

# Border County Health Workforce Profiles:



ARIZONA



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## Preface

A unique characteristic of the United States (U.S.)-Mexico Border region was the magnitude and diversity of the human capital residing within its boundaries. On the U.S. side, the four Border States were home to 65 million people in 2003, over one-fifth (22.4 percent) of the population of the country. About 6.9 million of them lived in the area extending 62 miles inland from Mexico. The Mexican side had a similar high concentration of people, with the larger Border cities hosting most of the population. In addition to the size of the population, the massive movement of people and goods between Mexico and the United States, combined with high rates of poverty and lack of health insurance, may facilitate the transmission of communicable diseases even beyond the Border.

This report, entitled *Border County Health Workforce Profiles: Arizona*, has companion reports for the States of California, New Mexico, Texas, and Florida.<sup>1</sup> This set of reports, which will be referred to as the “Profiles” throughout this report, represents a ground-breaking effort to assemble and disseminate consistent and current information on the health workforce, relevant population characteristics, and basic health indicators for the U.S. Border region. The Profiles were based on county-level data and reported by geographic proximity to the Border.

The great variability of health and workforce indicators between the Border States and between smaller regions within each State has traditionally been hidden in the aggregate totals and averages that have been used to describe the Border. Recognizing and understanding these differences is critically important to planners, policy makers, and program administrators who design and target health care interventions.

While the database created for the “Profiles” was a great improvement over existing aggregate, fragmented and rarely comparable information, some limitations remain. Mostly, the limitations were the result of using the politically defined county boundaries as a unit of measurement rather than the service areas within which health care was actually delivered. Also, the county averages may hide important differences within a county. For example, there may be concentrations of health professionals in an urban area that overshadow the lack of health professionals and extreme needs of a large rural area, producing a better-than average provider-to-population ratio for the county as a whole. Given these caveats, the data displayed in these reports provide a solid base for future research on workforce trends and utilization in the Border. The contract for this study, HRSA-230-03-0017, was awarded to the Regional Center for Health Workforce Studies at The University of Texas Health Science Center at San Antonio by the U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions (BHP).

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<sup>1</sup>The State of Florida was added because it has population and health workforce characteristics and needs similar to those of the U.S.-Mexico Border States.

The Evaluation and Analysis Branch, Office of Workforce Analysis and Quality Assurance, BHP, HRSA was responsible for overseeing the study.

## Introduction

The Border County Health Workforce Profiles present county-level data obtained from State health agencies and health professions licensing boards to develop social/health indicators and practitioner-to-population ratios, respectively. These indicators help describe health status and health disparities in the U.S. regions that lie next to Mexico as well as provide information on the number of practitioners available to address the health needs of the areas. Comparable indicators and ratios were shown in this Report for the State as a whole, the four Border States, and the Nation. The Profiles show that the Border was far from being a homogeneous region. The U.S. counties from San Diego, California, to Brownsville, Texas, while sharing some common cultural traits, exhibit significant diversity in the proportion of the population that was Hispanic/Latino(a), in socioeconomic indicators, in health status measures and in the supply of health professionals.

Border regions were defined by different entities using criteria of proximity to the Border. One definition identifies only those counties adjacent to the U.S.-Mexico Border as "Border Counties." The U.S.-Mexico Border Health Commission (USMBHC) expands that definition to include all counties within 62 miles of the Border excluding La Paz, Maricopa, and Pinal Counties in Arizona and Riverside County in California. The Texas Comptroller of Public Accounts broadens the criteria by adding counties considered as directly affected by the economic impact of Border commerce thus extending the area to approximately 100 miles from the Border in Texas. Other definitions include larger areas. In Arizona, totals for the following geographic areas are included: within 62 miles of the Border and more than 62 miles from the Border. To satisfy as many users as possible, the Profiles show totals for the following geographic areas for California, New Mexico, and Texas: within 62 miles of the Border, 62-300 miles from the Border, and more than 300 miles from the Border. In the Texas report, totals for counties within 100 miles of the Border were also included. Counties within 62 miles of the Border are also referred to as "*Border Counties*" throughout these reports using the USMBHC definition.

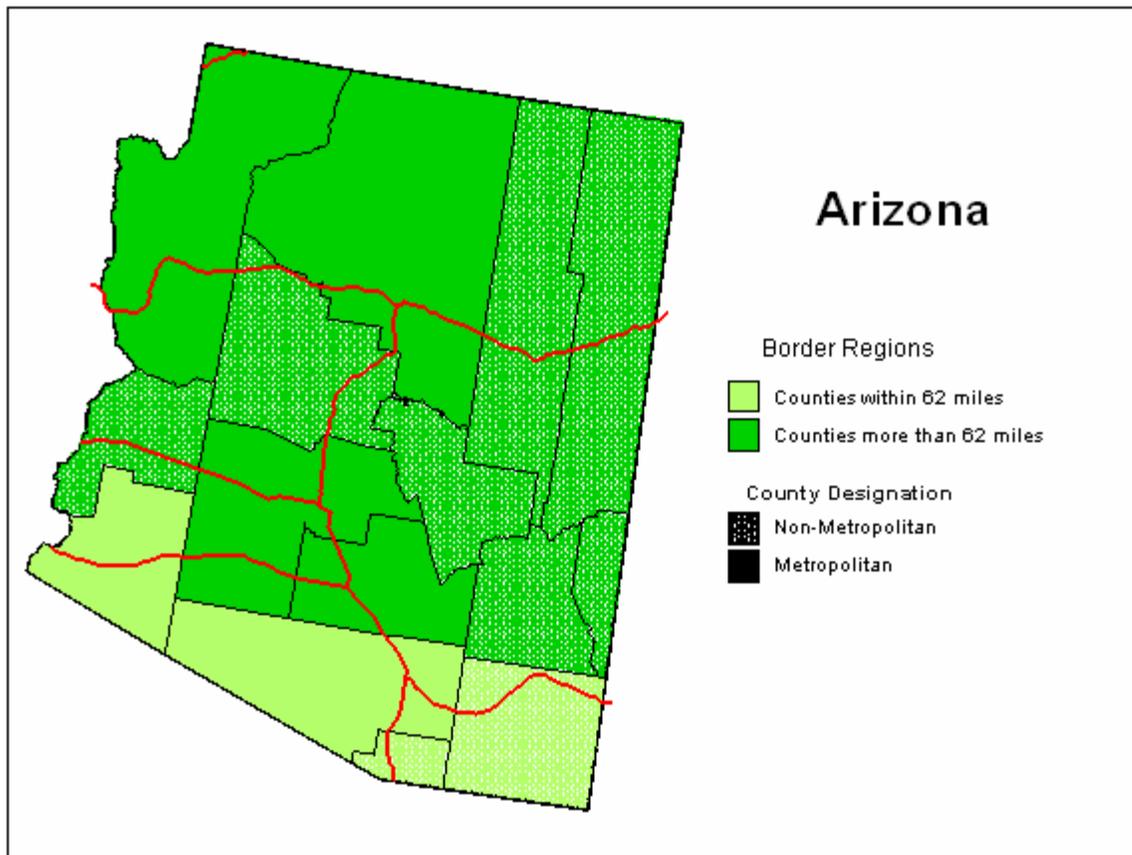
The Profiles were organized into three sections:

- A summary of State highlights for health status and the health workforce.
- Three categories of tables: Population and health status, health professions, and health infrastructure. Health professions tables include physicians, dentists, and registered nurses, non-physician clinician providers and mental health providers.
- A set of appendices that list counties included in the analysis by geographic area and a review of data sources.

These data may serve as a benchmark for updates and for complementary data

from Mexico. It is through additional tracking of data and summary of results for future years, and comparison of previous findings, that planners, policy makers, and program administrators will be able to measure the impact that programs may have on the reduction of health disparities for individuals living in the four Border States and Florida and particularly for those citizens living in closer proximity to the U.S.-Mexico Border.

## **Arizona State Highlights**



In 2000, the Arizona population was 5.13 million and had been estimated to increase by 9 percent to 5.58 million in 2003.<sup>2</sup> The Arizona population was 64 percent Non-Hispanic White, 25 percent Hispanic/Latino(a), 4 percent American Indian/Alaskan Native, 3 percent Black/African-American, and 4 percent Other Races. With a rate of 109 births per 1,000 women of childbearing ages, Hispanics/Latinos(as) were the fastest growing major race/ethnic group in Arizona. American Indians had a birth rate of 97 per 1,000, and Asians/Pacific Islanders had a rate of 75 per 1,000, but both of these populations were relatively small. The population of Arizona made up 9 percent of the 65 million people who lived in the four States (California, Arizona, New Mexico, and Texas) that share a Border with Mexico. California contributed 55 percent of the population of the four States and Texas and New Mexico contributed 34 percent and 2.9 percent, respectively.

This report provides information about two regions of Arizona based on distance from the U.S.-Mexico Border. Arizona has 15 counties. The 4 counties *within 62 miles* (100 kilometers) of the U.S.-Mexico Border are identified as Border Counties, excluding La Paz, Maricopa, and Pinal Counties. In 2003, an estimated 1.2 million Arizona residents lived in the Border Counties.

<sup>2</sup> U.S. Census Bureau, 2000.

## Population Dynamics

### Geographic Distribution

In 2000, Arizona's Border Counties contained 23 percent of the State's population (Table 1). Sixty percent of the population of Arizona lived in Maricopa County. The major cities in Arizona were Phoenix, Tucson, Mesa, Glendale, Scottsdale, and Tempe, all of which are located in Maricopa County. Counties *more than 62 miles from the U.S.-Mexico Border* were home to 77 percent of the State population.

### Race/Ethnicity

Table 2 shows that Non-Hispanic Whites account for the majority of the population across Arizona, regardless of geographic area: 64 percent statewide and 57 percent of the Border Counties. A larger proportion of the Arizona Border county population was Hispanic/Latino(a) (34 percent) than the State population (25 percent). Of the 6.9 million people who lived in Border Counties in the 4 Border States, 49 percent were Hispanic/Latino(a).

Pima County, designated as a metropolitan county, covers 9,184 square miles and had an estimated population of 843,746 in 2000. While 58 percent of the population lived in Tucson, 42 percent lived in the rest of the county.<sup>3</sup> This area may face access to care problems similar to those of a non-metropolitan area even though it is part of a metropolitan county.

### Education

In Arizona's Border Counties, 80 percent of residents had completed high school or more. This was consistent with the Arizona (81 percent) and U.S. (80 percent) populations which had completed high school or a higher education (Table 6).

### Income<sup>4</sup>

The median family income in the year 2000 in the Metropolitan Statistical Areas (MSA) of Arizona were: Phoenix-Mesa: \$51,126; Tucson: \$44,446. In the California MSA in San Diego, the median family income was \$53,438. These incomes are much higher than the median family incomes in 2000 for Las Cruces, New Mexico, at \$33,576; El Paso, Texas, at \$33,410; Laredo, Texas, at

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<sup>3</sup> Pima Association of Governments. Pima County Population Primer. <http://www.pagnet.org/population/primer.htm>, accessed May 23, 2006.

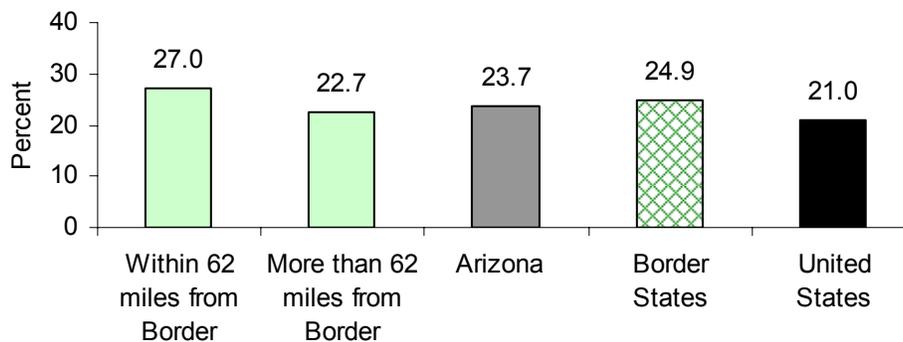
<sup>4</sup> U.S. Census Bureau, 2000; using America Fact Finder; P77. MEDIAN FAMILY INCOME IN 1999 (DOLLARS) [1] – Universe Families Data Set: Census 2000 Summary File 3 (SF 3) – Sample Data, and P155H. MEDIAN FAMILY INCOME IN 1999 (DOLLARS) (HISPANIC/LATINO HOUSEHOLDER) [1] – Universe: Families with a householder who is Hispanic/Latino Data Set: Census 2000 Summary File 3 (SF 3) – Sample Data.

\$29,394, and Brownsville–Harlingen, Texas, at \$27,853. The Texas MSAs included as Border Counties according to the definition used by the Texas Comptroller of Public Accounts, but not directly on the U.S.-Mexico Border (San Antonio and Corpus Christi), had median family incomes similar to those of Arizona and California. Hispanic/Latino(a) median family incomes ranged from \$31,000 to \$34,000 in Arizona and California Border MSAs, respectively, compared to \$24,500 to \$28,500 in New Mexico and Texas Border MSAs.

### Poverty

Table 4 shows that the proportion of families living below 150 percent of the Federal poverty guidelines in counties *within 62 miles of the U.S.-Mexico Border* (27 percent) was similar to that of the overall Arizona population (24 percent). In the counties *more than 62 miles from the U.S.-Mexico Border* 23 percent of the population lived on incomes of less than 150 percent of poverty. The U.S. Federal Poverty Thresholds<sup>5</sup> were established as a baseline to develop guidelines for Federal and State programs such as Medicaid. In 2000, \$17,761 for a family of four was established as the poverty threshold.

**Families Living Below 150 Percent of Poverty in Arizona, 2000**



Source: U.S. Census Bureau (2000).

### Health Access

According to the Behavioral Risk Factor Surveillance System (BRFSS) 16.1 percent of the Arizona population was uninsured; this was below the rate for Border States (19.4 percent), but higher than the U.S. rate (15.2 percent).<sup>6,7</sup> In

<sup>5</sup> U.S. Census Bureau, *Poverty in the United States: 2000: Current Population Reports: Consumer Income*, September 2011, p5. Note: Poverty thresholds are updated annually by the Census Bureau.

<sup>6</sup> *Behavioral Risk Factor Surveillance System (BRFSS)*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2002. In the BRFSS, respondents were asked “Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?” Sample size reflects number of respondents, excluding those who answered “Do not know/not sure” or refused. The sample size within a State may not add up to State total due to suppression of data for counties with small sample sizes. The percentages were weighted to population characteristics in order to produce estimates that were

opposition to the findings for families living below 150 percent of the poverty guidelines, a slightly larger proportion of uninsured residents lived in the Arizona counties *more than 62 miles from the U.S.-Mexico Border* where the rate was 16.7 percent (Table 5).

Health Professional Shortage Areas (HPSAs) were the method that HRSA used to identify areas of a State that do not have a sufficient supply of health professionals to meet the health needs of the population. Thirty-six percent of the population in the Arizona Border Counties resided in a primary care HPSA, either single or partial county (Table 44). While 31 percent (Table 45) of the Border Counties population in Arizona lived in a dental HPSA, 13.7 percent (Table 46) of residents lived in a mental HPSA. Statewide, 34 percent of the population lived in a primary care HPSA, 22 percent lived in a dental HPSA, and 20 percent lived in a mental HPSA.

## Health Status

Health status indicators for this Report were based on the Healthy Border 2010 Goals and Objectives established by the U.S.-Mexico Border Health Commission in 2003. The Commission is a binational organization dedicated to addressing the pervasive health needs of the U.S.-Mexico Border.

The overarching goals of the Healthy Border Program are:

1. Improve the quality and increase the years of healthy life, and
2. Eliminate health disparities

The twenty Healthy Border (HB) 2010 objectives fall into eleven principal areas with their specific objectives as follows:

1. Improve access to primary health care
2. Reduce cancer mortality in women through improved screening for breast and cervical cancers
3. Reduce morbidity and mortality from diabetes mellitus
4. Improve water quality through improved sanitation and reduce amount of acute pesticide poisoning
5. Reduce transmission of HIV
6. Improve rates of immunization and reduce rates of infectious diseases
7. Reduce mortality from unintentional injuries
8. Reduce infant mortality and increase the number of women receiving prenatal care
9. Reduce the suicide mortality rate by improving mental health
10. Increase the usage of dental and oral health services
11. Reduce morbidity from asthma

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representative of the sampled population. Health characteristics estimated from the BRFSS pertain only to the adult population (age 18 and older) living in households.

<sup>7</sup> Note: Estimates based on the Current Population Survey, Annual Social and Economic Supplement, 2004, indicate that 17 percent of Arizona residents were uninsured during some time in 2003.

The tables in this report provide detailed information about health status in Arizona. Comparisons to the Healthy Border objectives are used to highlight disparities in health with a focus on the Border Counties (those *within 62 miles of the U.S.-Mexico Border*).

### **Breast and Cervical Cancer**

**Healthy Border 2010 Objectives for breast and cervical cancer:**

- To reduce the female breast cancer death rate to 33.7 deaths per 100,000 women ages 25 or more
- To reduce the cervical cancer death rate to 4.0 deaths per 100,000 women ages 25 or more

- Screening for breast cancer is an important aspect of women's health. Evidence from the BRFSS in 2002 show that 81 percent of women living in the Arizona Border Counties had a *mammogram within the past 2 years*; this was similar to the proportion of women living in Arizona (84 percent) and the Border States (83 percent) who have had a mammogram within the past 2 years.<sup>8</sup>
- The *breast cancer incidence rate* in counties *within 62 miles of the U.S.-Mexico Border* was 67 per 100,000, this was higher than the Arizona incidence rate of 62 (Table 7).
- The *age-adjusted<sup>9</sup> breast cancer mortality rate* in the Arizona Border Counties was 10.8 per 100,000 population; this was similar to the Arizona rate of 12.3 per 100,000 population and the Border States rate of 13.3 (Table 7). When the rate is calculated only for women, the rate was 19.6 deaths in the Arizona Border Counties. The loss due to premature breast cancer death cost 70 years of life per 100,000 population in Arizona in 2002. The years of potential life lost rate was consistent across Arizona and notably lower than the U.S. rate of 86 years per 100,000 population. The number of years of life lost to breast cancer is brought more into focus when the rate was calculated for those most effected by breast cancer: 140 years of life were lost per 100,000 women per year in Arizona, in 2002.
- Regular screening with pap smears helps with early detection of cervical cancer. Seventy-eight percent of women living in the Arizona Border Counties had received a *pap smear within the past 2 years*; this rate was

<sup>8</sup> Behavioral Risk Factor Surveillance System (BRFSS). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2002. In the BRFSS, female respondents were asked "How long has it been since you had your last mammogram?" if they responded "yes" to ever having had a mammogram. The percentages reported here were weighted to population characteristics in order to produce estimates that were representative of the sampled population.

<sup>9</sup> Age-adjusted mortality rate= Sum of ((number of resident deaths/population) in 10-year age groups multiplied by weights from the U.S. 2000 Standard Population). This formula was applied whenever age-adjusted mortality rate is referred to in this report. The population used in calculating the crude death rates by 10-year age groups includes total population with exception of breast (when specified) and cervical cancer (females only).

similar to Arizona (81 percent) women and women living in the Border States (82 percent) in general.<sup>10</sup>

- In counties *within 62 miles of the U.S.-Mexico Border*, the *cervical cancer incidence rate* was 8.2 per 100,000 females; this was similar to the Arizona incidence rate of 7.4 per 100,000 females and slightly lower than the Border States incidence rate of 4.5 per 100,000 females (Table 7).
- In the Arizona Border Counties, the *age-adjusted cervical cancer mortality rate* at 1.8 per 100,000 females was lower than the State (2.3) and Border States (2.6) rates.

### **Diabetes Mellitus**

**Healthy Border 2010 Objectives for diabetes mellitus:**

- *Reduce the hospital discharge rate to 11.2 per 10,000 population for diabetes mellitus*
- *Reduce the diabetes death rate to 24.2 deaths per 100,000 population*

In 2002, diabetes was the sixth leading cause of death in the United States<sup>11</sup> and the ninth in Arizona.<sup>12</sup> Recent studies show that Type 2 diabetes is preventable.<sup>13</sup> Overweight and obesity contribute to diabetes prevalence.<sup>14</sup> Findings from the BRFSS indicate that Hispanics/Latinos(as) have a higher prevalence of diabetes than Non-Hispanic Whites at comparable Body Mass Index (BMI) ranking.<sup>15</sup> Table 8 provides information about diabetes in Arizona.

<sup>10</sup> *Behavioral Risk Factor Surveillance System (BRFSS)*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2002. In the BRFSS, female respondents were asked "How long has it been since you had your last Pap smear?" if they responded "yes" to ever having had a pap smear. The percentages reported here were weighted to population characteristics in order to produce estimates that were representative of the sampled population.

<sup>11</sup> Kochanek KD, Murphy SL, Anderson RN, Scott C. Deaths: Final data for 2002. National vital statistics reports; vol 53 no 5. Hyattsville, Maryland: National Center for Health Statistics. 2004.

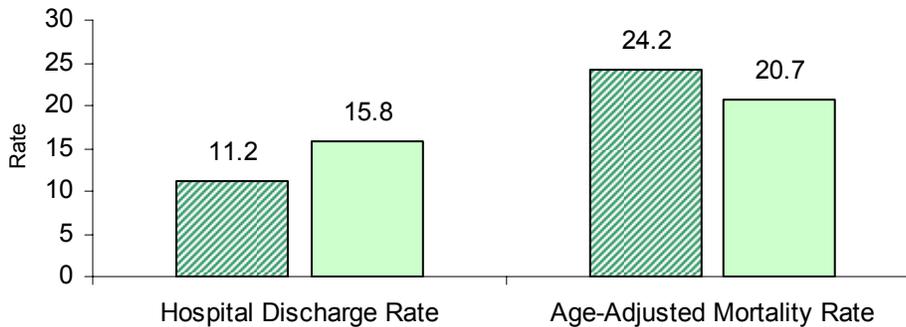
<sup>12</sup> Office of Statistics and Programming, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. 10 Leading Causes of Death, Arizona, 2002, All Races, Both Sexes, <http://webappa.cdc.gov/sasweb/ncipc/leadcaus10.html>, accessed on January 24, 2005.

