

1989

Assessment of the Health Care Needs of the Urban Indian Population in the State of Arizona

Indian Health Service.

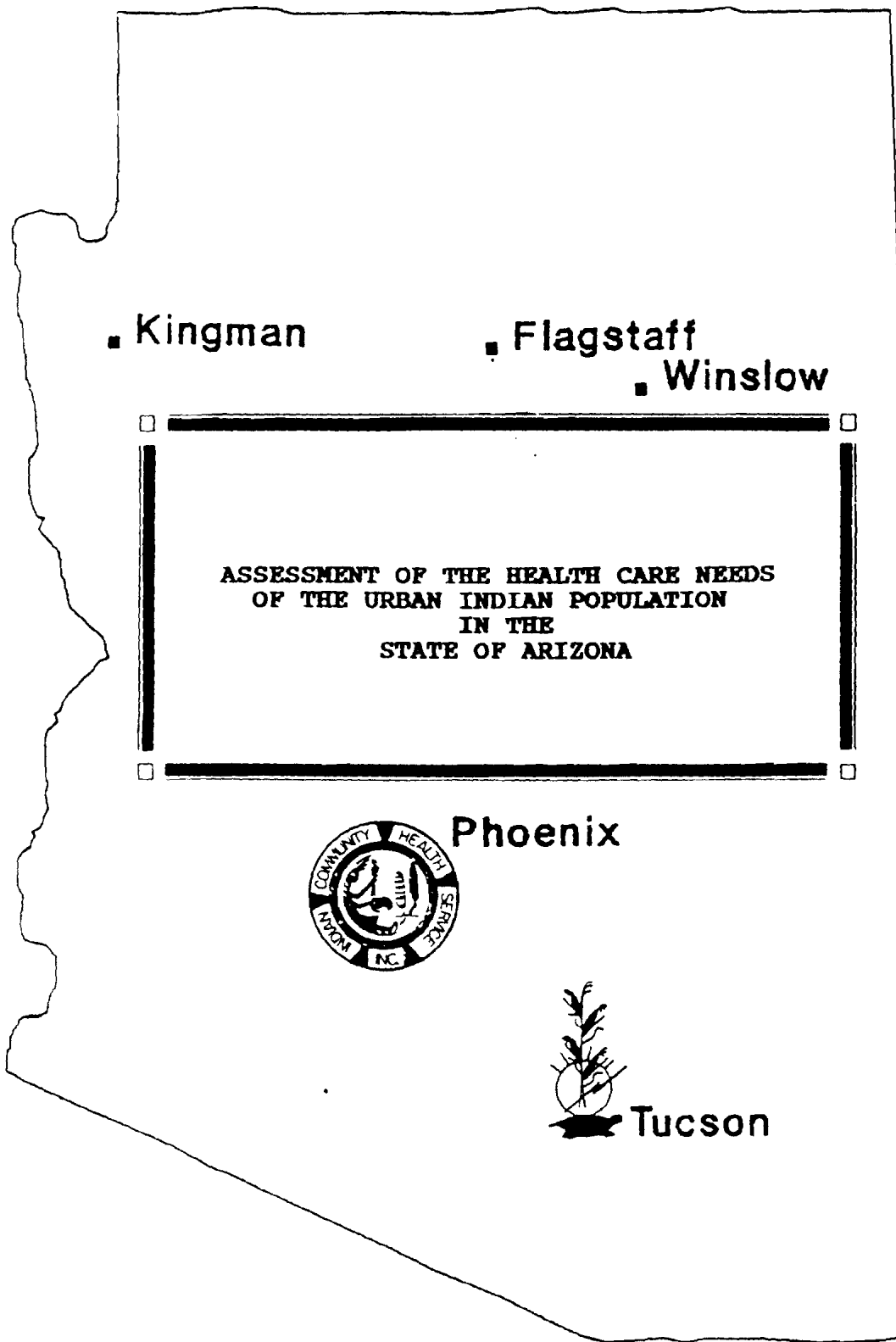
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AMERICAN
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despairing poverty. This spiral, which may result from something as simple as lack of information on basic requirements of life, can be broken by targeted assistance.

DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE

INDIAN HEALTH SERVICE

An Assessment of the Health Care Needs of the Urban Indian
Population in the State of Arizona

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Chapter 1

Introduction and Background

INTRODUCTION

In reports on the Fiscal Year 1988 budget for the Department of the Interior and Related Agencies, the Committee of Appropriations approved funding for the Indian Health Service (IHS)

"...to be used to conduct an assessment of the health care needs of the urban Indian population in the State of Arizona. The IHS is directed to provide a report of its findings to the Committee as soon as the needs assessment is completed..." (Senate Report No.100-165, p.117.)

and the Committee of Conference allocated funding for "an urban health assessment in Arizona." (Conference Report No. 100-498, p.917.)

The following report has been prepared by the Department of Health and Human Services, Indian Health Service, in response to these requests.

BACKGROUND

Purpose of the Study

Funding for the present study was provided by the Indian Health Service through a congressional request for information regarding the health status of the Arizona urban Indian population. The IHS has outlined the following purposes for the study:

(1) Determine the present health status of the urban Indian population in the State of Arizona, and determine the extent of use and availability of all health resources (Federal, State, County, City, and Tribal) for that population; (2) Identify the health needs of the population and the barriers that exist in addressing those needs; and (3) Provide accurate and timely information that will serve as an objective base for decision making in addressing the identified needs and problems.

Specific questions to be answered by this study were formulated by the IHS, and include:

-What are the demographic profiles of American Indians in selected urban sites in Arizona?

-What is the present health status of urban Indians and how does it compare to the health status of urban non-Indians in Arizona, as well as to the general population of Indians and non-Indians in the U.S.?

-What, if any, health resources are available to Indian people in the urban setting?

-What are the health needs of the urban Indian population?

-What are recommendations for action and future research?

A Technical Advisory Committee (TAC) of IHS staff guided the study by establishing objectives and methodology. The TAC used a broad definition for "urban Indian", which includes all self-defined/IHS direct service eligible Indian persons located in a non-reservation, urban setting. Such a definition is one used currently by the Title V urban health programs and is based on the legislation affecting the urban Indian community. A more restrictive definition applies for IHS contract care services (any services not supplied directly by the IHS facilities in the area). Contract care services are provided only to Indian people who also meet the residency requirement of being "on or near" their tribal reservation.

Several criteria were developed to decide which urban sites would be included in this study. Phoenix and Tucson were chosen immediately because they are major urban centers, and because Maricopa County (including Phoenix) and Pima County (including Tucson) constitute the Standard Metropolitan Statistical Areas (SMSAs) of Arizona. Although no other cities in Arizona meet IHS Title V eligibility (population > 50,000 with a significant urban Indian community), several smaller cities have a significant number of Indian people. Those with a population base near 10,000 or greater were chosen for further consideration based upon the conditions and health care services available for urban Indians in each setting. Yuma, Winslow, Kingman and Flagstaff were the final selections based on the following considerations:

1) Yuma (1985 total census pop. 46,807) is located near reservation areas and has IHS facilities available which should provide for the health care needs of urban Indians in Yuma.

2) Winslow (total 1985 census pop. 8,500) is also located near reservation areas with IHS facilities available. Although the Winslow population is less than 10,000, the total number of American Indians is high. The 1980 census reported that 17.5% (n=1,389) of the population in Winslow was Indian.

3) Flagstaff (1985 total census pop. 38,247) has limited IHS services available for its urban Indian population. Some contract care is available for Navajo people. However, no primary care facility exists. Significant numbers of Indian people have located in Flagstaff. However, many of these Native Americans are not Navajo and so do not qualify for contract care services. The 1980

census reported that 6.4% of the population was American Indian. Thus, approximately 2,215 Indian people resided in Flagstaff in 1985.

4) Kingman (1985 total census pop. 10,428) has neither IHS facilities nor contract care available for urban Indians. Very little is known about the urban Indian population in Kingman, and even less is known about where they go for their health care needs. The 1980 census reported that 1.5% of the Kingman population was American Indian (n=143).

The present study does not attempt to compare Arizona's urban Indian population with other urban Indian communities in the United States. The report is primarily intended as an in-depth study of a particular population within Arizona. Comparative data on urban Indians in other areas of the country are not available at this time. IHS does have activities planned, in FY 1990, to examine the urban Indian programs in totality. IHS will look at the health needs and the health services provided to urban Native Americans, and assess their effectiveness and efficiency.

Constraints

The present study was hampered by:

- 1) A limited (7 month) timeline which made it difficult to establish the contacts necessary to obtain data or to allow enough time for other agencies to process data for our use;
- 2) Unavailable or inaccessible data on urban Indians;
- 3) Limited coordination between or planning about the urban Indian population by Federal, state, local and private agencies;
- 4) Contradictory basic information on demographics factors such as population counts, which makes calculating mortality rates or any type of per capita based cost needs assessment virtually impossible;
- 5) The legal case of Arizona vs. United States (in which the state of Arizona medicaid program contends that the IHS has the primary payer responsibility) which has created a litigious atmosphere where information and cooperation is not forthcoming. There is clearly an area of controversy over Federal versus state versus local responsibility for the health care needs of the urban Indian community.

It became clear during the course of this study that while each urban area has its own complexities, the overall situation regarding urban Indians is one of crisis management rather than future-oriented planning or coordination. Currently, no agency is advocating or taking responsibility for monitoring the health

status of the urban Indian, and this was reflected in the fact that public and private agencies had never had a request for data on urban Indians and many did not have the time or energy to process one. IHS facilities were not able to process data by residence, except for mental health data from Tucson, in the timeline requested. In addition, Federal, state and county officials expressed concern about their overall lack of knowledge regarding the urban Indian population.

Several government agencies at the state and county level also expressed concern over supplying information due to the recent legal case between the IHS and the state of Arizona. While many times this was not directly acknowledged, several contacted agencies did express the need for approval before any information could be released. The litigation reduced the ability to obtain data which was not already compiled. This was particularly true at the state level, although Maricopa County officials also expressed regret at their lack of cooperation. Such an atmosphere proved to be a constraint in getting quality data on urban Indians.

Local agencies provided data from their ongoing community assessments of urban areas. Some localities had difficulties getting a good sampling frame because other agencies were unwilling to release listings of their Indian clientele to contact for community assessment. Additionally, the IHS clinical patient listings were difficult to obtain or proved to be outdated. Problems specific to each area will be discussed in the methodology section.

METHODOLOGY

Needs Assessment Framework

The Arizona Urban Indian Health Needs Assessment Study used the overall framework represented by the following IHS Needs Assessment model:

$$\text{HEALTH STATUS} - \text{HEALTH RESOURCES USED} + \text{BARRIERS/HEALTH RESOURCES NOT USED} = \text{HEALTH NEEDS}$$

The study also incorporated several other public health models into an overall methodological design. The PRECEDE model developed by Lawrence Green of the University of Texas (Green, Kreuter, Deeds & Partridge, 1980) and the Needs Assessment for Prevention Planning (Publ #ADM81-1061, 1981) developed by the Alcohol, Drug Abuse and Mental Health Administration of the U.S. Public Health Service provided some initial guides for the formulation of the study's database workplan and needs assessment techniques.

Health status was defined as proportional mortality compiled from data statistics on the Phoenix Service Unit for Phoenix and the Pima County urban census tract mortality data for Tucson. Additionally, reported prevalence of certain health conditions was obtained through community data. **Health resources used** were measured by objective data from Information & Referral, Data Network reports, and subjective recall data on health care use. **Barriers and health care resources not used** were defined on several levels: 1) economic need from objective demographic data supplied by the Census bureau and subjective interview data, 2) institutional barriers supplied by availability information and health professional interviews, and 3) subjective data on perceived barriers and satisfaction with service measured in interview data. These indicators were used within the IHS model framework to measure overall **health needs**.

The total needs assessment process consisted of two distinct phases: 1) investigating already existing sources of data; and 2) assisting in obtaining and analyzing new information from local Indian organizations. During the first phase, demographic analysis, inferential indicators, and programmatic data were explored. The second phase consisted of health professional interviews and community assessment data analyses.

PERSONAL CONTACT DATA GATHERING

Over 70 organizations in the Phoenix and Tucson areas were contacted by telephone and followed up with personal visits if appropriate. These agencies included:

- Health-oriented, Federal, State and Local;
- Health-oriented, Private;
- Indian specific;
- Social service, Federal, State and Local;
- Social service, Private;
- Health planning or statistics agencies.

Several of the contacted agencies provided useful data for the needs assessment. However, very little data specific to urban Indian people was available. All of the data received was in raw form, that is, the data had not previously been analyzed or used for planning purposes. This in itself represents a significant finding. With a short timeline for a needs assessment process, it is difficult to start from the very beginning because it is often necessary to establish a trusting relationship with an agency, or simply take the time to find the individual who has access to the data, before information can be obtained. In many instances, researchers felt that data was available but because no one had asked for it previously, or because no system was in place for getting the data on a regular basis, agency staff would not cooperate or give the request a priority so that it could be completed. Only one of the approximately 100 private hospitals and medical centers contacted provided usable information on use by urban Indians.

Most useful sources of data

During the initial data gathering phase, the sources which proved most useful were county health departments and information/referral services. Information and Referral Services, generally funded by United Way, are found in almost all major cities. They can provide a good source of information on services in an urban community and many also function as social service planning agencies. For example, the Information and Referral Service in Tucson conducts yearly surveys of community agencies which include estimates of client race. As previously mentioned, however, no one had ever asked for the data so it had to be manually extracted for use in this study.

The Data Network for Human Services, a central collection agency for data on human service utilization in Maricopa County, was also an excellent source of data. Again, they had never had requests for data on American Indians, but because of their computerized system were able to process requests in a short time for a small fee. Additionally, the Pima County Health Department provided excellent data from their computerized statistical system. They provided data from 1983 on Indian births and deaths by census tract and cause. Their computerized system made the

data readily accessible. Unfortunately, Maricopa County has no such similar database in place, or if they have one, did not provide similar data for this study. This is a discrepancy which affects the comparability of information between sites.

SECOND PHASE- COMPILING NEW DATA

Because the initial phase of data collection provided limited information on the health status/health needs of urban Indian people, the analysis of health interviews and Health Risk Appraisal (HRA) data proved to be an essential part of the needs assessment. Additionally, eight health professional interviews were conducted to provide insights into policy issues and service provider viewpoints on the health problems facing the urban Indian population.

Community Assessments

SAMPLING PROCEDURES

Within urban areas of Arizona, Indian people are scattered throughout the city. No census tracts have a great enough concentration of American Indian households for door-to-door sampling, local Tucson and Phoenix clinics compiled names and addresses of Indian people from schools, community agencies, day-care centers, churches and the IHS facilities. These "master" lists were checked for duplicates and then, systematic random samples were drawn for each community assessment. Random sampling is an important technique to avoid the bias associated with convenience sampling, where only certain types of people are interviewed. Random sampling allows generalizations to the larger population represented by the sampling frame. Thus, random samples taken from a representative sampling frame would be generalizable in a way that convenience sampling would not. Only those 18 and older were included in the assessments.

Tucson

In Tucson, the total sampling frame consisted of a good socioeconomic cross-section due to inclusion of individuals from Pima Community College (n=419), Tucson School Districts (n=1,190), urban users of San Xavier Indian Health facility (n=2,657), and various Indian-specific elderly and community organizations (n=56). Thus, the total number of unduplicated Indian individuals in the Tucson sampling frame was 4322. From this, a random sample of 550 Indians was chosen. The sampling frame included low-income Indians (from the San Xavier lists), Indian parents with children (from the school lists) and younger, childless Indians living in community college housing. Elderly Indian adults were included by using lists from social service agencies serving this age group. However, the sampling frame did not include the names of working, childless Indian families with health insurance coverage or parents of Indian children in private schools. There was also a bias towards females because

of their greater use of health facilities for child visits and because of the large number of single mothers in the school system.

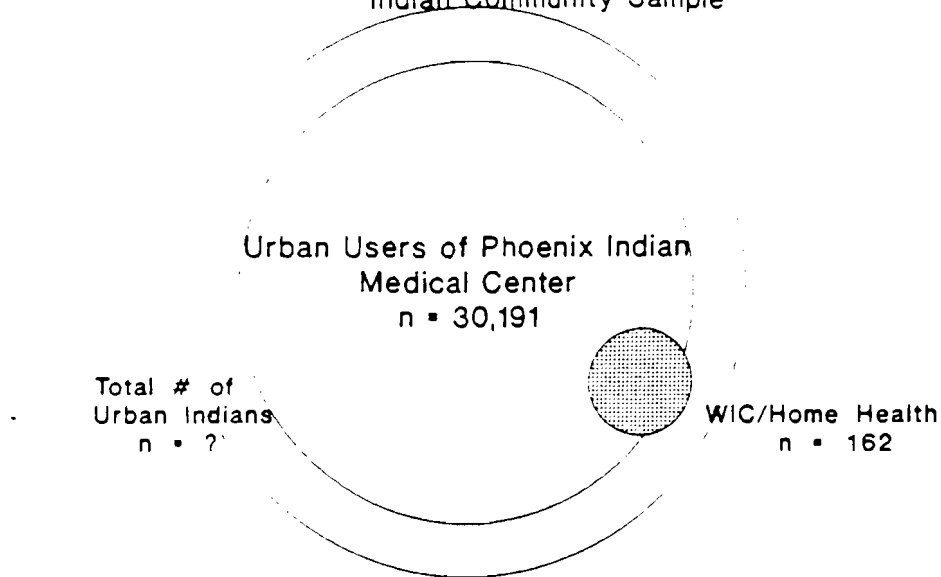
The sample did, in fact, represent more females (65%) and more uninsured (59%). Additionally, only 49% of the sample were high school graduates as compared to the overall 1980 Census figure of 59.5% for Tucson city. Our sample may have selected slightly less educated urban Indians than the general population in Tucson. Urban Indians in our Tucson sample had an overall low mean income of \$8,871, however, 53% did not respond to this question so comparisons with Census data would not be appropriate. Also, any census comparisons must be approached cautiously due to the nine year time difference between data collection. See Appendix 1 for more detailed analysis of sample demographics.

Phoenix

The Phoenix area had less success in getting a representative sample of the metro area urban Indian population. Local agencies were not cooperative in releasing lists of Indian clients, and urban clinic staff were unable to obtain information from schools, churches, colleges or social services. The sheer number of school districts and agencies in the metro area made the task a difficult one in the few months available. Again, additional time to establish relationships with agencies may have facilitated the exchange of information.

Another drawback in the Phoenix area was the Phoenix Indian Medical Center (PIMC) patient listing. (Direct care services at PIMC are provided to any person of Native American heritage and service provision is not means tested.) The client list consisted of all patients seen during the last two years at PIMC. However, the list had never before been generated and proved to be a difficult process because of outdated computer facilities at PIMC. This list did not include age or phone numbers and was not sorted by residence. Study staff had to manually sort through the 44,078 names and remove those with non-urban addresses. A total of 13,887 were pulled from the list, leaving 30,191 individuals (68.5% of the entire list) with urban residences. The urban clinic also added 162 unduplicated names from their home-health and WIC client lists. Thus, the systematic random sample of 1,023 urban Indians in Phoenix is representative of the Phoenix Indian Medical Center client base, but we have no knowledge as to the overlap that this group may have with the total urban Indian population. That is, non-users of PIMC services or the urban clinic had no chance to be represented in the community assessment. The sample population for Phoenix is conceptually illustrated in Figure 1-1.

Fig 1-1. Conceptual Illustration of the Phoenix Indian Community Sample



Given the large number of urban Phoenix Indians served by the PIMC over the last two years ($n=30,191$), it is difficult to say how large the total urban population NOT serviced by PIMC is, especially given that estimates of the total urban population of Indians residing in Phoenix have at their highest, reached slightly over 20,000. The most recent IHS linear regression methodology estimate of the Maricopa County Indian population for 1988 is 29,115. Based on the 1985 special census of Arizona, 70% of the Indian population in Maricopa County lives in Phoenix and surrounding cities, resulting in an estimated urban Indian population of 20,380 for the Phoenix Metropolitan area for 1988. Clearly, the population estimates are inaccurate if over 30,000 urban Indian people are being seen at PIMC. In terms of the sample, however, it seems that either the population estimates are grossly inaccurate or the PIMC user base represents the vast majority of the urban Indian community. Another plausible explanation might be the high mobility of the urban Indian population. Family members may move back and forth between the reservation and the city, and may list a temporary urban address for PIMC health professionals.

One could conjecture that three characteristics of PIMC users versus non-users would be lower income, lower education and lack of insurance coverage. Actual assessment data revealed slightly lower mean household income than that reported in the 1980 Census data. The Phoenix sample mean income was \$14,868 versus the \$15,404 Census figure. However, it should be noted that 35% refused to answer the income question. The educational level of the Phoenix sample was very close to the 1980 Census figures for the Phoenix Metro area-- 65% of respondents were high school graduates as compared to the 69.5% of the population in the Census report. Additionally, it was not solely for lack of insurance that urban Indian people used the PIMC facilities. Both community assessment data and discussions with PIMC personnel revealed that Indian people with insurance coverage

used PIMC facilities. Thirty one percent of the community reported having some type of health coverage (ranging from minimal to full), with 52% of the coverage coming from employers. See Appendix 1 for more detailed sample demographics.

Overall, the PIMC client list does represent the majority of Indian people in Phoenix, but those on the high end of the socioeconomic scale and males were underrepresented.

Non-SMSA sites

The Flagstaff Indian Center sent flyers to members and used the Center membership list to do a random systematic sample, calling members to come in to the Center for a health interview. The Winslow sample basically represented a convenience sample of the Indian center clientele. In Winslow, flyers were put up at IHS and Indian facilities, plus word was spread throughout the community that health interviews were needed. The Kingman sample used the Indian student school lists as its sampling frame, so it may be more representative of the overall urban Indian community. Total respondents from each site numbered: 86 in Flagstaff, 64 in Winslow and 37 in Kingman.

In each urban setting, urban Indian community members were initially asked to participate in the study. If they chose to participate, they signed a consent form and were paid for their time. The questionnaire part of the assessment study lasted approximately 40 minutes, with an added 15 minutes if they completed the Health Risk Appraisal. Confidentiality of responses was assured to all participants, and ID numbers unattached to names were used in the data entry process.

INSTRUMENTS

Questionnaire

The community agencies utilized questions from three needs assessments previously conducted with American Indian populations- the National Medical Care Expenditures Survey, the San Francisco Urban Indian Needs Assessment Study (Hill, unpublished), and an Assessment of Health Needs Among American Indians in Wayne County, Michigan (Bashshur & Shannon, 1981)- to insure that reliability and validity had been tested with the target population. Urban clinics decided to combine several instruments in an effort to cover all of the areas regarding use and barriers to health care for urban Indian people.

The National Medical Care Expenditures Survey is a national, probability sample health questionnaire which has recently been modified for use in Indian communities. Several of the questions in the Arizona community health assessments were used with the assumption that comparative data from across the United States

will be available in the spring of 1989. The areas covered by the questions are usual source of health care, need for care, and barriers to receiving care.

