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Cancer and Cancer Prevention and Control Programs in the Aberdeen Area Indian Health Service

THOMAS K. WELTY

CANCER AND CANCER RISK FACTORS AMONG NORTHERN PLAINS INDIANS

A pragmatic definition for epidemiology is the study of diseases and health problems as they affect groups of people. Why do we need epidemiologists in Indian Health Service? The main reason is to provide information for action to media, tribal communities, health professionals, and individuals. This information is used to design and evaluate interventions to improve Indian health to the highest possible level, which is the goal of Indian Health Service (IHS). I will review some of the cancer prevention and control interventions being conducted in the Aberdeen Area Indian Health Service.

The Aberdeen Area IHS serves 80,000 Indians who are members of seventeen tribal groups living in four states: North Dakota, South Dakota, Iowa, and Nebraska. It is an isolated area with severe transportation difficulties.

Several years ago, I worked on a report for Congress called "Closing the Gap" or "Bridging the Gap," on the differential epidemiology in various areas of the Indian Health Service. We reported on a number of different health conditions, including

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cancer, utilizing age-adjusted mortality rates. Overall, Indian people are at less of a risk of dying from cancer than United States all races, but there are some areas, notably Alaska, Bemidji, Billings, and Aberdeen, where the rates of death from cancer are higher than the United States all races (figure 1). In Albuquerque, Phoenix, Navajo, Portland, and Oklahoma areas, the age-adjusted cancer mortality rates are considerably lower [1,2]. In fact, the Navajo have about half the rate of death from cancer as the United States all races.

Much of this difference in rates is related to differences in smoking prevalence in the IHS areas (table 1). Forty-two percent of pregnant Sioux women were smoking in 1984; in 1986, 59 percent of a representative sample of Cheyenne River Sioux smoked [3]. Urban Indians in Minnesota had a smoking prevalence of 70 percent in 1984. In comparison, Southwestern Indians had smoking prevalence rates of 13 to 28 percent. In addition, Southwestern Indians smoked fewer cigarettes per day than those in other areas.

Smoking is also a significant risk factor for heart disease. Rates of death from cardiovascular disease for Aberdeen area Indians exceed the national rates (figure 2). Indians are said to be protected from heart disease. That is not true. Northern Plains Indians have very high rates of cardiovascular disease, although it is true that Southwestern Indians have lower rates and Alaska Natives' rates are intermediate [1–4]. Alaska Natives have not been affected as much by the diabetes epidemic that has impacted American Indians. Diabetes is also a risk factor for heart disease.

Much of the difference in cancer death rates is related to the higher rates of lung cancer, almost all of which are related to the high rates of smoking in the Northern Plains and also in Alaska (table 2). The Tucson area Indians and the Navajo have very low rates of death from lung cancer [3]. Indians are not immune to cancer, however. If Indians smoke, they get cancer just as other populations do. Differences in mortality rates from emphysema and house fires also reflect the differences in smoking prevalence [3]. Although the house fire deaths could also be related to cold climate, many of them are probably caused by cigarette smoking [4].

Mortality rates for specific cancer types are compared for Aberdeen area Indians, all Indians, and United States all races (figure 3). Rates for cancer are similar for the Aberdeen area and for the United States all races—rates that are higher than the IHS all-Indian rate. The Aberdeen area rate is about the same as the United

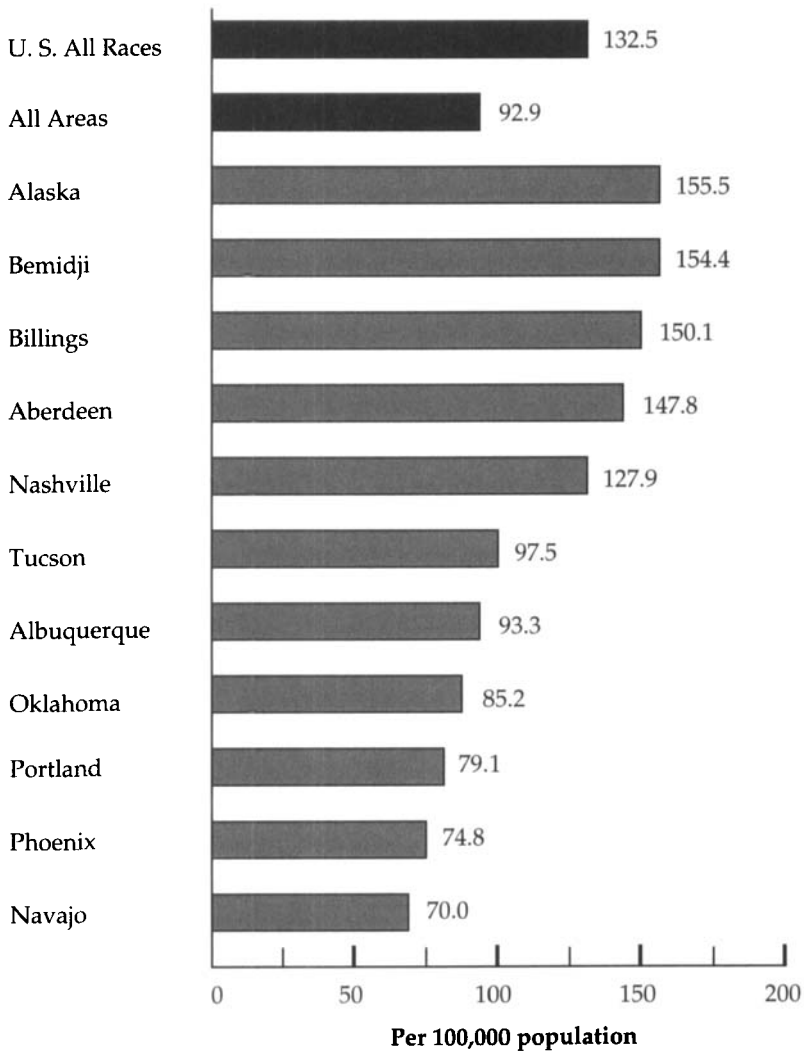


FIGURE 1. 1981-83 All IHS Areas Age-Adjusted Mortality Rates for Cancer (4-8-86/sc300)

