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Arizona Rural Health Plan

2005-2007

December 2004

Prepared by:
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To print copies of the Arizona Rural Health Plan or view the Rural Health Assessment data corresponding to the Plan, visit: http://www.rho.arizona.edu/sbrhrc.

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This Plan has been approved by the Centers for Medicare and Medicaid Services (CMS) based on the requirements of the Rural Hospital Flexibility Program.

Contents:

■ Executive Summary

The Arizona Rural Health Plan 2005-2007 provides a road map on how to strengthen the rural health infrastructure in the state as well as how to enhance access to health services by rural residents. It reflects Arizona's unique rural, cultural, and geographic characteristics, including 21 federally recognized America Indian tribes and the state's 350-mile wide contiguous border with Mexico. The Arizona Rural Health Plan was developed through a statewide effort that included an advisory committee representing rural health experts, health providers, and policy makers. The objectives and strategies identified within are intended to guide actions by policy makers, multiple agencies, health providers, and community-based organizations throughout the State. By selecting among the objectives, agencies and organizations can strategically plan to 1) modify current health policies and develop new ones, 2) develop rural health planning and program development, and 3) measure and monitor change within their chosen focus areas.

The Arizona Rural Health Office team has purposefully not prioritized the objectives or strategies that follow. Each agency or organization that chooses to adopt components of the Arizona Rural Health Plan must prioritize the objectives according to their own strategic plan. For example, in 2005, the Arizona Rural Health Office (RHO) will select objectives to adopt from the Arizona Rural Health Plan to guide the development of its own strategic plan for programs, activities, and evaluation measures for the coming years.

During the first developmental phase of the Arizona Rural Health Plan, the Southwest Border Rural Health Research Center, Rural Health Office, University of Arizona Mel and Enid Zuckerman College of Public Health administered a Delphi survey to rural health leaders throughout the state. The survey was intended to identify what were perceived as the most important rural health issues in the state. The most frequently cited rural health issues were: 1) Rural health care workforce shortages; 2) Health care coverage; 3) Lack of behavioral/mental health services; 4) Diabetes; and 5) Dental/Oral health. These five issues are represented across the Arizona Rural Health Plan's three primary rural health areas: Accessibility, Availability, and Preventative Services.

This publication is comprised of three sections. Section I contains an overview of the process that produced the Arizona Rural Health Plan, including a history of previous initiatives to produce a statewide plan for rural Arizona, the role of the Rural Health Plan Advisory Committee, and ways in which the Arizona Rural Health Plan can be used. Section II contains a summary of characteristics of Arizona's population, health care coverage, health care infrastructure, and rural health. Section III provides the results of the Arizona Rural Health Plan process: within 3 primary rural health areas, a collection of **14** focus areas and **39** specific, measurable objectives for bettering rural health in Arizona.

At the conclusion of this document, you will find a Utilization Report form. As agencies and organizations across the State choose to incorporate components of the Arizona Rural Health Plan into their activities, they are requested to complete and return the Utilization Report form. In 2006, the Arizona Rural Health Office will follow up with participating agencies to evaluate the degree of strategies from the plan being implemented and the results.

This publication and the subsequent success of the Arizona Rural Health Plan 2005-2007 depend upon generous sharing of information from multiple agencies and organizations. The following pages only begin to reflect the widespread input from rural constituencies across Arizona. Taking a page from Rural Healthy People 2010, we encourage all who read the Arizona Rural Health Plan 2005-2007 to forward to the Arizona Rural Health Office the Utilization Report form and other relevant material to support our ongoing efforts to provide rural communities, providers, and organizations with information that is accurate, timely, and useful.

I. Overview of the Arizona Rural Health Plan

The mission of the Rural Health Office at the University of Arizona Mel and Enid Zuckerman College of Public Health is to promote the health of rural medically underserved individuals, families, and communities through service, education, and research. It has been twenty-three years since the Rural Health Office has developed a comprehensive state rural health plan.

The Arizona Rural Health Plan has a set of health objectives for the State that can be achieved over the following three years. It can be used by many different people, counties, communities, professional organizations, and others to help them develop programs and policies to improve health. **This Arizona Rural Health Plan will serve as a guide to those working to improve rural health in the State**. The Plan can be used by policy makers, rural health stakeholders, health providers (e.g., community health centers, hospitals, county public health departments, and tribal and border health programs), health related agencies, universities and colleges, and practitioner associations in their health planning and development of health programs for rural Arizona.

The Arizona Rural Health Plan was developed through a broad consultation process, built on the knowledge of experts from around the State, and designed to measure progress over time.

- **Historical Background for a Plan for Rural Health in Arizona**
  The Arizona Rural Health Plan builds on initiatives pursued over the past two decades. In 1981, the Rural Health Office developed a comprehensive rural health plan for the state of Arizona.[1] In 1984 the RHO developed the first edition of the Arizona Rural Health Provider Atlas, which described the location of selected health professionals[2]. In 1987, the second edition of the Atlas was published. This edition was expanded to include types of health professions, health services, and health facilities, as well as both rural and urban needs assessments that were conducted and published[2-4]. The Arizona Medicare Rural Hospital Flexibility Program ("Flex Program") developed a State Rural Health Plan as part of its initial grant activities in 1999[5]. The initial plan, as well as subsequent modifications (primarily related to Indian hospitals), was approved by the Centers for Medicare and Medicaid Services (CMS). *The Flex Program and Rural Health Office have developed this Comprehensive State Rural Health Plan that will serve as a strategic planning document for the state's rural health care system.*

- **Rural Health Plan Advisory Committee**
  The Plan was developed by the Rural Health Office, in collaboration with an advisory committee comprised of rural health experts, health providers, and policy makers through out the state of Arizona. The members of the Statewide Rural Health Plan Advisory Committee (RHPAC) included: Arizona Department of Health Services, Arizona Health Cost Containment System, St. Luke's Health Initiatives, Arizona Rural Health Association, Arizona Hospital and Healthcare Association, Northern Cochise Community Hospital (CAH$^{\nabla}$), Wickenburg Regional Medical Center (CAH), Arizona Association of Community Health Centers, North Country Community Health Center, Arizona Public Health Association, Coconino County Department of Health Services, University of Arizona Mel and Enid Zuckerman College of Public Health, Indian Health Service, Inter-Tribal Council of Arizona, Navajo Division of Health, White Mountain

$^{\nabla}$ CAH: Critical Access Hospital, a designation through the Arizona Medicare Rural Hospital Flexibility Program

Apache Tribe, Pinal Gila Behavioral Health Association, University of Arizona College of Medicine, Arizona College of Osteopathic Medicine, Arizona State University College of Nursing, University of Arizona College of Nursing, Western Arizona Area Health Education Center, Southeast Arizona Area Health Education Center, and representatives from the Governor's Office and State Legislature. Appendix A provides a complete listing of the Advisory Committee.

- **Rural Health Plan Development**

  There were three phases in the development of the Arizona Rural Health Plan: (1) collection of background information, (2) selection of the three primary rural health areas that will be addressed in the Plan, and (3) development of the focus areas, objectives, and strategies that can be implemented during the next three years. The Rural Health Office Southwest Border Rural Health Research Center (SBRHRC) carried out each of the three phases of the Plan.

PHASE I

The collection of background information is comprised of two parts. The first is the Arizona Rural Health Assessment. The Assessment is a separate document published by the Rural Health Office. Some of the information complied for the Assessment is presented in the Arizona State Characteristics Section of the Plan. The second is the two-phase Delphi Study (refer to Appendix B for a summary of the study results).

Arizona Rural Health Assessment

The assessment collected information on selected demographic characteristics, rural health system infrastructure, health care coverage, health services utilization, and selected health indicators. In addition, there is a tribal health assessment component that collects similar data. The information collected from three Arizona Rural Hospital Flexibility Program surveys is also included in the assessment (2001 Technology Assessment, 2001 Emergency Medical Services (EMS) Survey and 2002 Hospital Needs Assessment). The Arizona Rural Health Assessment will provide the baseline for the evaluation of the progress of the Rural Health Plan implementation.

Delphi Study

The Delphi Study collected information in two phases. In the first phase, the study respondents identified specific rural health issues they felt needed to be addressed in the next three years. Rural health experts throughout the state were invited to participate in the study. Those first phase respondents who agreed to participate in the second phase of the Delphi Study were sent a second survey. During the second phase of the study, the respondents identified the top five rural health issues from the top fifteen that were identified in the first phase, as well as specific outcomes (objectives) and the strategies to accomplish those outcomes.

PHASE II

Three rural health areas were selected as the primary focus of the Arizona Rural Health Plan: (1) Accessibility – ability to obtain needed health services, (2) Availability – supply of health resources and services to meet the needs of the individual or community, and (3) Preventative Services – health programs that focus on the prevention of illnesses. The selections were determined by a Statewide Rural Health Plan Advisory Committee (RHPAC) using the findings from the Delphi Study.

PHASE III

Three RHPAC working groups (listed in Appendix C) were established to develop the focus areas, objectives, and strategies for each of the three rural health areas. The working groups used information from Healthy Arizona 2010, Delphi Study results, Rural Healthy People 2010, rural health assessment information, and members' experience to come up with the focus areas, objectives, and strategies. The RHPAC reviewed and approved the working groups' recommendations. Throughout the development of the Plan, the Rural Health Office sought feedback from Arizona's rural health community. The RHPAC-approved focus areas, objectives, and strategies provided the foundation for the development of the three-year Arizona Rural Health Plan.

Developing the Arizona Rural Health Plan

The Arizona Rural Health Plan can be used in rural health planning and the development of rural health programs. (See **"How Will the Objectives be Used"** below.) Several members of the Rural Health Plan Advisory Committee have indicated how they and the agencies that they represent will use the Plan. These suggestions and recommendations can be found under the **"How Will the Objectives Be Used?"** section. The implementation of the Plan will strengthen the rural health infrastructure as well as the entire health care system in the state. The three primary rural health areas (Accessibility, Availability, and Preventative Services) are presented in the next three sections. Each section is comprised of the primary health area, focus areas, objectives, and suggested strategies. The Plan addresses **14** focus areas and **39** specific objectives.

The focus areas were selected based on those health issues that have the greatest impact on rural Arizona. These were considered to be the highest priority areas. Those health issues determined to be of lower priorities were not included in the Plan. The Plan attempted to include as many of the relevant Healthy Arizona 2010 objectives as possible.

The Arizona Rural Health Plan's focus areas, objectives, and strategies were released for public comment at the Arizona Rural Health Conference in July 2004. In addition, the RHPAC was asked to share these with their colleagues for comments. As a result of the feedback received, several focus areas were modified and a new one was added, and more than three-quarter of the strategies were retained, and the remainder was either modified, replaced, or eliminated.

All of the objectives have measurable 3-year targets based on what might be reasonably accomplished in three years and a rural baseline that can be established from available data sources. Appendix D provides a comparison of the Arizona Rural Health Plan 2005-07 3-year targets, initial baseline comparisons, and sources of data to Healthy People 2010, Rural Healthy People 2010, Healthy Border 2010, and Healthy Arizona 2010. Since Healthy People 2010, Rural Healthy People 2010, Healthy Border 2010, and Healthy Arizona 2010 baselines are comprised of only national or state level data, the Arizona Rural Health Plan had to establish a rural baseline for each of its health-related objectives.

How Will the Objectives Be Used?

There are many ways in which the Arizona Rural Health Plan can be useful to policy makers, agencies, organizations, and communities across the State. The following comments and suggestions have been put forward by the Rural Health Plan Advisory Committee.

Health Policy:

The Plan's objectives and strategies could be used to modify current health policies and develop new health policies that will strengthen the rural health infrastructure and enhance rural residents' access to health services.

Health Planning and Program Development:

- State and County health departments could use aspects of the Plan to identify funding priorities for rural areas, inform their understanding of rural needs and develop strategies for program planning and development.
- Health providers, tribal and border health programs, and health related agencies could include the objectives and their strategies in their own health planning and development of health programs.
- Public health programs can use the framework to guide health promotion activities as well as community-based initiatives.
- Universities and colleges can identify focus areas for collaboration on workforce development, such as expanding health professions programs, developing incentives for rural health rotations or internships, and improving health professional retention rates in rural communities.
- Schools, colleges, and civic and faith-based organizations can undertake activities to further the health of all members of their community.
- Individuals, groups, and organizations in rural communities can integrate the Arizona Rural Health Plan objectives into current programs, special events, publications, and meetings, as well as build objectives into city/county strategic plans.
- Individual health care providers can encourage their patients to pursue healthier lifestyles and to participate in community-based programs.

Quality Improvement:

In 2001 the Institute of Medicine (IOM) released the *report Crossing the Quality Chasm: A new Health System for the 21st Century*. Based on a large body of evidence documenting serous shortcomings in the American health care system overall, the IOM report calls for fundamental reform of the U.S. health care system. The report identifies six aims for quality improvement – health care should be safe, effective, patient-centered, timely, efficient, and equitable. In 2004, the IOM Committee on the Future of Rural Health Care published a report that reviewed the quality of health care in rural areas, and developed a conceptual framework for a core set of services and the essential infrastructure necessary to deliver those services to rural communities. This IOM committee recommended priority objectives, and identified changes in policies and programs to achieve those objectives, including, but not limited to payment policies and the necessary information and communications technology ICT) infrastructure, and consider implications for federal programs an policy. The committee also adopted twelve recommendations pertaining to rural health care quality, and emphasized the need for the adoption of a national Rural Quality Initiative to assist rural communities and providers in acquiring the knowledge and tools needed to improve quality.

To this end, many of the objectives and strategies identified in the *Arizona Rural Health Plan* can be synchronized with appropriate recommendations in the 2004 IOM report, *Quality Through Collaboration, The Future of Rural Health*, particularly those that pertain to the structure of quality improvement, the strengthening of human resources, and the utilization of information and communications technology.

Measuring and Monitoring:
By selecting from among the objectives, all rural stakeholders – both individuals and organizations – have a means to build an agenda for community health improvement and monitor results over time. The Arizona Rural Health Plan will also provide the Rural Health Office with a roadmap to provide technical assistance and training to effectively implement Plan objectives, seek additional resources, and evaluate aspects of the Plan.

Limitations
The Arizona Rural Health Plan does not include all the health issues encountered in the State (e.g., prenatal care and HIV/AIDS). The RHPAC decided to include those health issues that have the greatest impact in rural Arizona and might reasonably be accomplished in three years.

Another limitation was accessing data on the State's public health workforce. Although the Overview section of this document addresses the public health component of the health care infrastructure, we do not provide workforce data on public health professionals or community lay health workers (e.g., *promotores(as)* and community health representatives), who are essential to many of the health promotion programs in the State. This primary data is collected at a local level and was not readily available to us at the time of the Rural Health Assessment. It should be noted that many of the strategies put forth in the Plan rely on close collaboration with the public health sector.

While there was tribal and Indian Health Service (IHS) involvement in the planning process, and the objectives and strategies reflect tribal/IHS activity, the following acknowledgement should be made:

- Tribes are sovereign governments and play a major role in health care delivery on or near their reservations/communities.
- For most of the Tribes in Arizona, the IHS is the principle provider of health care.
- National and local strategic plans are established by IHS/Tribes and these are consistent with Healthy People 2010.
- Health statistics (including workforce and population) are maintained for the most part, at the national level.
- Data used in this report may not fully include IHS and Tribal data.

Evaluation of the Arizona Rural Health Plan Implementation
The Rural Health Office Southwest Border Rural Health Research Center (SBRHRC) will monitor the progress of the Arizona Rural Health Plan 3-year targets. Some of the data sources that will be used to monitor the progress will include the SBRHRC Arizona Rural Health Dataline Website, Behavioral Risk Factor Surveillance System results, and Arizona Health Status and Vital Statistics. The SBRHRC will provide a one-year Arizona Rural Health Plan Progress Report that will be published on the Rural Health Office website (http://www.rho.arizona.edu) and presented at the Annual Arizona Rural Health Conference in 2006.

■ II. Arizona State Characteristics

- **Arizona Health Care Characteristics: A Snapshot**

Population and Geographic Characteristics

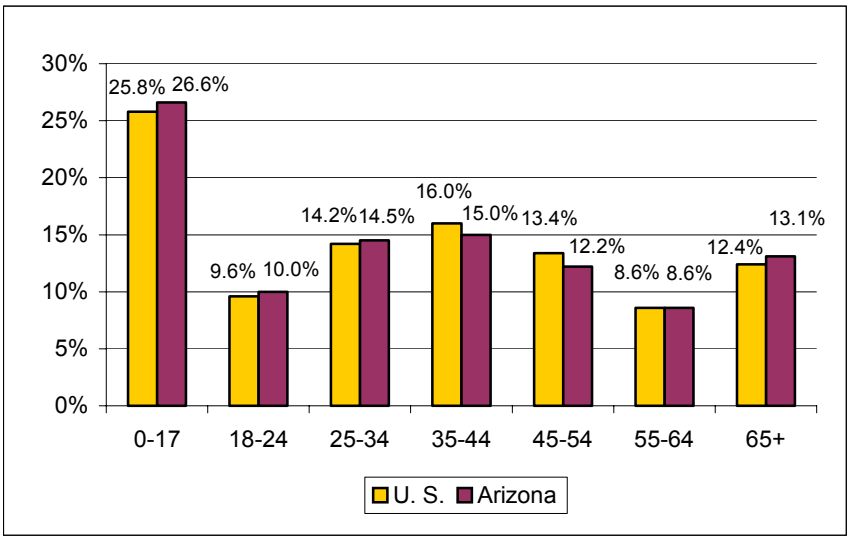
According to the Decennial Census, Arizona experienced a 40% increase in population between 1990 and 2000. Arizona has more than 5,130,632 residents and is the 6th largest in size of the 50 states, exceeded only by Alaska, Texas, California, Montana, and New Mexico. Its 114,000 square miles make it as large as New York and the New England states combined.[2] Although most of its acreage is frontier and rural, the majority of the population resides in urban centers such as Phoenix and Tucson (refer to Map 1 for details). As the second fastest growing state in the nation, the 2010 population is projected at 6.2 million[6].

Arizona is one of four U.S.-Mexico border states and consists of only 15 counties. It is bordered to the north by Nevada and Utah, to the east by New Mexico, to the south by Mexico, and to the west by California. The state's culture and history are replete with influences assimilated from the Spanish Empire to Mexican, Central and South American immigrants. At the same time, the state is home to 21 federally recognized American Indian tribes, including the Navajo nation, the largest on-reservation population in the United States. Economically, the state represents a diverse mixture of professions and incomes as retirees, military, and high tech industry leaders reside in communities with teachers and farm laborers.

Map 1. Arizona's 15-County Topographic Profile

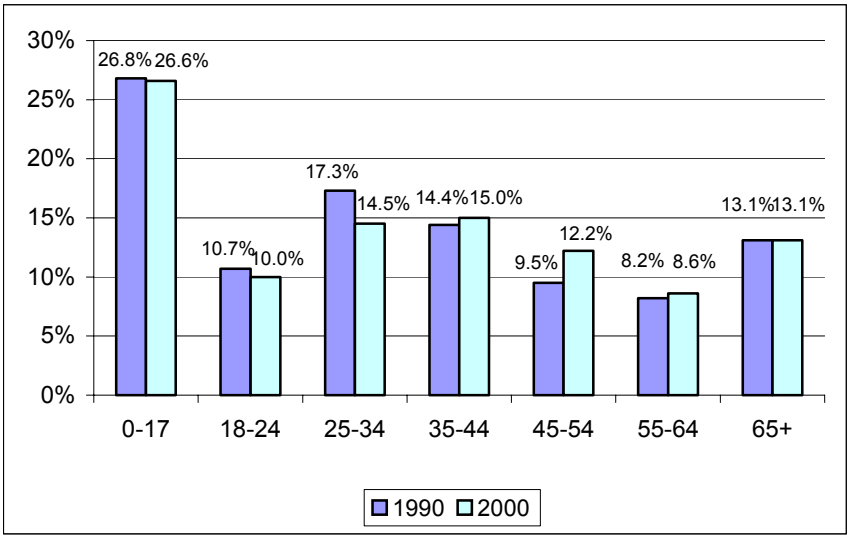
Arizona Population Trends: There are demographic differences between Arizona and the United States as well as demographic changes during the past decade. In 2000, women outnumbered men in Arizona, but only slightly. Fewer Arizonans were aged 45-54 than the national average, but slightly more were elderly (Figure 1). Thirteen percent of the population were 65 years or older. In the last decade, the 25-34 year old age group declined at nearly the same rate as the 45-54 age group increased (2.8% vs. 2.7%), to 14.5% and 12.2%, respectively (Figure 2).

Figure 1. Age Group Distribution for U.S. and Arizona: 2000



Source: U.S. Census Bureau, Census 2000

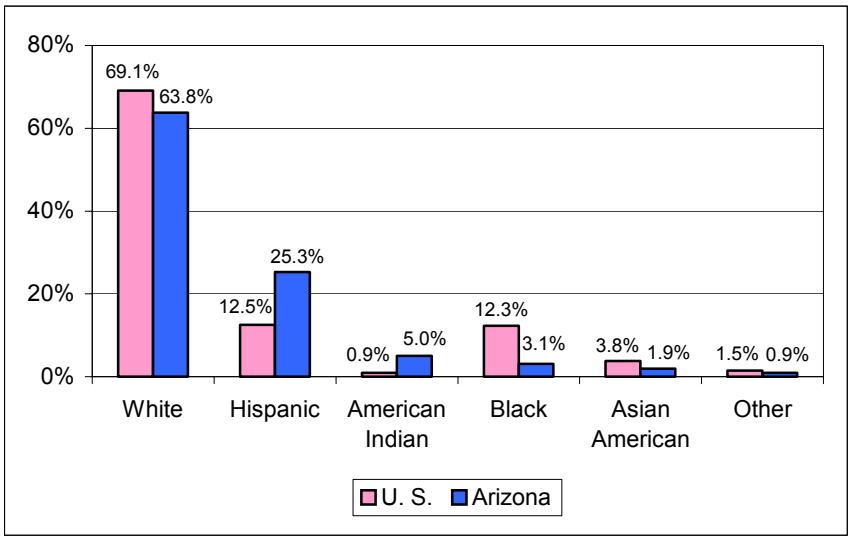
Figure 2. Age Group Distribution for Arizona: 1990 and 2000



Source: U.S. Census Bureau: 1990 and 2000 Censuses

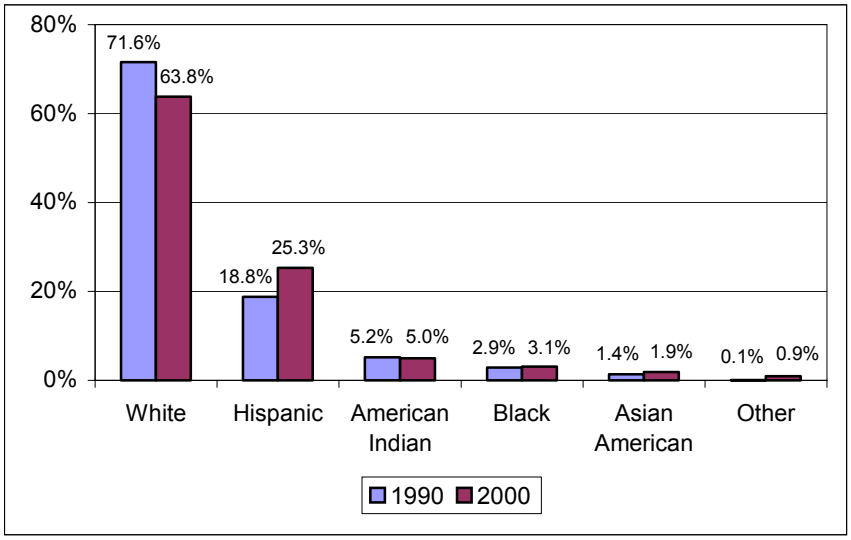
In 2000, there were significant race/ethnicity differences between the U.S. and Arizona (Figure 3). Arizona had fewer Whites, Blacks, and Asian Americans than the U.S. ratios, but more Hispanics and American Indians. The Hispanic (25.3%) and American Indian (5.0%) populations are the two largest minority populations in the state. Between 1990 and 2000, the number of Whites and American Indians decreased, while Hispanic, Black and Asian American populations increased (Figure 4).