The Health Needs Assessment study by Bashshur and Shannon in Michigan provided basic questions on use of health services; satisfaction with health care services; health knowledge, attitudes, and behavior; insurance coverage and use of public assistance. This survey was pretested with Indian families in urban areas of Michigan, and then used for major studies in Detroit and Sault Ste. Marie. Face and content validity were improved through continued use by and with urban Indian people.

Demographic and health status questions were taken from the San Francisco Urban Indian Health Needs Assessment survey. This survey was used with the urban population in the San Francisco Bay Area, and was pre-tested for validity before use.

The final instrument included almost 300 questions, with sections on usual sources of care; reasons for not having a usual source of care; use of medical care in the past year; satisfaction with health care; use of emergency room care; use of pap smear and prenatal care services for women; use of dental care; barriers to care; health knowledge and behavior; source of payment for medical care; use of medical assistance programs; needed health services; and traditional Indian medicine. Demographic and certain major health conditions were also assessed.

Health status was measured by reported prevalence of major health problems. Use of health services was measured by direct questions on use of care during the last year for medical, dental and emergency services. Barriers to care were defined along several dimensions. Spatial and temporal dimensions were measured by questions on length of waiting time and traveling distance to health care services. Economic barriers were addressed by questions on cost, payment difficulties, and insurance coverage. Perceived barriers were assessed by Likert designed satisfaction questions (not satisfied, satisfied, very satisfied) on availability and accessibility. Health knowledge and behavior were measured by Likert scale questions on the importance of certain health behaviors (e.g., not smoking--is it very important, important or not important) and whether the individual tried the behavior (e.g., how hard did you try not smoking--not hard, hard, or very hard). Demographic factors were assessed by direct questions on tribal affiliation, age, educational level, employment status, occupation, income, number of adults and children in the household, time spent on the reservation, length of time in the city, homeowner status, and marital status.

Health Risk Appraisals

The Health Risk Appraisal (HRA) is a 41-item instrument with questions on age; height; weight; history of diabetes and high blood pressure, smoking, drinking and other health behaviors. The HRA also includes physiological measures of blood pressure, total cholesterol and random glucose. The IHS has recently completed pilot-testing of the instrument for use in the Indian community, and this Indian-specific version was employed on a subset of the overall sample in each urban setting. Two hundred HRAs were completed in Phoenix, 200 in Tucson and an additional 200 in the non-SMSA sites of Flagstaff, Kingman and Winslow. The HRA is automatically computed and a printout made available for each individual completing the test. In each community, health education materials and trained staff were made available as part of the HRA data gathering process. Thus, 600 urban Indian people in Arizona received individualized health promotion/risk reduction information as part of the Arizona Urban Indian Health Needs Assessment.

FIELD EXPERIENCES

Training

All of the interviewers for the Arizona community health study received training through special seminars. The training sessions stressed the importance of consistency and reliability during the field experience, and included a discussion of bias and the importance of minimizing bias for an assessment to remain valid. Interviewers reviewed all questions and were trained in the proper method for asking them. Additionally, each interviewer had the opportunity to practice the assessment process before going out into the field. Almost all of the field staff were Indian, and several were bilingual as well.

Each interviewer was given a set number of names to contact for interviewing. Only in some cases was a phone number included as part of the client list, so the names were looked up in the phone book. If an appointment could not be made, the interviewers made a house-call to find the person to interview. If after three attempts the person remained unavailable, interviewers were instructed to move on to the next name on their list. Interviewers were paid by completed interview.

Tucson

One of the biggest difficulties for interviewers in Tucson was the wording of some of the interview questions. Even though the instrument had been validated with Indian people, the field staff found that some questions, especially those from the National Medical Care Expenditures Survey, used double negatives in their wording. This proved to be very confusing for Indian people who did not speak English as their native language. Therefore, these questions posed special difficulties for field personnel.

Unfortunately, the questions were originally chosen so that comparative data would be available on a national level. Thus, changes in the wording were not possible.

An additional problem found in Tucson was the outdated address listings from the local IHS facility. One of the field staff found an address over seven years old. Even the community and school listings were incorrect, illustrating that Indian people change addresses quite often in this urban setting. This made it difficult for interviewers to make on-the-spot visits.

Phoenix

The largest problem in Phoenix was the Phoenix Indian Medical Center client address listings. The high mobility of the Phoenix urban Indian community makes constant updating of the patient listing a long and arduous process. Additionally, only 2 out of 30 names drawn from the list were found to have an available telephone. Thus, contacting individuals took a great deal of time and effort on the part of the interviewers. To try to get more current address information, postcards were sent out to the selected persons and an address correction was requested. This technique was only partially successful. Most of the cards were never returned. When it became clear that it would not be possible to complete even a small portion of the assessment by the method used, the interviewers began to broaden their criteria for getting an interview. If they arrived at the interview site and the selected individual was not present, they would do one of two things: 1) interview another related adult household member, or 2) interview an unrelated adult who had moved into the residence and was American Indian.

Community assessments in both sites were completed during November and December of 1988. Work was completed in Flagstaff, Winslow and Yuma over a four-day period in early December.

Bias

Field experiences, particularly in Phoenix, introduced the bias of selecting more home-makers for interviews than if the list of names could have been strictly followed. The practice of interviewing persons in the household other than those selected compromises the random quality of the sample. However, due to the difficulty of completing the interview process within the given time frame, the changes in procedure were necessary and the sample is still more representative than if a convenience sampling technique had been employed. Additionally, the difficulty encountered in tracking down individuals illustrated the high mobility of the urban Indian population.

HEALTH PROFESSIONAL INTERVIEWS

Health professional interviews were conducted with administrators and service providers at the Federal, state and local levels. The interview included open-ended questions covering personal perceptions of the health needs of urban Indians, problems faced by urban Indians, services most effective for meeting the health needs of urban Indians, and policy recommendations or system changes to facilitate improvement in the health status of urban Indians. Health professionals were chosen on two levels: 1) as representatives of IHS, state, county and local agencies, and/or 2) as acknowledged experts on urban Indian health affairs. One non-Indian health professional chosen at the state level acknowledged his lack of information on urban Indian health, and referred researchers to an American Indian state employee for the interview. All but two of the health professionals interviewed were Indian.

DATA ANALYSIS

Coding and Data Entry

A comprehensive coding system was developed for the questionnaire portion of the interview (the HRA data was directly entered onto a floppy disk by an optical scanning device linked to the portable computer at the time of assessment). The bulk of data entry was accomplished by one administrative assistant (1,560 out of 1,764 data sets) although three other staff members participated in the data entry. All worked very closely together to insure reliability of data entry. Staff entered data into a dBase IV system which was then transferred into an SPSS file. Location, zip codes and ID numbers assured separate data files for each location. A random sample of 2% of the coding done by each data entry staff showed a very low error rate.

Analysis

Statistical analysis of data included basic frequencies, as well as mean and median scores for interval data. Non-parametric Spearman correlations were performed on ordinal and nominal based data. The SPSS system of statistical analysis was used for all statistical calculations.

FINDINGS

The findings of the Arizona Urban Indian Health Needs Assessment are reported in a summary chapter for the entire state with an emphasis on charts and graphs illustrating study results. For those interested in specific locations, a more technical analysis of findings are reported separately for Phoenix and Tucson (Chapters 3 and 4, respectively). In addition, a summary of community assessment data is compiled as Appendix 1 with the Health Risk Appraisal information as Appendix 2.

In our experience, socioeconomic status interacts with culture, and one factor cannot be addressed without the other. It is not the purpose of this study to define the variance which the cultural background of Native Americans plays in health matters. We also do not have the database needed for such an in-depth study. Therefore, we have chosen not to standardize socioeconomic measures. When comparisons are made, they are made with the data sets available and most of the time these do not reflect a "low-income" population. However, comparisons made to the general population are the most appropriate for this report, in that its purpose is to assess the health needs of urban Arizona Indians in an effort to provide information for decision-making to bring Native American health status to the "highest level possible".

It is also important to note that this report does not intend to produce information generalizable to a broader population. We have described our sample methodology clearly in an effort to illustrate this. Comparative information should be used with extreme caution, given the tremendous differences between the American Indian and general population.

Chapter 2
Arizona Urban Indians

BACKGROUND

Urban Indians in Arizona

Arizona, the nation's sixth largest state, is the home of many Indian peoples, from the Navajo and Hopi Nations in the northeastern "Four Corners" area bordering Utah, Colorado and New Mexico, to the Yuma (Quechan) Indians in the southwest corner near California and Mexico. Other Indian Nations which reported over 1,000 members in 1988 include the Mohave-Chemehuevi on the Colorado River Reservation in central western Arizona, the Gila River and Salt River Pima Indians near Phoenix in south central Arizona, the Hualapai of the northeast, the Apaches living in San Carlos and Fort Apache in central eastern Arizona, the Tohono O'odham (formerly known as Papago) Nation in south central Arizona bordering on Mexico, and the Pascua Yaqui, also in south central Arizona, living in and around the metropolitan area of Tucson.

Such a varied and ancient cultural heritage brings a special feeling to the lands of Arizona. Indian people in Arizona have maintained their cultural identities even throughout the federal relocation programs begun in the 1950's which encouraged Indian movement from reservation communities to nearby large cities. The move to cities dominated by white Europeans, who do not value or encourage cultural diversity, is not an easy one for American Indians. Many have extreme problems adapting, others are able to assimilate to the new, fast-paced society, while still others manage to live in the new environment while keeping cultural traditions and values intact. Return trips to the reservation community for socializing and traditional, religious ceremonies often help the urban Indian renew the spirit after constant cultural conflicts encountered in the urban setting. In addition, a younger group of urban American Indians were born and raised in the city, without the context of the reservation community. Such Indian people live with a distinct cultural identity similar to, and yet also different from, Indian people who are newly migrating to the urban life from the reservation.

For American Indians who have a difficult time adapting to the city, the problems of alienation can seem insurmountable (Saslow & Harrover, 1968 and Westermeyer, 1976). Indians in Arizona are no exception, where the urban Indian has been described as a person of "two worlds, yet unseen and ignored by both" (Weaver, 1978, p. 84). Many of the health care sources, social services and traditional support networks available to Indian people on the reservation are out of reach to urban Indians, and local services are not geared to meet their special language and cultural needs. However, despite the difficulties urban Indians

encounter, the community continues to grow rapidly due to the migration of people from reservations as well as the high birth rate.

Legislative Mandates Regarding Urban Indians

During the 1800's, Indian Nations entered into treaties with the federal government which included compensation for Indian lands in the form of money, land rights, and/or service obligations. Such treaties included an ongoing federal obligation to provide for the health care of indigenous Americans.

During the initial years of United States history, the Indian population lived primarily in rural areas of the country. The emergence of urban Indians is a relatively new phenomenon, which began during the period of general economic prosperity following World War II. In the early 1950's the Bureau of Indian Affairs (BIA) monitored a relocation program for American Indians. The intent of the program was to assist and encourage Indian people to seek employment and education in nearby cities. By the 1980 Census, over 50% of the Indian population in the United States lived in metropolitan areas.

As Indian people continued to move into the cities, they unknowingly forfeited access to federal health care services provided by the newly formed Indian Health Service (IHS) division of the Public Health Service, as well as social services provided by the BIA. Low economic standing, limited work experiences, unfamiliarity with the urban health care delivery systems, and cultural differences produced a low level of health care utilization.

Local Indian community leaders responded to this situation in the late 1960's by organizing small volunteer clinics which operated on a part-time basis. The first federal (IHS) funding for an urban Indian health program was provided in 1972, with more programs receiving support in the following years.

In 1976, Congress passed the Indian Health Care Improvement Act (P.L. 94-437) which is regarded as the landmark piece of Indian health legislation. This Act, along with subsequent amendments, addressed deficiencies in Indian health by providing for a high quality health system to be operated by the IHS, and established a firm program foundation to meet the expressed national goal of providing the highest possible health status to Indians.

Title V of this Act, entitled "Health Services for Urban Indians," specifically addresses the urban Indian population by giving IHS the authority to establish new programs to assess urban Indian health needs, plan services to address those needs, and most importantly, to provide direct health care services. In Arizona, two urban centers currently have Title V contracts, Phoenix (Indian Community Health Services, Inc.) and Tucson (Traditional Indian Alliance). While these programs provide outreach/referral, home health, and health education, neither of them currently provide primary health care services.

The Indian Health Care Improvement Act was reauthorized in 1988, and was the last bill to become a law under the Reagan Administration. The passage of this bill emphasizes the legislative mandate to extend quality health care services to all Indian people, including those living in urban areas.

DEMOGRAPHICS

Population Characteristics

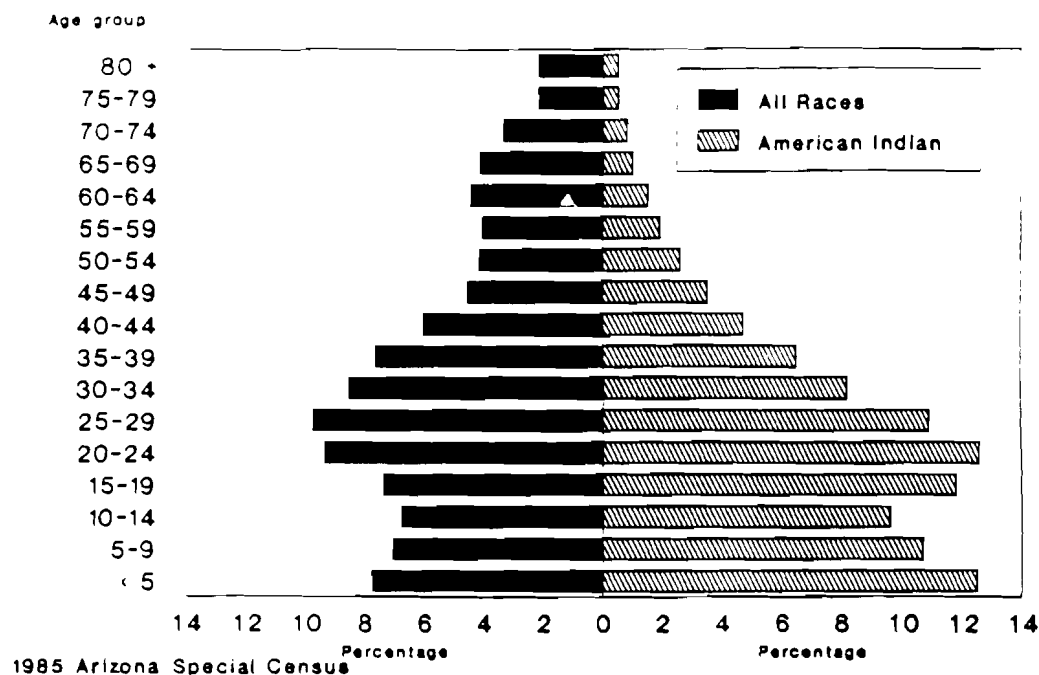
POPULATION COUNTS

The exact number of Indian people living in urban centers in Arizona is unknown, and estimates vary widely. For example, the IHS estimates that 29,115 Indians lived in Maricopa County in 1988. According to the 1985 Arizona Special Census, approximately 70% of the Indian population in Maricopa County resides in the Phoenix Metropolitan area, resulting in an estimated urban Indian population of 20,380. However, the Phoenix Indian Medical Center patient listings for 1986-1988 showed 30,191 Indians with urban Phoenix addresses, suggesting that the actual number of urban Indian residents in Phoenix is much higher than IHS estimates. Thus, the Phoenix Indian population for 1988 was probably somewhere between 25,000 and 35,000, however, there is no way of knowing the most accurate count.

Estimates of the Indian population in Tucson in 1985 ranged from 4,250 (1985 Arizona Special Census) to over twice that amount at 9,070 (analysis of census undercounting, Evaneshko, 1988). Even within the IHS, estimates vary considerably. The IHS linear regression model estimate for 1988 puts the Indian population at 5,239 (Berry, private communication) while a special Tucson IHS Service Area analysis using currently enrolled Indian public school students estimated 7,682 urban Tucson Indians. Thus, the Tucson Indian population in 1988 probably ranged from 5,000 to somewhere around 10,000. Again, the actual figure can not be quoted with certainty.

For non-Standard Metropolitan Statistical Areas (SMSAs), estimates were based on the 1980 and 1985 censuses, and were not adjusted for undercounting. The estimated 1985 Indian population in Winslow was 1,389; in Flagstaff, 2,215; in Kingman, 143; and in Yuma, 375.

Figure 2-1. Maricopa County (Phoenix SMSA) Population Distribution



AGE DISTRIBUTION

High birth rates in urban Indian communities result in young populations, while high death rates reduce the number of Indian elders.

Throughout the country, the American Indian population is growing at a rate 83% greater than the general population, resulting in a younger Indian population in comparison to the rest of the population (IHS Chart Series, 1988). This high birth rate is found in urban areas of Arizona as well. In fact, the Indian population in Phoenix is the youngest of SMSAs across the country (Berry, 1988). The Phoenix Service Unit of the IHS estimates that the population growth in Phoenix is 200% higher than the general population rate (Meyer & Attico, 1986).

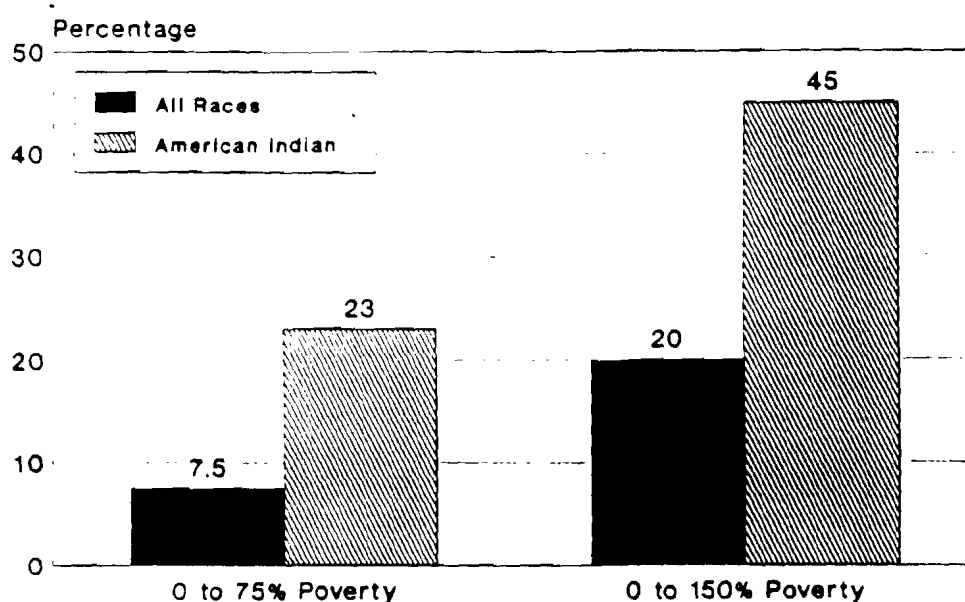
The shape of the Indian population distribution in the Phoenix SMSA (Maricopa County) in 1985 shows some dissimilarity with the general population, particularly in the percent of the young and the old (Figure 2-1). Fifty eight percent of the Indians in the Phoenix metropolitan area were under age 25, while only 38.5% of the general population were in the same age group. The median age of Phoenix Indians in 1985 was 22, while the median age for the general population was 31. In addition, less of the Indian population reached the ages of 60 and older than seen in All Races (Table 2-1), perhaps due to high death rates in the Indian community coupled with the large number of white "snowbirds", or elderly who move from the northern states to Phoenix for the

sunny climate. The Indian population in Pima County (which is at least 30% urban according to 1985 Arizona Special Census figures) is also very young, with a median age of 23.1 as compared to the general population median of 31.5.

Financial Characteristics

Figure 2-2. 75% and 150% Poverty Rates

All Races and American Indians
in Urbanized Areas of Arizona



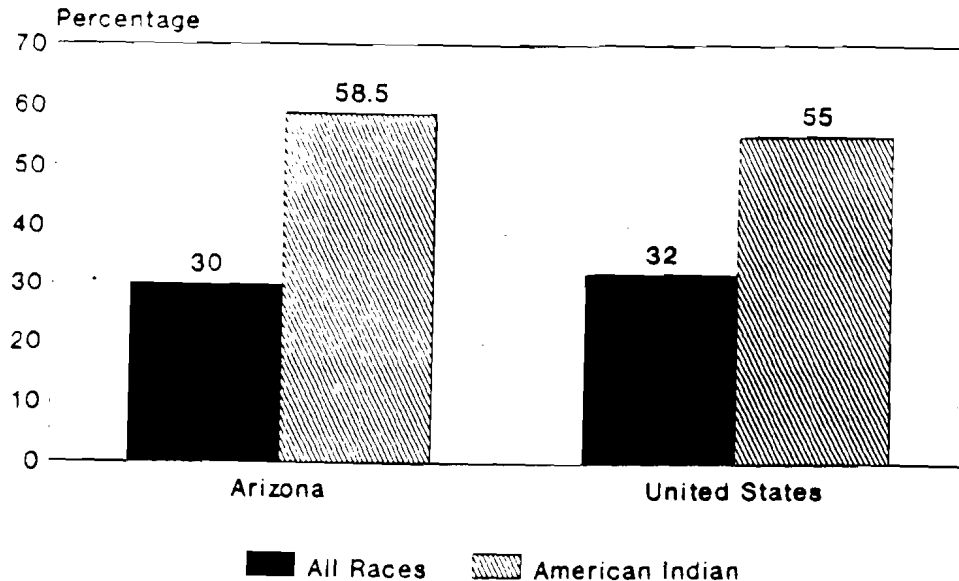
U.S. Census Bureau, 1980

POVERTY

Approximately one in four Indian people in Arizona cities live at or below 75% of the poverty line, while almost one-half live at an income level at or below 150% of poverty.

Poverty levels in urban Arizona were very high for American Indians. Twenty three percent of Indian people lived on incomes 75% less than the federally designated poverty level in 1980 (Figure 2-2). Over 300% more Indian people than All Races lived at 75% of the poverty line. In addition, almost one-half of the Indian population (45%) lived at an income level 1.5 times the poverty level, and again, the proportion of the Indian population at this level was much higher than the population at large living in urbanized Arizona.

Figure 2-3. Poverty At or Below 200%
All Races and American Indians
Urbanized Arizona and the U.S.