TABLE 1
Results of Various Surveys on the Prevalence of Cigarette Smoking
among Adult American Indians and Alaska Natives, United States [3]

| Population | Year Reported | Prevalence of Smoking (%) | |
|-------------------------------------|---------------|---------------------------|--------|
| | | Total | Heavy* |
| American Indians and Alaska Natives | | | |
| Northern Plains | | | |
| Sioux prenatal patients † | 1984 | (42) | NA § |
| Cheyenne River Sioux † | 1986 | (59) | NA § |
| Urban Indians | 1984 | (70) | (32) |
| Southwest | | | |
| Southwestern Indians | 1968 | (21) | (4) |
| Navajo | 1979 | (13) | (1) |
| Papago † | 1983 | (28) | (4) |
| Non-Southwestern Indians | 1968 | (50) | (26) |
| Alaska Natives | 1983 | (56) | (24) |
| General Population | | | |
| Men | 1985 | (31) | (21)** |
| Women | 1985 | (28) | (15)** |

*Heavy smoking is defined as 20 cigarettes/day.

† Study included only pregnant women

§ NA = not available.

† Indian Health Service, unpublished data collected during household surveys of American Indians/Alaska Natives 18 years of age. Sample sizes were 159 (Papago) and 400 (Cheyenne River Sioux).

** Prevalence for "heavy" smoking, as defined here, is previously unpublished National Center for Health Statistics data.

States rate for colon cancer mortality, but Indians overall have lower mortality rates from colon cancer. On the other hand, cervical cancer mortality rates for the Aberdeen area are four times the national rate [1], and it is obvious that we need to address that problem. The mortality rates for cervical cancer and breast cancer in our area are very similar. The breast cancer death rates are less than the national rates but higher than the rates for other Indians. There were eleven deaths each from cervical and breast cancer in a three-year period in our area. Almost all of these women were over age forty at the time of death, suggesting that we need to target our screening to women over forty. Women under forty

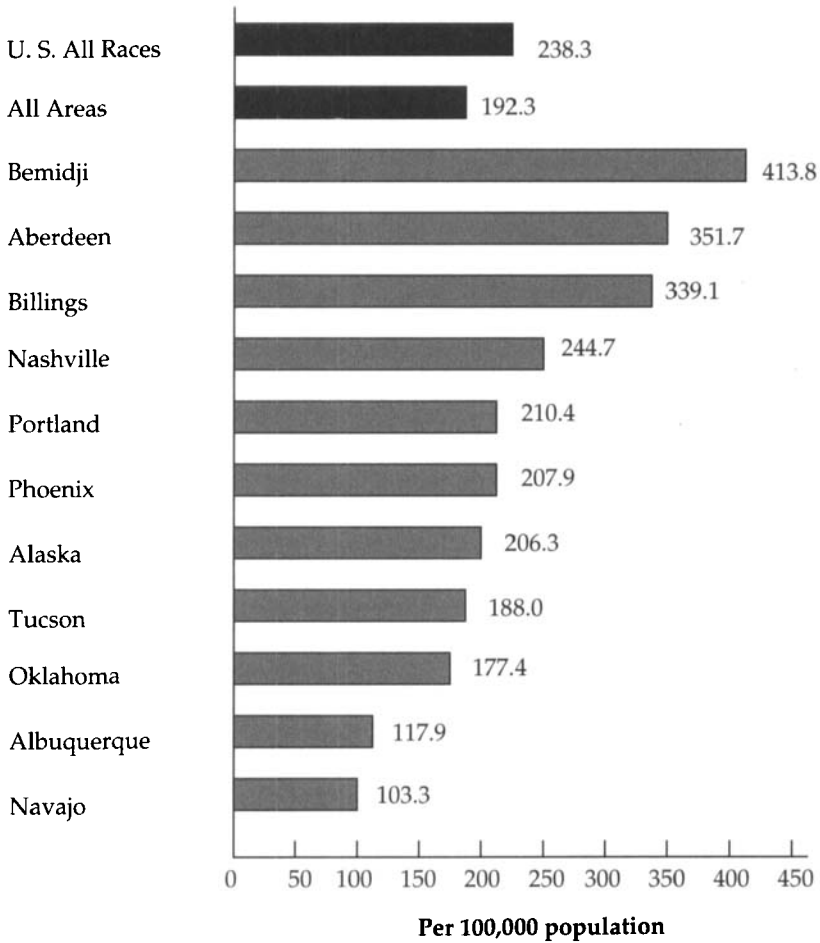


FIGURE 2. 1981-83 All IHS Areas Age-Adjusted Mortality Rates for Cardiovascular Disease (4-8-86/sc298)