Figure 3. Race/Ethnicity Distribution for U.S. and Arizona: 2000



Source: U.S. Census Bureau, Census 2000

Figure 4. Race/Ethnicity Distribution for Arizona: 1990 and 2000

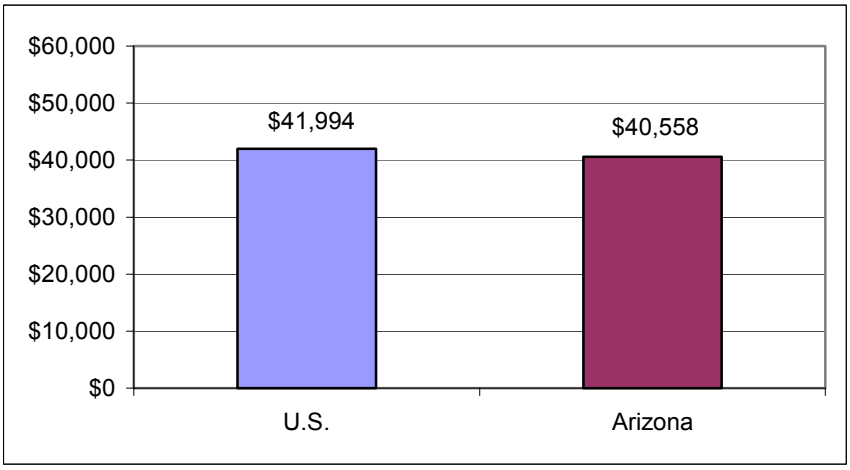


Source: U.S. Census Bureau: 1990 and 2000 Censuses

In 2000, the structure of employment in the Arizona economy was somewhat different from the rest of the nation. The largest employment sector in Arizona was in the service industries, which provided 82.4% of all employment – a figure that outpaced the U.S. total of 77.3%.[7] In Arizona, the three goods-producing industries (mining, construction, and manufacturing), employed comparatively few workers (17.6%) than the U.S. as a whole (22.7%). The largest difference in employment distribution is in the manufacturing sector, where Arizona trailed the U.S. (9.7% vs. 15.4%).[7]

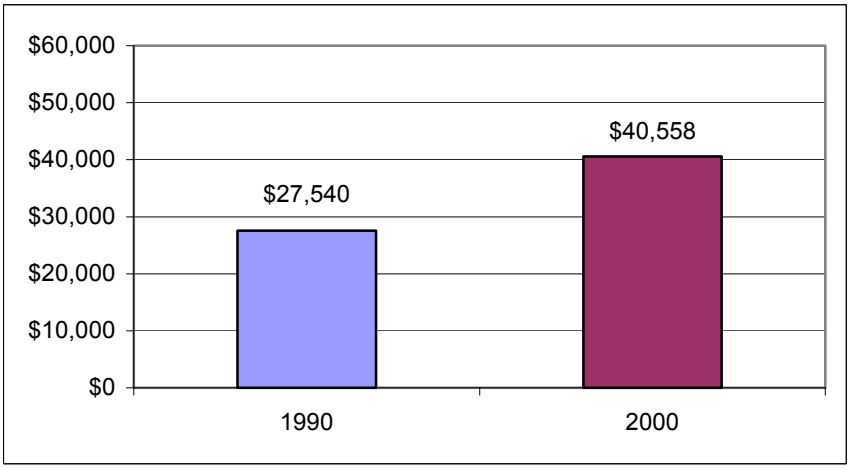
Although Arizona's median household income of $40,558 trails the national median household income of $41,994 (Figure 5), the Arizona median household income rose from $27,540 to $40,558 during the 10-year period (Figure 6). In 2000, the state's unemployment rate was lower than the national average [3.9% vs. 5.4%, respectively].

Figure 5. Median Income for U.S. and Arizona: 2000



Source: U.S. Census Bureau, Census 2000

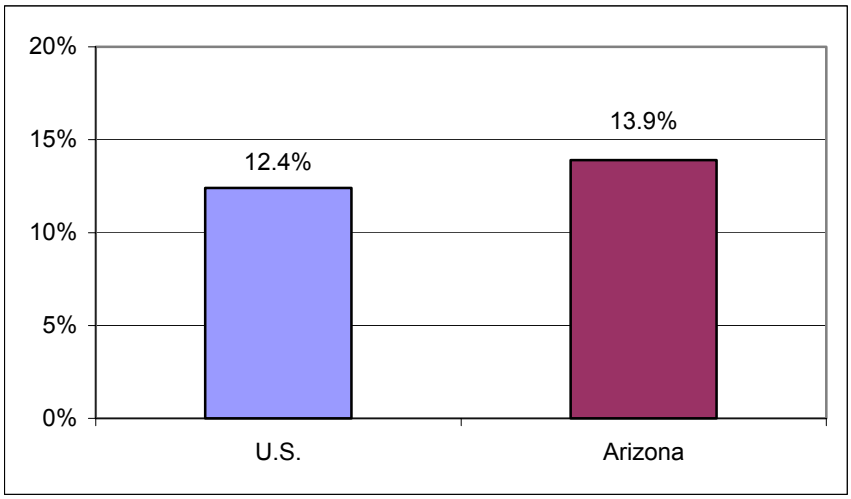
Figure 6. Median Income for Arizona: 1990 and 2000



Source: U.S. Census Bureau: 1990 and 2000 Censuses

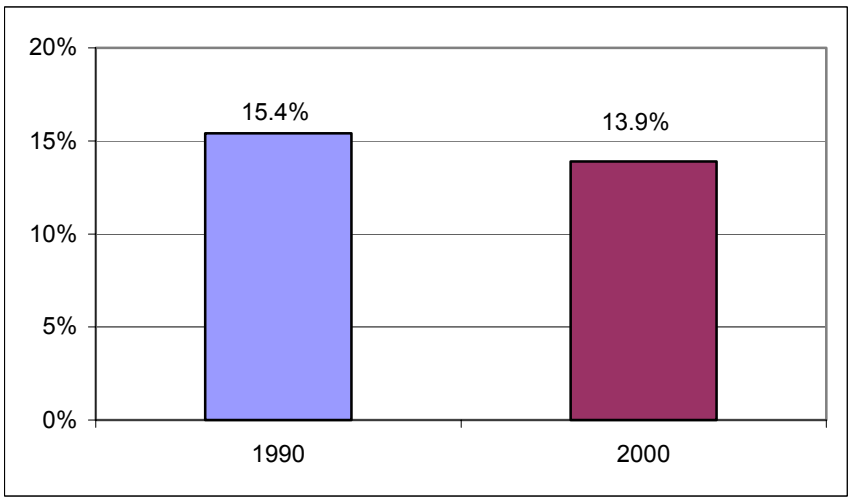
In 2000, Arizona had a higher percentage of persons at or below the Federal Poverty Level (FPL) than the U.S. percentage (Figure 7). The percentage of those at or below the Federal Poverty Level in Arizona decreased from 15.4% to 13.9% between 1990 and 2000 (Figure 8).

Figure 7. Federal Poverty Level Percentages for U.S. and Arizona: 2000



Source: U.S. Census Bureau, Census 2000

Figure 8. Federal Poverty Level Percentages for Arizona: 1990 and 2000



Source: U.S. Census Bureau: 1990 and 2000 Censuses

Rural and Urban Definitions: There are distinct differences between urban and rural areas. There are fewer health resources available in rural areas than urban areas, affecting the availability of health services in these communities. The state of Arizona has defined rural as (a) a county with a population less than 400,000 persons according to the most recent United States decennial census, and (b) a census county division with less than 50,000 persons in a county with a population of 400,000 or more persons according to the most recent United States decennial census[8]. There is a national debate on which definition of rural should be used. Currently, there are several agencies (e.g., Federal Office of Rural Health Policy, Office for the Advancement of Telehealth, and Department of Agriculture) that are examining the different definitions of rural. Rural definitions include those used by:

- U.S. Census Bureau, which bases rurality on a combination of population density, relationship to cities, and population size
- Office of Management and Budget (OMB), which classifies counties on the basis of their population size and integration with large cities
- Goldsmith and Associates—a modification to the OMB's definition which includes parts of large metropolitan counties that are small town or open-county without easy geographical access to central areas
- U.S. Department of Agriculture, which based rurality on a rural typology that provides a way to identify groups of U.S. non-metropolitan counties sharing important economic and policy traits
- U.S. Administration on Aging, which combines the identification of urbanized areas as defined by the Census Bureau and Zip code postal boundaries to classify all Zip code areas as either urban or rural
- University of Washington Rural Urban Commuting Areas (RUCAs), which defines degrees of rural and urban by their proximity to urban areas and the portion of the populations that commute from rural to urban areas)[9-11]

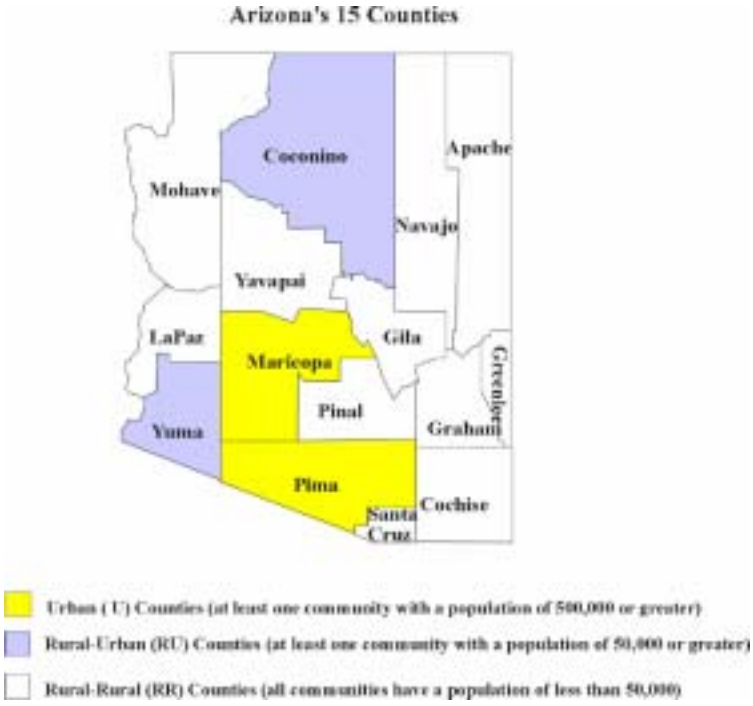
In addition, the U.S. Department of Health and Human Services, Health Resources and Services Administration, is examining the definition of "frontier" for federal funding purposes. "Frontier" differs from "Rural" in that it may apply to much more sparsely populated areas than those that fit under "Rural." These sparsely populated areas include those living on remote areas of rural counties such as those living on American Indian reservations.

Sources of available funding for rural areas are highly dependent on which definition is used. Some of these funding sources include: Rural Health Outreach Grant Program (creates models of outreach and health care services delivery in rural areas), Rural Health Network Development Grant Program (develops an integrated healthcare network in rural communities), Medicare Rural Flexibility Hospital Grant Program (helps to stabilize and improve access to America's smallest and most vulnerable rural hospitals), and Small Rural Hospital Improvement Grant (supports small rural hospitals with the implementation of projects involving the prospective payment system, the Health Insurance Portability and Accountability Act (HIPAA), and/or the improvement of overall hospital performance)[12]. The rural definition used also determines whether a community is designated as a Medically Underserved Area (MUA), Medically Underserved Population (MUP), and Health Professional Shortage Area (HPSA); the placement of National Health Service Corp health personnel and J-1 Visa physicians; and the rural

reimbursement for nurse practitioners, physician assistants, and nurse midwives for rural health clinics.

For the purposes of the Arizona Rural Health Plan, the urban and rural areas of Arizona are defined by the criteria explained in the Arizona Rural Health Assessment[7]. Arizona has two urban (U) counties—Maricopa County and Pima County— which include at least one community with a population of 500,000 or greater. Although these counties are classified as urban they also encompass large geographical areas that are rural (e.g., the Tohono O'odham Reservation in Pima County). The State's rural areas have been subdivided into two categories: Rural-Urban (RU), which includes those counties that have a community with a population of 50,000 or greater (technically urban according to the U.S. Census Bureau while the rest of the county is rural), and Rural-Rural (RR), which includes those counties in which all communities have a population of less than 50,000. Refer to Map 2 for a representation of Arizona's Urban, Rural-Urban, and Rural-Rural Counties.

Map 2. Arizona's Urban, Rural-Urban, and Rural Counties



County Population Trends: The 2000 population demographics for the urban, rural-urban, and rural counties are summarized below. Arizona's two urban counties, Maricopa and Pima, accounted for 76.3% of the state's population. Demographically, they were very similar: females slightly outpaced males and, while children 17 years of age or younger comprised 26.5% of the population, seniors aged 65 or older accounted for 12.2%. Hispanics made up 25.8% of the population, American Indians-2.1%, African/Black Americans-3.6%, and Asian Americans-2.3%. Unemployment in these counties was at 2.7%.

Coconino and Yuma are Rural-Urban (RU) counties with 5.4% of the state's population. During the past decade, Yuma experienced a 49.7% increase in population, two times more than Coconino's growth (20.4%). The gender breakdown for Coconino and Yuma Counties was almost evenly distributed between females and males, and children of 17 years of age or younger made up 28.8% of the population. About one-third of the population was Hispanic and 13% was American Indian. Yuma County was unique from Coconino in one respect: in 2000, it had the highest unemployment rate in the state at 27.5%.

The remaining 11 counties are designated Rural-Rural (RR). These counties experienced an overall growth of 71.6% from the previous decade. Like other counties, the sex breakdown was nearly even (49.6% females and 50.4% males). Combined, these 11 counties with more than half with reservations had an American Indian population of 14.5% and a Hispanic population of 20.4%. There are more children under the age of 17 (26.5%) than those 65 and older (16.6%). The unemployment rate was higher (5.8%) than the national average (5.4%), though significantly less than Yuma's unemployment rate.

Health Care Coverage Characteristics

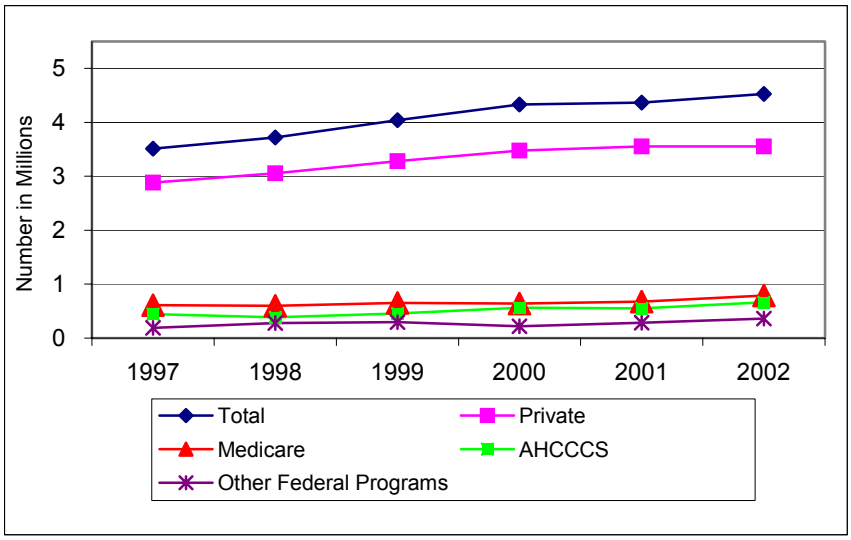
The U.S. Census Current Population Survey (CPS) reported that 83.2% of Arizona residents (based on *total population estimates*) had some type of health care coverage in 2002[13]. Health care coverage includes both private insurance and publicly funded health care options (e.g., Medicaid, Medicare, Veteran Affairs, Tricare, and Indian Health Service). The percentage excluded those who received care from various safety net providers: Federally Qualified Community Health Centers, rural health clinics, free or low cost clinics, school based-health clinics, public health clinics, and uncompensated care provided by hospitals and physicians. This is an increase from 75.5% in 1997[13].

National statistics for the total population indicated that the U.S. as a whole had higher rates of health care coverage percentages than did Arizona from 1997 to 2002[13]. Figure 9 describes the 1997 to 2002 trends for selected health care coverage programs in Arizona.

The Centers for Medicare and Medicaid Services (CMS) reported that in 2002 the U.S. health care expenditures reached $1.6 trillion (an average of $5,440 per person), up 9.3 % from 2001[14]. This figure represents 14.9% of the national gross domestic product (GDP), which measures the market value of goods and services produced by labor and property located within a country[14]. In the private sector, of the 54% expended ($839.6 billion), $549.6 billion (65.5%) was spent on private health insurance premiums. Consumer out-of-pocket expenditures accounted for another 14% of the total health expenditures. Forty-six percent of U.S. health expenditures were paid by the public sector ($713.4 billion: Medicare - 17%, Medicaid -16%, and other public programs - 13%).

Private Health Insurance: Generally, the private insurance market provides continuous health care coverage to regularly employed, middle- and high-income families. This occurs through employer-sponsored or individually purchased health insurance. The market can include any insurance product, but the most common forms of private health insurance are indemnity and managed care plans. There are more health insurance options available to residents in urban

Figure 9. Arizona Selected Health Care Coverage Programs' Estimates: 1997-2002*



Source: U. S. Census Bureau: Health Insurance Historical Table 4
*Revised Census Numbers for 1999 and 2000

areas than rural areas. The health insurance premiums may be paid entirely by the individual, family, employer, or the individual and employer may each pay a portion.

In 2002, 65.3% of health care coverage in Arizona was provided by private health insurance[13]. This was below the national percentage of 69.6%. This was a 3.4% increase from 1997 of 61.9%[13]. Most of the increase was from individual private health insurance. Of the total private health coverage in 2002, 83.7% was provided by employer-sponsored insurance. During the past three years (2000-02), employer-sponsored health insurance declined from 59.1% to 54.7%. This was due to the down turn of the U.S. economy in 2000, the result of September 11, 2001, the increase in the unemployment rate during this period, and the rising cost of health insurance premiums; especially, employer-sponsored health insurance.

Publicly-Subsidized Private Health Insurance Coverage: There are two types of publicly-subsidized private health care coverage by the state of Arizona. The Arizona Legislature established HealthCare Group (HCG) to make health insurance more accessible to the state's small business community; it was implemented in 1988 when private carriers began withdrawing from the small employer market. Administered through the Arizona Health Care Cost Containment System (AHCCCS), the program offers a choice of prepaid insurance coverage through AHCCCS contractors to businesses with 1 to 50 employees. There are no income requirements, and no requirements that the employer did not previously offer coverage or that the enrollees were previously insured. In 2000, there were 11,862 persons enrolled in HCG in which 37.6% were located in the 13 rural counties (rural-urban = 1,201 and rural-rural = 3,263)[15].

In 1998, Arizona sponsored a health care insurance pilot program on a sliding fee scale for uninsured, low-income families (under 200% Federal Poverty Level or FPL) called Premium Sharing. This program was administered through AHCCCS' HealthCare Group. Premium Sharing provides another insurance option for the states low income, working families for two rural counties: Cochise and Pinal, and two urban counties: Maricopa and Pima. In 2000, there were 7,107 members enrolled in the program in which 29.1% of the enrollees were located in Cochise and Pinal Counties[15]. The Premium Sharing program was expanded to all 15 counties and to cover those between 100 - 250% FPL (non-chronic illnesses) on October 1, 2001, but was terminated on September 17, 2003 due to state budget cuts.

Publicly-Sponsored Health Care Coverage: This health care coverage may be provided by the state or federal government. The federal government is the primary provider of this type of coverage (e.g., Medicare, Indian Heath Service, Tricare, and Veterans Administration). The federal government provides coverage for two primary groups: individuals for whom the federal government has assumed the responsibility of providing care (e.g., federally recognized tribal nations and veterans) and individuals who are unable to purchase health insurance through the private sector (e.g., the poor and medically indigent). There are programs that are administered by the State of Arizona, but receive funding support from both the state and federal governments such as AHCCCS and KidsCare.

AHCCCS: In 1965, the U.S. Congress enacted the Medicaid program (Title XIX of the Social Security Act), a federal and state financed program to pay for health services for the *categorically needy* and the *medically needy*. The *categorically needy* are those who receive public assistance from the Aid to Families with Dependent Children (AFDC) program (now called Temporary Assistance for Needy Families, or (TANF), and aged, blind and disabled recipients of Supplemental Security Income (SSI). The *medically needy* are those who have enough money to live on, but not enough to pay for medical care. During the 1981 Arizona Legislative Session, the Arizona Health Care Cost Containment System (AHCCCS) was designated as the state's Medicaid program and services began on October 1, 1982.

The AHCCCS program operates under a special Medicaid 1115 Research and Demonstration waiver. This allows AHCCCS to bring in federal funding for the Medicaid population in Arizona. If an extension or change to the current program is needed, then AHCCCS must submit a waiver amendment such as the expansion of eligibility of the acute care program from 34% for the Federal Poverty Level (FPL) to 100% that was done in January 2001. All AHCCCS beneficiaries receive health care from contracted managed care plans. AHCCCS provides general medical services to low income, indigent and disabled population.

There were 824,575 persons enrolled in AHCCCS (acute care) on December 1, 2002[16]. During 1998 – 2002, the AHCCCS acute care membership rose 105% from 402,013 in 1998[16]. The increase can be attributed to primarily the expansion of eligibility of the acute care program from 34% for the FPL to 100% in 2001. Another factor that attributed to the rise in AHCCCS enrollment was the increase in unemployment rates. Approximately 24% of the state's population lived in the 13 rural counties, but 33% of the total AHCCCS enrollees were located in those counties in 2002. During the five years, there were greater percentages of increase in the two urban counties (113%) than the 13 rural counties (rural-urban – 108% and rural-rural – 86%)[16].

KidsCare: The State Children's Health Insurance Program (SCHIP), enacted by Congress as part of the Balanced Budget Act (BBA) of 1997, provides states with $20.3 billion over five years to expand insurance programs for children under the age of 19. The Arizona SCHIP allotment is $114 million annually. In November 1998, Arizona implemented a separate state SCHIP program called KidsCare rather than just expand the AHCCCS (Medicaid) program[17]. Health care can be provided to children under the age of 19 through AHCCCS health plans, direct service, sliding-fee-scale clinics, or IHS/self determination tribal facilities for tribal members who elect that option.

KidsCare is a joint federal/state program for children under 19 who are not Medicaid eligible, in households below the 200% FPL. In 2002, there were 49,985 children enrolled in KidsCare[17]. Twenty-five percent (12,409) of the children were living in the 13 rural counties. On January 1, 2003, eligible parents of children enrolled in KidsCare with a household income up to 200% FPL were added to the program.

Medicare: In July 1965, Medicare was enacted into law. It is the nation's largest federally financed health insurance program. In 2002, $267 billion was spent for health care on behalf of Medicare enrollees[18]. It provides health insurance to people aged 65 and over (34,679,267 - 86%), those who have permanent kidney failure and certain people with disabilities (5,809,611 - 14%)[18].

In 2002, Arizona had 708,210 persons enrolled in Medicare in which 613,648 (86.6%) were 65 years of age or older and the remainder of the enrollees were disabled persons[18]. Twenty-eight percent (169,142) of the Medicare seniors were living in the 13 rural counties[18]. Of these, 96% of the seniors purchased Supplemental Medicare Insurance (Medicare Part B).

Other Federal Programs: The Indian Health Service (IHS), an agency within the Department of Health and Human Services (DHHS), is responsible for providing federal health services to American Indians and Alaska Natives. The provision of health services to members of federally recognized tribes grew out of the special government-to-government relationship between the federal government and Indian tribes. This relationship, established in 1787, is based on Article I, Section 8 of the Constitution, and has been given form and substance by numerous treaties, laws, Supreme Court decisions, and Executive Orders[19]. The IHS is the principal federal health care provider and health advocate for Indian people.