U.S. Census Bureau, 1980

WORKING POOR

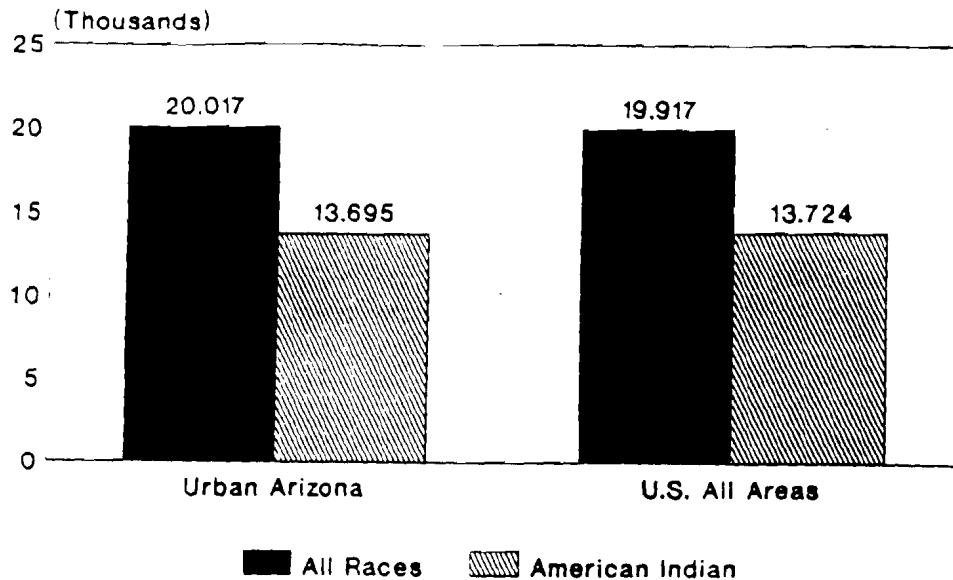
Three out of every five urban Indians in Arizona live at low-income levels of 200% or below the poverty line.

The 200% poverty level (that is, an income of twice the designated federal poverty guideline) is an important indicator of the group known as the "working poor", those with service level or laborer positions who are most likely uninsured or under-insured because of lack of employee-sponsored benefits, or income levels too high to qualify for medicaid coupled with no financial means to buy private coverage.

Figure 2-3 illustrates the proportion of the U.S. general and Indian populations, and the proportion of the urbanized Arizona general and Indian populations living at the 200% poverty level. While Arizona as a whole is slightly better off than the United States as a whole (30% as compared to 32%), the Arizona Indian population is worse off than any of the population groups, with 58.5% living at the 200% poverty level.

In addition, the differential between Indians and All Races in Arizona is greater than in the nation as a whole.

Figure 2-4. Median Family Income
All Races and American Indians
Urbanized Arizona and the U.S.



U.S. Census Bureau, 1980

MEDIAN FAMILY INCOME

During 1988, one half of Arizona's urban Indians reported incomes of \$4,500 or less, and 50% of urban Indian families reported incomes of \$10,000 or less (AZ Community Health Study, 1988).

Median income levels are often reported rather than mean income levels because the median is the "middle point" under which 50% of the incomes fall. Such an indicator is more appropriate than the average for analysis of incomes, because a small number of very high incomes can artificially inflate the mean.

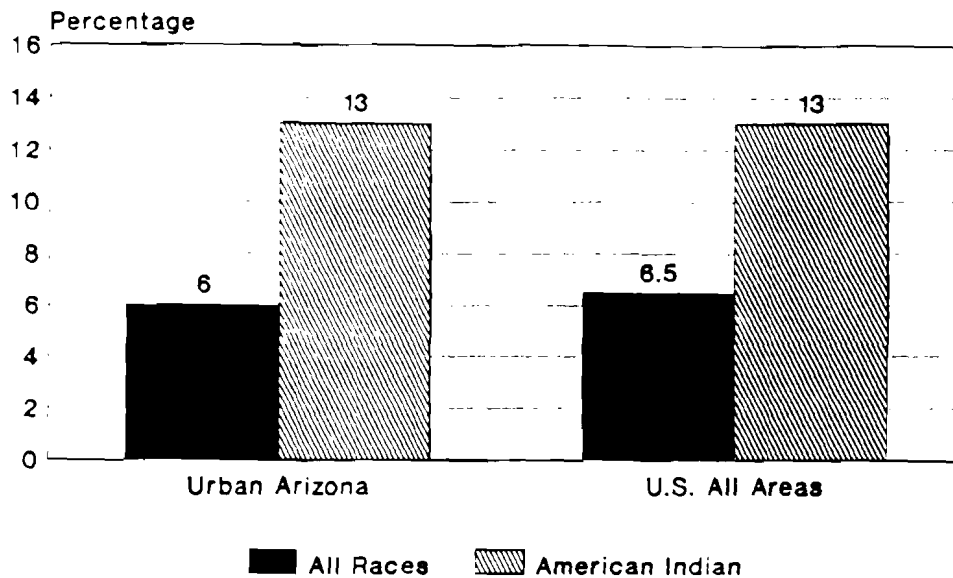
In 1980, Indian households in urbanized centers in Arizona had a similar median income to American Indians throughout the United States, while they had a much lower median income than the general population of the United States and Arizona (Figure 2-4). Again, the differential between the Indian and All Races was higher for urban Arizona than it was for the general population of the United States. In 1980, Indian families living in cities in Arizona lived on income levels 68% of the Arizona general population.

More recent community assessments in urban centers in Arizona-Phoenix, Tucson, Flagstaff, Winslow and Kingman-found very low median income levels for both individuals and households (Arizona Community Health Study, 1988). The median annual income reported was \$4,500 while the median household income was \$10,000. Tucson, in particular, showed low levels of financial resources,

with a median annual income of only \$3,306 and a median household income of only \$5,080¹.

Labor Force Characteristics

Figure 2-5. Unemployment
All Races and American Indians
Urbanized Arizona and the U.S.



U.S. Census Bureau, 1980

UNEMPLOYMENT

Urban Indian unemployment is at least 200% greater than the level reported in the general population, and the rate continues to climb.

In 1980, twice as many urban American Indians in Arizona reported unemployment than the general population (Figure 2-5). Although the Indian unemployment figure is high, the actual numbers of unemployed may be even higher due to the lower number of Indian people actively looking for work (that is, a smaller percentage

¹The Arizona Community Health Study sampling procedures are described in depth in the methodology section. The total number sampled was 1,764, with 1,023 in Phoenix, 553 in Tucson, 86 in Flagstaff, 65 in Winslow and 37 in Kingman.

of the Indian population would be counted in the "active" labor force). Because of the chronic nature of unemployment in the Indian community, some Indian people "drop out" and stop looking for jobs. For example, in Flagstaff the percent of Indian persons 16 years and over in the labor force in 1980 was 45.2%, while the corresponding percentage of the white population in the labor force was 67.4%. This difference was not due to a dramatic difference in numbers of each group with work disabilities (5.2% in the white population versus 8.7% in the Indian population). Additional information from 1988 community assessments shows that the rate of unemployment has grown considerably.

OCCUPATION

The vast majority of urban Indians work in service and laborer level occupations, with few employed in professional positions.

More urban Indians hold service and laborer jobs, and fewer professional level positions, than the general urbanized population of Arizona. For example, in the Phoenix metropolitan area in 1980, 27% of the Indian community reported having service or laborer occupations as compared to 16% of the general population. The 1980 Census also found that in Tucson, 14% of the Indian community held professional positions while 25% of the general population worked in professional jobs.

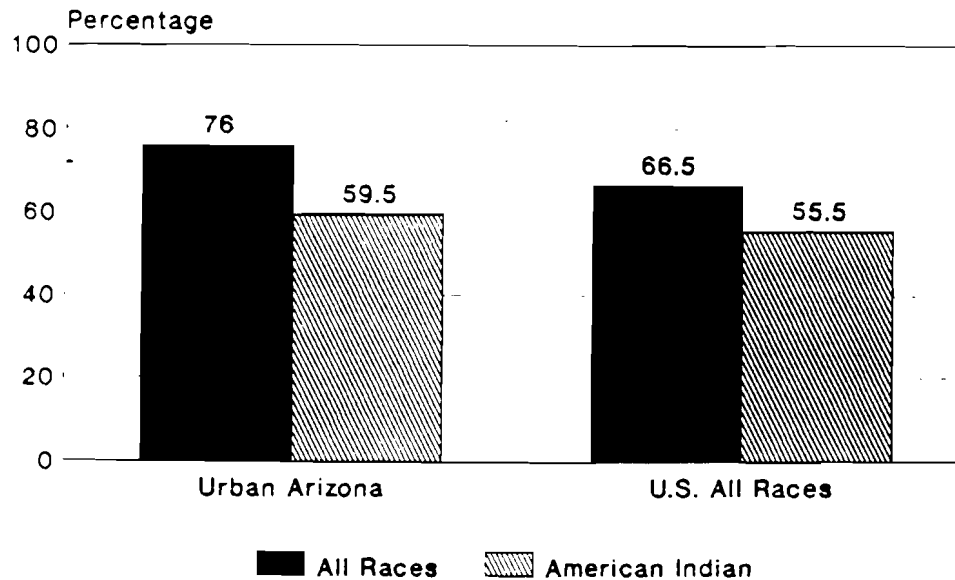
In 1988², the number of Indians in service and laborer occupations was considerably larger. Fifty two percent of the urban Indian community in Arizona held service and laborer positions, with only 2% at professional occupational levels.

Service and laborer occupations pay less, are more seasonal or part-time, have non-regular working hours and are much less likely to provide health insurance as a benefit. These elements may make it difficult to access health care services because of a lack of insurance, less flexibility for time-off for health appointments, and reduced financial means to pay for health visits or daycare.

²Based on the Arizona Community Health Study, number reporting = 1686.

Social Characteristics

Figure 2-6. High School Graduates
All Races and American Indians
Urbanized Arizona and the U.S.



U.S. Census Bureau, 1980

EDUCATION

American Indians in Arizona cities have made great strides in education since 1970, but still lag behind the general population.

Both American Indians and the general population of Arizona had achieved a higher educational level than their counterparts in the United States in 1980 (Figure 2-6). Additionally, American Indians have made great strides in education since the 1970 Census, when only 22% of the population had reached a high school graduate level of education.

However, urban Indians in Arizona still lagged behind the rest of the state in achieving high school graduate status in 1980 (59.5% versus 76%). Once again, the differential between the Indian and All Races rate was greater for Arizona than for the United States.

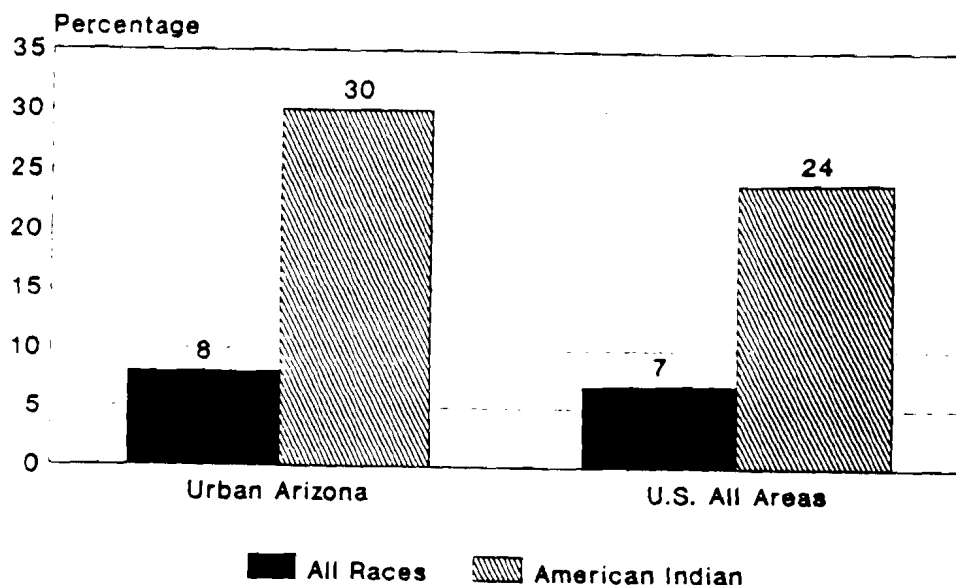
In 1988, the percent of the population reporting high school graduation was 61.1%³ Flagstaff had the highest percent of high

³Arizona Community Health Study, total sample n=1,764.

school graduates at 79%, while Tucson had the lowest at 49%.

Housing Characteristics

Figure 2-7. Households Without Phones
All Races and American Indians
Urbanized Arizona and the U.S.



U.S. Census Bureau, 1980

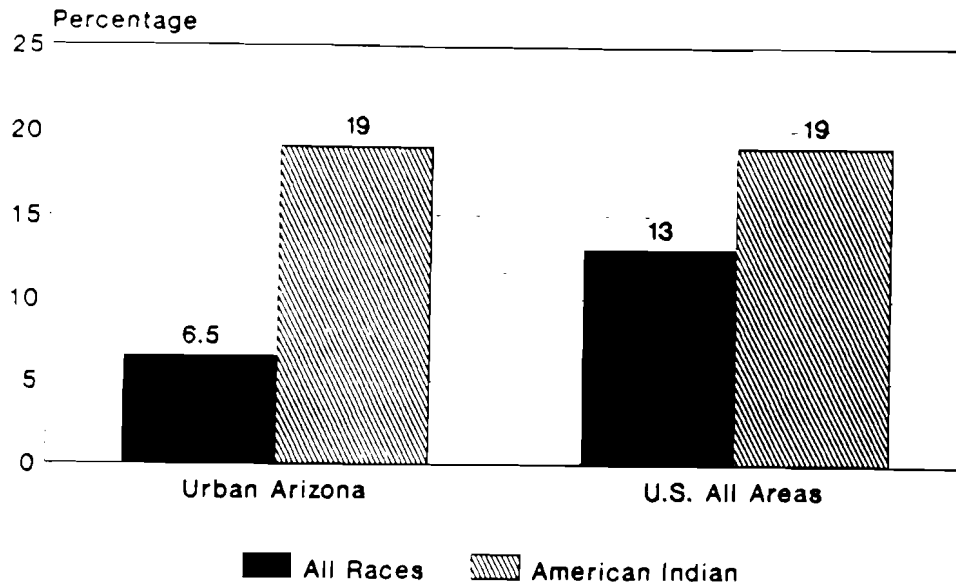
HOUSEHOLDS WITHOUT PHONES

One in three urban Indians in Arizona have no household access to telephone services.

Telephones provide an important link between outside resources and household members, for emergency situations as well as for making general appointments and getting health information. A telephone is also one of the only means available to health professionals for doing follow-up on special tests and diagnostic procedures.

Almost 400% more American Indian households than All Races in Arizona cities went without access to phones in 1980 (Figure 2-7). One in three Indian people lived without a phone in their household. This lack of telephones in the urban Indian community has contributed to the difficulty in establishing quality follow-up services by IHS or other health agencies.

Figure 2-8. Households Without Vehicles
All Races and American Indians
Urbanized Arizona and the U.S.



U.S. Census Bureau, 1980

HOUSEHOLDS WITHOUT VEHICLES

One in every five Indians in Arizona cities do not have access to a private vehicle for transportation.

Access to a vehicle is also an important link to health care resources, particularly in large urban areas where public transportation is minimal, or where health care resources are not in close proximity. Both of these conditions affect urban Indians in Arizona. Some examples are: Phoenix is a large, sprawling metropolitan area with increasingly serious pollution problems. The city has just begun debating whether to develop and fund a mass-transit system to augment the limited bus service now available to Phoenix residents. At the present time, however, the general public relies mainly on private vehicles, especially during the very hot months from May to October. In Tucson, IHS health services for Indian people are located several miles outside the city limits. However, transportation is limited due to the discontinuation of the metropolitan bus route to these IHS facilities. Finally, in places such as Flagstaff and Kingman, there are no IHS facilities available so many Indian people travel 60-70 miles to the nearest reservation to receive health care services.

Indian people are at a distinct disadvantage because of their limited access to personal transportation; three times more urban Indians go without a private vehicle than the general urban population (Figure 2-8). In addition, the gap between the All

Races rate and the American Indian rate in urban Arizona is strikingly higher than in the country as a whole. Arizona urbanites of All Races had better access to vehicles than the rest of the country in 1980 but the Indian population in Arizona did not. This differential between the Indians and All Races is 100% greater in urban Arizona than in the rest of the country.

POOR HOUSING CONDITIONS

Arizona urban Indians live in crowded housing with inadequate plumbing much more frequently than their All Races counterparts.

Indians living in Arizona cities are much more likely to live in overcrowded housing with limited plumbing (U.S. Census Bureau, 1980). Both of these conditions increase the risk for mortality and morbidity from accidents, violence and infectious diseases. Over 6% of the Indian homes in Tucson and 2% of the Indian homes in Phoenix had inadequate plumbing facilities (in great contrast to the 1% or less of the general population) during 1980 (U.S. Census Bureau). In addition, nine percent of the Indians in Phoenix and twelve percent in Tucson lived in crowded conditions with greater than 1.5 persons per room. Only 2% of the general urban population lived with similar overcrowding.

HEALTH STATUS

Overview of Regional Mortality Statistics

**TABLE 2-1. Age Adjusted Leading Causes of Death-United States
All Races Compared to IHS Service Areas**

<u>U.S. All Races</u>	<u>Phoenix IHS Area</u>	<u>Tucson IHS Area</u>
1 Heart diseases	Accidental injuries	Accidental injuries
2 Cancers	Heart diseases	Heart diseases
3 Cerebrovascular	Liver disease	Liver disease
4 Accidental injuries	Cancers	Cancers
5 Pulmonary	Pneumonia/Influenza	Suicide
6 Pneumonia/Influenza	Homicide	Diabetes
7 Diabetes	Diabetes	Pneumonia/Influenza
8 Liver disease	Suicide	Septicemias
9 Atherosclerosis	Cerebrovascular	Homicide
10 Suicide	Nephritis	Cerebrovascular

Data from OTA report Indian Health Care (1986)

IHS STATISTICS

The IHS provides health care services to American Indians and is composed of 12 administrative areas of service, two of which (Phoenix and Tucson areas) include the cities of Phoenix, Tucson, Flagstaff and Kingman, as well as the bulk of Arizona (the Navajo Service Area includes the northeast corner of Arizona). The Phoenix Service Area encompasses most Arizona tribes along with all of Utah and Nevada, while the Tucson Area is much smaller, including the metropolitan area of Tucson, the Pascua Yaqui and the Tohono O'odham reservations nearby in southern Arizona.

Although the following statistics include a much broader group of Indians than those living in the urban setting, they are useful for establishing a context for the discussion of the health care needs of urban Indians living in cities in these regions.

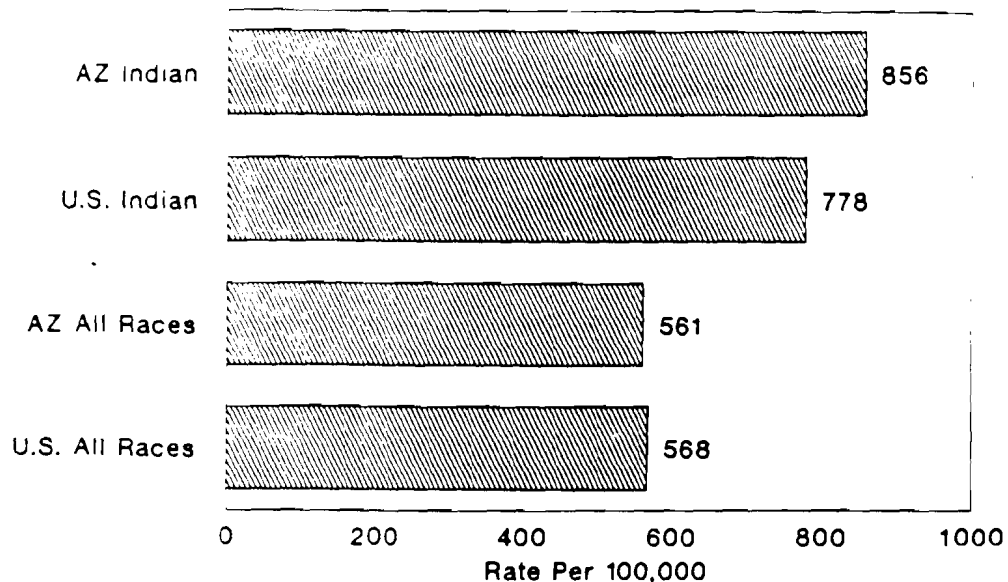
Table 2-1 compares the United States All Races leading causes of death in 1980 with those found for the Phoenix and Tucson IHS Service Areas for 1980-1982. Deaths due to accidental injuries and alcoholism were in the top three in both the Phoenix and Tucson IHS Areas, unlike the U.S. general population. For Phoenix Area Indians, homicide and suicide are major problems, appearing as the 6th and 8th leading causes of death, respectively. Suicide is an even greater problem in the Tucson Area as the fifth leading cause of death. Another cause for concern in Tucson is septicemia as the eighth leading cause of death. Septicemia is a health condition marked by an infection which has become "systemic", or in the blood circulating throughout the body. Because of the extreme nature of an

infection which would cause death by septicemia, and the relative rarity of this as a leading cause of death, the high mortality rate may indicate 1) an increased number of patients with severely compromised immune systems, or 2) access to care issues, that is, patients not presenting for health care until infections have gone systemic. The second scenario appears the most likely, given that infections and influenzas would probably be a higher ranked cause of death if increased immunity problems were affecting Tucson Indians.

ARIZONA STATISTICS

The following section looks at the broad picture of health status of Indian people throughout Arizona. Again, while this does provide information specific to urban American Indians, it does provides a contextual understanding of the health problems experienced by Arizona Indians in the urban setting. The next set of figures will compare the all causes age-adjusted mortality rates of four groups of Americans-Arizona American Indians (1980), Arizona All Races (1981), United States American Indians (1980-1982), and United States All Races (1981). The total number of Indian deaths recorded in Arizona in 1981 was 988.

Fig 2-9. Overall Age-Adjusted Mortality
 AZ Indian ('80), AZ All Races ('81),
 US Indian ('80-82), US All Races ('81)



Data from Arizona Dept of Health Service
 and OTA Report "Indian Health Care"

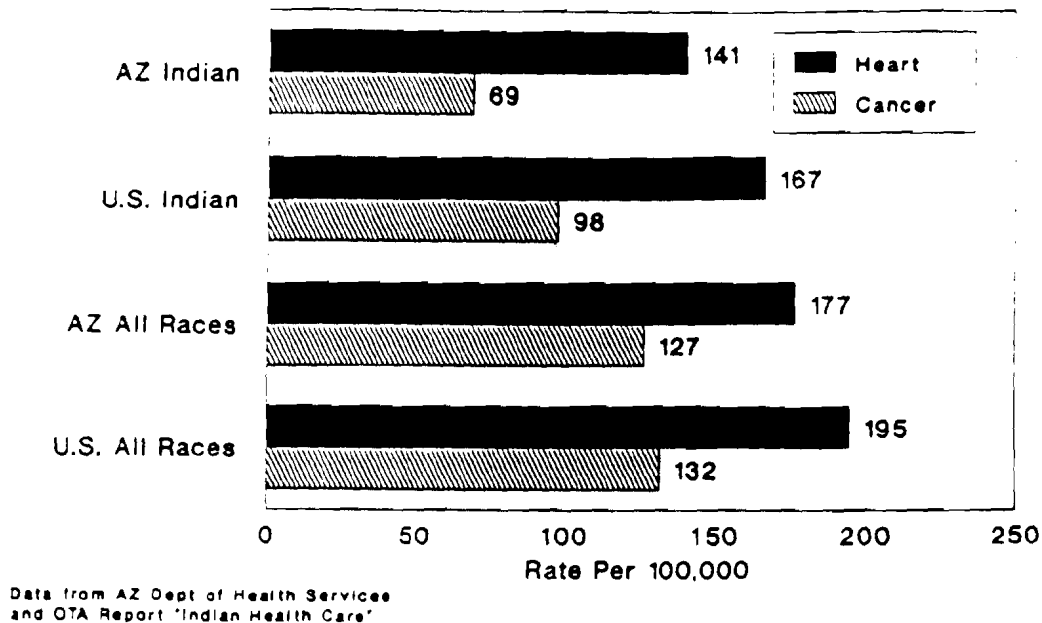
All Causes Mortality

Arizona Indians die from all causes at a much higher rate than the rest of the population in the state.