TABLE 2
Age-Adjusted Mortality Rates* for American Indians and Alaska Natives, by Cause of Death, United States [3]
Cause of Mortality[†]

| Population | All Causes | Cardiovascular Disease | Cancer (All Sites) | Lung Cancer | All Respiratory Disease | COPD [§] | Fires |
|-------------------------------------|------------|------------------------|--------------------|-------------|-------------------------|-------------------|-------|
| American Indians/ Alaska Natives | | | | | | | |
| Northern Plains | | | | | | | |
| Aberdeen | 1,180.7 | 351.7 | 147.8 | 35.3 | 71.2 | 18.3 | 8.8 |
| Bemidji | 973.8 | 413.8 | 154.4 | 47.7 | 59.1 | 15.6 | 18.9 |
| Billings | 1,228.2 | 339.1 | 150.1 | 45.9 | 87.8 | 31.8 | 14.9 |
| Southwest | | | | | | | |
| Albuquerque | 722.6 | 117.9 | 93.3 | 6.6 | 37.3 | 3.4 | 0.0 |
| Navajo | 629.5 | 103.3 | 70.0 | 3.9 | 42.8 | 6.4 | 2.7 |
| Phoenix | 829.0 | 207.9 | 74.8 | 12.4 | 60.3 | 7.5 | 6.6 |
| Tucson | 939.7 | 188.0 | 97.5 | 3.3 | 51.8 | 7.7 | 3.3 |
| Alaska Natives | 889.7 | 206.3 | 155.5 | 34.3 | 71.7 | 14.8 | 9.9 |
| All Areas | 695.1 | 192.3 | 92.9 | 19.9 | 42.2 | 9.7 | 5.6 |
| General Population** | 555.8 | 238.3 | 132.5 | 35.9 | 32.2 | 16.2 | 2.0 |

*Annual age-adjusted rates per 100,000 population, by underlying cause of death (source: National Center for Health Statistics).

[†]Column headings reflect the following International Classification of Diseases, 9th rev., mortality categories: cardiovascular disease (codes 390-448); cancer—all sites (140-208); lung cancer (162); all respiratory disease (460-519); chronic obstructive pulmonary disease (490-496); and fires (940-949).

[§]1981-83 data.

**1982 data.

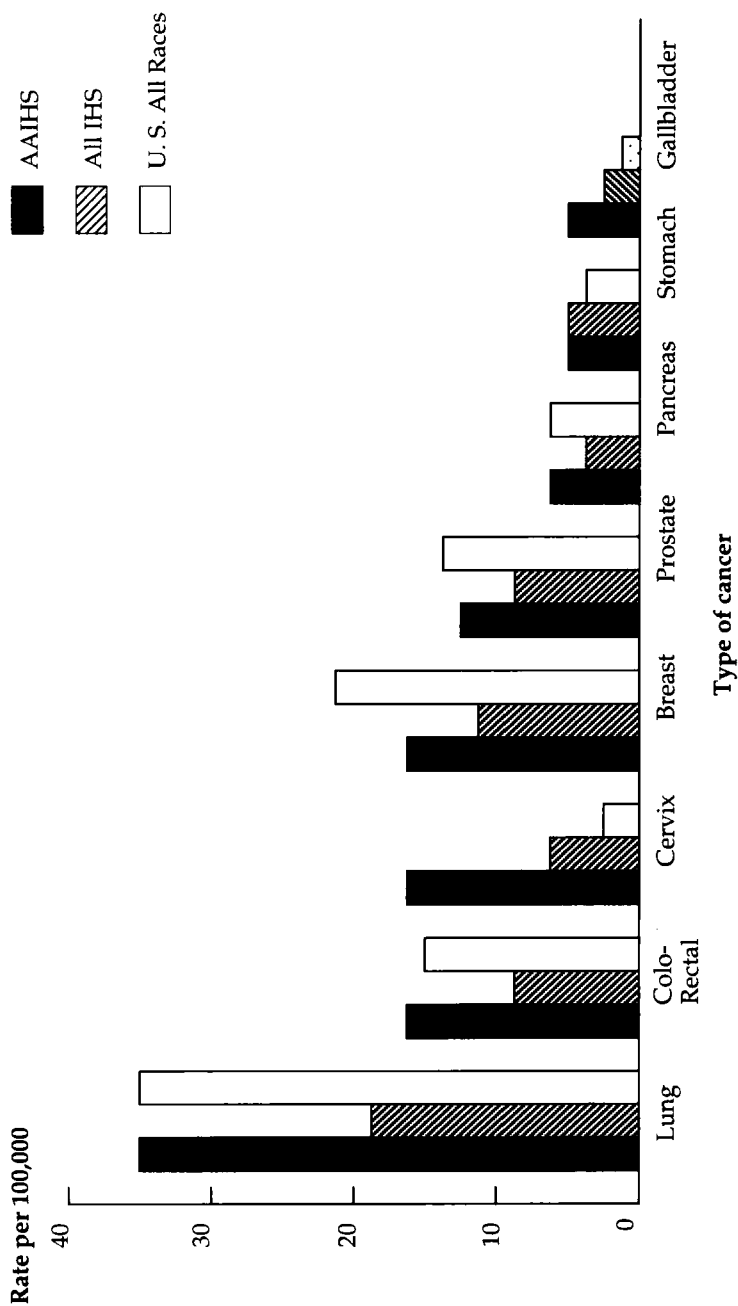


FIGURE 3. Cancer Mortality Rates, U. S., All IHS, and Aberdeen Area (Age-Adjusted-U. S. 1982, IHS 1981-83)

come in more regularly for screening as part of child care or prenatal care, and the rates of death from those cancers are lower in the younger age groups. Similar patterns likely occur in other areas as well. Since most of the deaths from cervical and breast cancer occur in older women, we need to intensify cancer screening in the post-forty age groups. For prostate cancer, the Aberdeen area mortality rate is similar to the national rate [1]. The Aberdeen area and most other areas have higher rates of gallbladder cancer mortality than the national rates.

