

Changing Patterns in Health Behaviors and Risk Factors Related to Cardiovascular Disease Among American Indians and Alaska Natives

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Indigenous peoples of the United States are a diverse population of more than 550 federally recognized tribal nations, all of whom have distinct customs, cultures, and languages and reside in diverse geographical territories.^{1,2} The demographics of indigenous peoples, whom we refer to here as American Indians and Alaska Natives, have changed significantly over the past 50 years. In 1960, 30% of American Indians and Alaska Natives lived in urban areas.³ Today, however, approximately 66% reside in urban areas, and the remaining 34% continue to live on reservations or in rural areas.^{4–6} The population is also growing. Between 1990 and 2008, the US American Indian and Alaska Native population increased by 65% from 2.0 to 3.3 million (American Indian and Alaska Native alone⁵). This growth was achieved through changing patterns of racial self-identification on the part of people with partial or distant American Indian and Alaska Native ancestry coupled with relatively high fertility and improving mortality rates.³ The population of American Indian and Alaska Native elders is also increasing; the number of American Indians and Alaska Natives aged 55 years and older was 310 000 in 2000 and is projected to increase to 459 000 by 2010.

As the American Indian and Alaska Native population grows and ages, several studies have shown that the burden of cardiovascular disease (CVD) and associated risk factors, such as heart disease, stroke, and diabetes, is increasing.^{7,8} The Strong Heart Study, a longitudinal study of CVD among American Indians in 3 geographic regions, found that the incidence of heart disease in this group has not only surpassed but doubled that of the general US population.⁹ Data from the Racial and Ethnic Approaches to Community Health (REACH) initiative funded by the Centers for Disease Control and Prevention found that American Indians and Alaska

Objectives. We assessed changes in cardiovascular disease–related health outcomes and risk factors among American Indians and Alaska Natives by age and gender.

Methods. We used cross-sectional data from the 1995 to 1996 and the 2005 to 2006 Behavioral Risk Factor Surveillance System. The respondents were 2548 American Indian and Alaska Native women and men aged 18 years or older in 1995–1996 and 11 104 women and men in 2005–2006. We analyzed the prevalence of type 2 diabetes, obesity, hypertension, cigarette smoking, sedentary behavior, and low vegetable or fruit intake.

Results. From 1995–1996 to 2005–2006, the adjusted prevalence of diabetes among American Indians and Alaska Natives increased by 26.9%, from 6.7% to 8.5%, and obesity increased by 25.3%, from 24.9% to 31.2%. Hypertension increased by 5%, from 28.1% to 29.5%. Multiple logistic models showed no meaningful changes in smoking, sedentary behavior, or intake of fruits or vegetables. In 2005–2006, 79% of the population had 1 or more of the 6 risk factors, and 46% had 2 or more.

Conclusions. Diabetes, obesity, and hypertension and their associated risk factors should be studied further among urban, rural, and reservation American Indian and Alaska Native populations, and effective primary and secondary prevention efforts are critical. (*Am J Public Health.* 2010;100:677–683. doi: 10.2105/AJPH.2009.164285)

Natives have the highest prevalence of CVD at 16.4% [95% confidence interval (CI)=13.6, 19.7] compared with 9.9% (95% CI=8.7, 11.3) in Blacks, 7.4% (95% CI=6.0, 9.1) in Hispanics, and 7.5% (95% CI=5.6, 10.1) in Asians.¹⁰ Aggregate data from the Indian Health Service (IHS) from 1989 to 1991 and 1996 to 1998 show that the CVD mortality rate among American Indians and Alaska Natives increased by 16%, whereas this rate declined in all other racial/ethnic minorities in the United States and in the US non-Hispanic White population.^{11,12} The average annual percentage change in CVD mortality rates was 0.4 for American Indian and Alaska Natives compared with –1.8 for all races in the United States, including the US White population.^{11,12}

Whereas prior studies have laid the foundation for our knowledge about CVD in American Indians and Alaska Natives, these studies were limited by some or all of the

following factors. Few studies used national samples or assessed the extent to which health behaviors and CVD risk factors have changed among American Indians and Alaska Natives over time. Even fewer studies have examined subgroup differences, specifically between men and women or by age groups, region, or sociodemographic status. IHS data, the source of data for many studies, include mostly rural and reservation American Indians and Alaska Natives. Although limited information is known about differences among urban, rural, and reservation populations, some studies have suggested that there are important differences in lifestyles and health outcomes among these populations.^{13,14} Examining regional differences of both urban and rural populations is thus critical for a better understanding of this geographically and culturally diverse population.