The Indian Health Service is organized into twelve regional areas covering the contiguous 48 states and Alaska. The Phoenix, Tucson and Navajo Area Offices are the core of IHS Administration and management in Arizona. The Navajo Area IHS Office, located in Window Rock, administers 21 ambulatory facilities and 6 hospitals in the Four Corners area of Arizona, Utah, Colorado, and New Mexico. The total estimated service population is over 226,460. The Tucson IHS serves the Tohono O'odham Nation with one hospital and two ambulatory facilities; the Pascua Yaqui Tribe of Arizona is served principally through contracts which collectively provide a full spectrum of health care. The total estimated service population is 29,470. The Phoenix Area IHS office covers health care for an eligible Indian population of over 153,500 with eight hospitals and 36 ambulatory care facilities over a service area that includes Arizona, Nevada, Utah, and California.[19]

Tricare was implemented by the Department of Defense (DOD) in 1994; it is the triple option health benefits program for the seven uniformed services: Army, Navy, Air Force, Marine

Corps, Coast Guard, Public Health Service, and National Oceanic and Atmospheric Administration. There are four types of health care coverage programs available under Tricare for the Arizona's 124,217 enrollees in 2000[20]. These are: 1) Tricare Prime, a Health Maintenance Organization(HMO) type system with a point-of-service option and no deductible; 2) Tricare Standard, an indemnity plan with an annual deductible where the beneficiary pays a percentage of total charges for medical care; and, 3) Tricare Extra, a Preferred Provider Organization (PPO) -type program that allows beneficiaries access to a network of providers and after the annual deductible is met, the beneficiary pays only 5% of the cost of care[21]. Tricare also offers a dental program, which is a voluntary, comprehensive program offered to family members of all active duty personnel and to selected reserve members and their families. Retirees and their families are eligible for a retiree dental program.

The Veterans Affairs (VA) provides coverage for retired, disabled, and otherwise qualified veterans of previous U.S. Military service. Of the 509,009 veterans in Arizona in 2000, 16.7% of them received care from the VA system[22]. Most veterans using the VA health care system are older, retired men with long-term care problems: multiple and chronic physical and emotional illnesses. Although the VA operates a system of both hospitals and outpatient clinics, most health care is provided by the hospital system.

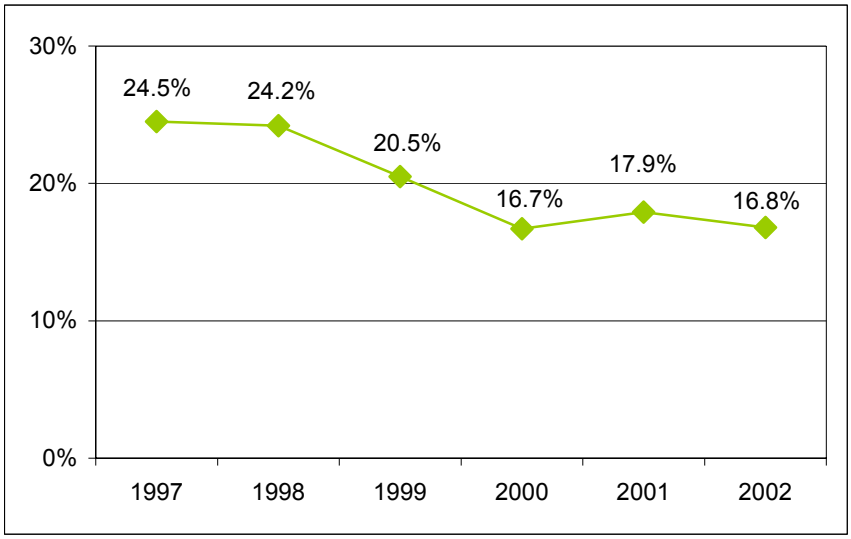
Safety Net: The Institute of Medicine defines the "health care safety net" as those providers that organize and deliver a significant level of health care and other related services to uninsured, Medicaid, and other vulnerable patients. The core safety net providers have two distinguishing characteristics: 1) either by legal mandate or explicitly adopted mission they maintain an "open door," offering access to services for patients regardless of their ability to pay, and 2) a substantial share of their patient mix is uninsured, Medicaid, and other vulnerable patients[23]. The core safety net providers include public hospital systems; federal, state, and locally supported community health centers (CHCs) or clinics; local health departments; and special service providers (e.g., family planning clinics, school-based health programs, and Ryan White AIDS programs). In addition, a proportion of medical care is rendered as charity by established providers and practitioners.

Uninsured Population: According to the U.S. Census Bureau and based on the Current Population Survey (CPS) data for 2002 for *the total population*, there were 916,000 (16.8%) uninsured individuals in Arizona[13]. In spite of the down turn of the U.S. economy in 2000, the result of September 11, 2001, the increase in unemployment rate, and the rising cost of health insurance premiums, the percentage of uninsured actually improved over the previous five years. Arizona was ranked second highest state in the percentage of uninsured residents in 1998 (24.2%), but dropped to 11th in 2002[13]. This improvement can be attributed primarily to the implementation of the KidsCare program in 1998 and expansion of the eligibility of the AHCCCS acute care program from 34% to 100% of FPL in 2001. Figure 10 shows the Arizona uninsured population trend for 1997-2002.

Minorities are more likely to be uninsured than Whites. In a 2001 study, William M. Mercer, Inc., found that in Arizona, Hispanics were more than two times more likely than Whites to be uninsured (45% vs. 19%)[24]. Native Americans were more likely to be uninsured than Whites (23% vs. 19%) and more low income Hispanics have uninsured rates which are even higher (53%). Worse, legal, non-citizen Hispanics are three times more likely to be uninsured than Whites (58%) - a number which is twice as high as uninsured Hispanics who are citizens[25].

With such a large majority of low-income workers uninsured, it is not surprising that young adults are not spared the same situation. Those aged 19-24 composed only 8% of the non-

Figure 10. Arizona Uninsured Population Estimates: 1997-2002



Source: U. S. Census Bureau: Health Insurance Historical Table 4

elderly population, but make up 15.8% of the total number of uninsured[26]. In fact, they were more likely to be uninsured than any other non-elderly age group. The primary reasons for the high risk of being uninsured in this age group are: 1) having lower paying jobs where insurance is not offered; 2) being too new in their jobs to be eligible; and 3) seeing themselves as invincible (the "Superman effect") and in no need for health insurance coverage.

Rural Arizonans are more likely to be older, poorer and less healthy than their urban counterparts. They are also more likely to be uninsured. Nationally, 84% of the rural uninsured are working or have workers in their families and 73% are in families with at least one full-time worker[27]. Fewer employer-sponsored health benefits are offered in rural communities. In counties that are not adjacent to an urban area, only 55% had health insurance through an employer. Among the rural uninsured who earn less than 100% FPL, 47% are from families with full-time workers, compared to 38% of the poor urban uninsured[27]. Older adults living in rural areas - those between 45 and 64 years of age - are uninsured in greater numbers than urbanites (24% vs. 19%)[27].

Health Care Infrastructure Characteristics

More than three quarters of the state population resides in urban centers such as Phoenix, Tucson, Mesa, Glendale, Tempe, Scottsdale, Yuma and Flagstaff where most of the state's health resources are located. There are fewer health resources available in rural areas than urban areas. A strong rural health care system includes access to timely, quality medical care. *A weak rural health infrastructure can impact urban centers by forcing rural residents to seek health care in these centers in which urban health care systems can be overwhelmed by the increase demands.* The major components of the health care infrastructure are health care practitioners, health facilities, and telemedicine systems.

Health Care Workforce:[▽] The *2000 Health Resources and Services Administration (HRSA) State Health Workforce Profiles* reported that there were 148,853 persons employed in the health sector in Arizona in 1998[28]. This was 7.2 percent of Arizona's total workforce, slightly lower than the national average of 9.0 percent. Among the 50 states, Arizona ranked 25th in total health services employment, which includes health professionals (e.g., physicians, nurses, dentists, and pharmacists), paraprofessionals (e.g., nurse aides, home health aides, and technicians), and non-patient care workers employed in health service settings (e.g., food service workers and administrative staff). Arizona ranked 47th in health services employment per 100,000 population. In 1998, psychologists were the health professionals with the highest ratio per 100,000 population (ranked 27th in the nation) in Arizona; pharmacists had the lowest ratio in the state (ranked 49th in the nation), as reported by the *2000 HRSA State Health Workforce Profiles* for those examined[28].

Health services employment in Arizona grew 52 percent between 1988 and 1998, while the state's population grew by 32 percent during that period, resulting in a net per capita growth of 15 percent in health services sector employment, lower than the national rate of growth of 23 percent. The hospital sector (44.3%) employed the largest number of Arizona health service workers than any other health care setting in 1998.

As expected, the largest health care practitioner group in the state was active registered nurses (40,469), followed by active licensed physicians (9,759) in 2001. Of the seven health professional areas examined, active registered nurses had the greatest increase in numbers during the 1997 to 2001 period (+9,171 and 29%), followed by pharmacists (+843 and 29%). During the five-year period, there was a major shift in the number of physicians going into the primary care versus the specialist fields. Primary care physicians grew by 14 percent (+528) while specialist physicians grew less than one percent (+440 and 0.8%). *Although there were significant increases of health care practitioners (physicians, registered nurses, dentists, pharmacists, and psychologists) in the state, they did not close the health care workforce gaps between urban and rural counties, except for the midlevel health care practitioners (physician assistants and nurse practitioners).*

This section compares selected Arizona and rural/urban county level health workforce trends during 1997 to 2001. Only active, licensed health practitioners residing in Arizona were included in the tables presented. Those persons with health professional licenses from other states who are practicing in federal health care settings (e.g., Indian Health Service (IHS), Veterans Affairs, and military health facilities) are not included in work force numbers.

Physicians: Primary care physicians include Allopathic Physician (MD) and Osteopathic Physician (DO) with active licenses, residing in Arizona, whose primary or secondary specialty is one of the primary health care specialties: family practice (FP), general practice (GP), internal medicine (IM), pediatrics (PD), or obstetrics/gynecology (GYN, OBS, and OBG) as defined by the Arizona Department of Health Services Primary Care Area (PCA). Even though general surgeons (GS) provide primary care services, especially in the rural areas, they are not counted as primary care physicians by the PCA definition[29].

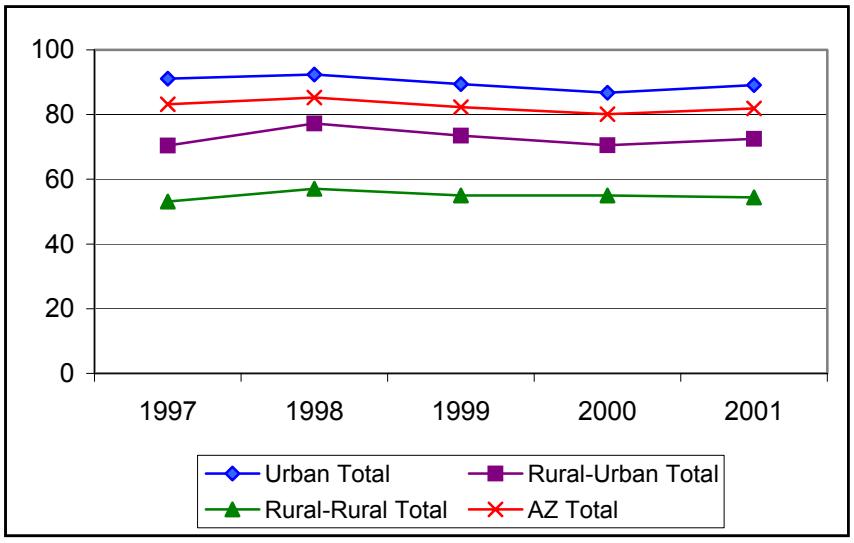
[▽] The workforce data presented here may not be inclusive of IHS workforce data.

In 2001, there were 4,349 active licensed primary care physicians in the state of Arizona. This is an increase of 528 primary care physicians (14%) between 2001 and 1997. Although there was an increase in the overall number of primary care physicians, the increase did not keep up with the population growth during this period. The ratio of primary care physicians to 100,000 population decreased from 83.2 to 81.9 (Figure 11). There was a decrease in the primary care physician to population ratio in the two urban counties (91.1 to 89.2), while there were increases in the rural-urban (70.5 to 72.5) and rural-rural (53.1 to 54.4) counties.

Those physicians who are not classified as primary care practitioners are classified as specialists. In 2001, there were more active licensed specialist physicians (5,405) than primary care physicians (4,349). However, there were greater increases in the number and percentage of primary care physicians (+528 and 14%) than specialist physicians (+45 and 0.8%) during the five-year period from 1997 to 2001. During the period from 1997 to 2001, there was a decrease in Arizona's ratio of specialist physicians to 100,000 population from 116.7 to 101.9 (Figure 12). The two urban counties (136.5 to 116.8) had greater decreases than the two rural-urban counties (84.4 to 80.3). However, the 11 rural-rural counties had increases in the specialist physician ratio (42.0 to 45.4).

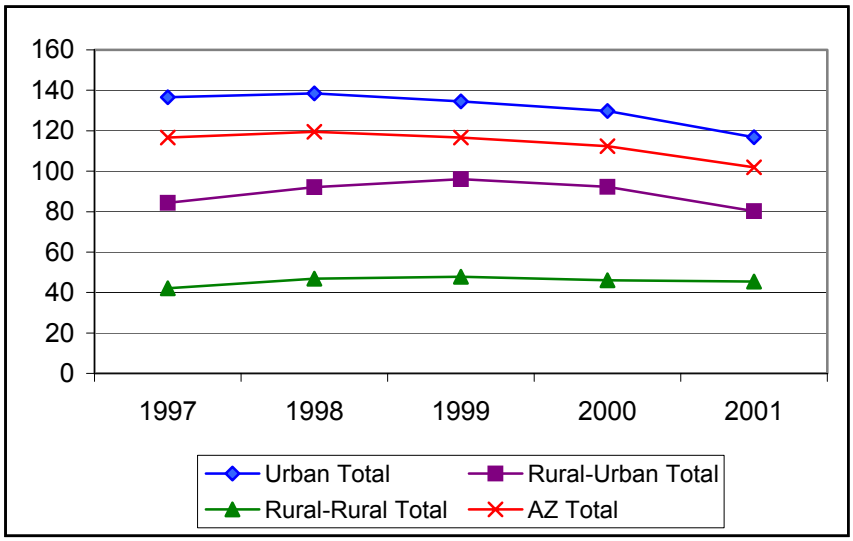
Physician Assistants: In 2001, there were 867 active licensed physician assistants (PAs). This is an increase of 437 physician assistants (102%) between 1997 and 2001. During this period, the state's ratio of physician assistants to 100,000 population increased from 9.4 to 16.3 (Figure 13). Although this increase occurred in all three county geographical areas (urban—8.5 to 15.6, rural-urban—7.4 to 18.0, and rural-rural—13.5 to 19.1), the greatest increase occurred in the two rural-urban counties.

Figure 11. Primary Care Physicians (MD and DO) per 100,000 Population Profile for Arizona and Its Counties: 1997-2001



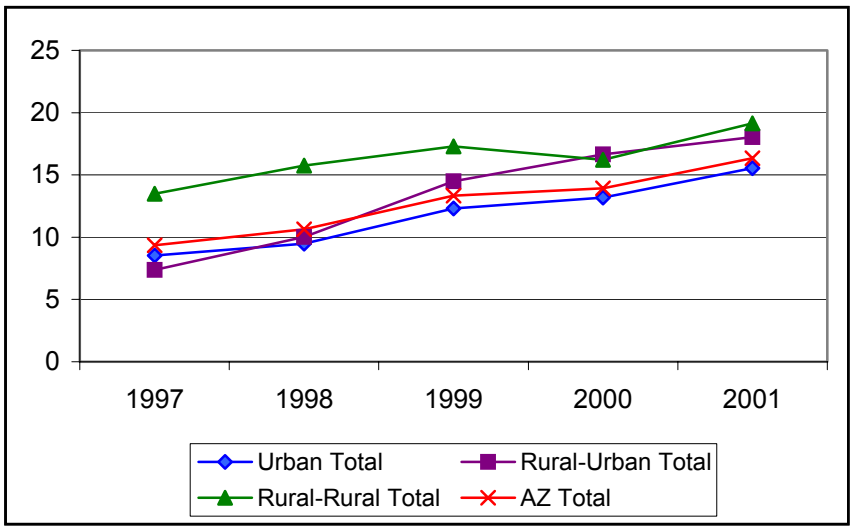
Source: Arizona Department of Health Services, Arizona Primary Care Area Program, Primary Care Area Primary Care Physician Statistical Files, 1997-2001.

Figure 12. Total Specialist Primary Care Physicians (MD and DO) per 100,000 Population Profile for Arizona and Its Counties: 1997-2001



Source: Arizona Department of Health Services, Arizona Primary Care Area Program, Primary Care Area Specialist Physician Statistical Files, 1997-2001.

Figure 13. Physician Assistants per 100,000 Population Profile for Arizona and Its Counties: 1997-2001



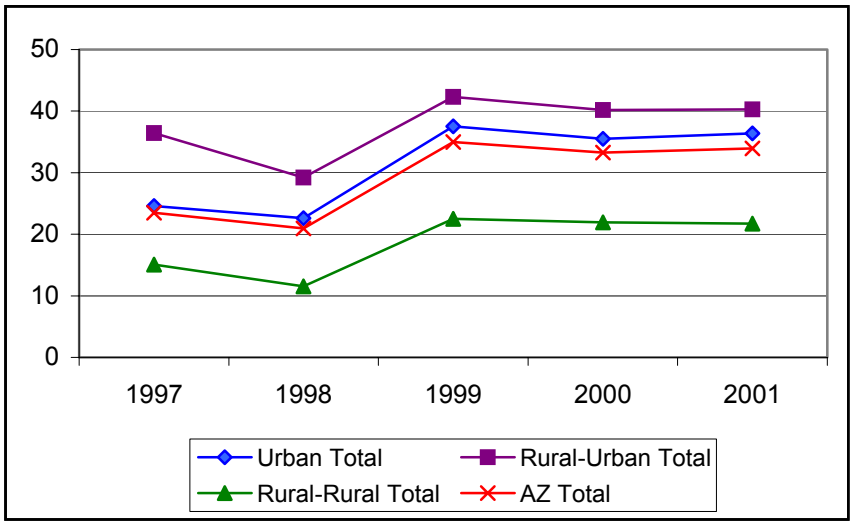
Source: Arizona Department of Health Services, Arizona Primary Care Area Program, Arizona Primary Care Area Statistical Profiles.

Nurse Practitioners: Both nurse practitioners (NP) and physician assistants (PA) are considered mid-level health care practitioners. In Arizona, there were more NPs (1,800) than PAs (867) in 2001. There was an increase of 721 active licensed nurse practitioners (67%) between 1997 and 2001 in the state. During this period, the ratio of nurse practitioners to 100,000 population

increased from 23.5 to 33.9 (Figure 14). This increase occurred in all three county geographical areas (urban – 24.6 to 36.4, rural-urban – 36.5 to 40.3, and rural-rural – 15.1 to 21.7).

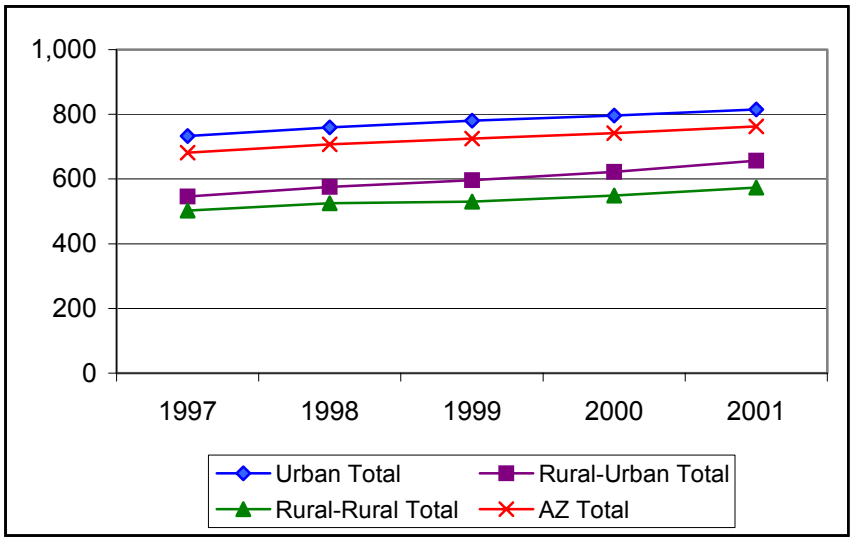
Registered Nurses: There were 40,469 active Arizona registered nurses (RNs) in 2001. There was an increase of 9,171 active registered nurses (29%) between 1997 and 2001. During this period, Arizona's ratio of registered nurses to 100,000 population increased from 681.1 to 762.5 (Figure 15). This increase occurred in all three county geographical areas (urban—732.5 to 814.8, rural-urban—546.1 to 657.2, and rural—502.8 to 573.5).

Figure 14. Nurse Practitioners per 100,000 Population Profile for Arizona and Its Counties: 1997-2001



Source: Arizona Department of Health Services, Arizona Primary Care Area Program, Arizona Primary Care Area Statistical Profiles.

Figure 15. Registered Nurses per 100,000 Population Profile for Arizona and Its Counties: 1997-2001



Source: Arizona State Board of Nursing.

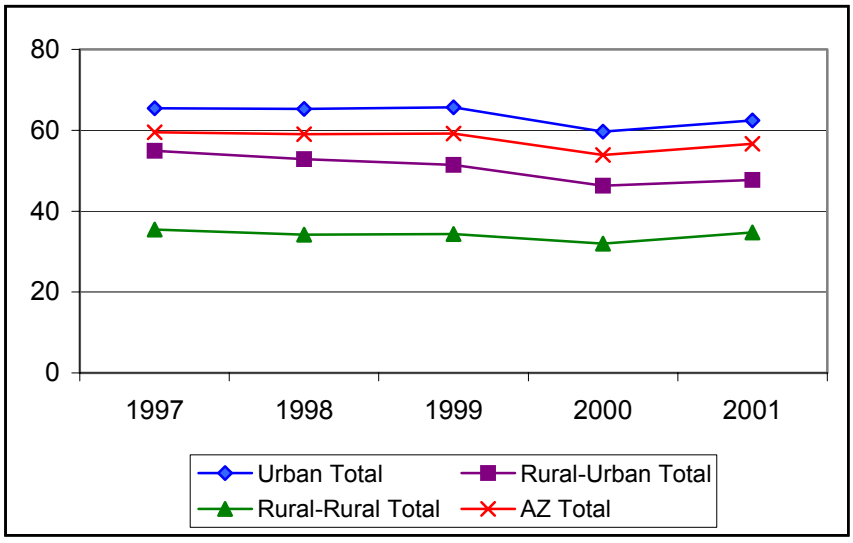
Dentists: In 2001, there were 3,005 active licensed dentists in the state. This was an increase of 272 dentists (10%) between 1997 and 2001. However, there was a decrease in the ratio of Arizona dentists per 100,000 population from 59.5 to 56.6 during this same time period (Figure 16). The decrease occurred in all three county geographical areas (urban—65.5 to 62.5, rural-urban—54.9 to 47.7, and rural—35.4 to 34.8).

Pharmacists: Arizona had 3,743 active licensed pharmacists in Arizona in 2001. This was an increase of 843 pharmacists (29%) between 1997 and 2001. During this five-year period, Arizona's ratio of pharmacists per 100,000 population increased from 63.1 to 70.5 (Figure 17). Although this increase occurred in all three county geographical areas (urban—70.9 to 80.3, rural-urban—43.8 to 45.3, and rural-rural—35.7 to 37.0), the greatest increase was in the two urban counties.

Psychologists: There were 1,105 clinical and counseling psychologists in Arizona in 2001. There was an increase of 178 (+19%) clinical and counseling psychologists between 1997 and 2001. During this five-year period, Arizona's ratio of psychologists to 100,000 population increased slightly from 20.2 to 20.8 (Figure 18). This increase occurred in all three county geographical areas (urban—22.7 to 23.3, rural-urban—25.0 to 27.2, and rural-rural—7.9 to 8.6), with the greatest increase occurring in the two rural-urban counties and the lowest occurring in the rural-rural counties.