How can we prevent and control cancer in the Aberdeen area? Risk factor reduction, community empowerment, audits of care for QA purposes, and cancer screening programs have been implemented and are ongoing in the Aberdeen area to deal with this problem (table 3).

Community empowerment enables Indian communities to become more aware and to assume responsibility for these health problems. The health problems that we see in the Aberdeen area will be solved only when individuals and communities assume responsibility for dealing with them.

Community empowerment is a concept of empowering grass-roots leaders in the communities by informing them what the problems are and encouraging them to develop programs, such as shelters for battered women, school programs, and community-based prevention programs. Stanford University is utilizing that concept to develop a curriculum entitled "Restoring Balance" that will be available for Indian communities and tribal groups throughout the country. Another project is Planned Approach To Community Health (PATCH), a prototype based on community analysis of mortality, morbidity, and behavioral risk factor data. Using such a program, the Cheyenne River Sioux tribe identified substance abuse, unwanted pregnancy, and diabetes as priority problems, and they have made progress in addressing those problems at the community level.

Resource, Education and Community Health (REACH) is a project that originated in the Aberdeen area and has encouraged IHS and tribal people to utilize resources that are available through the American Cancer Society, the American Heart Association, and state-funded agencies to help solve some of the health problems. Often nonprofit organizations focus their efforts in suburbia and big cities and ignore the rural areas of the country, especially Indian communities. Factors to Rise above Poverty is another Aberdeen area project to determine what cultural traits are asso-

TABLE 3
Outline of Cancer Control Activities in Aberdeen Area

- Risk Factor Reduction: i. e., smoking
 - Individual level: HRA
 - Community level: smoke-free building
 - Area and national objectives: prevention plan, North Dakota Cancer Prevention and Control Project

- Community Empowerment
 - PATCH: Planned Approach to Community Health—CDC, state, IHS, tribe
 - Groundswell toward Health: Stanford—Restoring Balance
 - REACH: Resource Education and Community Health—USD
 - Factors to Rise above Poverty Study
 - Indian-Specific Health Education Curricula Development
 - Adolescent Health Survey
 - Community-Oriented Primary Care

- Audits of Care
 - Diabetic patients
 - Inpatients
 - Industrial Strength Triage of all outpatients

- Cancer Screening
 - Shift resources when appropriate
 - Obtain new resources for community-based screening
 - Adapt screening criteria to realities of Indian health

- Cancer Research
 - Sioux cancer study

ciated with good health. Finally, an Indian-specific health education curriculum has been funded through CDC to provide resources for Indian Health Service to develop such a curriculum using Growing Healthy and the Teen-age Health Teaching Modules and other culturally adaptable health education curricula. This Indian-specific curriculum will focus on smokeless tobacco, smoking, substance abuse, and prevention of diabetes, because these are prevalent problems in Indian communities.

SCREENING FOR CANCER

The Health Risk Appraisal (HRA): Description and Interpretation

The overall mortality rate in Aberdeen area Indians is higher than for most other Indian people and approximately twice the mortality rate of the United States all races [4]. To have a major impact on this high rate, preventive programs are needed that can make major behavior modifications in the Indian population in a way that is culturally sensitive and acceptable. We were supported in this effort by the IHS Evaluation Program, and we conducted field tests on an Indian-specific Health Risk Appraisal (HRA) [5,6]. The Indian Health Service ordered 110,000 HRA forms, and training was provided for individuals in all twelve areas on how to administer and interpret the HRA. The HRA is not a panacea for the health problems that afflict Native Americans, but it does provide a comprehensive evaluation of individual health risks. Health professionals should interpret the results and encourage patients to make at least one of the behavioral changes printed on the appraisal. Many individuals in the Aberdeen area have four to six health risk behaviors. To get them to change one of those behaviors is a significant accomplishment. When used in other populations, and when properly interpreted, the HRA has been effective in motivating behavior change for one risk behavior on the average.

Optical scanning data entry makes the HRA quite convenient, and it runs on IBM-compatible public domain software that has been distributed to all twelve IHS areas.

Some women tend to think that chest x-rays are mammograms, and we have clarified this on the HRA questionnaire. Usually, we measure total cholesterol. If cholesterol cannot be measured, partici-

pants should fill in their cholesterol level if they know it. If they do not know it, the space should be left blank. The same applies to blood pressure and glucose levels. However, height, weight, age, sex, and smoking history must be completed to get an appraisal.

The Indian-specific HRA was administered to thirty-eight conference attendees at the First National Conference on Cancer in Native Americans. The HRA provides a three-page or a twelve-page group summary. The three-page just gives group totals; the twelve-page breaks down risk factors by age and sex. The HRA also has a function to export the data so that further analyses can be done using SAS or other statistical packages.

The group attending this conference is pretty healthy. Only 8 percent smoke, 25 percent or one-quarter of the group have quit, and no one uses smokeless tobacco. Maybe the HRA will motivate one or two of the 8 percent who still smoke to quit. The person who smokes a pack a day or more is the one who would benefit most by quitting.

Forty-two percent drink one or more drinks per week. Drinking in moderation is not a risk factor, but 9 percent of the group had five or more drinks on at least one occasion in the last month, and that group is at risk for various medical or traumatic sequelae of heavy drinking. Five percent admitted to drinking and driving in the past month. Although 68 percent of the group use seat belts 80 percent of the time, 32 percent need to remember to buckle up.

Over half the women had not had a clinical breast exam in the last year. The program also breaks down two age groups for mammography: 40–49 and 50+. Three of the six women in the 50+ age group had a mammogram in the last year. Although 50 percent of the women were up to date on their Pap smears, 16 percent of the women had not had a Pap smear in three or more years. One woman said she had never had a Pap smear. Health professionals need to set the example themselves to obtain these preventive services.