Only 2 analyses to date have used national data samples and examined subgroup

differences among American Indians and Alaska Natives. In the first, Denny et al. used Behavioral Risk Factor Surveillance System (BRFSS) data from 1997 to 2000 to examine select health behaviors of American Indians and Alaska Natives compared with non-Hispanic Whites, including obesity, diabetes, physical activity, and smoking.¹⁵ They found regional and sex-specific variations for high-risk behaviors and health status indicators. Cigarette smoking ranged from 21.2% in the Southwest to 44.1% in the Northern Plains. American Indians and Alaska Natives were more likely than respondents of other races to report obesity (23.9% versus 18.7%) and no leisure-time physical activity (32.5% versus 27.5%). In a follow-up analysis, Denny et al. used 2001 and 2002 BRFSS data to examine risk factors and health behaviors among American Indian and Alaska Native individuals aged 55 years and older compared with non-Hispanic Whites.⁸ Their most significant findings were that older American Indian and Alaska Native men had a prevalence of current cigarette smoking more than twice that for White men (31.0% versus 14.6%). American Indian and Alaska Native men (35.6%) also were substantially more likely than White men (25.6%) to report no leisure-time physical activity. Except for no leisure-time physical activity among women and obesity among men, American Indians and Alaska Natives were significantly ($P < .05$) more likely than Whites to report all 5 health risk behaviors and status measures after control for age, education, employment, geographic region, and urban or rural residence. Although this study examined several CVD risk factors, it examined data only for American Indians and Alaska Natives 55 years of age or older; neither study examined changes over time.

The goal of our study was to extend the previous research on CVD health behaviors and risk factors among American Indians and Alaska Natives by examining (1) the predicted prevalences of a comprehensive set of risk factors and health behaviors for CVD across a 10-year time period, from 1995 through 1996 to 2005 through 2006; (2) differences by sociodemographic factors including age, gender, education, and region; and (3) the clustering of unhealthy behaviors and risk factors. We examined the following CVD risk factors and health behaviors: diabetes,

obesity, hypertension, cigarette smoking, sedentary behavior, and low vegetable or fruit intake.

METHODS

Observations were based on cross-sectional data from the 1995–1996 and 2005–2006 BRFSS (<http://www.cdc.gov/brfss>). The BRFSS is a continual, state-based telephone survey conducted by state health departments in collaboration with the Centers for Disease Control and Prevention to assess the health of the civilian adult population aged 18 years and older. The survey methodology is based on a stratified sampling design whereby eligible individuals are randomly selected within households that have working telephone numbers. Trained interviewers use computer-assisted telephone interview software to complete more than 150 000 surveys each year. The BRFSS includes standardized questions on demographic characteristics, socioeconomic status, health behaviors, and risk factors that are organized as core questions, rotating modules, and state-added questions. The BRFSS thus provides some of the most recent national estimates of self-reported health behaviors and risk factors known to affect chronic diseases.

The health behaviors and risk factors for this study were from the 1995–1996 and 2005–2006 BRFSS in the 36 states covered by the IHS administrative areas. Data from the American Indian and Alaska Native respondents were aggregated into 5 geographic regions. Data for American Indians and Alaska Natives living outside the 36-state IHS service area were not included because of the extremely small sample sizes.

Measures

The primary variables of interest in this analysis were American Indian or Alaska Native race/ethnicity, age, gender, educational attainment, geographic region of residence, and the following health outcomes and risk factors: diabetes, obesity, hypertension, cigarette smoking, sedentary behavior, and low vegetable or fruit intake. Income was not used as a primary variable given the relatively high missing data (13% in 1995–1996 and 12% in 2005–2006).

Race and ethnicity were self-reported as Native American, American Indian, or Alaska Native. For age, the data were separated into 4 age groups that represent adults who often have different lifestyles, living circumstances, and health care needs in response to the question, “What is your age?”: very young adults (18–24 years), young adults (25–44 years), middle-aged adults (45–64 years), and older adults (65 years and older). For educational attainment, the participants were grouped into categories of less than 12 years, 12 years, 13 to 15 years, and 16 or more years of education in response to the question, “What is the highest grade or year of school you completed?” The geographic regions of residence identified were Southwest, North Plains, East, Pacific Coast, and Alaska.