<sup>13</sup> Jermendy G. Can type 2 diabetes mellitus be considered preventable? *Diabetes Research and Clinical Practice* 2005, 68(SI): S73-81; Schwarz PEH, Schwarz J, Bornstein SR, Schulze J. Prevention of type 2 diabetes: what challenges do we have to address? *Journal of Public Health*, 2005. 13:303-308; Zimmet P, Shaw J, Alberti KGMM. Preventing Type 2 diabetes and the dysmetabolic syndrome in the real world: a realistic view. *Diabetic Medicine*, 2003. 20:693-702.

<sup>14</sup> Mokdad AH, Ford ES, Bowman BA, et al. Prevalence of obesity, diabetes, and obesity-related health risk factors, 2001. *Journal of the American Medical Association* 2003; 289:76-9.

<sup>15</sup> Morbidity and Mortality Weekly Report (MMWR), Prevalence of Diabetes Among Hispanics --- Selected Areas, 1998--- 2002. 53(40):941-944.

**Healthy Border 2010 Objectives for Diabetes and 2002 Rates  
for Arizona Border Counties**



Sources: Section of Cost Reporting and Discharge Data Review, Bureau of Public Health Statistics, Arizona Department of Health Services (2002), and Office of Vital Records, Bureau of Public Health Statistics, Arizona Department of Health Services (2002).

- Fifty-six percent of Arizona residents were overweight based on Body Mass Index; 37 percent were overweight but not obese, and 20 percent were obese. There was little variation across geographic areas of the State (Table 9) with respect to this measure.
- The reported prevalence of *diabetes* in the Arizona Border Counties was 7.3 percent of adults responding to the BRFSS. This figure was higher than the State rate of 6.5 percent and the same as the Border States rate.
- Residents of the Arizona Border Counties were *hospitalized for diabetes* related issues (15.8 hospital discharges per 100,000 population) at similar rates of Arizona residents in general (14.8 per 100,000 population). This Border Counties rate was similar to the Border States rate of 14.5 per 100,000 and notably lower than the U.S. rate of 20.1 hospital discharges per 100,000 population (Table 8).
- The *diabetes age-adjusted mortality rate* was 21 per 100,000 population in counties *within 62 miles of the U.S.-Mexico Border*. This was similar to the Arizona rate of 23 deaths per 100,000 population which was lower than the Border States and U.S. rates at 26 and 25 deaths per 100,000 population, respectively.
- *Premature death due to diabetes* resulted in 74 years of potential life lost per 100,000 population in the Arizona Border Counties. Years of potential life lost due to diabetes in Arizona (78 years lost per 100,000 population) was somewhat higher than the Border States (73 years lost per 100,000 population) and similar to the U.S. rates (79 years lost per 100,000 population).

Hospital discharge rates for diabetes in the Arizona Border Counties were approaching the HB 2010 goals, while mortality rates were lower.

## **HIV/AIDS**

### **Healthy Border 2010 Objectives for HIV:**

- *Reduce the incidence rate to 4.2 per 100,000 population for HIV*

HIV/AIDS, despite recent advances in treatment, is an increasing concern in Mexico and a major cause of illness and death in the United States.<sup>16</sup> While the latest therapies have reduced death rates from AIDS in the Border region, their costs are prohibitive for some segments of the population.<sup>16</sup> Estimates in the United States of the lifetime costs associated with health care for HIV/AIDS have increased from \$55,000 to \$155,000 or more, contributing to the burden of illness, disability, and death.<sup>16</sup> In this context, HIV prevention becomes even more cost-effective.

- The incidence rate for HIV in the Arizona Border Counties was 6.8 cases per 100,000 and the AIDS incidence rate was 5.2 cases per 100,000 population, in 2002. Both rates were lower than the Arizona rates (8.0 and 5.3 cases per 100,000 respectively), and less than half the rates for the Border States (15.5 and 11.5 cases per 100,000 respectively, Table 11).
- The HIV incidence rate in the Arizona Border Counties (at 6.8 per 100,000) was 1.6 times the goal established by HB 2010 objectives.

## **Hepatitis and Tuberculosis**

### **Healthy Border 2010 Objectives for hepatitis and tuberculosis:**

- *Reduce the incidence rate to 5.5 per 100,000 population for hepatitis A*
- *Reduce the incidence rate to 3.2 per 100,000 population for hepatitis B*
- *Reduce the incidence rate to 5.0 per 100,000 population for tuberculosis (TB)*

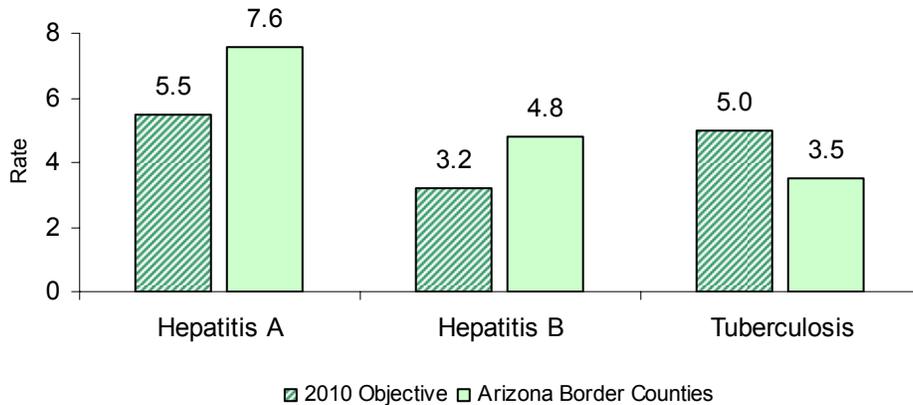
The TB incidence rate of 3.5 cases per 100,000 population in the Arizona Border Counties was lower than both the State rate (4.8 cases per 100,000) and the Border States rate of 7.8 cases per 100,000 population (Table 12).

Counties *within 62 miles of the U.S.-Mexico Border* exceeded the HB 2010 objective for tuberculosis in 2002. The hepatitis A and B incidence rates, however, were higher than the HB 2010 objectives for the Arizona Border Counties.

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<sup>16</sup> U.S.-Mexico Border Health Commission (USMBHC). Healthy Border 2010: An Agenda for Improving Health on the United States Mexico Border, 2003.

### Healthy Border 2010 Objectives and 2002 Incidence Rates for Selected Infectious Diseases for Arizona Border Counties



Sources: Infectious Disease Epidemiology Section, Office of Infectious Disease Services, Public Health Services, Arizona Department of Health Services (2002), and Tuberculosis Control Program, Office of Infectious Disease Services, Public Health Services, Arizona Department of Health Services (2002).

### Immunization Coverage

**Healthy Border 2010 Objectives for immunizations was to achieve and maintain an immunization coverage rate of 90 percent for children 19 to 35 months of age for the following vaccination series:**

- 4+ doses of diphtheria, tetanus, and pertussis or diphtheria and tetanus (DTP)
- 3+ doses of haemophilus influenzae (Hib)
- 3+ doses of hepatitis B vaccine (HepB)
- 3+ does of polio vaccine
- 1 dose of varicella vaccine
- 1 dose of measles, mumps, German measles vaccine (MCV)

If children were properly immunized, most childhood diseases can be prevented. This could result in a significant reduction in the cost of health care. The only reliable data available about childhood immunization status comes from the National Immunization Survey (NIS). These data were available only for the Nation and individual States. The sample size was too small to allow estimates of immunization rates for counties or smaller areas.

- The NIS results estimated that 68 percent (plus or minus 4.4 percent)<sup>17</sup> of Arizona children 19 to 35 months of age had coverage for the prescribed vaccination series. Nationally, the NIS estimated that 73 percent of children in this age group (plus or minus 1.0) had received this coverage.

<sup>17</sup> National Immunization Program, Centers for Disease Control and Prevention, 2003. Estimates are based on a sample and presented as 95 percent confidence intervals; wide confidence intervals for the State (plus or minus 4.4 percent) may be a sign of small sample size and less precision; national estimates have smaller confidence intervals (plus or minus 1.0 percent) and are more precise than State estimates.

- Non-Hispanic White children and Hispanics/Latinos(as) had similar rates of immunization: 68 percent (plus or minus 6.9) and 68 percent (plus or minus 6.4), respectively. Data for other race/ethnic groups were not available (Table 13).

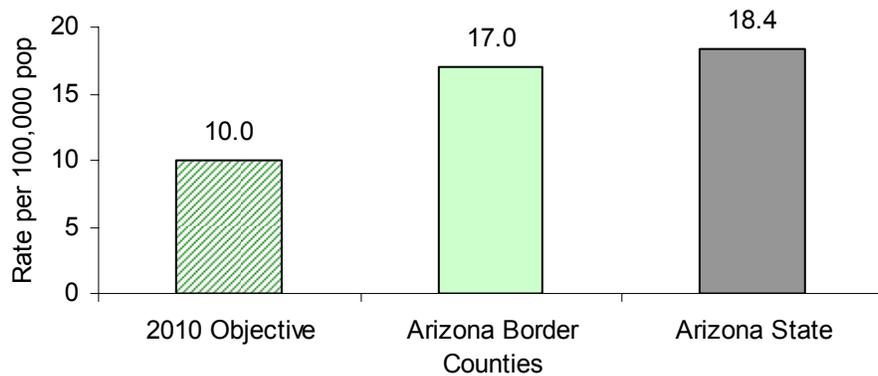
### ***Injury-Related Deaths***

**Healthy Border 2010 Objectives for selected injury-related deaths:**

- Reduce the mortality rate to 10.0 per 100,000 population for deaths due to motor vehicle crashes
- Reduce the mortality rate to 10.3 per 100,000 population for deaths due to unintentional injuries for children ages 0 to 4

Injury is identified as the leading health threat in the first 4 decades of life.<sup>18</sup> Unintentional injury was the third leading cause of death among all persons in Arizona<sup>19</sup>, and the fifth leading cause in the Border States and the United States in 2002.<sup>20</sup> Most injuries are preventable. Intentional injury was also among the leading causes of death in the United States with suicide being eleventh, and homicide being the fourteenth.<sup>20</sup> Injuries sustained by violent-intentional or accidental-unintentional means are responsible for more than 146,000 deaths each year nationwide.<sup>21</sup>

**Healthy Border 2010 Objective and 2002 Age-Adjusted Mortality Rates for Motor Vehicle Crashes in Arizona**



Source: Office of Vital Records, Bureau of Public Health Statistics, Arizona Department of Health Services (2002).

<sup>18</sup> National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. Injury in America. Defining Risk...Increasing Safety, June 2002.

<sup>19</sup> Office of Statistics and Programming, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. 10 Leading Causes of Death, Arizona, 2002, All Races, Both Sexes, <http://webappa.cdc.gov/sasweb/ncipc/leadcaus10.html>, accessed on January 24, 2005.

<sup>20</sup> Kochanek KD, Murphy SL, Anderson RN, Scott C. Deaths: Final data for 2002. National vital statistics reports; vol 53 no 5. Hyattsville, Maryland: National Center for Health Statistics. 2004.

<sup>21</sup> National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. Injury Factbook 2001–2002, November 2001; and National Center for Injury Prevention and Control. Centers for Disease Control and Prevention. Injury in America: Defining risk...Increasing Safety, June 2002.

- The *motor vehicle crash age-adjusted mortality rate* in the Arizona Border Counties was 17.0 deaths per 100,000 population; this was similar to the Arizona and U.S. rates of 18.4 and 15.7 per 100,000 population, respectively (Table 14).
- In 2002, lives claimed by *premature deaths due to motor vehicle crashes* resulted in the loss of 526 years of life per 100,000 population in Arizona; this was 90 more years of life lost than the rate for the Border States (436 years lost per 100,000 population). Similar to the Border States rate, the counties *within 62 miles of the U.S.-Mexico Border* had a rate of 454 years lost per 100,000 population.
- In 2002, there were a total of 66 deaths among children ages 0 to 4 due to unintentional injuries in Arizona.<sup>22</sup> Approximately 23 percent of these deaths (15 of 66) occurred in the Border Counties of Arizona. Hispanic/Latino(a) children accounted for 42 percent of these deaths (28 of 66) statewide.

The Arizona Border Counties will need to improve mortality rates due to motor vehicle crashes in order to meet the HB objective by 2010.

### ***Prenatal Care***

***Healthy Border 2010 Objective for prenatal care:***

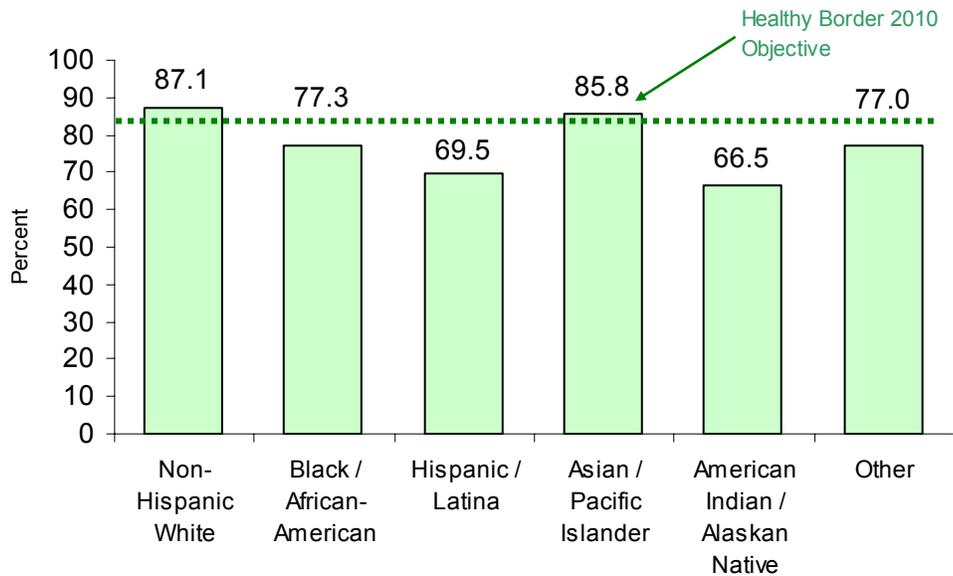
- *Increase the percent of women starting prenatal care in the first trimester to 85 percent*

Early prenatal care is important to a healthy pregnancy and is critical in identifying potential problems that may put the pregnancy at risk. Risk factors and maternal health conditions including pregnancy-related hypertension, gestational diabetes, and cigarette smoking, among others, which can contribute to poor infant outcomes can be identified by screenings as a part of prenatal care.<sup>23</sup>

<sup>22</sup> Office of Vital Records, Bureau of Public Health Statistics, Arizona Department of State Health Services, 2002.

<sup>23</sup> U.S.-Mexico Border Health Commission (USMBHC). Healthy Border 2010: An Agenda for Improving Health on the United States Mexico Border, 2003.

**Proportion of Mothers Beginning Prenatal Care in the First Trimester by Race/Ethnicity in Arizona State, 2002**



Source: Office of Vital Records, Bureau of Public Health Statistics, Arizona Department of Health Services (2002).

- In 2002, 72 percent of women in the Arizona Border Counties received prenatal care in the first trimester of pregnancy (Table 16). In Arizona, 78 percent of women received *prenatal care in the first trimester*.
- In 2002, 87 percent of Arizona's Non-Hispanic White and 86 percent of Asian/Pacific Islander mothers began prenatal care in the first trimester. Only 70 percent of Hispanic/Latina and 67 percent of American Indian/Alaskan Native mothers began prenatal care in the first trimester.
- Blacks/African-Americans, Hispanics/Latinas, and American Indians/Alaskan Natives in Arizona fell well below the desired goal set out in the HB 2010 objective for the proportion of women who should begin prenatal care in their first trimester of pregnancy. These rates were: 77 percent of Black/African-American, 70 percent of Hispanic/Latina, and 67 percent of American Indian/Alaskan Native mothers.
- Additional efforts may be needed to help achieve the HB 2010 goal of 85 percent of mothers beginning prenatal care in the first trimester of pregnancy among Black/African-American, Hispanic/Latina, and American Indian/Alaskan Native mothers in Arizona.

### Prenatal Care – Border Teenage Mothers by Race/Ethnicity

Teenage mothers living in counties *within 62 miles of the U.S.-Mexico Border* received prenatal care in the first trimester of pregnancy at rates well below the desired goal established in the Healthy Border 2010 Objectives of 85 percent (Table 18). In 2002, the proportions of teenage mothers in the Border Counties that received prenatal care in the first trimester were:

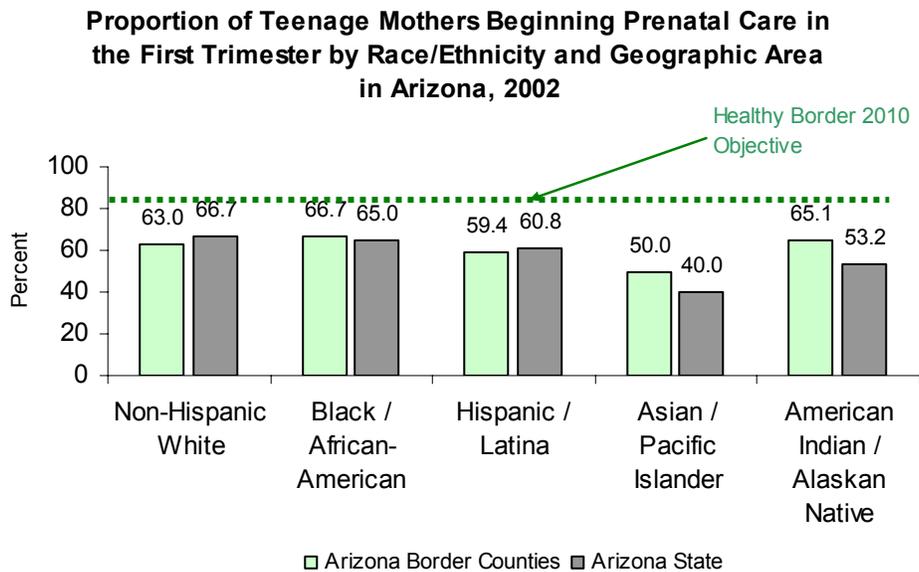
- 63 percent of Non-Hispanic White mothers
- 67 percent of Black/African-American mothers
- 59 percent of Hispanic/Latina mothers
- 65 percent of Native American/Alaskan Native mothers

### Prenatal Care – Arizona State Teenage Mothers by Geographic Distribution

In Arizona, the proportion of mothers ages 15 to 17 who received prenatal care in the first trimester were similar across geographic regions. The rates were 61 percent of teenage mothers in the Arizona Border Counties and 62 percent of mothers in counties *more than 62 miles from the Border* (Table 18).

### Prenatal Care of Border Teenage Mothers – Comparison of Race/Ethnicity to State

In the Arizona Border Counties, while all teenage mothers, regardless of race/ethnic groups, fell well below the HB 2010 goals for early prenatal care, a smaller proportion of Hispanic/Latina mothers (59 percent) received prenatal care during the first trimester.



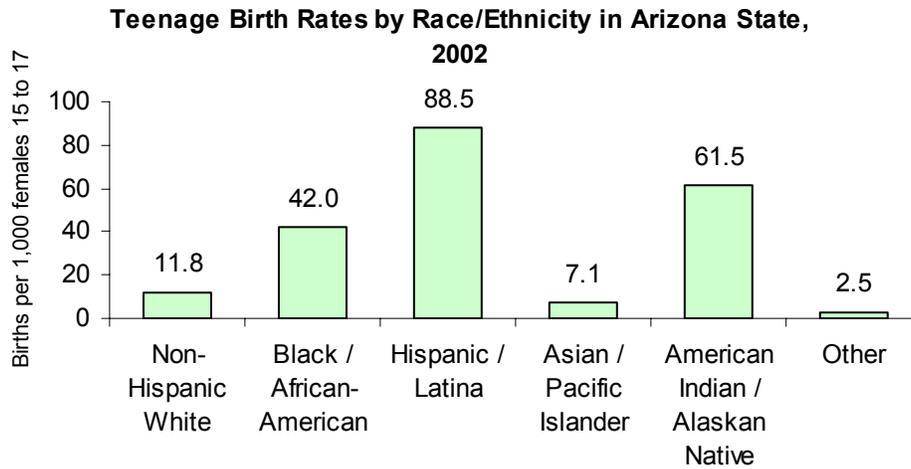
Source: Office of Vital Records, Bureau of Public Health Statistics, Arizona Department of Health Services (2002).

## Teenage Pregnancy

**Healthy Border 2010 Objective for teenage pregnancy, ages 15 to 17:**

- Reduce teenage pregnancies to 28.0 per 1,000 women ages 15 to 17

- The birth rate for teenage women in Arizona was 34 births per 1,000 females ages 15 to 17. There was little variation across the State in birth rates among teenage women in 2002 (Table 17). The teenage birth rate in Arizona was considerably higher than the Border States teenage birth rate of 29 and the U.S. rate (18.2 per 1,000).



Source: Office of Vital Records, Bureau of Public Health Statistics, Arizona Department of Health Services (2002).

