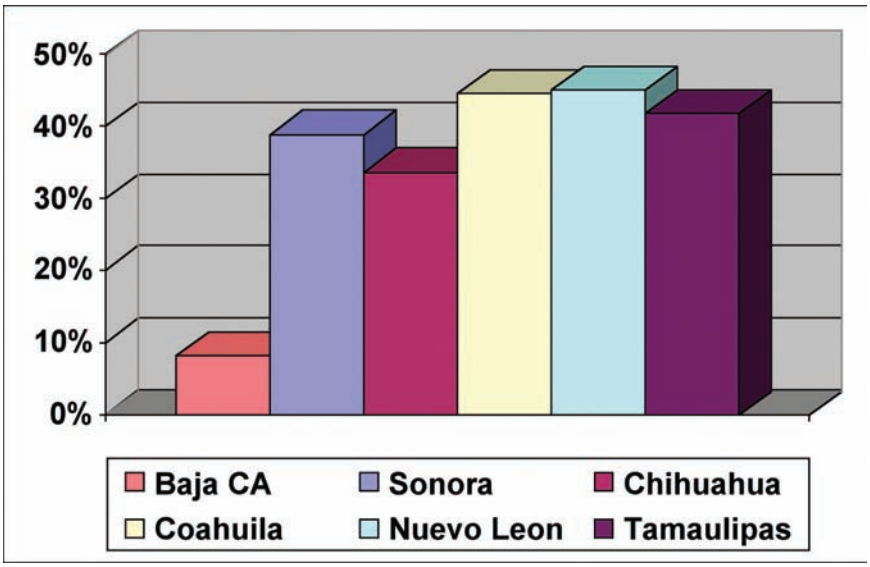


Figure 6: Population Living Below the Poverty Level in Mexican Border States, 2005



In Mexico, three definitions for poverty are commonly used to describe impoverished communities. *Nutritional poverty* is the lowest threshold measure for poverty. Nutritional poverty represents the proportion of people whose per capita household income is below what is required to cover basic nutritional needs corresponding to recommended dietary allowances. *Socioeconomic poverty* represents the proportion of people whose per capita household income is below the level necessary to cover basic nutritional, health and education needs. *Overall poverty* represents the proportion of people whose per capita household income is below the level necessary to cover basic consumption needs for nutrition, clothing, footwear, shelter, health, public transportation and education. These three measures for poverty are not mutually exclusive and *overall poverty* represents the highest levels of poverty and may be most comparable to the definition for poverty in the U.S. In comparing poverty levels across the ten most populous Mexican border municipalities, a general east to west increase in poverty rates is evident with the lowest rates of poverty in Tijuana (7.1%) and Mexicali (10.3%) and relatively higher rates along the eastern region of the border with rates of 44.6 percent in Acuña, Coahuila and 53.3 percent in Río Bravo, Tamaulipas (Table 6).

Table 6: People Living in Nutritional, Socioeconomic and Overall Poverty in the 10 Most Populous Mexican Border Municipalities, 2005

Municipality	Total Pop.	People living in nutritional poverty*	People living in socioeconomic poverty**	People living in overall poverty***
Tijuana, BC	1,410,687	0.5	1.1	7.1
Juárez, Chih	1,313,338	4.9	9.7	33.4
Mexicali, BC	855,962	1.5	2.6	10.3
Reynosa, Tamps	526,888	5.5	11.5	39.5
Nuevo Laredo, Tamps	355,827	6.5	13.2	42.2
Nogales, Son	193,517	6.5	12.3	37.4
San Luis Río Colorado, Son	157,076	7.2	13.5	41.1
Piedras Negras, Coah	143,915	7.8	14.8	43.0
Acuña, Coah	126,238	7.3	14.4	44.6
Río Bravo, Tamps	106,842	12.7	21.9	53.3
Total Mexico Border Pop. (10 Municipalities)	**5,190,290**	**3.7**	**7.3**	**25.0**
Total Mexico Border Pop.	**5,714,541**	**4.2**	**8.0**	**26.0**

CONEVAL. Mapas de la pobreza en México. México, 2007. (CONEVAL. Poverty Maps in Mexico, 2007.)

* Nutritional poverty: Proportion of people whose per capita household income is below what is required to cover basic nutritional needs corresponding to recommended dietary allowances

** Socioeconomic poverty: Proportion of people whose per capita household income is below the level necessary to cover basic nutritional, health and education needs.

*** Overall poverty: Proportion of people whose per capita household income is below the level necessary to cover basic consumption needs for nutrition, clothing, footwear, shelter, health, public transportation and education.

Health Status and Availability of Health Care

Health status and health care indicators also provide a helpful view into the general well-being of communities along the border.

GENERAL CHARACTERISTICS OF THE BORDER POPULATION

Life Expectancy: Life expectancy in border states within the U.S. and Mexico range from 76 to 78 years. Within counties and municipalities along the border, the lowest overall life expectancy can be found in Hidalgo, New Mexico (71 years), Kinney, Texas (74 years) and Río Bravo, Tamaulipas (74 years). The highest overall life expectancy is present in Starr, Texas (78 years) and Hidalgo, Texas (78 years) and Tijuana, Baja California (77 years).

Infant Mortality: Infant mortality per 1,000 live births is notably higher in Mexican border municipalities when compared to both Mexican border states overall and U.S. border states and counties. Infant mortality rates within border municipalities range from a low of 19.5 per 1,000 in Nogales, Sonora to a high of 26.0 per 1,000 in Río Bravo, Tamaulipas. Overall infant mortality rates in Mexican Border States are considerably lower than those found in border municipalities with a low of 14.0 per 1,000 in the state of Nuevo Leon and an upper bound of 16.3 per 1,000 within the states of Sonora and Tamaulipas. By comparison, infant mortality rates are substantially lower in U.S. border states and counties with a low of 5.0 per 1,000 live births in California and a high of 6.6 per 1,000 in Texas.

Physicians: The rate of physicians per 100,000 varies substantially by border state, county and municipality. On the state level, the rates of physicians range from 81 per 100,000 in Texas to 170 per 100,000 in California. On the county level, some of the least populous counties (Hudspeth and Terrell, Texas) do not have any physicians. While other U.S. border counties have more, the physician rate is still relatively low in a number of locations including Hidalgo, New Mexico (17), Zapata, Texas (23) and Starr, Texas (29). San Diego, California (265), El Paso, Texas (174) and Doña Ana, New Mexico (138) have the highest rates. In Mexico, the rate of physicians per 100,000 range from 118 in Chihuahua to 177 in Sonora. Among the 10 most populous Mexican municipalities, Río Bravo, Tamaulipas (68) has the lowest physician rate while the highest rates are found in Piedras Negras, Coahuila (185) and Acuña, Coahuila (372).

Hospitals and Clinics: The rate of hospitals and clinics per 100,000 can serve as an indicator of health status and availability of health care in border communities. Several rural U.S. border counties, with populations of less than 14,000 people, do not have local hospitals or clinics. Several other border counties with larger populations have relatively low rates of hospitals per population including San Diego (1.0) and Imperial (1.3), California, Webb, Texas (1.3) and Hidalgo, Texas (1.6). On the state level, California (1.8) has the lowest rate of hospitals while New Mexico is the border state with the highest rate (4.1 per 100,000) [Tables 7a and 7b].

Table 7a: Health Status and Availability of Health Care in U.S. Border Counties, 2005

County	Total Pop. (2005)	Life Expectancy (1979-1997)	Life Expectancy By Sex (1979-1997)	Infant Mortality (per 1,000 live births)	Number of Physicians per 100,000 of Populations(MDs, Pas, NPs)	Number of Hospitals or Clinics per 100,000 of Population
San Diego, CA	2,933,462	76.2	79.1(F)/73.2(M)	5.4	265	1.0
Imperial, CA	155,823	74.6	78.7(F)/70.5(M)	4.7	74	1.3
Yuma, AZ	181,277	75.7	79.2(F)/71.9(M)	4.3	103	2.8
Pima, AZ	924,786	75.3	78.9(F)/71.7(M)	8.4	55	3.2
Santa Cruz, AZ	41,136	77.4	80.2(F)/74.2(M)	2.6	81	2.4
Conchise, AZ	126,106	75.3	78(F)/72.2(M)	10.7	95	7.9
Hidalgo, NM	5,037	71.1	78.2(F)/71.1(M)	2.9	17	0.0
Luna, NM	26,267	74.3	78.4(F)/70.2(M)	7.5	82	3.8
Dona Ana, NM	189,444	76.8	79.6(F)/73.7(M)	4.9	138	2.1
El Paso, TX	721,598	76.3	79.5(F)/72.8(M)	3.7	174	1.7
Hudspeth, TX	3,384	77.4	78.8(F)/75.1(M)	0	0	0.0
Jeff Davis, TX	2,159	77.8	81.2(F)/74.3(M)	0	134	0.0
Presidio, TX	7,921	77.4	81.1(F)/73.5(M)	0	53	0.0
Brewster, TX	9,347	75.9	79.3(F)/72.4(M)	3.1	109	10.7
Terrell, TX	915	74.7	77.9(F)/71.1(M)	0	0	0.0
Val Verde, TX	47,304	75.3	78.2(F)/72.3(M)	7.8	84	2.1
Kinney, TX	3,404	73.9	79.1(F)/68.9(M)	0	30	0.0
Maverick, TX	50,602	77.5	80.8(F)/73.9(M)	10.1	69	2.0
Webb, TX	224,695	76.8	80.6(F)/72.8(M)	6.4	94	1.3
Zapata, TX	13,560	75.0	80.4(F)/69.8(M)	6.8	23	0.0
Starr, TX	59,496	78.2	81.9(F)/74.2(M)	11.9	29	1.7
Hidalgo, TX	678,275	78.0	81.2(F)/74.4(M)	4.2	103	1.6
Cameron, TX	378,311	76.7	80.3(F)/72.9(M)	5.4	36	2.1
Total U.S. Border Pop.	6,784,309					