Age-adjusting a mortality rate is very important when making comparisons between populations with different age distributions. The following rates have all been standardized to a similar age distribution, so that effects of population distribution will be eliminated for comparative purposes.

The all causes mortality rate takes all deaths in a population to get a sense of the overall death for that particular group. Figure 2-9 shows that Arizona Indians had a higher overall mortality rate than United States Indians, as well as the general populations of Arizona and the United States. In fact, Arizona Indians have an all causes mortality rate 150% higher than All Races in Arizona.

Fig 2-10. Heart and Cancer Mortality
 AZ All Indian ('80), AZ All Races('81),
 US All Indian('80-82), US All Races('81)



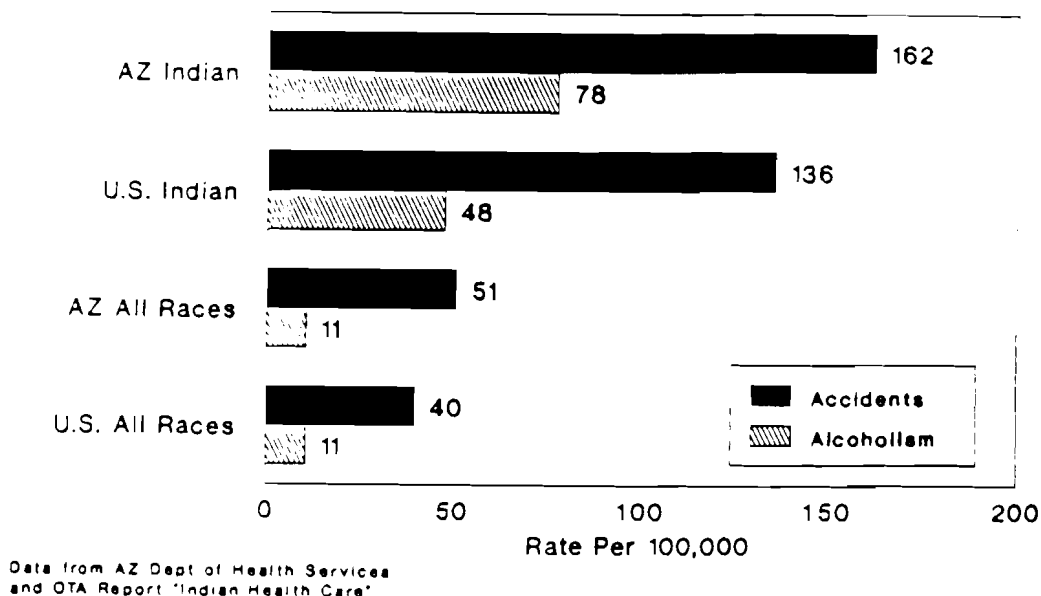
Heart Disease and Cancer Mortality

Arizona Indians die from heart diseases and cancers at a lower rate than the rest of the Arizona population. However, this may be due to the fact that these are diseases of "old age" and large numbers of young Indian people die from accidents and violence.

The overall death rate for Indian people living in all areas of Arizona is higher than the All Races rate. However, for two causes of death (heart diseases and cancers) the mortality rate is lower than in the general population (Figure 2-10). The differential between the races is particularly high in cancer mortality, where the rate for Arizona Indians is 69 per 100,000 and the rate for Arizona All Races is 127 per 100,000.

However, it should be noted that just because Indian people have lower rates does not mean that they are immune to these diseases. One of the reasons that the rates are low may be due to the fact that heart disease and cancer are chronic diseases, or also known as diseases of the aged. Because Indian people die at early ages from such causes as infectious diseases, accidental injuries, diabetes, alcoholism and suicide, they are less likely to live to old age and die of the chronic diseases.

Fig 2-11. Accident & Alcohol Mortality
 AZ Indian ('80), AZ All Races ('81),
 US Indian ('80-82), US All Races ('81)



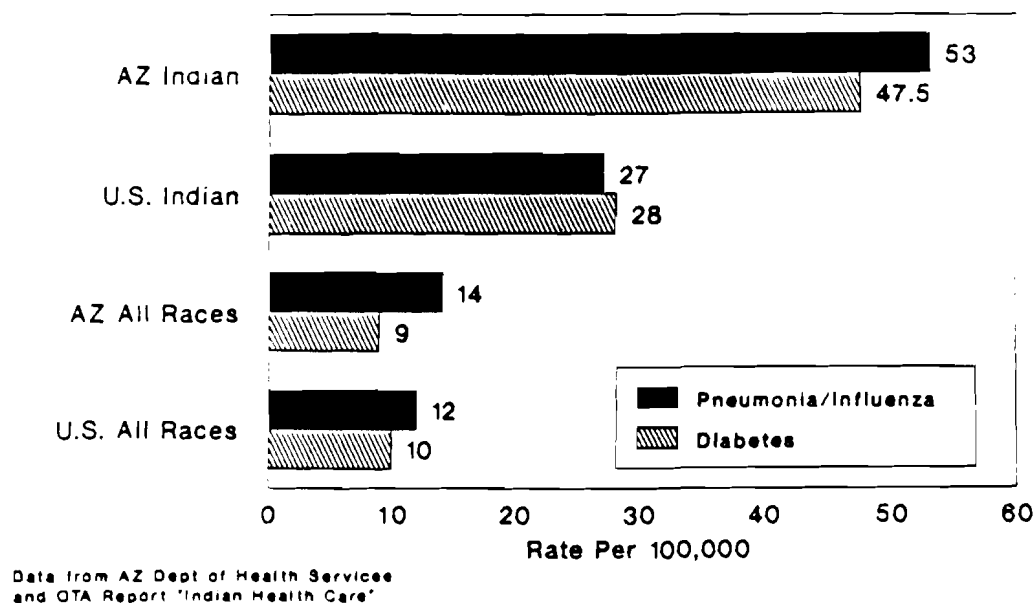
Accidental injury and Alcohol Mortality

Accidental injuries and alcoholism take the lives of many more Indian people than All Races in Arizona. The rate of death related to alcohol is particularly high compared to other population groups.

Figure 2-11 shows that the accidental injury mortality rate was very high for the Arizona Indian population, 300% higher than the Arizona All Races rate as well as higher than the United States Indian and general populations.

The rate of death for alcoholism was 700% higher for Arizona Indians than for All Races in that state. This rate is the highest of all of the groups compared (Figure 2-11).

Fig 2-12. Diabetes & Pneu/Infl Mortality
 AZ Indian ('80), AZ All Races ('81),
 US Indian ('80-82), US All Races ('81)



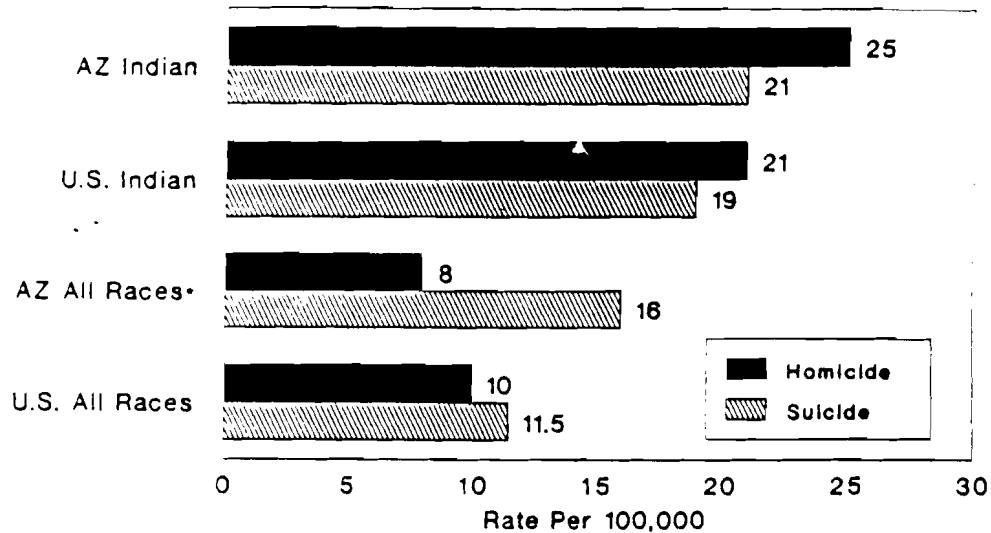
Diabetes and Pneumonia/Influenza Mortality

Both diabetes and pneumonia/influenza mortality rates are very high in Arizona Indians, 500% greater than the Arizona All Races rate in the case of diabetes.

Figure 2-12 illustrates the severe effect that diabetes has on Arizona Indian people. Over five times the number of American Indians die from diabetes than in the general population in Arizona. It is also important to note that morbidity associated with diabetes is very high. For example, the Phoenix Indian Medical Center reports diabetes mellitus as the number one outpatient diagnosis and diabetes complications as the number three reason for inpatient admissions.

Pneumonia and influenza are both infectious respiratory diseases which occur more frequently in the Indian population. The very young and the elderly are much more likely to be victims of this condition in Arizona Indians. For example, in Arizona in 1980 pneumonia and influenza were responsible for 10.5% of the mortality of Indians 65 and older, whereas only 4% of the mortality was from the same condition in the general population. However, 1987 proportional mortality data showed a slight decline in the Indian percentage (8%).

Fig 2-13. Suicide & Homicide Mortality
 AZ Indian ('80), AZ All Races ('81),
 US Indian ('80-82), US All Races ('81)



Data from AZ Dept of Health Services
 and OTA Report "Indian Health Care"
 *Homicide data for AZ Whites not All

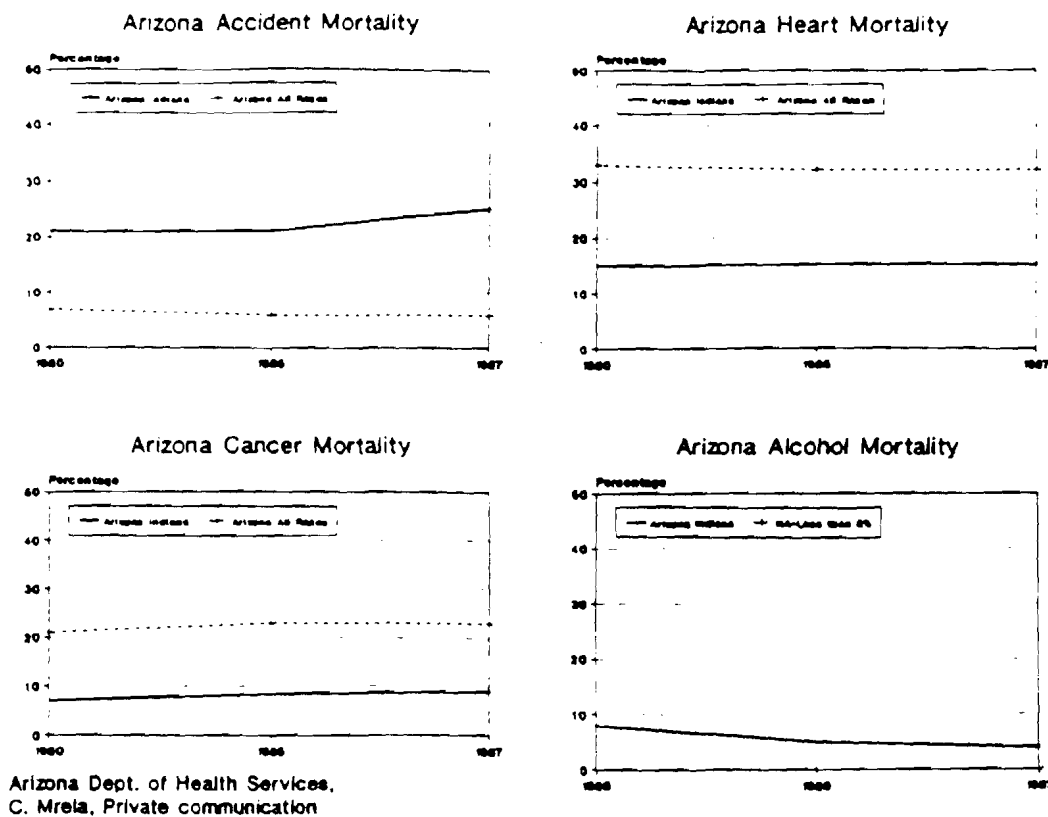
Suicide and Homicide Mortality

Suicide and homicide caused more deaths in the Arizona Indian population than in any other population group.

The suicide mortality rate of 21 per 100,000 was higher than the rate for the U.S. Indian population and the All Races populations of Arizona and the United States (Figure 2-13).

Homicide rates for Arizona Indians were over 300% higher than rates for the white population in the state (rates for All Races are not available).

Fig 2-14. Proportional Mortality Over Time
Arizona Indians and All Races, 1980, 1985 and 1987



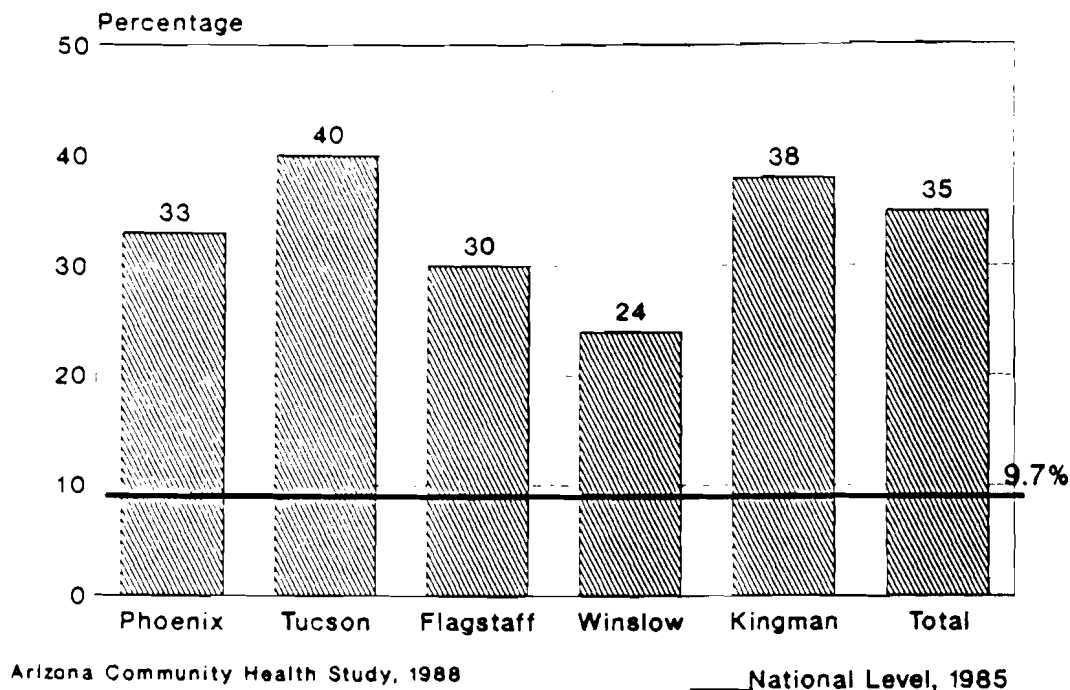
Time Trends in Arizona Mortality

While heart disease proportional mortality remained fairly stable for Arizona Indians during the 1980's, alcohol mortality declined while cancer and accidental injury mortality both rose slightly.

Time trend data on the four leading causes of death for Arizona American Indians from 1980, 1985, and 1987 indicate that the proportional mortality for heart diseases has remained consistent for both Indians and the general population (Figure 2-14). Mortality from accidental injury has climbed for Arizona Indians while it has declined slightly for the general population. Cancer mortality has gone up slightly for both Indians and the general population. Finally, alcohol-related mortality in American Indians has declined slightly over the seven year period.

Urban Indian Health Status

Figure 2-15. Self-Assessment of Health
Percent Reporting Fair-to-Poor Health



OVERALL SELF-ASSESSMENT OF HEALTH STATUS

One in three Indians in Arizona cities consider their health to be fair or poor, in great contrast to the national All Races level of one in ten.

Figure 2-15 reveals that many urban Indians in Arizona do not consider themselves to be in good health condition. Overall, 34.5% report their health as fair or poor, with Tucson showing the poorest rating at 40%⁴. This level exceeds the national level reported in 1985, where only 9.7% of the American people

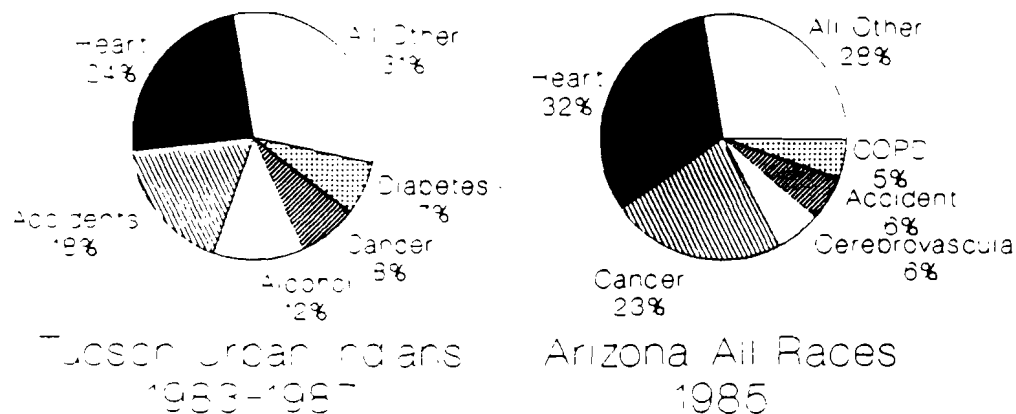
⁴The following urban Indian health information is taken from the Arizona Community Health Study, 1988. Total n=1,764, Phoenix n=1,023, Tucson n=553, Flagstaff n=86, Winslow n=65 and Kingman n=37.

felt themselves to be in fair or poor health (National Center for Health Statistics, 1985).

The high level of poor self-perceived health status relates to elevated rates of mortality and morbidity in the urban Indian community. The large number of accidental and violent deaths among young people, as well as the epidemic of diabetes in Arizona Indians, are all reflected in the poor health ratings given by urban Indians. However, self-perception of health status not only indirectly measures actual health problems in a community, but also indicates levels of personal self-efficacy. Individuals who perceive their health status as fair or poor may have a difficult time achieving personal and social goals. A perception of poor health status may interfere with looking for a job or completing an education. It has also been linked to depression and anxiety.

The following data on urban Indian mortality and morbidity show that, indeed, many difficult health problems are facing the urban Indian community in Arizona.

Fig 2-16. Five Leading Causes of Death
Tucson Indians compared to AZ All Races



Pima County Health Department Data
and Arizona Dept. of Health Services

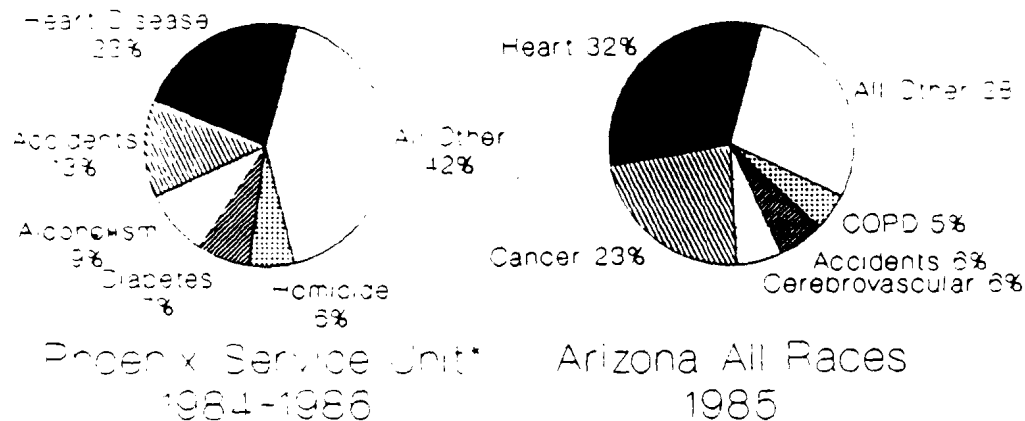
LEADING CAUSES OF DEATH- TUCSON

The leading causes of death for urban Indians in Tucson were heart diseases (24%), accidental injury (18%) and alcoholism (12%). Alcoholism takes a greater toll on urban Indians than the Indian population as a whole in Arizona.

While heart disease was a leading cause of death for both urban Indians and Arizona All Races, accidents took three times more mortality for Indians (18%) than for the general population (6%). Alcoholism was a major cause of Tucson Indian mortality (12%) which was not even among the top five causes of death for All Races in Arizona. Diabetes (7%) was also a major cause of death for Tucson Indians not found in the top five of the general Arizona population.

Of special note is the fact that alcoholism took a much greater toll on the Tucson Indian population than in the Indian population as a whole throughout Arizona. Only 5% of the total deaths of all Arizona Indians were alcohol-related compared to the 12% of deaths caused by alcohol in the Tucson Indian community.

Fig 2-17. Five Leading Causes of Death
Phoenix Indians compared to AZ All Races



*IHS, Phoenix Service Unit
(Patient record data show 70% Urban)

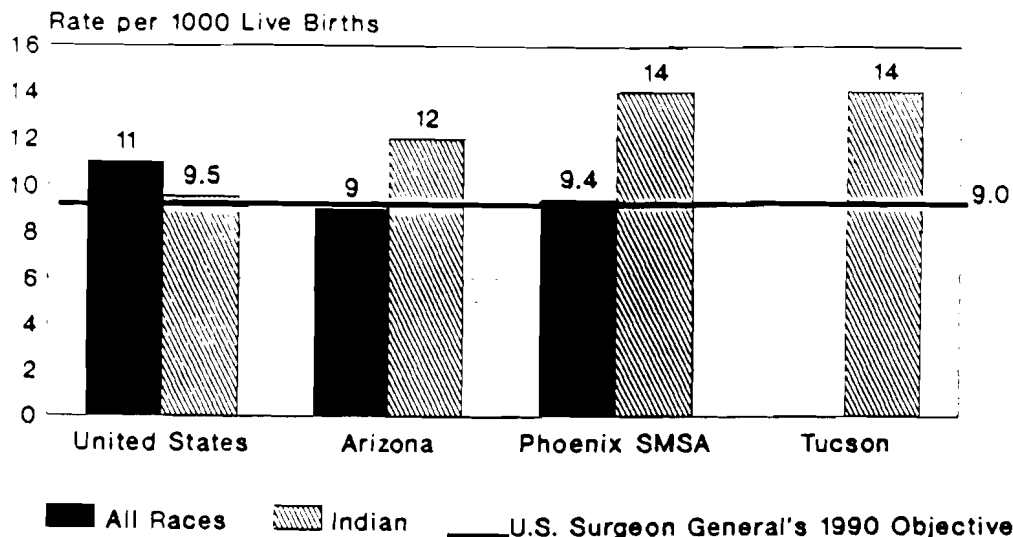
LEADING CAUSES OF DEATH- PHOENIX SERVICE UNIT

The leading causes of death for urban Indians in Phoenix were heart diseases (23%), accidental injuries (13%) and alcoholism (9%). Diabetes, alcoholism and homicide are leading causes of death for the urban Indian population which are not found among All Races in Arizona.

