FACTORS AFFECTING ACCESS TO HEALTH CARE FOR
RURAL ARIZONA MINORITIES

by
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STATEMENT BY THE AUTHOR

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ABSTRACT

Rural communities comprise 20% of the United States population and have higher rates of chronic illness, disability and lower health status than urban communities. All ages, the young to the old, and races: Caucasian, African American, Hispanic, Native Americans are equally affected and have poorer health statistics than their urban counterparts. Numerous reasons have been identified for healthcare disparities such as: transportation, lack of available medical care and low income.

Several reasons exist why transportation has been identified as a contributing problem to the healthcare disparities of rural communities. These include lack of, or expense of appropriate transportation to and from medical centers. In some cases, poor weather conditions contributed to the transportation problems. A third factor noted was that some patients were too sick to use the available transportation options, i.e. the need to be transported by a wheelchair accessible van and only a car was available.

Across America, medical services are not evenly available in some communities. Approximately 9% of physicians and 10% of specialists practice in the rural communities, and usually do not have evening or weekend hours. In the last 20 years over 500 rural hospitals have had to close, (due to negative budgets), leaving some rural communities with no hospital access.

Lastly, low income, (poverty) and being uninsured contributed, (negatively), to healthcare access in rural communities. The two, income and insurance go hand in hand; lower paying employment usually results in smaller insurance benefits offered; or none at all. Studies have shown that higher income and insured families are more likely to
receive routine care and vaccinations from a physician than lower income and uninsured families are.
Chapter I Introduction

*Definition of Terms*

*Rural.* There are many definitions for rural, “Nearly everyone can come up with a definition of rural, but seldom will those definitions be in agreement” (Bushy, 2000, p. 18). At the federal level, the Bureau of the Census defines urbanized areas, (UA), by the density of the population. UA’s are considered to be areas of population with a density of 1,000 people or more per square mile and can cover parts of several counties. People living in or near an UA, (cities, towns, suburbs and villages), with a population of 2,500 or more is considered urban; less than a population of 2,500 is considered rural.

The Office of Management and Budget designate urban areas as metropolitan statistical areas, (MSAs), and rural areas as nonmetropolitan statistical areas, (non-MSAs). An area is determined to be a MSA when it has a population of 50,000 or more inhabitants or is part of a county, counties with 100,000 or more inhabitants. Non-MSAs are defined by exclusion of not being a MSA.

The state of Arizona defines rural as “a county with a population less than 400,000 persons according to the most recent United States decennial census and a census county division with less than 50,000 persons in a county with a population of 400,000 or more persons...” (Arizona Rural Health Plan, 2004, p. 13). Using this definition, Arizona has further subdivided rural areas into Rural-Urban, (RU) and Rural-Rural, (RR). Counties are defined as RU if there is a community of at least 50,000 but the rest of the county is rural. Counties with no communities of 50,000 are RR. With these definitions in mind Arizona has two RU counties and 11 RR counties (map 1).
Poverty. Poverty, or being poor, is defined as living below the federal poverty level. Among minorities in rural communities poverty is prevalent when compared to urban minorities. According to Probst, Samuels, Jespersen, et al (2002) 34% of African and Native Americans along with 25% of Hispanics who live in rural communities are poor, or live below the federal poverty level. Probst, Samuels, Jespersen, et al (2002) also note that in rural communities average bank deposits are 24% – 56.2% smaller by these minority groups when compared to urban minority groups. This poverty causes minorities to delay necessary medical care and affects the amount of health care resources available within the community.
Poverty decreases as educational levels increase. “Those with less than a high school education suffer far higher rates of poverty (22.2%) than do those with a high school degree (9.2%), some postsecondary education (6.5%), or a bachelor’s degree or more (3.5%)” (Jensen, McLaughlin & Slack in Brown & Swanson, 2003, p. 120). Probst, Samuels & Moore (2003) found that over one-half of all non-metro, working age African American and Hispanics fell below the poverty line.

Low income families generally do not have insurance coverage for a variety of reasons. Some of these reasons include: low paying jobs where insurance is not offered or is offered but is still unaffordable, or they make too much to qualify for state assisted medical programs; in Arizona the state assisted health care is known as Arizona Health Care Cost Containment System, (AHCCCS). “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” (Arizona Rural Health Plan, 2004, p. 15). The percentage of individuals with insurance has declined from 1997 by approximately 8% (figure 1).

Further adding to the dilemma of the uninsured in Arizona was the passing of proposition 200 in the fall of 2004. Proposition 200 requires everyone applying for state benefits, i.e. welfare, AHCCCS and voting rights to show proof of US citizenship or legal residency. Proposition 200 also charges state employees with a misdemeanor crime for not reporting undocumented aliens when they try to apply for benefits. This has caused many minorities, documented and undocumented, throughout the state afraid to seek healthcare benefits for themselves or their children in fear of being deported.
Health Provider Shortage Areas. Fewer health care resources are available in rural communities in which these minorities live. Probst, Samuels, Jespersen, et al (2002) state that 70% of rural African Americans, 84% of rural Hispanics and 67% of Native Americans live in communities that are Health Professions Shortage Areas (HPSA’s). In many cases rural African American, Hispanics, (84%), and Native Americans, (67%), are the majority of the population in HPSA’s.