Diabetes was assessed by the question, “Have you ever been told by a physician that you have diabetes?” The questions “About how much do you weigh without shoes?” and “About how tall are you without shoes?” were used to calculate obesity, which was defined as a body mass index (BMI; weight in kilograms divided by height in meters squared) greater than or equal to 30 kg/m². Hypertension was assessed by the question, “Have you ever been told by a physician that you have hypertension?” Current cigarettes smokers were those who had smoked at least 100 cigarettes in their entire life and were currently smoking cigarettes every day or some days as determined by the questions, “Have you smoked at least 100 cigarettes in your life?” and “Do you now smoke cigarettes every day, some days, or not at all?” Sedentary behavior was defined as no leisure-time physical activity in the past month in response to the question, “During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?” Low vegetable or fruit intake was defined as fewer than 3 servings of vegetables or fruits (green salad, carrots, unfried potatoes, other vegetables, fruit, fruit juices) in response to questions on how often the respondent ate or drank each of the food or drink items on the previous day.

Analysis

All analyses incorporated sampling weights that adjusted for unequal probabilities of

selection, which were calculated on the basis of a number of factors, including strata (subsets of area code or prefix combinations), household density, telephone numbers per household, adults per household, non-coverage, and nonresponsiveness. Further details on the weighting formula can be found at http://www.cdc.gov/brfss/technical_infodata/weighting.htm. Multiple logistic regression models were run by using SAS version 9.1 (SAS Institute, Cary, NC) to calculate predicted prevalences, adjusted for age (4 groups), gender, education (4 levels), marital status (3 groups), region (5 regions), time (2 time periods), and all first-order interactions. Odds ratios (ORs), 95% confidence intervals (CIs), and *P* values were also derived from these models.

RESULTS

The sample included 2548 American Indians and Alaska Natives aged 18 years and older in 1995–1996 and 11104 in 2005–2006 (Table 1). The sample sizes in all socio-demographic subgroups were approximately 300 or more, providing stability for subgroup estimates. In general, this population was a young and middle-aged demographic, with about 75% aged 25 to 64 years. The educational levels were well represented with approximately 20% of the sample having less than a high school degree and 45% having some college or more. All regions were well represented, except to a lesser degree for Alaska in 2005–2006.

Predicted prevalences and changes in health outcomes and risk factors by socio-demographic factors are presented in Table 2. From 1995–1996 to 2005–2006, the adjusted prevalence of diabetes increased by 26.9%, from 6.7% to 8.5%, and that of obesity increased by 25.3%, from 24.9% to 31.2%. Hypertension increased by 5%, from 28.1% to 29.5%. Diabetes, obesity, and hypertension increased in both women and men and in all age groups, educational levels, and regions with several minor exceptions. The largest changes were for diabetes among older American Indians and Alaska Natives, obesity for almost all subgroups including higher-educated persons, and hypertension among North Plains American Indians and Alaska Natives. As expected, the prevalence of

hypertension increased with age at each time point, with the greatest increases at the highest ages.

Smoking prevalences were high in 1995–1996 and remained high in 2005–2006, especially among younger and lower-educated people. This is consistent with other studies that have found American Indians and Alaska Natives to have the highest smoking prevalence of any ethnic group, 40.4%, compared with 27.4% among non-Hispanic Whites, 25.7% among non-Hispanic Blacks, 23.3% among Hispanics, and 16.1% among Asians.^{8,16} Although smoking continues to decline among adults in the United States,¹⁷ our findings suggested that smoking appears to be increasing among some groups of American Indians and Alaska Natives, specifically those with less education (less than 12 years), and within the Northern Plains, East, and Alaska regions.

Overall, American Indians and Alaska Natives had high levels of physical inactivity. About 30% reported no leisure-time physical activity in the past month. Elders and those with less education (less than 12 years) were substantially more likely to be physically inactive than were their counterparts.

There was exceptionally low fruit or vegetable intake among all subgroups and at both time periods. About 70% to 85% reported fewer than 3 servings of vegetables or fruits on the previous day.

The weighted ORs from the multiple logistic regression models (Table 3) supported our findings that the largest changes occurred for obesity and diabetes, followed by hypertension, over the 10-year time period. For example, the risk of diabetes increased by 30% and that of obesity increased by 37%. There were no meaningful changes in any of the other health behaviors or risk factors, although levels of smoking and physical activity showed slight improvements.