Figure 2-17 shows that while heart disease was a leading cause of death for both urban Indians and Arizona All Races, accidents took over two times more mortality for Indians (13%) than for the general population (6%). Alcoholism was a major cause of Phoenix Indian mortality (9%) but was not even among the top five causes of death for All Races in Arizona. Diabetes (7%) was also a major cause of death for Phoenix Indians not found in the top five of the general Arizona population.

Homicide is a major problem for the Phoenix Indian community. This particular cause of death was not a leading cause in either the All Races, the total Arizona Indian population, or the Tucson Indian community. Homicide took the same proportion of lives from the Phoenix Indian community as accidents and cerebrovascular disease in the general population (Figure 2-17).

Figure 2-18. Infant Mortality Rates
U.S. Indian and All Races Compared to
Arizona, Phoenix and Tucson Indian Rates



Data from United States DHHS, Arizona
 Dept of Health Services and Pima County
 Health Department

INFANT MORTALITY

Infant mortality rates for urban Indians in Arizona (14 deaths per 1000 live births) are 60% higher than the Surgeon General's 1990 Objective for the Nation (9 deaths per 1000 live births).

Figure 2-18 shows the infant mortality rates for the United States (1985), for Arizona (1986), for Phoenix (1986) and for Tucson (1983-1987)⁵. Rates for Indian people living in urban areas were higher than both the Indian and All Races rates throughout the nation and the state of Arizona.

The IHS has been successful in reducing infant mortality in the general Indian population in the United States. In fact, the mortality rate for the United States Indian population was lower than the All Races rate in 1985. However, the urban Indian has not been a part of this success story. In Arizona, the rate for urban Indians exceeds that of the total Indian population. In addition, while the general population of the state has reached the Surgeon General's 1990 Objective, the urban Indian communities have not.

⁵Tucson rates were calculated using census tract data from the Pima County Health Department. Comparable All Races rates are not available.

TABLE 2-2. Self-reported Prevalence of Selected Health Conditions by Percent of Those Reporting

	TOTAL	Phoenix	Tucson	Flagstaff	Winslow	Kingman	U.S.*
(Total sample)	(1,764)	(1,024)	(553)	(86)	(64)	(37)	
Adult		Percent					
Eye or Vision Problem	40.5	39.4	42.4	49.4	28.1	45.9	-**
Too Overweight	37.3	35.2	44.2	27.7	20.3	48.6	20.1
Dental Problem	30.7	29.6	34.6	27.7	17.2	37.8	-
Back Problems	21.7	20.9	23.2	25.3	18.8	18.9	-
Frequent Colds	17.4	16.0	21.2	18.1	9.4	13.5	-
Diabetes	17.0	13.5	27.4	4.8	7.8	13.5	2.6
High Blood Pressure	16.2	14.6	21.2	7.2	12.5	16.2	12.4
Arthritis	15.0	12.3	22.4	7.2	9.4	13.5	13.9
Anxiety/Depression	14.5	13.2	18.7	10.8	9.4	10.8	10-20
Ear or Hearing Problem	14.1	12.7	17.3	13.3	7.8	21.6	9.1
Fatigue/Exhaustion	13.5	11.0	19.8	13.3	6.3	8.1	-
Kidney/Bladder Problem	10.3	10.2	12.1	4.8	7.8	2.7	3.2
Skin Problem	9.7	9.1	10.1	13.3	7.8	13.5	-
Gall Bladder Problem	8.5	8.0	10.3	3.6	12.5	0	0.4
Heart Problem	8.5	7.7	12.1	0	4.7	8.1	8.3
Asthma/Emphysema	8.3	8.8	9.1	2.4	1.6	8.1	4.6
Ulcers/ Frequent Heartburn	7.8	8.0	9.1	1.2	6.3	2.7	1.9
Female Organ Problems	7.8	8.2	8.2	6.0	3.1	5.4	2.3
Other Medical Problem	6.3	6.7	7.2	2.4	0	2.7	-
Cirrhosis/ Liver Problems	5.4	5.2	7.0	0	4.7	2.7	0.3
Cancer	5.1	4.9	6.0	0	4.7	8.1	-
Bowel Problem	4.1	4.3	4.7	1.2	1.6	2.7	-
Male Organ Problems	1.8	1.6	2.7	0	0	0	-
Children							
Frequent Colds	22.2	21.6	25.3	27.7	14.1	8.6	-
Chronic Ear Infections	19.6	20.7	19.5	20	12.5	5.7	-
Eye or Vision Problems	17.7	16.9	18.9	26.2	14.1	14.3	-
Allergies/Eczema	15.1	15.4	14.7	24.6	6.3	11.4	-
Asthma	13.6	16.5	10.4	6.2	6.3	5.7	-
Too Overweight	12.1	11.1	14.9	12.3	6.3	17.1	-
Learning Problems	10.8	9.2	13.1	15.4	12.5	11.4	-
Other Medical Problems	4.4	5.1	4.5	1.5	1.6	0	-
Anemia	4.3	4.3	4.8	3.1	3.1	2.9	-
Heart Problem	3.6	3	5.9	0	4.7	0	-
Psychological Problems	3	2.8	3.5	3.1	3.1	2.9	-
Seizures	2.6	2.6	2.4	1.5	4.7	2.9	-
Diabetes	1.6	1.5	2.4	0	0	2.9	-
Dizziness	1.6	1.7	1.3	1.5	0	2.9	-

(Data from Arizona Community Health Study, 1988)

*Comparative data should be used with extreme caution because they are based on national age-adjusted samples from different age groupings: Most data are from the National Center for Health Statistics as published in Advance Data No. 155, May 24, 1988, of all ages. Data on overweight on ages 25 - 74 during 1976-1980 from Health, United States, 1988 and on depression and anxiety from Williams CL & Poling, J (1989) An Epidemiological

Perspective on the Anxiety and Depressive Disorders. However, all data are based on self-report.

** - indicates data not available.

MORBIDITY- SELF-REPORTED PREVALENCE OF HEALTH CONDITIONS

Eye, dental, weight and back problems are common for urban Indians. Urban Indian people in Arizona also cite frequent colds, diabetes, high blood pressure and arthritis as major health problems. In addition psychological problems of depression, anxiety, and exhaustion affected over one in ten urban Arizona Indians.

Several of the serious prevalent health problems are likely related to the large number of urban Arizona Indians with diabetes.

Most commonly cited health problems

All of the following information is based on self-report; and, to avoid misinterpretation, the conditions listed in Table 2-2 represent the actual wording used for the self-reports. Eye problems affected a large proportion of the urban Indian population in Arizona (40.5%) and were the most commonly cited health problem along with overweight (37.3%), dental (30.7%) and back problems (21.7%).

Diabetes

One out of every six urban Indians had diabetes, a chronic health condition which causes many associated health problems, and as was shown earlier, high mortality. Obesity and vision problems are likely related to the high number of urban Indians with diabetes. Kidney and bladder problems (10.3%) may also reflect diabetes related complications which have reached an advanced and seriously health compromising stage.

Heart Disease

Heart disease, as the leading cause of death for both urban Indians and the general population, is also a chronic condition with associated morbidity. Over 16% of Indians in Arizona cities reported high blood pressure while 8.5% reported heart problems.

Respiratory Ailments

Frequent colds affected one in six urban Indians in Arizona. As mentioned previously, urban Indians are more likely to live in conditions which make it possible for infectious diseases to develop (including overcrowded housing and inadequate plumbing). Urban Indians also reported respiratory conditions of asthma and emphysema (8.3%).

Mental Health

Anxiety, depression, fatigue and exhaustion touched over 13% of the urban Indians in Arizona. Such conditions can seriously affect the both the individual and the community, and can lead to further problems with alcohol or other acting-out behaviors. The high number of Indian people who reported having these conditions is in itself a somewhat surprising finding, given the general reluctance of most individuals to divulge such personal information.

Chronic Conditions

Many of the top problems reported include long-term, chronic health conditions. Obesity, back problems, diabetes, arthritis, heart problems, asthma and cancer are all chronic conditions requiring not only consistent and frequent follow-up and education, but also costly medical procedures.

Children's Health

Frequent colds were the most common problem among urban Indian children, along with chronic ear infections, vision problems, and allergies (all over 15%). An additional cause for concern is the high percentage of overweight reported (12%), because of the strong association with future development of diabetes. One in ten children were also reported to have learning problems.

SELF-REPORTED BEHAVIORAL HEALTH RISKS (HEALTH RISK APPRAISAL)

Health Risk Appraisals

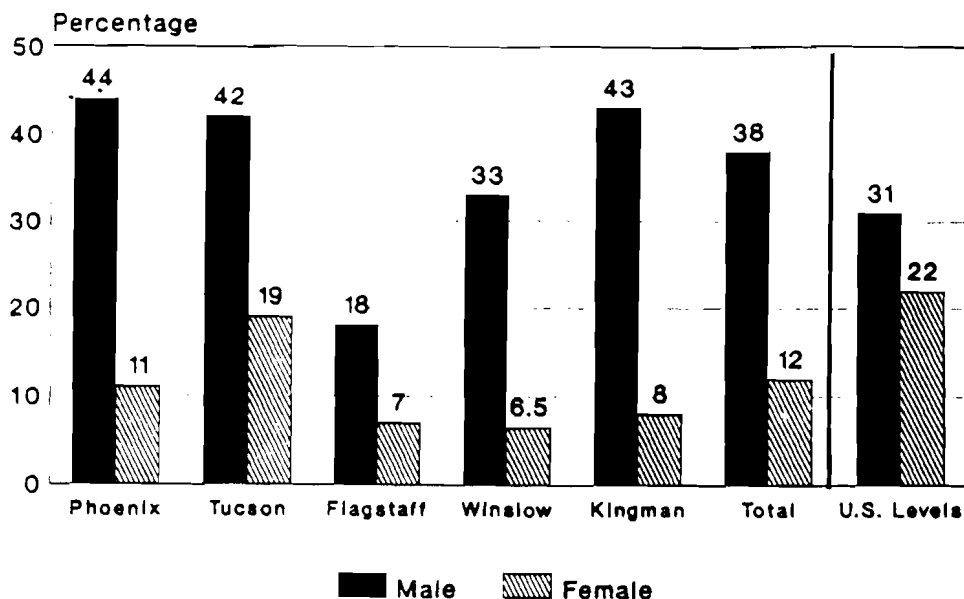
The Health Risk Appraisal is a behavioral health assessment tool which has recently been modified for use in the Indian community by IHS researchers in Aberdeen. The following information is based on the Arizona Community Health Study subsample of 600 urban Indians eighteen years and older who completed the HRA⁶ as part of the assessment.

The HRA is based on self-reported health risks with the exception of clinical-based measurements of random glucose, blood pressure, cholesterol and weight. It should be noted that these data are based on a relatively small sample of urban Indians which should not be generalized to a broader population (please see the methodology section for a more detailed description of the sample). Caution should be exercised in making comparisons to

⁶The total sample was comprised of 200 from Phoenix, 200 from Tucson, 98 from Flagstaff, 64 from Winslow and 38 from Kingman. The majority of the sample was female (68%). For further sampling information, please see the methodology section.

the general population because the socioeconomic conditions of the urban Indian community effect their use of health services and complicate the issue of behavioral health measures. No comparable data are available on low-income Arizonans.

**Fig 2-19. High Blood Pressure Reading
Arizona Urban Indians by Location**



Health Risk Appraisal Data 1988 (Total
n=600) and U.S. NHANES Data, 1978-1980

High Blood Pressure Readings

Urban Indian males are at risk for high blood pressures, and high blood pressure is showing up at early ages within the urban Indian community.

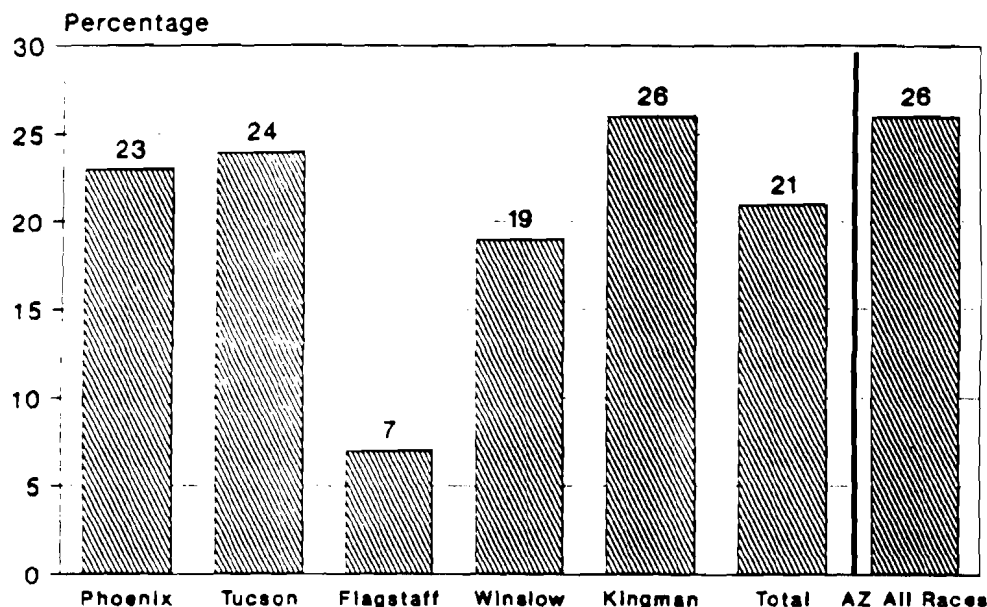
High blood pressure readings were defined as those ≥ 140 mm/hg systolic with ≥ 90 mm/hg diastolic. High blood pressure (also called hypertension) is a major risk factor for heart disease, stroke and kidney damage.

Twenty percent of urban Indians had high blood pressure readings (Figure 2-19). However, only five percent of the total sample were currently taking medication for high blood pressure.

Males. Almost 40% of urban Indian males in Arizona showed high blood pressure readings. In several communities-Phoenix, Tucson and Kingman-over 40% of the males had high blood pressure readings.

Definite high blood pressure. The mean age of the 55 definite hypertensives (defined as 160/95 mm/hg) was 37, with 50% under the age of 35. Thus, the urban Indian community is showing high blood pressure at ages when the threat of this condition should be low. Eighteen percent of those showing definite high blood pressure were on medication, suggesting that problems exist in controlling high blood pressure among urban Indians.

Figure 2-20. Current Smoking
Arizona Urban Indians by Location



Health Risk Appraisal Data, 1988 (Total
n=600) and Arizona BFRSS, 1987 (n=1,179)

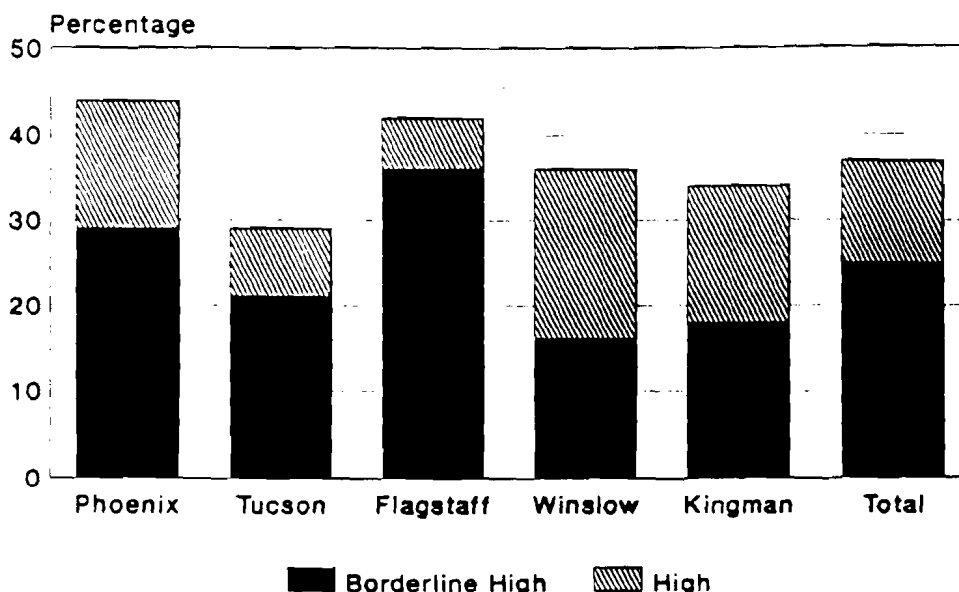
Current Smoking

While smoking prevalence among urban Indians is lower than in the general population, the number of young people taking up the habit suggests that smoking and its associated morbidity and mortality may grow among urban Indians in the future if not curtailed.

One in five Indians in Arizona cities reported currently smoking cigarettes (Figure 2-20). The majority of smokers were relatively young. Fifty percent of smokers were aged 28 and under, and one third were under aged 24. A small percentage of Indians used smokeless tobacco (3%).

Among smokers, several factors, such as high blood pressure and diabetes, can significantly increase the risk for heart disease. One in four of the smokers had high blood pressure readings, and 12% reported having diabetes.

**Figure 2-21. Serum Cholesterol
Arizona Urban Indians by Location**



Health Risk Appraisal Data, 1988 (Total
n=600)

Serum Cholesterol

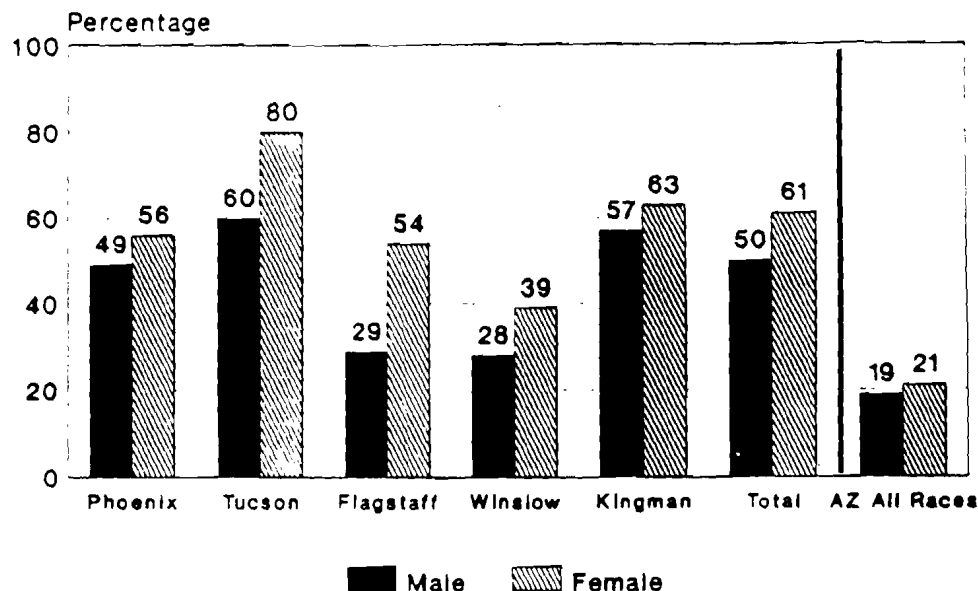
Almost 40% of urban Indians in Arizona have elevated serum cholesterol levels. High serum cholesterol has been associated with increased risk for heart disease, the number one cause of death for urban Indians in Arizona.

Serum cholesterol is a particular kind of fat which deposits in the arteries and increases risk of heart disease and stroke. Borderline high (200 to 220 mg/dl) and high levels (>220 mg/dl) found in the urban Indian communities are illustrated in Figure 2-21.

One in four urban Arizona Indians had borderline high cholesterol levels, with an additional 12% showing highly elevated levels. Tucson Indians had the lowest percentage of high cholesterol while Winslow Indians showed the highest. Phoenix Indians had over 40% with either high or borderline high serum cholesterol.

Of Indians with elevated cholesterol levels, 50% were aged 30 and under. Twenty two percent had high blood pressure, which is also a risk factor for heart disease and stroke.

Figure 2-22. Obesity
Arizona Urban Indians by Location



Health Risk Appraisal Data, 1988 (Total
n=600) and Arizona BRFSS, 1987 (n=1,179)

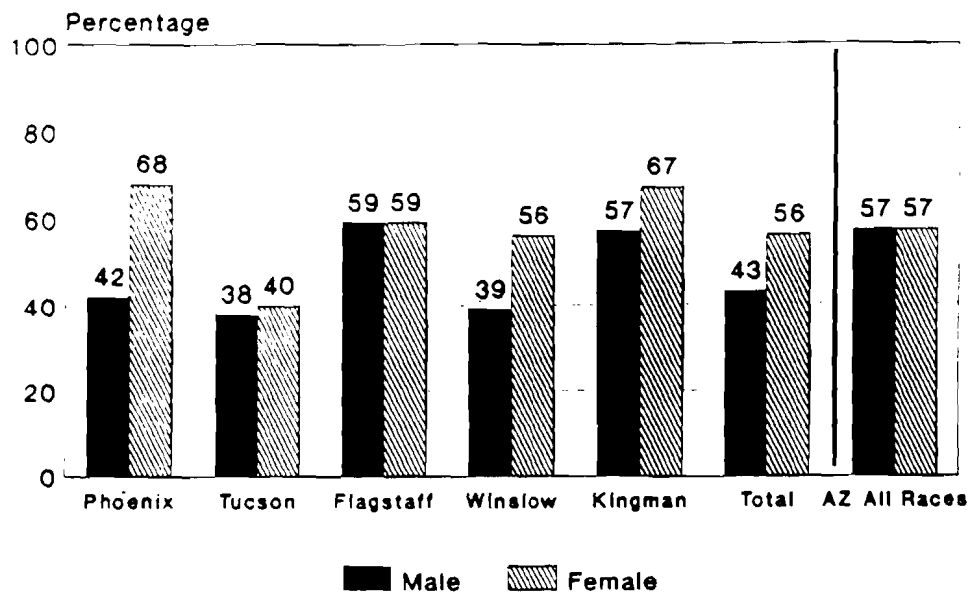
Obesity

Obesity among urban Indians in Arizona is 300% higher than that found among the general population. Females, in particular, are overweight, with 61% at the obesity level.

Obesity, defined as 120% or over the ideal body weight as per the Metropolitan Height/Weight Tables, has been associated with a myriad of health problems including heart disease, hypertension, diabetes and endometrial cancer. High mortality due to diabetes and heart disease in the urban Indian community makes this a particularly crucial risk factor to monitor.

One half of the Indian males and 61% of the Indian females in Arizona cities were obese, as compared to only 19% of the All Races males and 21% of All Races females (Figure 2-22). Tucson Indians, in particular, showed a very high percentage of overweight, with 80% of the females at the obese level.