Table 7b: Health Status and Availability of Health Care in U.S. Border States, 2005

State	Total Pop.	Life Expectancy	Infant Mortality (per 1,000 live births)	Number of Physicians Per 100,000 of Population(MDs, Pas, NPs)	Number of Hospitals/Clinics per 100,000 of Population
Arizona	6,166,318	77.5	6.4	126	2.3
California	36,457,549	78.2	5.0	170	1.8
New Mexico	1,954,599	77.0	5.9	116	4.1
Texas	23,507,783	76.7	6.6	81	2.7

Sources for Table 7a and 7b data:
Population: www.census.gov; Life expectancy: http://greeneconomics.blogspot.com/2006/09/life-expectancy-by-state-selection-or.html; http://ushp.org; Infant mortality: www.dshs.state.tx.us/chs/cfs, www.womenscommission.state.nm.us/County%20Reports/, www.unitedhealthfoundation.org/; Physicians per capita: http://neigborhoods.homeseekers.com/; Number of hospitals per capita: www.revolutionhealth.com and www.theagapecenter.com/Hospitals/index.htm

The Mexican border municipalities of Nogales, Sonora (3.6) and Juárez, Chihuahua (3.7) have relatively low rates of hospitals and clinics per 100,000 when compared to the municipalities of Río Bravo, Tamaulipas (15.0), San Luis Río Colorado, Sonora (11.5) and Piedras Negras, Coahuila (10.4). Within Mexican border states, Baja California has the lowest rate at 8.4 hospitals or clinics per 100,000 compared to the highest rate in the state of Sonora (30.8 per 100,000) [Tables 7c and 7d].

Table 7c: Health Status and Availability of Health Care in the 10 Most Populous Mexican Border Municipalities, 2005

Municipality	Total Pop.(2005)	Life Expectancy (2000)	Infant Mortality (per 1,000 live births) (2000)	Number of Physicians per 100,000 of Population	Number of Hospitals or Clinics per 100,000 of Population
Tijuana, BC	1,410,687	77	21.3	102	4.5
Juárez, Chih	1,313,338	77	20.9	75	3.7
Mexicali, BC	855,962	77	20.7	119	8.8
Reynosa, Tamps	526,888	76	21.9	139	6.8
Nuevo Laredo, Tamps	355,827	76	22.1	129	7.3
Nogales, Son	193,517	77	19.5	123	3.6
San Luis Río Colorado, Son	157,076	77	20.9	107	11.5
Piedras Negras, Coah	143,915	77	21.0	185	10.4
Acuña, Coah	126,238	75	23.8	372	10.3
Río Bravo, Tamps	106,842	74	26.0	68	15.0

Fuente: CONAPO para esperanza de vida y tasa de mortalidad infantil. Secretaria de Salud, DGI. Número de médicos y hospitales. (Source: CONAPO for life expectancy and infant mortality rates. Health Secretary, DGI for physician and hospital rates.)

Table 7c: Health Status and Availability of Health Care in the 10 Most Populous Mexican Border Municipalities, 2005

Mexican State	Total Pop. (2005)	Life Expectancy (2005)	Infant Mortality (per 1,000 live births) (2005)	Number of Physicians per 100,000 of Population (2000)	Number of Hospitals/Clinics per 100,000 of Population
Baja California	2,821,961	77	14.9	125	8.4
Sonora	2,412,598	76	16.1	177	30.8
Chihuahua	3,256,055	76	16.3	118	17.0
Coahuila	2,515,297	76	14.8	156	14.9
Nuevo Leon	4,220,804	76	14.0	148	14.0
Tamaulipas	3,036,091	76	16.3	165	18.0

Fuente: Secretaría de Gobernación. Sistema Nacional de Informacón Municipal. (Source: Governing Secretary. National System for Municipal Information.)

IV. Natality: Birth Rates Among Border Populations

In 2005, 110,239 live births were recorded among women aged 15-50 years in the ten most populous U.S. border counties. The overall birth rate was 67.4 per 1,000 population. Birth rates vary widely across counties with the highest birth rates per 1,000 in Hidalgo, Texas (100.2), Webb, Texas (84.6), and Yuma, Arizona (88.3). The lowest birth rates are found in El Paso, Texas (61.1), San Diego, California (60.6), and Pima, Arizona (60.0) [Table 8a].

In the ten most populous Mexican border municipalities, 115,840 live births were recorded in 2005 among women aged 15-49 years, with an overall birth rate of 85.8 per 1,000 population. The lowest number of births in 2005 occurred in Piedras Negras, Coahuila (2,878) while the highest overall number of births took place in Tijuana, Baja California (32,228) and Ciudad Juárez, Chihuahua (27,688). Mexicali, Baja California had the lowest birth rate (73.5 per 1,000) and Río Bravo, Tamaulipas had the highest birth rate at 113.0 per 1,000 population [Table 8b].

Table 8a: Birth Rate in 10 Most Populous U.S. Border Counties, 2005

County	Total Female Population (15-49 yrs.)*	Number of Live Births/Fertility (15-50 yrs.)**	Birth Rate (per 1,000 population)
San Diego, CA	712,507	43,190	60.6
Pima, AZ	217,170	13,039	60.0
El Paso, TX	183,454	11,211	61.1
Hidalgo, TX	170,854	17,125	100.2
Cameron, TX	94,033	7,209	76.7
Webb, TX	57,248	4,842	84.6
Doña Ana, NM	96,374	5,590	58.0
Yuma, AZ	39,632	3,499	88.3
Imperial, CA	36,277	2,794	77.0
Cochise, AZ	27,703	1,740	62.8
Total U.S. Border Pop.	**1,635,252**	**110,239**	**67.4**

Source:
***National Center for Health Statistics, Bridged-Race Population Estimates, 2005.**
****Source: US Census Bureau, American Community Survey, 2005; for Arizona, the number of live births were obtained from state vital statistics.**

Table 8b: Birth Rate in 10 Most Populous Mexican Border Municipalities, 2005

Municipality	Total Female Population (15-49 yrs.)*	Number of Live Births**	Birth Rate (per 1,000 population)
Tijuana, BC	364,189	32,228	88.5
Ciudad Juárez, Chih	337,927	27,688	81.9
Mexicali, BC	221,693	16,289	73.5
Reynosa, Tamps	140,236	13,177	94.0
Nuevo Laredo, Tamps	94,250	8,882	94.2
Nogales, Son	51,282	4,623	90.1
San Luis Río Colorado, Son	40,470	3,813	94.2
Piedras Negras, Coah	37,784	2,878	76.2
Acuña, Coah	33,996	3,089	90.9
Río Bravo, Tamps	28,083	3,173	113.0
Total Mexico Border Pop. (10 Municipalities)	**1,349,910**	**115,840**	**85.8**
Total Mexico Border Pop.	**1,482,606**	**127,923**	**86.3**

Source:

*** INEGI. II Conteo de población y vivienda 2005. México, 2006 (Population and living census 2005. Mexico, 2006)**

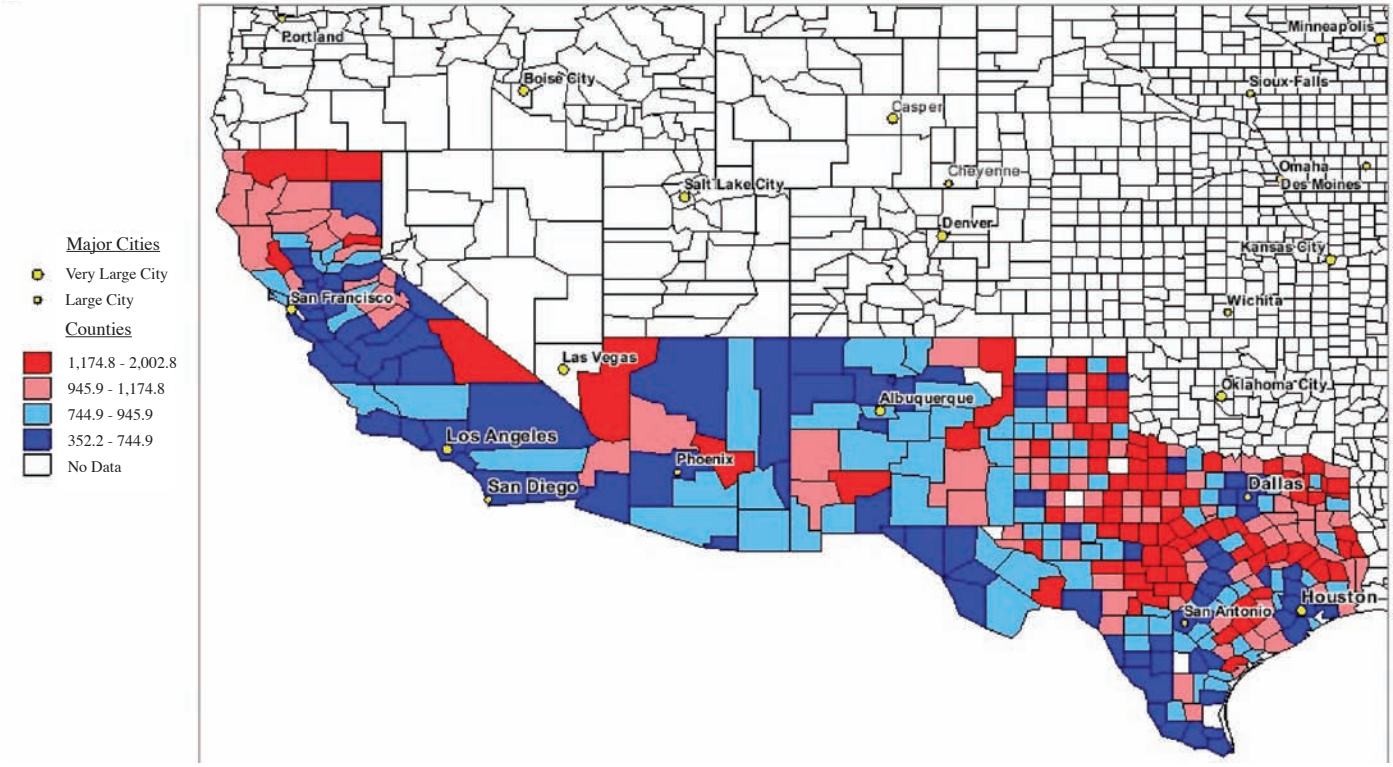
**** INEGI. Estadísticas de nacimientos. México, 2007 (Birth statistics, Mexico)**

V. Mortality: Deaths and Death Rates Among Border Populations

Overall death rates per 100,000 people within counties and municipalities along the U.S.-Mexico border are relatively low when compared to counties that are further from the border. In U.S. border counties, for instance, overall death rates are between 352 and 946 per 100,000. In counties to the north of the border region (i.e., beyond the 23 contiguous border counties), overall death rates are more likely to reach a range of 946 to 2,003 per 100,000. This may be a reflection of a younger population in the border region.