It is also interesting to note that more than half the participants in this conference were Indian and two-thirds were female. Mean age was forty-two, mean weight 160, and there are 60 percent of us who need to floss our teeth more regularly. Overweight was present in about half of the group. Better diets and exercise would help. I have been accused of making people miserable by interpreting their HRA, but I encourage you to substitute something that is fun for the bad habits you have.

The HRA interpretation called "Finding the Way" is designed

to be culturally sensitive. Although it has been field-tested in a number of places, some items still need improvement. The HRA encourages Indian people to retain ways that are healthy and carve away things that are unhealthy in their lives. That is a good way to think about the HRA.

The risk engine was created by Centers for Disease Control (CDC) and the Carter Center in Atlanta using national mortality data. The Indian-specific HRA uses the same risk engine, because the impact of risk factors is likely similar in Indians. If Indians smoke, they are more likely to get cancer, and if Indians do not wear seat belts, they are more likely to be injured. Some modifications may eventually be needed in the risk engine, but right now we do not have the information to do that. With the group data we accumulate from administering the HRA, perhaps we will gain enough information to modify this risk engine and make it more specific for Indian people.

We made the HRA more Indian-specific by adding a question about binge drinking, which is the typical pattern of drinking among Indians. The Carter Center HRA does not include binge drinking; it just asks about the number of drinks per week. We also added one or two questions about diabetes and modified the appraisal. For people who have a family history of diabetes, are overweight, and do not yet have diabetes, we generated a strong message that they should watch their diet and exercise, because those folks are at high risk of developing diabetes.

Although we plan to adapt this HRA to run on the IHS data system (the PCC system), currently it only runs on an IBM-compatible PC. It can be used in different ways: as a teaching tool, as we did here, and in outpatient, dental, and eye clinics. It can be self-administered for most people. It can be entered either manually or with a scanner. The appraisal can be interpreted by health educators, CHRs, or medical students before the patient sees the provider. If the HRA appraisal is filed in the medical record, providers can reinforce these messages every time they see the patient. Inpatients and employees will benefit from the HRA. The group summary data is helpful in tracking HP/DP initiatives.

We have a limited collection of health education material. There is a need for more Indian-specific materials, especially for smoking. Tobacco is a sacred plant and should be used only for special purposes. If traditional healers would advocate ceremonial use rather than the daily use of tobacco, it would really help us in dealing with smoking at a community level.

Results of HRA Field Test

(Terms in parentheses refer to figures 4–6.)

(Note: The participants in the field test of the HRA were not randomly selected, so these results should be interpreted cautiously. They may not be representative of the rates in the communities where the HRA was tested.)

Smoking and smokeless tobacco use vary in Indian adults (figure 4). Smokeless tobacco use is more common in children and adolescents. Some adults give smokeless tobacco to young children. The IHS dental program has been active in addressing that problem on an individual basis and also in the schools. About a third of Aberdeen area boys and girls in high school use smokeless tobacco on a regular basis.

During CHR training at Rapid City, we administered the HRA and found that over half of the CHRs from our area are current smokers. When we interpreted this, we encouraged them to quit, but it is very difficult for most smokers to quit. We also administered the HRA to the National Congress of American Indians (NCAI) in Sioux Falls, a group of tribal leaders from all over the country. At the powwow in Rapid City (POWOW), we set up a health fair, and a significant number of non-Indians completed the HRA. Over half of the people were non-Indians, so it is not really representative of an Indian population. More than 30 percent of clinic users in a small Northern Plains community smoke. People aged 45 to 74 from the Northern Plains who are part of our heart research project, the Strong Heart Study (HEART), smoke. One hundred eighty-five of the hospital employees at Fort Defiance, Arizona (FTDEF), took the HRA, and only 5 percent smoked. That would corroborate other data indicating that Navajos smoke very infrequently. The field test of the HRA included three communities in Portland area (PORTLD), several Alaska Native communities (ALAS), several Indian communities in the Tucson area (SELLS), and an urban Indian group in California (CALIF).

We should encourage tribes to be competitive in health-related activities. The Blackfeet tribe voted by a small margin to ban smoking in their tribal buildings. This is the logical extension of the smoke-free IHS facility policy. Let us encourage all tribal offices and schools to become smoke free. That may help to decrease smoking rates among Indians and reduce the adverse health effects of passive smoking. In addition, the use of smokeless

