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Assessment of AIDS Knowledge, Attitudes, Behaviors, and Risk Level of Northwestern American Indians

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Abstract: A survey was made of 710 American Indians of Oregon, Washington, and Idaho to assess the population's knowledge, attitudes, and behaviors in respect to acquired immunodeficiency syndrome (AIDS), to estimate the population's risk, and to plan strategies to reduce it. In contrast to 3 percent of the general population, this study found 10.6 percent of male and 6.4 percent of female Pacific Northwestern American Indians in groups considered at high risk for AIDS. (*Am J Public Health* 1990; 80:875–877.)

Introduction

Assessment of the degree to which any population is at risk for infection with the human immunodeficiency virus (HIV) is difficult. The American Indian/Alaskan Native population presents a special challenge because of its heterogenous cultural roots and its dispersion within the general population. Few Native Americans who live on reservations have been included in the National Health Interview Survey (NHIS), which studies the public's knowledge and attitudes toward acquired immunodeficiency syndrome (AIDS) (Deborah Dawson, National Center for Health Statistics, personal communication, July 14, 1989).

No census exists of persons with Native American ancestry; many in rural or reservation areas do not have telephones, and are not represented in telephone surveys. Unpublished AIDS knowledge, attitudes and behavior studies include data from women clients in a WIC (Women, Infants and Children) program; a survey of health care workers in Arizona; a survey of junior college students who primarily have Indian ancestry; and a survey of health service workers who work primarily with American Indians in the San Diego, California area (Steven Helgerson, Indian Health Service, personal communication, November 7, 1989).

Current literature reports a low rate of known AIDS cases in the American Indian population, especially in comparison to other minority groups,[1–3] but data on HIV infection do not exist and current information could understate risk in this relatively small and vulnerable population. In order to assess risk and recommend appropriate educational and preventive initiatives, the Northwest Portland Area Indian Health Board conducted an extensive survey of AIDS knowledge, attitudes, and behaviors among American Indians who live in the Pacific Northwest states of Oregon, Washington, and Idaho.

Methods

The questionnaire* was adapted from an Indian Health Service form, which included many of the items on the NHIS.[4] Questions probed respondents' knowledge about AIDS, attitudes toward people with AIDS, and behaviors related to HIV transmission. The questionnaire included a number of questions on sexual behavior (number and sex of partners, degree of acquaintance with partners, age at first sexual intercourse, etc.) and on the use of various licit and illicit drugs, including alcohol. Demographic questions asked respondents to identify their age, sex, ethnic affiliation, and education, and to categorize their residence by on or off reservation, community type and size, and state and county.

The survey was administered from September 1988 through March 1989 at 24 Indian centers in Oregon, Idaho, and Washington either by a member of the staff of the Northwest Portland Area Indian Health Board or by staff at the participating agency. Sixty-six percent of respondents were surveyed at health clinics or health stations, 17 percent at tribal offices, and 17 percent at Indian educational or community agencies. Respondents include employees, persons conducting tribal business, persons seeking health care, and family members accompanying them. All respondents were asked to complete the questionnaire; anonymity was guaranteed and individuals were assured that they would not be denied any tribal service if they chose not to answer the survey, or any part of the survey.

The sample consisted of 710 persons from ages 12 to 78 with a median age of 33 years; 237, 283, and 190 respondents were from Oregon, Washington and Idaho, respectively. Women represented 73 percent of the sample (Table 1). Idaho had the largest percentage resident on a reservation (85 percent), Washington was intermediate (69 percent), and Oregon was lowest (43 percent). This percentage did not differ by sex, but fewer of the age group under age 30 resided on reservations (59 percent) than in the age group over 50 (71 percent), while the age group from 30 to 49 was intermediate (65 percent).

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*For a copy of the questionnaire or a tabulation of responses, please write to the NW Portland Area Indian Health board, 520 SW Harrison, Suite 440, Portland, OR 97201.

TABLE 1—Sample Distribution by Age, Sex, and Risk Group*

	Age Groups (years)			
	12–17	18–29	30–49	50–78
Sex	N (%)	N (%)	N (%)	N (%)
Male	21 (41.2)	49 (23.9)	73 (24.7)	33 (31.1)
Female	30 (58.8)	156 (76.1)	222 (75.3)	73 (68.9)
Total	51 (7.8)	205 (31.2)	295 (44.9)	106 (16.1)
Risk Groups	8 (22.9)	93 (48.7)	187 (66.1)	93 (90.3)
Middle	25 (71.4)	78 (40.8)	74 (26.1)	8 (7.8)
High	2 (5.7)	20 (10.5)	22 (7.8)	2 (1.9)
Total	35 (5.7)	191 (31.2)	283 (46.2)	103 (16.8)

*Fifty-three persons (7%) did not provide their age; of these, 17 also did not provide information on sexual behaviors; an additional 45 (9% altogether) indicated their age but not their sexual behavior. Percentages are based on those responding to specific questions.