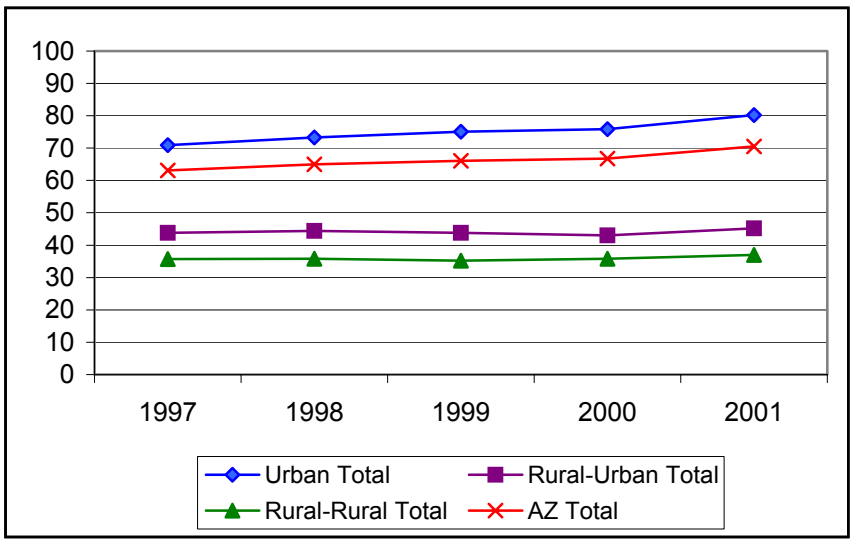
Behavioral Health Professionals. In 2002, there were 5,545 behavioral health professionals, including 2,109 social workers, 1,957 certified counselors (professional counselors), 1,179 substance abuse counselors, and 300 marriage and family therapists. There were 4,576 behavioral health professionals in the urban counties, 271 in the rural-urban counties, and 698 in the rural-rural counties. The ratio of behavioral health professionals per 100,000 population in Arizona in 2002 was 101.32 (Figure 19). The ratio of behavioral health professionals was greatest in the urban counties (109.3), followed by the rural-urban counties (91.8), then the rural-rural counties (70.4).

Figure 16. Dentists per 100,000 Population Profile for Arizona and Its Counties: 1997-2001



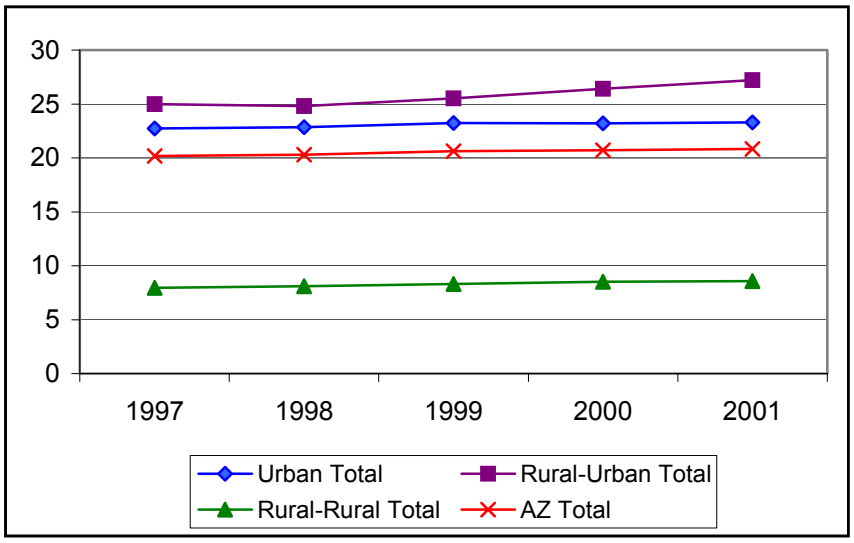
Source: American Dental Association.

Figure 17. Pharmacists per 100,000 Population Profile for Arizona and Its Counties: 1997-2001



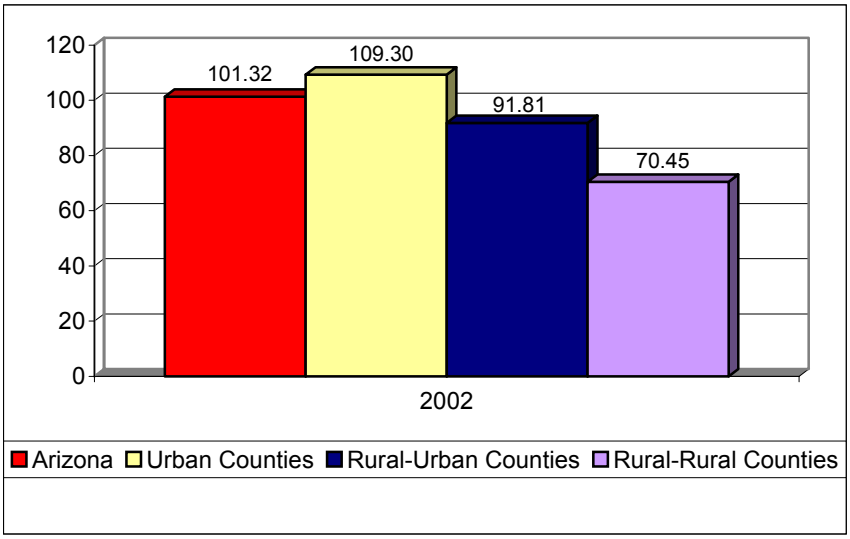
Source: Arizona State Board of Pharmacy.

Figure 18. Psychologists per 100,000 Population Profile for Arizona and Its Counties: 1997-2001



Source: Arizona Board of Psychologist Examiners.

Figure 19. Behavioral Health Professionals per 100,000 Population Profile for Arizona and Its Counties: 2002



Source: Arizona Board of Behavioral Health Examiners.

Health Care Facilities and Telemedicine Characteristics

The rural health care facility infrastructure described in this section includes the managed care system, primary care health facilities (e.g., community health centers, rural health clinics, school-based health centers, public health facilities and clinics), hospitals, mental health facilities, pharmacies and telemedicine sites.

Managed Care System: Arizona is one of the United States' most aggressive and competitive health care marketplaces. Much of the development of managed care delivery systems can be traced back to the State's successful efforts during the past two decades to implement the State's Medicaid demonstration, Arizona Health Care Cost Containment System (AHCCCS). In 1982, incorporating the philosophies of managed care into a publicly funded health program, Arizona became the first state in the country to provide care to indigent, Medicaid eligible populations through primary care gatekeepers who worked under the auspices of organized networks of hospitals and physicians, coordinating care to patients.

While managed care products were available in the state in the early 1980s, market penetration was limited. In the years 1994 to 1999 the percentage of Americans with employment-based coverage slowly increased. This was also the situation in Arizona. Most of the increases in private health insurance coverage during this time period could be explained by increased employment, rising wages and incomes, shifts to full-time employment, and increased education. In addition to the increase of employer-sponsored managed care (MC) plans, the expansion of commercial MC products that targeted seniors (Medicare HMOs), small employers, and rural residents contributed to the increase in managed care enrollments. As a result of these changes in the private health care marketplace, Arizona placed among the top states in terms of the number of persons who received health care coverage through managed care plans.

The dominance of commercial and public managed care plans (e.g., AHCCCS and KidsCare) in the Arizona health care market has resulted in the formation of numerous organized networks of physicians (e.g., Physician Group Practices and Individual Practice Associations) in the state. Most of these occur in the urban areas, but there are both formal and informal networks of physicians in rural areas. There are still a few rural physicians whose practices are not 100 percent contracted managed care plans.

In spite of changes in the health care market place such as a reduction in the number of MC plans and product offerings and the rise and fall of Medicare HMOs, Arizona remains as one of the top managed care-penetrated state in the country. Most of the managed care products are offered in the urban centers where most of the state's physician offices and group practices, medical facilities, and hospitals are located. In the rural areas of the state, managed care plan options are very limited. It is not usual for a rural physician to contract with multiple MC plans.

Community Health Centers: One of the federal government's major initiatives to increase access to health care is the expansion of Federal Qualified Community Health Centers (FQCHCs). The Arizona Association of Community Health Centers has developed a five-year plan to expand the number of FQCHCs in the state. Community Health Centers (CHCs) provide care for low-income individuals in medically underserved areas. CHCs are public or private non-profit organizations that provide primary and preventive health care services. Unlike CHCs, FQCHCs receive federal grant funding under section 330 of the Public Health Service Act in which they are required to provide a sliding-fee-scale for their services and must provide care to everyone, regardless of their ability to pay. In addition, FQHCs receive higher Medicaid and Medicare reimbursement levels for heath care provided. In 2002, there were several Arizona Counties that did not have a FQCHC. These included: Apache, Gila, Graham, Greenlee, La Paz, and Yavapai—all in the rural-rural counties). Map 3 shows the locations of the FQCHC main facilities and their satellites in 2003.

Rural Health Clinics: In 2002, there were only six Rural Health Clinics (RHCs) in Arizona. Five were located in Apache County and the sixth one was located in Gila County. These clinics are located in an area designated as a health professional shortage area (HPSA) or a medically underserved area (MUA). Unlike FQCHCs, RHCs are not eligible to receive federal grant funding under section 330 of the Public Health Service Act, but they are eligible for various federal grants such as the Rural Health Outreach Grant Program. RHCs are not required to provide services on a sliding-fee-scale, but are required to provide outpatient primary medical care services. They receive higher reimbursement levels from Medicaid and Medicare for health care services rendered.

School-Based Health Centers: During the 2000-01 school year, School-Based Health Centers (SBHCs) delivered over 27,000 medical visits to over 14,000 Arizona children[30]. These visits included comprehensive, low-cost services including well childcare, immunizations, medical care for acute and chronic illness and injury, and dental services. In 2002, most of the School-Based Health Centers were located in the two urban counties (Maricopa - 76 and Pima -7). There were five SBHCs in the two rural-urban counties (Cococino -2 and Yuma – 3). Of the 11 rural-rural counties, there were 4 counties that had at least one SBHCs (9).

Map 3. Federal Community Health Centers Locations for 2003

Source: Arizona Association of Community Health Centers

Public Health Facilities and Clinics: In each of the 15 Arizona counties, there is a county health department. The county health department and its clinics provide a variety of health services to the public (e.g., immunizations, family planning, prenatal care, nutrition education, WIC, child well visits, and oral health) as part of the state's medical safety net. In addition to the main public health facility, 11 of the county health departments had clinics in 2002.

Most tribes also operate health departments. Tribal health departments provide wellness, preventive health programs and services such as diabetes prevention and maternal and child health. They also provide alcohol/substance abuse, mental health, social services, in-home health, environmental health, and injury prevention departments. Some tribes operate public health nursing programs.

Hospitals: In 2002, there were 74 acute care hospitals in Arizona. These included the federal (IHS, VA, and military) hospitals in the state. As expected, the majority of the hospitals and beds were located in the two urban counties (Maricopa—31 and Pima—10). There were five hospitals located in the rural-urban counties (Coconino—3 and Yuma—2).

One of the major challenges for small rural hospitals is maintaining financial stability. To assist small rural hospitals to improve their financial viability and stability, the Medicare Rural Hospital Flexibility (Flex) Program was created by Congress (authorized under section 4201 of the Balanced Budget Act of 1997 (BBA), Public Law 105-33, and its amendment, the Balanced Budget Refinement Act of 1999). A key aspect of this program was the creation of a new designation for rural hospitals called Critical Access Hospitals (CAHs). Under the Flex Program,

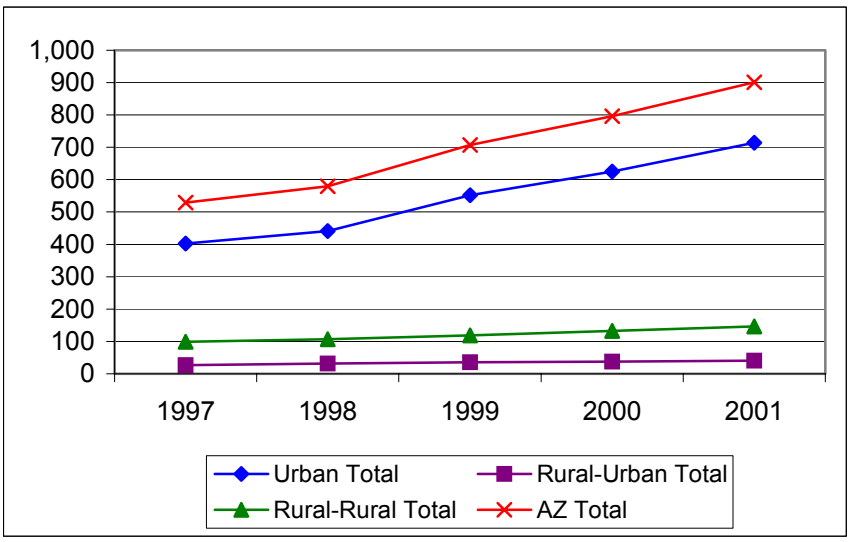
CAHs receive a cost-based reimbursement for services provided to Medicare beneficiaries. In Arizona, an additional reimbursement is provided to the CAHs for serving Medicaid (AHCCCS) patients. In 2002, there were six CAH's in Arizona, and this increased to 11 CAHs in 2003 (see Map 4).

Map 4. Arizona Critical Access Hospitals in 2003

Mental Health and Behavioral Health Facilities: In rural areas, the behavioral health facility infrastructure is very limited. For many families, access to behavioral health services in rural communities is a major challenge. In 2002, 78 percent of all the behavioral health facilities (678) were located in the two urban counties. The facilities included outpatient clinics, behavioral health residential treatment centers, psychiatric acute care hospitals, rural treatment centers, sub-acute agencies, transitional agencies, rural substance abuse transitional centers, adult foster homes, and others. Five percent of the facilities were in the two rural-urban counties, and 17 percent of the facilities were in the remaining 11 rural-rural counties.

Pharmacies: In 2001, there were 901 pharmacies in the state. This was an increase of 372 pharmacies (70%) between 2001 and 1997. However, 311 of the new pharmacies (84%) were in the two urban counties. Figure 18 shows the major disparity gap between the number of pharmacies in the two urban counties and the 13 rural counties during a five-year period.

Figure 18. Pharmacies Profile for Arizona and Its Counties: 1997 - 2001



Source: Arizona State Board of Pharmacy

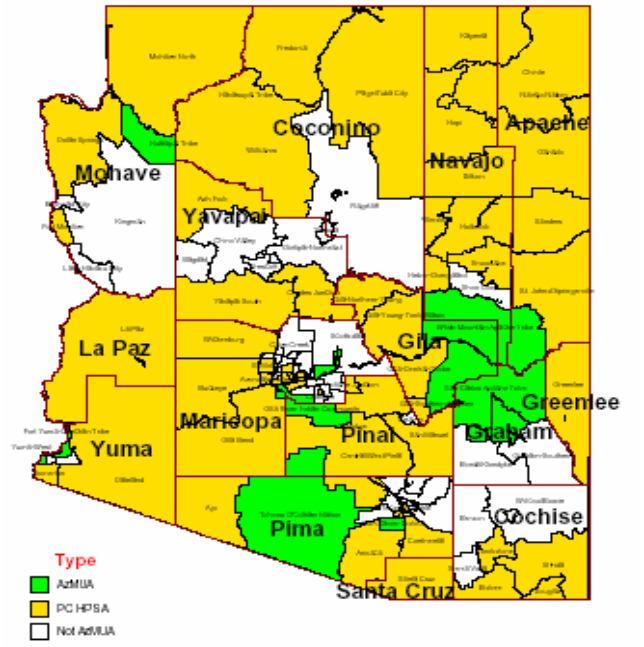
Telemedicine/Telehealth Sites: The Arizona Telemedicine Program is a statewide program intended to increase access to healthcare to all residents in Arizona using telemedicine technologies. The use of telemedicine reduces the need for rural patients and their families to travel to the urban centers for health services as well as enhancing the rural health infrastructure. The program's telecommunications network spans the entire state and serves as a hub for linking all the telemedicine networks in Arizona including the state prison's telemedicine network (for details refer to Map 5). Arizona's telemedicine network serves three functions: (1) health care delivery, (2) education and training, and (3) videoconference administrative meetings.

Medical Underserved Areas: Map 6 shows the Arizona Medically Underserved Areas (AzMUA) in the state. The AzMUA is a geographical designation that identifies areas as having a need for medical services on the basis of selected demographic data. These designations are important in determining funding eligibility for various rural programs. It should be noted that the AzMUA includes the Tohono O'odham, San Carlos Apache, White Mountain Apache, and Hualapai Reservations.

Map 5. Arizona Telemedicine Network System for 2003

Source: Arizona Telemedicine Program

Map 6. Medically Underserved Area Locations for 2003



Source: Arizona Department of Health Services

Rural Health Characteristics

Rural areas frequently pose different and, in some instances, greater challenges than urban areas in addressing a number of health care issues. There are rural-urban disparities in health conditions associated with particular preventable or chronic diseases and disparities in infrastructure or professional capacity to address health needs. There is ample evidence that some important rural-urban health disparities exist with respect to, for example, shortages of some types of primary care physicians (obstetricians and pediatricians), shortages of specialized mental health providers and oral health providers, prevalence of tobacco use and impaired driving, and delays in screening and diagnosis of cancer.

Rural Arizonans face a unique combination of factors that create disparities in health status and wellbeing when compared to urban areas. Particular conditions such as economic factors, cultural and social differences, education limitations, geographic isolation, lack of transportation systems, lack of access to specialty services, lack of health insurance, lack of adequate support to maintain quality of medical care, and limited rural health infrastructure present obstacles to both rural residents seeking services and providers who would deliver them. These conditions are often magnified on the U.S.-Mexico border as well as Indian communities and tribal reservations.

Rural Arizonans are more likely to be older (even though 26.6% of the state population is under 17 years of age - largest age group, and among Arizona tribes, over 10% of population are under age 5), poorer and less healthy than their urban counterparts. As a result, certain health care issues have become genuine crises in rural areas of the state including: cardiovascular disease, diabetes mellitus, mental health and mental disorders, oral health, tobacco use, substance abuse (including alcohol use), maternal/child health, nutrition and overweight, cancer screening and treatment, and older adult immunization rates. Even so, access to insurance to support health care continues to be a problem in rural areas—a problem associated with a lower paid workforce reliant upon small employers that are less likely than larger employers to offer health insurance. And although access to timely and effective primary care is deemed critical to avoiding hospitalizations for ambulatory care sensitive conditions, health workforce shortages and the recruitment and retention of primary care providers continue to be identified as major rural health concerns for Arizona. Emergency services, from first responders to ambulance and trauma services, are also in short supply in rural Arizona.

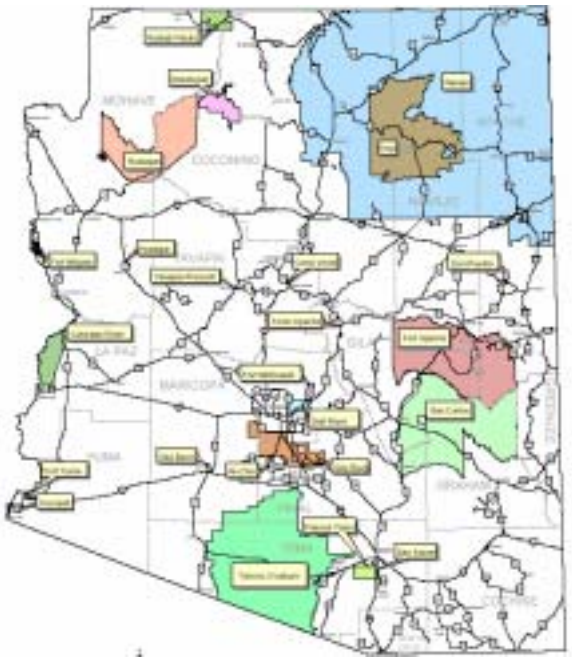
Of particular significance to rural Arizona is the consideration of the special characteristics of communities along the U.S.-Mexico Border. The border is defined as 62.5 miles or 100 kilometers north of the U.S.-Mexico Border international line. Four of Arizona's fifteen counties—Yuma, Pima, Santa Cruz, and Cochise—create a 350 mile border including 75 miles of the Tohono O'odham Reservation that are contiguous to Mexico. There are four American Indian tribes that reside in the four counties contiguous to the border. Only the lower most portions of Maricopa, Pinal, and La Paz Counties are also located within the 62.5 miles of the border. Of the 12 sister cities located on the U.S.-Mexico Border, three of them are in Arizona (Yuma/San Luis Rio Colorado, Nogales/Nogales, and Douglas/Agua Prieta).

Residents living along the U.S.-Mexico Border experience greater rates of communicable illnesses such as tuberculosis and vaccine preventable illnesses than other groups of people across the United States. Frequent movement of people between both countries and within the

U.S. has increased the potential for international spread of diseases and has created difficulties identifying affected populations. High rates of hepatitis and other intestinal infections, due to a lack of clean water and proper sewage disposal, are also a concern. The border region has a high prevalence rate of diabetes. Additionally, communities along the border area have some of the highest rates of poverty, unemployment, uninsured people, and lack of access to health care in the Nation.

Together, the 21 federally recognized American Indian tribes contribute to the rich cultural diversity of Arizona. Over 250,000 Native Americans (2000 Census) make up Arizona's population. Reservations and tribal communities comprise over a quarter of Arizona's lands and are located mostly in rural and frontier areas. (See Map 7.)

Map 7. Arizona's American Indian Tribes



Tribes in Arizona face numerous health challenges concerning both physical and mental health issues. Compared to other races, American Indian people have a higher incidence of diabetes, heart disease, certain cancers, tuberculosis, substance abuse, obesity, and violence. In contrast, the neo-natality mortality rate reported by IHS is slightly lower (4.4) than for the U.S. (4.8), all races. The growing tribal demand for diabetes care has placed a heavy burden on the Indian health care system.

A lack of culturally competent care delivered by different health care providers, inadequate funding for health care, and poor access to care compound the problems and make the solutions challenging to attain. Many of the cultural barriers to access to care for American Indians are the result of the colonial policies of the Nation's Westward expansion. Due to these policies, there

was a devastating undermining of Native American cultural traditions that foster wellbeing and that remain for the most part the fabric of communities. While some tribes are choosing to take control of their health care systems through options like 638[▽], for most Indian people, the health care they receive comes from a blend of Indian Health Service (IHS), state, local, and private providers and seamless access to care is still lacking. For example, the IHS and therefore tribes are only funded at 60 percent of need.

The *Primary Rural Health Areas Section* that follows addresses many of the health issues identified in this section related to accessibility, availability, and preventative services.

[▽] 638 refers to an agreement which states that tribes can operate a facility under a P.L. 93-638 self-determination contract (Title I) or self-governance compact (Title III). Currently, there is one tribal nation in Arizona – the Gila River Indian Community – which operates a 638 facility, and the Navajo Nation has three 638 pilot sites.

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III. Primary Rural Health Areas

The three primary rural health areas include:

A. Accessibility – ability to obtain needed health services.

The Accessibility section includes objectives related to:

- Access to Health Care
- Behavioral/Mental Health Services
- Emergency Medical Services and Urgent Care
- Lack of Transportation to Health Services

B. Availability – supply of health resources and services to meet the needs of the individual and community.

The Availability section includes objectives related to:

- Strengthen Statewide Infrastructure to Support an Adequate Rural Health Workforce
- Rural Health Care Workforce
- Recruitment and Retention of Rural Health Professionals
- Reimbursement for Rural Health Care Providers

C. Preventative Services – health programs that focus on the prevention of illnesses.

The Preventative Services section includes objectives related to:

- Rural Health Data
- Obesity
- Diabetes
- Substance Abuse
- Oral Health
- Immunization/Infectious Disease

How to use the following sections:

The following sections present the focus areas, objectives and strategies developed by the Rural Health Plan Advisory Committee for each primary rural health area. A measurable three-year target was developed for each objective. **The three-year targets can be quantified by cross-referencing the comparison data included in Appendix D of this document.** In some cases, the comparison data has yet to be collected. When this is the case, we have identified the likely sources of the data.