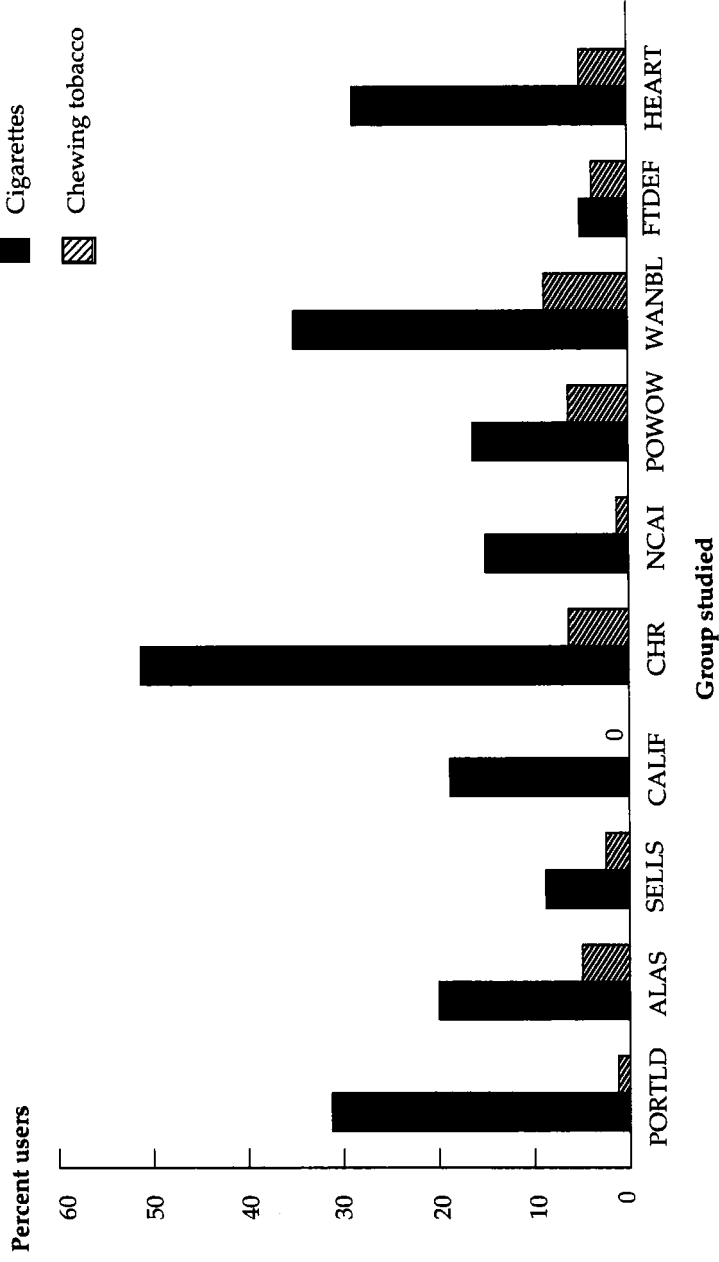


FIGURE 4. Current Tobacco Use: Indian-Specific HRA Field Test
 (Finding the Way-HRA [HRA Smoke])

tobacco should be banned in such facilities.

Although some IHS pharmacies are reluctant to provide Nicorette gum, studies have shown that having the gum available at no charge to the patient has promoted higher rates of smoking cessation.

The Aberdeen area tobacco objective implemented in 1986 was to reduce tobacco use in pregnant women from 40 percent to 20 percent, to reduce smoking rates in high school students, and to have all of our facilities smoke free by 1 January 1987. The last objective was met in spite of the fact that half of our hospital employees and half of the CHRs smoke. The unions objected for a while, but their concerns were addressed, and now all of our facilities are smoke free. The other two objectives have not been documented. We are counseling pregnant women about tobacco use. We also have baseline data on our adolescents' tobacco use.

The Adolescent Health Survey was made available nationwide to schools that have Indian students. It is a very comprehensive, rich database including tobacco, alcohol, seat belt use, etc. that has been used to design curricula and interventions to improve the health of Indian adolescents. Further analyses of the data are needed to fully utilize them in planning health education curricula and other preventive interventions for adolescents.

In areas where tribal smoke shops sell low-cost tobacco products, usage may increase. Increasing the cost of tobacco products may decrease use by younger users.

Cancer Screening HRA Data

There are questions on the HRA related to mammography, breast self-exam, clinical breast exam, and family history (figure 5). The different groups vary. Fortunately, a high proportion of the CHRs have had cancer screening. However, 41 percent of elderly Strong Heart Study participants were not doing breast self-exams, and 33 percent said they had never received a clinical breast exam from a doctor or nurse (HEART).

There are also questions on the HRA about Pap smears (figure 6). A high proportion of Alaska Native people (ALAS) were screened within the last year with Pap smears, and a small proportion have not had a Pap in three or more years. Results varied among different groups. CHRs and tribal leaders had high rates. However, the older women in the Strong Heart Study had infre-