Figure 7: Total Death Rate in U.S. Border Counties, 2003

(National value = 841.900)



Overall death rates within Mexican municipalities were not available at the time of publication of this report.

Leading Causes of Death in U.S. Border Counties

Heart disease, cancer, lung disease, stroke and accidents consistently rank among the top five leading causes of death along the 23 contiguous U.S. border counties. HIV/AIDS ranks among the top twenty leading causes of death in these border counties. The death rate for HIV/AIDS per 100,000 is lowest in Arizona (2.3) and is followed by slightly higher rates in Texas (2.8), New Mexico (3.2) and California (4.6) [Tables 9a-d].

Table 9a: Ten Leading Causes of Death in California Border Counties, 2003

Rank	Cause of death	N	%	Rate (per 100,000)
	All causes	20,805	100.0	673.5
1	Heart disease	5,654	27.2	183.0
2	Cancer	4,922	23.7	159.3
3	Stroke	1,590	7.6	51.5
4	Lung Disease (CLRD)	1,116	5.4	36.1
5	Accidents	856	4.1	27.7
6	Influenza / pneumonia	597	2.9	19.3
7	Diabetes	543	2.6	17.6
8	Alzheimer's disease	1,016	4.9	32.9
9	Cirrhosis	315	1.5	10.2
10	Suicide	334	1.6	10.8
	HIV/AIDS (SD 2002)*	142	0.7	4.6
	All other causes	3,862	18.6	125.0

Source: State of California, Department of Health Services, Death Records
***Source: Prepared by Community Epidemiology, Health and Human Services Agency, County of San Diego, 1/06/05**

Table 9b: Ten Leading Causes of Death in Arizona Border Counties, 2005

Rank	Cause of death	N	%	Rate (per 100,000)
13	All causes	9823	100.0	770.9
1	Heart disease	3054	31.1	239.7
2	Cancer	2151	21.9	168.8
3	Stroke	598	6.1	46.9
4	Lung Disease (CLRD)	602	6.1	47.2
5	Accidents	628	6.4	49.3
6	Influenza / pneumonia	288	2.9	22.6
7	Diabetes	266	2.7	20.9
8	Alzheimer's disease	293	3.0	23.0
9	Cirrhosis	171	1.7	13.4
10	Suicide	195	2.0	15.3
11	HIV/AIDS	29	0.3	2.3
12	All other causes	1641	16.7	128.8

Table 9c: Ten Leading Causes of Death in New Mexico Border Counties, 2005

Rank	Cause of death	N	%	Rate (per 100,000)
13	All causes	1495	100.0	676.2
1	Heart disease	342	22.9	154.7
2	Cancer	333	22.3	150.6
3	Stroke	97	6.5	43.9
4	Lung Disease (CLRD)	88	5.9	39.8
5	Accidents	81	5.4	36.6
6	Influenza / pneumonia	67	4.5	30.3
7	Diabetes	39	2.6	17.6
8	Alzheimer's disease	36	2.4	16.3
9	Cirrhosis	35	2.3	15.8
10	Suicide	31	2.1	14.0
11	HIV/AIDS	7	0.5	3.2
12	All other causes	342	22.9	154.7

Table 9d: Twenty Leading Causes of Death in Texas Border Counties, 2004

Rank	Cause of Death (Short Titles)	N	%	Rate (per 100,000)
	All Causes	11,146	100.0	506.0
1	Heart Disease	3,013	27.0	136.8
2	Cancer	2,372	21.3	107.7
3	Stroke	578	5.2	26.2
4	Diabetes	573	5.1	26.0
5	Accidents	533	4.8	24.2
6	Lung Disease	388	3.5	17.6
7	Liver Disease	300	2.7	13.6
8	Septicemia	270	2.4	12.3
9	Influenza & Pneumonia	255	2.3	11.6
10	Kidney Disease	246	2.2	11.2
11	Alzheimer's Disease	208	1.9	9.4
12	Suicide	124	1.1	5.6
13	Hypertension	114	1.0	5.2
*14	Pneumonitis	95	0.9	4.3
*14	Perinatal Conditions	95	0.9	4.3
16	Congenital Malformations	85	0.8	3.9
17	Neoplasms	73	0.7	3.3
18	Homicide	71	0.6	3.2
19	HIV/AIDS Disease	61	0.5	2.8
20	Parkinson's Disease	56	0.5	2.5
	All other causes	1,636	14.7	74.3

* Note: Two causes tied for 14th place.

Leading Causes of Death in Mexican Border States

The top ten leading causes of death are relatively consistent across the six Mexican border states (Tables 9e-j). Ischemic heart disease, diabetes mellitus, stroke, liver disease, chronic lower respiratory infections, and automobile accidents rank within the top six causes of death for the majority of these states. HIV/AIDS mortality data by state were not available for Mexican states at the time this document was published.

Table 9e: Ten Leading Causes of Death in the Mexico Border State of Baja California, 2005

Rank	Cause of death	N	%	Rate
	All causes	13,049	100.0	458.7
1	Ischemic Heart Disease / Enfermedades isquémicas del corazón	1,671	12.8	58.7
2	Diabetes mellitus	1,516	11.6	53.3
3	Other external causes / Otras causas externas	1,136	8.7	39.9
4	Stroke / Enfermedades cerebrovasculares	699	5.4	24.6
5	Liver Disease / Enfermedades del hígado	553	4.2	19.4
6	Other heart disease / Otras enfermedades del corazón	459	3.5	16.1
7	Violence / Agresiones	440	3.4	15.5
8	Infections related to perinatal period / Ciertas afecciones originadas en el periodo perinatal	420	3.2	14.8
9	Remaining malignant tumors / Resto de tumores malignos	360	2.8	12.7
10	Pneumonia / Neumonía	356	2.7	12.5
	All other causes / Todas las otras Causas	5,439	41.7	191.2

Source: INEGI. Estadísticas de Mortalidad. (Mortality Statistics.)

Table 9f: Ten Leading Causes of Death in the Mexico Border State of Sonora, 2005

Rank	Cause of death	N	%	Rate
	All causes	12,639	100.0	527.8
1	Ischemic heart diseases / Enfermedades isquémicas del corazón	1,871	14.8	78.1
2	Diabetes mellitus	1,369	10.8	57.2
3	Automobile accidents / Accidentes de transporte	640	5.1	26.7
4	Stroke / Enfermedades cerebrovasculares	618	4.9	25.8
5	Chronic lower respiratory disease / Enfermedades crónicas de las vías respiratorias inferiores	511	4.0	21.3
6	Pneumonia / Neumonía	391	3.1	16.3
7	Liver disease / Enfermedades del hígado	384	3.0	16.0
8	Infections related to perinatal period / Ciertas afecciones originadas en el periodo perinatal	375	3.0	15.7
9	Other heart disease / Otras enfermedades del corazón	370	2.9	15.4
10	Malignant tumors of the trachea, bronchials, lung / Tumor maligno de la tráquea, de los bronquios y del pulmón	348	2.8	14.5
	All other causes / Todas las otras Causas	5,762	45.6	240.6
Source: INEGI. Estadísticas de Mortalidad. (Mortality Statistics.)				

Table 9g: Ten Leading Causes of Death in the Mexico Border State of Chihuahua, 2005

Rank	Cause of death	N	%	Rate
	All causes	17,287	100.0	533.3
1	Ischemic heart disease / Enfermedades isquémicas del corazón	2,455	14.2	75.7
2	Diabetes mellitus	2,167	12.5	66.9
3	Stroke / Enfermedades cerebrovasculares	832	4.8	25.7
4	Automobile accidents / Accidentes de transporte	705	4.1	21.7
5	Chronic lower respiratory disease / Enfermedades crónicas de las vías respiratorias inferiores	661	3.8	20.4
6	All other external causes / Todas las demás causas externas	637	3.7	19.7
7	Liver disease / Enfermedades del hígado	636	3.7	19.6
8	Violence / Agresiones	569	3.3	17.6
9	Other heart disease / Otras enfermedades del corazón	526	3.0	16.2
10	Digestive tract disease / Resto de enfermedades del sistema digestivo	514	3.0	15.9
	All other causes / Todas las otras Causas	7,585	43.9	234.0
Source: INEGI. Estadísticas de Mortalidad. (Mortality Statistics.)				