Blakemore (1999), Hargraves & Hadley (2003) and Probst, Samuels, Jespersen, et al (2002) have complied research findings that show rural minorities have more difficulty accessing healthcare than urban minorities. Reasons for these difficulties include: poverty, lack of health insurance, inadequate transportation and communities in a HPSA.
Blakemore (1999) makes mention of the problem of racism and institutional discrimination resulting in services which neglect minority communities.

In the state of Arizona all Federal HPSAs are also known as Arizona Medically Underserved Areas, (AzMUA). AzMUAs are defined as areas with an Index of Medical Underservice, (IMU), of 62.0 points or less. The IMU is a weighted score and includes: “ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population below the federal poverty level, and percentage of the population 65 years and older” (Arizona Rural Health Resource Manual, 2004, p. 69). All 15 counties in Arizona have either: areas designated as HPSAs and AzMUAs or in some cases the whole county is designated as a HPSA and AzMUA.

Vulnerable Populations. “Vulnerable populations are social groups who have an increased susceptibility to adverse health outcomes” (Leight, 2003, p. 440). Individuals in rural communities have an increased vulnerability over their urban counterparts. This is in part to several factors and theories. One theory is the hardiness theory. Bushy (2000) defines hardiness as the state or quality of being hardy; a capacity for enduring or sustaining hardship and privation and the capability of surviving under unfavorable conditions; courage; boldness; and audacity. It is known that rural individuals delay seeking healthcare, (hardiness theory), with the first onset of symptoms resulting in hospital admission when health care was eventually sought (Long, 1993; Long & Weinert, 1989; Rosenblatt & Moscovice, 1982; Weinert & Long, 1990). The hardiness theory accounts for a sicker population, resulting in an increased risk of vulnerability for some rural populations.
Other factors that increase vulnerability for rural populations include large numbers of older aged individuals and the young.

It is not unusual to hear longtime residents report, “what we do best here is raise and educate our children, who then go someplace else to find work.” Those who remain behind – specifically, the elderly and the young – are the most vulnerable, but in many cases essential health – related and support services do not exist for them. Bushy 2000, p. 23

Arizona’s population, according to the 2000 census, showed that women slightly outnumbered men. When compared with the rest of the United States, 13.1% of Arizona’s population was 65 years or older versus 12.4%. “In the last decade, the 25 – 34 age group declined at nearly the same rate as the 45 – 54 age groups increased (2.8% vs. 2.7%)” (Eng, Jacobs & Peashock, 2004, p. 9) (figure 2).

Figure 2 Age Group Distribution for U.S. and Arizona: 2000

Chapter II Cultural Issues Affecting Access to Health Care

*Competence*

Increasingly, health providers are treating clients of diverse racial and ethnic origins. Unfortunately, “there is not an equitable representation of racial minorities in entering into or practicing in the health professions” (Bushy, 2001, p. 38). This creates a shortfall of culturally competent providers which further distances minorities from accessing health care. In Arizona 1/3 of the RU population and 20.4% of the RR population are Hispanic, 13% of the RU population and 14.5% of the RR population are Native American. African Americans make up 3.6% and Asian Americans make up 2.3% of the total population in Arizona.

In cultural competence, world view is a key topic that must be addressed. “World view includes a deeply rooted, ethnicly based understanding of causality of illness as well as other life events” (Baer & Nichols in Loue & Quill, 2001, p. 73). Worldview is deeply engrained in one’s development and is difficult to change. Many providers would like to institute lifestyle modifications, or health education into their health promotion regimens, but without cultural competence this is often met with resistance.

*Diversity*

Diversity among people and races is as very common. No two individuals are the same; even twins have their differences. There are differences within ethnic groups, i.e. the Native Americans. In Arizona the Northern Navajo have differing health beliefs than the Southern Pascua Yaqui. So even though a provider may be trained by Indian Health
Services, (IHS), to work with one group of Indians a transfer to a differing Indian Nation would require more specialized training.

Much like the Indian Nations, rural areas differ incredibly from one area to the next depending on the geographic type of area and inhabited population. Elder, Ayala, Zabinski, & et. al. (2001) state that the southwestern states include a large concentration of Hispanics, whereas Northwestern states have a large number of older, retired persons. So just because one has experience in a Northern rural community does not mean they can easily perform in a Southern rural area. There would need to be a time frame for adjustment in working within a different rural community.