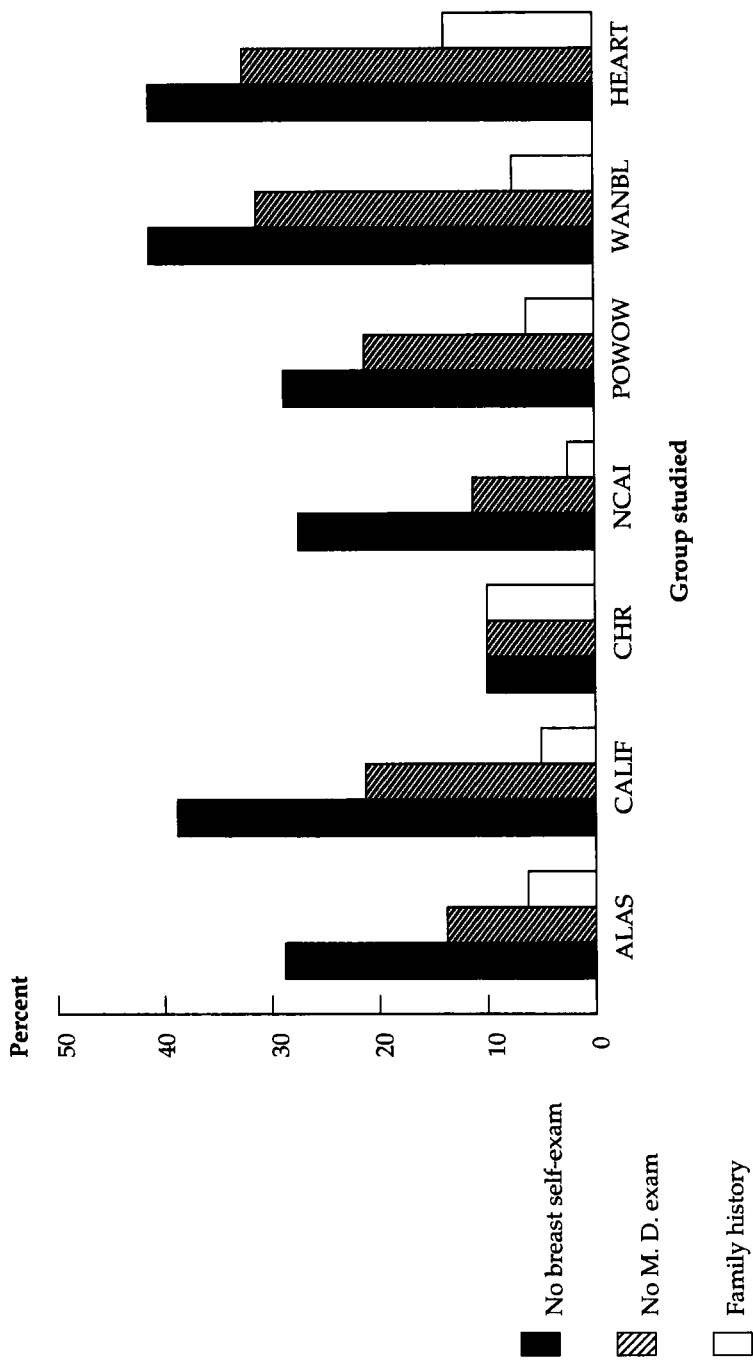


FIGURE 5. Breast Cancer Risks: Indian-Specific HRA Field Test (Finding the Way-HRA [HRABREAST])

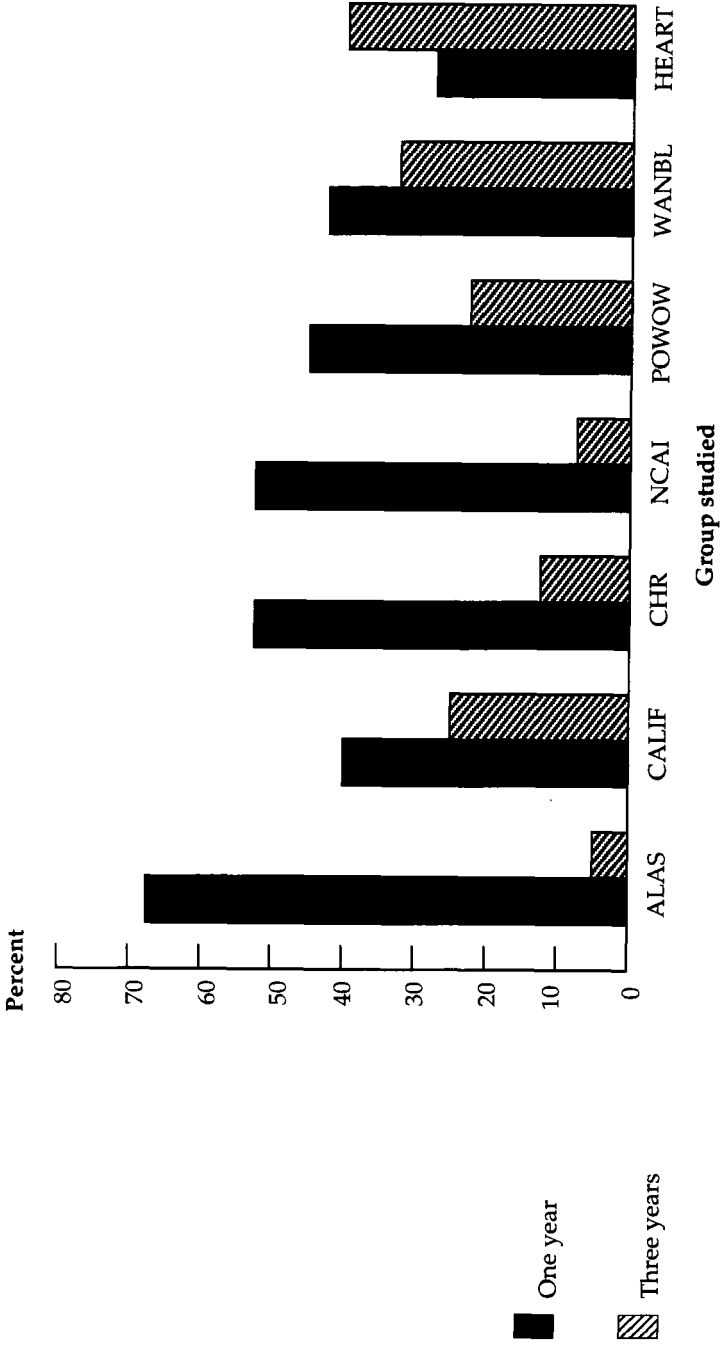


FIGURE 6. Last Pap Smear: Indian-Specific HRA Field Test
(Finding the Way-HRA [HIRAPAP])

quent Paps (HEART). Less than a third of this group had had a Pap in the past year, and 40 percent had not had one in three or more years. As part of the Strong Heart Study, we provided Pap smears to all participants who agreed to be examined by our female nurse practitioners. Older people aged forty-five to seventy should be targeted for cancer screening.