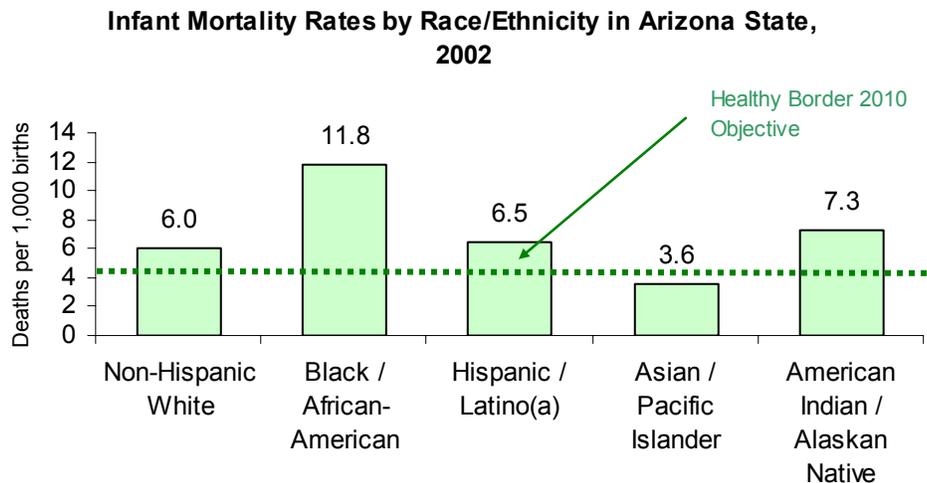
- There was considerable variation in the teenage birth rate by race/ethnicity. The Hispanic/Latina teenage birth rate was 89 per 1,000 in Arizona, 62 per 1,000 for American Indians/Alaskan Natives, 42 per 1,000 for Blacks/African-Americans, and 12 per 1,000 among Non-Hispanic White teenage women (Table 17). The highest teenage birth rate in the State was for Hispanics/Latinas in the counties *more than 62 miles from the Border* (97 per 1,000).
- The higher teenage birth rate was reflected in all race/ethnic categories except Non-Hispanic Whites and Asian/Pacific Islanders.

## Infant Mortality

**Healthy Border 2010 Objective for infant deaths:**

- Reduce the infant mortality rate to 4.6 deaths per 1,000 live births

Table 15 shows that in Arizona, the *infant mortality rate* in 2002 was 6.4 deaths per 1,000 live births.



- For Non-Hispanic Whites and Hispanics/Latinos(as), the infant mortality rate was 6.0 and 6.5 per 1,000 live births, respectively.
- The Black/African-American infant mortality rate was 11.8 deaths for each 1,000 live births. This reflects an infant mortality rate that was almost twice that in the Non-Hispanic White and Hispanic/Latino(a) populations.
- There was little variation in infant mortality rates across geographic areas in Arizona.

In 2002, the infant mortality rates in Arizona were higher for all major racial/ethnic groups, except Asian/Pacific Islander, than the target established by the HB 2010 Objective of 4.6 deaths per 1,000 live births.

### ***Mental Health***

***Healthy Border 2010 Objective for mental health:***

- *Reduce the mortality rate for suicides to 9.4 deaths per 100,000 population*

Meeting mental health needs has been identified as a National priority in the United States. The National Action Agenda, established by the Surgeon General, notes specific action steps aimed to decrease the burden of mental illness including promoting public awareness, supporting mental health-related

research, improving early assessment, recognition and access to care, and training appropriate personnel to recognize and manage mental disorders.<sup>24</sup>

Hospitalizations for *psychiatric-related conditions* occurred at the rate of 19 per 10,000 population in Arizona in 2002; this was one-half of the Border States rate of 38 per 10,000 (Table 19).

- At 15 psychiatric related conditions per 10,000 population in the counties *more than 62 miles from the U.S.-Mexico Border*, the rate was much lower than in the Arizona Border Counties.

Suicide takes a disproportionate toll in the community as well as on the family and friends of the deceased. It also results in a significant loss of years of potential life of a productive community member. Suicide was the ninth leading cause of death in Arizona<sup>25</sup> and the eleventh in the United States.<sup>26</sup>

- Table 19 shows that the Arizona 2002 age-adjusted suicide mortality rate was 16.3 deaths per 100,000 population. This was much higher than the Border States and the U.S. rates (10.9 per 100,000, respectively).
- The loss of life due to suicide in Arizona Border Counties was slightly lower than in the State. The age-adjusted suicide rate was 15.5 per 100,000 in the Border Counties; this reflects a years of potential life lost rate of 337 years per 100,000 population.
- In the counties *more than 62 miles from the U.S.-Mexico Border*, the loss due to suicide was similar to the State rate with an age-adjusted rate of 16.5 per 100,000 population. There were 392 years of potential life lost per 100,000 population in 2002 in the counties *more than 62 miles from the U.S.-Mexico Border*.

## Oral Health

### **Healthy Border 2010 Objective for oral health:**

- *Increase the use of oral care system to 75 percent*

“You are not healthy without good oral health,” noted Dr. C. Everett Koop, former U.S. Surgeon General.<sup>27</sup> The importance of meeting oral health care needs in communities in the Border Counties, Border States and nationwide is increasing as research continues to link oral health with general well-being. Oral infection

<sup>24</sup> *Mental Health: A Report of the Surgeon General—Executive Summary*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, 1999.

<sup>25</sup> Office of Statistics and Programming, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. 10 Leading Causes of Death, Arizona, 2002, All Races, Both Sexes, <http://webappa.cdc.gov/sasweb/ncipc/leadcaus10.html>, accessed on January 24, 2005.

<sup>26</sup> Kochanek KD, Murphy SL, Anderson RN, Scott C. Deaths: Final data for 2002. National vital statistics reports; vol 53 no 5. Hyattsville, Maryland: National Center for Health Statistics. 2004.

<sup>27</sup> *Oral Health in America: A Report of the Surgeon General*. U.S. Department of Health and Human Services, National Institutes of Health, Rockville, MD, 2000.

has been associated with the onset and severity of systemic diseases such as cardiovascular disease and diabetes, and negative birthing outcomes.<sup>28</sup> Despite increased use of dental sealants and water fluoridation, preventable oral diseases still afflict many children and adults during their lifetimes, impacting their self-image and quality of life as well as compromising their health and well-being.<sup>28</sup> Disparities in access to preventative and therapeutic oral care are demonstrated by the unmet needs of those with lower income and education levels, underserved populations, and a notable proportion of untreated tooth decay (over 40 percent in persons between 2 and 19 years, and approximately 90 percent of adults) observed in individuals regardless of sociodemographic characteristics.<sup>29</sup> While it is now possible to maintain healthy teeth throughout a lifetime, currently available preventive measures, knowledge, and technologies must be utilized universally by professionals and consumers alike.<sup>30</sup>

***The HB 2010 Objective for oral health includes these essential services:***

- *Treatment of dental cavities*
- *Preventive services such as dental sealants*
- *Dental restorative treatments such as replacement of permanent teeth*
- *Screening and diagnosis of oral and pharyngeal cancers*
- *Identification and referral for treatment of oral birth defects, such as cleft lip and cleft palate*

Information collected in the Behavioral Risk Factor Surveillance System (BRFSS) results from answers to the question, “Have you visited the dentist or dental clinic within the past year for any reason?”

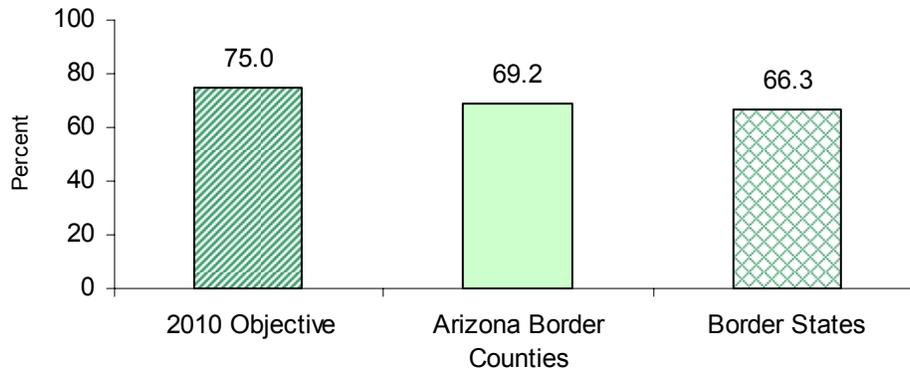
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<sup>28</sup> Cappelli DP, Steffensen JEM, Urbietta M. “Oral Health,” in the Bexar County Community Health Assessment, 2002. The Bexar County Community Health Collaborative, San Antonio, Texas; Grossi SG, Zambon JJ, Ho AW, et al. Assessment of risk for periodontal disease: risk indicators of periodontal attachment loss. *Journal of Periodontology*, 1994. 65:260-267; Mattila KJ, Valle MS, Nieninen MS, et al. Dental infections and coronary atherosclerosis. *Atherosclerosis*, 1993. 103:205-211; Offenbacher S, Katz V, Fertik G, et al. Periodontal disease as a possible risk factor for preterm low birthweight. *Journal of Periodontology*, 1996. 67:1103-1113.

<sup>29</sup> Beltrán-Aguilar ED, Barker LK, Canto MT, Dye BA, Gooch BF, Griffin SO, Hyman J, Jaramillo F, Kingman A, Nowjack-Raymer R, Selwitz RH, Wu T. Surveillance for Dental Caries, Dental Sealants, Tooth Retention, Edentulism, and Enamel Fluorosis. *MMWR Surveillance Summaries* 2005;54(03);1-44.

<sup>30</sup> Cappelli DP, Steffensen JEM, Urbietta M. “Oral Health,” in the Bexar County Community Health Assessment, 2002. The Bexar County Community Health Collaborative, San Antonio, Texas.

**Healthy Border 2010 Objective for Oral Health and 2002  
Proportion Using Dental Services in the Last Year in Arizona  
Border Counties**



Source: Behavioral Risk Factor Surveillance System (2002).

Results indicate that, in 2002, 68 percent of Arizona residents had visited a dentist within the past year. Sixty-nine percent of adults living in the Border Counties had *visited a dentist or dental clinic in the past year*. This was similar to Border States (66 percent) and the U.S. (70 percent, Table 20).

### ***Asthma***

***Healthy Border 2010 Objectives for asthma:***

- *Reduce the hospital discharge rate to 5.2 per 10,000 population*

Of Arizona respondents to the BRFSS in 2002, 13.9 percent reported that they had been diagnosed as *ever having asthma* by a health professional.

- The asthma rate was 15.0 percent among residents in the Arizona Border Counties.
- In 2002, the asthma hospitalization rate (8.9 per 10,000) in counties *within 62 miles of the U.S.-Mexico Border* was 1.7 times the HB 2010 goal. The hospitalization rate reflects only cases that were severe enough to be admitted to the hospital, not cases that presented themselves in the emergency department, treated and released.
- Death due to asthma was a relatively rare cause of death; the age-adjusted mortality rate for Arizona was 1.5 deaths per 100,000 population. This rate was consistent across Arizona and similar to the Border States and U.S. rates.

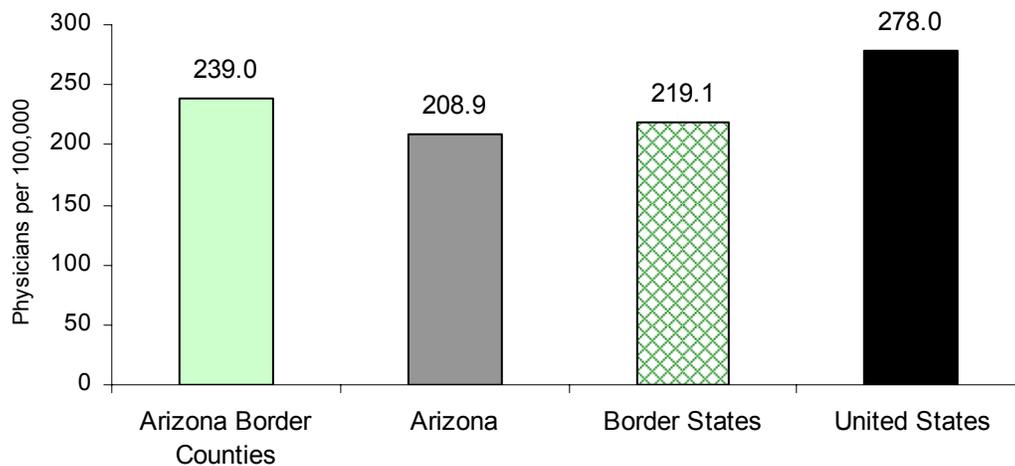
## Health Professions

### Physicians, Dentists, and Registered Nurses

#### *Physicians*

In 2004, there were 11,997 active physicians licensed to practice in Arizona for a ratio of 209 physicians per 100,000 Arizona residents (Table 22).

**Physician to Population Ratios in Arizona, 2004**



Sources: Border States includes data from Arizona Medical Board (2004), and Arizona Board of Osteopathic Examiners in Medicine and Surgery (2004), California Department of Consumer Affairs (2004), New Mexico Health Policy Commission (2003), and Texas State Board of Medical Examiners (2003); U.S. from U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions (2000).

- There were 2,982 physicians in the Arizona Border Counties. There were 239 physicians for every 100,000 people living in this region (*within 62 miles of the U.S.-Mexico Border*). The physician to population ratio was somewhat higher *within 62 miles of the U.S.-Mexico Border* (239 per 100,000) than in the State (209 per 100,000) and the Border States (219 per 100,000). However, the Border Counties ratio was much lower than the ratio for the U.S. at 278 physicians per 100,000 population.
- In the Arizona Border Counties, there were 2.5 times as many physicians per 100,000 population in the metropolitan counties<sup>31</sup> as in the non-metropolitan counties: 260 and 103 physicians per 100,000, respectively.
- The counties *more than 62 miles from the U.S.-Mexico Border* in Arizona had a lower physician to population ratio than in the Border Counties with 201 physicians per 100,000 population.

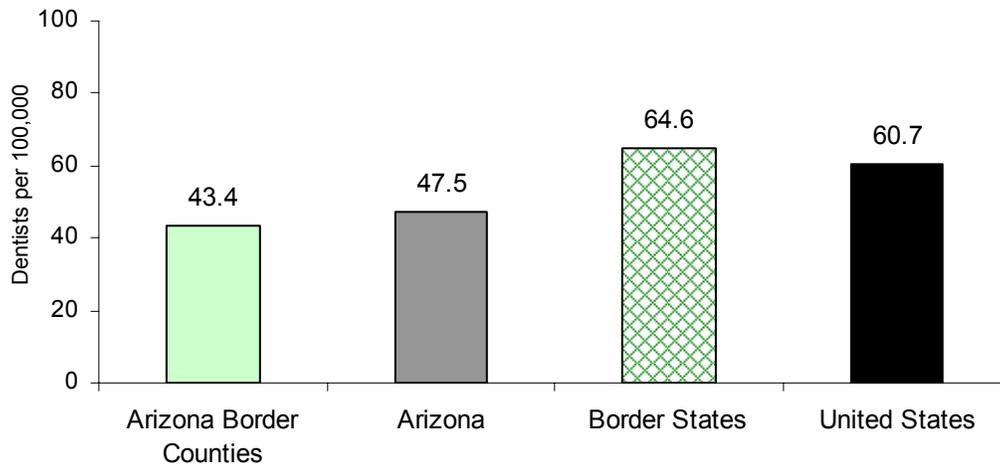
<sup>31</sup> Area Resource File (ARF), 2002.

- In *counties within 62 miles of the U.S.-Mexico Border*, there were 101 primary care physicians and 138 specialty care physicians per 100,000 population (Table 23). This compares to a ratio of 91 primary care and 109 specialty care physicians in the counties *more than 62 miles from the U.S.-Mexico Border*. Statewide, there were 93 primary care and 115 specialty physicians per 100,000 population.

### Dentists

In 2004, there were 2,727 active dentists licensed to practice in Arizona for a ratio of 48 dentists per 100,000 Arizona residents (Table 24).

**Dentist to Population Ratios in Arizona, 2004**



Sources: Border States includes data from Arizona State Board of Dental Examiners (2004), California Department of Consumer Affairs (2004), New Mexico Health Policy Commission (2003), and Texas State Board of Dental Examiners (2003); U.S. from U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions (2000).

- There were 542 dentists in *counties within 62 miles of the U.S.-Mexico Border*. For every 100,000 people living in the Arizona Border Counties, there were 43 dentists. Though the dentist to population ratio was comparable to the overall State ratio, it was lower than the supply of dentists in both the Border States (65 per 100,000) and the U.S. (61 per 100,000).
- In the metropolitan<sup>32</sup> Border Counties in Arizona, there were 1.6 times as many dentists than in the non-metropolitan counties: 46 and 28 per 100,000, respectively.
- In Arizona, *counties more than 62 miles from the U.S.-Mexico Border* had a higher supply of dentists than *counties within 62 miles of the Border*, with 49 dentists per 100,000 population.

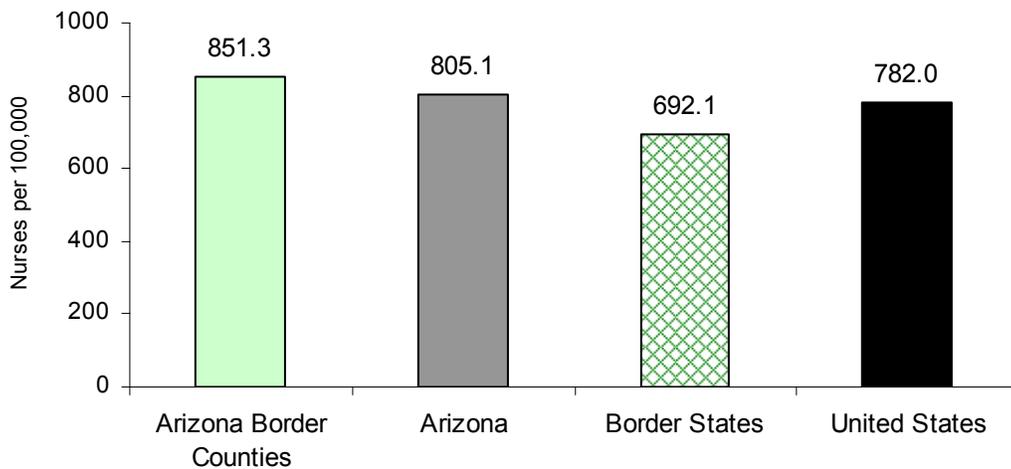
<sup>32</sup> Area Resource File (ARF), 2002.

- In the Arizona Border Counties, there were 36 general practice dentists per 100,000 population (Table 25). This was lower than the ratio of 41 general practice dentists in the *counties more than 62 miles from the U.S.-Mexico Border*.
- There were 7.8 specialty care dentists per 100,000 population in Arizona and each of the Border regions (Table 25).

### Registered Nurses

In 2004, there were 46,244 active registered nurses (RNs) licensed to practice in Arizona for a ratio of 805 RNs per 100,000 Arizona residents (Table 26).

**Registered Nurse to Population Ratios in Arizona, 2004**



Sources: Border States includes data from Arizona State Board of Nursing (2004), California Department of Consumer Affairs (2004), New Mexico Health Policy Commission (2003), and Texas Board of Nurse Examiners (2003); U.S. from U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions (2000).

- There were 10,624 registered nurses in *counties within 62 miles of the U.S.-Mexico Border*; this was 851 nurses for every 100,000 people living in this region. The registered nurse to population ratio in *counties within 62 miles of the Border* was similar to the State ratio (805 per 100,000), but notably higher than the ratios for the Border States and the U.S. (692 and 782 per 100,000 population, respectively).
- In the metropolitan<sup>33</sup> Border Counties, there were 1.6 times as many nurses as there were in the non-metropolitan counties: 894 and 570 per 100,000 population, respectively.

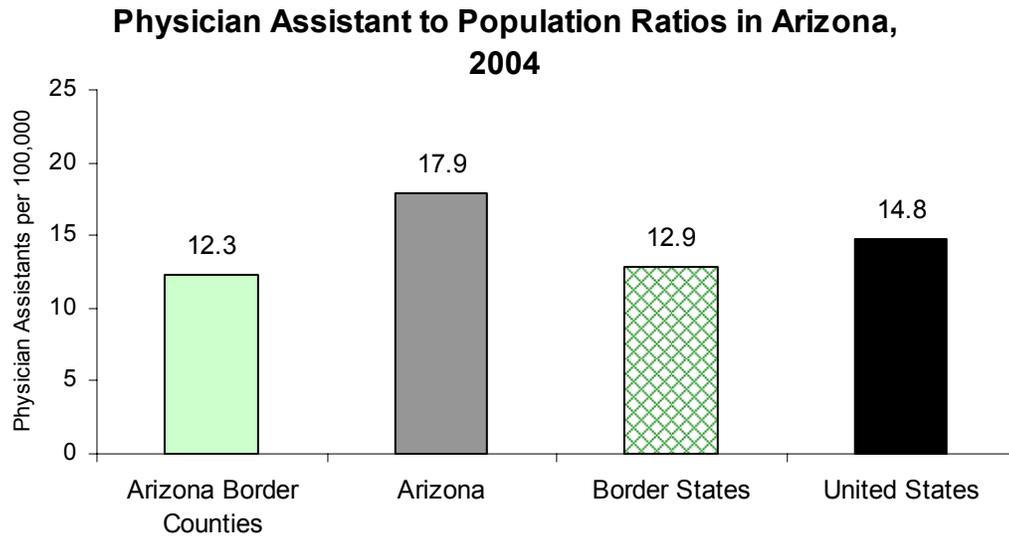
<sup>33</sup> Area Resource File (ARF), 2002.

- The Arizona counties that were *more than 62 miles from the U.S.-Mexico Border* had a lower supply of registered nurses than the Border Counties with 792 per 100,000 population (Table 26).
- Registered nurses in the Arizona Border Counties were overwhelmingly Non-Hispanic White (85 percent), with only 8.5 percent of nurses reported as Hispanic/Latino(a) (Table 27). Nationally, 86 percent of RNs were Non-Hispanic White, 5.1 percent were Black/African-American, and 2.2 percent were Hispanic/Latino(a).<sup>34</sup>
- In the counties *more than 62 miles from the U.S.-Mexico Border*, Non-Hispanic Whites accounted for the vast majority of the nursing workforce (88 percent, Table 27).

### **Non-Physician Clinicians**

#### *Physician Assistants*

In 2004, there were 1,028 active physician assistants (PAs) licensed to practice in Arizona for a ratio of 17.9 PAs for every 100,000 Arizona residents (Table 29).