Hispanic Population

The Hispanic population has a history of sophisticated healing with a pharmacopia of more than 5,000 naturally occurring medicinals and strong connections between religion and health. “Research indicates that Latinos tend to be more traditional in their health care services in nonmetropolitan communities” (Saenz & Torres, 2003, p. 57). One common belief about the cause of disease is the disruption between hot and cold. Vasoconstriction or a low metabolic rate are considered a cold disease, examples include: menstrual cramps and colic. Vasodilation or a high metabolic rate are considered a hot disease, examples include: pregnancy, hypertension and diabetes. The overall goal is to restore the one’s body with the proper harmony and balance.

Several concepts are present in the Hispanic population which affect health care behaviors and include familialism, machismo and the value of children. “Familialism dictates that family comes first” (Bushy, 2001, p. 164). This often interferes with one’s
seeking health care due to family commitments and responsibilities, putting their condition or needs off and while taking care of others more important needs.

Machismo defined by Mosby, (1994), states that it is a psychological concept of the male that includes both culturally desirable traits of courage and fearlessness; which contributes to the Hispanic culture being male dominant. “Children are highly valued and motherhood is viewed by many as the women’s primary role” (Bushy, 2001, p. 164 - 165). These two concepts may be the contributing factors to high rates of teenage pregnancy and increases in HIV among the Hispanic population.

Native American Populations

The Native American culture, much like the Hispanic culture, also has a rich history of traditional healing. Native Americans hold traditional holistic beliefs, (treating body and spirit), about remaining healthy and avoiding illnesses. Ritual objects are routinely used during healing ceremonies; such as feathers and personal belongings. Depending upon their preference, adhering to traditional medicine or seeking Western medicine, they may or may not seek appropriate healthcare screening. “Hence, they maybe reluctant to participate in such practices unless first educated about the value of screening and early diagnosis of a health problem” (Bushy, 2001, p. 118). After spending many years educating Indians about Western medicine, by IHS, many Indians can make the distinction when to chose a ‘healer’ versus Western medicine; still it is common for both forms of medicine to be sought.

For most of the Indian Nations, family is of utmost importance with elders being highly respected. Gender roles, i.e. matrilineal, vary within the nations along with who
cares for the sickened individual and who speaks for the sick. One highly valued concept is autonomy. Even if it is to their determent, the ill person is allowed autonomy in their decision making process.
Chapter III Factors That Affect Access to Health Care

Transportation

Arizona is spread out among the deserts and mountainous terrain, many rural areas are without adequate public transportation systems. This leaves one to find their own transportation; in some extreme cases this means walking or hitchhiking to the local clinic. With the extreme temperature fluctuations in the summer and winter; transportation, even by vehicle, can be made more torturous. Many of Arizona’s rural roads are narrow with sharp curves, have numerous potholes or are crumbling away. In some cases, the roads are not even paved making transportation arrangements even more difficult.

Areas without a specialty provider elicit a trip into the urban area; in some areas a one to two hour, one way, car ride away. Arizona has available a telemedicine program administered through the University of Arizona. This network can span the entire state; but is not being utilized in all the rural areas of the state.

According to AHCCCS guidelines, transportation services are offered to its members, however there are some restrictions. An appointment has to be made in advance for a ride to a medical appointment, so this makes an urgent or same day medical appointment an impossibility. It has been this authors experience that even with an appointment, transportation has been known to be late getting the patient to their appointment or picking up the patient from their appointment. This has caused frustration on both the medical facility receiving the patient and the patient themselves. In some
cases the patient has opted to work out their own transportation, resulting in either missing their appointment or canceling it all together.

*Health Insurance and Income*

Another significant contributing factor to the problem is lack of health insurance and finances. The uninsured are predominantly low-income, minority families that do not have insurance, for varying reasons. Either coverage is not offered from their place of employment or they cannot afford the premiums. There are varying arguments between policymakers about why people do not have health insurance “…uninsured persons, do not have access problems related solely to lack of insurance coverage, rather they have access to care through community safety net resources” (Hargraves & Hadley, 2003. p. 810). Unfortunately, these ‘safety nets’ are still unaffordable to families, preventing them from seeking routine care and screening which leads to early diagnosis and treatment.

Hargraves & Hadley (2003), Arizona Rural Health Plan (2004) and the Institute of Medicine (2004) identified that lack of healthcare insurance was the most significant barrier in accessing healthcare for minorities. The second most significant barrier in accessing healthcare was low-income or poverty. Probst, Samuels & Moore (2003), also identified lack of health insurance as a significant barrier for minorities in seeking healthcare. Probst, Samuels, Jespersen, et al (2002) identified inadequate health services infrastructure as the basis of their research for access to care. “Risk increases inverse proportion to opportunity and resource availability; thus, fewer socioeconomic and environmental resources translate to increasing relative risk” (Leight, 2003, p. 442)
In reviewing the literature multiple studies have been done by researchers addressing insurance coverage, community resources and health care access. Higgs, Bayne & Murphy (2001) used quantitative and qualitative approaches in obtaining their data about consumer’s perspectives of health care. “Major barriers were cost, length of time before one could get an appointment, lack of comfort with providers and having to miss work for appointments” (Higgs, Bayne & Murphy, 2001, p. 3).