Figure 2-23. Sedentary Life-Style
Arizona Urban Indians by Location



Health Risk Appraisal Data, 1988 (Total
n=600) and Arizona BRFSS, 1987 (n=1,179)

Sedentary Life-Style

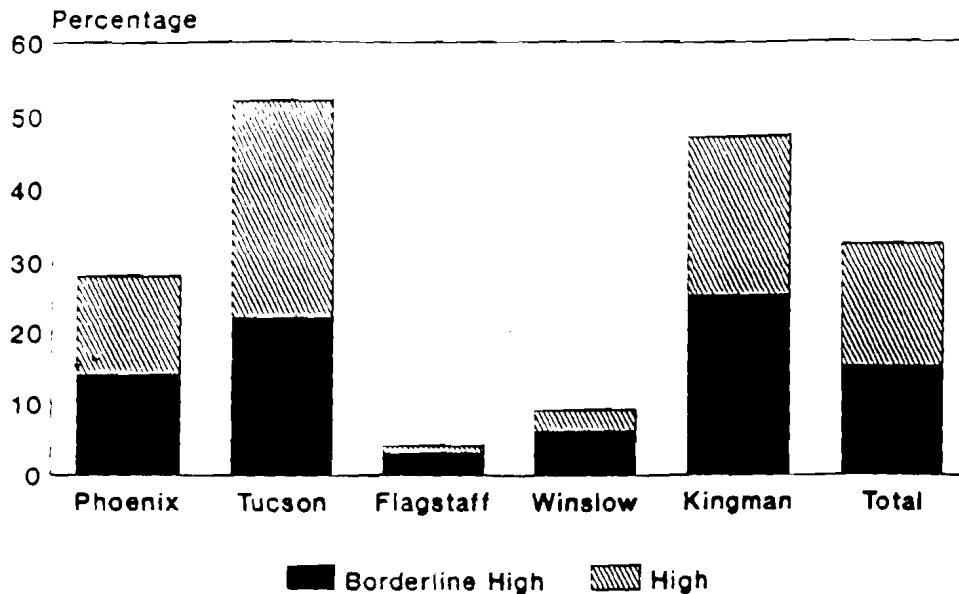
Urban Indian women get less exercise than urban Indian males. A slightly higher percentage of the Indian population gets regular exercise than the general population in Arizona. Only one-half of the urban Indians with diabetes exercised regularly, although exercise is an important and low-cost method for controlling diabetes.

Sedentary life-style is defined as less than 3 exercise episodes per week. Exercise can be a very important component in weight control, and some research suggests that it reduces the risk of high blood pressure as well as controls blood sugar levels in diabetics.

Figure 2-23 shows the percentage of urban Indians who do not get regular exercise. A smaller percentage of Indian women gets regular exercise than Indian men, particularly in Phoenix, Winslow, and Kingman.

Of those urban Indians with diabetes, only 50% exercised regularly. Because exercise is such an important means for controlling diabetes, this indicates the need for an increase in the use of exercise for diabetes control.

Figure 2-24. Random Glucose
Arizona Urban Indians by Location



Health Risk Appraisal Data, 1988 (Total
n=600)

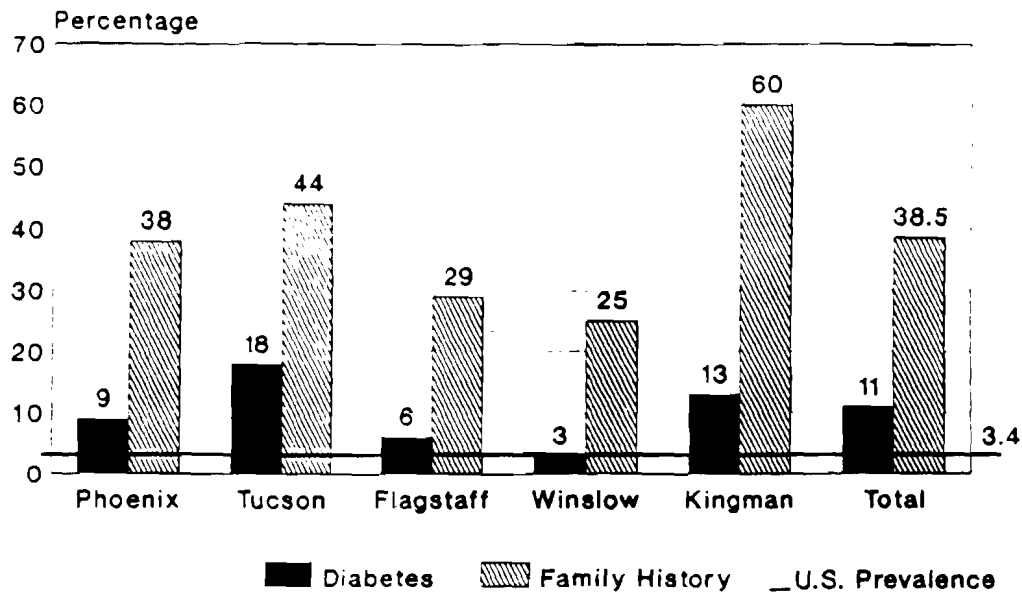
Random Glucose

Almost one in three urban Indians have elevated random glucose levels.

Random glucose readings are a crude screening method for diabetes risk. Levels of random glucose were very high among urban Indians in Arizona (Figure 2-24), with 31% high or borderline high.

Tucson and Kingman, two communities where diabetes rates are the highest, also showed the highest percentages of elevated cholesterol. Flagstaff and Winslow showed relatively few Indian people with high glucose readings.

Fig 2-25. Diabetes and Family History
Arizona Urban Indians by Location



Health Risk Appraisal Data, 1988 (Total
n=600)

Diabetes and Family History of Diabetes

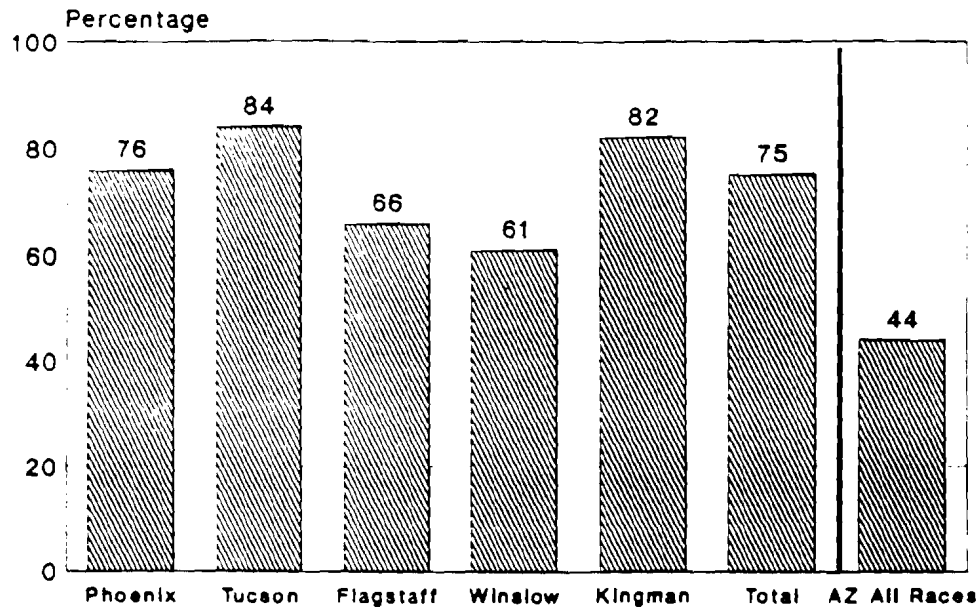
Diabetes is found in epidemic proportions among Arizona urban Indians, with over 300% more reported cases in urban Indians than in the U.S. general population. The family history of this condition is also very high.

Figure 2-25 illustrates the elevated prevalence rates of diabetes in urban Arizona Indians as compared to the rest of the country. In addition, the Center for Disease Control estimates that known cases are only one half of the actual number with diabetes, indicating that the disease is rampant within urban centers in Arizona, particularly Tucson, Kingman and Phoenix.

Family history of the disease is one of the most important factors associated with increased risk for developing diabetes. Again, family history rates shown in Figure 2-25 show very high percentages of urban Indians at risk for developing the condition.

Diabetics are at increased risk for heart disease and stroke. Any behaviors which would increase the risk of heart problems would be especially problematic for those with diabetes. Of the diabetics, 23% were current smokers, 30% were binge drinkers, 50% did not exercise regularly, 54% had elevated cholesterol levels, and 31% had high or borderline high blood pressure readings.

Figure 2-26. Seat Belt Non-use
Arizona Urban Indians by Location



Health Risk Appraisal Data, 1988 (Total
n=600) and Arizona BRFSS, 1987 (n=1,179)

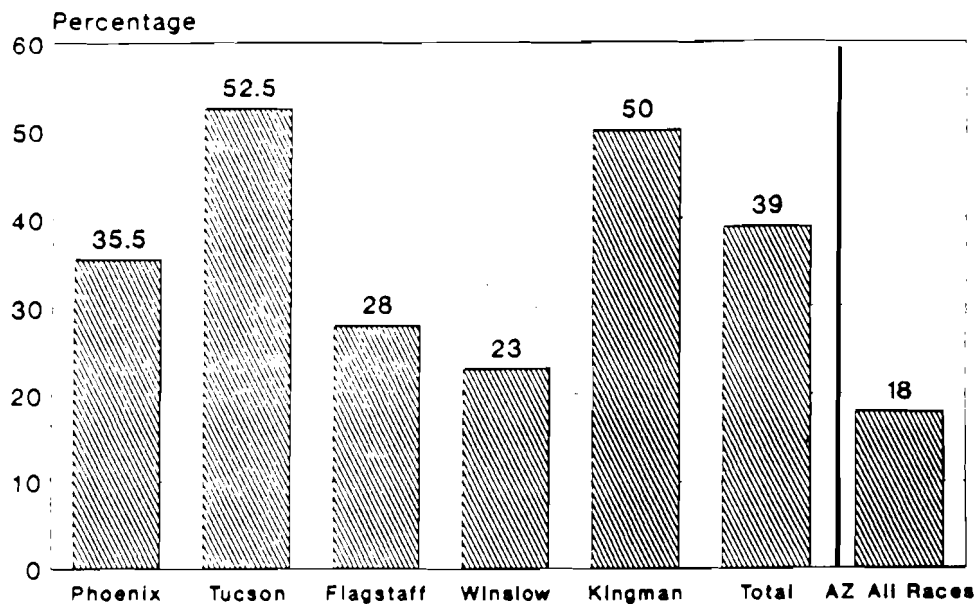
Seat Belt Non-use

Almost twice as many urban Indians than All Races in Arizona do not "buckle up" regularly.

Figure 2-26 shows that seat belt non-use among urban Indians is the norm rather than the exception. Three out of every four urban Indians did not use their seat belt more than 50% of the time, as compared to 44% of the general population. Such behavior is important to change given the high accident mortality found among urban Indians.

An additional risk factor in motor-vehicle related accidents is high driving speeds. Eighteen percent of the Indian population in Arizona cities drove at speeds 6-15 miles over the posted limits. An additional 11% drove more than 15 miles per hour over the safe speeds.

Figure 2-27. Binge Drinking
Arizona Urban Indians by Location



Health Risk Appraisal Data, 1988 (Total
n=600) and Arizona BRFSS, 1987 (n=1,179)

Binge Drinking

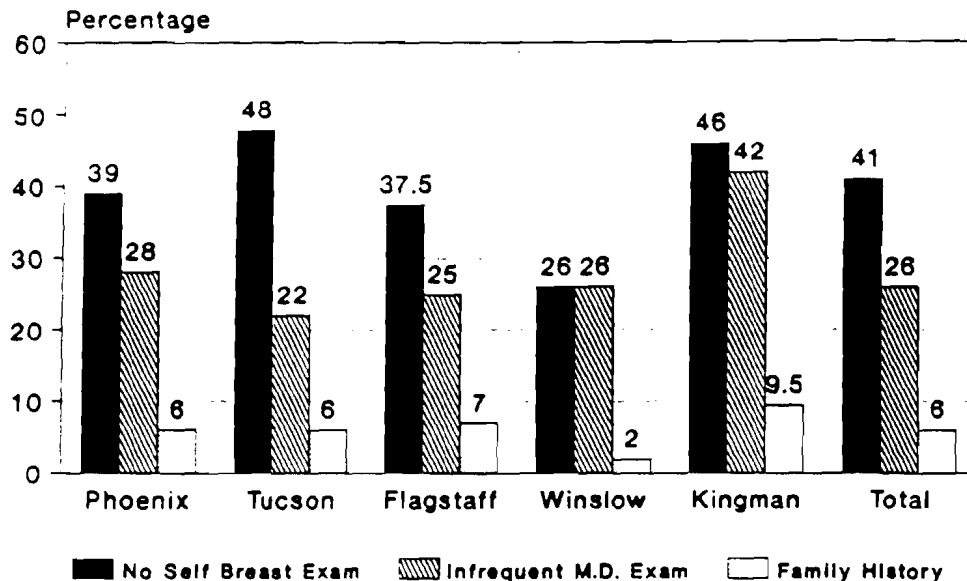
Binge drinking (5 drinks or more per occasion) is twice as prevalent in the urban Indian community than in the general population in Arizona, and greatly increases the risk of accidental injury. One in ten pregnant women reported binge drinking over the past month in the Arizona Community Health Study (1988). In addition, the risk for accidental motor vehicle injury is increased by the 24% who had driven or ridden while intoxicated during the past month.

Alcohol consumption has been associated with accidental injury, heart disease, liver disease mortality and birth defects. The overall percentage of urban Indians who drank five or more drinks per occasion at least once during the last month was 39%, over twice the level for All Races in Arizona. Binge drinking levels among urban Indians varied considerably by location. In Tucson, the percentage was highest at 52.5% with a similar percentage in Kingman (50%).

Pregnant women who binge drink increase the risk for birth defects. Ten percent of the pregnant urban Indian women reported binge drinking during the past month.

In addition to binge drinking, driving while intoxicated greatly increases the risk of accidental injury. One in every four urban Indians had driven while intoxicated or ridden with an intoxicated driver during the past month.

Figure 2-28. Breast Cancer Risks
Arizona Urban Indians by Location



Health Risk Appraisal Data, 1988 (Total number of females = 408)

Breast Cancer Risks

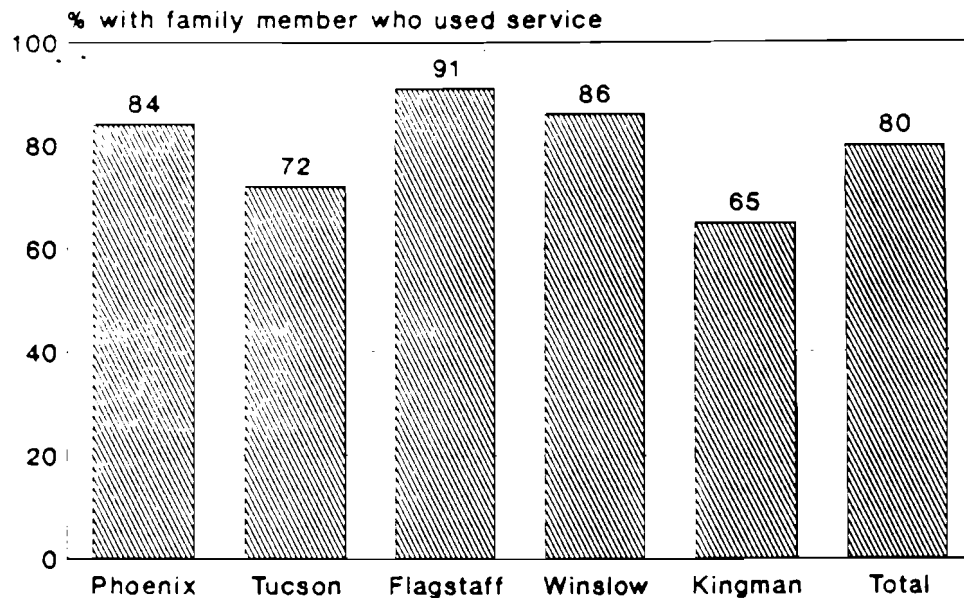
Six percent of urban Indian women have a family history of breast cancer. Screening and early detection are key elements in preventing breast cancer mortality. Many urban Indian women do not practice self breast exams (41%) and one in four do not have regular physician exams.

Figure 2-28 shows family history of breast cancer and behavioral health patterns related to screening and early detection. The majority of urban Indian women perform regular self breast exams, however, 41% do not perform self exams and 26% do not have regular exams by a health professional. Six percent of urban Indian women report a family history of breast cancer.

RESOURCE UTILIZATION, HEALTH NEEDS, AND BARRIERS TO CARE

Resource Utilization

Figure 2-29. Use of Health Services
During The Past Year



Arizona Community Health Study, 1988
(Total n=1,764)

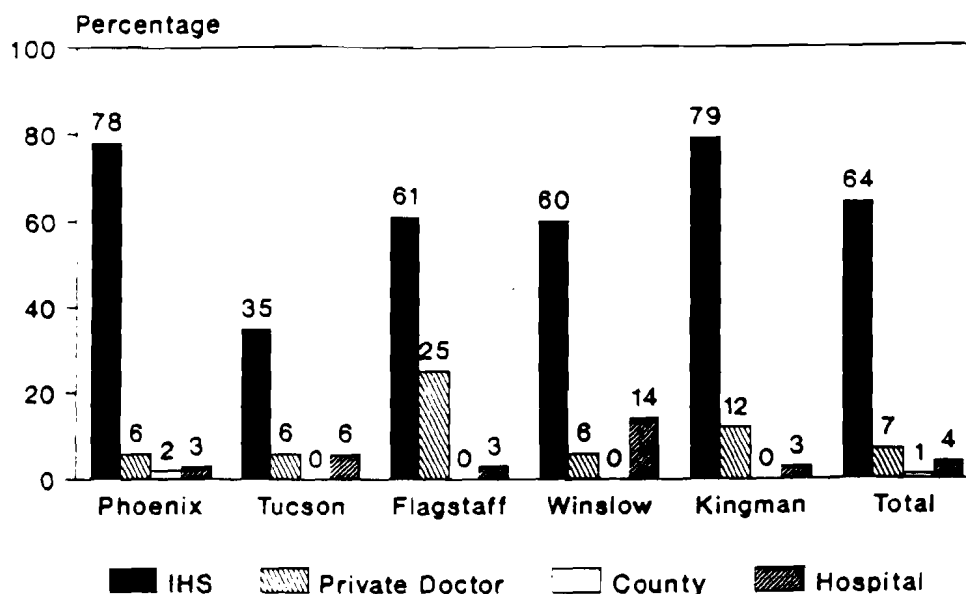
USE OF SERVICES

Four out of five urban Indians in Arizona had a family member visit health facilities during the past year.

Overall, 80% of the urban Indians in Arizona had a family member who visited a health care facility during the past year (Figure 2-29). Health care use was lowest in Kingman (65%) where no IHS facilities are available. Tucson also had lower utilization at 72%. The nearest IHS health care facilities for Tucson Indians are located 10 miles outside the city.

Surprisingly, Flagstaff (which also has no IHS facilities) had the highest health care utilization over the past year (91%). However, as the next figure illustrates, many more Indian people in Flagstaff used private doctors as their source for medical care.

Figure 2-30. Source Of Medical Care
Arizona Urban Indians by Location



Arizona Community Health Study, 1988
(Total n=1,590)

SOURCES OF MEDICAL CARE

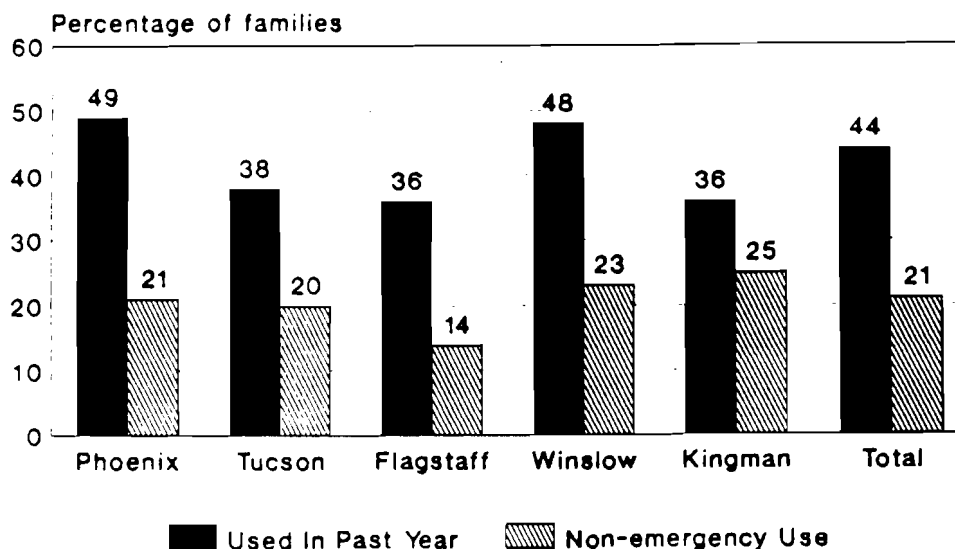
Urban Indians in Arizona rely heavily on the IHS for medical care. At least three out of five Indians in Arizona cities used IHS as their health care source.

The IHS was the most commonly used health care facility for urban Indians in Arizona (Figure 2-30). At least 60% of the urban Indians used the IHS as their source of care during the past year. These figures may be underestimated, however, because the Pascua Yaqui Indians have IHS funded neighborhood clinics which were considered "clinics" rather than IHS facilities in the community assessments. In Tucson 18% cited "clinics" as their source for medical care. Urban Indians in all sites also reporting using more than one facility, and even if they used IHS, this was not added in the total usage of IHS facilities.

County facilities, one of the few low-cost options available, were used by only one percent of the urban Indian families. Private physicians were the source of care for only 7% of urban Indians, although the percentage was much higher in both Flagstaff and Kingman, where no IHS facilities are located. In Flagstaff, one in four urban Indians cited a private doctor as their health care source. One reason for this may be the higher

number of Indian professionals in Flagstaff⁷, given that professional positions usually come with health coverage.

Figure 2-31. Emergency Room Use
Self-reported Frequency and Estimated
Percent Who Used for Non-emergency



Arizona Community Health Study, 1988
(Total n=1,764)

EMERGENCY ROOM USE

Urban Indians in Arizona use the emergency room 250% more often than the general public. Around one-half of these visits are considered inappropriate, and have been linked to long waiting times and unavailability of alternate resources for taking care of such non-acute problems in a lower cost, primary care setting.

Figure 2-31 shows that emergency room use among urban Indians in Arizona was very high (44%) compared to a Robert Wood Johnson Foundation study (1986) which found an emergency room usage of 18% nationwide.

⁷In Flagstaff, the community assessment showed that 13% were professionals as compared to the total sample in which only 2% were employed professionally. See Appendix 1 for more details.