It should be noted that the state of Arizona has adopted additional objectives under Healthy Arizona 2010 that are not included in Healthy People 2010. The Plan attempted to include as many of the relevant Healthy Arizona 2010 objectives and strategies as possible. Some of the objectives and strategies were modified in order to be more reflective of the rural perspective.

■ A: Accessibility Focus Areas, Objectives, and Strategies

FOCUS AREA 1:	Access to Health Care [Healthy Arizona 2010 (HA)]	
Objective 1: [HA]	Increase the proportion of rural persons with health care coverage. Coverage includes both private health insurance and publicly funded health care coverage options (e.g., Medicare, Veteran Affairs, Tricare, Indian Health Service, and Safety Net Programs). *3-year target: Reduce 2002 rural uninsured percentage by 10%.*	
	Strategy 1.1: [HA]	Increase public awareness of the availability of publicly funded and commercial health care coverage options and how to access them.
	Strategy 1.2: [HA]	Simplify the eligibility and enrollment process for acquiring and maintaining publicly funded health care coverage. ▪ Increase assistance, at the local level, in the application process. ▪ Support the use of technology; e.g., the AHCCCS e-application.
	Strategy 1.3: [HA]	Expand benefit options under existing health insurance programs. ▪ Increase availability of affordable individual/small business health insurance options (e.g., HealthCare Group). ▪ Create more flexible insurance packages to improve affordability. ▪ Develop a coalition of health plans to offer low cost coverage to uninsured individuals and families.
	Strategy 1.4: [HA]	Create alternatives to existing health insurance programs. ▪ Support public/private partnerships to enhance coverage options. ▪ Develop a plan for individuals without group coverage to be covered under the health plans at the same rates as groups. ▪ Allow current insurers to do 'demonstration' type programs where creativity and flexibility are not so highly regulated and suppressed.

	Strategy 1.5:	Expand public support for health care coverage. ▪ Support universal health care coverage initiatives. ▪ Support legislation to develop a comprehensive medical care coverage program that everyone can obtain and afford. ▪ Raise eligibility for entitlement programs to cover more of the working poor. ▪ Obtain endorsements from the Chambers of Commerce to support tax credits to small businesses that offer AHCCCS healthcare group plans to their employees. ▪ Encourage state representatives to promote the expansion of AHCCCS to all children.
Objective 2:	Expand and strengthen the rural safety net (IOM definition on page on 19). ***3-year target**: Increase the 2002 number of persons covered by rural safety net by 10%.*	
	Strategy 2.1:	Develop a clear statement of the impact of the health care professional shortage and concern for the safety net for rural Arizona.
	Strategy 2.2:	Enhance safety net coverage and expansion of Federally Qualified Community Health Centers, rural health clinics, free or low cost clinics, and school-based health clinics.
	Strategy 2.3:	Identify several key legislative leaders to champion the concern for the safety net for rural Arizona and craft a bill for introduction.
Objective 3: HA	Increase the proportion of rural persons who have a specific source of ongoing care [medical home]. ***3-year target**: Increase the 2002 percentage of rural regular source of care by 10%.*	
	Strategy 3.1: HA	Increase public awareness of the importance of having a specific source of ongoing care and how to access services.
	Strategy 3.2: HA	Expand availability of sources of ongoing care.
Objective 4: HA	Increase the proportion of rural persons with access to clinical preventative services. ***3-year target**: Increase the 2002 rural preventative service usage by 10%.*	
	Strategy 4.1: HA	Increase public awareness of the importance of healthy lifestyles, clinical preventative service guidelines, and how to access preventative services.
	Strategy 4.2: HA	Increase provider knowledge of basic clinical preventative service guidelines, follow-up counseling, and funding.

	Strategy 4.3: [HA]	Increase promotion of and access to clinical preventative services through increases in funding and changes in policies and practices.
	Strategy 4.4: [HA]	Increase the availability of programs that provide clinical preventative services.
FOCUS AREA 2:	Behavioral/Mental Health Services	
Objective 1:	Greater access to Behavioral Health Services to all rural communities. *3-year target: Increase the 2002 number of behavioral health programs and services in rural-rural counties by 5%.*	
	Strategy 1.1:	Require mental health parity (equivalent coverage) of all commercial health plans and insurers.
	Strategy 1.2:	Provide tax incentives for behavioral health workers practicing in rural areas.
	Strategy 1.3:	Encourage changing loan payback to include behavioral health workers (e.g., psychiatrists).
	Strategy 1.4:	Increase staffing and resources for existing crisis hotlines.
	Strategy 1.5:	Increase funding to train behavioral health counselors at state and community colleges.
	Strategy 1.6:	Adopt a "train the trainer" model for behavioral health providers to ensure that providers have the necessary guidance in wellness for themselves.
Objective 2:	Improve Behavioral Health Infrastructure in rural areas. *3-year target: Increase the 2001 number of trained rural mental health workers by 5%.*	
	Strategy 2.1:	Develop a statewide rural behavioral health needs assessment to determine what is needed and where in rural areas.
	Strategy 2.2:	Restore state funding for mental health services to be provided on a sliding fee scale to adults who are not seriously mentally ill or eligible for Medicaid or KidsCare.
	Strategy 2.3:	Develop a strategic plan for mental health integration (e.g., community health centers).
	Strategy 2.4:	Encourage the development of more Tribal Regional Behavioral Health Authorities with the understanding that part of the scope of work is to assist the development of on-reservation behavioral health and mental health providers and facilities and third party billing capabilities.

Objective 3:	Promote integration of primary care and behavioral health services in rural areas. *3-year target: Increase the 2002 number of rural Federal Qualified Community Health Centers with behavioral health services by 3.*	
	Strategy 3.1:	Educate primary health care providers on holistic approaches to health care.
	Strategy 3.2:	Partner with Regional Behavioral Health Authorities (RBHAs), community health centers, community colleges and community agencies to screen and refer for behavioral health issues and services.
FOCUS AREA 3:	Emergency Medical Services and Urgent Care	
Objective 1:	Reduce the proportion of rural persons who delay or have difficulty in getting emergency medical care. *3-year target: Increase the number of facilities in rural areas that provide 24-hour emergency response by 3.*	
	Strategy 1.1:	Expand the State Trauma Advisory Board (STAB) role to conduct a survey of all communities in the state that lie further away from Emergency Room/Urgent Care services than forty-five minutes' response time and develop a strategic plan.
	Strategy 1.2:	Identify the facilities that could be made available on a 24-hour basis and the medical personnel and ancillary staff that could cover these facilities by agreeing to rotate assignments.
	Strategy 1.3:	Expand urgent care.
	Strategy 1.4:	Develop new and different approaches to responding to urgent needs in rural communities.
Objective 2:	Increase the proportion of rural persons who have access to rapidly responding pre-hospital emergency services. *3-year target: Identify the unmet need.*	
	Strategy 2.1:	Support rural EMS systems evaluation.
	Strategy 2.2:	Interview 911 operators and ask them to identify the gaps and difficulties they encounter in responding to calls. Use this information to address the difficulties and expand capabilities.
	Strategy 2.3:	Build Information Technology (IT) communication network with emergency responders.
Objective 3:	Increase the rural availability of risk appropriate urgent care. *3-year target: Increase the 2002 number of rural urgent care sites by 3.*	
	Strategy 3.1:	Train EMS and urgent care staff in behavioral health assessment.

	Strategy 3.2:	Train EMS and urgent care staff in infectious disease response, especially bioterrorism.
	Strategy 3.3:	Carry out simulation exercises to test infectious disease response system.
FOCUS AREA 4:	Lack of Transportation to Health Services	
Objective 1:	Reduce the need for transportation to health services by using technological options that can provide the services directly to rural residents. *3-year target: Increase the 2002 number of rural telemedicine sites by 3.*	
	Strategy 1.1:	Expand and enhance telemedicine.
	Strategy 1.2:	Bring physicians and specialists to rural areas through technology.
	Strategy 1.3:	Urge rural physicians and mid-level providers to use telemedicine technology when it is accessible to them.
	Strategy 1.4:	Train rural practitioners in the use of telemedicine technology.
	Strategy 1.5:	Find creative ways to reduce the cost to the carrier in order to avoid costs being passed to the consumer.
	Strategy 1.6:	Loosen the restrictions and regulations enough to attract new carriers to rural areas.
	Strategy 1.7:	Include telecommunications infrastructure as a key component of all economic development plans to ensure adequate technology at a reasonable cost in support of telemedicine networks.
	Strategy 1.8:	Leverage federal funding for telemedicine and distance learning projects whenever possible.
	Strategy 1.9:	Seek grant opportunities to meet the financial requirements to provide the service.
	Strategy 1.10:	Advocate for revisions in the Medicare and other payers' billing systems to make higher reimbursements possible for rural practitioners performing telemedicine consults.
Objective 2:	Reduce the need for transportation to health services by providing mobile/ community-oriented services directly to rural residents. *3-year target: Increase the 2002 number of rural persons covered by these programs by 5%.*	
	Strategy 2.1:	Expand and enhance mobile clinics, van services, and community health workers service capacities in rural areas.
	Strategy 2.2:	Encourage the billing for these services to AHCCCS.

	Strategy 2.3:	Advocate for health policy that will allow the billing for these services to insurance companies.
Objective 3:	Improve the rural transportation infrastructure. *3-year target: Increase the 2002 percentage of rural residents served by a public transportation system by 5%.*	
	Strategy 3.1:	Participate with the Arizona Department of Transportation "United We Ride" project and support statewide development of transportation infrastructure.

■ B: Availability Focus Areas, Objectives, and Strategies

FOCUS AREA 1:	Strengthen Statewide Infrastructure to Support an Adequate Rural Health Workforce.	
Objective 1:	Adopt consistent statewide definition of "rurality." *3-year target: Adopt new rurality definition.*	
	Strategy 1.1:	Review existing definition of rurality in state statute (A.R.S. 36-2171) and adopt a standard definition of rurality.
Objective 2:	Increase funding levels to support the statewide infrastructure. *3-year target: Increase the 2004 state budget for rural health activities by 5%.*	
	Strategy 2.1:	Analyze state budget to determine areas where the total percentage allocated for rural health activities can provide positive outcome results.
	Strategy 2.2:	Determine the economic benefits of the health care workforce in rural communities and advocate for continued and expanded support.
	Strategy 2.3:	Work to increase funding opportunities for health professional programs that promote and support rural health.
	Strategy 2.4:	Work to increase funding opportunities for payback of loans of health professionals who want to practice in rural areas.
	Strategy 2.5:	Support funding of rural health activities.
Objective 3:	Coordinate resources for rural health care. *3-year target: Increase the 2002 number of rural health networks by 3.*	
	Strategy 3.1:	Coordinate partnerships with community/IHS/tribal hospitals, Federally Qualified Community Health Centers, rural health clinics to provide rural practice opportunities with little or no overhead requirements for the health professional to encourage expansion of services into economically challenged areas.
	Strategy 3.2:	Improve coordination of programs working on health care issues through networks.
	Strategy 3.3:	Conduct annual rural health conference and legislative forum, as well as rural health roundtable events, teleconferences and other forums for the purpose of coordinating rural health resources.

FOCUS AREA 2:	Rural Health Care Workforce	
Objective 1:	Recognize and promote the advantages of rural living and health care provision. *3-year target: Establish a rural health promotional pamphlet.*	
	Strategy 1.1:	Educate constituents at all levels (city, county, and state), promoting public discussion about the need for rural health care.
	Strategy 1.2:	Work on statewide (legislative) and local re-prioritization of expenditures, moving AZMUAs to the top of the priority list.
	Strategy 1.3:	Increase local governments' willingness to invest in incentive and retention programs for rural health care workers.
	Strategy 1.4:	Work to effect systemic change at the legislative/policy level through involvement in statewide commissions and local boards of health, education of local constituencies, and support of rural health care professional-friendly policies.
	Strategy 1.5:	Work with local Chambers of Commerce and other groups to promote the region as a whole, potentially with the goal of recruiting retired health care professionals for part-time work.
Objective 2: HA	Increase the geographical/cultural competency, and geographical/cultural sensitivity of health care providers and other staff working in rural and minority communities. *3-year target: Establish a rural geographical and cultural competency training manual.*	
	Strategy 2.1: HA	Identify best rural practices related to increasing the geographical/cultural competency and geographical/cultural sensitivity of health care providers.
	Strategy 2.2: HA	Increase availability of and participation in continuing education that promotes geographical/cultural competency and geographical/cultural sensitivity for health care providers working in rural, U.S.-Mexico border, tribal, and minority communities.
	Strategy 2.3: HA	Increase availability of and participation in training that promotes geographical/cultural competency and geographical/cultural sensitivity among students in health care professional education programs.
	Strategy 2.4: HA	Increase the number of rural and minority students in the health care professions in order to promote greater attention to and understanding of issues related to geographical/ cultural competency and geographical/cultural sensitivity in health care education and practice.

	Strategy 2.5:	Increase rural and minority community commitment and involvement in addressing its health concerns in order to improve community health status.
Objective 3:	Increase the state retention rate of Arizona graduates from health professional programs. ***3-year target**: Increase the 2002 number of health professional graduates staying in Arizona by 5%.*	
	Strategy 3.1:	Work with health professional education programs to send more students to the rural areas including border and Indian reservations for internship opportunities or rotations in clinics to provide exposure to rural opportunities.
	Strategy 3.2:	Build rural linkages and develop affiliation agreements with schools, colleges, tribes, and residency programs in Arizona.
	Strategy 3.3:	Establish rural teaching track for senior-level residents (particularly primary care). Develop a collaborative model to allow senior-level residents to practice in ambulatory medical care settings while being supervised via distance learning technologies. Establish the model infrastructure and secure agreement from CMS (Centers for Medicare & Medicaid Services) as well as accreditation bodies.
FOCUS AREA 3:	Recruitment and Retention of Rural Health Professionals	
Objective 1:	Improve rural retention of specific health professional types by a certain percentage. Increase rural recruitment of specific health professional types of 3-year targeted shortage areas by a certain percentage. ***3-year target**: Increase the 2001 number of selected rural health professionals by 5%.*	
	Strategy 1.1:	Conduct a survey of the present workforce to accurately define how many graduates in each category of health field will be needed in rural areas within the next decade.
	Strategy 1.2:	Increase statewide efforts to address rural retention dynamics – pay, physician relations, mandatory overtime, etc.
	Strategy 1.3:	Examine the possibility of expanding selected practitioner health care roles and the reimbursement of health services provided by these health practitioners (e.g., Nurse Practitioners, Physician Assistants, Pharmacists, and Emergency Technicians).
	Strategy 1.4:	Identify, document, and review organizations and programs involved in recruitment and retention of health care providers in rural areas (including border and IHS/tribes), and workforce development activities. ▪ Look at national, state, and local models.

Objective 2:	Increase the incentives to attract health care providers to rural areas. *3-year target: Establish 3 rural recruitable communities.*	
	Strategy 2.1:	Explore and implement recruitable community model.
	Strategy 2.2:	Provide regional in-services and continuing education from medical schools out to rural settings via telemedicine or in-person visits for those practicing in rural environments.
	Strategy 2.3:	Give tax incentives for rural practice - for example, no state taxes on income if one works in a rural area for the first 5 years.
	Strategy 2.4:	Advocate expansion of J-1 visas in rural areas.
	Strategy 2.5:	Increase availability and publicity of scholarships and other opportunities (e.g., loan repayment, offsetting of malpractice insurance, and practice or/and housing subsidy) for those who will commit to practice in rural communities.
	Strategy 2.6:	Improve rural hospital working conditions for health professionals (e.g., promote patient safety quality assurance measures).
	Strategy 2.7:	Improve rural compensation to be competitive with other areas.
	Strategy 2.8:	Provide updated equipment and technology (e.g., computers) in rural areas.
	Strategy 2.9:	Implement recruitment and retention bonuses for rural clinical positions.
	Strategy 2.10:	Implement a Continuing Medical Education (CME) reimbursement plan of up to $2,000 annually.
	Strategy 2.11:	Link state residency programs support to rural needs. Provide stipends to specialists to practice in rural areas to support the needs of primary care providers and patients.
Objective 3:	Increase the community commitment in recruitment and retention of health care professionals. *3-year target: Identify 10 rural communities that have demonstrated commitment in recruitment and retention of health care professionals.*	
	Strategy 3.1:	Promote the understanding of the economic impact of the health care sector on rural communities.
	Strategy 3.2:	Engage communities and private enterprise in supporting recruitment of health professionals to improve community economic standing.

	Strategy 3.3:	Work in the community to provide social support for new rural health care providers.
	Strategy 3.4:	Increase education programs that use distance learning, web-based, and self-paced learning approaches wherever possible so rural students don't have to leave their homes and local areas to gain training and certification.
	Strategy 3.5:	Work with rural including border and tribal reservations, middle schools and high schools to increase pipeline of rural students into health care professions.
	Strategy 3.6:	Recruit and train local people to become nurse and health aides.
	Strategy 3.7:	Work with the existing community college system, including Tribal community colleges, to develop and implement a health careers curriculum that trains and certifies persons in health care.
	Strategy 3.8:	Examine tuition levels and provide low cost loans, scholarships, and subsidies to allow more health professional students to complete the courses rather than dropping out due to inability to sustain expenditures. Also provide other support such as childcare programs for full-time health professional students.
	Strategy 3.9:	Establish health professional training in community colleges, university extensions, and continuing education programs in coordination with Area Health Education Centers (AHECs).
Objective 4:	Increase malpractice insurance availability in rural areas (e.g., OB/GYN coverage). *3-year target: Increase the 2004 OB/GYN malpractice insurance rural coverage by 5%.*	
	Strategy 4.1:	Promote the collaboration among the Arizona Rural Health Association, Arizona Hospital and Health Care Association, health care professional organizations, other interested parties, and legislators to address the issue of malpractice insurance availability in rural areas.
FOCUS AREA 4:	Reimbursement for Health Care Providers in Rural Areas	
Objective 1:	Better federal geographical reimbursement adjustments for rurality. *3-year target: Increase the 2003 rural reimbursement rates by 5%.*	
	Strategy 1.1:	Encourage the Centers for Medicare and Medicaid Services to change rural payment rate (e.g., physicians, clinics, hospitals, nursing homes, and IHS and 638 tribal facilities).

	Strategy 1.2:	Encourage the Centers for Medicare and Medicaid Services to pay for uncompensated care of undocumented persons to border health care providers at a reasonable reimbursement rate.
Objective 2:	Increase state rural reimbursement adjustments. *3-year target: Increase the 2003 rural reimbursement rates by 5%.*	
	Strategy 2.1:	Coordinate providers and associations to advocate for the need for rural reimbursement adjustments.
	Strategy 2.2:	Educate AHCCCS and commercial payers that it costs more to deliver the same level of quality, quantity, and specialization in rural areas than in urban areas.
	Strategy 2.3:	Use prospective rather than retrospective actuarial tables for rural cost and rate determination.
	Strategy 2.4:	Reform AHCCCS funding ratios for rural areas.
	Strategy 2.5:	Provide better diagnosis related group (DRG) training to rural hospitals regarding the effects of ICD - 9CM and CPT 4 coding on reimbursement. Increase accessible training to rural providers regarding reimbursement, billing, and other financial issues.

■ C: Preventative Services Focus Areas, Objectives, and Strategies

FOCUS AREA 1:	Rural Health Data	
Objective 1:	Enhance the sharing of health data. *3-year target: Expand the SBRHRC Arizona Rural Health Dataline Website.*	
	Strategy 1.1:	Identify existing data sharing agreements.
	Strategy 1.2:	Increase collaboration among agencies including IHS/tribes with regard to data sharing.
Objective 2:	Develop a standardized statewide data surveillance system that will monitor health status in rural areas. *3-year target: Establish a rural health surveillance system.*	
	Strategy 2.1:	Identify existing data surveillance systems.
	Strategy 2.2:	Increase collaboration among agencies including IHS/tribes that collect rural health data.
	Strategy 2.3:	Support the Rural Health Office's efforts in maintaining and expanding the Southwest Border Rural Health Research Center (SBRHRC) Arizona Rural Health Dataline Website.
FOCUS AREA 2:	Obesity	
Objective 1:	Decrease obesity in rural Arizona by placing more emphasis on primary and secondary prevention. *3-year target: Reduce the 2002 proportion of rural adults who are obese by 5%.*	
	Strategy 1.1:	Establish more public awareness of the relationship between obesity and illness.
	Strategy 1.2:	Use "Steps to a Healthier Arizona" as a statewide model to train lay community leaders or leaders in public health on primary and secondary prevention that will reduce the rural obesity rate. ▪ Garner support of policy makers to address the obesity epidemic. ▪ Increase activities geared for community participation, including walking clubs, health clinics, community fitness challenges, and healthy eating classes/activities. ▪ Increase health education activities in county health departments and community health centers.
	Strategy 1.3:	Support the on-going efforts already being initiated by the tribes.
	Strategy 1.4:	Review environments in specific communities to identify ways to improve the safety and usefulness of already existing physical activity facilities.

	Strategy 1.5:	Educate rural health care professionals, school personnel, and other "gatekeeper" groups about obesity and the importance of good nutrition.
	Strategy 1.6:	Provide incentives for rural schools to eliminate unhealthy snacks and promote healthy snacks (e.g., salads).
	Strategy 1.7:	Increase state funding for physical education in rural schools.
	Strategy 1.8:	Encourage rural employers to support fitness programs that may lead to lower health insurance premiums.
	Strategy 1.9:	Increase access to fruits and vegetables through grocery stores, work sites, schools, places of worship, farmers' markets, and community gardens.
FOCUS AREA 3:	Diabetes	
Objective 1:	Monitor rural diabetes trends, diabetes program activities, and progress of diabetes control efforts. *3-year target: Enhance the statewide diabetes surveillance system.*	
	Strategy 1.1:	Continue to track (i.e., data collection and analyses) age-specific diabetes prevalence rates including IHS/tribal data.
	Strategy 1.2:	Continue to track (i.e., data collection and analyses) programs in the state that are actively involved in preventing and controlling diabetes.
	Strategy 1.3:	Identify the data collection systems in Arizona and establish a collaborative relationship effort.
	Strategy 1.4:	Expand data collection systems that would serve as a registry for patients with diabetes.
Objective 2:	Identify individuals living in rural areas who may be at risk for diabetes. *3-year target: Identify the number of potential rural diabetics.*	
	Strategy 2.1:	Identify rural populations at risk for diabetes.
	Strategy 2.2:	Screen both rural adults and children for diabetes at various sites, such as health fairs, schools and clinics, on a routine basis.
	Strategy 2.3:	Educate all rural doctors and health care providers to identify and provide treatment and education for pre-diabetes.
Objective 3:	Increase the number of rural health providers who will adhere to all of the standards of care recommended by the American Diabetes Association. *3-year target: Increase the 2004 rural health provider adherence level by 5%.*	
	Strategy 3.1:	Enhance rural diabetes detection efforts to identify those undiagnosed.

	Strategy 3.2:	Increase rural health provider diabetes control efforts.
	Strategy 3.3:	Support the on-going efforts already being initiated by the tribes per their Federal Special Diabetes Prevention funding.
Objective 4:	Increase self-management levels for rural people living with diabetes. *3-year target: Increase the 2002 rural self-management levels by 5%.*	
	Strategy 4.1:	Provide rural health education on diabetes and its management including dental care.
	Strategy 4.2:	Increase rural diabetes treatment compliance (e.g., medication, diet, exercise, and self-monitoring).
FOCUS AREA 4:	Substance Abuse Healthy Arizona 2010 [HA]	
Objective 1: [HA]	Reduce rural mortality related to substance abuse (alcohol use and drug abuse). *3-year target: Reduce the 2001 rural rate by 5%.*	
	Strategy 1.1: [HA]	Continue Arizona Department of Health Services' (ADHS) involvement in collaborative planning, funding, and system coordination through the Governor's Strategic Plan for Substance Abuse and the Governor's Drug and Gang Policy Council.
	Strategy 1.2: [HA]	Reduce the rural entry barriers to improve rapid access to treatment and 3-year targeted outreach to vulnerable AOD (alcohol and other drugs) populations (disabled, ethnic minorities, HIV infected individuals, and women with children).
	Strategy 1.3: [HA]	Continue ADHS involvement in Substance Abuse Consortia to improve and promote evidence-based AOD treatment and effective treatment systems.
	Strategy 1.4:	Support tribal outreach and health education efforts in substance abuse.
	Strategy 1.5:	Encourage an increase in federal funding for tribal alcohol and substance abuse programs.
Objective 2: [HA]	Reduce the rural percentage of alcohol-related traffic fatalities. *3-year target: Reduce the 2002 rural rate by 5%.*	

	Strategy 2.1: [HA]	Launch a public / private initiative in partnership with Mothers Against Drunk Drivers (MADD), and ADHS / Emergency Medical Services (EMS), tribal government, and Indian Health Service to improve public awareness and identification of impaired drivers. The initiative will involve local police departments in rural areas statewide. The 3-year target populations will be: 1) underage drinkers, 2) chronic re-offenders, and 3) impaired drivers.
FOCUS AREA 5:	Oral Health Healthy Arizona 2010 [HA]	
Objective 1: [HA]	Increase the proportion of rural residents served by community water systems with optimally fluoridated water. *3-year target: Increase the 2002 rural percentage by 5%.*	
	Strategy 1.1: [HA]	Promote water fluoridation in Arizona rural communities, including tribal reservations.
	Strategy 1.2:	Conduct inventory of what currently exists and what the tribal policies are on water fluoridation.
Objective 2: [HA]	Reduce the proportion of rural children who have ever had tooth decay (measured at preschool and elementary levels). *3-year target: Reduce the 2002 rural percentage for ages 2-4 and 6-8 by 5%.*	
	Strategy 2.1: [HA]	Increase education of all rural health professionals on the importance of oral health.
	Strategy 2.2: [HA]	Increase rural public education on the importance of oral health.
	Strategy 2.3: [HA]	Expand the state-sponsored dental sealant program statewide.
	Strategy 2.4:	Encourage Health Resources and Services Administration (HRSA) to fund health facilities that include dental services.
	Strategy 2.5:	Support outreach services to enroll more American Indian children into the AHCCCS programs in order to increase access to dental services.
Objective 3: [HA]	Reduce the proportion of rural children who currently have untreated tooth decay (measured at preschool and elementary levels). *3-year target: Reduce the 2002 rural percentage for ages 2-4 and 6-8 by 5%.*	
	Strategy 3.1: [HA]	Educate rural health professionals on appropriate early oral assessments, diagnosis, referrals, and treatments for children.
	Strategy 3.2: [HA]	Increase education of rural health professionals on importance of early oral assessments, diagnosis, appropriate referrals, and treatments for children.

	Strategy 3.3: [HA]	Increase dental providers in underserved areas of the state.
	Strategy 3.4:	Provide dental screenings to all children in schools.
	Strategy 3.5: [HA]	Promote rural enrollment in, and utilization of, publicly funded dental insurance programs.
FOCUS AREA 6:	Immunization/Infectious Disease Healthy Arizona 2010 [HA]	
Objective 1: [HA]	Increase the proportion of older adults living in rural areas who are vaccinated annually against influenza and have ever been vaccinated against pneumococcal disease. *3-year target: Increase the 2002 influenza and pneumococcal pneumonia rural percentages by 5%.*	
	Strategy 1.1: [HA]	Enhance and expand the promotion of pneumococcal polysaccharide vaccine (PPV) and influenza vaccinations for persons living in rural areas who are 65 and older, and for those with chronic conditions (e.g., diabetes).
	Strategy 1.2: [HA]	Increase (incrementally) the accessibility of PPV and influenza vaccinations to persons living in rural areas who are 65 and older with appropriate safe guards through the following steps: ▪ Support Legislative initiatives to permit pharmacists to vaccinate adults. ▪ Encourage fire departments to vaccinate adults in neighborhood clinics. ▪ Promote the use of emergency medical technicians to provide vaccinations in rural areas. ▪ Support funding for hospitals to vaccinate any unvaccinated person 65 or older who is admitted or seen in an emergency room.
	Strategy 1.3:	Support on-going rural, tribal, and border health promotion/disease prevention activities and outreach and health education efforts.
Objective 2:	Increase the rural proportion of health care providers who are vaccinated annually against influenza. *3-year target: Increase the 2004 rural health care provider immunization rate by 5%.*	
	Strategy 2.1:	Encourage policy change that necessitates rural health care facilities require all health care staff to be immunized.

▪ Appendix A: Rural Health Plan Advisory Committee Membership

Amanda Aguirre, MA, RD	Western Arizona Area Health Education Center and Arizona State Legislature
Sarah Allen	Canyonlands Community Health Care
Michael Allison, MPH	Office of Health Systems Development, Arizona Department of Health Services
Jack Beveridge, MA	Pinal Gila Behavioral Health Association
Jennifer Burns, JD	Arizona State Legislature
Joseph Coatsworth	Arizona Association of Community Health Centers
Chris Cronberg	Northern Cochise Community Hospital
Don Davis	Phoenix Area Indian Health Service
Dale Decker	Wickenburg Regional Medical Center
Merlin (Monte) K. DuVal, MD	DHEW Assistant Secretary of Health (former)
Elsie Eyer	Arizona Public Health Association
Edie Faust	Arizona Rural Health Association
Susan Gerard	Arizona Governor Staff Policy Advisor, Health/Human Services
Michal Goforth	El Rio Community Health Center
Michael Grossman, MD, MACP	Phoenix Area Medical Education Consortium, University of Arizona
Karen Halverson	Southeast Arizona Area Health Education Center
Scott Hamblin, MD	Mountain Avenue Clinic, Springerville, Arizona
Fred Hubbard	White Mountain Apache Tribe
Rhonda Johnson, DrPH, CFNP	College of Health Professions, Northern Arizona University
Debbie Johnston	Arizona Hospital and Healthcare Association
Roni Kerns, RN	Central Arizona Health Education Center Board of Directors
John R. Kittredge, MD	Tucson Area Indian Health Service
John Lewis	Inter-Tribal Council of Arizona
Thomas McWilliams, DO	Arizona College of Osteopathic Medicine, Midwestern University
Jennie Mullins, MPH	Mel and Enid Zuckerman Arizona College of Public Health, University of Arizona
Linda Nelson, MPH	Mountain Park Health Center
Jane Pearson	St. Luke's Health Initiatives
Ken Poocha	Arizona Association of Community Health Centers
Phyllis Primas, PhD, RN	College of Nursing, Arizona State University
Sally Reel, PhD, CFNP	College of Nursing, University of Arizona
Anslem Roanhorse	Navajo Division of Health
Ann Roggenbuck , PhD, MPH	North County Community Health Center
Anna Shane	Arizona Health Care Cost Containment System
Art Silvers, PhD	School of Public Administration and Policy, Eller College of Business and Administration, University of Arizona
Patricia Tarango	Office of Health Systems Development, Arizona Department of Health Services
Barbara Worgess	Coconino County Department of Health Services

Rural Health Office, University of Arizona Mel and Enid Zuckerman College of Public Health
Lynda Bergsma, Juana Casillas, Howard Eng, Joyce Hospodar, Alison Hughes, Julie Jacobs, Jim Laukes, Jennifer Peashock

▪ Appendix B: Delphi Study Results

A two-phase Delphi study conducted by the Southwest Border Rural Health Research Center, Rural Health Office, University of Arizona Mel and Enid Zuckerman College of Public Health was used to identify health issues encountered in rural Arizona, as well possible strategies to address these issues. The Delphi Study was used in conjunction with other information to identify rural health issues that are addressed in the Arizona Rural Health Plan. Rural health experts throughout the state were invited to participate in the study. In the first phase, the study respondents identified specific rural health issues they felt needed to be addressed in the next three years. First phase respondents who agreed to participate in the second phase of the Delphi Study were sent a second survey. During this second phase of the study, the respondents identified their choice of the top five rural health issues, selected from the fifteen top ranked issues identified in the first phase, as well as specific outcomes (objectives) and the strategies to accomplish those outcomes. Figure 1 summarizes the Delphi Study process.

Study Participants: The Delphi Study Phase I survey was distributed to those attending the Rural Health Conference in July 2003 (210 individuals attended the conference). The Rural Health Office (RHO) staff and the Rural Health Plan Advisory Committee (RHPAC) identified 149 additional persons considered knowledgeable about rural health issues. These included: Arizona Health Education Center directors, community health center directors, county health department directors, rural community and tribal hospital directors, Arizona Rural Health Association board members, Arizona Regional Behavioral Health Authority administrators, Arizona tribal health directors, Emergency Medical Service Regional Council members, and Small Rural Hospital Improvement Grant Program (SHIP) Hospital directors. To ensure that rural representatives throughout the state would participate in the Delphi Study, an invitation to participate in the study was e-mailed to all those who were on both the RHO Rural Health Briefing Newsletter (approximately 600) and the Arizona Rural Health Association Newsletter (approximately 300) listservs. These two listservs do overlap in their membership lists. The Delphi Study Phase II survey was e-mailed to those who completed and returned the Delphi Study Phase I survey and indicated that they would be willing to participate in the next phase of the study.

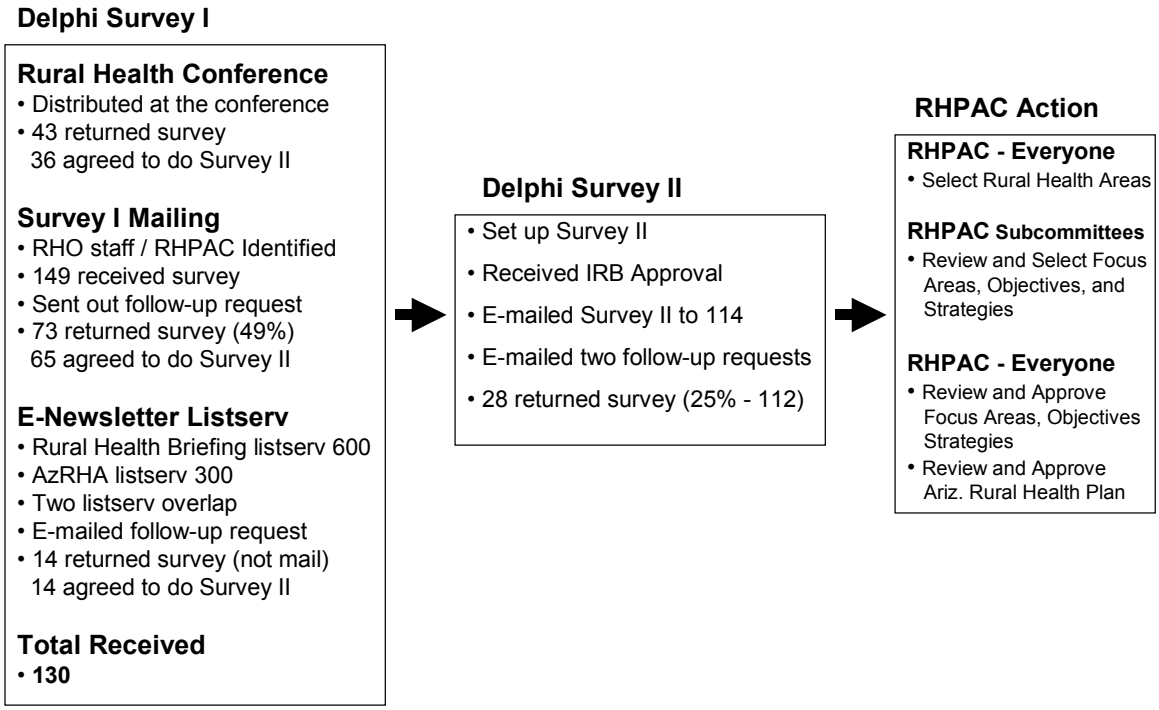
Data Collection: Both phases of the Delphi Study surveys were pilot-tested and received approval from the University of Arizona Human Subjects Protection Program Office. The Delphi Study Phase I survey was one page (a copy of the survey follows this section). The Delphi Study was presented during the opening session of the Rural Health Conference in July 2003. At that time, conference attendees were requested to participate in the study and to either return the completed survey to the registration desk or send it to the Rural Health Office. The purpose of the study was explained and conference attendees were assured that participation was voluntary and their responses would be kept confidential. No follow-up was done.

Those persons identified by the RHO and the RHPAC as knowledgeable about rural health issues were sent a cover letter and the Delphi Study Phase I survey in March 2004. The cover letter explained the purpose of the study and assured respondents that participation was voluntary and their responses would be kept confidential. A follow-up letter and survey was sent to those who did not return the survey (copies of the letters follow this section).

An invitation to complete the Delphi Study Phase I survey was emailed to the recipients of the Rural Health Office and Arizona Rural Health Association Newsletters in March 2004. The invitation explained the purpose of the study, assured that participation was voluntary and that responses would be kept confidential, and included an attached copy of the Delphi Study Phase I survey (a copy of the invitation follows this section). There was no follow-up done.

Completers of the Delphi Study Phase I survey who indicated they would participate in the second round of the Delphi Study were emailed a cover letter and the Delphi Study Phase II survey in May 2004 (a copy of the letter and survey follows this section). This survey consisted of four pages. Two e-mail follow-ups were sent to those who did not return their surveys.

Figure 1. Rural Health Areas, Focus Areas, Objectives, and Strategies Selection Process



Data Analysis: The 15 most frequently cited health issues were identified from the Delphi Study Phase I survey responses. These top 15 health issues were placed in a summary table. The Delphi Study Phase II survey's 15 health issues were summarized in a rank order table. The health issue that received the highest number of votes had the highest ranking, followed by the health issue with the next highest number of votes, and so on.

Another table summarizes the health issues ranking based on the highest number of points. The point assignment was based on highest preference for a health issue to be addressed: (1) first choice = 5 points, (2) second choice = 4 points, (3) third choice = 3 points, (4) fourth choice = 2 points, and (5) fifth choice = 1 point. The total points for each health issue were added

together and the health issue that received the highest point total had the highest ranking followed by the next health issue with the next highest point total, and so on. For each health issue, the related objectives identified were listed in a table.

Limitations: There are several limitations in this study. These include:

1. Only those respondents who completed the Delphi Study Phase I survey and indicated they would participate in the Delphi Study Phase II were e-mailed surveys.
2. There were limited follow-up attempts made to those who did not return their surveys, which likely limited the response rate.
3. The information collected was self-reported, and thus based solely on the respondent's perception of health issues at a point in time.

Survey Results

Response Rate: At the Rural Health Conference in July 2003, 43 attendees completed and returned the Delphi Study Phase I survey (20% response rate = 43/210). Of those 43, 36 (84%) agreed to participate in Phase II. The RHO staff and RHPAC identified persons to include in the Delphi Study. The Rural Health Conference attendees who returned a survey were excluded from this group. One hundred and fifty-six (156) surveys were sent in March 2004. Of the 156, 6 surveys were returned to sender, one survey was compiled from two respondents who were each sent a survey, and 73 surveys were returned (49% response rate = 73/149). Sixty-five (65) respondents agreed to participate in Phase II of the Delphi Study (89%). From the newsletter invitations, 14 surveys were returned, and all of these respondents agreed to participate in Phase II of the study. A total of 130 surveys were returned in Phase I. Of the 130, 114 agreed to participate in the next phase (88%) and the Delphi Study Phase II survey was sent to them. Of the 114, one was no longer available to participate, one worked with another respondent to submit only one survey, and 28 surveys were received (25% response rate = 28/112) after two follow-up e-mail requests.

Survey Results: Table 1 lists the top 15 health issues identified in the first phase of the study. The top five health issues identified in Phase II of the Delphi Study, based on the number of votes and point totals, include: (1) Rural Health Care Workforce (Shortages), (2) Health Care Coverage, (3) Availability and Accessibility to Health Care, (4) Recruitment and Retention, and (5) Lack of Behavioral/Mental Health Services. The rank order of the top 15 health issues based on number of votes is also summarized in Table 1. Table 2 summarizes the health issues ranking based on the highest number of points. For each health issue, the related objectives identified are listed in Table 3.

Conclusions and Recommendations: The top fifteen health issues that were identified in the Delphi Study, as well as specific outcomes (objectives) and the strategies to accomplish those outcomes, were presented to the RHPAC for review and selection of those to be included in the Arizona Rural Health Plan.

Table 1. Delphi Study Survey II Results: Top 15 Health Issues by Rank Order (1 = Highest and 5 = Lowest)

Rank Order	1	2	3	4	5	SUM
Rural Health Care Workforce (Shortages)	7	5	5	3	1	**21**
Health Care Coverage	4	7	2	2	0	**15**
Availability and Accessibility to Health Care	6	2	2	3	3	**16**
Recruitment and Retention	1	2	8	2	0	**13**
Lack of Behavioral/Mental Health Services	2	2	3	1	4	**12**
Diabetes	2	1	1	5	1	**10**
Dental/Oral Health	0	1	1	3	4	**9**
Obesity	2	3	2	0	2	**9**
EMS and Urgent Care	1	1	1	0	4	**7**
Reimbursement for Health Care Providers	1	1	0	4	1	**7**
Lack of Transportation to Health Services	0	1	2	0	3	**6**
Substance Abuse	0	2	1	2	1	**6**
Malpractice Insurance	1	1	1	1	2	**6**
Patient/Client Education	1	0	0	2	0	**3**
Affordable Prescription Drugs/Pharmaceutical Plan	1	0	0	0	2	**3**

Table 2. Delphi Study Survey II Results: Top 15 Health Issues Ranked by Total Points (1 = 5 pts, 2 = 4 pts, 3 = 3 pts, 4 = 2 pts, and 5 = 1 pt)

Points Order	5	4	3	2	1	SUM
Rural Health Care Workforce (Shortages)	35	20	15	6	1	**77**
Health Care Coverage	20	28	6	4	0	**58**
Availability and Accessibility to Health Care	30	8	6	6	3	**53**
Recruitment and Retention	5	8	24	4	0	**41**
Lack of Behavioral/Mental Health Services	10	8	9	2	4	**33**
Obesity	10	12	6	0	2	**30**
Diabetes	10	4	3	10	1	**28**
Dental/Oral Health	0	4	3	6	4	**17**
EMS and Urgent Care	5	4	3	0	4	**16**
Malpractice Insurance	5	4	3	2	2	**16**
Substance Abuse	0	8	3	4	1	**16**
Reimbursement for Health Care Providers	5	0	0	8	1	**14**
Lack of Transportation to Health Services	0	4	6	0	3	**13**
Patient/Client Education	5	0	0	4	0	**9**
Affordable Prescription Drugs/Pharmaceutical Plan	5	0	0	0	2	**7**

Table 3. Delphi Study Survey II Results: Health Issue Objectives

Rural Health Care Workforce (Shortages) – Objectives

1. Work to increase the number of slots in the various schools, based on the projections due to baby boomers heading into older years, requiring more medical services.
2. Increase number of nursing slots statewide by 20%. Increase number of medical student slots by 10% or develop primary care residencies targeting rural and underserved sites.
3. Establish teaching track for senior-level residents (particularly primary care).
4. Build linkages with academic programs in Arizona.
5. More doctors, nurses and other medical practitioners will work in rural areas. Programs such as loan repayment and foreign visas will be available and publicized. More general health care workers and para-professionals will be trained and employed.
6. Work with the existing community college system to develop and implement a health careers curriculum that trains and certifies persons in the allied health fields.
7. Seventy-five percent (75%) of small rural locations will be able to get into the competitive market of getting providers to come to their area.
8. Less than 5% of positions will go unfilled.
9. The challenges of recruiting and retaining health care professionals at all levels (general, emergency, and specialized) exist throughout the country, and are magnified by the political and economic climate of Arizona; they are magnified yet again in rural Arizona where low wages, the necessity of covering broad geographic regions, and the lack of colleagues with specialized knowledge can create a stressful working environment.
10. Ideally, specific outcomes of the strategies delineated below would include:
    - Educated constituents at all levels (city, county and state) demanding a public discussion about the need for rural health care, leading to:
    - Statewide (legislative) and local re-prioritization in expenditures, moving health care nearer to the top of the priority list.
    - Local governments' willingness to invest in incentive and retention programs for rural health care workers.
    - A locally recruited, well-educated (both in general and specialized practice) pool of health care workers/trainees.
11. Increase the number of health care workers in rural areas that are properly trained.
12. Increased the number of individuals from rural areas being trained as health care workers.
13. Create an on-going recruitment strategy for providers by July, 2007.
14. Increase the number of health care providers (MDs and NPs) by 10%.
15. Increase scholarships and loan repayment opportunities for nurses, nurse practitioners and physician's assistants who will commit to practice in rural communities by 30% of current rates.
16. Increase providers in rural areas.
17. Higher percentage of graduates practicing in rural/underserved areas.
18. Reduce shortages in specific health professions by a certain percentage.
19. Reduce the number of medically underserved communities or health professional shortage areas.
20. "Tax credits" for working in underserved areas.
21. Pilot project with university system to target training in rural areas.
22. Reduce the number of health professional shortage areas in Arizona.
23. Increase number of providers in rural areas.
24. Establish model to allow senior level residents (particularly primary care) to attend in ambulatory medical care utilizing trained faculty or distance learning by telemedicine for supervisors of residents in at least 2 selected sites.
25. Assist in securing additional federal funding for community health centers in rural Arizona.

Health Care Coverage (Uninsured and Underinsured) – Objectives

1. Reduce the number of uninsured by at least 50%.
2. Reduce the number/percentage of uninsured in Arizona.
3. Reduce percent of people in Arizona who are uninsured or have no health coverage from the current 17% to at least the national average of 15%.
4. Reduce premiums and co-pays paid by individuals. KidsCare premiums have increased. Premiums have increased on all employer based insurance plans.
5. Develop a comprehensive medical care coverage program that everyone can obtain and afford.
6. Eligibility for entitlement programs, premium sharing and health care groups will be raised to cover more of the working poor. Then more people will be enrolled for available programs. Mental health parity (equivalent coverage) will be required of all commercial health plans and insurers.

7. Have the governor establish a blue-ribbon panel to develop legislation that obligates insurance companies to offer policies on a sliding-fee scale, based on income. Use the governor's veto power to arm wrestle the legislature into passing the legislation OR charge all existing insurance companies a surtax on profits and use those funds to hire state employed providers to deliver health care services to the needy.
8. Reduce uncompensated care.
9. Provide basic health care coverage, including preventive care to 100% of children in the state.
10. 25% increase in use of primary care and obstetrical care by this group.
11. Preserving the $10.4 M primary care (tobacco tax) funding for community health centers.
12. Single payor - expand medicare…like IOM is advising for HIV patients.
13. Assist in securing additional federal funding for community health centers in rural Arizona.
14. Insurance companies need to honor coverage and cover people in rural areas.
15. Expand enrollment staff for AHCCCS.
16. Provide tax credits to small businesses to offer AHCCCS small group plans to their employees.

Accessibility to Health Care – Objectives

1. Increase number of community primary care health centers.
2. Greater availability of AHCCCS-type programs for un- and under-served individuals and families.
3. Greater availability of affordable employee insurance programs for small businesses.
4. Clinics—potentially volunteer-run—available to families during non-conventional hours.
5. Ten percent (10%) decrease in identifiable use of emergency room as source of urgent and primary care services.
6. Compare the results of a survey performed in 2003 to the same survey performed in 2006 asking people about their health care needs and issues surrounding availability and accessibility to health care.
7. Reduce the number/percentage of people reporting difficulty in accessing care or reporting that care is unavailable.
8. Reduce the number of medically under-served populations.
9. Expand the capacity of the health care delivery system, including facilities and personnel to the extent that the community and its resources can support.
10. Seek to increase the proportion of the population that has knowledge of the facilities and personnel available to render services.
11. Increase the proportion of the population that has coverage.
12. Increase the percentage of women receiving prenatal care in the 1st trimester.
13. Increase the percentage of infants/children receiving immunizations and EPSDT.
14. Increase the percentage of diabetics receiving standard of care.
15. By 2007, the concept of medical care will become a statewide emphasis in Arizona with equity for all.
16. Improve accessibility to care for poor and uninsured patients.
17. Rural communities should offer basic, ER, and primary care. Specialists to be a more regional approach with outreach clinics.

Recruitment and Retention of Health Professionals – Objectives

1. Reduce the number of professionals leaving their field by 25%.
2. Need to influence CMS to change payment rate.
3. Establish teaching track for senior level residents (particularly primary care). Develop a model to allow senior level residents to attend in ambulatory (also with patient, if appropriate) in at least 2 selected sites. (Probably no effect before 4 or 5 years, but difficult to say).
4. More health care professionals will be employed in rural areas.
5. Increase retention rate of health professionals to 95%.
6. Increase supply of motivated, trained, community-minded healers.
7. Reduction in the number of professional staff vacancies within Indian Health Service and tribal 638 hospital facilities.
8. Receive a HRSA/BPHC recruitment/retention grant to help community health centers and other HRSA grantees.
9. Less turnover with rural health care employers (especially nursing).
10. Less professional isolation.
11. Opportunity for development, advancement, CE/CME.
12. Improve retention of specific health professional types by a certain percentage. Increase recruitment of specific health professional types to targeted shortage areas by a certain percentage.
13. Incentives for doctors who practice in frontier / rural underserved areas.
14. Increase the supply of nursing and non-nursing candidates.
15. Loan payback for psychiatrists, not just primary care.

Lack of Behavioral / Mental Health Services – Objectives

1. Basic behavioral health services to all rural communities.
2. Incorporate working relationships with existing agencies and/or provide services within the next 3 years.
3. From a systemic standpoint, desirable outcomes somewhat mirror those addressing the shortage of health care workers in general:
    - Educated constituents at all levels (city, county and state) demanding a public discussion about the need for rural mental health care, leading to
    - Statewide (legislative) and local re-prioritization in expenditures, moving mental health care nearer to the top of the priority list.
    - Create some type of incentive mechanism allowing mental health care interns to complete practicum hours in rural areas, thereby augmenting the mental health care workforce.
4. Expand integrated mental health services to 20% of the state's community health centers.
5. Increase the number of persons eligible for and receiving mental health services by 20%.
6. Family practitioners will be allowed by AHCCCS to prescribe anti-depressants and anti-psychotics for patients.
7. By 2007, provide depression screening in every health care facility to establish baseline data concerning depression and wellness activities.
8. Improve behavioral health infrastructure in rural areas.
9. Increase state funding.

Diabetes – Objectives

1. Identify trends.
2. Decrease diabetes.
3. Identify potential diabetes sufferers in rural areas.
4. Provide treatment of pre-diabetes identified individuals.
5. Screen children for pre-diabetes.
6. Reduce number of overweight children and adults.
7. Improvement in core measures.
8. Fewer complications.
9. Fewer ER visits.
10. By 2007, early detection of diabetes will be accomplished and an accurate account of people living with diabetes in Arizona will be established including, but not exclusive to, the Hispanic/Latino, Native American Indians, African American, Asian American, and European American populations.
11. Reduce the prevalence rate of diabetes among the Native American population. (Realistically, it will take many more years before this rate can come down. In the mean time measurable objectives should be action initiatives such as the number of tribally and urban Indian based diabetes prevention programs in existence, etc.)
12. Reduce occurrence of new cases by 10%.
13. Increase to 95% the number of diabetics receiving all of the services recommended in the standard of care.
14. Slow the rising prevalence of diabetes.
15. Develop a 3-page policy statement on what communities can do to reduce obesity and enhance exercise.

Dental / Oral Health – Objectives

1. Establish Dental/Oral Health Services within the Health Department within the next 3 years.
2. Increase Dental/Oral Health.
3. Current programs expanded to include all – rather than just focused on children.
4. Reduce the number of cavities of school age children and adults in rural areas.
5. Increase number of adults with appropriate denture.
6. Provide additional dental services by July, 2007.
7. Decrease dental caries in uninsured/underinsured populations by 25%.
8. Graduate dentists who practice in underserved communities.
9. Decrease the incidence of cavities and fillings in children 1 to 8 years of age.
10. Less caries in children.
11. Integration of oral health in key areas such as prenatal, diabetes.
12. Increased dental presence.

Obesity – Objectives

1. Eighty-five percent (85%) of the patients with a BMI over 30 will be referred to a nutritionist.

2. Eighty percent (80%) of the schools in the school districts in the county will change to 1% white milk for lunch.
3. Seventy-five percent (75%) of vending machines will have diet soda, real juices, fresh fruit and healthy lower calorie snacks.
4. Stop the rise in BMI of the general population.
5. Increase the percentage of children and adults who exercise for at least 20 min 3 times or more weekly.
6. Obesity – track BMI available goal is 50%.
7. Decrease obesity rate for total population by 10%.
8. Reduce the number of obese children.
9. Increase the number of individuals who are physically active.
10. Reduce the number of obese adults.
11. By 2007, decrease obesity in Arizona by 10% by placing more emphasis on primary prevention efforts.
12. Slow rising prevalence of obesity.

Emergency Medical Services and Urgent Care – Objectives

1. More efficient and effective delivery of rural services will happen in rural areas.
2. Identify, within six months, all communities in the state that lie further away than forty-five minutes' response time from Emergency Room/Urgent Care services.
3. Within two years, begin implementation of the plan and continue through the 3rd year.
4. Reduce morbidity and mortality from emergent conditions.
5. Increase the availability of emergency services to 24/7.
6. Compare the degree to which you have succeeded with a profile taken before the effort starts.

Reimbursement for Health Care Providers in Rural Areas – Objectives

1. Rural providers will be reimbursed at rates reflecting the higher costs in rural areas than in urban communities.
2. Decrease loss of present health care providers in rural areas by 10%. Increase new providers by 10%.
3. Reimbursement for rural providers increased to at least cover costs, even for non-CAH facilities.
4. Clearly need to influence CMS to change payment rate.
5. Make the reimbursement ratios equal for rural/urban providers (hospitals/doctors).

Lack of Transportation to Health Services – Objectives

1. Establish a team to define the problem. Does this topic include only transportation for routine services, such as doctor visits and eye exams, or for emergency services as well?
2. Lessen the lack of transportation to health services.
3. Public transportation systems in rural areas, including handicapped and special needs capabilities, which are affordable and accessible.
4. Expand and enhance telemedicine.
5. Increase the use of in-home technology for health assessment by lay health workers and nurses by 20% of current utilization rates.
6. Establishment of tribal public transportation programs and reduction in comments made by tribal elected leaders and health personnel concerning the negative health impact caused by the lack of available public transportation to health facilities.
7. Reduce the need for AHCCCS and tobacco tax insured to be transported to Phoenix, Flagstaff, and Tucson for treatment by 200%.
8. By 2007, a transit system will be in place for persons living in rural Arizona to access health care.
9. ADHS/DBHS continues to monitor the availability of transportation for emergency and routine behavioral health care.
10. All services will have transportation available when necessary and all transportation standards will be met in each RBHA.

Substance Abuse – Objectives

1. Reduce the incidence of young adult (17-25 years of age) smoking.
2. A decrease in domestic violence cases involving substance use.
3. A decrease in automobile accidents involving substance use.
4. Monitor a measurable reduction in law enforcement, legal and criminal activity and expense – as SA programs are made affordable and available in all rural communities.
5. Reduce the alcoholism rate among the Native American population.

6. More outpatient and residential treatment programs in the state.
7. Improved cessation programs.
8. Expanded education with regard to tobacco use in schools.
9. Reduce behavioral/mental health related illnesses and sickness.

Malpractice Insurance – Objectives

1. Sixty percent (60%) of the cost of malpractice insurance will be part of the providers benefit.
2. Tort reform with caps.
3. Reduce the number of physicians reporting scope of service changes due to malpractice rates.
4. Reduce the number of communities reporting the loss of providers or services due to malpractice rates.
5. Get malpractice back for OB/GYN coverage to rural areas.
6. Make this an economic development issue – get business involved.
7. Increase funding for national and local loan repayment programs, hospitals to cover malpractice.

Patient / Client Health Education – Objectives

1. Partner with state and local health departments to create common health messages related to public awareness on benefits of immunizations, preventive health screenings and healthy lifestyles.
2. Design and begin a massive campaign to educate the public that their health is primarily determined by the life-choices they make.

Affordable Prescription Drugs Issue – Objectives

1. Seventy-five percent (75%) of the elderly, uninsured and working class have a workable, reasonable medication system.
2. Provide access to affordable prescription drugs for all patients by July, 2007.
3. Access to Patient Assistance Programs made easier (50% less paperwork).

THE UNIVERSITY OF ARIZONA
MEL AND ENID ZUCKERMAN ARIZONA COLLEGE OF PUBLIC HEALTH

March 26, 2004

Name
Title
Organization
Address
City, State, Zipcode

Dear Name:

One of the Mel and Enid Zuckerman Arizona College of Public Health, Rural Health Office's major goals for this year is to develop and complete a comprehensive statewide rural health plan and present this plan at the Rural Health Conference in July 2004. The purpose of the plan is to assess Arizona's rural health care needs, to identify three rural health areas that can be improved by the end of three years, and to recommend strategies that will be used to guide the rural health efforts in our state that will lead to these improvements.

You are invited to voluntarily participate in this Delphi Study because of your expertise and work in rural health. We value your expertise, and your viewpoints, and hope you will agree to participate in this study. The enclosed survey is the first part of a two-round Delphi Study. In this survey you are asked to ***identify the top five rural health issues in Arizona.*** The second round of the Delphi Study will be a second survey that will ask you to select the top five rural health issues from a list of the top 15 issues identified from the first survey. The second survey will also ask you to identify those issues that can be addressed (that is, make a significant difference) in three years, as well as the strategies that can be used to address each one of the selected health issues.

This Delphi Study will assist the State Advisory Committee in the development of an Arizona Rural Health Plan by identifying which rural health issues can be addressed in a very short time and which strategies can guide Arizona's rural health efforts. Please take a few minutes to list your top five rural health issues on the enclosed survey. *Your individual responses will remain confidential* and results from this survey will be reported in aggregate format. *Please fold and mail the preaddressed and prestamped survey to Julie Jacobs, Research Specialist Senior, Rural Health Office, 2501 E. Elm Street, Tucson, Arizona 85716 by Wednesday, April 7, 2004.*

If you have any questions related to this survey, please call me at (520) 626-7946, ext. 237 or e-mail me at aeng@ahsc.arizona.edu. If you have questions regarding your rights as a survey participant you may call the University of Arizona Human Subjects Protection Program office at (520) 626-6721.

Thank you for your assistance in this study.

Sincerely,

Howard J. Eng, DrPH
Associate Director for Education and Research, Rural Health Office

March 31, 2004

Dear Arizona Subscriber:

One of the Mel and Enid Zuckerman Arizona College of Public Health, Rural Health Office's major goals for this year is to develop and complete a comprehensive statewide rural health plan and present this plan at the Rural Health Conference in July 2004. The purpose of the plan is to assess Arizona's rural health care needs, to identify three rural health areas that can be improved by the end of three years, and to recommend strategies that will be used to guide the rural health efforts in our state that will lead to these improvements.

You are invited to voluntarily participate in this Delphi Study because of your expertise and work in rural health. We value your expertise, and your viewpoints, and hope you will agree to participate in this study. The enclosed survey is the first part of a two-round Delphi Study. In this survey you are asked to ***identify the top five rural health issues in Arizona.*** The second round of the Delphi Study will be a second survey that will ask you to select the top five rural health issues from a list of the top 15 issues identified from the first survey. The second survey will also ask you to identify those issues that can be addressed (that is, make a significant difference) in three years, as well as the strategies that can be used to address each one of the selected health issues.

This Delphi Study will assist the State Advisory Committee in the development of an Arizona Rural Health Plan by identifying which rural health issues can be addressed in a very short time and which strategies can guide Arizona's rural health efforts. Please take a few minutes to list your top five rural health issues on the enclosed survey. *Your individual responses will remain confidential* and results from this survey will be reported in aggregate format. *Please e-mail the survey to jajacobs@email.arizona.edu or mail the survey to Julie Jacobs, Research Specialist Senior, Rural Health Office, 2501 E. Elm Street, Tucson, Arizona 85716 by Friday, April 16, 2004.*

If you have any questions related to this survey, please call me at (520) 626-7946, ext. 237 or e-mail me at aeng@ahsc.arizona.edu. If you have questions regarding your rights as a survey participant you may call the University of Arizona Human Subjects Protection Program office at (520) 626-6721.

Thank you for your assistance in this study.

Sincerely,

Howard J. Eng

Howard J. Eng, DrPH
Associate Director for Education and Research, Rural Health Office

THE UNIVERSITY OF ARIZONA
MEL AND ENID ZUCKERMAN ARIZONA COLLEGE OF PUBLIC HEALTH

Rural Health Office
Rural Health Issues Delphi Survey

You are invited to voluntarily participate in this Delphi Study because of your expertise in rural health issues in Arizona. This study will assist the state advisory committee in the development of an Arizona Rural Health Plan by identifying which rural health issues can be addressed in a very short time. This survey is the first part of a two-round Delphi Study. In this survey you are asked to ***identify the top five rural health issues in Arizona.*** If you agree to participate, you will be contacted in about a month to complete the second round of the study. In this round, you will be asked to complete a second survey in which you will select the top five rural health issues from a list of the top 15 issues identified in the first survey. You will be asked to identify those issues that can be addressed (that is, make a significant difference) in three years, as well as how you would address each one of the selected health issues. Each survey will take approximately five minutes to complete. Any questions you have will be answered. *Please fold and mail this pre-addressed and pre-stamped survey to Julie Jacobs, Research Specialist Senior, Rural Health Office, 2501 E. Elm Street, Tucson, Arizona 85716 by April 7, 2004.*

Disclaimer: There are no known risks from your participation in this study. There is no cost to you except for your time. You will not be compensated for your participation. The benefit of your participation will be an awareness of the top rural health issues in the state. *Your name and your individual responses will remain confidential* and survey results will be reported in aggregate format. The survey information will be locked in a cabinet in a secure place. Only the investigator and the data analyst will have access to your name and the information you provide. By participating in this study, you are giving permission for the investigator to use your information for research purposes. If you have any questions related to this survey, please contact Howard J. Eng, DrPH at (520) 626-7946, ext. 237 or at aeng@ahsc.arizona.edu. If you have questions regarding your rights as a survey participant you may call the University of Arizona Human Subjects Protection Program office at (520) 626-6721.

1. _____
2. _____
3. _____
4. _____
5. _____

If you are willing to participate in the next round of the Delphi Study, please provide the following information (print clearly):

Name: _____

Title: _____

Address: _____

Telephone number: _____

E-mail Address: _____

Thank you for your participation in the Delphi Study.

THE UNIVERSITY OF
ARIZONA
MEL AND ENID ZUCKERMAN
ARIZONA COLLEGE OF PUBLIC HEALTH

April 2, 2004

Name
Title
Organization
Address
City, State, Zipcode

Dear Name:

If you have not completed and mailed your Delphi Study that will ***identify the top five rural health issues in Arizona,*** please do so. We value your expertise, and your viewpoints, and hope you will agree to participate in this study.

This Delphi Study will assist the State Advisory Committee in the development of an Arizona Rural Health Plan by identifying which rural health issues can be addressed in a very short time and which strategies can guide Arizona's rural health efforts. Please take a few minutes to list your top five rural health issues on the enclosed survey. *Your individual responses will remain confidential* and results from this survey will be reported in aggregate format. *Please fold and mail the preaddressed and prestamped survey to Julie Jacobs, Research Specialist Senior, Rural Health Office, 2501 E. Elm Street, Tucson, Arizona 85716 by Friday, April 16, 2004.*

If you have any questions related to this survey, please call me at (520) 626-7946, ext. 237 or e-mail me at aeng@ahsc.arizona.edu. If you have questions regarding your rights as a survey participant you may call the University of Arizona Human Subjects Protection Program office at (520) 626-6721.

Thank you for your assistance in this study.

Sincerely,

Howard J. Eng

Howard J. Eng, DrPH
Associate Director for Education and Research, Rural Health Office

THE UNIVERSITY OF
ARIZONA
MEL AND ENID ZUCKERMAN
ARIZONA COLLEGE OF PUBLIC HEALTH

May 10, 2004

Dear Colleague:

Thank you for your support of the Rural Health Issues Delphi Study and agreeing to participate in the second phase of the study. The information you provide will assist the State Advisory Committee in the development of the Arizona Rural Health Plan by identifying which rural health issues need to be addressed in the next three years and which strategies can guide Arizona's rural health efforts.

In this Delphi survey, you are asked to rank your top five rural health issues that need to be addressed in the next three years in which we can make a significant difference (impact) from the list of the top 15 Arizona rural health issues identified in the first survey. For each rural health issue you have selected and ranked, you will summarize what you want to accomplish (measurable outcome) in the next three years and what approach(es) you would use to achieve it (strategy to be used). The survey will take approximately 30 - 60 minutes to complete. Your individual responses will remain confidential and results from this survey will be reported in aggregate format.

Please e-mail the survey to *jajacobs@email.arizona.edu*, fax (520-326-6429), or mail the survey to Julie Jacobs, Research Specialist Senior, Rural Health Office, 2501 E. Elm Street, Tucson, Arizona 85716 ***by Friday, June 11, 2004*.**

If you have any questions related to this survey, please call me at (520) 626-7946, ext. 237 or e-mail me at aeng@ahsc.arizona.edu. If you have questions regarding your rights as a survey participant you may call the University of Arizona Human Subjects Protection Program office at (520) 626-6721.

Thank you for your assistance in this study.

Sincerely,

Howard J. Eng

Howard J. Eng, DrPH
Associate Director for Education and Research, Rural Health Office

THE UNIVERSITY OF ARIZONA
MEL AND ENID ZUCKERMAN ARIZONA COLLEGE OF PUBLIC HEALTH

Rural Health Office
Rural Health Issues Delphi Survey Phase II

This survey is the final part of the two-round Delphi Study. In this survey, you are asked to ***rank your top five rural health issues that need to be addressed in the next three years in which we can make a significant difference (impact) from the list of the top 15 Arizona rural health issues identified in the first survey****. For each rural health issue you have selected and ranked,* would you summarize what you want to accomplish (measurable outcome) in the next three years and what approach(es) you would use to achieve it (strategy to be used). Please limit your summaries to one paragraph in length. This survey will take approximately 30 - 60 minutes to complete. Any questions you have will be answered. *Please e-mail the survey to jajacobs@email.arizona.edu, fax (520-326-6429), or mail the survey to Julie Jacobs, Research Specialist Senior, Rural Health Office, 2501 E. Elm Street, Tucson, Arizona 85716* ***by Friday, June 11, 2004.***

Disclaimer: There are no known risks from your participation in this study. There is no cost to you except for your time. You will not be compensated for your participation. The benefit of your participation will be an awareness of the top rural health issues in the state. *Your name and your individual responses will remain confidential* and survey results will be reported in aggregate format. The survey information will be locked in a cabinet in a secure place. Only the investigator and the data analyst will have access to your name and the information you provide. By participating in this study, you are giving permission for the investigator to use your information for research purposes. If you have any questions related to this survey, please contact Howard J. Eng, DrPH at (520) 626-7946, ext. 237 or at aeng@ahsc.arizona.edu. If you have questions regarding your rights as a survey participant you may call the University of Arizona Human Subjects Protection Program office at (520) 626-6721.

Rural Health Issues	***Ranking*** **(1 = highest and 5 = lowest)**
Rural Health Care Workforce (Shortages)	____
Availability and Accessibility to Health Care	____
Health Care Coverage (Uninsured and Underinsured)	____
Lack of Transportation to Health Services	____
Recruitment and Retention of Health Professionals	____
Lack of Behavioral / Mental Health Services	____
Dental / Oral Health	____
Reimbursement for Health Care Providers in Rural Areas	____
Diabetes	____
Malpractice Insurance	____
Patient / Client Health Education	____
Obesity	____
Emergency Medical Services and Urgent Care	____
Substance Abuse	____
Affordable Prescription Drugs / Pharmaceutical Plan	____

1. Rural Health Issue:

   Accomplishment in three years (specific measurable outcome):

   Strategies:

---

2. Rural Health Issue:

   Accomplishment in three years (specific measurable outcome):

   Strategies:

3. Rural Health Issue:

   Accomplishment in three years (specific measurable outcome):

   Strategies:

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4. Rural Health Issue:

   Accomplishment in three years (specific measurable outcome):

   Strategies:

5. Rural Health Issue:

   Accomplishment in three years (specific measurable outcome):

   Strategies:

Thank you for your support and participation in the Delphi Study.

05-10-04

▪ Appendix C: Rural Health Plan Advisory Committee Working Groups

We would like to especially thank the following members of the Rural Health Plan Advisory Committee who contributed their expertise to one or more working group to address the three Primary Rural Health Areas of Accessibility, Availability, and Preventative Services.

- **Accessibility Working Group**

  Juana Casillas
  Edie Faust
  Alison Hughes
  Roni Kerns
  Jane Pearson
  Sally Reel
  Anna Shane
  Art Silvers
  Patricia Tarango

- **Availability Working Group**

  Jack Beveridge
  Elsie Eyer
  Michal Goforth
  Michael Grossman
  Fred Hubbard
  Debbie Johnston
  Jennie Mullins
  Phyllis Primas
  Ann Roggenbuck

- **Preventative Services Working Group**

  Michael Allison
  Chris Cronberg
  Susan Gerard
  Karen Halverson
  Joyce Hospodar
  Rhonda Johnson
  Tom McWilliams
  Linda Nelson
  Patricia Tarango
  Barbara Worgess

How to read the comparison tables: Each table corresponds to an objective in the Arizona Rural Health Plan. The second through fourth columns provide the related Healthy People 2010 Objective reference number, data source(s) used to monitor objective progress, and baseline comparisons. The first three rows in each table represent the national publications: Healthy People 2010, Rural Healthy People 2010, and Healthy Border 2010. The fourth row represents Healthy Arizona 2010, a publication of the Arizona Department of Health Services. All of the former have 10-year targets in fifth column. The fifth and final row represents *Arizona Rural Health Plan 2005-2007*. These targets are 3-year targets.

A: Primary Rural Health Area – Accessibility

▪ FOCUS AREA 1: Access to Health Care

▪ Objective 1: Increase the proportion of rural persons with health care coverage.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	1-1	NHIS, CDC, NCHS	83.0%*	100%
Rural Healthy People 2010	1-1	NHIS, CDC, NCHS	83.0%*	100%
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	1-1	U.S. Census, BRFSS, CDC, NCCDPHP	75.8%	90.0%
Arizona Rural Health Plan 2005-07	1-1	Arizona BRFSS	2002 Rural Percentage	Reduce 2002 rural uninsured percentage by 10%

Key: TBD = To Be Determined NE= Not Established * = persons under age 65 years

▪ Objective 2: Expand and strengthen the rural safety net.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	AHCCCS, AzCHA, ADHS Tobacco Tax Program, School-Based Health Center	Number of rural persons covered by safety net programs in 2002	Increase 2002 number of rural persons covered by 10%

Key: TBD = To Be Determined NE= Not Established

- Objective 3: Increase the proportion of rural persons who have a specific source of ongoing care (medical home).

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	1-4	NHIS, CDC, NCHS	87.0%	96.0%
Rural Healthy People 2010	1-4	NHIS, CDC, NCHS	87.0%	96.0%
Healthy Border 2010	1-4	TBD	TBD	Reduce 25% of population lacking access to primary care provider.
Healthy Arizona 2010	1-4	TBD	TBD	TBD
Arizona Rural Health Plan 2005-07	1-4	Arizona BRFSS	2002 Rural Percentage	Increase 2002 percentage of rural regular source of care by 10%

Key: TBD = To Be Determined NE= Not Established

- Objective 4: Increase the proportion of rural persons with access to clinical preventive services.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	1-2	MEPS	NE	NE
Rural Healthy People 2010	1-2	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	1-2	TBD	TBD	TBD
Arizona Rural Health Plan 2005-07	1-2	Arizona BRFSS	2002 Rural Percentage	Increase 2002 percentage of rural preventive service usage by 10%

Key: TBD = To Be Determined NE= Not Established

- **FOCUS AREA 2: Lack of Behavioral / Mental Health Services**

■ Objective 1: Greater access to basic behavioral health services to all rural communities.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	ADHS Dept. Licensure	2002 rural-rural number	Increase 2002 programs and services by 5%

Key: TBD = To Be Determined NE= Not Established

■ Objective 2: Improve behavioral health infrastructure in rural areas.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	ADHS Behavior Health	Number of mental health workers in 2001	Increase 2001 number of mental health workers by 5%

Key: TBD = To Be Determined NE= Not Established

■ Objective 3: Promote integration of primary care and behavioral health services to rural areas.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	18-6*	NE	NE	NE
Rural Healthy People 2010	18-6*	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	Arizona Community Health Center Association	Number of rural FQCHC with behavior health services in2002	Increase number of FQCHC with behavior health services by 3

Key: TBD = To Be Determined NE= Not Established

* Healthy People 2010 Objective 18-6: "Increase the number of persons seen in primary health care who receive mental health screening and assessment."

■ **FOCUS AREA 3: Emergency Medical Services and Urgent Care**

- Objective 1: Reduce the proportion of rural persons who delay or have difficulty in getting emergency medical care.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	1-10	NE	NE	NE
Rural Healthy People 2010	1-10	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	ADHS EMS	2002 number	Increase rural facilities that provide 24 hour EMS by 3

Key: TBD = To Be Determined NE= Not Established

- Objective 2: Increase the proportion of rural persons who have access to rapidly responding pre-hospital emergency services.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	1-11	NE	NE	NE
Rural Healthy People 2010	1-11	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	ADHS EMS	NE	Identify unmet need.

Key: TBD = To Be Determined NE= Not Established

- Objective 3: Increase the rural availability of risk appropriate urgent care.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	ADHS Licensure Dept.	Number of rural urgent care sites in 2002	Increase number of rural urgent care sites by 3

Key: TBD = To Be Determined NE= Not Established

- **FOCUS AREA 4: Lack of Transportation to Health Services**

■ Objective 1: Reduce the need for transportation to health services by using technological options that can provide the services directly to rural residents.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	Arizona Telemedicine Program	Number of rural telemedicine sites in 2002	Increase number of rural telemedicine sites by 3

Key: TBD = To Be Determined NE= Not Established

■ Objective 2: Reduce the need for transportation to health services by providing the services directly to rural residents.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	TBD	Number of rural persons covered by these programs in 2002	Increased 2002 number of rural persons covered by 5%

Key: TBD = To Be Determined NE= Not Established

■ Objective 3: Increase percentage of rural residents served by a public transportation system.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	ADOT	Number of rural persons served by these systems in 2002	Increased 2002 number of rural persons served by 5%

Key: TBD = To Be Determined NE= Not Established

B: Primary Rural Health Area – Availability

■ FOCUS AREA 1: Strengthen Statewide Infrastructure to Support an Adequate Rural Health Workforce

■ Objective 1: Adopt consistent statewide definition of "rurality."

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	Rural Health Office	Review current rurality definitions	Adopt new rurality definition

Key: TBD = To Be Determined NE= Not Established

■ Objective 2: Increase funding levels to support the statewide infrastructure.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	State Budget	State budget for rural health activities in 2004	Increase 2004 state budget for rural health activities by 5%

Key: TBD = To Be Determined NE= Not Established

■ Objective 3: Coordinate resources for rural health care.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	Rural Health Office	Number of rural health networks in 2002	Increase 2004 number of rural health networks by 3

Key: TBD = To Be Determined NE= Not Established

■ **FOCUS AREA 2: Rural Health Care Workforce (Shortages)**

■ Objective 1: Recognize and promote the advantages of rural living and health care provision.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	Rural Health Office	Does not exist in 2004	Establish a rural health promotional pamphlet.

Key: TBD = To Be Determined NE= Not Established

■ Objective 2: Increase the geographical/cultural competency, and cultural/geographical sensitivity of health care providers working in rural and geographical communities.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	State Only@	TBD	TBD	TBD
Arizona Rural Health Plan 2005-07	NE	Rural Health Office and AZ. Rural Health Association	Does not exist in 2004	Establish a rural geographical and cultural competency training manual

Key: TBD = To Be Determined NE= Not Established

@ Healthy Arizona 2010 focuses on cultural competency and cultural sensitivity of health care providers only.

■ Objective 3: Increase the state retention rate of Arizona graduates from health professional programs.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	Health Profession Programs	Number of graduates staying in Arizona in 2004	Increase 2002 number of graduates staying in Arizona by 5%

Key: TBD = To Be Determined NE= Not Established

■ **FOCUS AREA 3: Recruitment and Retention of Rural Health Professionals**

■ Objective 1: Improve rural retention of specific health professional types by a certain percentage. Increase recruitment of specific health professional types of 3-year targeted shortage areas by a certain percentage.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	Health Profession Boards and Associations	Number of selected rural health professionals in 2001	Increase 2001 number of selected rural health professionals by 5%

Key: TBD = To Be Determined NE= Not Established

■ Objective 2: Increase the incentives to attract health care providers to rural areas.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	Rural Health Office	Does not exist in 2004	Establish 3 rural recruitable communities

Key: TBD = To Be Determined NE= Not Established

■ Objective 3: Increase the community commitment in recruitment and retention of health care professionals

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	Survey	Does not exist in 2004	Identify 10 rural commu-nities that demonstrate commitment

Key: TBD = To Be Determined NE= Not Established

■ Objective 4: Increase malpractice insurance availability in rural areas (e.g., OB/GYN coverage).

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	Rural Health Office	OB/GYN malpractice Insurance rural coverage in 2004	Increase 2004 OB/GYN malpractice Insurance rural coverage by 5%

Key: TBD = To Be Determined NE= Not Established

■ FOCUS AREA 4: Reimbursement for Health Care Providers in Rural Areas

■ Objective 1: Better federal geographical reimbursement adjustments for rurality.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	CMS	Rural reimburse-ment rates in 2003	Increase 2003 rural reimbursement rates by 5%

Key: TBD = To Be Determined NE= Not Established

■ Objective 2: Increase state rural reimbursement adjustments.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	AHCCCS and CMS	Rural reim-bursement rates in 2003	Increase 2003 rural reimbursement rates by 5%

Key: TBD = To Be Determined NE= Not Established

C: Primary Rural Health Area – Preventative Services

▪ FOCUS AREA 1: Rural Health Data

▪ Objective 1: Enhance the sharing of health data

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	Rural Health Office	SBRHRC Arizona Rural Health Dataline Website	Expand SBRHRC Arizona Rural Health Dataline Website

Key: TBD = To Be Determined NE= Not Established

▪ Objective 2: Develop data surveillance system that will monitor health status in rural areas.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	TBD	Does not exist in 2004	Establish rural health surveillance system

Key: TBD = To Be Determined NE= Not Established

▪ FOCUS AREA 2: Obesity

▪ Objective 1: Decrease obesity in Arizona by placing more emphasis on primary and secondary prevention.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	19-2	NHANES, CDC, NCHS	23.0%	Reduce the proportion of adults who are obese to 15%.
Rural Healthy People 2010	19-2	NHANES, CDC, NCHS	23.0%	Reduce the proportion of adults who are obese to 15%.

Healthy Border 2010	19-2	TBD	TBD	Reduce the proportion of adults who are obese to 15%.
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	19-2	Arizona BRFSS	2002 Rural Percentage	Reduce 2002 proportion of rural adults who are obese by 5%

Key: TBD = To Be Determined NE= Not Established

▪ FOCUS AREA 3: Diabetes

▪ Objective 1: Monitor rural diabetes trends, program activities, and progress of diabetes control efforts.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	ADHS Diabetes Program	2004 Statewide Diabetes Surveillance System	Enhance Statewide Diabetes Surveillance System

Key: TBD = To Be Determined NE= Not Established

▪ Objective 2: Identify individuals living in rural areas who may be at risk for diabetes.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	ADHS Diabetes Program and Arizona BRFSS	Does not exist in 2004	Identify number of potential rural diabetics

Key: TBD = To Be Determined NE= Not Established

■ Objective 3: Increase the number of rural health providers who will adhere to all the standards of care recommended by the American Diabetes Association.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	HSAG Diabetes Initiative Partners	2004 Adhere Level	Increase the 2004 adhere level by 5%

Key: TBD = To Be Determined NE= Not Established

■ Objective 4: Increase self-management levels for rural people living with diabetes.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	Arizona BRFSS	2002 Rural Percentage	Increase 2002 rural self-management levels by 5%

Key: TBD = To Be Determined NE= Not Established

■ FOCUS AREA 4: Substance Abuse

■ Objective 1: Reduce rural mortality related to substance abuse (alcohol use).

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	26-2	NVSS, CDC, NCHS	6.3 deaths per 100,000	1.0 deaths per 100,000
Rural Healthy People 2010	26-2	NVSS, CDC, NCHS	6.3 deaths per 100,000	1.0 deaths per 100,000
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	26-2	Arizona Health Status and Vital Statistics, NVSS, CDC, NCHS	7.7 deaths per 100,000	No more than 6.7 deaths per 100,000
Arizona Rural Health Plan 2005-07	26-2	Arizona Health Status and Vital Statistics	2001 Rural Rate	Reduce 2001 rural rate by 5%

Key: TBD = To Be Determined NE= Not Established

■ Objective 1: Reduce rural mortality related to substance abuse (drug abuse) [contd].

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	26-3*	NVSS, CDC, NCHS	6.3 deaths per 100,000	1.0 deaths per 100,000
Rural Healthy People 2010	26-3*	NVSS, CDC, NCHS	6.3 deaths per 100,000	1.0 deaths per 100,000
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	26-3	Arizona Health Status and Vital Statistics, NVSS, CDC, NCHS	10.6 deaths per 100,000	No more than 4.5 deaths per 100,000
Arizona Rural Health Plan 2005-07	26-3	Arizona Health Status and Vital Statistics	2001 Rural Rate	Reduce 2001 rural rate by 5%

Key: TBD = To Be Determined NE= Not Established

*Healthy People 2010 Objective 26-3 reads "Reduce drug-induced deaths," and specifies that causes of drug-induced deaths include drug psychosis, drug dependence, suicide, and intentional and accidental poisoning that result from illicit drug use.

■ Objective 2: Reduce the rural percentage of alcohol related traffic fatalities.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	26-1a	FARS, DOT, NHTSA	5.9 deaths per 100,000	4.0 deaths per 100,000
Rural Healthy People 2010	26-1a	FARS, DOT, NHTSA	5.9 deaths per 100,000	4.0 deaths per 100,000
Healthy Border 2010	26-1	TBD	TBD	Reduce the number of alcohol related deaths by 50%
Healthy Arizona 2010	26-1	ADOT Motor Vehicle Crash Statis-tics Unit, PARS, STRS	26.56%	22.0%
Arizona Rural Health Plan 2005-07	26-1	ADOT Motor Vehicle Crash Statistics Unit	2002 Rural Percentage	Reduce 2002 rural percentage by 5%

Key: TBD = To Be Determined NE= Not Established

■ **FOCUS AREA 5: Oral Health**

■ Objective 1: Increase the proportion of rural residents served by community water systems with optimally fluoridated water.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	21-9	CDC Fluoridation Census, CDC, NCCDPHP	62%	75%
Rural Healthy People 2010	21-9	CDC Fluoridation Census, CDC, NCCDPHP	62%	75%
Healthy Border 2010	21-9	TBD	TBD	Increase to at least 75%
Healthy Arizona 2010	21-9	ADHS – Office of Oral Health, CDC Fluoridation Census, CDC, NCCDPHP	47%	75%
Arizona Rural Health Plan 2005-07	21-9	ADHS – Office of Oral Health	2002 Rural Percentage	Increase 2002 rural percentage by 5%

Key: TBD = To Be Determined NE= Not Established

■ Objective 2: Reduce the proportion of rural children who have ever had tooth decay (measured at preschool and elementary levels).

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	21-1a 21-1b	NHANES, CDC, NCHS	Age 2-4: 18% Age 6-8: 52%	Age 2-4: 11% Age 6-8: 42%
Rural Healthy People 2010	21-1a 21-1b	NHANES, CDC, NCHS	Age 2-4: 18% Age 6-8: 52%	Age 2-4: 11% Age 6-8: 42%
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	21-1a 21-1b	ADHS – Office of Oral Health	Age 2-4: 37% Age 6-8: 60%	Age 2-4: 11% Age 6-8: 42%
Arizona Rural Health Plan 2005-07	21-1a 21-1b	ADHS – Office of Oral Health	Ages 2-4 and 6-8 rural percentages in 2002	Reduce 2002 rural percentage for ages 2-4 and 6-8 by 5%

Key: TBD = To Be Determined NE = Not Established

■ Objective 3: Reduce the proportion of rural children who currently have untreated tooth decay (measured at preschool and elementary levels).

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	21-2a 21-2b	NHANES, CDC, NCHS	Age 2-4: 16% Age 6-8: 29%	Age 2-4: 9% Age 6-8: 21%
Rural Healthy People 2010	21-2a 21-2b	NHANES, CDC, NCHS	Age 2-4: 16% Age 6-8: 29%	Age 2-4: 9% Age 6-8: 21%
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	21-2a 21-2b	ADHS – Office of Oral Health	Age 2-4: 16% Age 6-8: 43%	Age 2-4: 9% Age 6-8: 21%
Arizona Rural Health Plan 2005-07	21-2a 21-2b	ADHS – Office of Oral Health	Ages 2-4 and 6-8 rural percentages in 2002	Reduce 2002 rural percen-tage for ages 2-4 and 6-8 by 5%

Key: TBD = To Be Determined NE = Not Established

■ **FOCUS AREA 6: Immunization/Infectious Disease**

■ Objective 1: Increase the proportion of older adults living in rural areas that are vaccinated annually against influenza and ever vaccinated against pneumococcal disease.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	14-29a 14-29b	NHIS, CDC, NCHS	Influenza: 64%* Pneumococcal pneumonia: 46%*	Influenza: 90%* Pneumococcal pneumonia: 90%*
Rural Healthy People 2010	14-29a 14-29b	NHIS, CDC, NCHS	Influenza: 64% Pneumococcal pneumonia: 46%	Influenza: 90% Pneumococcal pneumonia: 90%
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	14-29	BRFSS, CDC, NCCDPHP	Influenza: 71.2% Pneumococcal pneumonia: 53.1%	Influenza: 90% Pneumococcal pneumonia: 90%
Arizona Rural Health Plan 2005-07	14-29	Arizona BRFSS	Influenza and pneumococcal pneumonia rural percentages in 2002	Increase 2002 influenza and pneumococcal pneumonia rural percen-tages by 5%

Key: TBD = To Be Determined NE = Not Established

* Non-institutionalized adults aged 65 years and older

■ Objective 2: Increase the rural proportion of healthcare providers who are vaccinated annually against influenza.

	Related Healthy People 2010 Objective Ref. No.	Data Source	Baseline	10-year targets 3-year target
Healthy People 2010	NE	NE	NE	NE
Rural Healthy People 2010	NE	NE	NE	NE
Healthy Border 2010	NE	NE	NE	NE
Healthy Arizona 2010	NE	NE	NE	NE
Arizona Rural Health Plan 2005-07	NE	Survey	2004 influenza rural vaccinated level	Increase 2004 influenza rural vaccinated percent by 5%

Key: TBD = To Be Determined NE = Not Established

▪ Appendix E: Glossary of Acronyms

ADHS – Arizona Department of Health Services
ADOT – Arizona Department of Transportation
AFDC – Aid to Families with Dependent Children
AHEC – Area Health Education Center
AHCCCS – Arizona Health Care Cost Containment System
AOD – Alcohol and Other Drugs
ARS – Arizona Revised Statutes
AzMUA – Arizona Medically Underserved Area
BBA – Balanced Budget Act of 1997
BRFSS – Behavioral Risk Factor Surveillance Survey
CAH – Critical Access Hospital, a designation through the Arizona Flex Program
CDC – Centers for Disease Control and Prevention
CHCs – Community Health Centers
CME – Continuing Medical Education
CMS – Centers for Medicare and Medicaid Services
CPS – Current Population Survey
CPT - Current Procedural Terminology
DHEW – Department of Health, Education, and Welfare
DHHS – Department of Health and Human Services
DO – Osteopathic Physician
DOD – Department of Defense
DOT – U.S. Department of Transportation
DRG – Diagnostic Related Group
FARS – Fatality Analysis Reporting System
Flex Program – Arizona Medicare Rural Hospital Flexibility Program
FP – Family Practice
FPL – Federal Poverty Level
FQCHC – Federally Qualified Community Health Center
GDP – Gross Domestic Product
GP – General Practice
GS – General Surgeon
HCG – HealthCare Group
HMO – Health Maintenance Organization
HIPAA – Health Insurance Portability and Accountability Act of 1996
HPSA – Health Professional Shortage Area
HRSA – Health Resources and Services Administration
HSAG – Health Services Advisory Group
ICD-9CM – International Classification of Diseases 9th Revision Clinical Modification
IRB – Institutional Review Board (Human Subjects Protection Program)
IHS – Indian Health Service
IM – Internal Medicine
IT – Information Technology
MADD – Mothers Against Drunk Drivers
MC- Managed Care

MD – Allopathic Physician
MEPS – Medical Expenditure Panel Survey
MUA – Medically Underserved Area
MUP – Medically Underserved Population
NCCDPHP – National Center for Chronic Disease Prevention and Health Promotion
NCHS – National Center for Health Statistics
NHANES – National Health and Nutrition Examination Survey
NHIS – National Health Interview Survey
NHTSA – National Highway Traffic Safety Administration
NVSS – National Vital Statistics System
OB/GYN – Obstetrics/Gynecology
PCA – Primary Care Area
PD – Pediatrics
Plan – Arizona Rural Health Plan
PPO – Preferred Provider Organization
PPV – Pneumococcal Polyvalent Vaccine
RBHA – Regional Behavioral Health Authority
RHC – Rural Health Clinic
RHO – Rural Health Office
RHPAC – Rural Health Plan Advisory Committee
RN – Registered Nurse
RR – Rural-Rural Counties (any county with communities having a population of less than 50,000).
RU – Rural-Urban Counties (any county with at least one community with a population 50,000 or greater).
RUCAs – Rural Urban Commuting Areas
SBHC – School-Based Health Center
SBRHRC – Southwest Border Rural Health Research Center
SCHIP – State Children's Health Insurance Program
SHIP – Small Rural Hospital Improvement Grant Program
SORH – Arizona State Office of Rural Health
SSI – Supplemental Security Income
STAB – State Trauma Advisory Board
TANF – Temporary Aid to Needy Families (the Welfare Reform version of AFDC which started in 1998)
U – Urban Counties (any county with at least one community with a population of over 50,000.
U.S. – United States
VA – Veterans Affairs
WIC – Women, Infants, and Children

▪ Appendix F: Description of the Southwest Border Rural Health Research Center and Authors

SOUTHWEST BORDER RURAL HEALTH RESEARCH CENTER

The Southwest Border Rural Health Research Center (SBRHRC), Rural Health Office, University of Arizona Mel and Enid Zuckerman College of Public Health was one member of a network of rural health research centers originally funded by the Federal Office of Rural Health Policy in 1988. The Center has received funding from federal agencies, private foundations, and the State of Arizona. The SBRHRC conducts policy-relevant research (action and applied) that addresses rural health issues that affect the Southwestern United States, the U.S.-Mexico border region, and the nation, and disseminates research results to influence policy in areas including: access to preventive services, primary care, and other health services especially for the socio-economically disadvantaged and underserved; minority populations and health disparities; health profession distribution; health care financing; and barriers to health care utilization.

The SBRHRC provides research/evaluation technical assistance to rural communities, state agencies, and organizations as well as learning opportunities for university students to develop their skills and expertise in rural health research and evaluation. The Center has carried out numerous research and evaluation projects throughout rural Arizona and the Southwestern United States, and in U.S.-Mexico border communities. In addition, the Center has worked with tribal nations on different projects.

AUTHORS

Howard J. Eng, MS, DrPH, is the Director of the Southwest Border Rural Health Research Center, Associate Director for Education and Research of the Rural Health Office, and Assistant Professor in the University of Arizona Mel and Enid Zuckerman College of Public Health. His training and expertise include rural health, health services research, health policy, health economics, public health, epidemiology, and pharmacy. He has more than 25 years of experience working in health care and has been a faculty member in the Colleges of Pharmacy, Medicine, and Public Health. Dr. Eng's research interest issues related to access to health services especially for the socio-economically disadvantaged and underserved; minority populations and health disparities; health profession distribution; health care financing (e.g., managed care); barriers to health care utilization; health care delivery systems; and pharmaceutical usage patterns. He was one of 14 fellows selected to participate in the 2003-04 Office of Rural Health Policy Rural Health Leadership Development Program: "Rural Voices."

Julie A. Jacobs, MS, is the Data Manager/Analyst for the Southwest Border Rural Health Research Center. Ms. Jacobs is a Senior Research Specialist at the University of Arizona Mel and Enid Zuckerman College of Public Health's Rural Health Office, where she is responsible for the data management and analysis of several center projects (e.g., Arizona Rural Health Assessment, Health Care Coverage in Arizona Assessment, and Border *Vision Fronteriza* Initiative). Ms. Jacobs performs data collection, preparation, management, analysis, and report writing activities. She has extensive experience as a data analyst, researcher, project coordinator, and writer. Prior to joining the staff of

the Southwest Border Rural Health Research Center, Ms. Jacobs performed a variety of duties, to include research, project management, data analysis, and grant writing, for a consulting firm.

Jennifer Peashock, BA, is the Instructional Specialist Coordinator for the Arizona State Office of Rural Health (SORH) program grant. Ms. Peashock has worked to expand and coordinate the health promotion and disease prevention core functions of the program. In addition, Ms. Peashock provides health education curriculum development, data collection and analysis, and technical assistance in program planning and grant writing. She is a skilled researcher and coordinator of informational resources and technology. Previous to joining the staff of the Arizona SORH program, Ms. Peashock coordinated training and data collection efforts for a tobacco prevention and education grant funded by the Arizona Department of Health Services.

▪ Appendix G: Utilization Report

Utilization Report Form

After reading the Arizona Rural Health Plan 2005-2007, please indicate by marking the box(es) which Focus Areas for Rural Health your agency or organization will address in 2005-2006.

By completing this form and submitting it to the Southwest Border Rural Health Research Center, you will be assisting with the monitoring of current activities statewide to improve rural health in Arizona. You will be contacted for follow-up by the Southwest Border Rural Health Research Center in 2006.

A. Accessibility – ability to obtain needed health services.
Please mark the boxes that apply to your agency/organization:

- ☐ Access to Health Care
- ☐ Behavioral/Mental Health Services
- ☐ Emergency Medical Services and Urgent Care
- ☐ Lack of Transportation to Health Services

B. Availability – supply of health resources and services to meet the needs of the individual and community.
Please mark the boxes that apply to your agency/organization:

- ☐ Strengthen Statewide Infrastructure to Support an Adequate Rural Health Workforce
- ☐ Rural Health Care Workforce
- ☐ Recruitment and Retention of Rural Health Professionals
- ☐ Reimbursement for Rural Health Care Providers

C. Preventative Services – health programs that focus on the prevention of illnesses.
Please mark the boxes that apply to your agency/organization:

- ☐ Rural Health Data
- ☐ Obesity
- ☐ Diabetes
- ☐ Substance Abuse
- ☐ Oral Health
- ☐ Immunization/Infectious Disease

IMPORTANT:

1. Turn the page over to complete the contact information section.
2. Tear out this page and fold according to instructions.
3. Use tape (DO NOT STAPLE) to secure folded page AT THE TOP and return to Southwest Border Rural Health Research Center (address is provided on opposite side of this page) by mail.

THE UNIVERSITY OF ARIZONA
MEL AND ENID ZUCKERMAN COLLEGE OF PUBLIC HEALTH

Rural Health Office
2501 E. Elm Street
Tucson, AZ 85716

TO: Rural Health Office
2501 E. Elm Street
Tucson, AZ 85716

Attn: Southwest Border Rural Health Research Center
Howard J. Eng, MS, DrPH

Fold here

IMPORTANT: Fill out the following contact information.

Agency/Organization Name:	_____
	_____
Mailing Address:	_____
	_____
City, State, Zip:	_____
Website Address:	_____
Contact Name:	_____
Contact Phone:	_____
Contact Fax:	_____
Contact Email:	_____