Hargraves & Hadley (2003) used the behavioral model to guide analysis of the independent variables. The conceptual domains included “enabling, predisposing and need factors that include demographics, personal preferences, individual health status, and economic and market characteristics….and the availability of medical care resources” (Hargraves & Hadley, 2003, p. 813-14). The dependant variables were measures of access and utilization.

Doeksen & Schott (2003) used a case study in “measuring the economic impact that the health sector has on a community’s economy”. In their case study of Atoka, Oklahoma, Doeksen & Schott (2003) used input – output, (I/O), analysis in analyzing transactions within the economy. Even though the I/O analysis is not a benefit – cost analysis, it was able to capture the “indirect and induced interrelated circular behavior of the economy” (Doeksen & Schott, 2003, p. 3). The I/O model was able to describe the structural interdependence of the community for the researchers.

A common theme between researchers has shown that the higher the education level, (graduation from high school), the higher percentage of one having insurance coverage, (Probst, Samuels & Moore 2003). The higher the education level was usually
proportional to a higher income level, hence the ability to afford health insurance coverage, (Hargraves & Hadley 2003). Even with higher income level for minorities in rural settings the healthcare services provided by the governing community still remained low, (Probst, Samuels, Jespersen, et al 2002), (Higgs, Bayne & Murphy 2001).

It has been noted by researchers that rural schools lag behind or is sub par than urban schools, (Killian & Beaulieu, Pollard & O’Hare). “To make matters worse, rural schools suffer disproportionately from inadequate funding, dilapidated buildings and less experienced and less qualified teachers” (Lichter, Roscigno & Condron, in Brown & Swanson, 2003, p. 101-102). Furthering the dilemma of poor, under achieving rural schools are “strategies devised by state and federal policy makers to improve the academic performance of rural students remain largely confined to school based solutions” (Beaulieu, Israel & Wimberley, in Brown and Swanson, 2003, p. 273-274).

The Arizona Rural Health Plan, (2004) states that rural minorities: Hispanics, Native Americans, and the elderly are more likely to be uninsured than their urban counterparts. The reason cited for this trend toward the elderly included being less healthy, poorer and older. No reasons were specifically cited for this trend in rural minorities, but it is understood that a large number of undocumented, migrant workers reside in the rural areas. Being undocumented does not leave a worker any options for assisted healthcare benefits. Some migrant workers may be eligible for benefits but with the passing of Proposition 200 in the fall of 2004, many are scared even to look into what benefits they are eligible for fear of being “found out” and deported.
“Access to insurance to support health care continues to be a problem in rural areas – a problem associated with a lower paid work force reliant upon small employers that are less likely to than larger employers to offer health insurance” (Arizona Rural Health Plan, 2004, p. 33). In 2000, Arizona’s median household income was $40,558 whereas the national median household income was $41,558 (figure 3).

Figure 3  Median Income for U.S. and Arizona

![Median Income Chart](U.S. vs Arizona Median Income)


In 2002-2003 34% of high school students were Hispanic, 7% Native American, 5% Black and 2% were Asian (figure 4). According to the Arizona Department of Education, (2004), dropout rates varied as high as 21.6%, Indian – Oasis Baboquivari Unified District, and 18.1%, Gila Bend Unified School District in rural areas compared to urban dropout rates of 3%, Tucson Unified School District, and 6.1%, Phoenix Union High School District. Overall Minorities had a higher drop out rates than Whites, (figure 5).
Figure 4 2002 – 2003 High School Enrollments by Race

![Pie chart showing high school enrollments by race: White 52%, Hispanic 34%, Asian 2%, African American 5%, Native American 7%](image)


Figure 5 Overall Dropout Rate

![Bar chart showing overall dropout rate for grades 7-12 by race: White, Hispanic, Native American, African American, Asian](image)

Health Provider Shortage Areas

Crises, which affect the nation’s health care system in general, affect the rural system in a more pronounced way” (Long, Scharff & Weinert, in Lee, 1998, p. 40). For many years it has been known and predicted that there was a healthcare shortage and it would get worse as rural populations exploded and health care providers left and chose to practice in urban settings. There are numerous rural areas all over the United States that have been deemed HPSA’s and rural areas in Arizona are not immune from this classification.

In the 2000 Health Resources and Services Administration, (HRSA), State Health Workforce Profiles reported that out of the 50 states Arizona ranked 25th in total health services employment and 47th in health services employment per 100,000 population. In the same study it found that Arizona had the second lowest ratio of pharmacists; ranked 49th in the nation.