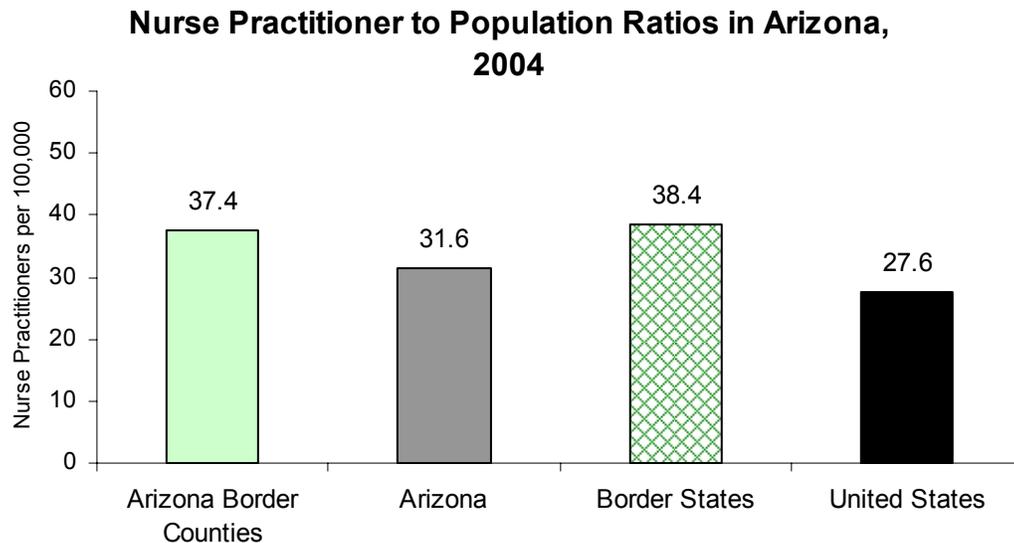
Sources: Border States includes data from Arizona Medical Board (2004), California Department of Consumer Affairs (2004), New Mexico Health Policy Commission (2003), and Texas State Board of Medical Examiners (2003); U.S. from U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions (2000).

<sup>34</sup> National Center for Health Workforce Analysis, Bureau of Health Professions, Health Resources and Services Administration, U.S. Department of Health and Human Services. United States Health Personnel Factbook, 2003. Table #402 Estimated Supply of Registered Nurses by Geographic Area December 31, 1999. It is estimated that 2,201,813 registered nurses employed in nursing are represented by survey results.

- There were 153 physician assistants in the Arizona Border Counties or 12.3 PAs per 100,000 population. The PA to population ratio in *counties within 62 miles of the Border* was less than the State ratio of 17.9. The Border Counties ratio was similar to the ratio for the Border States (12.9 per 100,000) and the U.S. (14.8 per 100,000).
- In the counties *more than 62 miles from the U.S.-Mexico Border*, there was a higher ratio of PAs per 100,000 population than in the Border Counties: 19.5 compared to 12.3.

### Nurse Practitioners

In 2004, there were 1,817 active nurse practitioners licensed to practice in Arizona for a ratio of 32 nurse practitioners per 100,000 population (Table 30).



Sources: Border States includes data from Arizona State Board of Nursing (2004), California Department of Consumer Affairs (2004), New Mexico Health Policy Commission (2003), and Texas Board of Nurse Examiners (2003); U.S. from U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions (2000).

- There were 467 nurse practitioners working in the Arizona Border Counties, this was 37 nurse practitioners per 100,000 population and was higher than the ratio for the State (32 per 100,000 population). While the ratio of nurse practitioners to population in counties *within 62 miles of the U.S.-Mexico Border* was similar to the ratio for Border States (38 per 100,000), it was somewhat higher than the U.S. ratio of 28 per 100,000 population.
- In the metropolitan counties<sup>35</sup> *within 62 miles of the U.S.-Mexico Border*, there were 1.6 times more nurse practitioners per 100,000 population than

<sup>35</sup> Area Resource File (ARF), 2002.

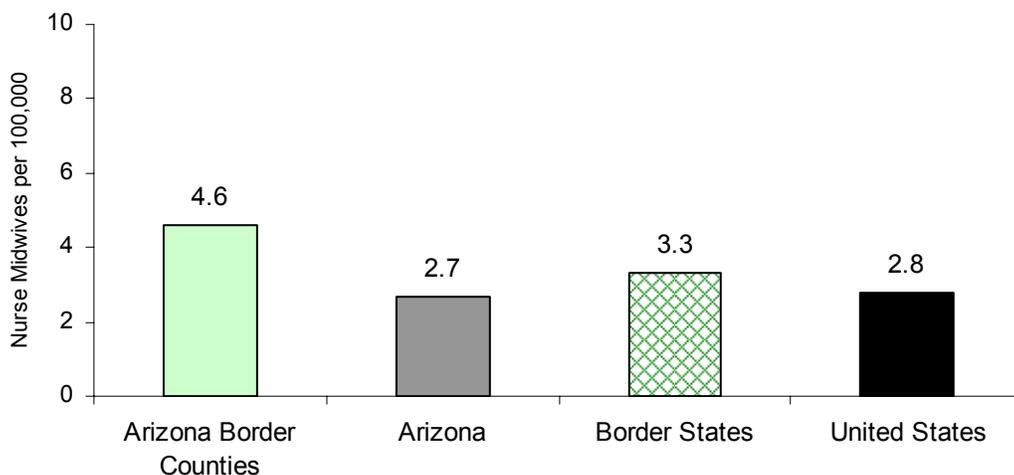
in the non-metropolitan counties *within 62 miles of the Border*. 39 and 26 nurse practitioners per 100,000 population, respectively.

- In the Arizona Border Counties, the ratio of nurse practitioners per 100,000 population was 1.4 times the National ratio.
- Nurse practitioners in counties *within 62 miles of the U.S.-Mexico Border* were mostly Non-Hispanic White (86 percent), with only 9.4 percent of nurse practitioners reported as Hispanic/Latino(a) (Table 31).
- In the counties *more than 62 miles from the Border*, Non-Hispanic White nurse practitioners also dominated the workforce (92 percent). The population in this region consists of 66 percent Non-Hispanic White, 5.0 percent American Indian/Alaskan Natives, and 23 percent Hispanic/Latino(a) (Table 2).

### Nurse Midwives

In 2004, there were 153 active nurse midwives licensed to practice in Arizona for a ratio of 2.7 nurse midwives per 100,000 population (Table 33).

**Nurse Midwife to Population Ratios in Arizona, 2004**



Sources: Border States includes data from Arizona State Board of Nursing (2004), California Department of Consumer Affairs (2004), Public Health Division, New Mexico Department of Health (2004), and Texas Board of Nurse Examiners (2003); U.S. from U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions (2000).

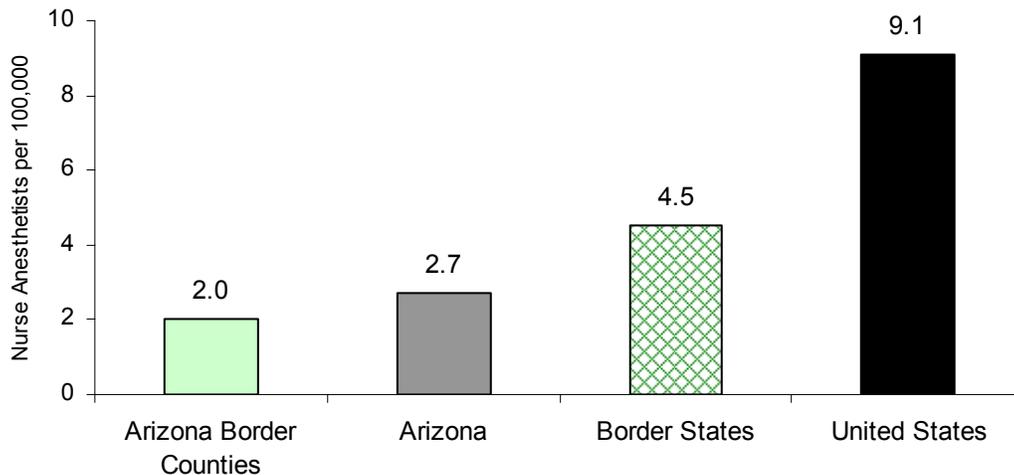
- There were 57 nurse midwives in the Arizona Border Counties; this was 4.6 nurse midwives per 100,000 population in these counties. This ratio was higher than the State ratio for nurse midwives at 2.7 per 100,000 population, the Border States (3.3 per 100,000) and the U.S. (2.8 per 100,000).

- In the Border Counties 57 percent of the population was Non-Hispanic White and 34 percent was Hispanic/Latino(a) (Table 2).
- In the counties *more than 62 miles from the Border*, Non-Hispanic White nurse midwives also dominate the workforce (90 percent). The population in this region was 66 percent Non-Hispanic White, 5.0 percent American Indian/Alaskan Natives and 23 percent Hispanic/Latino(a) (Table 2).
- Nearly 100 percent of nurse midwives in Arizona were female (Table 35).

### Nurse Anesthetists

In 2004, there were 156 active nurse anesthetists licensed to practice in Arizona for a ratio of 2.7 nurse anesthetists per 100,000 population (Table 36).

**Nurse Anesthetist to Population Ratios in Arizona, 2004**



Sources: Border States includes data from Arizona State Board of Nursing (2004), California Department of Consumer Affairs (2004), New Mexico Health Policy Commission (2003), and Texas Board of Nurse Examiners (2003); U.S. from U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions (2000).

- Twenty-five of Arizona's nurse anesthetists were in the Arizona Border Counties for a rate of 2.0 nurse anesthetists per 100,000 population; this ratio was similar to the State ratio of 2.7 per 100,000. The ratios of nurse anesthetists in the Arizona Border Counties were less than 60 percent of the Border States ratio of 4.5 per 100,000 and less than a third of the U.S. ratio of 9.1.
- Nurse anesthetists in counties *more than 62 miles of the Border* were overwhelmingly Non-Hispanic White (96 percent) and only 1.6 percent of nurse anesthetists were reported as Hispanic/Latino(a) (Table 37).
- In the counties *within 62 miles of the U.S.-Mexico Border*, Non-Hispanic White nurse anesthetists were 100 percent of the workforce.

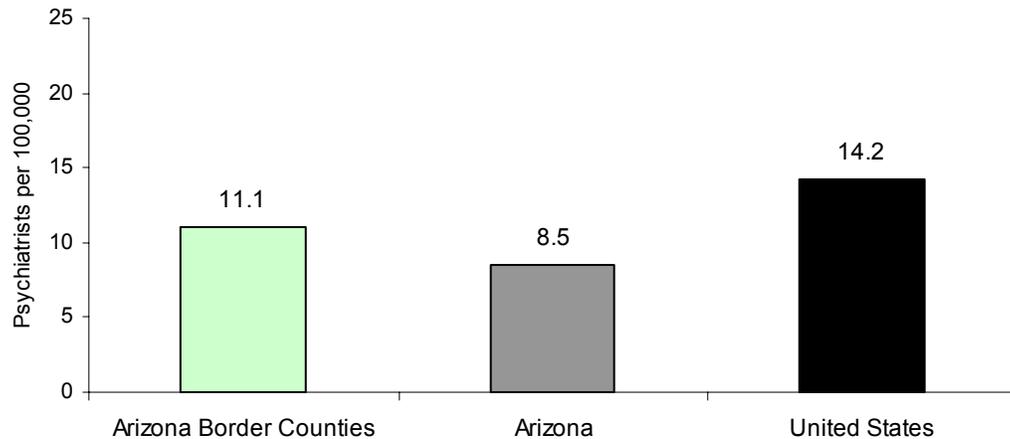
- While there were more females working as nurse anesthetists, males accounted for a larger proportion of nurse anesthetists than other nurse specialties reported here: 56 percent and 40 percent in counties *within 62 miles of the Border* and those *more than 62 miles from the Border*, respectively (Table 38).

## **Mental Health Professionals**

### *Psychiatrists*

In 2004,<sup>36</sup> there were 490 active psychiatrists licensed to practice in Arizona for a ratio of 8.5 psychiatrists per 100,000 population (Table 39).

**Psychiatrist to Population Ratios in Arizona, 2004**



Sources: Arizona Medical Board (2004), and Arizona Board of Osteopathic Examiners in Medicine and Surgery (2004); U.S. from U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions (1999).

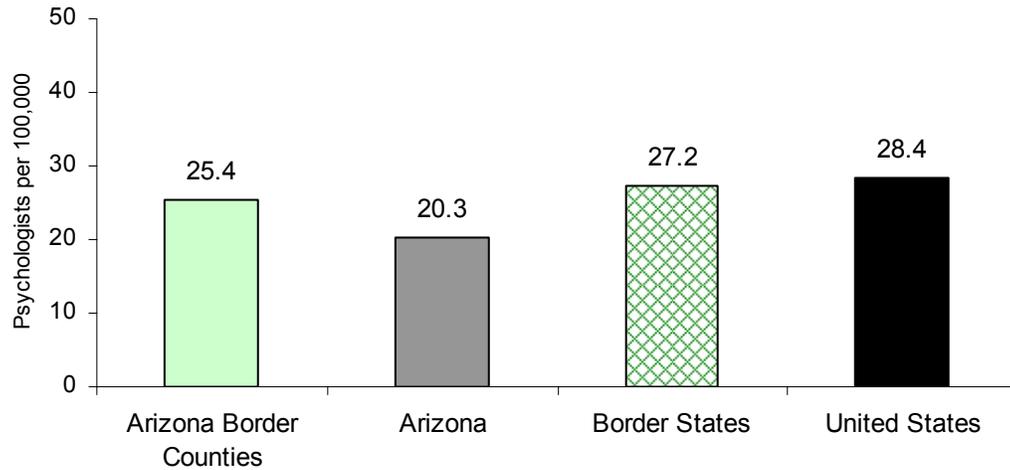
- In 2004, there were 138 psychiatrists in the Arizona Border Counties. There were 11.1 psychiatrists per 100,000 population in this region, a ratio that was higher than the State ratio of 8.5. In each case, the counties *within 62 miles of the Border* and State ratios for psychiatrists in Arizona were lower than the U.S. ratio of 14.2.
- In the counties *more than 62 miles from the Border*, there were even fewer psychiatrists per 100,000 population than in the counties *within 62 miles of the U.S.-Mexico Border* with a ratio of 7.8 psychiatrists per 100,000 population.

<sup>36</sup> Ratios could not be calculated for Border States because specialty data for California were not available.

## Psychologists

In 2004, there were 1,165 active psychologists licensed to practice in Arizona for a ratio of 20 psychologists per 100,000 population (Table 40).

**Psychologist to Population Ratios in Arizona, 2004**



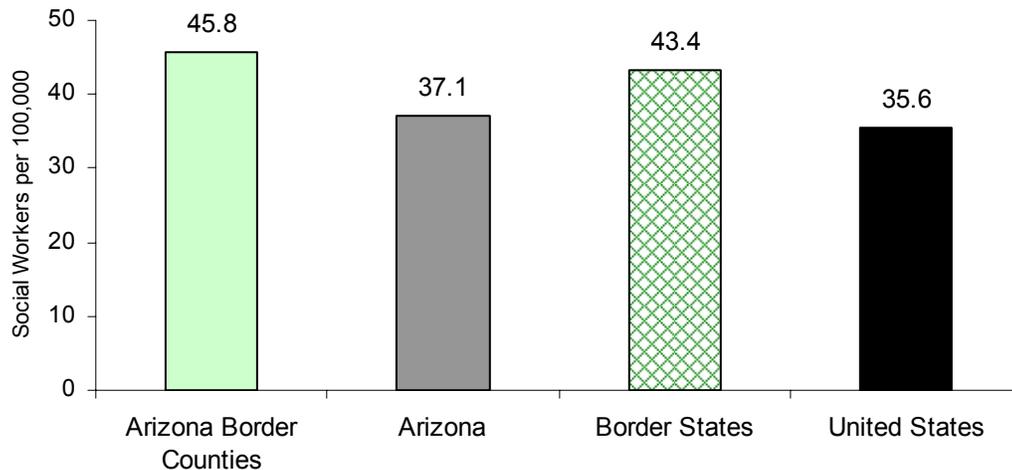
Sources: Border States includes data from Arizona Board of Psychologist Examiners (2004), California Department of Consumer Affairs (2004), New Mexico Health Policy Commission (2003), and Texas State Board of Examiners of Psychologists (2003); U.S. from U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions (1999).

- There were 317 psychologists in counties *within 62 miles of the U.S.-Mexico Border* or 25 psychologists per 100,000 population. This ratio was similar to the State ratio of 20 per 100,000. Both the Border Counties and State ratios for psychologists were lower than the Border States and U.S. ratios of 27 and 28 per 100,000 population, respectively.
- In the counties more than *62 miles from the U.S.-Mexico Border*, there were even fewer psychologists per 100,000 population than in the Arizona Border Counties with a ratio of 18.9 per 100,000 population.

## Social Workers

In 2004, there were 2,131 active social workers licensed to practice in Arizona for a ratio of 37 social workers per 100,000 Arizona residents (Table 41).

## Social Worker to Population Ratios in Arizona, 2004



Sources: Border States includes data from Arizona Board of Behavioral Health Examiners (2004), California Department of Consumer Affairs (2004), New Mexico Health Policy Commission (2003), and Texas State Board of Social Worker Examiners (2003); U.S. from U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions (1999).

- There were 571 social workers in the counties *within 62 miles of the U.S.-Mexico Border*, this was 46 social workers per 100,000 population. This ratio was higher than the ratios for the State (37 per 100,000), Border States (43 per 100,000) and the United States (36 per 100,000).
- In the metropolitan counties<sup>37</sup> *within 62 miles of the U.S.-Mexico Border*, there were twice as many social workers per 100,000 population than in the non-metropolitan counties *within 62 miles of the Border*. 49 and 24 social workers per 100,000 population, respectively.
- The Arizona counties *more than 62 miles from the U.S.-Mexico Border* had fewer social workers per 100,000 population than the counties *within 62 miles of the U.S.-Mexico Border* with a ratio of 35 per 100,000 population.

## Health Infrastructure

In Arizona, there were a similar number of certified nursing home beds across the State with 29 per 100,000 population in the Border Counties and 28 per 100,000 in those counties *more than 62 miles from the U.S.-Mexico Border*. This was comparable to the State ratio of 28 per 100,000, but lower than the Border States ratio of 40 per 100,000 population (Table 42).

<sup>37</sup> Area Resource File (ARF), 2002.

Statewide, there were 23 licensed hospital beds per 10,000 population. Counties *within 62 miles of the Border* had 26 per 10,000 population, while counties *more than 62 miles from the Border* had fewer beds (22 per 10,000 population, Table 43).

## **Non-Traditional Professions**

“Community Health Worker” (CHW) is a term inclusive of many job titles, such as community health advisors, lay health advocates, *promotoras*, outreach educators, community health representatives, peer health promoters and educators, etc. The common general attribute is that the CHWs are members of, or have a close relationship to, the community served. They generally are lay members of an underserved community who work in association with the health care system to offer interpretation and translation services, provide culturally appropriate health education and information, assist people in getting the health services they need, provide informal counseling and social support, advocate for individual and community health needs, and provide direct services such as first aid and blood pressure screening.<sup>38</sup>

The Community Health Worker National Workforce Study (described below) will compute a set of estimates for paid CHWs using data from the U.S. Census Bureau’s Public Use Microdata Sample (PUMS) and Staffing Patterns data from the Bureau of Labor Statistics for every State in the country. In addition, an estimate of the number of volunteer CHWs will also be calculated at the State and National level. Results from the National Community Health Advisor Study (1998) indicated that there were at least 12,500 CHWs working throughout the United States.

The Community Health Worker National Workforce Study, which began on October 1, 2004, under a 2-year contract by the RCHWS at The University of Texas Health Science Center at San Antonio with the U.S. Department of Health and Human Services (HHS), Health Resources and Services Administration (HRSA), Bureau of Health Professions, is aimed at drawing an accurate profile of the CHW workforce. The study consists of a thorough analysis of the quality and size of CHW employment and potential job market. Data on the number of paid and volunteer CHWs, their duties, work conditions, compensation, training/education and career opportunities are collected, organized, verified, and explained. The study also examines related issues, such as training and credentialing standards, the availability of funding streams for education and compensation as well as current State/Federal policy trends and options. The final report will provide a National profile and detailed assessments of the CHW workforce in four States that will inform policy and strategic interventions on existing application of CHW capabilities in improving access, reducing disparities, and enhancing quality improvement and cost-containment efforts. Arizona is one of the States where an in-depth investigation of the CHW workforce will be included as part of the overall study.

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<sup>38</sup> This is a HRSA description inclusive of the core roles of CHWs in the U.S. from the *National Community Health Advisor Study* by Rosenthal EL, Wiggins N, Brownstein JN et al., 1998.

## **Population and Health Profiles Tables**

Table 1  
Population in Arizona Border Regions, 2000<sup>39</sup>

Geographic Area	Counties	Population	Percent
<b>Arizona</b>	<b>15</b>	<b>5,130,632</b>	<b>100.0</b>
<b>Arizona Border Regions</b>			
More than 62 miles from Border	11	3,970,724	77.4
<b>Within 62 miles</b>	<b>4</b>	<b>1,159,908</b>	<b>22.6</b>

<sup>39</sup> Source: U.S. Census Bureau. Census 2000 Summary File (SF-3) – Sample Data.

Table 2  
Estimate of 2003 Population by Race/Ethnicity<sup>40</sup>

Geographic Area	Non-Hispanic White	Black / African-American	Hispanic / Latino(a) <sup>φ</sup>	Asian / Pacific Islander	American Indian / Alaskan Native	Other**	Total
Percent of Total Population							
<b>United States</b>	<b>69.1</b>	<b>12.0</b>	<b>12.5</b>	<b>3.7</b>	<b>0.7</b>	<b>1.9</b>	<b>100.0</b>
<b>Border States</b>	<b>50.1</b>	<b>7.5</b>	<b>31.9</b>	<b>7.1</b>	<b>1.0</b>	<b>2.3</b>	<b>100.0</b>
<b>Arizona</b>	<b>63.9</b>	<b>2.9</b>	<b>25.2</b>	<b>1.8</b>	<b>4.4</b>	<b>1.7</b>	<b>100.0</b>
Arizona Border Regions							
More than 62 miles from Border	65.7	2.9	22.7	1.8	5.0	1.8	78.0
Within 62 miles	57.4	2.7	34.2	1.8	2.2	1.7	22.0
Population							
<b>United States</b>	<b>201,002,880</b>	<b>34,831,660</b>	<b>36,413,990</b>	<b>10,757,840</b>	<b>2,160,970</b>	<b>5,642,440</b>	<b>290,809,780</b>
<b>Border States</b>	<b>32,581,700</b>	<b>4,909,550</b>	<b>20,769,230</b>	<b>4,593,800</b>	<b>678,330</b>	<b>1,525,780</b>	<b>65,058,390</b>
<b>Arizona</b>	<b>3,567,380</b>	<b>159,730</b>	<b>1,408,200</b>	<b>102,880</b>	<b>245,240</b>	<b>97,380</b>	<b>5,580,810</b>
Arizona Border Regions							
More than 62 miles from Border	2,863,000	127,127	989,377	80,448	218,068	76,430	4,354,450
Within 62 miles	704,380	32,603	418,823	22,432	27,172	20,950	1,226,360

<sup>φ</sup> Includes Hispanics/Latinos(as) of all races; in Arizona, 8.1% of Hispanics/Latinos(as) are Black/African-American, Asian/Pacific Islander, American Indian/Alaskan Native, or Other race. In the U.S. population, 9.7% of Hispanics/Latinos(as) are races other than White.

\*\* Includes some other race or cases with two or more races.

<sup>40</sup> Source: U.S. Census Bureau County Population Estimates.

Table 3  
Estimate of 2003 Population by Age<sup>41</sup>

Geographic Area	Less than 25	25 to 34	35 to 44	45 to 54	55 to 64	65 and Over	Total
Percent of Total Population							
<b>United States</b>	35.3	14.1	16.3	13.4	8.6	12.4	100.0
<b>Border States</b>	37.7	15.0	16.4	12.6	7.7	10.6	100.0
<b>Arizona</b>	36.5	14.5	15.3	12.2	8.5	13.0	100.0
Arizona Border Regions							
More than 62 miles from Border	36.6	14.9	15.4	12.1	8.4	12.6	78.0
<b>Within 62 miles</b>	<b>36.0</b>	<b>13.0</b>	<b>15.0</b>	<b>12.6</b>	<b>8.9</b>	<b>14.4</b>	<b>22.0</b>
Population							
<b>United States</b>	102,519,790	40,897,610	47,436,820	38,832,180	24,977,550	36,145,830	290,809,780
<b>Border States</b>	24,496,680	9,772,120	10,678,680	8,208,470	5,025,510	6,876,930	65,058,390
<b>Arizona</b>	2,037,590	806,500	852,190	681,360	477,140	726,030	5,580,810
Arizona Border Regions							
More than 62 miles from Border	1,595,801	646,635	668,788	526,456	367,927	548,836	4,354,443
<b>Within 62 miles</b>	<b>441,789</b>	<b>159,865</b>	<b>183,402</b>	<b>154,904</b>	<b>109,213</b>	<b>177,194</b>	<b>1,226,367</b>

<sup>41</sup> Source: U.S. Census Bureau County Population Estimates.

Table 4  
Poverty Level, 2000<sup>42</sup>

Geographic Area	Percent of Poverty					Total
	Under 1.00	1.00 to 1.49	1.50 to 1.84	1.85 to 1.99	2.00 & Over	
Percent of Total Population						
<b>United States</b>	<b>12.4</b>	<b>8.6</b>	<b>6.2</b>	<b>2.5</b>	<b>70.4</b>	<b>100.0</b>
<b>Border States</b>	<b>14.7</b>	<b>10.2</b>	<b>6.8</b>	<b>2.6</b>	<b>65.7</b>	<b>100.0</b>
<b>Arizona</b>	<b>13.9</b>	<b>9.8</b>	<b>7.1</b>	<b>2.7</b>	<b>66.5</b>	<b>100.0</b>
Arizona Border Regions						
More than 62 miles from Border	13.3	9.4	6.8	2.7	67.8	77.5
<b>Within 62 miles</b>	<b>15.9</b>	<b>11.1</b>	<b>8.0</b>	<b>2.8</b>	<b>62.2</b>	<b>22.5</b>
Population						
<b>United States</b>	<b>33,899,812</b>	<b>23,420,337</b>	<b>16,977,258</b>	<b>6,897,202</b>	<b>192,687,623</b>	<b>273,882,232</b>
<b>Border States</b>	<b>8,851,341</b>	<b>6,142,023</b>	<b>4,095,365</b>	<b>1,567,304</b>	<b>39,536,456</b>	<b>60,192,489</b>
<b>Arizona</b>	<b>698,669</b>	<b>490,762</b>	<b>355,022</b>	<b>136,423</b>	<b>3,340,362</b>	<b>5,021,238</b>
Arizona Border Regions						
More than 62 miles from Border	519,093	365,815	264,464	104,687	2,639,208	3,893,267
<b>Within 62 miles</b>	<b>179,576</b>	<b>124,947</b>	<b>90,558</b>	<b>31,736</b>	<b>701,154</b>	<b>1,127,971</b>

<sup>42</sup> Source: U.S. Census Bureau, 2000. Data for 2000 were the most recent year of data available. Note: In 2000, \$17,761 for a family of four was established as the poverty threshold according to the U.S. Census Bureau, *Poverty in the United States: 2000: Current Population Reports: Consumer Income*, September 2001, p 5. Poverty thresholds are updated annually by the Census Bureau, in 2004, the poverty threshold changed to \$19,484, <http://www.census.gov/hhes/poverty/threshld/thresh04.html>, accessed on February 8, 2006.

Table 5  
Insurance Coverage, 2002

Geographic Area	Without Health Coverage <sup>43</sup>
Percent of Population	
<b>United States</b>	<b>15.2</b>
<b>Border States</b>	<b>19.4</b>
<b>Arizona</b>	<b>16.1</b>
Arizona Border Regions	
More than 62 miles from Border	16.7
Within 62 miles	<b>14.2</b>
Sample Size	
<b>United States</b>	<b>247,303</b>
<b>Border States</b>	<b>24,305</b>
<b>Arizona</b>	<b>3,218</b>
Arizona Border Regions	
More than 62 miles from Border	2,062
Within 62 miles	<b>986</b>

<sup>43</sup> Source: *Behavioral Risk Factor Surveillance System (BRFSS)*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2002. In the BRFSS, respondents were asked "Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?" Sample size reflects number of respondents, excluding those who answered "Do not know/not sure" or refused. The sample size within a State may not add up to State total due to suppression of data for counties with small sample sizes. The percentages were weighted to population characteristics in order to produce estimates that were representative of the sampled population. Health characteristics estimated from the BRFSS pertain only to the adult population (age 18 and older) living in households.

Table 6  
Highest Level of Education, 2000<sup>44</sup>

Geographic Area	Less than 9	9 to 12 (no diploma)	High School	Some College	Associate Degree	College Degree	Total
Percent of Total Population							
<b>United States</b>	<b>7.5</b>	<b>12.1</b>	<b>28.6</b>	<b>21.0</b>	<b>6.3</b>	<b>24.4</b>	<b>100.0</b>
<b>Border States</b>	<b>11.1</b>	<b>12.1</b>	<b>22.2</b>	<b>23.0</b>	<b>6.4</b>	<b>25.1</b>	<b>100.0</b>
<b>Arizona</b>	<b>7.8</b>	<b>11.2</b>	<b>24.3</b>	<b>26.4</b>	<b>6.7</b>	<b>23.5</b>	<b>100.0</b>
Arizona Border Regions							
More than 62 miles from Border	7.6	11.1	24.5	26.5	6.8	23.5	77.2
<b>Within 62 miles</b>	<b>8.5</b>	<b>11.4</b>	<b>23.8</b>	<b>26.0</b>	<b>6.6</b>	<b>23.6</b>	<b>22.8</b>
Population							
<b>United States</b>	<b>13,755,477</b>	<b>21,960,148</b>	<b>52,168,981</b>	<b>38,351,595</b>	<b>11,512,833</b>	<b>44,462,605</b>	<b>182,211,639</b>
<b>Border States</b>	<b>4,271,425</b>	<b>4,645,407</b>	<b>8,558,845</b>	<b>8,857,227</b>	<b>2,473,254</b>	<b>9,674,620</b>	<b>38,480,778</b>
<b>Arizona</b>	<b>254,696</b>	<b>364,851</b>	<b>791,904</b>	<b>859,165</b>	<b>219,356</b>	<b>766,212</b>	<b>3,256,184</b>
Arizona Border Regions							
More than 62 miles from Border	191,321	279,953	615,633	665,853	170,439	590,886	2,514,085
<b>Within 62 miles</b>	<b>63,375</b>	<b>84,898</b>	<b>176,271</b>	<b>193,312</b>	<b>48,917</b>	<b>175,326</b>	<b>742,099</b>

<sup>44</sup> Source: U.S. Census Bureau, 2000. Counts reported here reflect the highest level of education attained by adults ages 25 and over. Data for 2000 is the most recent year of data available.

Table 7  
Breast and Cervical Cancer, 2002

Geographic Area	Breast Cancer			Cervical Cancer		
	Age-Adjusted Mortality Rate	YPLL Rate	2001 Incidence Rate	Age-Adjusted Mortality Rate	YPLL Rate <sup>45</sup>	2001 Incidence Rate
	Per 100,000			Per 100,000		
<b>United States<sup>46</sup></b>	<b>14.5</b>	<b>86.2<sup>£</sup></b>	<b>NA<sup>§</sup></b>	<b>2.7</b>	<b>34.0<sup>£</sup></b>	<b>NA<sup>§</sup></b>
<b>Border States</b>	<b>13.3</b>	<b>71.8</b>	<b>NA<sup>§</sup></b>	<b>2.6</b>	<b>31.9</b>	<b>4.5<sup>Ω</sup></b>
<b>Arizona<sup>47</sup></b>	<b>12.3</b>	<b>69.8</b>	<b>61.6</b>	<b>2.3</b>	<b>30.7</b>	<b>7.4</b>
<b>Arizona Border Regions</b>						
More than 62 miles from Border	12.8	70.6	60.2	2.4	33.3	7.1
<b>Within 62 miles</b>	<b>10.8</b>	<b>66.8</b>	<b>66.7</b>	<b>1.8</b>	<b>21.6</b>	<b>8.2</b>
	Number of Cases					
<b>United States</b>	<b>41,883</b>	<b>17,520<sup>£</sup></b>	<b>NA<sup>§</sup></b>	<b>3,952</b>	<b>2,609<sup>£</sup></b>	<b>NA<sup>§</sup></b>
<b>Border States</b>	<b>7,555</b>	<b>3,424</b>	<b>NA<sup>§</sup></b>	<b>827</b>	<b>572</b>	<b>2,804<sup>Ω</sup></b>
<b>Arizona</b>	<b>656</b>	<b>289</b>	<b>3,264</b>	<b>64</b>	<b>43</b>	<b>195</b>
<b>Arizona Border Regions</b>						
More than 62 miles from Border	518	228	2,475	52	36	146
<b>Within 62 miles</b>	<b>138</b>	<b>61</b>	<b>789</b>	<b>12</b>	<b>7</b>	<b>49</b>

<sup>£</sup> YPLL rate is for 2001, the most recent year of data available.

<sup>§</sup> Counts not available for 2001.

<sup>Ω</sup> New Mexico rate is based on average number of cases for a 5-year period.

<sup>45</sup> Years of potential life lost (YPLL) calculated only for persons who died before age 65.

<sup>46</sup> Sources: Kochanek KD, Murphy SL, Anderson RN, Scott C. Deaths: Final data for 2002. National vital statistics reports; vol 53 no 5. Hyattsville, Maryland: National Center for Health Statistics. 2004, for mortality, and <http://wonder.cdc.gov/mortICD10J.html>, accessed on September 9, 2004, for YPLL rates.

<sup>47</sup> Sources: Office of Vital Records, Bureau of Public Health Statistics, Arizona Department of Health Services, 2002, for mortality and YPLL rates, and Arizona Cancer Registry, Arizona Department of Health Services, 2001, for incidence rates. Breast cancer mortality and YPLL rates include all deaths and total population; female population used to calculate mortality and YPLL for cervical cancer; both mortality rates were adjusted to the 2000 U.S. Standard Population. Incidence rates reflect malignant neoplasm of the breast and cervix uteri and were for the most current years of data available.

**Table 8**  
**Diabetes Mellitus Measures, 2002**

Geographic Area	Hospital Discharge Rate	Age-Adjusted Mortality Rate	YPLL Rate <sup>48</sup>	Ever Had Diabetes <sup>49</sup>
	Per 10,000	Per 100,000	Per 100,000	Percent
<b>United States<sup>50</sup></b>	<b>20.1</b>	<b>25.4</b>	<b>79.3<sup>£</sup></b>	<b>7.1</b>
<b>Border States</b>	<b>14.5</b>	<b>25.7</b>	<b>72.8</b>	<b>7.3</b>
<b>Arizona<sup>51</sup></b>	<b>14.8</b>	<b>22.5</b>	<b>77.8</b>	<b>6.5</b>
Arizona Border Regions				
More than 62 miles from Border	14.5	23.1	78.8	6.3
Within 62 miles	<b>15.8</b>	<b>20.7</b>	<b>74.1</b>	<b>7.3</b>
		Number of Cases		Sample Size
<b>United States</b>	<b>NA<sup>§</sup></b>	<b>73,249</b>	<b>17,664<sup>£</sup></b>	<b>245,063</b>
<b>Border States</b>	<b>92,664</b>	<b>14,228</b>	<b>3,849</b>	<b>24,018</b>
<b>Arizona</b>	<b>8,036</b>	<b>1,210</b>	<b>328</b>	<b>3,186</b>
Arizona Border Regions				
More than 62 miles from Border	6,135	939	251	2,045
Within 62 miles	<b>1,901</b>	<b>271</b>	<b>77</b>	<b>970</b>

<sup>£</sup> YPLL rate is for 2001, the most recent year of data available.

<sup>§</sup> Number of hospitalizations not reported, only rates of discharge.

<sup>48</sup> Years of potential life lost (YPLL) calculated only for persons who died before age 65.

<sup>49</sup> Source: *Behavioral Risk Factor Surveillance System (BRFSS)*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2002. In the BRFSS, respondents were asked "Have you ever been told by a doctor that you have diabetes? (If "Yes" and female, ask "Was this only when you were pregnant?")". Sample size reflects number of respondents, excluding those who answered "Do not know/not sure," were female and had diabetes while pregnant, or refused. The sample size within a State may not add up to State total due to suppression of data for counties with small sample sizes. The percentages were weighted to population characteristics in order to produce estimates that were representative of the sampled population. Health characteristics estimated from the BRFSS pertain only to the adult population (age 18 and older) living in households.

<sup>50</sup> Sources: DeFrances CJ, Hall MJ. 2002 National Hospital Discharge Survey. Advance data from vital and health statistics; no 342. Hyattsville, Maryland: National Center for Health Statistics. 2004; for hospital discharge rate; Kochanek KD, Murphy SL, Anderson RN, Scott C. Deaths: Final data for 2002. National vital statistics reports; vol 53 no 5. Hyattsville, Maryland: National Center for Health Statistics. 2004, for mortality; and <http://wonder.cdc.gov/mortlCD10J.html>, accessed on September 9, 2004, for YPLL rate.

<sup>51</sup> Sources: Section of Cost Reporting and Discharge Data Review, Bureau of Public Health Statistics, Arizona Department of Health Services, 2002, and Office of Vital Records, Bureau of Public Health Statistics, Arizona Department of Health Services, 2002, for mortality and YPLL rates.

Table 9  
Proportion Overweight and Obese, 2002

Geographic Area	Body Mass Index Category <sup>52</sup>		
	Overweight Only	Obese Only	Overweight & Obese
Percent of Population			
<b>United States</b>	<b>36.9</b>	<b>21.9</b>	<b>58.8</b>
<b>Border States</b>	<b>37.4</b>	<b>20.9</b>	<b>58.3</b>
<b>Arizona</b>	<b>36.6</b>	<b>19.6</b>	<b>56.2</b>
Arizona Border Regions			
More than 62 miles from Border	36.9	20.6	57.5
Within 62 miles	<b>35.6</b>	<b>17.5</b>	<b>53.1</b>
Sample Size			
<b>United States</b>			<b>236,287</b>
<b>Border States</b>			<b>23,243</b>
<b>Arizona</b>			<b>3,112</b>
Arizona Border Regions			
More than 62 miles from Border			2,003
Within 62 miles			<b>950</b>

<sup>52</sup> Source: *Behavioral Risk Factor Surveillance System (BRFSS)*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2002. In the BRFSS, body mass index is reported as a calculated variable using weight and height data collected from the respondent. Sample size reflects number of respondents, excluding those who answered "Do not know/not sure" or refused, or whose data was missing. The sample size within a State may not add up to State total due to suppression of data for counties with small sample sizes. The percentages were weighted to population characteristics in order to produce estimates that were representative of the sampled population. Health characteristics estimated from the BRFSS pertain only to the adult population (age 18 and older) living in households.

Table 10  
Cerebrovascular Disease Deaths, 2002

Geographic Area	Age-Adjusted Mortality Rate	YPLL Rate <sup>53</sup>
	Per 100,000	Per 100,000
<b>United States<sup>54</sup></b>	<b>56.2</b>	<b>96.7<sup>£</sup></b>
<b>Border States</b>	<b>57.9</b>	<b>81.0</b>
<b>Arizona<sup>55</sup></b>	<b>46.6</b>	<b>60.7</b>
<b>Arizona Border Regions</b>		
More than 62 miles from Border	46.9	60.3
<b>Within 62 miles</b>	<b>45.7</b>	<b>62.5</b>
	Number of Cases	
<b>United States</b>	<b>162,672</b>	<b>19,048<sup>£</sup></b>
<b>Border States</b>	<b>31,226</b>	<b>3,897</b>
<b>Arizona</b>	<b>2,454</b>	<b>262</b>
<b>Arizona Border Regions</b>		
More than 62 miles from Border	1,861	201
<b>Within 62 miles</b>	<b>593</b>	<b>61</b>

<sup>£</sup> YPLL rate is for 2001, the most recent year of data available.

<sup>53</sup> Years of potential life lost (YPLL) calculated only for persons who died before age 65.

<sup>54</sup> Sources: Kochanek KD, Murphy SL, Anderson RN, Scott C. Deaths: Final data for 2002. National vital statistics reports; vol 53 no 5. Hyattsville, Maryland: National Center for Health Statistics. 2004, for mortality; and <http://wonder.cdc.gov/mortlCD10J.html>, accessed on September 9, 2004, for YPLL rate.

<sup>55</sup> Source: Office of Vital Records, Bureau of Public Health Statistics, Arizona Department of Health Services, 2002, for mortality and YPLL rates.

Table 11  
HIV / AIDS, 1998-2002

Geographic Area	AIDS	HIV
Incidence Rate Per 100,000		
<b>United States<sup>56</sup></b>	<b>14.8</b>	<b>NA<sup>§</sup></b>
<b>Border States<sup>Ω</sup></b>	<b>11.5</b>	<b>15.5</b>
<b>Arizona<sup>57</sup></b>	<b>5.3</b>	<b>8.0</b>
<b>Arizona Border Regions</b>		
More than 62 miles from Border	5.3	8.3
<b>Within 62 miles</b>	<b>5.2</b>	<b>6.8</b>
Number of Cases		
<b>United States</b>	<b>42,651</b>	<b>NA<sup>§</sup></b>
<b>Border States<sup>Ω</sup></b>	<b>7,358</b>	<b>9,887</b>
<b>Arizona</b>	<b>1,373</b>	<b>2,059</b>
<b>Arizona Border Regions</b>		
More than 62 miles from Border	1,070	1,663
<b>Within 62 miles</b>	<b>303</b>	<b>396</b>

<sup>§</sup> Counts not available for 2002; number of HIV cases only available for 36 states.

<sup>Ω</sup> Arizona rate is based on average number of cases for a 5-year period, while New Mexico rate is based on average number of cases for a 3-year period.

<sup>56</sup> Source: National Center for HIV, STD and TB Prevention, Centers for Disease Control and Prevention. Table 14. AIDS cases and rate (per 100,000 population), by area of residence and age category, reported through December 2002 – United States.

<sup>57</sup> Source: Office of HIV/AIDS, Bureau of Epidemiology and Disease Control, Public Health Services, Arizona Department of Health Services, Current Estimated Prevalence and Incidence by County, 1998- 2002.

Table 12  
Selected Infectious Diseases, 2002

Geographic Area	Hepatitis A	Hepatitis B	Tuberculosis
Incidence Rate Per 100,000			
<b>United States<sup>58</sup></b>	<b>3.1</b>	<b>2.8</b>	<b>5.2</b>
<b>Border States</b>	<b>4.3</b>	<b>3.3</b>	<b>7.8</b>
<b>Arizona<sup>59</sup></b>	<b>5.6</b>	<b>4.6</b>	<b>4.8</b>
Arizona Border Regions			
More than 62 miles from Border	5.0	4.6	5.2
Within 62 miles	<b>7.6</b>	<b>4.8</b>	<b>3.5</b>
Number of Cases			
<b>United States</b>	<b>8,795</b>	<b>8,064</b>	<b>15,075</b>
<b>Border States</b>	<b>2,747</b>	<b>2,122</b>	<b>5,021</b>
<b>Arizona</b>	<b>303</b>	<b>251</b>	<b>263</b>
Arizona Border Regions			
More than 62 miles from Border	212	193	221
<b>Within 62 miles</b>	<b>91</b>	<b>58</b>	<b>42</b>

<sup>58</sup> Sources: National Center for Infectious Diseases, Centers for Disease Control and Prevention. Table 1. Reported Cases of Acute Viral Hepatitis, by Type and Year, United States, 1966-2003; National Center for HIV, STD and TB Prevention, Centers for Disease Control and Prevention. Table 1. Tuberculosis Cases and Case Rates per 100,000 Population, Deaths, and Death Rates per 100,000 Population: United States, 1953-2002.