Using self-reported reasons for use⁸, estimates found that 45% of the visits were non-emergency situations. One in five urban Indians used the emergency room inappropriately, that is, for reasons which could have been treated in a lower cost, primary care setting. (Examples would be colds, fevers, infections, child immunizations, chronic disease care, and in some cases, even routine checkups.)

Additional data from the Phoenix Indian Medical Center (PIMC) corroborate the increasing use of the emergency room facilities for non-acute reasons. Staff at PIMC report that the patient caseload in the emergency room increased 21% from FY 1986 to FY 1988. Three out of every four of the emergency room visits were for non-urgent problems such as colds, sore throats, or prescription refills, up from 51% non-urgent reasons noted in 1985. Reasons for this increase cited by both staff and administrators include high waiting times and waiting room crowding evident at the clinic. In addition, the lack of alternate resources for urban Indians, particularly during the "after hours" times, makes the emergency room the only option.

⁸Reasons for use were provided by the patient, with no chart follow-up, so conservative estimates were made based on these self-reports.

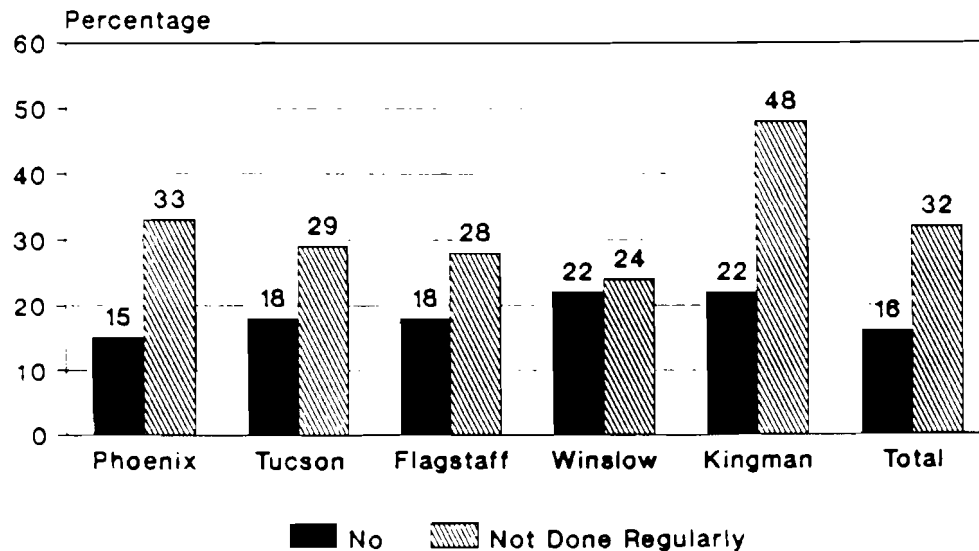
WOMEN'S PREVENTIVE HEALTH

One out of three urban Indian women do not have pap smears done regularly, and 16% have never had a pap smear to check for cervical cancer. In addition, regular screening decreased with age, contrary to the cancer prevention recommendations.

Pap smears are a screening and detection tool for the early diagnosis of uterine cancer. The importance of regular pap screening (at least once every three years before age 40 and every one to two years thereafter) has been demonstrated by cancer researchers.

Figure 2-32 shows the percentage of Indian women in Arizona cities who report never having a preventive pap smear to screen for cancer, and the percentage who do not have pap smears regularly. In Phoenix and Kingman in particular, the percentage of women who do not have regular pap smears is high. Of the women in Kingman who do have paps, only one in three have them done at regular intervals. Despite cancer guidelines calling for increased screening with advancing age, the percentage of women who receive regular paps decreases with age for urban Indians.

Figure 2-32. Women's Pap Smears
Percent Who Have Never Received Pap
Smear and Percent Not Done Regularly



Arizona Community Health Study, 1988
(Total n=1,153)

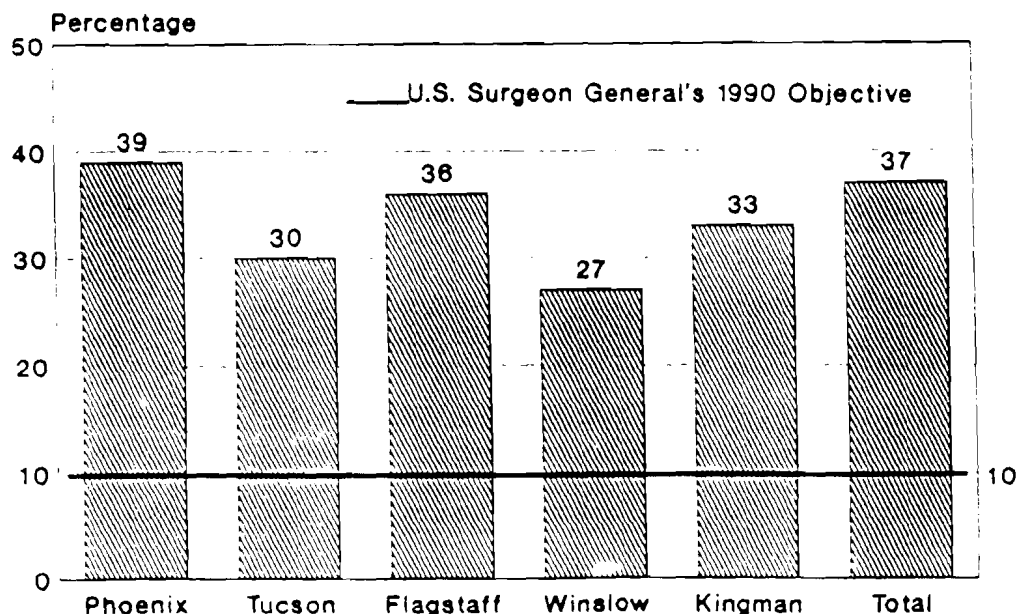
PRENATAL CARE

Early prenatal care is a key component in insuring the health of both mother and infant. Thirty seven percent of the Indian women in Arizona cities are receiving late prenatal care (Arizona Community Health Study, 1988), a rate almost 400% higher than the Surgeon General's 1990 Objective for the Nation.

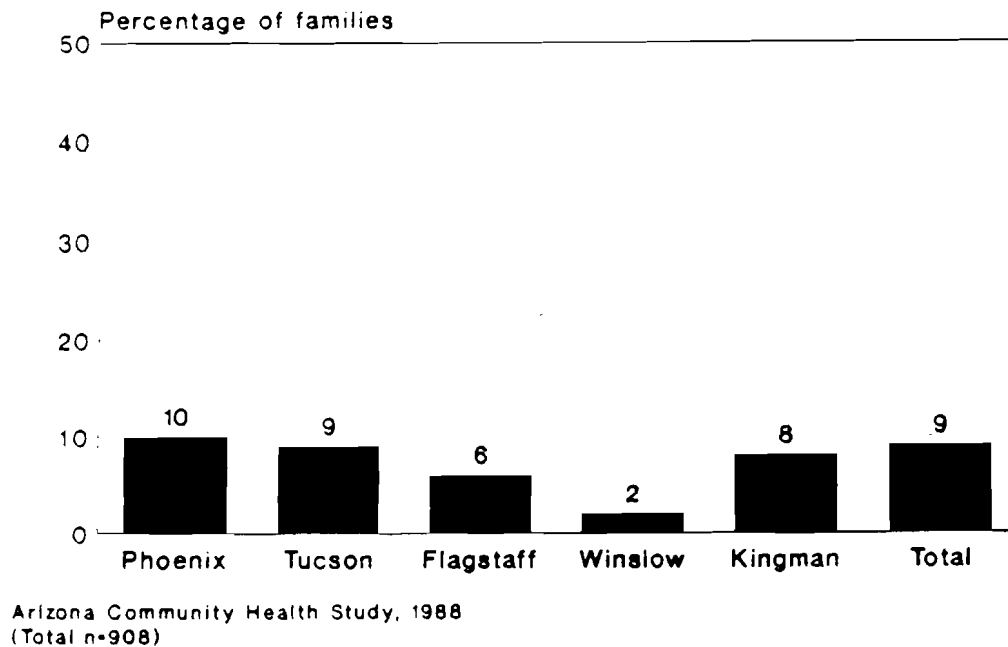
Early prenatal care is important in assuring the health of both the mother and her infant; it can be a key factor in preventing infant morbidity and mortality. Given the high mortality rate among urban Indians and the high rate of birth defects found in Arizona Indians (16.4 per 100,000 Indian as compared to 7.9 All Races), early and quality prenatal care is an important issue for Indian women.

Reducing the number of pregnant women who receive late prenatal care (defined here as none or care initiated in the second or third trimester) has been established as a national objective. The Surgeon General's National Objective for 1990 is that no more than 10% of all women should begin prenatal care after the 1st trimester. However, late prenatal care is common among urban Indians in Arizona (Figure 2-33). Thirty seven percent of the women who were pregnant over the last two years received late prenatal care, almost four times greater than the national objective. In addition, seven percent of Indian women in Phoenix and five percent in Tucson received no prenatal care whatsoever during their pregnancies, as compared to 1.9 percent among Arizona All Races. In fact, of all ethnic groups in Arizona, American Indians have the highest rate of inadequate prenatal care (Arizona Department of Health Services, 1988b).

Fig 2-33. Late Prenatal Care
Arizona Urban Indians by Location



**Figure 2-34. Child Health Care Service
Low-income Early Periodic Screening,
Diagnosis and Testing (EPSDT) Services**



LOW-INCOME CHILDREN'S HEALTH SERVICES

The bulk of urban Indian families in Arizona (91%) are not accessing the low cost child health care services available through Federal and state funding sources.

Early Periodic Screening, Diagnosis and Treatment (EPSDT) services are an important source of child health care for low-income women. Figure 2-34 illustrates the low utilization of these services by urban Indian families in Arizona. Less than 10% reported taking advantage of the EPSDT services in Arizona cities.

Health professionals indicate that there are at least two difficulties with EPSDT services in Arizona cities: 1) **availability**- the state of Arizona does not currently provide extra funding for an expanded program of services available similar to other states and 2) **accessibility**- little or no outreach program to the urban Indian community.

SOCIAL SERVICE USE

Social service use by urban Indians is low, however, when Indian specific services are available, the number of urban Indian users increases.

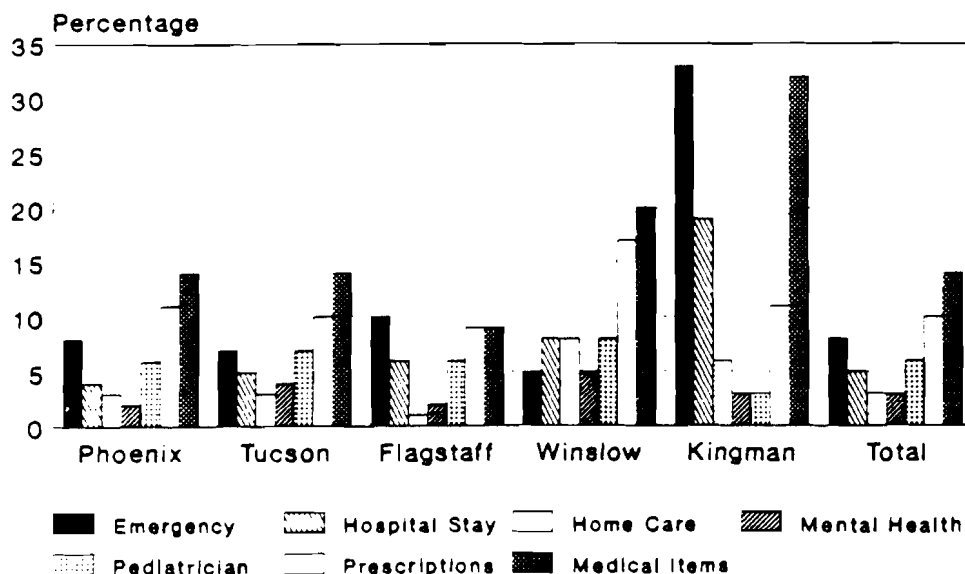
Little information is available on the social services utilization patterns of urban Indians. However, data from two central planning agencies in Phoenix and Tucson provide some sketches of the service network available to urban Indians in these cities. The basic theme to emerge from analysis of social service data was under-utilization. While the number of urban Indians who fall within the poverty level is quite large, the number of contacts provided to urban Indians by social service agencies is small.

In Tucson, food service agencies reported high utilization by Indians. Several agencies in the Tucson area, in particular the Casa Maria "Free Kitchen" and the Salvation Army, provide free, daily meals which were used by urban Indian people. On the other hand, county food services (for example the free commodities program) were not used by the urban Indian community.

In Phoenix, the only social service program well used by the Indian community was the Women, Infant and Children's program (WIC). This program is administered through the Indian Community Health Services (ICHS), an Indian agency in downtown Phoenix. A review of statistics from the Arizona Department of Health Services shows that since ICHS has had an on-site WIC program, the number of Indians using the services in Phoenix has increased from hundreds to thousands when compared to the usage of services when no Indian specific site was available.

Health Needs

Figure 2-35. Self-Reported Health Needs
Arizona Urban Indians by Location



DIRECT ASSESSMENT

Urban Indians in Arizona cities report many health needs. Indians did not receive needed emergency care, pediatric, and prescription services. In addition, medical items such as glasses were not received by 14% of the urban Indians.

Urban Indians in Arizona reported many health needs during the past year (Figure 2-35). In particular, 5-10% of urban Indians reported needing but not obtaining emergency, pediatric and prescription services. In addition, 14% needed medical items such as crutches and glasses. The greatest needs were reported in Kingman, where no IHS facilities are available.

Reasons for health needs

This direct evidence of services needed but not received suggests that particular problems exist for urban Indians. The major reasons cited by urban Indians for not receiving services include 1) **financial constraints**, which include the inability to pay even sliding fee scales, 2) **poor service aspects** such as long waits, and rude or indifferent staff, 3) **services not being available** at all and 4) **being rejected for services** due to agency space or financial limitations. (It should be noted that the category "services just not being available" may also indicate at least a perception of services not being available, because these data were based on self-reports.)

The reasons also varied somewhat by location. For example, in Winslow and Flagstaff, urban Indians reported being rejected for service because no room was available. In Kingman, 29% reported not receiving services because they were not enrolled in the tribe. In all sites, but particularly in Phoenix and Tucson, financial constraints were reported as the major reason for not receiving needed services.

INDIRECT ASSESSMENT

Health needs can also be measured indirectly by the perception of needed services within the urban Indian community. Urban Indians were asked an open-ended question on what was the most needed health service in their city. The number one response was a desire for more clinics (36.4%), followed by more and better staff (11.4%), drug, alcohol and mental health services (10%), dental and eye services (9.0%), classes and health programs (7.2%), transportation services (7.1%), and emergency care services (5.8%). Given the high risk factors for major diseases among urban Indians, the desire for more health education classes

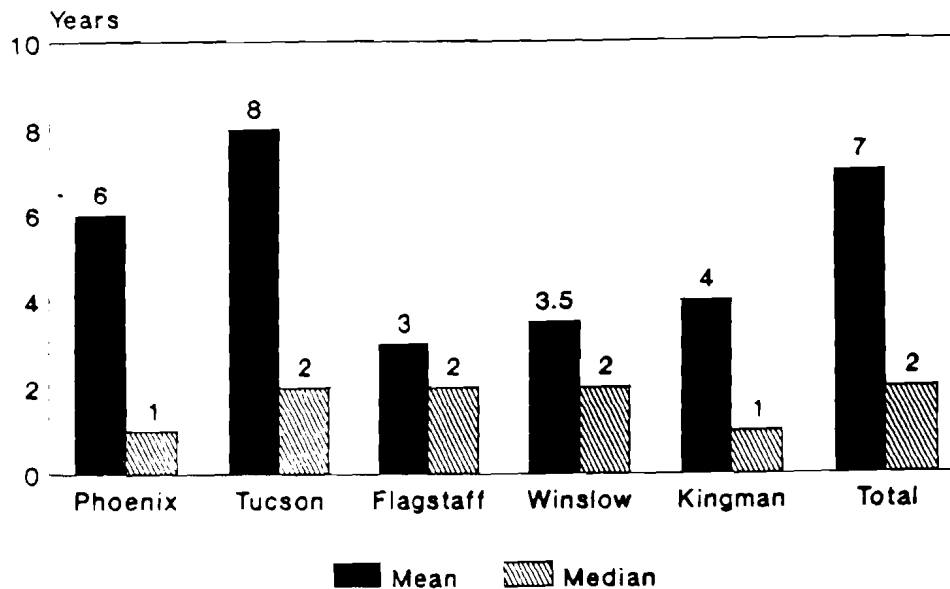
and preventive programs is noteworthy. The reported need for mental health services also indicates a willingness to acknowledge and work on such personal issues.

Health professionals working both in service delivery and administration concurred that more clinics are needed to address the health problems of urban Indian people. They also noted the importance of establishing multi-disciplinary, family-centered health services with an emphasis on perinatal/well-child care and preventive care. Professionals also expressed a desire for more mental health and adjunct health services sensitive to the cultural needs of urban American Indians.

The next section describes barriers encountered by urban Indians in trying to get their health needs met.

Barriers to Care

Figure 2-36. Length At Present Address
Arizona Urban Indians by Location



Arizona Community Health Study, 1988
(Total n=1,764)

MOBILITY OF URBAN INDIANS

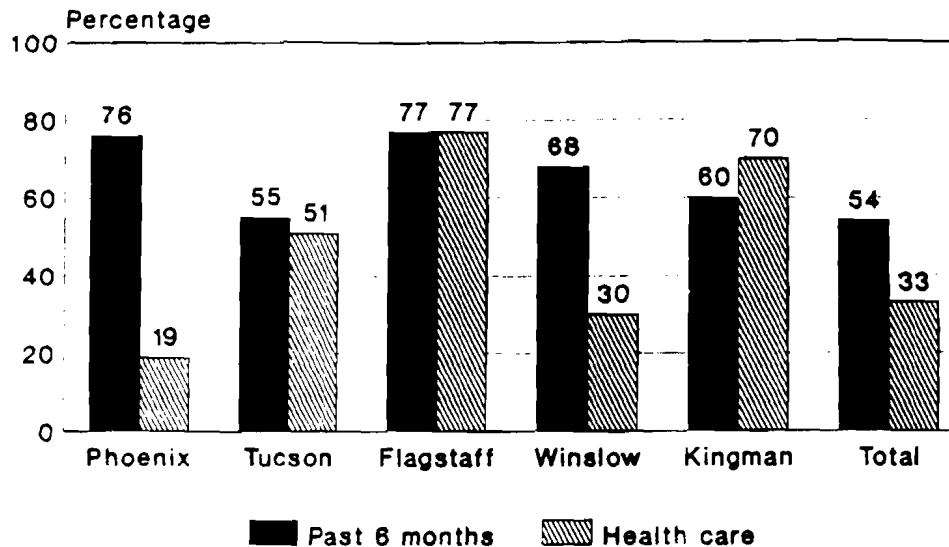
Almost one-half of Indians in Arizona cities have lived at their present address one year or less. High mobility makes it difficult for urban Indians to access needed services, and for health agencies to do proper follow-up and outreach.

Figure 2-36 examines the mobility of the urban Indian community which can act as a major barrier to getting health needs met. While the mean of length at the present address was seven years for urban Indians, the median was only two. In fact 47.5% of the Indians in Arizona cities had lived at their current address for one year or less. The difference between the mean and the median indicates that a large group of Indians have lived at their present address for many years, while an equally large group is very mobile. An example in Phoenix and Tucson (where the mean/median differences are largest) would be the different experiences of the Pascua Yaqui and the Navajo. The Pascua Yaqui have lived in a stable, Phoenix community for many years. The Navajo, on the other hand, are much more mobile and many move back and forth from their northern Arizona reservation community.

Such mobility can present several barriers to receiving health care services. The transition from the reservation to the city is not an easy one, and many Indian people are ill-prepared for

the difference in housing, employment, education and health care services available in the urban environment. In addition, the constant movement of people from one address to another makes it very difficult for health professionals to do follow-up care and outreach about available services.

Figure 2-37. Visits To Reservation
Percent who visited within the past six months or returned for health care



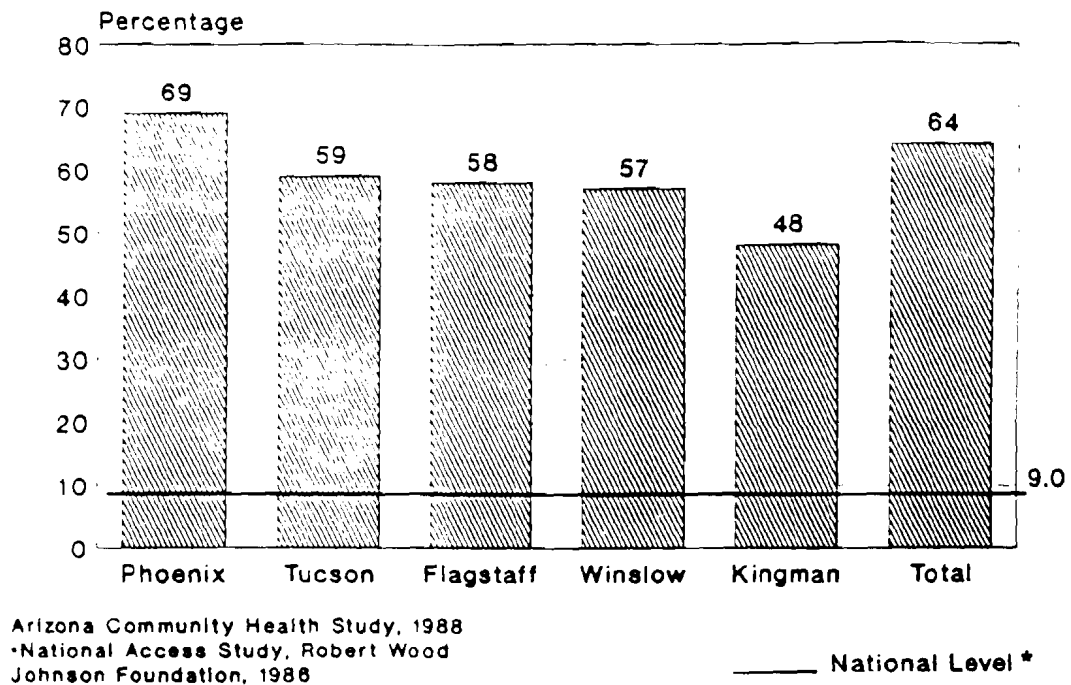
Arizona Community Health Study, 1988
(Total n=1,764)

URBAN INDIAN TIES TO THE RESERVATION

The majority of urban Indians make visits to their reservation communities for social or traditional reasons. In cities where IHS facilities are not available, a large percentage of Indians return for medical care.

Figure 2-37 illustrates the personal ties which urban Indians maintain with their reservation communities; Over one-half of the urban Indians in Arizona had returned to their reservation during the past six months. Many urban Indians had also returned for health care, particularly in Flagstaff (77%) and Kingman (70%), where no IHS facilities are available in town.