To examine the clustering of risk factors, we calculated the total sum of the 6 risk factors for each time period to examine comorbidities and possible increases. In 2005–2006, 79% of the population had 1 or more risk factors, 46% had 2 or more, and almost 20% had 3 or more. Although the clustering of risk factors did not show substantial increases over time, more people had 3 or more risk factors in

TABLE 1—Sociodemographic characteristics of the Native American and Alaska Native study population: United States, 1995–1996 and 2005–2006

	1995–1996, No. or No. (%)	2005–2006, No. or No. (%)
Total	2548	11104
Age, y		
18–24	332 (13.0)	956 (8.6)
25–44	1192 (46.8)	4070 (36.7)
45–64	718 (28.2)	4392 (39.5)
≥65	306 (12.0)	1686 (15.2)
Education, y		
<12	560 (22.0)	2253 (20.4)
12	883 (34.7)	3756 (33.9)
13–15	789 (31.0)	3194 (28.8)
≥16	312 (12.3)	1868 (16.9)
Household income, \$		
<25 000	1192 (53.7)	4935 (50.3)
25 000 to 49 999	764 (34.4)	2876 (29.3)
≥50 000	262 (11.8)	1994 (20.3)
Marital status		
Never married	537 (21.1)	2114 (19.1)
Previously married	705 (27.7)	3512 (31.7)
Currently married	1302 (51.2)	5449 (49.2)
Region ^a		
Southwest	318 (12.5)	1766 (15.9)
North Plains	649 (25.5)	2822 (25.4)
East	558 (21.9)	4110 (37.0)
Pacific Coast	412 (16.2)	1493 (13.4)
Alaska	611 (23.9)	913 (8.2)

Note. Data are unweighted values from the Behavioral Risk Factor Surveillance System.

^aStates included in each region were as follows: Southwest: NV, UT, CO, AZ, and NM; North Plains: MT, ND, MN, WI, MI, WY, SD, NE, IA, and IN; East: ME, MA, CT, RI, NY, PA, NC, SC, TN, FL, AL, MS, LA, KS, OK, and TX; Pacific Coast: WA, OR, ID, and CA.

2005–2006 than in 1995–1996, suggesting an adverse trend and increasing numbers of individuals with serious health problems (Figure 1).

DISCUSSION

We found high rates and increases in diabetes and obesity among almost all socio-demographic and regional groups of American Indians and Alaska Natives. Of particular concern was the substantial increase in obesity

TABLE 2—Adjusted Prevalences of Health Outcomes and Risk Factors for Native Americans and Alaska Natives: United States, 1995–1996 and 2005–2006

	Diabetes		Obesity		Hypertension		Current Smoking		No Physical Activity		Low Fruit or Vegetable Intake	
	1995–1996	2005–2006	1995–1996	2005–2006	1995–1996	2005–2006	1995–1996	2005–2006	1995–1996	2005–2006	1995–1996	2005–2006
Total	6.7	8.5	24.9	31.2	28.1	29.5	34.8	35.5	30.2	28.8	76.6	76.7
Age, y			Change	Change	Change	Change	Change	Change	Change	Change	Change	Change
18–24	1.5	1.9	19.1	26.2	10.2	9.6	46.2	47.1	24.1	21.7	84.4	82.7
25–44	3.6	4.6	22.3	29.0	18.9	19.1	39.5	40.2	27.6	25.6	80.2	79.3
45–64	12.2	15.3	27.7	33.4	39.6	42.6	30.5	31.1	33.1	32.1	72.7	73.8
≥ 65	21.1	25.8	30.6	35.8	52.3	56.8	26.4	27.0	36.0	35.6	68.4	70.8
Gender			Change	Change	Change	Change	Change	Change	Change	Change	Change	Change
Men	6.0	8.4	24.4	30.6	29.3	31.3	37.4	37.5	29.9	27.6	78.5	79.1
Women	7.5	8.7	25.5	31.8	26.9	27.7	32.4	33.6	30.6	29.9	74.6	74.2
Education, y			Change	Change	Change	Change	Change	Change	Change	Change	Change	Change
<12	5.6	7.9	31.8	35.5	31.4	33.4	47.1	42.5	46.2	47.2	84.1	86.4
12	6.6	8.4	25.6	31.8	28.4	30.0	36.6	36.2	31.8	31.3	77.5	78.4
13–15	7.1	8.7	22.8	30.1	27.0	28.5	31.8	33.2	25.5	24.5	73.6	73.4
≥ 16	7.7	9.0	20.2	28.4	25.7	26.9	27.3	30.3	20.1	18.8	69.2	67.6
Region			Change	Change	Change	Change	Change	Change	Change	Change	Change	Change
Southwest	6.7	8.5	24.9	31.2	28.1	29.5	34.8	35.5	30.2	28.8	76.6	76.7
Pacific Coast	7.2	7.8	21.9	29.5	23.6	25.9	27.0	29.8	22.5	27.4	61.7	70.8
North Plains	6.4	8.8	27.3	34.0	26.9	31.8	43.7	41.1	27.7	28.4	79.1	78.5
East	6.8	8.3	31.8	29.3	27.6	31.1	43.1	41.7	26.7	29.5	80.9	76.5
Alaska	7.0	8.2	30.8	30.3	28.5	30.1	48.9	36.2	28.7	27.5	74.4	82.7