<sup>59</sup> Sources: Infectious Disease Epidemiology Section, Office of Infectious Disease Services, Public Health Services, Arizona Department of Health Services, 2002; reflects only acute hepatitis cases, and Tuberculosis Control Program, Office of Infectious Disease Services, Public Health Services, Arizona Department of Health Services, 2002.

**Table 13**  
**Estimated Vaccination Coverage\*\* with 4:3:1:3:3:1†**  
**Among Children 19-35 Months of Age by Race/Ethnicity‡, and by**  
**State and Immunization Action Plan Area U.S., National**  
**Immunization Survey, 2003§<sup>60</sup>**

Geographic Area	Total	Non-Hispanic White	Non-Hispanic Black	Hispanic	American Indian or Alaskan Native only	Asian only	Native Hawaiian or Other Pacific Islander only	Multiple Race, non-Hispanic
<b>United States</b>	<b>72.5</b> <b>±1.0</b>	<b>73.9</b> <b>±1.2</b>	<b>68.4</b> <b>±3.3</b>	<b>71.3</b> <b>±2.2</b>	<b>69.1</b> <b>±8.1</b>	<b>76.0</b> <b>±5.5</b>	<b>NA</b>	<b>74.3</b> <b>±5.0</b>
<b>Border States</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>Arizona</b>	<b>68.4</b> <b>±4.4</b>	<b>67.8</b> <b>±6.9</b>	<b>NA</b>	<b>67.7</b> <b>±6.4</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>Arizona Border Regions</b>								
More than 62 miles from Border	NA	NA	NA	NA	NA	NA	NA	NA
<b>Within 62 miles</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

\*\* Estimate=NA (Not Available) if the unweighted sample size for the numerator was <30 or (CI half width)/Estimate >0.5 or (CI half width)>10

† Four or more doses of DTP, three or more doses of poliovirus vaccine, one or more doses of any MCV, three or more doses of Hib, three or more doses of HepB, and one or more doses of varicella

‡ Self-reported by respondent. Individual racial groups do not include Hispanic children. Children of Hispanic ethnicity may be of any race

§ Children in the Q1/2003-Q4/2003 National Immunization Survey were born between February 2000 and May 2002.

|| % ± 95% Confidence Interval

NA: Not Available.

The NIS estimates vaccination coverage for each state and 28 selected urban areas. Due to NIS sampling methods and sample size constraints, coverage for smaller geographical areas cannot be estimated.

NIS Data are not available at the county-level. Therefore, coverage rates for Border regions cannot be provided.

National coverage estimates are more precise than State estimates.

<sup>60</sup> Source: National Immunization Program, Centers for Disease Control and Prevention, 2003. National Immunization Survey table available at [http://www.cdc.gov/nip/coverage/nis/03/tab26\\_431331\\_race\\_iap.xls](http://www.cdc.gov/nip/coverage/nis/03/tab26_431331_race_iap.xls), accessed on August 25, 2004.

Table 14  
Motor Vehicle Deaths, 2002

Geographic Area	Age-Adjusted Mortality Rate	YPLL Rate <sup>61</sup>
	Per 100,000	Per 100,000
<b>United States<sup>62</sup></b>	<b>15.7</b>	<b>465.6<sup>£</sup></b>
<b>Border States</b>	<b>14.6</b>	<b>436.4</b>
<b>Arizona<sup>63</sup></b>	<b>18.4</b>	<b>525.5</b>
<b>Arizona Border Regions</b>		
More than 62 miles from Border	18.8	545.3
<b>Within 62 miles</b>	<b>17.0</b>	<b>454.3</b>
	Number of Cases	
<b>United States</b>	<b>45,380</b>	<b>36,410<sup>£</sup></b>
<b>Border States</b>	<b>9,238</b>	<b>7,886</b>
<b>Arizona</b>	<b>991</b>	<b>826</b>
<b>Arizona Border Regions</b>		
More than 62 miles from Border	784	663
<b>Within 62 miles</b>	<b>207</b>	<b>163</b>

<sup>£</sup> YPLL rate is for 2001, the most recent year of data available.

<sup>61</sup> Years of potential life lost (YPLL) calculated only for persons who died before age 65.

<sup>62</sup> Sources: Kochanek KD, Murphy SL, Anderson RN, Scott C. Deaths: Final data for 2002. National vital statistics reports; vol 53 no 5. Hyattsville, Maryland: National Center for Health Statistics. 2004, for mortality, and National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, for YPLL rate. <http://webappa.cdc.gov/sasweb/ncipc/ypll10.html>, accessed on August 30, 2004.

<sup>63</sup> Source: Office of Vital Records, Bureau of Public Health Statistics, Arizona Department of Health Services, 2002, for mortality and YPLL rates. Age at death not reported for two cases in Arizona.

Table 15  
Infant Mortality by Race/Ethnicity, 2002

Geographic Area	Non-Hispanic White	Black / African-American	Hispanic / Latino(a) <sup>Φ</sup>	Asian / Pacific Islander	American Indian / Alaskan Native	Other**	Total
Infant Mortality Rate per 1,000 Births							
<b>United States<sup>64</sup></b>	<b>5.9</b>	<b>14.3</b>	<b>5.6</b>	<b>NA<sup>§</sup></b>	<b>NA<sup>§</sup></b>	<b>NA<sup>§</sup></b>	<b>7.0</b>
<b>Border States</b>	<b>5.4</b>	<b>12.9</b>	<b>5.5</b>	<b>3.4</b>	<b>7.1</b>	<b>8.7</b>	<b>5.9</b>
<b>Arizona<sup>65</sup></b>	<b>6.0</b>	<b>11.8</b>	<b>6.5</b>	<b>3.6</b>	<b>7.3</b>	<b>‡</b>	<b>6.4</b>
Arizona Border Regions							
More than 62 miles from Border	6.1	12.0	6.5	4.5	6.2	‡	6.4
<b>Within 62 miles</b>	<b>5.8</b>	<b>11.3</b>	<b>6.4</b>	<b>‡</b>	<b>16.9</b>	<b>‡</b>	<b>6.5</b>
Number of Infant Deaths							
<b>United States</b>	<b>13,492</b>	<b>8,446</b>	<b>4,928</b>	<b>NA<sup>§</sup></b>	<b>NA<sup>§</sup></b>	<b>NA<sup>§</sup></b>	<b>27,977</b>
<b>Border States</b>	<b>1,894</b>	<b>957</b>	<b>2,700</b>	<b>261</b>	<b>79</b>	<b>63</b>	<b>5,954</b>
<b>Arizona</b>	<b>237</b>	<b>31</b>	<b>240</b>	<b>8</b>	<b>41</b>	<b>0</b>	<b>557</b>
Arizona Border Regions							
More than 62 miles from Border	200	25	177	8	31	0	441
<b>Within 62 miles</b>	<b>37</b>	<b>6</b>	<b>63</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>116</b>

Did not respond in Arizona - zero

<sup>Φ</sup> Includes Hispanics/Latinos(as) of all races; in Arizona, 3.8% of Hispanic/Latino(a) infant deaths were of races other than White.

\*\* Includes some other race or cases with two or more races.

<sup>§</sup> Counts not available for 2002.

‡ Rates cannot be calculated for cells with zero cases.

† Rates based on small cell sizes are unreliable.

- Number of cases is suppressed due to fewer than five cases.

<sup>64</sup> Source: Kochanek KD, Murphy SL, Anderson RN, Scott C. Deaths: Final data for 2002. National vital statistics reports; vol 53 no 5. Hyattsville, Maryland: National Center for Health Statistics. 2004.

<sup>65</sup> Source: Office of Vital Records, Bureau of Public Health Statistics, Arizona Department of Health Services, 2002.

**Table 16**  
**Prenatal Care Started in First Trimester by Race/Ethnicity,**  
**2002**

Geographic Area	Non-Hispanic White	Black / African-American	Hispanic / Latino(a) <sup>φ</sup>	Asian / Pacific Islander	American Indian / Alaskan Native	Other**	Total
Percent Starting Prenatal Care in First Trimester							
<b>United States<sup>66</sup></b>	<b>88.6</b>	<b>75.2</b>	<b>76.7</b>	<b>84.8</b>	<b>69.8</b>	<b>NA<sup>§</sup></b>	<b>83.7</b>
<b>Border States</b>	<b>88.2</b>	<b>78.6</b>	<b>78.6</b>	<b>86.6</b>	<b>64.7</b>	<b>84.0</b>	<b>82.4</b>
<b>Arizona<sup>67</sup></b>	<b>87.1</b>	<b>77.3</b>	<b>69.5</b>	<b>85.8</b>	<b>66.5</b>	<b>77.0</b>	<b>77.8</b>
Arizona Border Regions							
More than 62 miles from Border	88.6	78.9	70.5	88.4	66.2	80.9	79.5
<b>Within 62 miles</b>	<b>79.5</b>	<b>70.7</b>	<b>66.6</b>	<b>75.6</b>	<b>69.2</b>	<b>60.0</b>	<b>71.6</b>
Number Starting Prenatal Care in First Trimester							
<b>United States</b>	<b>2,006,365</b>	<b>423,012</b>	<b>657,240</b>	<b>NA<sup>§</sup></b>	<b>NA<sup>§</sup></b>	<b>NA<sup>§</sup></b>	<b>3,301,186</b>
<b>Border States</b>	<b>306,594</b>	<b>58,502</b>	<b>387,515</b>	<b>66,873</b>	<b>7,199</b>	<b>6,083</b>	<b>832,766</b>
<b>Arizona</b>	<b>34,261</b>	<b>2,024</b>	<b>25,706</b>	<b>1,915</b>	<b>3,744</b>	<b>104</b>	<b>67,754</b>
Arizona Border Regions							
More than 62 miles from Border	29,163	1,650	19,120	1,577	3,335	89	54,934
<b>Within 62 miles</b>	<b>5,089</b>	<b>374</b>	<b>6,586</b>	<b>338</b>	<b>409</b>	<b>15</b>	<b>12,820</b>

Did not respond in Arizona - 398

<sup>φ</sup> Includes Hispanics/Latinos(as) of all races; in Arizona, 4.3% of Hispanics/Latinos(as) were of races other than White.

\*\* Includes some other race or cases with two or more races.

<sup>§</sup> Counts not available for 2002.

<sup>66</sup> Source: Martin JA, Hamilton BE, Sutton PD, Ventura SJ, Menacker F, Munson ML. Births: Final data for 2002. National vital statistics reports; vol 52 no 10. Hyattsville, Maryland: National Center for Health Statistics. 2003.

<sup>67</sup> Source: Office of Vital Records, Bureau of Public Health Statistics, Arizona Department of Health Services, 2002.

**Table 17**  
**Birth Rates for Teenage Mothers, Ages 15 to 17, by**  
**Race/Ethnicity, 2002**

Geographic Area	Non-Hispanic White	Black / African-American	Hispanic / Latino(a) <sup>†</sup>	Asian / Pacific Islander	American Indian / Alaskan Native	Other**	Total
Birth Rates							
<b>United States<sup>68</sup></b>	<b>13.1</b>	<b>41.0</b>	<b>50.7</b>	<b>9.0</b>	<b>30.7</b>	<b>NA<sup>§</sup></b>	<b>18.2</b>
<b>Border States</b>	<b>10.0</b>	<b>39.4</b>	<b>60.5</b>	<b>7.1</b>	<b>39.6</b>	<b>8.6</b>	<b>28.8</b>
<b>Arizona<sup>69</sup></b>	<b>11.8</b>	<b>42.0</b>	<b>88.5</b>	<b>7.1</b>	<b>61.5</b>	<b>2.5</b>	<b>34.3</b>
Arizona Border Regions							
More than 62 miles from Border	12.4	42.1	96.7	6.8	60.3	2.6	34.9
<b>Within 62 miles</b>	<b>9.5</b>	<b>41.9</b>	<b>70.7</b>	<b>8.1</b>	<b>72.7</b>	<b>2.2</b>	<b>32.6</b>
Number of Births to Teenage Mothers							
<b>United States</b>	<b>49,756</b>	<b>37,017</b>	<b>46,740</b>	<b>NA<sup>§</sup></b>	<b>NA<sup>§</sup></b>	<b>NA<sup>§</sup></b>	<b>138,731</b>
<b>Border States</b>	<b>7,020</b>	<b>4,202</b>	<b>28,004</b>	<b>667</b>	<b>649</b>	<b>281</b>	<b>40,823</b>
<b>Arizona</b>	<b>856</b>	<b>137</b>	<b>2,563</b>	<b>15</b>	<b>372</b>	<b>5</b>	<b>3,948</b>
Arizona Border Regions							
More than 62 miles from Border	710	107	1,912	11	329	4	3,073
<b>Within 62 miles</b>	<b>146</b>	<b>30</b>	<b>651</b>	<b>4</b>	<b>43</b>	<b>1</b>	<b>875</b>

Did not respond in Arizona – five

<sup>†</sup> Includes Hispanics/Latinos(as) of all races; in Arizona, 4.2% of Hispanics/Latinos(as) were of races other than White.

\*\* Includes some other race or cases with two or more races.

<sup>§</sup> Counts not available for 2002.

<sup>†</sup> Rates based on small cell sizes are unreliable.

<sup>‡</sup> Rates cannot be calculated for cells with zero cases.

- Number of cases is suppressed due to fewer than five cases.

<sup>68</sup> Source: Martin JA, Hamilton BE, Sutton PD, Ventura SJ, Menacker F, Munson ML. Births: Final data for 2002. National vital statistics reports; vol 52 no 10. Hyattsville, Maryland: National Center for Health Statistics. 2003.

<sup>69</sup> Source: Office of Vital Records, Bureau of Public Health Statistics, Arizona Department of Health Services, 2002.

**Table 18**  
**Prenatal Care Started in First Trimester by Race/Ethnicity for**  
**Teenage Mothers, 2002**

Geographic Area	Non-Hispanic White	Black / African-American	Hispanic / Latino(a) <sup>Ⓞ</sup>	Asian / Pacific Islander	American Indian / Alaskan Native	Other**	Total
Percent Teenage Mothers Starting Prenatal Care in First Trimester							
<b>United States<sup>70</sup></b>	<b>70.1</b>	<b>57.2</b>	<b>62.2</b>	<b>NA<sup>§</sup></b>	<b>NA<sup>§</sup></b>	<b>NA<sup>§</sup></b>	<b>63.3</b>
<b>Border States</b>	<b>69.3</b>	<b>63.1</b>	<b>67.1</b>	<b>49.9</b>	<b>51.3</b>	<b>62.3</b>	<b>66.5</b>
<b>Arizona<sup>71</sup></b>	<b>66.7</b>	<b>65.0</b>	<b>60.8</b>	<b>40.0</b>	<b>53.2</b>	<b>100.0</b>	<b>61.5</b>
Arizona Border Regions							
More than 62 miles from Border	67.5	64.5	61.3	36.4	51.7	100.0	61.8
<b>Within 62 miles</b>	<b>63.0</b>	<b>66.7</b>	<b>59.4</b>	<b>50.0</b>	<b>65.1</b>	<b>100.0</b>	<b>60.6</b>
Number of Teenage Mothers Starting Prenatal Care in First Trimester							
<b>United States</b>	<b>34,890</b>	<b>21,190</b>	<b>29,051</b>	<b>NA<sup>§</sup></b>	<b>NA<sup>§</sup></b>	<b>NA<sup>§</sup></b>	<b>87,876</b>
<b>Border States</b>	<b>4,862</b>	<b>2,651</b>	<b>18,779</b>	<b>333</b>	<b>333</b>	<b>175</b>	<b>27,133</b>
<b>Arizona</b>	<b>571</b>	<b>89</b>	<b>1,559</b>	<b>6</b>	<b>198</b>	<b>5</b>	<b>2,428</b>
Arizona Border Regions							
More than 62 miles from Border	479	69	1,172	4	170	4	1,898
<b>Within 62 miles</b>	<b>92</b>	<b>20</b>	<b>387</b>	<b>2</b>	<b>28</b>	<b>1</b>	<b>530</b>

Did not respond in Arizona - five

<sup>Ⓞ</sup> Includes Hispanics of all races; in Arizona, 4.2% of Hispanics were of races other than White.

\*\* Includes some other race or cases with two or more races.

<sup>§</sup> Counts not available for 2002.

<sup>‡</sup> Percent cannot be calculated for cells with zero cases.

<sup>70</sup> Source: Martin JA, Hamilton BE, Sutton PD, Ventura SJ, Menacker F, Munson ML. Births: Final data for 2002. National vital statistics reports; vol 52 no 10. Hyattsville, Maryland: National Center for Health Statistics. 2003.

<sup>71</sup> Source: Office of Vital Records, Bureau of Public Health Statistics, Arizona Department of Health Services, 2002.

**Table 19**  
**Mental Health Measures, 2002**

Geographic Area	Hospital Discharge Rate <sup>‡</sup>	Suicide – Age-Adjusted Mortality Rate	Suicide YPLL Rate <sup>72</sup>
	Per 10,000	Per 100,000	Per 100,000
<b>United States<sup>73</sup></b>	<b>85.8</b>	<b>10.9</b>	<b>261.6<sup>£</sup></b>
<b>Border States</b>	<b>37.9<sup>Ω</sup></b>	<b>10.9</b>	<b>237.0</b>
<b>Arizona<sup>74</sup></b>	<b>19.4</b>	<b>16.3</b>	<b>380.4</b>
Arizona Border Regions			
More than 62 miles from Border	17.1	16.5	392.4
Within 62 miles	<b>27.4</b>	<b>15.5</b>	<b>336.9</b>
		Number of Cases	
<b>United States</b>	<b>NA<sup>§</sup></b>	<b>31,655</b>	<b>25,214<sup>£</sup></b>
<b>Border States</b>	<b>235,577<sup>Ω</sup></b>	<b>6,730</b>	<b>5,501</b>
<b>Arizona</b>	<b>10,551</b>	<b>868</b>	<b>703</b>
Arizona Border Regions			
More than 62 miles from Border	7,256	683	566
Within 62 miles	<b>3,295</b>	<b>185</b>	<b>137</b>

<sup>£</sup> YPLL rate is for 2001, the most recent year of data available.

<sup>Ω</sup> Rate for the Border States is based on Arizona, California, and Texas; hospitalizations for New Mexico not based on primary diagnosis.

<sup>‡</sup> Hospitalized for: Alcohol- and substance-related mental disorders; senility and organic mental disorders; affective disorders; schizophrenia, related disorders; other psychoses; anxiety, somatoform, dissociative, and personality disorders; preadult disorders, other mental conditions; personal history of mental disorder, mental / behavioral problems, observation, mental retardation; and screening for mental condition.

<sup>§</sup> Number of hospitalizations not reported, only rates of discharge.

<sup>72</sup> Years of potential life lost (YPLL) calculated only for persons who died before age 65.

<sup>73</sup> Source: DeFrances CJ, Hall MJ. 2002 National Hospital Discharge Survey. Advance data from vital and health statistics; no 342. Hyattsville, Maryland: National Center for Health Statistics. 2004 for hospital discharge rate; Kochanek KD, Murphy SL, Anderson RN, Scott C. Deaths: Final data for 2002. National vital statistics reports; vol 53 no 5. Hyattsville, Maryland: National Center for Health Statistics. 2004, for mortality; National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, for YPLL rate <http://webappa.cdc.gov/sasweb/ncipc/ypll10.html>, accessed on August 30, 2004.

<sup>74</sup> Source: Section of Cost Reporting and Discharge Data Review, Bureau of Public Health Statistics, Arizona Department of Health Services, 2002, and Office of Vital Records, Bureau of Public Health Statistics, Arizona Department of Health Services, 2002, for mortality and YPLL rates.

Table 20  
Oral Health, 2002

Geographic Area	Dental Visit in Past Year <sup>75</sup>
Percent of Population	
<b>United States</b>	<b>69.5</b>
<b>Border States</b>	<b>66.3</b>
<b>Arizona</b>	<b>68.2</b>
Arizona Border Regions	
More than 62 miles from Border	68.4
<b>Within 62 miles</b>	<b>69.2</b>
Sample Size	
<b>United States</b>	<b>243,595</b>
<b>Border States</b>	<b>24,257</b>
<b>Arizona</b>	<b>3,211</b>
Arizona Border Regions	
More than 62 miles from Border	2,060
<b>Within 62 miles</b>	<b>983</b>

<sup>75</sup> Source: *Behavioral Risk Factor Surveillance System (BRFSS)*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2002. In the BRFSS, respondents were asked "How long has it been since you last visited a dentist or a dental clinic for any reason? [Include visits to dental specialists, such as orthodontists.]" Sample size reflects number of respondents, excluding those who answered "Do not know/not sure" or refused. The sample size within a State may not add up to State total due to suppression of data for counties with small sample sizes. The percentages were weighted to population characteristics in order to produce estimates that were representative of the sampled population. Health characteristics estimated from the BRFSS pertain only to the adult population (age 18 and older) living in households.

Table 21  
Asthma, 2002

Geographic Area	Hospital Discharge Rate	Age-Adjusted Mortality Rate	YPLL Rate <sup>76</sup>	Ever Had Asthma <sup>77</sup>
	Per 10,000	Per 100,000	Per 100,000	Percent
<b>United States<sup>78</sup></b>	<b>16.8</b>	<b>1.4</b>	<b>17.8<sup>£</sup></b>	<b>11.9</b>
<b>Border States</b>	<b>11.1</b>	<b>1.5</b>	<b>15.4</b>	<b>12.0</b>
<b>Arizona<sup>79</sup></b>	<b>11.4</b>	<b>1.5</b>	<b>15.4</b>	<b>13.9</b>
<b>Arizona Border Regions</b>				
More than 62 miles from Border	12.1	1.4	15.1	13.6
<b>Within 62 miles</b>	<b>8.9</b>	<b>1.5</b>	<b>16.4</b>	<b>15.0</b>
		Number of Cases		Sample Size
<b>United States</b>	<b>NA<sup>§</sup></b>	<b>4,261</b>	<b>2,124<sup>£</sup></b>	<b>247,646</b>
<b>Border States</b>	<b>71,160</b>	<b>852</b>	<b>415</b>	<b>24,341</b>
<b>Arizona</b>	<b>6,212</b>	<b>77</b>	<b>38</b>	<b>3,223</b>
<b>Arizona Border Regions</b>				
More than 62 miles from Border	5,144	58	29	2,062
<b>Within 62 miles</b>	<b>1,068</b>	<b>19</b>	<b>9</b>	<b>987</b>

<sup>£</sup> YPLL rate is for 2001, the most recent year of data available.