Audits on Quality of Care

American Indians have a high rate of diabetes. Diabetic patients regularly receive medical care, and it should be easy to screen them for cancer. The IHS diabetes control program has set national standards that include cancer screening. National data are available on how well diabetic patients are being screened. In our area, about a third of the diabetic women had had a Pap smear and a third had had a clinical breast exam within the last year. Because one-third to one-half of the adult Indian population are diabetic, systematic cancer screening in diabetic patients can be of significant benefit to the entire community. Not only are we screening for cervical cancer but also for uterine cancer, which may be significantly higher among the diabetic population.

We can track improvement in cancer screening by evaluating a sample of diabetic patients once a year at all service units. In addition, inpatients should be screened for cancer, and an audit of cancer screening should be done on these patients.

Industrial Strength Triage (IST)

IST is a system of providing care that has been pioneered by Dr. Greg Shorr utilizing the computerized record system of IHS. When patients are seen in clinic, preventive services should be provided, including immunizations, cancer screening, etc., in addition to making sure the patient's major health problems are taken care of. That system of care is being promoted throughout IHS, and we should audit how well it is working. The IHS computerized medical record will help to develop cancer registries as well as facilitate quality assurance audits.

Guide to Clinical Preventive Services

The *Guide to Clinical Preventive Services* addresses cancer screening and other preventive services [7]. The advisory group met for four years and reviewed the scientific studies that evaluated preventive services. The book critically evaluates our knowledge about the efficacy of preventive services. Indian Health Service should review these recommendations and modify them as appropriate for the American Indian and Alaska Native populations. The recommendations include the following:

1. Pap smears regularly every one to three years for sexually active women. Evidence indicates that cervical cancer is sexually transmitted. A nun, who is presumably not sexually active, may not need routine Pap smears. Women who consistently have negative Pap smears do not need them after age 65, because there is a very low risk that they will acquire the sexually transmitted virus that causes the disease. However, most women age forty-five to sixty-five have not been consistently screened. So rather than confuse them with all the details, it is easier to say "Have a Pap smear every year."
2. To screen for breast cancer, an annual clinical breast exam at age forty and over, and mammography every one to two years for women aged fifty to seventy-five. Earlier mammography is indicated for high-risk women. Although breast self-exam is widely recommended, no study has shown that it reduces mortality from breast cancer. The group encourages continuation of current practice, whatever that may be. In our population, breast self-exam is worth teaching, and in our area we are promoting it.

We need to tailor these recommendations to our own situations. Sometimes we complain, "We can't afford to send everybody for a mammography." Looking at the QA data on the diabetic patients, one sees the need for improvement in breast and cervical cancer screening through clinical breast exam and Pap smear. Such screening does not cost contract care dollars; it costs professional time but not contract care. So we should emphasize the need to improve the clinical breast exam rate and Pap smears for the women we serve, particularly for diabetic patients. In the Aberdeen area, we found that the best way to provide mammography is to contract with a private vendor to bring a mobile mammography unit to IHS facilities. Mammograms are done for \$35 each, \$600 a day

minimum. Interpretation costs \$15–\$20. Thus, for \$50–\$55 each, we are providing mammography services in rural locations in North and South Dakota. When only limited mammography services are available, they should be prioritized first to those women with clinically detected breast problems and second to women aged fifty to seventy-five and younger women with a family history of breast cancer. There are creative ways to provide mammography. You can solicit vendors who are willing to provide these services in remote areas; then you must work with your CHRs to get the high-risk women in for screening mammograms. (The recommendations promoted by the Preventive Services Task Force differ from those of the American Cancer Society [ACS]. ACS recommends baseline at age thirty-five, every two years for forty to forty-nine, and once a year for over forty-nine.)

3. Male cancer. Annual rectal exams have not been shown to be effective in reducing the mortality rate from prostate cancer. The Preventive Services Task Force recommends against use of ultrasound for prostate cancer screening. Although there is no evidence one way or the other, the usual practice of annual rectal exams over age forty is the most reasonable practice. Rectal exams are not difficult to do and do not cost a lot of money; therefore, they should be promoted. Testicular self-exam effectiveness in reducing deaths from testicular cancer has not been documented. The task force recommends testicular exams for men at risk for testicular cancer (those with cryptorchidism, orchiopexy, or testicular atrophy).

4. Colon cancer. There is insufficient evidence to recommend for or against hemoccult blood tests or sigmoidoscopy. Routine annual screenings of persons fifty and over and those with risk factors are recommended. More intense screening is needed when familial colon cancer occurs [8].

5. Counseling to prevent tobacco use. Counseling should be offered by health care providers on a regular basis to all smokers and smokeless tobacco users. Nicorette gum helps some patients quit, and IHS should promote its use. Patients hospitalized in smoke-free facilities should be offered Nicorette gum if they have problems. Nonusers should be advised not to start. The data from the meta-analysis of smoking cessation efforts do not sound very encouraging. Overall, after six months of a program, 8 percent of smokers can quit, and this drops off to 6 percent after a year. That means that a counselor has to talk to ten or twenty smokers in order to get one to quit.

Nevertheless, health care providers can have a significant impact on health by promoting smoking cessation, even though rates of quitting are low.

Tobacco use should be noted on the problem lists of medical records to encourage providers to reinforce that counseling. Other treatments such as acupuncture have helped certain individuals to quit. Traditional healers could also play a role. We should not be close-minded to any of these approaches. We do not know why people become addicted. These treatments should be studied in a scientific manner to see what works.

SUMMARY

Cancer prevention and control efforts in American Indian and Alaska Native populations should be area-specific and should be based on the cancer epidemiology in each area. Screening for cervical and breast cancer should be emphasized in women over age forty. Smoking and smokeless tobacco cessation programs should be promoted as the most important prevention activity. The Indian-specific Health Risk Appraisal is a useful tool in preventing and controlling cancer.

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