across all groups. Our findings are consistent with previous studies that showed that the prevalence of diabetes and obesity is higher among American Indian and Alaska Native youth and adults than in any other ethnic group and continues to rise. IHS clinical data showed that between 1994 and 2002, the age-adjusted prevalence of diabetes increased 33.2% among American Indian and Alaska Native adults, from 11.5% to 15.3%, and increased 73.7% among those aged 20 to 34 years, from 1.8% to 3.1%.¹⁸ In an analysis of national BRFSS data, Denny et al. found that more than 20% of the American Indian and Alaska Native population reported being obese.¹⁵ The prevalence of obesity was approximately 50% higher among American Indian and Alaska Native women than among White, non-Hispanic women.⁸ The Strong Heart Study also found that the prevalence of diabetes among American Indians aged 45–74 years increased from 6% to 12% over a 4-year period, from 1989–1991 to 1993–1995.⁹ Among the communities participating in the CDC-funded REACH 2010 initiative, American Indians have a higher prevalence of diabetes, obesity, and hypertension than any other ethnic group.¹⁰

Our findings are consistent with previous studies that reported low levels of physical activity among American Indians and Alaska Natives, particularly when the emphasis was on leisure-time physical activity.^{19–22} Denny et al. found that American Indians and Alaska Natives were more likely to report unhealthy behaviors associated with chronic diseases, including low leisure-time physical activity, cigarette smoking, and poor diet.^{8,15} American Indians and Alaska Natives reported the least leisure-time physical activity of all racial/ethnic groups and the highest prevalence of current smoking of any racial/ethnic group.¹⁵

We also found that American Indians and Alaska Natives had high rates of cigarette smoking, consistent with the 1999–2001 self-reported National Survey on Drug Use and Health, which found that American Indians and Alaska Natives have the highest rates of smoking (27.9% youth, 40.4% adult) compared with Blacks (7% youth, 25.7% adult), Whites (16% youth, 27.4% adult), Hispanics (10.8% youth, 23.1% adult), and Asians (8.1% youth, 16.2% adult).²³

TABLE 3—Weighted Odds Ratios of Health Outcomes and Risk Factors in Native Americans and Alaska Natives: United States, 1995–1996 and 2005–2006

	Weighted OR (95% CI)	<i>P</i>
Health outcomes		
Diabetes	1.30 (1.29, 1.30)	<.001
Obesity	1.37 (1.36, 1.37)	<.001
Hypertension	1.07 (1.06, 1.07)	<.001
Risk factors		
Current smoking	0.97 (0.97, 0.97)	<.001
No physical activity	0.93 (0.93, 0.93)	<.001
Low fruit or vegetable intake	1.00 (1.00, 1.01)	.06

Note. CI = confidence interval; OR = odds ratio. Multivariate logistic models were adjusted for age, gender, education, marital status, region, time, and all first-order interactions.

In our study, American Indians and Alaska Natives reported very low fruit or vegetable intake, consistent with other studies.^{24–28} The Strong Heart Study and others found generally high-fat, low-fiber diets among the 10 tribal communities participating in the study.^{24,29} Other studies found that the diet in many American Indian and Alaska Native communities is low in fruits and vegetables, high in fat, and below the Recommended Dietary Allowances for several vitamins and minerals, including calcium and iron.^{28,30–32}

The strengths of our study include our use of a national sample of American Indians and Alaska Natives and that we examined changes over 2 time periods. We also ensured

sufficient participation numbers to examine differences and changes in women and men and across age, education, and region of residence. We examined a comprehensive set of CVD risk factors and health behaviors. We present predicted prevalences and adjusted ORs from multiple logistic regression models that were controlled for confounding factors. The study limitations included the relatively low response rate (about 40%) of the BRFSS, although it remains one of the largest data sources on the American Indian and Alaska Native population in the United States. The BRFSS is based on non-institutionalized populations and excludes persons residing elsewhere (e.g., nursing

homes or long-term-care facilities). BRFSS data are based on self-reports, which can be subject to recall bias, and do not include clinical measures. Persons without a residential telephone are not included; therefore, the BRFSS might exclude certain persons of lower socioeconomic status or households with cellular phones only.