<sup>§</sup> Number of hospitalizations not reported, only rates of discharge.

<sup>76</sup> Years of potential life lost (YPLL) calculated only for persons who died before age 65.

<sup>77</sup> Source: *Behavioral Risk Factor Surveillance System (BRFSS)*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2002. In the BRFSS, respondents were asked "Have you ever been told by a doctor, nurse, or other health professional that you had asthma?" Sample size reflects number of respondents, excluding those who answered "Do not know/not sure" or refused. The sample size within a State may not add up to State total due to suppression of data for counties with small sample sizes. The percentages were weighted to population characteristics in order to produce estimates that were representative of the sampled population. Health characteristics estimated from the BRFSS pertain only to the adult population (age 18 and older) living in households.

<sup>78</sup> Sources: DeFrances CJ, Hall MJ. 2002 National Hospital Discharge Survey. Advance data from vital and health statistics; no 342. Hyattsville, Maryland: National Center for Health Statistics. 2004 for hospital discharge rate; Kochanek KD, Murphy SL, Anderson RN, Scott C. Deaths: Final data for 2002. National vital statistics reports; vol 53 no 5. Hyattsville, Maryland: National Center for Health Statistics. 2004, for mortality; and <http://wonder.cdc.gov/mortlCD10J.html>, accessed on September 9, 2004, for YPLL rates.

<sup>79</sup> Sources: Section of Cost Reporting and Discharge Data Review, Bureau of Public Health Statistics, Arizona Department of Health Services, 2002, and Office of Vital Records, Bureau of Public Health Statistics, Arizona Department of Health Services, 2002, for mortality and YPLL.

## **Tables for Profiles of Physicians, Dentists, and Registered Nurses**

Table 22  
Physician to Population Ratios, 2004

Geographic Area	Number	Ratio
<b>United States<sup>£,80</sup></b>	<b>782,235</b>	<b>278.0</b>
<b>Border States</b>	<b>143,792</b>	<b>219.1</b>
<b>Arizona<sup>81</sup></b>	<b>11,997</b>	<b>208.9</b>
Arizona Border Regions		
More than 62 miles from Border	9,015	200.5
<b>Within 62 miles</b>	<b>2,982</b>	<b>239.0</b>

<sup>£</sup> Counts are for 2000, the most recent year of data available.

<sup>80</sup> Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis. United States Health Personnel Factbook, 2003. Table #203 Number, Percent Distribution, and Physician-to-Population Ratios of Active MDs by Primary Care Specialty, 1981-2000; Table #211 Total and Active Osteopathic Physicians (DOs) and Physician-to-Population Ratios, 1981-2000.

<sup>81</sup> Source: Arizona Medical Board, March 2004, and Arizona Board of Osteopathic Examiners in Medicine and Surgery, August 2004. Physicians include active MDs and DOs whose address was located in Arizona.

**Table 23**  
**Physicians by Type of Patient Care, 2004**

Geographic Area	Primary Care**	Other Specialties	Total
Physician to Population Ratios per 100,000			
<b>Arizona</b> <sup>82</sup>	<b>93.0</b>	<b>115.4</b>	<b>208.4</b>
Arizona Border Regions			
More than 62 miles from Border	90.8	109.1	199.9
<b>Within 62 miles</b>	<b>100.9</b>	<b>138.1</b>	<b>239.0</b>
Number of Physicians			
<b>Arizona</b>	<b>5,340</b>	<b>6,630</b>	<b>11,970</b>
Arizona Border Regions			
More than 62 miles from Border	4,081	4,907	8,988
<b>Within 62 miles</b>	<b>1,259</b>	<b>1,723</b>	<b>2,982</b>

Did not respond in Arizona - eight

\*\*Primary care includes family practice, general practice, internal medicine, pediatrics, and OB/GYN.

Note: Specialty information for active physicians not available at the National level (85 primary care MDs<sup>83</sup> per 100,000 population, DOs not reported). Similarly, since specialty information is not collected by each Board in the Border States, the proportion of physicians by type of patient care could not be calculated.

<sup>82</sup> Source: Arizona Medical Board, March 2004, and Arizona Board of Osteopathic Examiners in Medicine and Surgery, August 2004. Physicians include active MDs and DOs whose address was located in Arizona.

<sup>83</sup> Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis. United States Health Personnel Factbook, 2003. Table #203 Number, Percent Distribution, and Physician-to-Population Ratios of Active MDs by Primary Care Specialty, 1981-2000.

Table 24  
Dentist to Population Ratios, 2004

Geographic Area	Number	Ratio
<b>United States<sup>£,84</sup></b>	<b>168,000</b>	<b>60.7</b>
<b>Border States</b>	<b>42,370</b>	<b>64.6</b>
<b>Arizona<sup>85</sup></b>	<b>2,727</b>	<b>47.5</b>
Arizona Border Regions		
More than 62 miles from Border	2,185	48.6
Within 62 miles	<b>542</b>	<b>43.4</b>

£ Counts are for 2000, the most recent year of data available.

<sup>84</sup> Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis. United States Health Personnel Factbook, 2003. Table #301 Professionally Active and Private Practice Dentists and Dentist-to-Population Ratios, Selected Years: 1975-2000.

<sup>85</sup> Source: Arizona State Board of Dental Examiners, February 2004. Dentists include those dentists with an active license (DDS, BDS, and DMD degrees) whose address was located in Arizona.

Table 25  
Dentists by Type of Patient Care, 2004

Geographic Area	General Dentistry	Other Specialties**	Total
Dentist to Population Ratios per 100,000			
<b>Arizona</b> <sup>86</sup>	<b>39.7</b>	<b>7.8</b>	<b>47.5</b>
Arizona Border Regions			
More than 62 miles from Border	40.8	7.8	48.6
<b>Within 62 miles</b>	<b>35.7</b>	<b>7.8</b>	<b>43.4</b>
Number of Dentists			
<b>Arizona</b>	<b>2,278</b>	<b>449</b>	<b>2,727</b>
Arizona Border Regions			
More than 62 miles from Border	1,833	352	2,185
<b>Within 62 miles</b>	<b>445</b>	<b>97</b>	<b>542</b>

Did not respond in Arizona - zero

\*\*Specialties includes endodontics, oral surgery, oral pathology, orthodontics, pediatric dentistry, periodontics, and prosthodontics.

<sup>86</sup> Source: Arizona State Board of Dental Examiners, February 2004. Dentists include those dentists with an active license (DDS, BDS, and DMD degrees) whose address was located in Arizona.

Table 26  
Registered Nurse to Population Ratios, 2004

Geographic Area	Number	Ratio
<b>United States<sup>£,87</sup></b>	<b>2,201,800</b>	<b>782.0</b>
<b>Border States</b>	<b>454,178</b>	<b>692.1</b>
<b>Arizona<sup>88</sup></b>	<b>46,244</b>	<b>805.1</b>
Arizona Border Regions		
More than 62 miles from Border	35,620	792.3
Within 62 miles	<b>10,624</b>	<b>851.3</b>

£ Counts are for 1999, the most recent year of data available.

<sup>87</sup> Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis. United States Health Personnel Factbook, 2003. Table #402 Estimated Supply of Registered Nurses by Geographic Area December 31, 1999.

<sup>88</sup> Source: Arizona State Board of Nursing, August 2004. Registered nurses (RNs) include those RNs with an active license whose address was located in Arizona.

**Table 27**  
**Registered Nurses by Race/Ethnicity, 2004**

Geographic Area	Non-Hispanic White	Black / African-American	Hispanic / Latino(a) <sup>Ⓟ</sup>	Asian / Pacific Islander	American Indian / Alaskan Native	Other**	Total
Percent of Registered Nurses							
<b>Arizona</b> <sup>89</sup>	<b>87.4</b>	<b>2.2</b>	<b>5.1</b>	<b>3.1</b>	<b>1.2</b>	<b>1.0</b>	<b>100.0</b>
<b>Arizona Border Regions</b>							
More than 62 miles from Border	88.0	2.2	4.0	3.4	1.4	1.0	77.1
<b>Within 62 miles</b>	<b>85.4</b>	<b>2.0</b>	<b>8.5</b>	<b>2.4</b>	<b>0.9</b>	<b>0.9</b>	<b>22.9</b>
Number of Registered Nurses							
<b>Arizona</b>	<b>38,146</b>	<b>949</b>	<b>2,204</b>	<b>1,376</b>	<b>544</b>	<b>440</b>	<b>43,659</b>
<b>Arizona Border Regions</b>							
More than 62 miles from Border	29,590	749	1,356	1,135	459	351	33,640
<b>Within 62 miles</b>	<b>8,556</b>	<b>200</b>	<b>8,482</b>	<b>241</b>	<b>85</b>	<b>89</b>	<b>10,019</b>

Did not respond in Arizona – 2,586 (5.6%)

<sup>Ⓟ</sup> Includes Hispanics/Latinos(as) of all races; in Arizona, unable to calculate percent Non-Hispanic White, Black/African-American, or Others.

\*\* Includes some other race or cases with two or more races.

Note: Race/ethnicity for registered nurses at the National level is as follows: 85.9% Non-Hispanic White; 5.1% Black/African-American; 2.2% Hispanic/Latino(a); 4.1% Asian/Pacific Islander; 0.5% American Indian/Alaskan Native, and 1.2% two or more races.<sup>90</sup> Since race/ethnicity is not collected by each Board in the Border States, the proportion of registered nurses by race/ethnic group could not be calculated.

<sup>89</sup> Source: Arizona State Board of Nursing, August 2004. Registered nurses (RNs) include those RNs with an active license whose address was located in Arizona.

<sup>90</sup> Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis. The Registered Nurse Population: Findings from the National Sample Survey of Registered Nurses, 2001. Table 1. Registered nurse population by employment status, gender, racial/ethnic background and age group: March 2000.

**Table 28**  
**Registered Nurses by Gender, 2004**

Geographic Area	Female	Male	Total
Percent of Registered Nurses			
<b>Arizona<sup>91</sup></b>	<b>92.2</b>	<b>7.8</b>	<b>100.0</b>
<b>Arizona Border Regions</b>			
More than 62 miles from Border	92.2	7.8	77.0
<b>Within 62 miles</b>	<b>92.1</b>	<b>7.9</b>	<b>23.0</b>
Number of Registered Nurses			
<b>Arizona</b>	<b>42,563</b>	<b>3,623</b>	<b>46,186</b>
<b>Arizona Border Regions</b>			
More than 62 miles from Border	32,791	2,785	35,576
<b>Within 62 miles</b>	<b>9,772</b>	<b>838</b>	<b>10,610</b>

Did not respond in Arizona - 57

Note: Gender for registered nurses at the National level is as follows: 94.1% female and 5.9% male.<sup>92</sup> Since gender is not collected by each Board in the Border States, the proportion of registered nurses by gender could not be calculated.

<sup>91</sup> Source: Arizona State Board of Nursing, August 2004. Registered nurses (RNs) include those RNs with an active license whose address was located in Arizona.

<sup>92</sup> Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis. The Registered Nurse Population: Findings from the National Sample Survey of Registered Nurses, 2001. Table 1. Registered nurse population by employment status, gender, racial/ethnic background and age group: March 2000.

## **Tables for Profiles of Non-Physician Clinicians**

Table 29  
Physician Assistant to Population Ratios, 2004

Geographic Area	Number	Ratio
<b>United States<sup>£,93</sup></b>	<b>42,220</b>	<b>14.8</b>
<b>Border States</b>	<b>8,469</b>	<b>12.9</b>
<b>Arizona<sup>94</sup></b>	<b>1,028</b>	<b>17.9</b>
<b>Arizona Border Regions</b>		
More than 62 miles from Border	875	19.5
<b>Within 62 miles</b>	<b>153</b>	<b>12.3</b>

<sup>£</sup> Counts are for 2002, the most recent year of data available.

<sup>93</sup> Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis. United States Health Personnel Factbook, 2003. Table #220 Estimated Number of Physician Assistants and Physician Assistant-to-Population Ratios by Geographic Area, January 1, 2002.

<sup>94</sup> Source: Arizona Medical Board, March 2004. Physician assistants (PAs) are those PAs with an active license whose address was located in Arizona.

Table 30  
Nurse Practitioner to Population Ratios, 2004

Geographic Area	Number	Ratio
<b>United States<sup>£,95</sup></b>	<b>77,584</b>	<b>27.6</b>
<b>Border States</b>	<b>25,215</b>	<b>38.4</b>
<b>Arizona<sup>96</sup></b>	<b>1,817</b>	<b>31.6</b>
<b>Arizona Border Regions</b>		
More than 62 miles from Border	1,350	30.0
<b>Within 62 miles</b>	<b>467</b>	<b>37.4</b>

£ Counts are for 2000, the most recent year of data available.

<sup>95</sup> Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis. The Registered Nurse Population: Findings from the National Sample Survey of Registered Nurses, 2001. Table 12. Distribution of advanced practice nurses by national certification, State recognition and employment status: March 2000. It was estimated that 77,584 nurse practitioners employed in nursing are represented by survey results. Ratio calculated using the estimated number of nurse practitioners and the 2000 U.S. population.

<sup>96</sup> Source: Arizona State Board of Nursing, August 2004. Nurse practitioners are registered nurses with an active license and reported as a "nurse practitioner" whose address was located in Arizona. A nurse practitioner is reported here only once even if multiple specialties as a nurse practitioner were reported in the nurse practitioner file.

**Table 31**  
**Nurse Practitioners by Race/Ethnicity, 2004**

Geographic Area	Non-Hispanic White	Black / African-American	Hispanic / Latino(a) <sup>Ⓞ</sup>	Asian / Pacific Islander	American Indian / Alaskan Native	Other**	Total
Percent of Nurse Practitioners							
<b>Arizona<sup>97</sup></b>	<b>90.6</b>	<b>1.6</b>	<b>4.8</b>	<b>1.6</b>	<b>0.6</b>	<b>0.8</b>	<b>100.0</b>
Arizona Border Regions							
More than 62 miles from Border	92.0	1.3	3.1	1.9	0.8	0.9	74.5
<b>Within 62 miles</b>	<b>86.4</b>	<b>2.5</b>	<b>9.4</b>	<b>0.7</b>	<b>0.2</b>	<b>0.7</b>	<b>25.5</b>
Number of Nurse Practitioners							
<b>Arizona</b>	<b>1,545</b>	<b>27</b>	<b>81</b>	<b>27</b>	<b>11</b>	<b>14</b>	<b>1,705</b>
Arizona Border Regions							
More than 62 miles from Border	1,169	16	40	24	10	11	1,270
<b>Within 62 miles</b>	<b>376</b>	<b>11</b>	<b>41</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>435</b>

Did not respond in Arizona - 112

<sup>Ⓞ</sup> Includes Hispanics/Latinos(as) of all races; in Arizona, unable to calculate percent Non-Hispanic/White, Black/African-American or Others.

\*\* Includes some other race or cases with two or more races.

† Percentage cannot be calculated for cells with zero cases.

Note: Race/ethnicity for nurse practitioners at the National level is as follows: 90.7% Non-Hispanic White; 4.6% Black/African-American; 2.2% Hispanic/Latino(a); 1.8% Asian/Pacific Islander; and 0.6% American Indian/Alaskan Native.<sup>98</sup> Since race/ethnicity is not collected by each Board in the Border States, the proportion of nurse practitioners by race/ethnic group could not be calculated.

<sup>97</sup> Source: Arizona State Board of Nursing, August 2004. Nurse practitioners are registered nurses with an active license and reported as a "nurse practitioner" whose address was located in Arizona. A nurse practitioner is reported here only once even if multiple specialties as a nurse practitioner were reported in the nurse practitioner file.

<sup>98</sup> Source: Health Personnel in the U.S., 2000-2015, forthcoming.

**Table 32**  
**Nurse Practitioners by Gender, 2004**

Geographic Area	Female	Male	Total
Percent of Nurse Practitioners			
<b>Arizona<sup>99</sup></b>	<b>93.6</b>	<b>6.4</b>	<b>100.0</b>
Arizona Border Regions			
More than 62 miles from Border	93.9	6.2	74.4
<b>Within 62 miles</b>	<b>92.7</b>	<b>7.3</b>	<b>25.6</b>
Number of Nurse Practitioners			
<b>Arizona</b>	<b>1,698</b>	<b>117</b>	<b>1,815</b>
Arizona Border Regions			
More than 62 miles from Border	1,267	83	1,350
<b>Within 62 miles</b>	<b>431</b>	<b>34</b>	<b>465</b>

Did not respond in Arizona - two

Note: Gender for nurse practitioners at the National level is as follows: 94.7% female.<sup>100</sup> Since gender is not collected by each Board in the Border States, the proportion of nurse practitioners by gender could not be calculated.

<sup>99</sup> Source: Arizona State Board of Nursing, August 2004. Nurse practitioners are registered nurses with an active license and reported as a "nurse practitioner" whose address was located in Arizona. A nurse practitioner is reported here only once even if multiple specialties as a nurse practitioner were reported in the nurse practitioner file.

<sup>100</sup> Source: Health Personnel in the U.S., 2000-2015, forthcoming.

Table 33  
Nurse Midwife to Population Ratios, 2004

Geographic Area	Number	Ratio
<b>United States<sup>£,101</sup></b>	<b>7,914</b>	<b>2.8</b>
<b>Border States</b>	<b>2,154</b>	<b>3.3</b>
<b>Arizona<sup>102</sup></b>	<b>153</b>	<b>2.7</b>
Arizona Border Regions		
More than 62 miles from Border	96	2.1
Within 62 miles	57	4.6

<sup>£</sup> Counts are for 2000, the most recent year of data available.

<sup>101</sup> Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis. The Registered Nurse Population: Findings from the National Sample Survey of Registered Nurses, 2001. Table 12. Distribution of advanced practice nurses by national certification, State recognition and employment status: March 2000. It is estimated that 7,914 nurse midwives employed in nursing are represented by survey results. Ratio calculated using the estimated number of nurse midwives and the 2000 U.S. population.

<sup>102</sup> Source: Arizona State Board of Nursing, August 2004. Nurse midwives are registered nurses with an active license, reported in the nurse midwife file, whose address was located in Arizona.

**Table 34**  
**Nurse Midwives by Race/Ethnicity, 2004**

Geographic Area	Non-Hispanic White	Black / African-American	Hispanic / Latino(a) <sup>Ⓞ</sup>	Asian / Pacific Islander	American Indian / Alaskan Native	Other**	Total
Percent of Nurse Midwives							
<b>Arizona</b> <sup>103</sup>	<b>91.7</b>	<b>0.7</b>	<b>3.5</b>	<b>0.7</b>	<b>2.8</b>	<b>0.7</b>	<b>100.0</b>
Arizona Border Regions							
More than 62 miles from Border	90.2	1.1	4.3	1.1	2.2	1.1	63.9
<b>Within 62 miles</b>	<b>94.2</b>	-	<b>1.9</b>	-	<b>3.8</b>	-	<b>36.1</b>
Number of Nurse Midwives							
<b>Arizona</b>	<b>132</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>144</b>
Arizona Border Regions							
More than 62 miles from Border	83	1	4	1	2	1	92
<b>Within 62 miles</b>	<b>49</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>52</b>

Did not respond in Arizona - nine

<sup>Ⓞ</sup> Includes Hispanics/Latinos(as) of all races; in Arizona, unable to calculate percent Non-Hispanic White, Black/African-American or Others.

\*\* Includes some other race or cases with two or more races.

<sup>†</sup> Percentage cannot be calculated for cells with zero cases.

Note: Race/ethnicity for nurse midwives at the National level is as follows: 92.1% Non-Hispanic White; 4.1% Black/African-American; 1.5% Hispanic/Latino(a); 1.4% Asian/Pacific Islander; and 0.8% American Indian/Alaskan Native.<sup>104</sup> Since race/ethnicity is not collected by each Board in the Border States, the proportion of nurse midwives by race/ethnic group could not be calculated.

<sup>103</sup> Source: Arizona State Board of Nursing, August 2004. Nurse midwives are registered nurses with an active license, reported in the nurse midwife file, whose address was located in Arizona.

<sup>104</sup> Source: Health Personnel in the U.S., 2000-2015, forthcoming.

Table 35  
Nurse Midwives by Gender, 2004

Geographic Area	Female	Male	Total
Percent of Nurse Midwives			
<b>Arizona</b> <sup>105</sup>	<b>99.3</b>	<b>0.7</b>	<b>100.0</b>
<b>Arizona Border Regions</b>			
More than 62 miles from Border	99.0	1.0	62.7
<b>Within 62 miles</b>	<b>100.0</b>	-	<b>37.3</b>
Number of Nurse Midwives			
<b>Arizona</b>	<b>152</b>	<b>1</b>	<b>153</b>
<b>Arizona Border Regions</b>			
More than 62 miles from Border	95	1	96
<b>Within 62 miles</b>	<b>57</b>	<b>0</b>	<b>57</b>

Did not respond in Arizona - zero

\* Percentage cannot be calculated for cells with zero cases.

Note: Gender for nurse midwives at the National level is as follows: 99.3% female.<sup>106</sup> Since gender is not collected by each Board in the Border States, the proportion of nurse midwives by gender could not be calculated.

<sup>105</sup> Source: Arizona State Board of Nursing, August 2004. Nurse midwives are registered nurses with an active license, reported in the nurse midwife file, whose address was located in Arizona.

<sup>106</sup> Source: Health Personnel in the U.S., 2000-2015, forthcoming.

Table 36  
Nurse Anesthetist to Population Ratios, 2004

Geographic Area	Number	Ratio
<b>United States</b> <sup>£,107</sup>	<b>25,575</b>	<b>9.1</b>
<b>Border States</b>	<b>2,945</b>	<b>4.5</b>
<b>Arizona</b> <sup>108</sup>	<b>156</b>	<b>2.7</b>
<b>Arizona Border Regions</b>		
More than 62 miles from Border	131	2.9
<b>Within 62 miles</b>	<b>25</b>	<b>2.0</b>

£ Counts are for 2000, the most recent year of data available.