Table 9h: Ten Leading Causes of Death in the Mexico Border State of Coahuila, 2005

Rank	Cause of death	N	%	Rate
	All causes	12,422	100.0	497.8
1	Diabetes mellitus	2,184	17.6	87.5
2	Ischemic heart disease / Enfermedades isquémicas del corazón	1,850	14.9	74.1
3	Stroke / Enfermedades cerebrovasculares	745	6.0	29.9
4	Liver disease / Enfermedades del hígado	539	4.3	21.6
5	Chronic lower respiratory disease / Enfermedades crónicas de las vías respiratorias inferiores	442	3.6	17.7
6	Automobile accidents / Accidentes de transporte	382	3.1	15.3
7	All other external causes / Todas las demás causas externas	376	3.0	15.1
8	Digestive tract disease / Resto de enfermedades del sistema digestivo	359	2.9	14.4
9	Urinary tract disease / Resto de enfermedades del sistema genitourinario	336	2.7	13.5
10	Other heart disease / Otras enfermedades del corazón	320	2.6	12.8
	All other causes / Todas las otras Causas	4,889	39.4	195.9

Source: INEGI. Estadísticas de Mortalidad. (Mortality Statistics.)

Table 9i: Ten Leading Causes of Death in the Mexico Border States of Nuevo Leon, 2005

Rank	Cause of death	N	%	Rate
	All causes	19,928	100.0	474.6
1	Ischemic heart disease / Enfermedades isquémicas del corazón	2,940	14.8	70.0
2	Diabetes mellitus	2,556	12.8	60.9
3	Stroke / Enfermedades cerebrovasculares	1,306	6.6	31.1
4	Chronic lower respiratory disease / Enfermedades crónicas de las vías respiratorias inferiores	824	4.1	19.6
5	Liver disease / Enfermedades del hígado	781	3.9	18.6
6	Digestive system disease / Resto de enfermedades del sistema digestivo	717	3.6	17.1
7	Other heart disease / Otras enfermedades del corazón	660	3.3	15.7
8	Other external causes / Todas las demás causas externas	647	3.2	15.4
9	Automobile accidents / Accidentes de transporte	558	2.8	13.3
10	Malignant tumors / Resto de tumores malignos	547	2.7	13.0
	All other causes / Todas las otras Causas	8,392	42.1	199.8

Source: INEGI. Estadísticas de Mortalidad. (Mortality Statistics.)

Table 9j: Ten Leading Causes of Death in the Mexico Border State of Tamaulipas, 2005

Rank	Cause of death	N	%	Rate
	All causes	13,935	100.0	460.8
1	Diabetes mellitus	2,096	15.0	69.3
2	Ischemic heart disease / Enfermedades isquémicas del corazón	2,018	14.5	66.7
3	Stroke / Enfermedades cerebrovasculares	751	5.4	24.8
4	Automobile Accidents / Accidentes de transporte	613	4.4	20.3
5	Liver disease / Enfermedades del hígado	608	4.4	20.1
6	Chronic lower respiratory disease / Enfermedades crónicas de las vías respiratorias inferiores	543	3.9	18.0
7	Infections related to perinatal period / Ciertas afecciones originadas en el periodo perinatal	440	3.2	14.5
8	Urinary tract infections / Resto de enfermedades del sistema genitourinario	398	2.9	13.2
9	Other heart disease / Otras enfermedades del corazón	378	2.7	12.5
10	Digestive tract disease / Resto de enfermedades del sistema digestivo	374	2.7	12.4
	All other causes / Todas las otras Causas	5,716	41.0	189.0

Source: INEGI. Estadísticas de Mortalidad. (Mortality Statistics.)

Chapter 3: Scope of the HIV/AIDS Epidemic Along the Border

In this chapter:

- Background
- Overall Trends: Summary of HIV/AIDS Surveillance Data
- Geographic Impact: New HIV Diagnoses, Progressors, and People Living with HIV/AIDS
- Exposure: New HIV Diagnoses and a Closer Look at Risk
- HIV Estimation
- HIV Mortality: Mortality Among Individuals Diagnosed with HIV/AIDS
- Other Indicators of Risk: Sexually Transmitted Diseases Along the Border

I. Background

The U.S.-Mexico border spans nearly 2,000 miles (3,141 kilometers) of terrain from the Pacific Ocean to the Gulf of Mexico. The region that surrounds the U.S.-Mexico border holds the distinction of being the only region in the world where a highly developed nation and a developing nation share natural resources.[12] The region is known to encompass numerous disparate communities from cultural, demographic, socioeconomic and political perspectives.

Similarly, the scope of the HIV/AIDS epidemic along the U.S.-Mexico border varies substantially from county to county and municipality to municipality. Despite variation across local regions, some general border-wide trends of note emerge when data from the border region are aggregated. This chapter provides an overview of the HIV/AIDS epidemic in the border region. The ten border states—four in the U.S. and six in Mexico—rely on a number of approaches to monitor the epidemic. The information in this chapter relies primarily on HIV/AIDS surveillance data to provide a description of HIV/AIDS morbidity and mortality, geographic and demographic HIV/AIDS trends from 2001-2005 and HIV exposure risk among specific populations.

Table 10: Percentage of New HIV Disease in U.S. Border States by State and Country of Origin, 2001-2005

	United States	Mexico	Other
Arizona	79.8% (2598)	15.7% (662)	4.5% (152)
California	76.1% (493)	19.4% (97)	4.5% (28)
New Mexico	72.5% (74)	27.5% (28)	0% (0)
Texas	70.8% (968)	27.7% (378)	1.5% (21)
Total	75.1% (4,133)	21.2% (1,165)	.4% (201)

In the four U.S. border states, persons born in the U.S. constitute the largest portion (75.2 %) of those with new HIV disease, with 4,133 cases reported. This is followed by those born in Mexico, with 1,165 or 21.2 percent of the total cases reported.

12 **Washburn, Rachel. "Globalization, Territorialized Economic Development and Power Plants on the U.S.-Mexico Border"** *Paper presented at the annual meeting of the American Sociological Association, Hilton San Francisco & Renaissance Parc 55 Hotel, San Francisco, CA,, 2004-08-14 Online* <.**PDF**>. 2008-01-03

II. Overall Trends: Summary of HIV/AIDS Surveillance Data

In 2005, there were 16,236 people living with HIV/AIDS (PLWH/A) (239 per 100,000 population) in the 23 contiguous U.S. counties that border Mexico [Table 11]. The majority of these PLWH/A were men (88%). The rate among male PLWH/A (426 per 100,000) along the border was nearly eight times higher than the rate for women living with HIV/AIDS along the border (56 per 100,000). The population at greatest risk of acquiring HIV along the U.S.-Mexico border was men who have sex with men (MSM, 65.7%), followed by heterosexuals (10.5%), injection drug users (IDUs) (9.1%), and MSM/IDUs (7.5%). Most of the PLWH/A along the border were diagnosed between the ages of 35-54 (69.8%), but the highest rate was found among PLWH/A along the U.S. border with Mexico who were diagnosed between the ages of 35-44 years (466 per 100,000). Whites (48.6%) comprised the largest proportion of PLWH/A along the U.S. border with Mexico and also had the highest rate (226 per 100,000) followed by Latinos (176 per 100,000) and Blacks (49 per 100,000). Geographically, the rates of prevalent HIV/AIDS cases were highest in San Diego county, California (367 per 100,000), Pima county, Arizona (192 per 100,000) and El Paso county, Texas (178 per 100,000).

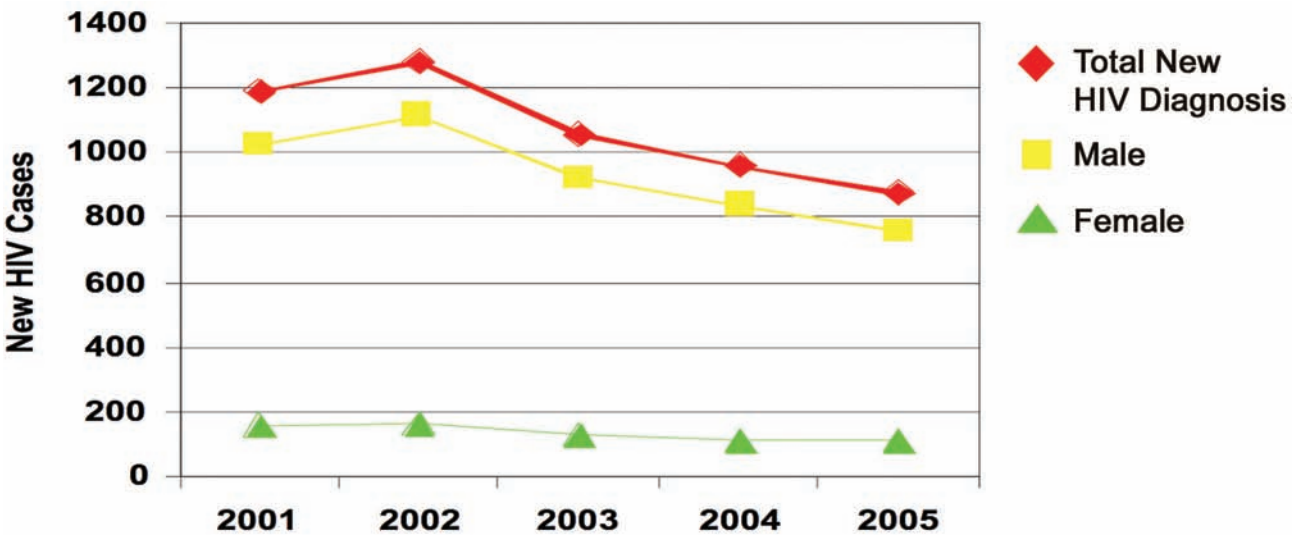
Table 11: People Living with HIV/AIDS by Sex, Age, Mode of Exposure and Race/Ethnicity in U.S. Border Counties, 2005