Figure 2-38. Self-Reported Uninsured
Percent reporting no type of coverage

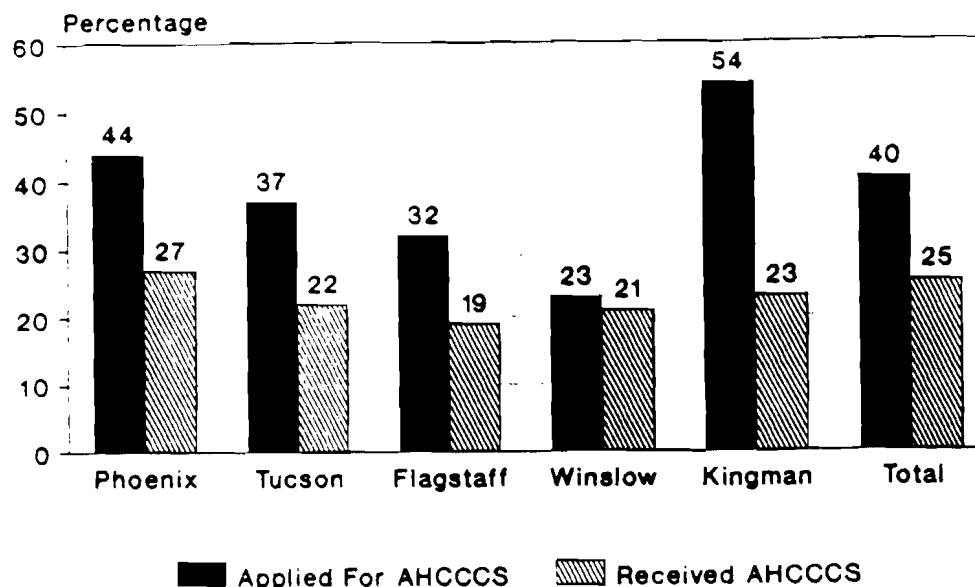


UNINSURED

Two out of every three urban Indians in Arizona are uninsured. The level of uninsured found in the urban Indian community is 700% higher than that in the general public.

Perhaps the major barrier to getting quality health care found among urban Indians is the lack of health coverage. Figure 2-38 shows that the majority of urban Indians are uninsured (64%). This level is 700% higher than the national level of 9% found by the Robert Wood Johnson Foundation access to care study (1986). The high number of poor and "working poor" in the Indian community may be responsible for this lack of health coverage.

Figure 2-39. Arizona Medicaid (AHCCCS)
Percent who applied for/received AHCCCS



Arizona Community Health Study, 1988
(Total n=1,764)

ARIZONA'S MEDICAID PROGRAM- AHCCCS

While 25% of the urban Indian community in Arizona receive Arizona medicaid, they encounter many barriers in accessing and utilizing the current system. The high number of urban Indians living in poverty also suggest that the percentage of Indians on AHCCCS should be higher than 25%.

Arizona's medicaid system (known as Arizona's Health Care Cost Containment System-AHCCCS) was consistently cited as a major problem for urban Indians by health professionals, field personnel and community agencies. Figure 2-39 shows that while 40% of the Indians in Arizona cities applied for AHCCCS, only 25% received it. The high percentage of urban Indians in poverty suggest that more Indian people should be eligible for these health services. Some of the concerns about the AHCCCS system include:

1) Complicated application procedure. The complications in the application and eligibility proceedings which make it very difficult for urban Indians to apply. For example, the application form itself is 25 pages long and requires many types of documents. Indian people do not have cars (no driver's license), are highly mobile (no documents with current address), and may have just moved from the reservation (no birth or identification certificates available). Required documentation may be very difficult to obtain for urban Indians.

2) Misunderstanding of the AHCCCS system. Urban Indians may not have the education to understand the process of applying and using AHCCCS. For example, a person must go to different offices (state versus county) to apply for different kinds of coverage. Urban Indians also may not understand that they must re-enroll every six months. This type of system is very different from the IHS, which has no requirement for continuous enrollment. Finally, Indians may not understand the system of choosing and using providers other than the IHS. Many Indian people on AHCCCS (even those who have been assigned to other providers) go to IHS anyway, despite the fact that they can choose from a variety of health care providers.

3) Lack of provider awareness. Another AHCCCS barrier revolves around the provider agencies, who do not seek out Indian clients and who are not aware of special cultural needs of Indian people. Indians who have chosen private providers may go to these agencies and then return to using the IHS system because of provider insensitivity or patient/provider communication problems.

4) Lack of networking. Little networking has been done between the major players in the health system regarding the needs of urban Indians, in part, due to the litigation which has limited communication between the IHS and the state because of the inability to resolve the issue. Private providers, state and county medical systems, and the IHS would ideally work together to exchange information and provide for a referral system for urban Indians, especially in major cities where several health care options exist.

AVAILABILITY, AFFORDABILITY AND ACCOMMODATION

Many quality health services are available in urban areas of Arizona, especially the larger metropolitan cities of Phoenix, Tucson and Flagstaff. However, availability of services is only a small part of the broader picture in determining services useful to the urban Indian community. Other factors such as affordability, accommodation, accessibility and acceptability are standard ways of looking at services to determine true availability.

Limited Affordable Services

Most of the sources of care in urban areas are expensive or available to those with health insurance coverage. Because of this, the majority of urban Indians (who live in poverty) can not use these services and are relegated to very few available resources, i.e., IHS facilities, county medical services, urban Indian clinics and community health centers.

IHS Facilities. In Phoenix and Winslow, IHS facilities are available within the city limits. Phoenix has the Phoenix Indian Medical Center (PIMC) which provides outpatient and limited inpatient services. However, PIMC staff report a tremendous pressure on their health system due to the growth of the urban Indian population. The secondary care hospital was originally built as a referral center for area reservations with a capacity for 40,000 outpatient visits. PIMC staff are now faced with a caseload of over 100,000. Chronic underfunding have led to staff burnout, exceedingly long patient waiting times, and high appointment no-shows among clients.

Tucson has a direct care facility available several miles outside the city. City transportation services to the clinic have recently been cut, making access to health services for urban Indians difficult. The nearest IHS hospital is sixty miles away in Sells. Flagstaff and Kingman Indians must travel approximately 60 miles to reach the nearest IHS facility on the reservations. Winslow has the IHS direct care facility with no limited hospital services.

County Medical Facilities. Hospital and outpatient health care services are available in Maricopa County. However, these services are gravely overcrowded and county health administrators report likely service cutbacks and financial screenings in the future. Very few urban Indians report using the county facilities, and county personnel often refer Native Americans to IHS to lessen the strain on their own, leaving the urban Indian being shuttled from one system to the other. In Pima County, outpatient and adjunct health services are available but again, used relatively little by the Native American urban community. In Flagstaff and Kingman, the county operates more limited outpatient services and in Kingman, only limited public health services are available.

Urban Indian Clinics. Urban Indian clinics are operating in Phoenix and Tucson. Both clinics provide health education and home health; however, neither provide primary health services.

Community Health Centers. Federally funded community health centers are available in Phoenix and Tucson, but not in the other cities of Flagstaff, Kingman and Winslow. Almost no urban Indians report using the community health facilities.

Limited Accomodation

Accomodation factors, or the ways in which the provider makes the services available to Indian people, also restrict the availability of services. In this case, community health centers and county health facilities are not "accommodating" for urban Indians. Very few urban Indians report using the community health services available. This may be due to the sliding fee scale system or due to the lack of cultural sensitivity and

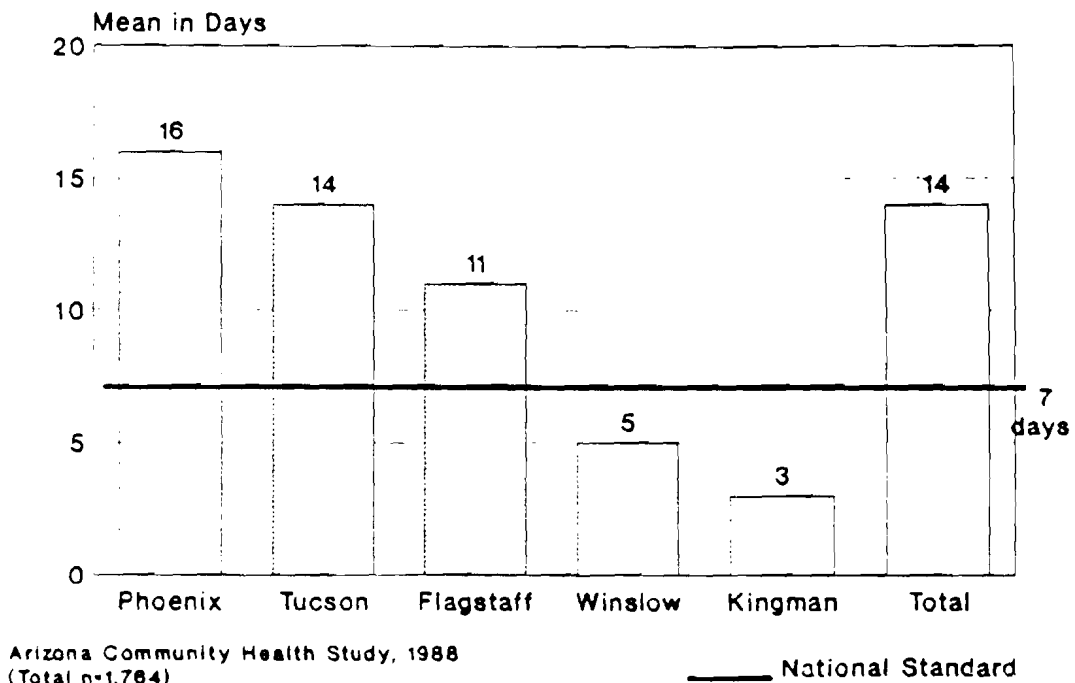
outreach provided to the urban Indian community. Many of the urban Indians in Arizona are unaware of the low-cost option for services provided by community health centers.

ACCESSIBILITY

Limited Accessibility

Affordability and accommodation factors greatly decrease the number of facilities available to the urban Indian community. Accessibility, or the convenience and location of health care services, also restricts the availability of services to urban Indians in Arizona.

Figure 2-40. Accessibility Factors
Appointment Delay Time in Days



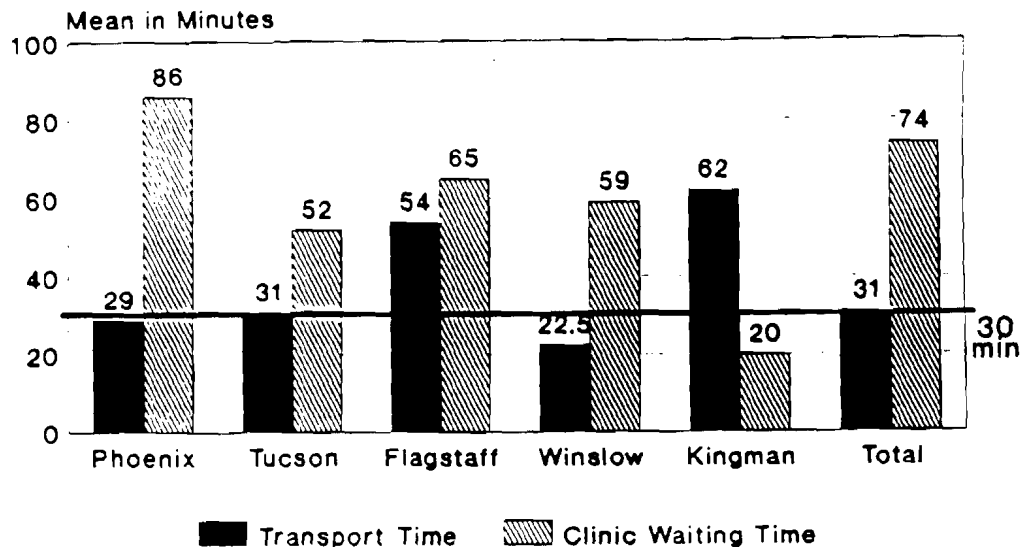
Appointment Delay Time

Appointment delay times are high for urban Indians in Arizona, 200% over the national standard of seven days. Phoenix and Tucson Indians, in particular, wait for weeks to get an appointment for acute medical care.

Figure 2-40 show the accessibility factor of appointment delay time, or the number of days it takes to get an appointment. In Phoenix, Tucson and Flagstaff, appointment delay times are well above the national standard of 7 days. Overall, the urban Indian

community in Arizona has an appointment delay time 200% above the national standard.

Figure 2-41. Accessibility Factors
Length of Transportation to Health
Care Source and Clinic Waiting Time



Arizona Community Health Study, 1988
(Total n=1,764)

— National Standard

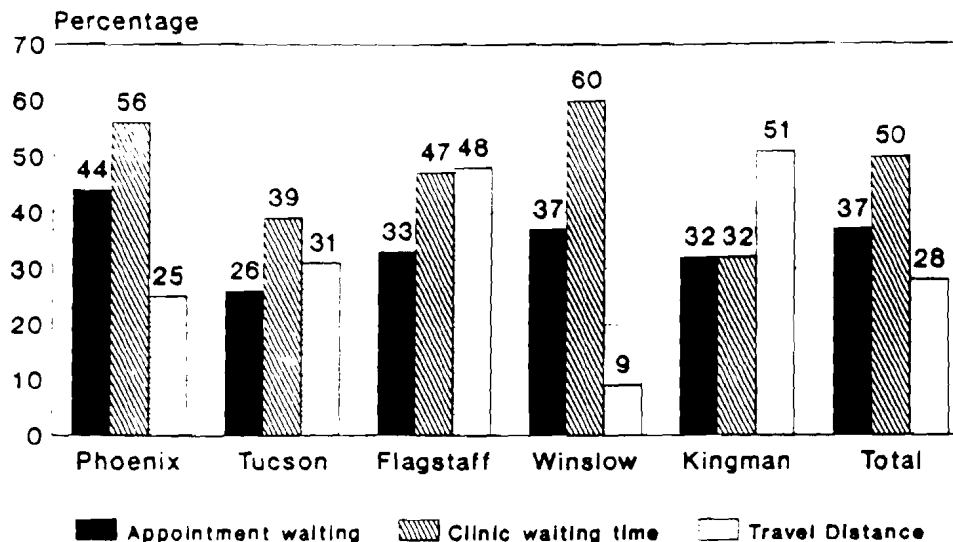
Length of Transportation and Clinic Waiting Time

Transportation times for Indians living in Flagstaff and Kingman are 200% higher than the national standard of 30 minutes. Clinic waiting times are also high for urban Indians in Arizona. Phoenix Indians, in particular, have exceedingly long waits to see a health care professional once they arrive at the clinic.

Figure 2-41 shows the excess in length of transportation and clinic waiting times experienced by urban Indians in Arizona. Both of these factors have been cited as reasons for the inappropriate use of emergency room facilities. For example, in Phoenix, where average clinic waiting times are over 80 minutes, Indian people may get tired of waiting and leave before seeing a health professional. This may act as a barrier to care the next time they are ill, if they wait until the condition worsens before seeking medical attention, or if they arrive at the emergency room for care.

ACCEPTABILITY

Figure 2-42. Dissatisfaction
Dissatisfaction with various
aspects of health services



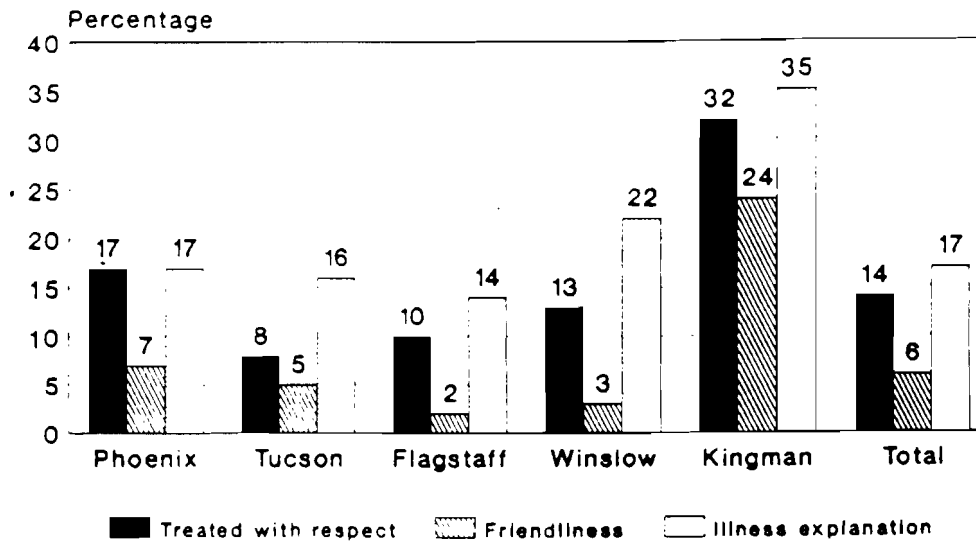
Arizona Community Health Study, 1988
(Total n=1,784)

Patient Dissatisfaction with Convenience Factors

Urban Indians expressed dissatisfaction with the high clinic waiting times in their communities. Appointment waiting time was also too high for many of the Indians in Arizona cities. Travel distances were also too high for much of the urban Indian community, particularly in Flagstaff and Kingman.

Figure 2-42 shows the patient dissatisfaction with appointment waiting time, clinic waiting time, and travel distance to see a health professional. As may be expected, urban Indians were very dissatisfied with these factors. One half of the urban Indians were dissatisfied with clinic waiting times, 37% were dissatisfied with appointment waiting times, and 28% were dissatisfied with the transportation times to get to medical care. Flagstaff and Kingman Indians, in particular, were highly dissatisfied with travel distance, since the nearest IHS facilities are at least one hour travel time.

Figure 2-43. Dissatisfaction
Dissatisfaction with various
aspects of health services



Arizona Community Health Study, 1988
(Total n=1,764)

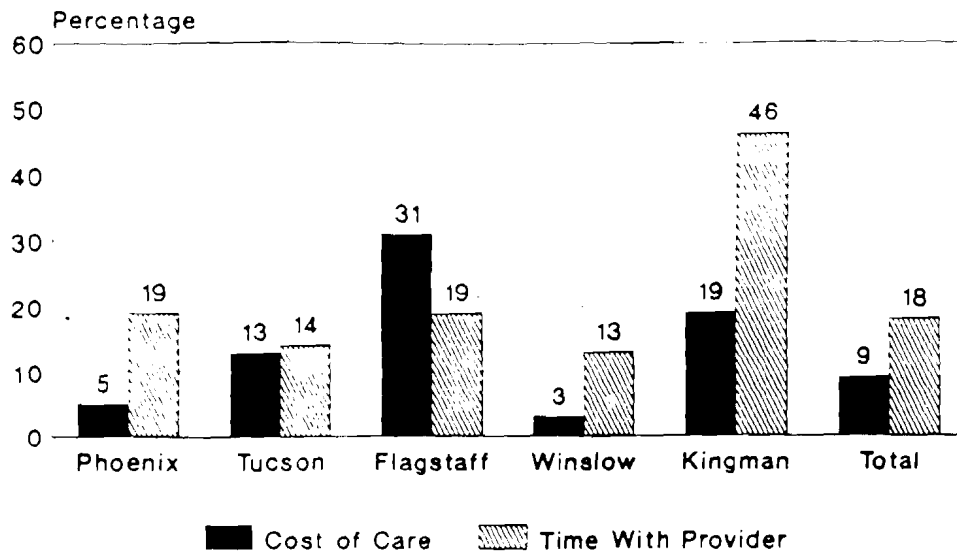
Patient Dissatisfaction with Quality of Care Factors

Some urban Indians in Arizona are dissatisfied with their treatment by health professionals, in particular with the respect they are accorded as patients and in the patient education they receive about their health condition.

Figure 2-43 illustrates the community dissatisfaction with respectful treatment, friendliness and explanation of illness received from the health professional. The highest percentage of dissatisfaction (17%) came with the patient education factor, illness explanation. Urban Indians also expressed some dissatisfaction with the treatment they received, 14% felt dissatisfied with the respect they were accorded by health professionals. Less dissatisfaction was expressed with the friendliness of the providers.

Kingman Indians were two to four times more dissatisfied with these aspects of care than Indian people in the rest of the Arizona cities studied.

Figure 2-44. Dissatisfaction
Dissatisfaction with various
aspects of health services



Arizona Community Health Study, 1988
(Total n=1,764)

Patient Dissatisfaction with Cost and Provider Time

Urban Indians in Arizona cities expressed dissatisfaction with the amount of time their health care professional spends with them. In addition, Indians in Flagstaff and Kingman expressed dissatisfaction with the cost of care.

Figure 2-44 illustrates the dissatisfaction levels urban Indians express in regard to the cost of care and the time they spend with the health care provider. Almost one of every five patients were unsatisfied with the time the provider spent with them, which may be related to the dissatisfaction expressed about the patient education they received. The cost of care was a problem for 31% of the Indians in Flagstaff and 19% of the Indians in Kingman. Indians living in these cities see a private provider more frequently than in the other cities studied, which may explain the difference in satisfaction with the cost factor.

Dissatisfaction with services may create a barrier to health care utilization. Only 17% of the general public were found to be dissatisfied with their last ambulatory health care visit in a 1986 Robert Wood Johnson study of access to care. Overall, urban Indians in Arizona expressed more dissatisfaction than the

general public on most care indices, with the exception of friendliness, respectful treatment, and cost of care. However, some exceptions were noted in specific cities.

Dissatisfaction can diminish the "acceptability" of health care services and create a strong internal barrier to getting health care needs met.

SUMMARY

HEALTH STATUS

The health status of urban Indians is poor, and three of the major causes of death-accidents, alcoholism and homicide-are complex problems over which medical technology has had little success. Heart disease and diabetes, the other leading causes of death for urban Indians, are chronic conditions requiring long-term health monitoring. These conditions are also responsible for morbidity problems such as eye diseases and physical handicaps. Urban Indians reported high prevalence of vision problems (40.5%), overweight (37.3%), dental (30.7%), and back problems (21.7%). In addition, mental health difficulties affected urban Indians: 14.5% reported anxiety and depression while 13.5% reported fatigue and exhaustion.

Infant mortality rates for urban Indians are well above the rate of the Arizona general population and the overall Arizona Indian population. In addition, they exceed the goal of the Surgeon General by 60%.

Health risk factor levels are high among the urban Indian community. In particular, high blood pressure readings in Indian males combined with the low numbers taking blood pressure medication point to the importance of screening and follow-up for heart health risks. Levels of obesity, binge drinking and diabetes were also very high within the urban Indian community. Other risk-factors observed were high driving speeds, driving while intoxicated and sedentary life-style for females.

HEALTH RESOURCES USED

The major source of health care for urban Indians is the IHS. Other sources such as county medical facilities community health centers, and private providers are rarely used by urban Indians.

Forty four percent of the urban Indian community visited the emergency room during 1988. However, many of these visits are considered inappropriate use of emergency facilities. Between 45% and 75% of the emergency visits could have been taken care of through less costly, primary care visits.

Social services in metropolitan areas are under-utilized by the Indian community. Indian-specific programs, with the exception of alcohol-related services and Women, Infants and Children (WIC) nutrition services, are not available. Both WIC and alcohol-related programs are among the few used by the Indian community, indicating that services geared toward Indian people will have greater utilization than those not culturally specific.