From 1997 to 2001 the numbers show that primary care physicians decreased slightly or remained the same throughout Arizona, (figure 6). In actuality however the overall number of physicians did increase but still could not keep up with the growth of the rural populations. In Arizona all or parts of all 15 counties are designated as AzMUA’s and HPSA’s.
Figure 6  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.

Chapter IV Disparities Resulting from Access to Health Care

Racism

Blakemore (1999) mentions the disparity of racism when minorities are trying to access healthcare and cited racial discrimination and social disadvantage as difficulties faced by minorities trying to gain access to healthcare in the United Kingdom. Across America racism does still exist to a certain degree. “Discrimination – based inequalities manifest themselves in a variety of ways, ranging from income inequality to residential segregation” (Lyson & Tolbert, in Brown & Swanson, 2003, p. 236). This includes minorities being offered lower rates of pay in the rural community when cost of living is just as comparable to urban communities.

Arizona, along with other states, has a multitude of Indian tribes that have battled with the legislature and other opposition groups over Indian gamming. It cannot be argued that revenues from these gamming establishments have improved the quality of life, living standards and medical care for many tribes and their members. Arguments have been raised by opposition groups about unpleasant social behaviors associated with gambling; i.e. compulsive gambling, increased crime and domestic violence. These opposition groups have raised “the unpleasant specter of racism” (Gonzales, in Brown & Swanson, 2003, p. 52).

Infant Mortality

Sherman, (1992) stated that many rural areas lagged behind urban ones in terms of sentinel health outcomes such as infant mortality and rates of low birth weight babies in the 1960’s and 1970’s. Progress has been made over the years with a decrease in the
rural infant mortality rates. Rural areas now face a decrease in, or access to, maternal and perinatal care which will lead to an increase again in infant mortality. “The loss of local care is not simply an inconvenience for women; the absence of local care creates barriers that may limit access of the maternal and perinatal care system” (Lischner, Larson & et al, in Ricketts, 1999, p. 134).

Over the years the overall number of specialty providers has decreased in Arizona; various reason exists, i.e. increase in medical malpractice premiums. In the RR areas of Arizona specialty providers have remained steady at fewer than 40 per 100,000 population from 1997 – 2001, but in the urban communities the number increases to approximately 120 specialty providers per 100,000 population (figure 7). This places the rural dwellers at a huge disparity when compared with their urban counterparts.

Figure 7 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.

Cancer Screening and Management

“Minority groups suffer disproportionately from cancer and disparities in both mortality and incidence rates” (Bushy, 2001, p. 31). These incidences are due to several factors increased sun exposure for the migrant farm worker, (skin cancer), and limited access to health care with minimal access for preventative medicine such as mammograms, pap smears, rectal exams, colonoscopies and routine lab work. If screenings are able to be performed follow up care and treatment is usually limited.

Diabetes Mellitus

According to the Arizona Department of Health and Human Services in 2002 there were 2,021 newly diagnosed cases of diabetes in the Hispanic population and 688 newly diagnosed case in Native Americans. Bushy, (2001), states that the Pima Indians of Arizona have the highest incidence of diabetes than any other Indian tribe in the world. Multiple chronic diseases occur after the onset of diabetes including end stage renal disease, blindness, cardiovascular disease resulting in heart attacks and lower extremity amputations. These diabetes related chronic conditions occur at a higher incidence for minorities than whites.

Most of these complications could be prevented if proper follow up care could be adequately provided. Unfortunately, diabetic monitors, testing equipment and medications are too expensive for the rural minority. Even with health insurance, co – pays for office vists and medications can easily total over $100 a month. By the time the person qualifies for assistance, i.e. Medicare, it is usually because they have been given the diagnosis of end stage renal disease.
**Hypertension**

“Racial minorities have higher rates of hypertension, develop it at an earlier age and are less likely to undergo treatment to control their high blood pressure” (Bushy, 2001, p. 33). Hypertension has been called the silent killer; some people remain asymptomatic. So they are not even prompted to go to a doctor because there is “no problem”. Since they have limited access to care they do not go for routine check ups to have their blood pressure taken or labs drawn to check renal function.

Only after a stroke or heart attack occurs are they aware that they have high blood pressure. Once again finances may play a part in compliance, but more times than not they become uncompliant. This is because when they first start taking the medication they may feel poorly; causing them to stop it and not being able to follow up with their physician.

**Hyperlipidemia**

Hyperlipidemia is another silent killer like hypertension. It is impossible for one to know what their cholesterol level is without having it checked, hence preventative screening. Even with screening, a lipid panel is over $100, and according to drugstore.com a 30 day supply of Lipitor is approximately $95, without insurance coverage. So even with a diagnosis of hyperlipidemia treatment may still be unaffordable for many rural minorities.