	California			Arizona			New Mexico			Texas			Total U.S. Border		
	2 Border Counties			4 Border Counties			3 Border Counties			14 Border Counties			23 Border Counties		
Land Area (Sq. mi.)	8,373			11,216			10,226			34,122			63,937		
Population Characteristic	**N**	**%**	**Rate**	**N**	**%**	**Rate**	**N**	**%**	**Rate**	**N**	**%**	**Rate**	**N**	**%**	**Rate**
Total HIV/AIDS Cases	10,928	100.0	353.7	2,153	100.0	36.3	299	100.0	100.0	2,856	100.0	92.4	16,236	100.0	239.2
Sex															
Male	9,850	90.1	630.9	1,849	85.9	62.2	246	82.3	226.1	2,363	82.7	151.4	14,308	88.1	425.8
Female	1,078	9.9	70.5	304	14.1	10.2	53	17.7	47.2	493	17.3	32.3	1,928	11.9	56.3
Age															
<13	35	0.3	6.0	18	0.8	1.6	2	0.7	4.6	22	0.8	3.8	77	0.5	5.5
13-24	236	2.2	41.5	70	3.3	6.9	24	8.0	51.7	140	4.9	24.6	470	2.9	33.3
25-34	1556	14.2	342.1	303	14.1	35.3	73	24.4	253.6	614	21.5	135.0	2,546	15.7	180.6
35-44	4617	42.2	1,001.9	783	36.4	95.3	103	34.4	378.2	1066	37.3	231.3	6,569	40.5	466.0
45-54	3263	29.9	791.3	712	33.1	94.6	70	23.4	254.0	720	25.2	174.6	4,765	29.3	338.1
55+	1221	11.2	200.3	267	12.4	19.9	27	9.0	56.3	294	10.3	48.2	1,809	11.1	128.3
Mode of Exposure															
MSM	7,785	71.2	-	1,292	60	-	144	48.2	-	1,442	50.5	-	10,663	65.7	-
IDU	845	7.7	-	280	13	-	35	11.7	-	315	11	-	1,475	9.1	-
MSM/IDU	882	8.1	-	185	8.59	-	24	8.03	-	128	4.48	-	1,219	7.5	-
Heterosexual	990	9.1	-	218	10.1	-	33	11	-	515	18	-	1,756	10.8	-
Perinatal	61	0.6	-	32	1.49	-	2	0.67	-	31	1.09	-	126	0.8	-
Other	74	0.7	-	22	1.02	-	6	2.01	-	39	1.37	-	141	0.9	-
NIR	291	2.7	-	123	5.71	-	55	18.4	-	386	13.5	-	855	5.3	-
Race/Ethnicity															
Latino	2,895	26.5	295.0	641	29.8	136.8	167	55.9	118.1	2,458	86.1	129.1	6,161	37.9	176.3
White	6,263	57.3	638.1	1,214	56.4	259.2	104	34.8	73.5	309	10.8	16.2	7,890	48.6	225.7
Black	1,425	13.0	145.2	197	9.2	42.1	17	5.7	12.0	77	2.7	4.0	1716	10.6	49.1
Am. Indian/Al. Native	80	0.7	8.2	51	2.4	10.9	10	3.3	7.1	1	0.0	0.1	142	0.9	4.1
Asian/Pacific Islander	263	2.4	26.8	15	0.7	3.2	1	0.3	0.7	8	0.3	0.4	287	1.8	8.2
Other/Unknown	2	0.0	N/A	35	17.8	N/A	0	0.0	0.0	3	3.9	N/A	40	0.2	1.1

New HIV diagnoses or incident cases are an important measure of the extent of the epidemic along the border. In both the U.S. and Mexico, HIV and AIDS are reportable conditions. HIV incidence, or new HIV diagnoses, describes anyone reported to a health department who has been newly diagnosed with HIV or AIDS. Newly diagnosed cases of HIV have not been previously reported to the health department. Persons with HIV, therefore, include those who are asymptomatic as well as those who have presented for care with clinical or laboratory symptoms that are considered AIDS-defining. People newly diagnosed with HIV who also receive a concurrent AIDS diagnosis have been termed "late testers." For the purpose of this report, late testers are defined as people who are newly diagnosed with HIV (i.e., not previously known to have HIV) and either at the same time of the HIV diagnosis or within the same calendar year also received an AIDS diagnosis. Late testers may sometimes serve as a proxy for level of access to health care and/or HIV testing. New HIV diagnoses are an important aspect of the HIV epidemic and may assist in describing new disease trends.

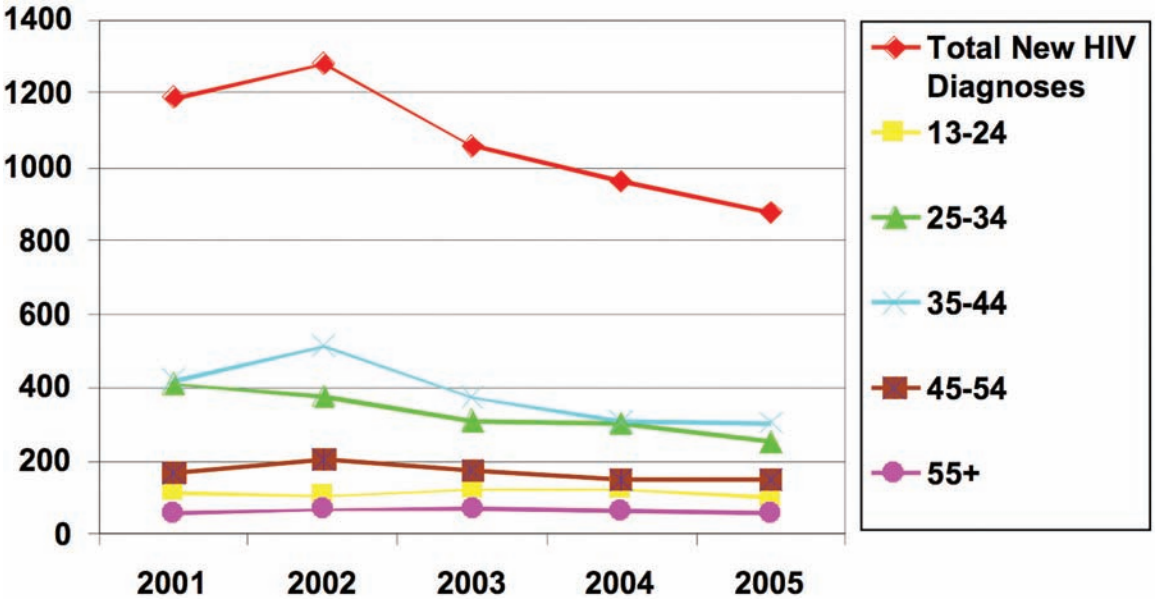
From 2001- 2005 the number of newly diagnosed HIV cases across all U.S. border counties decreased by 26.2 percent from 2001 (1,190) to 2005 (878). During the same time period, the number of new HIV diagnoses decreased by 26.0 percent among men (1028 in 2001 to 761 in 2005) and by 27.8 percent among women (162 in 2001 compared with 117 in 2005) [Figure 8].

Figure 8: Trend in new HIV diagnoses by sex in U.S. border states, 2001-2005



When stratified by age, the largest proportional decrease in newly diagnosed HIV cases along the border was observed among 25-34 year olds, decreasing by 39.3 percent between 2001 (410) and 2005 (253) (Figure 9). The proportion of new HIV cases by age remained relatively static from 2001 to 2005 within the other age groups.

Figure 9: Trend in New HIV Diagnoses by Age in U.S. Border States, 2001-2005



The proportion of newly diagnosed HIV cases among Latinos in the border region increased from 46.6 percent of all new HIV cases in 2001 to 53.9 percent of all new HIV cases in 2005, an increase of 15.7 percent (Table 12a).

From 2001 to 2005, the largest decrease by mode of exposure in newly diagnosed HIV cases occurred among MSM/IDU (69 to 35 cases, 49.3%), followed by IDUs (129 to 72 cases, 44.2%), heterosexuals (160 to 110 cases, 31.3%) and MSM (717 to 552, 23%) [Table 12a].

Table 12a: Trend in New HIV Diagnoses by Sex, Age, Mode of Exposure and Race/Ethnicity in U.S. Border States, 2001-2005

	2001			2002			2003			2004			2005		
	N	%	Rate per 100,000	N	%	Rate per 100,000	N	%	Rate per 100,000	N	%	Rate per 100,000	N	%	Rate
Total New HIV Diagnoses	1,190	100	18.6	1,281	100	19.7	1,057	100	16	961	100	14.3	878	100	12.9
Sex															
Male	1,028	86.4	32.4	1,116	87.1	34.6	927	87.7	28.3	843	87.7	25.4	761	86.7	22.6
Female	162	13.6	5	166	13	5	134	12.7	4	118	12.3	3.5	117	13.3	3.4
Age															
<13	10	0.8	0.7	8	0.6	0.6	1	0.1	0.1	4	0.4	0.3	3	0.3	0.2
13-24	117	9.8	9.8	105	8.2	8.6	125	11.8	10	124	12.9	9.8	103	11.7	8
25-34	410	34.5	44	378	29.5	40.1	311	29.4	32.9	306	31.8	32.3	253	28.8	26.8
35-44	424	35.6	44.9	513	40	54.4	373	35.3	39.6	309	32.2	32.9	305	34.7	32.6
45-54	169	14.2	21.7	207	16.2	26	175	16.6	21.5	151	15.7	18.1	152	17.3	17.9
55+	60	5	5	70	5.5	6	72	6.8	5.6	67	7	5.1	58	6.6	4.3
Mode of Exposure															
MSM	717	60.3		788	61.5		661	62.5		578	60.1		552	62.9	
IDU	129	10.8		127	9.9		98	9.3		99	10.3		72	8.2	
MSM/IDU	69	5.8		78	6.1		55	5.2		49	5.1		35	4	
Heterosexual	160	13.4		170	13.3		150	14.2		138	14.4		110	12.5	
Perinatal	10	0.8		8	0.6		1	0.1		4	0.4		3	0.3	
Other	7	0.6		8	0.6		2	0.2		2	0.2		3	0.3	
NIR	98	8.2		102	8		90	8.5		91	9.5		103	11.7	
Race/Ethnicity															
Latino	554	46.6	17.7	551	43	17.1	500	47.3	15.1	482	50.2	14.1	473	53.9	13.5
White	476	40	8.4	561	43.8	9.7	411	38.9	7	360	37.5	6.1	311	35.4	11.8
Black	125	10.5	46.2	133	10.4	48.7	109	10.3	39.6	87	9.1	31.4	66	7.5	28.5
Am. Indian/Al. Native	10	0.8	10.5	18	1.4	18.8	14	1.3	14.4	7	0.7	7.1	11	1.3	19.6
Asian/Pacific Islander	22	1.8	6.2	21	1.6	5.7	23	2.2	6	25	2.6	6.4	16	1.8	4.3
Other/Unknown	3	0.3		1	0.1		0	0		0	0		1	0.1	

In comparison to incident cases of HIV in the U.S. border counties, in the 36 Mexican border municipalities, 2,102 people were newly diagnosed with HIV in 2005. Slightly more than three-quarters (76.8%) of people newly diagnosed with HIV in 2005 along the Mexican border with the U.S. were men and 66.9 percent were between the ages of 25 and 44 years. Among men newly diagnosed with HIV along the Mexican border with the U.S., 13.5 percent were younger than 25 years of age while 29.6 percent of women newly diagnosed with HIV in Mexican border states were younger than 25 years (Table 12b).