<sup>107</sup> Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis. The Registered Nurse Population: Findings from the National Sample Survey of Registered Nurses, 2001. Table 12. Distribution of advanced practice nurses by national certification, State recognition and employment status: March 2000. It was estimated that 25,575 nurse anesthetists employed in nursing are represented by survey results. Ratio calculated using the estimated number of nurse anesthetists and the 2000 U.S. population.

<sup>108</sup> Source: Arizona State Board of Nursing, August 2004. Nurse anesthetists are registered nurses with an active license, reported in the nurse anesthetist file, whose address was located in Arizona.

**Table 37**  
**Nurse Anesthetists by Race/Ethnicity, 2004**

Geographic Area	Non-Hispanic White	Black / African-American	Hispanic / Latino(a) <sup>Ⓞ</sup>	Asian / Pacific Islander	American Indian / Alaskan Native	Other**	Total
Percent of Nurse Anesthetists							
<b>Arizona<sup>109</sup></b>	<b>96.6</b>	<b>0.7</b>	<b>1.4</b>	<b>0.0</b>	<b>0.0</b>	<b>1.4</b>	<b>100.0</b>
Arizona Border Regions							
More than 62 miles from Border	96.0	0.8	1.6	-	-	1.6	15.1
<b>Within 62 miles</b>	<b>100.0</b>	-	-	-	-	-	<b>84.9</b>
Number of Nurse Anesthetists							
<b>Arizona</b>	<b>141</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>146</b>
Arizona Border Regions							
More than 62 miles from Border	118	1	2	0	0	2	123
<b>Within 62 miles</b>	<b>23</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23</b>

Did not respond in Arizona - 10

<sup>Ⓞ</sup> Includes Hispanics/Latinos(as) of all races; in Arizona, unable to calculate percent Non-Hispanic White, Black/African-American, or Others.

\*\* Includes some other race or cases with two or more races.

<sup>†</sup> Percentage cannot be calculated for cells with zero cases.

Note: Race/ethnicity for nurse anesthetists at the National level is as follows: 91.8% Non-Hispanic White; 4.1% Black/African-American; 2.2% Hispanic/Latino(a); 1.7% Asian/Pacific Islander; and 0.1% American Indian/Alaskan Native.<sup>110</sup> Since race/ethnicity is not collected by each Board in the Border States, the proportion of nurse anesthetists by race/ethnic group could not be calculated.

<sup>109</sup> Source: Arizona State Board of Nursing, August 2004. Nurse anesthetists are registered nurses with an active license, reported in the nurse anesthetist file, whose address was located in Arizona.

<sup>110</sup> Source: Health Personnel in the U.S., 2000-2015, forthcoming.

**Table 38**  
**Nurse Anesthetists by Gender, 2004**

Geographic Area	Female	Male	Total
Percent of Nurse Anesthetists			
<b>Arizona</b> <sup>111</sup>	<b>56.8</b>	<b>43.2</b>	<b>100.0</b>
<b>Arizona Border Regions</b>			
More than 62 miles from Border	59.2	40.1	83.9
<b>Within 62 miles</b>	<b>44.0</b>	<b>56.0</b>	<b>16.1</b>
Number of Nurse Anesthetists			
<b>Arizona</b>	<b>88</b>	<b>67</b>	<b>155</b>
<b>Arizona Border Regions</b>			
More than 62 miles from Border	77	53	130
<b>Within 62 miles</b>	<b>11</b>	<b>14</b>	<b>25</b>

Did not respond in Arizona - one

Note: Gender for nurse anesthetists at the National level is as follows: 59.1% female.<sup>112</sup> Since gender is not collected by each Board in the Border States, the proportion of nurse anesthetists by gender could not be calculated.

<sup>111</sup> Source: Arizona State Board of Nursing, August 2004. Nurse anesthetists are registered nurses with an active license, reported in the nurse anesthetist file, whose address was located in Arizona.

<sup>112</sup> Source: Health Personnel in the U.S., 2000-2015, forthcoming.

## **Tables for Profiles of Mental Health Professionals**

Table 39  
Psychiatrist to Population Ratios, 2004

Geographic Area	Number	Ratio
<b>United States</b> <sup>£,113</sup>	<b>38,258</b>	<b>14.2</b>
<b>Border States</b> <sup>Ω</sup>	<b>NA</b>	<b>NA</b>
<b>Arizona</b> <sup>114</sup>	<b>490</b>	<b>8.5</b>
<b>Arizona Border Regions</b>		
More than 62 miles from Border	352	7.8
<b>Within 62 miles</b>	<b>138</b>	<b>11.1</b>

£ Counts are for 1999, the most recent year of data available; reflects the number of clinically trained psychiatrists.

Ω Results for the Border States could not be calculated as comparable data was not available for California.

<sup>113</sup> Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis. United States Health Personnel Factbook, 2003. Table #701 Estimated Number of Clinically Active or Clinically Trained Mental Health Personnel and Practitioner-to-Population Ratios by Discipline and Geographic Area.

<sup>114</sup> Source: Arizona Medical Board, March 2004, and Arizona Board of Osteopathic Examiners in Medicine and Surgery, August 2004. Psychiatrists include active MDs and DOs, whose primary specialty was reported as "psychiatry," and whose address was located in Arizona.

Table 40  
Psychologist to Population Ratios, 2004

Geographic Area	Number	Ratio
<b>United States</b> <sup>£,115</sup>	<b>76,968</b>	<b>28.4</b>
<b>Border States</b>	<b>17,848</b>	<b>27.2</b>
<b>Arizona</b> <sup>116</sup>	<b>1,165</b>	<b>20.3</b>
<b>Arizona Border Regions</b>		
More than 62 miles from Border	848	18.9
<b>Within 62 miles</b>	<b>317</b>	<b>25.4</b>

£ Counts are for 1999, the most recent year of data available; reflects the number of clinically trained psychologists.

<sup>115</sup> Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis. United States Health Personnel Factbook, 2003. Table #701 Estimated Number of Clinically Active or Clinically Trained Mental Health Personnel and Practitioner-to-Population Ratios by Discipline and Geographic Area.

<sup>116</sup> Source: Arizona Board of Psychologist Examiners, April 2004. Psychologists include those psychologists whose license was active and whose public address was located in Arizona.

Table 41  
Social Worker to Population Ratios, 2004

Geographic Area	Number	Ratio
<b>United States</b> <sup>£,117</sup>	<b>96,268</b>	<b>35.6</b>
<b>Border States</b>	<b>28,465</b>	<b>43.4</b>
<b>Arizona</b> <sup>118</sup>	<b>2,131</b>	<b>37.1</b>
<b>Arizona Border Regions</b>		
More than 62 miles from Border	1,560	34.7
<b>Within 62 miles</b>	<b>571</b>	<b>45.8</b>

£ Counts are for 1999, the most recent year of data available; reflects the number of clinically trained social workers.

<sup>117</sup> Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis. United States Health Personnel Factbook, 2003. Table #701 Estimated Number of Clinically Active or Clinically Trained Mental Health Personnel and Practitioner-to-Population Ratios by Discipline and Geographic Area.

<sup>118</sup> Source: Arizona Board of Behavioral Health Examiners, April 2004. Includes only Master Social Workers and Independent Social Workers, where each certification requires a Master's degree in social work, whose license was active and whose business address was located in Arizona.

## **Health Care Infrastructure Tables**

Table 42  
Nursing Home Bed Ratios, 2004<sup>119</sup>

Geographic Area	Average Certified Beds	Certified Beds, Entire Pop.	Certified Beds, Ages 65+
	Per Facility	Per 10,000	
<b>Border States</b>	<b>98.1</b>	<b>39.7</b>	<b>374.7</b>
<b>Arizona</b>	<b>119.4</b>	<b>28.1</b>	<b>220.1</b>
<b>Arizona Border Regions</b>			
More than 62 miles from Border	120.2	27.8	227.8
<b>Within 62 miles</b>	<b>116.7</b>	<b>29.0</b>	<b>197.2</b>
	Number of Facilities	Number of Beds	
<b>Border States</b>	<b>2,675</b>	<b>262,313</b>	<b>262,313</b>
<b>Arizona</b>	<b>135</b>	<b>16,114</b>	<b>16,114</b>
<b>Arizona Border Regions</b>			
More than 62 miles from Border	104	12,497	12,497
<b>Within 62 miles</b>	<b>31</b>	<b>3,617</b>	<b>3,617</b>

<sup>119</sup> Source: <http://www.medicare.gov/NHCompare/home.asp>, accessed on August 25, 2004. Nursing Home Compare includes information only on nursing homes that are Medicare or Medicaid certified.

Table 43  
Hospital Bed Ratios, 2004<sup>120</sup>

Geographic Area	Bed Capacity	Average Bed Capacity
	Per Facility	Per 10,000
<b>Arizona</b>	<b>155.7</b>	<b>22.5</b>
<b>Arizona Border Regions</b>		
More than 62 miles from Border	156.4	21.6
<b>Within 62 miles</b>	<b>153.5</b>	<b>25.8</b>
	Number of Hospitals	Number of Beds
<b>Arizona</b>	<b>83</b>	<b>12,922</b>
<b>Arizona Border Regions</b>		
More than 62 miles from Border	62	9,699
<b>Within 62 miles</b>	<b>21</b>	<b>3,223</b>

<sup>120</sup> Source: <http://www.azdhs.gov/als/databases/sr-med.txt>, accessed on August 25, 2004. Only bed capacity was reported for facilities whose type was reported as "hospital".

**Table 44**  
**Population in Primary Care Health Professions Shortage**  
**Areas by Type, 2000**

Geographic Area	Single County	Partial County	Total
Percent of Total Population			
<b>Arizona</b> <sup>121</sup>	<b>1.3</b>	<b>33.0</b>	<b>34.3</b>
<b>Arizona Border Regions</b>			
More than 62 miles from Border	0.7	33.1	33.8
<b>Within 62 miles</b>	<b>3.3</b>	<b>32.8</b>	<b>36.1</b>
HPSA Population			
<b>Arizona</b>	<b>66,643</b>	<b>1,705,981</b>	<b>1,772,624</b>
<b>Arizona Border Regions</b>			
More than 62 miles from Border	28,262	1,323,148	1,351,410
<b>Within 62 miles</b>	<b>38,381</b>	<b>382,833</b>	<b>421,214</b>

<sup>121</sup> Source: HPSA designations from the U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, Office of Workforce Analysis and Quality Assurance, Shortage Designations Branch, updated weekly.

Table 45  
Population in Dental Health Professions Shortage Areas by  
Type, 2000

Geographic Area	Single County	Partial County	Total
Percent of Total Population			
<b>Arizona</b> <sup>122</sup>	<b>1.3</b>	<b>20.9</b>	<b>22.1</b>
Arizona Border Regions			
More than 62 miles from Border	0.7	19.0	19.7
<b>Within 62 miles</b>	<b>3.3</b>	<b>27.2</b>	<b>30.5</b>
HPSA Population			
<b>Arizona</b>	<b>66,643</b>	<b>1,077,563</b>	<b>1,144,206</b>
Arizona Border Regions			
More than 62 miles from Border	28,262	760,227	788,489
<b>Within 62 miles</b>	<b>38,381</b>	<b>317,336</b>	<b>355,717</b>

<sup>122</sup> Source: HPSA designations from the U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, Office of Workforce Analysis and Quality Assurance, Shortage Designations Branch, updated weekly.

Table 46  
Population in Mental Health Professions Shortage Areas by  
Type, 2000

Geographic Area	Single County	Partial County	Total
Percent of Total Population			
<b>Arizona</b> <sup>123</sup>	<b>19.7</b>	-	<b>19.7</b>
<b>Arizona Border Regions</b>			
More than 62 miles from Border	21.4	-	21.4
<b>Within 62 miles</b>	<b>13.7</b>	-	<b>13.7</b>
HPSA Population			
<b>Arizona</b>	<b>1,016,565</b>	<b>0</b>	<b>1,016,565</b>
<b>Arizona Border Regions</b>			
More than 62 miles from Border	856,539	0	856,539
<b>Within 62 miles</b>	<b>160,026</b>	<b>0</b>	<b>160,026</b>

<sup>123</sup> Source: HPSA designations from the U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, Office of Workforce Analysis and Quality Assurance, Shortage Designations Branch, updated weekly.

## **Appendices**

**Appendix A. List of Counties**

**ARIZONA**

<b>Counties Within 62 Miles</b>	<b>Counties More Than 62 Miles from Border</b>
Cochise Pima Santa Cruz Yuma	Apache Coconino Gila Graham Greenlee La Paz Maricopa Mohave Navajo Pinal Yavapai

## **Appendix B. Data Sources**

### ***Overview of Data Sources***

#### **Population**

Census data and county estimates from the U.S. Census Bureau were used to calculate the size of the population at the county-level for each of the Border States. Population figures used for calculating the health provider-to-population ratios in this report are based on updated data from the U.S. Census Bureau, Population Division, Population Estimates Program (Release Date: August 11, 2005).

#### **Prevalence Data**

Data for 2002 from the Behavioral Risk Factor Surveillance System (BRFSS) were used to estimate the proportion of the population: without health coverage; ever diagnosed with diabetes; who are overweight or obese; who have had a dental visit within the past year; and, who currently have asthma. In addition, the proportions of females who had a pap smear or mammogram were also estimated.

The BRFSS is a survey that collects information about adults (18 and older and living in households); persons younger than 18 are not represented by the survey results provided in this report.

While the sample allows estimates to be produced for areas, such as the Border regions in each of the Border States, most counties do not have large enough samples to produce reliable estimates for individual counties.

#### **State Licensure Data**

Agencies in each State that handle data for licensed health professionals were contacted to obtain data for the current report. Among these were State boards for physicians, dentists, registered nurses, physician assistants, psychologists, and social workers. Psychiatrists and three categories of specialty nurses were identified when specialty information or another designator was included in the data sets.

Delays in obtaining data resulted in inconsistencies in the reporting date of the data as most licensing boards process and compile data requests on an as needed basis and this Study may have had a lower priority rating at one board than at others. Reporting dates were included in the respective tables in the report.

The health professions data used in this report, in most cases, was purchased from the respective Board in each State. Consequently, for some boards, a

mailing list was purchased only when no other data were available for analysis. Some boards were able to include additional variables to mailing lists.

### **State Health Data**

Vital statistics, hospital discharge, and incidence data for selected diseases were also requested from State health departments to present the health status of the regions as well as State totals. Healthy Border 2010 Objectives guided the selection of health indicators used in this report.

## ***Description of Geocoding Process***

### **State Licensure Data**

Data received from State licensure boards or State organizations were “geocoded” using Geographic Information Systems (GIS) software in an effort to determine the location of the health professional. This permitted assignment of health professionals to a county based on the county Federal information processing standards (FIPS) code assigned by the GIS software. The following process describes the method by which an address was “geocoded.” The address used was determined by staff (in consultation with the suppliers of the data when possible) to best represent the practice location of the health professional. Using batch processing, on the first pass, addresses were matched only on the exact street name, house number and zip code. On the second pass<sup>124</sup>, addresses were matched by “relaxing” the zip code; this allows a match for address in a different zip code. On the third pass, street name and house number for the address were relaxed to allow matches for parameters similar to address components (such as misspellings to be matched to the address). On the final geocoding pass (usually by this stage only a small percentage of records were not matched), records were matched by zip code only. Once these passes were complete, remaining unmatched records were viewed through interactive mode in GIS to determine if a match could be made by searching for visible errors in the address field. Once geocoding was completed, data were moved into Statistical Package for the Social Sciences (SPSS) software. The remaining unmatched records were assigned a county in SPSS based on the city name. For example, since PO Box addresses could not be geocoded, they were assigned a county FIPS code based on the name of the city.

### **State Health Data**

Health related information such as vital statistics, hospital discharge, and incidence data, were usually assigned a county code by the State agency/office

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<sup>124</sup> Subsequent geocoding passes were performed on unmatched records only.

responsible for the data. Data reported here reflects place of residence of each case, not the place of occurrence.

### ***Data from Licensing Boards in Arizona***

Data for each of the health professions discussed in the current report was received from each of the respective licensing boards in Arizona. While special issues with each of the data sets were discussed below, the following table highlights the proportion of data that were not available (NA) by type of variable for the three types of primary care professionals:

#### **Proportion of Missing Data for Physicians, Dentists, and Registered Nurses in Arizona**

Variable	Physicians	Dentists	Registered Nurses
Race/Ethnicity	NA	NA	5.6
Age	NA	NA	NA
Gender	NA	NA	<1.0
Patient Care	NA	NA	NA
Specialty	<1.0	0.0	A
Hours/Week or Part-/Full-Time	NA	NA	NA

NA= Not available

A= Available

RCHWS was unable to obtain codes to determine which health professionals provide direct services to the population using data from Arizona licensure boards. Thus, this report includes all professionals with an active license and does not reflect the number of health professionals providing direct patient care in their respective health fields.

#### **Physicians and Physician Assistants**

License data for allopathic physicians (MDs) and physician assistants (PAs) was received from the Arizona Medical Board in March 2004. License data for osteopathic physicians (DOs) were received from the Arizona Board of Osteopathic Examiners in Medicine and Surgery and reflects a date of August 2004.

Physician license data used in this analysis, as well as PA data, lacked many of the data elements requested for this report. Specifically, data for any of the three demographic variables (age, sex, and race/ethnicity) were not available. While the Board does not collect information on race/ethnicity, it declined to release

information on age and sex. In addition, information which indicated whether the health professional was working in a full- or part-time position was not available. Most importantly, there was no information available to identify whether physicians or PAs provide direct patient care. Specialty information was available for physicians which allowed for identification of those providing primary care.

An additional problem with data for physicians and PAs was the availability of only one address which was geocoded to determine the location of the health professional's reported place of practice. The problem with this assumption was the inability to determine whether the address in the data set reflected the health professional's home or business/practice address.

### **Dentists**

License data for dentists in Arizona was received from the Arizona State Board of Dental Examiners and reflects a date of February 2004.

Dentist license data used in this analysis contained no information for age, sex, or race/ethnicity. The Board indicated that demographic information was not available. In addition, the following information was also not available for analysis: Employment in a full- or part-time position or ability to identify dentists in private practice (used as an indicator of direct patient care). Information was available for specialty which allowed for identification of dentists in a dental specialty area.

An additional problem with dental license data were the availability of only one address which was geocoded to determine the location of the dentist's reported place of practice. The problem with this assumption was the inability to determine whether the address in the data set reflected the health professional's home or business/practice address.

### **Registered Nurses**

License data for registered nurses was received from the Arizona State Board of Nursing and reflects a date of August 2004.

The registered nurses' data used in this analysis contained information regarding race/ethnicity and gender of nurses with an active license in Arizona.

Unfortunately, the Board declined to release information about age for nurses. Other information that was not available for registered nurses include working in a full- or part-time nursing position and codes for nurses providing patient care. However, specialty information was available for specialty nurses in separate files. These separate files were matched to the active nurses file in order to compute the number of active specialty nurses reported here.

An additional problem with data for registered nurses was the availability of only one address which was geocoded to determine the location of nurse's practice address. The problem with this assumption was the inability to determine

whether the address in the data set reflected the nurse's home or business/practice address.

### **Psychologists**

License data for psychologists was received from the Arizona Board of Psychologist Examiners and reflects a date of April 2004.

The only demographic variable available for psychologists with an active license in Arizona was gender. In addition to race/ethnicity and age, other fields that were not available for psychologists include working in a full- or part-time position and the identification of psychologists providing patient care in a clinical setting. One strength of data for licensed psychologists in Arizona was the availability of a public/business address which was geocoded to determine the location of the health professional's reported practice address.

### **Social Workers**

License data for social workers was received from the Arizona Board of Behavioral Examiners and reflects a date of April 2004.

Demographic information for social workers with an active license in Arizona were not available for this Report. Other information not available for social workers include: working in a full- or part-time position and the identification of social workers providing patient care in a clinical setting. A public/business address was geocoded to determine the location of the health professional's reported practice address.

## ***Data from Health Offices in Arizona***

### **Vital Statistics**

Vital statistics data for 2002 were received from the Office of Vital Statistics, Bureau of Public Health Statistics, Arizona Department of Health Services.

### **Hospital Discharges**

Hospital discharge data for 2002 were received from the Bureau of Public Health Statistics, Arizona Department of Health Services.

### **Incidence Data**

#### **Breast and Cervical Cancer**

Data for breast and cervical cancer cases diagnosed in 2001 was received from the Arizona Cancer Registry, Arizona Department of Health Services.

### HIV/AIDS

Number of HIV/AIDS cases diagnosed from 1998 through 2002 were retrieved on May 14, 2004, from <http://www.hs.State.az.us/phs/hiv/pdf/counties.pdf>.

### Hepatitis A and B

Data for hepatitis A and B cases diagnosed in 2002 was received from the Infectious Disease Epidemiology Section, Office of Infectious Disease Services, Public Health Services; Arizona Department of Health Services. Data on chronic hepatitis B cases were not available for each of the Border States, but were available for Arizona.

### Tuberculosis

Number of tuberculosis (TB) cases identified in 2002 and 2003 was provided by the Arizona Department of Health Services, Tuberculosis Control Program, Office of Infectious Disease Services, Public Health Services.

### **Immunizations**

Information about childhood immunization status for 2003 was obtained from the Centers for Disease Control and Prevention, National Immunization Program (NIP). The National Immunization Survey (NIS) provides immunization status for States, but not counties. Results were also not available for all race/ethnic groups. For Arizona, State level results were available for Non-Hispanic Whites and Hispanics/Latinos(as) only.

The Arizona State Immunization Information System (ASIIIS) allows for the collection of immunizations to children ages 18 and under. Legislation passed in Arizona creates the mechanism for providers to report immunization information to the State registry. However, the registry cannot currently be used to calculate coverage estimates because not all providers report all immunizations to the registry. As a result, Arizona relies on the National Immunization Survey (NIS) for coverage rates, as noted in the current report. Arizona does not conduct retrospective surveys as was the case in other States.