As we know genetics play a large role in high cholesterol levels, especially for Hispanics and African Americans. Eating healthy, plenty of fruits and vegetables can be very expensive. The staple in many Hispanic and Native Americans diets are tortillas
which are made with a large amount of lard, and often fried in grease. Making minorities aware lifestyle changes, (diet and exercise), is received well but at times difficult or too expensive to implement.

**HIV/AIDS**

The incidence of HIV has continued to rise over the last several years in the minority populations, even with the information and education provided about how preventable the disease is (table 1). According to the Centers for Disease Control (2004) the estimated rate of adults and adolescents living with HIV in Arizona was 121.8 per 100,000 populations and 92.1 per 100,000 populations living with AIDS. Once again, screening or testing for HIV usually does not occur until symptoms or suspicions arise causing one to seek medical care. “Contributing factors for the disparities in HIV/AIDS include the late identification of the disease and once it is diagnosed, lack of health insurance to pay for the costly drug therapies” (Bushy, 2001, p. 34).
Table 1 Estimated Numbers of AIDS Cases, by Year of Diagnosis and Selected Characteristics of Persons, 1999-2003 – United States

<table>
<thead>
<tr>
<th>Age at diagnosis (yrs)</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>Cumulative through 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;13</td>
<td>187</td>
<td>117</td>
<td>119</td>
<td>105</td>
<td>59</td>
<td>9,419</td>
</tr>
<tr>
<td>13–14</td>
<td>57</td>
<td>58</td>
<td>70</td>
<td>88</td>
<td>59</td>
<td>891</td>
</tr>
<tr>
<td>15–24</td>
<td>1,541</td>
<td>1,642</td>
<td>1,025</td>
<td>1,810</td>
<td>1,991</td>
<td>37,599</td>
</tr>
<tr>
<td>25–34</td>
<td>11,340</td>
<td>10,385</td>
<td>9,947</td>
<td>9,504</td>
<td>9,005</td>
<td>311,137</td>
</tr>
<tr>
<td>35–44</td>
<td>17,165</td>
<td>17,285</td>
<td>16,890</td>
<td>17,008</td>
<td>17,033</td>
<td>365,432</td>
</tr>
<tr>
<td>45–54</td>
<td>8,088</td>
<td>8,586</td>
<td>8,929</td>
<td>9,310</td>
<td>10,051</td>
<td>148,347</td>
</tr>
<tr>
<td>55–64</td>
<td>2,218</td>
<td>2,422</td>
<td>2,468</td>
<td>2,724</td>
<td>2,888</td>
<td>43,451</td>
</tr>
<tr>
<td>≥65</td>
<td>739</td>
<td>783</td>
<td>779</td>
<td>759</td>
<td>886</td>
<td>13,711</td>
</tr>
</tbody>
</table>

| Race/ethnicity         |      |      |      |      |      |                       |
| White, not Hispanic    | 12,026| 12,047| 11,020| 11,960| 12,222| 376,834               |
| Black, not Hispanic    | 19,960| 20,312| 20,291| 20,476| 21,304| 368,169               |
| Hispanic               | 8,141| 8,233| 8,204| 8,021| 8,757| 172,993               |
| Asian/Pacific Islander | 389  | 373  | 409  | 452  | 497  | 7,166                 |
| American Indian/Alaska Native | 162 | 186  | 179  | 198  | 195  | 3,026                 |

| Transmission category  |      |      |      |      |      |                       |
| Male adult or adolescent |   |      |      |      |      |                       |
| Male-to-male sexual contact | 16,556| 16,272| 16,383| 16,971| 17,969| 440,887               |
| Injection drug use      | 7,710| 7,425| 6,772| 6,406| 6,353| 175,988               |
| Male-to-male sexual contact and injection drug use | 2,323| 2,071| 2,028| 1,942| 1,877| 62,416               |
| Heterosexual contact    | 4,243| 4,299| 4,578| 4,899| 5,133| 56,403               |
| Other*                  | 328  | 319  | 310  | 308  | 281  | 14,191               |
| Subtotal                | 31,159| 30,387| 30,074| 30,517| 31,614| 749,887               |
| Female adult or adolescent |   |      |      |      |      |                       |
| Injection drug use      | 3,448| 3,498| 3,269| 3,024| 3,096| 70,558               |
| Heterosexual contact    | 6,350| 7,011| 7,119| 7,380| 8,127| 93,586               |
| Other*                  | 212  | 254  | 251  | 261  | 276  | 6,535                |
| Subtotal                | 10,010| 10,763| 10,839| 10,666| 11,495| 170,079               |
| Child(<13 yrs at diagnosis) |   |      |      |      |      |                       |
| Perinatal               | 185  | 115  | 116  | 103  | 58   | 8,749                 |
| Other*                  | 3    | 2    | 3    | 3    | 1    | 570                  |
| Subtotal                | 187  | 117  | 119  | 105  | 59   | 9,419                 |

| Region of residence    |      |      |      |      |      |                       |
| Northeast              | 11,885| 12,616| 11,350| 10,551| 11,461| 285,040               |
| Midwest                | 4,099| 4,139| 4,094| 4,337| 4,698| 91,926               |
| South                  | 17,224| 16,757| 17,633| 18,482| 19,609| 337,409               |
| West                   | 6,892| 6,681| 8,468| 6,843| 6,667| 186,100               |
| Total*                 | 41,368| 41,287| 40,833| 41,289| 43,171| 929,988               |