Table 12b: HIV/AIDS Diagnoses by Age at Diagnosis and Sex in Mexican Border States, 2005

Age	Males		Females		Total	
	n	%	N	%	n	%
Infants	12	0.7	8	1.6	20	1.0
1 to 4	7	0.4	9	1.8	16	0.8
5 to 9	2	0.1	3	0.6	5	0.2
10 to 14	0	0.0	4	0.8	4	0.2
15 to 19	22	1.4	33	6.8	55	2.6
20 to 24	175	10.8	87	17.9	262	12.5
25 to 44	1129	69.9	277	56.9	1406	66.9
45 to 49	126	7.8	31	6.4	157	7.5
50 to 59	101	6.3	23	4.7	124	5.9
60 to 64	14	0.9	8	1.6	22	1.0
Over 65	22	1.4	3	0.6	25	1.2
Unknown	5	0.3	1	0.2	6	0.3
Total	1615	76.8	487	23.2	2102	100.0

III. Geographic Impact: New HIV/AIDS Diagnoses, Progressors, and People Living with HIV/AIDS

In 2005, in the 23 U.S. border counties there were a total of 878 newly diagnosed cases of HIV: 554 people were diagnosed with HIV and 324 were diagnosed with AIDS (late testers). In addition there were 317 “progressors,” individuals who were known to have HIV (not AIDS) in a previous year and who were subsequently given an AIDS diagnosis. Overall, 36.9 percent of all newly diagnosed cases of HIV were among late testers. The largest number of newly diagnosed cases of HIV on the U.S. side of the border were in San Diego County, California (437) followed by Pima county, Arizona (149), El Paso County, Texas (100) and Hidalgo County, Texas (76) [Table 13a].

Table 13a: Newly Diagnosed HIV and AIDS Cases, Percentage of Late Testers and Progressors in U.S. Border Counties, 2005

County	Total Pop.	New HIV Cases[1]	New AIDS Cases[2]	Total New HIV Diagnoses	Percentage of Late Testers Among New HIV Diagnoses	Progressors[3]
San Diego, CA	2,933,462	290	147	437	33.6%	211
Imperial, CA	155,823	8	9	17	52.9%	1
Yuma, AZ	181,277	4	11	15	73.3%	0
Pima, AZ	924,786	79	38	149	32.5%	32
Santa Cruz, AZ	42,009	0	0	0	N/A	0
Conchise, AZ	126,106	8	1	10	11.1%	1
Hidalgo, NM	5,968	0	0	0	0.0%	0
Luna, NM	26,392	0	0	0	0.0%	1
Doña Ana, NM	192,474	19	6	25	24.0%	5
El Paso, TX	721,598	53	47	100	47.0%	25
Hudspeth, TX	3,295	0	0	0	N/A	0
Jeff Davis, TX	2,306	0	0	0	N/A	0
Presidio, TX	7,722	0	1	1	100.0%	0
Brewster, TX	9,079	0	0	0	N/A	0
Terrell, TX	996	0	0	0	N/A	0
Val Verde, TX	47,596	0	0	0	N/A	0
Kinney, TX	3,327	0	0	0	N/A	0
Maverick, TX	51,181	2	0	2	0.0%	0
Webb, TX	224,695	14	8	22	36.4%	7
Zapata, TX	13,373	0	0	0	N/A	0
Starr, TX	60,941	6	3	9	33.3%	0
Hidalgo, TX	678,275	42	34	76	44.7%	20
Cameron, TX	378,311	29	19	48	39.6%	14
Total U.S. Border Pop.	**6,790,992**	**554**	**324**	**878**	**36.9%**	**317**

[1]Individuals who were not previously known to have HIV or AIDS

[2]Late testers, people who are newly diagnosed with HIV (i.e., not previously known to have HIV) and either at the same time of the HIV diagnosis or within the same calendar year also receive an AIDS diagnosis.

[3]Individuals who were previously known to have HIV in a previous year and have progressed to AIDS

Geographically, the largest proportions of cumulative HIV/AIDS cases diagnosed in the six Mexican border states were found in Baja California, Mexico (42.0%) and Tamaulipas, Mexico (21.0%)—the western most and eastern most Mexican border states, respectively. The Mexican border state with the lowest proportion of HIV/AIDS diagnoses in 2005 was Coahuila (6.1%) [Table 13b].

Table 13b: HIV and AIDS Diagnoses by Mexican Border State, 2005

	Baja		Coahuila		Chihuahua		Nuevo León		Sonora		Tamaulipas		Total
	N	%	N	%	N	%	N	%	N	%	N	%	
HIV	338	33.2	50	4.9	188	18.5	110	10.8	59	5.8	273	26.8	1,018
AIDS	544	50.2	79	7.3	120	11.1	89	8.2	84	7.7	168	15.5	1,084
Total	882	42.0	129	6.1	308	14.7	199	9.5	143	6.8	441	21.0	2,102

The rate of people living with HIV/AIDS in the 23 U.S. border counties with Mexico was highest in San Diego, California (367.2 per 100,000) followed by Pima, Arizona (191.5 per 100,000), El Paso, Texas (176.6 per 100,000), Cochise, Arizona (158.6 per 100,000), Cameron, Texas (141.2 per 100,000) and Doña Ana, New Mexico (138.7 per 100,000) [Table 14]. The rate of PLWH/A in San Diego county was higher than the statewide rate of PLWH/A in California for 2005 (195.3 per 100,000).

Table 14: People Living with HIV/AIDS in U.S. Border Counties, 2005

County	Total Pop.	People Living with HIV/AIDS	Prevalent HIV/AIDS Rate
San Diego, CA	2,933,462	10,773	367.2
Imperial, CA	155,823	155	99.5
Yuma, AZ	181,277	143	78.9
Pima, AZ	924,786	1,771	191.5
Santa Cruz, AZ	42,009	40	95.2
Cochise, AZ	126,106	200	158.6
Hidalgo, NM	5,968	<5	50.3
Luna, NM	26,392	29	109.9
Doña Ana, NM	192,474	267	138.7
El Paso, TX	721,598	1,274	176.6
Hudspeth, TX	3,295	0	0.0
Jeff Davis, TX	2306	0	0.0
Presidio, TX	7722	<5	38.9
Brewster, TX	9079	<5	11.0
Terrell, TX	996	0	0.0
Val Verde, TX	47,596	12	25.2
Kinney, TX	3,327	<5	30.1
Maverick, TX	51,181	34	66.4
Webb, TX	224,695	268	119.3
Zapata, TX	13,373	5	37.4
Starr, TX	60,941	31	50.9
Hidalgo, TX	678,275	692	102.0
Cameron, TX	378,311	534	141.2
Total U.S. Border Pop.	**6,790,992**	**16,236**	**239.1**

IV. Exposure: New HIV Diagnoses and a Closer Look at Risk

HIV case surveillance offers an important source of information for HIV prevention planning programs. This section highlights new diagnoses of HIV along the U.S. border with Mexico by looking closer at newly diagnosed cases of HIV by sex, mode of exposure, race/ethnicity, and age.

In 2005, nearly two-thirds (62.9%) of females newly diagnosed with HIV in U.S. border counties with Mexico reported heterosexual contact as their risk exposure, while about ten percent reported IDU. Of note, nearly one quarter (24.1%) of new female HIV cases reported in 2005 were classified as "No Identified Risk." This category includes women with no reported risk factors and women who reported heterosexual contact with a partner of unknown risk status.

Among men newly diagnosed in U.S. border counties with Mexico, more than seven in ten (72.5%) new diagnoses of HIV cases reported on the border in 2005 were among MSM. Nearly ten percent of male HIV cases had no identified risk and 7.9 percent of new HIV diagnoses were among people who reported IDU [Table 15].

Table 15: New HIV Diagnoses by Sex and Mode of Exposure in U.S. Border States, 2005

Mode of Exposure	Female		Male		Total	
	N	%	N	%	N	%
MSM	0	0.0	552	72.5	552	62.9
IDU	12	10.3	60	7.9	72	8.2
MSM/IDU	0	0.0	35	4.6	35	4.0
Heterosexual	73	62.9	37	4.9	110	12.5
Perinatal	1	0.9	1	0.1	2	0.2
Other	2	1.7	1	0.1	3	0.3
NIR	28	24.1	75	9.9	103	11.7
Total	**116**	**100.0**	**761**	**100.0**	**877**	**100.0**

Overall, when looking at new HIV diagnoses by age, 35 to 44 year olds represented the highest proportion of cases in 2005. The proportion of new HIV diagnoses in this age group was higher among men (36.7%) when compared to women (22.4%). Approximately half (50.8%) of new female HIV cases in 2005 were among women between the ages of 13 and 34 years. One in five (22.4%) new female HIV cases was in young women between the ages of 13 and 24 years while only one in ten (10.6%) new male cases was in this age group [Table 16].

Table 16: New HIV Diagnoses by Sex and Age in U.S. Border States, 2005

Age	Female			Male			Total		
	N	%	Rate	N	%	Rate	N	%	Rate
< 13	1	0.9	0.1	1	0.1	0.1	2	0.2	0.1
13-24	26	22.4	4.2	81	10.6	12.1	107	12.2	8.3
25-34	33	28.4	7.1	220	28.9	45.8	253	28.8	26.8
35-44	26	22.4	5.5	279	36.7	59.8	305	34.8	32.6
45-54	19	16.4	4.3	133	17.5	32.2	152	17.3	17.9
55+	11	9.5	1.5	47	6.2	7.7	58	6.6	4.3
Total	**116**	**100**		**761**	**100**		**877**	**100**	

An assessment of new HIV diagnoses within U.S. counties along the Mexican border by race/ethnicity indicates that Latinos comprised the largest proportion of new cases (53.9%) followed by Whites (35.4%) and Blacks (7.5%). In comparing the proportionate burden of disease among women and men, Latinas (57.3%) made up a greater proportion of new HIV cases among all women followed by white women (23.1%) and Black women (14.5%). Latinos made up 53.4% of all new HIV diagnoses among all males followed by White men (37.3%) and Black men (6.4%) [Table 17].

Table 17: New HIV Diagnoses by Sex and Race/Ethnicity in U.S. Border States, 2005

Race/Ethnicity	Female			Male			Total		
	N	%	Rate	N	%	Rate	N	%	Rate
Latino	67	57.3	5	406	53.4	32.9	473	53.9	18.4
White	27	23.1	1.1	284	37.3	12.2	311	35.4	6.5
Black	17	14.5	17.4	49	6.4	42.4	66	7.5	30.9
Am. Indian/Al. Native	1	0.9	2.5	10	1.3	25.6	11	1.3	13.9
Asian/Pacific Islander	5	4.3	2.9	11	1.4	7.1	16	1.8	4.9
Other/Unknown	0	0		1	0.1		1	0.1	
Total	**117**	**100**		**761**	**100**		**878**	**100**	

In assessing new HIV diagnoses by race/ethnicity and mode of exposure among adults in the U.S. border counties in 2005, Latinos made up the largest proportions among MSM (52.4%), IDU (51.4%) and heterosexuals (60.2%). Whites (45.7%) comprised the largest majority among MSM (45.7%). More than six in ten (62.1%) new HIV cases with no identified risk were Latino [Table 18].

Table 18: New HIV Diagnoses by Race/Ethnicity and Mode of Exposure in U.S. Border States, 2005

Race/Ethnicity	MSM		MSM/IDU		IDU		Heterosexual		Perinatal		Other		NIR		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	NIR	%	N	%
Latino	289	52.4	15	42.9	37	51.4	65	60.2	0	0.0	2	66.7	64	62.1	472	53.8
White	225	40.8	16	45.7	23	31.9	25	23.1	1	25.0	0	0.0	21	20.4	311	35.5
Black	21	3.8	4	11.4	8	11.1	17	15.7	1	25.0	0	0.0	15	14.6	66	7.5
Am. Indian/Al. Native	7	1.3	0	0.0	2	2.8	0	0.0	0	0.0	1	33.3	1	0.0	11	1.3
Asian/Pacific Islander	9	1.6	0	0.0	2	2.8	1	0.9	2	50.0	0	0.0	2	0.0	16	1.8
Other/Unknown	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Total	**552**	**100.0**	**35**	**100.0**	**72**	**100.0**	**108**	**100.0**	**4**	**100.0**	**3**	**100.0**	**103**	**100.0**	**877**	**100.0**

V. HIV/AIDS Estimation

Health departments typically depend on HIV/AIDS surveillance data to monitor the HIV epidemic. New HIV estimation software permits systematic assessment of concentrated epidemics. Estimation techniques may be particularly useful for public health jurisdictions and regions that do not yet have well established HIV/AIDS surveillance systems. A unique advantage of the estimation software is that it allows for systematic forecasting of future HIV/AIDS trends. The WHO/UNAIDS Workbook Method was used to estimate and project adult HIV prevalence along the U.S.-Mexico border. U.S. Census data were used to obtain age and gender-specific estimates for U.S. border state populations. Population and HIV prevalence estimates for MSM, IDU, MSM/IDU, and heterosexuals were obtained from published articles and county reports. Numbers of HIV-positive men and women were estimated for each at-risk group. Low and high HIV prevalence estimates were also calculated [Table 19].

Approximately 18 million adults aged 15-49 years lived in California in 2005. The estimated number of PLWH/A in the state was between 54,883 and 205,916 (mean=119,197). HIV prevalence was estimated at 0.67 percent. Using the estimation methodology, more than 90 percent of infections were among men. The risk groups with the greatest number of HIV/AIDS cases in California were MSM (45,000 to 162,000) followed by IDU (1,800 to 12,500) and MSM/IDU (5,000 to 22,500).

More than 4.6 million individuals aged 15-49 years lived in Arizona in 2005 and the estimated number of PLWH/A was 11,673. HIV/AIDS incidence for the state was estimated at 771 new cases per year. Cumulative HIV cases were estimated to total 16,221 and HIV prevalence was estimated 0.25 percent.

In New Mexico, the population of 15-49 year olds in 2005 approached one million (964,109) and the estimated number of PLWH/A was 2,425. HIV/AIDS incidence for the state was estimated at 81 new cases per year. Cumulative HIV cases were estimated to total 969 and HIV prevalence was estimated at 0.25 percent.

HIV/AIDS estimates were not available for Texas.

In Mexico for 2005, HIV prevalence estimates ranged from a high of 0.52 percent in Baja California (estimated 8,800 PLWH/A) to 0.29% in Chihuahua (estimated 5,600 PLWH/A), to 0.17 percent in Coahuila (estimated 2,400 PLWH/A).

Table 19: Adult HIV Prevalence Estimates Along the U.S.-Mexico Border, 2005

State	Adult population (15-49)	HIV/AIDS Incidence	Estimate of people living with HIV	% Prevalence	Cumulative HIV Cases
Baja California	1,700,231	Not available	8,800	0.52	Not available
Chihuahua	1,910,903	Not available	5,600	0.29	Not available
Nuevo León	2,409,834	Not available	6,400	0.27	Not available
Tamaulipas	1,794,597	Not available	4,400	0.25	Not available
Sonora	1,385,723	Not available	3,000	0.22	Not available
Coahuila	1,415,230	Not available	2,400	0.17	Not available
Mexico Border Estimate	58,730,220	Not available	182,000	0.31	Not available
California	17,921,614	4,500	119,197	0.67	40,282
Arizona	4,621,274	N/A	N/A	N/A	N/A
New Mexico	964,109	81	2,425	0.25	969
Texas	1,075,517	258	Not available	Not Available	992
U.S. Border Estimate	**24,582,514**	**5,610**	**133,295**	**0.54**	**58,464**

HIV/AIDS estimation software can also be utilized to calculate estimates at the local level. Here we highlight estimates for three of the most populous U.S. border counties along the U.S.-Mexico border.

Approximately three million adults aged 15-49 years lived in San Diego County, California in 2006. The estimated number of PLWH/A in this border county was between 4,794 and 23,400. HIV prevalence was estimated at 0.78 percent. More than 96 percent of prevalent infections were estimated to be among men. According to estimates, the largest number of persons living with HIV/AIDS in San Diego County were MSM (4,546 to 22,000), IDU (157 to 613) and sex workers (16 to 610).

More than 900,000 adults aged 15-49 years lived in Pima County, Arizona in 2006. The estimated number of PLWH/A in Pima was between 2,103 and 2,804. Low and high HIV prevalence estimates were calculated at 0.22 percent and 0.30 percent, respectively. More than 13 percent of prevalent infections were among women. The largest estimated number of PLWH/A in Pima County by mode of exposure were MSM (1,291 to 1,614), followed by IDU (310 to 388) and MSM/IDU (187-234).

In Doña Ana County, New Mexico, the estimated population of adults aged 15-49 years was just under 100,000 in 2006. The estimated number of PLWH/A in Doña Ana was between 233 and 237.

The estimated HIV prevalence was 0.24 percent. More than 87 percent of the estimated infections were among men. The largest number of PLWH/A in Doña Ana County by mode of exposure were MSM (194 to 197) followed by low-risk women (26 to 27) and IDU (12-13).