Additionally, only leisure-time physical activity was examined within the BRFSS. Many within the American Indian and Alaska Native population may work in unskilled or semiskilled labor jobs that would increase their levels of physical activity.

The needs for future research include collecting more accurate measures, particularly for physical activity, such as using pedometers, and differentiating between leisure-time and work-time physical activity within this population. Data regarding diet for urban, rural, and reservation populations and examining the major dietary staples within these different populations are critical. Collecting individual and neighborhood environment data for both urban and rural or reservation populations will help health professionals better understand the factors contributing to the high rates and increases in diabetes and obesity. These efforts could be accomplished by developing a national sample of American Indians and Alaska Natives, similar to the National Health and Nutrition Examination Survey (NHANES) and the Hispanic HANES, which would allow for the combination of survey data with physical examinations and clinical measures to assess the health and nutrition of American Indians and Alaska Natives over time. This national sample should include American Indians and Alaska Natives in a number of major cities and rural and reservation areas, possibly overlapping the NHANES.

Our findings highlight the dramatic health disparities that exist among American Indians and Alaska Natives within the United States. Past interventions that have targeted this population have shown limited success and have focused primarily on chronic disease management. In 2004 Congress increased funding to the IHS to implement 2 prevention initiatives. The Diabetes Prevention Demonstration Project, which adapted the curriculum from the Diabetes Prevention Program of the National Institute of Diabetes and Digestive and Kidney

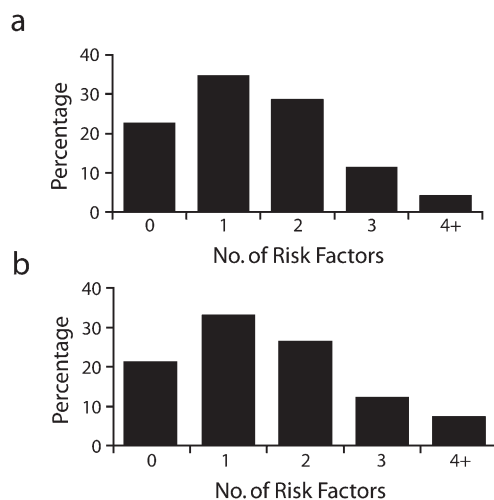


FIGURE 1—Percentage of American Indian and Alaska Native participants by number of risk factors in (a) 1995–1996 and (b) 2005–2006: United States.

Diseases, is being implemented with limited funding in 36 American Indian and Alaska Native communities. The Healthy Heart Demonstration Project, an intensive clinical, team-based, case-management approach to treat risk factors for CVD in American Indians and Alaska Natives who currently have diabetes, is being implemented with limited funding in 30 American Indian and Alaska Native communities. These recent efforts are demonstration projects that may be refunded by Congress if they successfully show decreases in the incidence of diabetes or CVD risk factors. However, these efforts are being implemented with partial funding and are available to only a small percentage of the rural and reservation populations and to those who used the HIS, but to very few urban populations.

To improve American Indian and Alaska Native population health, the IHS must be fully funded and urban populations must be included within the IHS funding, which currently are not. Additionally, the use of community-based participatory research, which has offered an alternative to traditional research approaches, is being integrated within the aforementioned IHS prevention initiatives and has shown promise in facilitating the translation of research into practice and building capacity with American Indian and Alaska Native communities.^{33–36} The use of community-based participatory research should be continued and expanded, as is happening with the NIH Native American Research Centers for Health initiatives, which fund community-directed research initiatives in American Indian and Alaska Native communities. An emphasis on the training and development of American Indian and Alaska Native researchers must be a priority if we are to better address the health disparities within this population. ■

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Contributors

V. B. B. Jernigan and M. Winkleby synthesized the analyses and led the writing. B. Duran assisted with the writing and analyses. D. Ahn completed the analyses. All authors helped to conceptualize ideas, interpret findings, and review drafts of the article.

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Human Participant Protection

No original data were collected with this study, only secondary data were used, and this research was exempt by the institutional review board of Stanford University.

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