Note. These numbers do not represent reported case counts. Rather, these numbers are point estimates, which result from adjustments of reported case counts. The reported case counts are adjusted for reporting delays and for redistribution of cases in persons initially reported without an identified risk factor. The estimates do not include adjustment for incomplete reporting.

* Includes persons with a diagnosis of AIDS from the beginning of the epidemic through 2003.

+ Includes hemophilia, blood transfusion, perinatal, and risk factor not reported or not identified.

* Includes hemophilia, blood transfusion, and risk factor not reported or not identified.

+ Includes persons of unknown race or multiple races and persons of unknown sex. Cumulative total includes 1796 persons of unknown race or multiple races and 1 person of unknown sex. Because column totals were calculated independently of the values for the subpopulations, the values in each column may not sum to the column total.

**Immunizations**

The elderly and the young are both at risk for vaccine preventable diseases. Over the years childhood immunization rates have increased largely due to schools monitoring immunization schedules, health departments making immunizations free of charge and providing mobile clinics in the rural areas. Pima County has several free clinics in various locations at the beginning of each school year and has scheduled visits to rural communities monthly for immunizations.

Elderly rural residents have various reasons for not getting annual flu shots or being vaccinated against pneumonia, besides the cost or availability of medical care. Many reasons are myths, such as: “I get sick every time I have had a flu shot.” “There continues to be a disproportionate burden of vaccine preventable disease in minority and underserved populations” (Bushy 2001, p. 37).
Chapter V Solutions

Transportation

Many suggestions and recommendations are made by the various researchers to develop or revise policies and practice protocols related to the delivery of healthcare in rural settings. According to Probst, Samuels, Jespersen, et al (2002) further research is needed in determining the transportation barriers experienced by minorities in the rural community. This research would provide better “policy information for planning site locations and transportation services” (Probst, Samuels, Jespersen, et al, 2002, p. 5).

The researchers pose many questions, which can be applied to nursing. Would resolving transportation issues promote better compliance with patients trying to access healthcare? If this is true, coordinating appointments with transportation issues in mind, i.e. scheduling appointments, or having office hours when adequate transportation is available is critical. Also providers need to be flexible about seeing patients who arrive late or early to their appointments or just walk in and want to be seen that day.

The Arizona Rural Health Plan, (2004), addresses several issues to resolve transportation issues in accessing care. First it proposes to increase the number of rural telemedicine sites by three by 2007. This involves training staff in the outlaying areas with the technology needed to operate the program and making the program financially affordable to the rural sites; by securing grants and providing for higher reimbursements to rural providers performing telemedicine consults.

The Plan also calls for providing an increased number of mobile and community oriented services to rural residents in their community. This will be accomplished by
2007 by increasing the number of vans or mobile clinics and workers for the rural community. The Plan will also look at ways to bill AHCCCS and other health plans for the services provided by these mobile clinics.

Health Insurance and Income

Probst, Samuels & Moore (2003) link higher income earners with the ability to afford health insurance. One factor that they have identified in earning a higher wage in minority communities was graduation from high school. So their recommendation for further research and development of programs is enhancing high school graduation rates for minorities in rural communities. Probst, Samuels & Moore (2003) also identify the period one is without insurance can lead to higher utilization of healthcare services once patients are insured again. Further research needs to be complied into whether or not this phenomenon is true. Unfortunately, Probst, Samuels & Moore (2003) provide no statistics with this identification.

Hargraves & Hadley (2003) recommend that making health insurance more available, not only to rural communities but to all citizens of the United States, would reduce the disparities faced by minorities in trying to access healthcare. This would require new policies to be put into place by lawmakers for accessible healthcare for all persons regardless of race, income level or place of residence, which is a goal of Healthy People 2010. All the researchers agreed that the lack of insurance is the biggest factor affecting access to healthcare for rural minorities.

The Arizona Rural Health Plan, (2004), has set a goal to reduce rural uninsured by 10% by 2007. One of the strategies they will implement is to make the public more aware
of the insurance programs, either publicly or privately funded, that are available. The Plan also wants to simplify the eligibility and enrollment process in acquiring and expand the benefits currently available.