Since there was no selection among persons who visit Indian agencies to use tribal services, the sample is believed to represent that population well; those who do not use these services, such as homeless individuals and those on Skid Road, may be underrepresented. The relatively large number of women in the sample is probably due to their greater use of tribal services during business hours. To control for sex and age and to allow comparison among states and with sex and age groups surveyed in the NHIS, all responses were tabulated by sex, age, and state.[5]

Six males who had sexual relations with other males and 12 males and 30 females who have taken drugs intravenously were designated as members of the high-risk group, while middle-risk group members consisted of those who had two or more sexual partners in the past year or who had been involved with a person he/she did not know well. The low-risk group consisted of all others after exclusion of 62 persons who did not answer any of the questions about sexual behavior.

Results

Of the classifiable respondents, 7 percent were in the high-risk group, 30 percent were in the middle-risk group, and 63 percent were in the low-risk group (Table 1). Even if all 62 persons who did not answer sexual behavior/drug use questions were considered in the low-risk category, the proportion of high-risk respondents still would be considerably higher than that in other samples, i.e., 6.8 percent in this sample compared to 2 percent in the Hispanic population,[6] 4 percent in the Black population,[7] and 3 percent in the general population.[4]

The knowledge level of the sample does not differ markedly from that of the general population as reported by the NHIS for December 1988,[4] (Table 2). Other unpublished surveys in selected Indian populations have produced similar results in terms of knowledge (Steven Helgerson, personal communication, November 7, 1989). As has been found in other samples, respondents' knowledge is better about specific clinical properties of the disease than knowledge concerning transmission.[1,8]

Discussion

The American Indian population of the Pacific Northwest is at potential risk for high rates of HIV infection not only because of the relatively large numbers in high-risk groups but because of the large numbers of youth in the middle-risk group and the small size of many of its 39 tribes. The middle-risk group is predominantly young and male (42.9 percent of males as opposed to 25.3 percent of females). Use of alcohol and illicit drugs is much higher among middle-risk

TABLE 2—Percentage of Correct Answers to Selected Knowledge Questions by NHIS and Northwest Indian Samples

	NHIS December 1988[4]		Northwest Indian Sample				
Questions	Male	Female	Male	Female	Low-Risk	Medium-Risk	High-Risk
1. AIDS is a disease caused by a virus[a]	85	79	83	78	78	80	77
2. Any person with the AIDS virus can pass it on to someone else during sexual intercourse.[a]	95	96	95	96	97	91	98
3. A pregnant woman who has AIDS can give AIDS to her baby.[a]	94	95	89	94	94	91	90
4. How likely do you think it is that a person will get AIDS or the AIDS virus from the following?							
A. Eating in a restaurant where the cook has AIDS.[b]	45	48	45	46	45	45	34
B. Working near someone with AIDS.[b]	67	66	66	65	66	62	60
C. Being coughed or sneezed on by someone with AIDS.[b]	42	43	43	37	40	35	34

[a]Definitely true or probably true were scored as correct.
[b]Very unlikely or definitely not possible were scored as correct.

group members than among those in the low-risk group.[5] Middle-risk group members reported their first sexual experience at a younger age than those in either the high- or low-risk group, and women in the middle- and high-risk group who have had pregnancies were younger at the time of their first pregnancy than those in the low-risk group.[5] Finally, over half of the middle-risk group, compared to 13 percent of low-risk and 41 percent of high-risk groups, reported having sexual partners from both reservation and non-reservation communities. If introduced into one of the small reservation communities, HIV could decimate the population.

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Steady Increase Reported in Health Personnel; Shortages Persist among Nurses, Minorities

Despite recent declines in the numbers of health professions school graduates, the United States supply of active health personnel has risen steadily since 1970, and ratios of health personnel to population are currently at their highest levels, according to a recent report from the Health Resources and Services Administration (HRSA). In submitting the report to the Congress, Health and Human Services Secretary Louis W. Sullivan warned that, "While the numbers generally show that we have a strong foundation to meet personnel requirements through the end of the century, they also reveal problems that will continue to demand our attention." Highlights of the report include the following:

- Black and Hispanic physicians constitute only 3 percent each of the total physician supply, while Blacks account for 12 percent of the total US population and Hispanics for 7 percent. First-year and total enrollments of minorities in health professions schools have not changed significantly in recent years, and Black enrollment has shown less increase than other minority groups.
- The smaller graduating classes and continuing exits from the health work force are expected to impact on the field between the years 2000 and 2020. Growth in the supply of many health professions, such as nursing and dentistry, is expected to slow.
- A national shortage of registered nurses exists despite growth in the supply from 750,000 in 1970 to more than 1.6 million in 1988. Although the active supply will continue to increase over the next 15 years, the present shortage evokes concern about projections of a smaller supply of nurses in the future.
- More primary care practitioners are needed to provide services for patients in their initial contact with the health care system, and to address rural and inner-city health problems as well as promote health enhancement and illness prevention.
- Recent studies and surveys also reveal shortages of personnel in public health, allied health, geriatrics and gerontology, the report noted.

More information on the report, *Seventh Report to the President and Congress of Health Personnel in the United States,* is available from the Office of Data Analysis and Management, Bureau of Health Professions, Room 8-47, HRSA, 5600 Fishers Lane, Rockville, MD 20857. Tel: 301/443-6936.