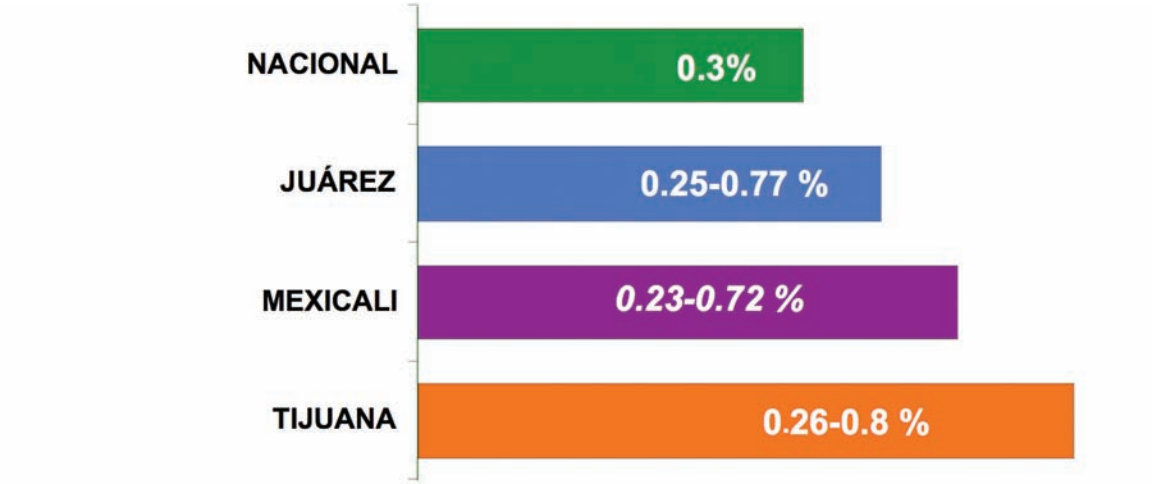
	San Diego County, CA		Pima County, AZ		Doña Ana County, NM	
	Low	High	Low	High	Low	High
HIV Prevalence (%)	0.78	0.78	0.22	0.30	0.24	0.24
Total Population of County	2,824,259	2,933,462	924,786	Not available	96374	97916
Sex						
Men	4,688	22,490	1,827	2,437	204	207
Women	106	910	276	367	29	30
Total	4,794	23,400	2,103	2,804	233	237
Mode of exposure						
MSM	4546	22000	1,291	1,614	194	197
MSM/IDU	Not available	Not available	187	234	N/A	N/A
IDU	157	613	310	388	12	13
Female Sex Workers	16	610	N/A	N/A	N/A	N/A
Low Risk Women 15-49*	75	787	127	159	26	27
Low Risk Men 15-49**	Not available	Not available	36	45	N/A	N/A

* Low Risk women = Women who are not IDU and do not report sex with IDU, MSM or multiple sexual partners

**Low risk men = Men who are not IDU and do not report sex with IDU, MSM or multiple sexual partners

In Mexico, 0.3 percent of the national population is estimated to be living with HIV/AIDS. Meanwhile, estimated HIV/AIDS prevalence ranges in selected Mexican cities along the border with the U.S. vary from 0.25 percent to 0.77 percent in Mexicali, Baja California, to 0.26 percent to 0.8 percent in Tijuana, Baja California, to 0.25 percent to 0.77 percent in Ciudad de Juarez, Chihuahua (Figure 10).

Figure 10: Estimated HIV/AIDS Prevalence in Selected Mexican Border Cities, 2005



Source: Situación Epidemiológica del VIH/SIDA en la Frontera Norte de México. CENSIDA, 2006. Reporte interno

VI. HIV Mortality: Mortality Among Individuals Diagnosed with HIV/AIDS

Overall, annual mortality related to all causes among individuals with HIV/AIDS decreased by 21.2 percent, from 2001 (302) to 2005 (238) in U.S. border counties. In the California border counties, the annual mortality among people diagnosed with HIV/AIDS decreased from 190 in 2001 to 112 in 2005, a decrease of 41.1 percent. Mortality figures among HIV/AIDS infected individuals remained relatively stable in border counties in Arizona and New Mexico during the same five year period while, in Texas border counties, annual deaths among individuals diagnosed with HIV/AIDS increased by 68.9 percent, from 2001 (45) to 2005 (76) [Figure 11, Table 21].

Figure 11: Trend in All-Cause Mortality Among People Diagnosed with HIV/AIDS in U.S. Border States, 2001-2005

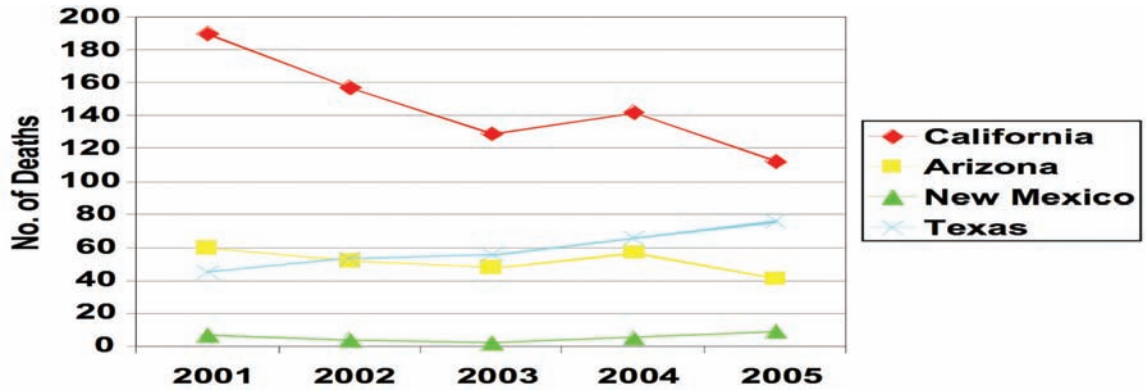


Table 21: Trend in HIV/AIDS Mortality in U.S. Border States, 2001-2005

	2001		2002		2003		2004		2005	
	N	%	N	%	N	%	N	%	N	%
California	190	62.9	157	59.0	129	54.9	142	52.6	112	47.1
Arizona	60	19.9	52	19.5	48	20.4	57	21.1	41	17.2
New Mexico	7	2.3	4	1.5	2	0.9	5	1.9	9	3.8
Texas	45	14.9	53	19.9	56	23.8	66	24.4	76	31.9
U.S. Border Total	**302**	**100.0**	**266**	**100.0**	**235**	**100.0**	**270**	**100.0**	**238**	**100.0**

VII. Other Indicators of Risk: Sexually Transmitted Diseases Along the Border

Incidence and prevalence of sexually transmitted diseases (STDs) are often considered a strong proxy for HIV risk behaviors and future incidence and prevalence of HIV. In aggregate, Chlamydia (40,272 cases), gonorrhea (8,500) and syphilis (1,383) were among the most prevalent STDs in U.S. counties that border Mexico. Chlamydia and gonorrhea rates were highest in California (386.5 and 89.5 per 100,000, respectively) and Arizona (358 and 83.4 per 100,000, respectively) and the lowest rates for each disease were in Texas border counties (286 and 29 per 100,000, respectively) [Table 22a].

Table 22a: Sexually Transmitted Disease Rates in U.S. Border States, 2005

	Mexico[1]		United States		California[2]		Arizona[3]		New Mexico[4]		Texas[5]	
Disease	*N*	*Rate*	*N*	*Rate*	*N*	*Rate*	*N*	*Rate*	*N*	*Rate*	*N*	*Rate*
Gonorrhea		3	8,500	74.2	2,764	89.5	4951	83.4	146	64.9	639	29.0
Syphilis*		5	1,383	12.1	313	10.1	789	13.3	12	5.3	269	12.2
Chlamydia		NA	40,272	351.5	11,941	386.5	21,264	358.0	768	341.6	6299	286.0

1 STD rates may underestimate actual rates as the surveillance system may not be as thorough as desired
2 California DHS Sexually Transmitted Disease Control Branch; CDHS TB Control Branch, CDHS Infectious Disease Branch; Overall, 69% of SD's cases were MSM, 14% were male heterosexual, and 17% were females. For Imperial, one was male heterosexual, the other was female.
3 Arizona Department of Health Services, Division of Public Health
4 New Mexico Department of Health, STD Program ; University of New Mexico, Bureau of Business and Economic Research, Population Estimates, 2005.
5 Texas Department of State Health Services
*Include Primary and Secondary Syphilis or P&S Syphilis and Early Latent Syphilis
Incidence: reported cases for border counties

In 2005, STD cases were broadly distributed across all six Mexican states that border the U.S. The largest proportions of urinary candidiasis (29.0%), Chanchroide (44.6%), genital herpes (26.8%), gonococcal infection (29.3%), vaginal Trichomoniasis (34.1%) were found in Tamaulipas, the eastern-most Mexican border state. The highest proportion of syphilis (29.8%), congenital syphilis (65.4%) and Chlamydia (41.3%) cases were diagnosed in Chihuahua. Meanwhile, the highest proportion of Human Papiloma Virus (HPV) (37.0%), HIV (33.2%) and AIDS (50.2%) cases were diagnosed in Baja, California, the western-most Mexican border state.

Table 22b: Sexually Transmitted Diseases in Mexican States Along the Border with the U.S., 2005

	State												
	Baja		Coahuila		Chihuahua		Nuevo León		Sonora		Tamaulipas		
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Total
Urinary candidiasis	6,193	14.1	5,199	11.8	7,490	17.0	7,957	18.1	4,385	10.0	12,766	29.0	43,990
Chanchroide	11	9.1	16	13.2	23	19.0	5	4.1	12	9.9	54	44.6	121
genital herpes	75	16.4	62	13.6	85	18.6	95	20.8	17	3.7	122	26.8	456
gonococcal infection	89	23.1	44	11.4	45	11.7	62	16.1	33	8.5	113	29.3	386
Chlamydia	6	13.0	1	2.2	19	41.3	4	8.7	5	10.9	11	23.9	46
Syphilis	260	27.6	69	7.3	281	29.8	82	8.7	112	11.9	138	14.6	942
Trichomoniasis, vaginal	2,097	10.8	2,813	14.4	3,390	17.4	2,609	13.4	1,952	10.0	6,641	34.1	19,502
HIV	338	33.2	50	4.9	188	18.5	110	10.8	59	5.8	273	26.8	1,018
AIDS	544	50.2	79	7.3	120	11.1	89	8.2	84	7.7	168	15.5	1,084
Congenital syphilis	12	14.8	2	2.5	53	65.4	4	4.9	8	9.9	2	2.5	81
Human Papiloma Virus	1,052	37.0	633	22.3	299	10.5	439	15.4	134	4.7	287	10.1	2,844

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NASTAD strengthens state and territory-based leadership, expertise, and advocacy, and brings them to bear in the reducing the incidence of HIV infection and on providing care and support to all who love with HIV/AIDS. Our vision is world free of HIV/AIDS.

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