Also included in the objectives for the Arizona Rural Health Plan, (2004), is getting rural persons to access preventative services, i.e. health screenings and immunizations for the elderly. The strategy for this is by promoting education and creating a public awareness about the services offered and their importance. The Plan recommends increasing funding for providers to allow for the screenings and any necessary follow-up care.

Currently Proposition 200 is in effect, but there remains legal battles at the state legislature level regarding its legality. Proponents and opponents have filed suits in courts of law challenging its implementation. Until it is repealed or further defined minorities, whether documented or not, will avoid seeking health care for fear of deportation.

Cultural Competence

Higgs, Bayne & Murphy (2001) recommend that health care needs to be delivered so that people, minorities, can be responsive to it. This method builds trust between the patients and the healthcare system which increases participation from patients in the healthcare decision making process. “A need to design and deliver health related services that fit the cultural and linguistic preferences of consumers” (Bushy, 2001 p. 39).

Blakemore (1999) makes reference that previous research has “tended to racialize the debate about minority needs, focusing on problems in community care as if they affect all black people equally” (p. 30). Blakemore (1999) notes that some minority
communities are better off, as far as inadequate services of care, etc., than others. Putting
the same label on all minority communities is inappropriate, further study is needed
within the varying minority communities before policy and changes in access to care are
This is something health care workers need to be aware of because not all minorities have
the same disparities in accessing healthcare and need to be assessed individually, not as a
group.

To address the continued rise in HIV among the Hispanic population
interventions need to be culturally tailored and developed for youth and their parents.
Programs that are culturally sensitive need to be developed and implemented to promote
communication about sexual activity between the parents and the adolescents. Culturally
appropriate information needs to be distributed into the community regarding ways to not
be at risk for HIV and information on the screening process also needs to be promoted
within the community.

To address cultural disparities, the Arizona Rural Health Plan has proposed to
establish a rural geographical and competency training manual. Several strategies include
promoting and increasing the participation in continuing education for those working in
border, tribal and minority communities. The Plan also proposes to increase, promote, the
number of rural and minority students in health care professional education programs.

*Health Provider Shortage Areas*

further research is needed in communities, with a positive health services infrastructure,
that attract and retain physicians for the sole purpose of replicating this model into
communities that have a poor health system infrastructure. With replicating the positive
systems, communities would develop positive health system infrastructures and decrease
the lack of services faced in many rural communities.

To address the HPSA’s, the Arizona rural Health Plan, (2004) has several
objectives and strategies proposed to decrease the number of these theses areas. First they
propose to adopt a new definition of rural, one that is more standard. They also propose
to increase funding of the 2004 budget by 5% for rural activities. This money will fund
the promotion of rural health programs in health professional programs and assist health
providers who want to work in a rural setting in the repayment of their educational loans.

Another objective set forth by the Arizona Rural Health Plan, (2004), is to
increase the number of 2002 rural health networks by three by 2007. Strategies for this
include building partnerships with current rural health centers and encourage expansion
of their services into economically challenged areas. The Plan also calls for coordination
of rural centers by annual rural health conferences, roundtable discussions and
teleconferences.

The Institute of Medicine, (2004), recommends that “a multifaceted approach to
the recruitment and retention of health professionals in rural areas is needed, including
interventions at every point along the rural workforce pipeline…” One idea is to offer
enhanced education to help prepare rural elementary and high school students pursue a
career in health care. A second facet is to have Universities develop a stronger
commitment to recruiting, training and developing rural health curriculum for their
students. Lastly they recommend that incentives be provided for health care professionals to seek and continue to practice in rural communities.

To increase the number of rural health care workforce the Arizona Rural Health Plan intends to promotes rural health living, i.e. pamphlets by 2007. Another objective is to retain and increase the number of Arizona health professional graduates by 5%. This is done by building partnerships and rural health care track programs with the Universities in Arizona. There are also objectives and strategies proposed to retain current and new providers in rural health care.
Chapter VI Summary

Nurse practitioners who practice in rural settings are able to make a huge impact in the lives of minorities that live in a rural community. With their nursing knowledge and background; nurse practitioner’s have been trained to focus on patients, families, environments and how these factors affect their health. Understanding the disparities and issues when practicing in the rural setting; further empowers the nurse practitioner in providing competent health care.

As already mentioned, preventative screenings and health education is needed in the rural settings. Nurse practitioners can fill this gap by promoting health education and the importance of health screenings, i.e. preventative testing: pap smears, mammograms, etc., at every visit. This need for health education can be met by writing articles in the local community newspapers, speaking at community events and by getting involved within the community, i.e. being on committees.

Nurse practitioners, by being patient advocates, can widely influence how health care is delivered in the rural setting. Encouraging the use of telemedicine services, being flexible with appointment times and understanding other access to health care issues, the goals of the Arizona Rural Health Plan can be met in 2007. By furthering their education about rural health issues, (i.e. disparities, cultural competency, etc.), nurse practitioners can become leaders in delivering health care to rural minorities.
References:


