PERCEIVED DISCRIMINATION IN HEALTH CARE AMONG AMERICAN INDIANS/ALASKA NATIVES

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Objectives: We compared the prevalence of, and reasons for, perceived discrimination in health care among American Indian/Alaska Natives (AI/ANs) and persons of AI/AN + White heritage to African Americans, Asian Americans, and Whites.

Design: Data on perceived discrimination were collected by the 2001 California Health Interview Survey (CHIS). We used chi-square tests to evaluate the prevalence of perceived discrimination and the reasons for perceived discrimination across racial groups.

Setting: The 2001 CHIS, a telephone survey, one of the largest cross-sectional surveys ever conducted in the United States.

Participants: Participants in this analysis were adults ≥18 years of age, interviewed from 55,000 households that took part in the survey.

Interventions: Participants in the 2001 CHIS were asked ''Thinking of your experiences with receiving health care in the past 12 months, have you felt you were discriminated against for any reason?'' Respondents who endorsed this item were asked about possible reasons for the discrimination.

Main Outcome Measures: 1) Does the prevalence of perceived discrimination in health care differ between AI/ANs, AI/AN + Whites, African Americans, Asian Americans, and Whites? and 2) Do the reasons for perceived discrimination in health care vary by race or ethnicity?

Results: Discrimination was perceived by 7.1% of the AI/AN alone group, 8.8% of AI/AN + White respondents, 5.6% of African Americans, 4.3% of Whites, and 2.6% of Asian Americans. After adjusting for covariates, the odds of perceived discrimination were different for AI/AN + White (odds ratio [OR] =2.0, 95% confidence interval [CI] 1.5–2.5) and Asian American (OR=.5, 95% CI .4–.7) when compared to Whites.

Conclusions: AI/ANs, and especially those who identify as AI/AN + White, were the most likely among racial groups to report discrimination in health care. (*Ethn Dis*. 2006;16:766–771)

Key Words: Alaska Native, American Indian, Health Disparities, Perceived Discrimination

INTRODUCTION

The Commission on National Statistics defines racial discrimination as differential treatment on the basis of race or other inadequately justified factors that disadvantages a racial group.[1] Discrimination occurs in many sectors of health care, possibly due in part to biases, prejudices, and stereotyping behaviors of healthcare providers.[2] Racial and ethnic discrimination has been associated with hypertension, smoking, low self-rated health, psychological distress, and alcohol abuse.[3–13] People who perceive discrimination in the healthcare setting may delay or avoid seeking care and may be less likely to follow their provider's advice.[14]

Most research on discrimination in the United States has focused on African Americans, 10%–26% of whom reported discrimination when receiving healthcare.[15–18] Among African Americans, perceptions of discrimination vary along socioeconomic lines; higher socioeconomic status is associated with more perceived discrimination.[14,18] American Indian/Alaska Natives (AI/ANs) have among the worst health outcomes of any US racial group. However, we could find no study that examined perceived discrimination in this population.[19] Furthermore, no previous studies of perceived discrimination have included persons who identify with multiple races.

The 2001 California Health Interview Survey (CHIS) was a population-based telephone survey that included two items on perceived discrimination. The CHIS oversampled minorities, including AI/ANs, and allowed respondents to specify more than one racial identity. Notably, the AI/AN population of California has historically been very heterogeneous because of the colonization and migration of native peoples. To address the diversity within AI/AN communities in California, we identified AI/AN alone and AI/AN and White heritage (AI/AN + White) to constitute separate self-identified categories. The CHIS data, therefore, are uniquely able to address the following questions: 1) Does the prevalence of perceived discrimination in health care differ between AI/ANs, AI/AN + Whites, African Americans, Asian Americans, and Whites? and 2) Do the reasons for perceived discrimination in health care vary by race or ethnicity?

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METHODS

Population, Survey, and Sampling

According to the 2000 Census in California 333,346 individuals reported

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their race as AI/AN alone, and an additional 627,562 identified themselves as AI/AN in combination with one or more races.[20] California's large, heterogeneous AI/AN population is likely the result of historical trends. First, many Mexican and Central American Indians have immigrated to California because of the state's proximity to the Mexican border and because of its history of colonization by Spain and Mexico. Second, although California is home to many federally and non-federally recognized tribes, it also has attracted a large, urban AI/AN population. During the 1950s, a federal relocation program drew thousands of non-California Indians from their home communities to cities such as Oakland and Los Angeles.

The CHIS 2001 was one of the largest cross-sectional surveys ever conducted in the United States. Respondents were recruited from every county in California; random digit dialing was used to assemble a representative sample of the state's noninstitutionalized population residing in households. Participants in this analysis were adults ≥18 years of age, interviewed from 55,000 households that took part in the survey. The CHIS weighted the data to the 2000 California Census. The sample included 2835 adult respondents, ≥18 years of age, who identified as AI/AN. Our analysis used public release data available on the CHIS website.[21,22]

Determination of Race and Ethnicity

The 2001 CHIS public release data contains five self-report race variables: AI/AN, African American, Asian American, Pacific Islander, White, and other. Respondents who reported more than one race were asked to specify a main racial identity, but this information is not available in the public release data. Latino ethnicity was not a choice in the race question. It was determined by a separate question and, therefore, could not be analyzed as a unique category.[21] We used nomenclature corresponding to the Office of Management and Budget's definition of race[23] and selected respondents who selected only one of the following four racial categories: AI/AN, African American, Asian American, or White. In addition, because of our focus on AI/ANs, we created a fifth category composed of people who identified as AI/AN and White, but no other race (AI/AN + White). Because of small numbers, we excluded Pacific Islanders (n=234) and AI/ANs who identified with another minority race. These other minorities included AI/AN and African American (n=172), AI/AN and Asian American (n=10), AI/AN and Pacific Islander (n=7), and AI/AN and other (n=2). Although tribal enrollment is often used as a marker of Indian identity, the CHIS public use data did not release information on tribal membership.

Perceived Discrimination

The CHIS 2001 included two questions pertinent to discrimination in health care: ''Thinking of your experiences with receiving health care in the past 12 months, have you felt you were discriminated against for any reason?'' Respondents who endorsed this item were asked about possible reasons for the discrimination including age, race or ethnic group, language or accent, health or disability, body weight, insurance type, income level, gender/sex, medical beliefs/practices, other, and more than one reason.[24] In the public use dataset, individuals who selected more than one reason were aggregated into a ''more than one reason'' category, where each reason could not be analyzed individually. For this analysis, we created a variable that indicated whether the specified reason was race, insurance type, any other reason, or more than one reason.

Other Variables

Other demographic variables incorporated in our analysis included age (years), sex, Latino ethnicity, educational level (some college or higher), and yearly income (in increments of $20,000, starting at <$20,000). Insurance coverage variables included currently insured, employer-based insurance, Medi-Cal (California Medicaid program), and ever uninsured in the past 12 months. These yes/no variables were not mutually exclusive.[24]

STATISTICS

We described the demographic, insurance, and perceived discrimination variables as percentages stratified by race and used chi-square statistics to test for overall differences between racial groups. Logistic regression was used to evaluate the odds of perceived discrimination in each minority racial group compared to Whites. First, we ran an unadjusted model with race as the sole discriminating factor; next, we adjusted for the demographic and insurance-related covariates described above. Finally, among participants who reported discrimination, we described the distribution of each reason for the discrimination as percentages stratified by race. We calculated odds ratios (OR) and 95% confidence intervals (CI) for all point estimates and conducted all analyses with the survey replication

Table 1. Characteristics of the CHIS respondents by race

Characteristic*	AI/AN (*n*=889) % (95% CI)	AI/AN + White (*n*=1547) % (95% CI)	African American (*n*=2596) % (95% CI)	Asian American (*n*=3886) % (95% CI)	White (*n*=38,420) % (95% CI)
Demographic					
Age, years					
18–34	44 (39–48)	32 (29–36)	33 (31–36)	39 (38–42)	29 (29–30)
35–54	43 (39–47)	43 (40–47)	41 (39–44)	41 (39–43)	41 (40–41)
≥55	13 (11–16)	25 (22–28)	25 (24–27)	19 (18–20)	30 (30–30)
Female	42 (37–45)	46 (42–49)	55 (53–57)	50 (48–51)	52 (51–53)
Latino ethnicity	67 (63–71)	19 (15–22)	5 (4–6)	3 (3–4)	16 (16–17)
Some college	32 (29–36)	53 (50–57)	62 (59–64)	69 (67–71)	64 (64–65)
Yearly income					
≤$20,000	36 (32–40)	24 (22–27)	32 (29–34)	22 (20–23)	19 (18–19)
$20,001–$40,000	29 (25–33)	27 (24–30)	26 (24–28)	21 (19–22)	22 (21–22)
$40,001–$60,000	14 (11–17)	18 (15–21)	16 (14–17)	15 (13–16)	17 (17–18)
>$60,000	22 (18–26)	31 (28–34)	27 (25–30)	43 (41–45)	43 (42–43)
Insurance coverage					
Currently uninsured	27 (20–27)	14 (12–17)	11 (10–13)	15 (14–17)	11 (11–12)
Ever uninsured in past 12 months	30 (26–34)	21 (18–23)	17 (15–18)	20 (18–21)	16 (16–17)
Currently covered by Medi-Cal	18 (15–22)	14 (12–16)	23 (21–25)	13 (12–14)	9 (8–9)
Perceived discrimination	7.1 (5.2–9.8)	8.8 (7.1–10.9)	5.6 (4.5–7.0)	2.6 (2.1–3.3)	

* All characteristics comparing distributions in the AI/AN, AI/AN + White, African American, Asian American, and White groups = $P<.001$.
AI/AN=American Indian/Alaska Native; CI=confidence interval.

analysis methods in Stata version 8.1 (StataCorp, College Station, Texas). These methods perform the JK-1 bootstrapping technique required for variance estimation in the CHIS data set and allow appropriately weighted inference to the California general population.

RESULTS

Table 1 illustrates that respondent characteristics varied across the five racial groups ($P<.001$). The AI/AN group was the youngest and least likely to have some college education and had the lowest income and highest ratio of being uninsured. Furthermore, the AI/AN group reported a higher prevalence of Latino ethnicity (67%) than the AI/AN + White (19%), African American (5%), Asian American (3%), and White (16%) groups. Asian Americans were most likely to attend some college and, along with Whites, had the highest incomes.

The AI/AN + White group had the highest prevalence of perceived discrimination (8.8%), followed by AI/AN alone (7.1%), African American (5.6%), White (4.3%), and Asian American (2.6%) ($P<.001$). As shown in Table 2, the unadjusted logistic regression models produced higher odds of perceived discrimination compared to Whites for AI/AN (OR=1.7), AI/AN + White (OR=2.1), and African American (OR=1.3) respondents but lower odds for Asian Americans (OR=.6). After adjusting for demographic and insurance-related covariates, only the AI/AN + White (OR=2.0, 95% CI 1.5–2.5) and Asian American (OR=.5, 95% CI .4–.7)

Table 2. Odds ratios for perceived discrimination with Whites as reference group

Race	Unadjusted Odds Ratio	Unadjusted (95% CI)	Adjusted* Odds Ratio	Adjusted* (95% CI)
White	1.0	–	1.0	–
AI/AN	1.7	(1.2–2.4)	1.4	(.99–2.0)
AI/AN + White	2.1	(1.7–2.7)	2.0	(1.5–2.5)
African American	1.3	(1.01–1.7)	1.0	(.8–1.4)
Asian American	.6	(.5–.8)	.5	(.4–.7)

* Adjusted for age, sex, Latino ethnicity, education, income, ever uninsured in past year, and current Medi-Cal insurance.
CI=confidence interval; AI/AN=American Indian/Alaska Native.

Table 3. Reasons for perceived discrimination by race, evaluated for the subset of CHIS respondents who reported perceived discrimination in health care in the previous 12 months

	AI/AN (n=71)		AI/AN + White (n=158)		African American (n=137)		Asian American (n=111)		White (n=1827)	
Reason*	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Race/ethnicity	26	(13–45)	5	(3–11)	21	(13–31)	23	(16–32)	9	(7–11)
Insurance type	15	(8–26)	27	(19–38)	19	(12–29)	20	(12–30)	32	(29–35)
Other	41	(28–56)	45	(35–55)	43	(32–56)	29	(21–39)	46	(42–49)
More than one reason	13	(8–25)	23	(13–37)	14	(7–26)	26	(17–37)	12	(10–14)
Total	100	–	100	–	100	–	100	–	100	–

*Missing values: AI/AN =6%; AI/AN + White =4%, African American =3%, Asian American =3%, White =3%.
CI=confidence interval; AI/AN=American Indian/Alaska Native.

comparisons remained statistically significant.

Table 3 outlines the reasons for perceived discrimination among the five racial groups. More than 20% of AI/AN, African American, and Asian American respondents who reported perceived discrimination cited race as the sole reason, compared to <10% of AI/AN + White and White respondents. AI/AN + White (27%) and White (32%) respondents were more likely to cite insurance as the sole reason for discrimination than AI/ANs (15%), African Americans (19%), and Asian Americans (20%). AI/AN + White and Asian American respondents were the most likely to report more than one reason for perceived discrimination (23% and 26%, respectively), compared to <15% of AI/ANs, African Americans, and Whites.

DISCUSSION

Our objectives were to examine the prevalence of, and reasons for, perceived discrimination in health care among AI/ANs. We found that AI/AN and AI/AN + White respondents were most likely to perceive discrimination. The AI/AN + White group experienced the highest prevalence and odds of perceived discrimination and was of higher socioeconomic status and more often insured compared to the AI/AN alone group. This pattern is consistent with studies of African Americans in which higher socioeconomic status has been associated with greater perceived discrimination.[14,18] However, the higher prevalence of perceived discrimination and lower socioeconomic status in AI/ANs compared to the other racial groups is not congruent with past research findings.[14,18] In contrast to a previous investigation,[25–27] we observed the lowest prevalence and odds of perceived discrimination in health care among Asian Americans, a group similar to Whites in terms of income but less frequently insured. We cannot say why Asian Americans perceived less discrimination than Whites, given the demographic similarities between these groups and the history of discrimination against Asian Americans. Yet, among people who did report discrimination, Asian Americans were significantly more likely than Whites to cite race as the sole reason. Finally, African Americans had a lower prevalence of perceived discrimination than previously reported and did not have statistically elevated odds compared to Whites. However, as with Asian Americans, among African American individuals who reported perceived discrimination in health care, race was the most commonly cited reason. This finding is consistent with studies reporting that 12%–26% of African Americans perceived racial discrimination in health care.

To our knowledge, this is the first study on perceived discrimination to include as a separate category a group of individuals who identify with multiple races. The AI/AN + White group perceived more discrimination in health care than their AI/AN alone counterparts, but they were less likely to cite race as the sole reason. We suggest two explanations for this pattern. First, both AI/AN + White and White respondents were most likely to cite insurance as the sole reason for perceived discrimination, and they were less likely than the other groups to cite race/ethnicity. This suggests that the AI/AN + White group may be perceived as White and thereby not experience racial discrimination as often as individuals who identify solely as AI/AN. In fact, many studies have documented that AI/ANs are often misclassified as White.[28–31] We cannot verify this explanation because a large proportion of AI/AN + White respondents cited more than one reason for perceived discrimination. As the CHIS public release does not identify the separate answers that constitute the variable for more than one reason, the true proportion of AI/AN + White respondents specifying race as a reason likely exceeds 5%.

Second, people who identify as AI/AN + White could feel excluded from both cultures, which could result in a stronger tendency to perceive discrimination in health care. This phenomenon, called ''stigma consciousness,'' reflects the expectation of being stereotyped regardless of actual behavior[32] and has been associated with reports of discrimination.[14,32] Furthermore, a large

proportion of individuals who identify as AI/AN + White may not be enrolled members of federally recognized tribes and thus be ineligible for Indian Health Service coverage. The lack of coverage may lead AI/AN + Whites to feel discriminated against and is congruent with their frequent citation of insurance type as the reason for perceived discrimination in health care. Although these factors could produce the pattern of perceived discrimination exhibited by the AI/AN + White group, more research on individuals who identify with two races is needed to confirm our explanations.

This study has several limitations. First, the main racial identity for people endorsing more than one racial category is unavailable in the public use data. We addressed the multiple race issue by limiting the analysis to people endorsing only one race or the AI/AN + White identity. Because our focus was on AI/ANs and because most AI/ANs who endorsed multiple races only endorsed White, we believe that the lack of the main racial identity information does not seriously limit this analysis. Second, we did not consider Latino as a race but as an ethnicity. The Office of Management and Budget defines Latino as "a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture origin, regardless of race."[23] Because Latino ethnicity is not considered a distinct racial category in either the Office of Management and Budget's definition or the CHIS data, it could not be examined as a distinct racial category. The high percentage of the AI/AN group in the CHIS sample that identified as both Latino and AI/AN can be explained by the California tribes' interwoven history with Spain and Mexico and large number of immigrants from Mexico and Central America who identify as both Latino and AI/AN.

Third, among people who reported any discrimination, the inability to distinguish race as a possible factor when citing more than one reason for the discrimination made it impossible to conclusively evaluate the apparent tendency of AI/AN + White respondents to cite racial discrimination less frequently than did other minority groups. Fourth, although perceived discrimination has been linked to worse health outcomes in other studies, we could not address objective outcomes associated with perceived discrimination, such as non-receipt of services or inadequate treatment. Finally, the AI/AN sample in the CHIS may not accurately reflect the entire California AI/AN population, as many AI/ANs lack telephones and CHIS was a telephone survey. Lower income is associated with not having a telephone.[33,34] Furthermore, given the heterogeneity of the AI/AN population in California, this study may also not be generalizable to AI/ANs residing in other states or to strictly reservation-based settings.

The AI/AN + White group experienced the highest prevalence and odds of perceived discrimination and was of higher socioeconomic status and more often insured compared to the AI/AN alone group.

In conclusion, AI/ANs, especially those who identify as AI/AN + White, perceived more discrimination in health care compared to African Americans, Asian Americans, and Whites. Perceived discrimination has been increasingly recognized as a factor in the mental and physical health of racial and ethnic minority group members[35] and may play a role in the striking health disparities experienced by AI/AN communities. The Institute of Medicine has documented that racial and ethnic minorities receive lower quality health care than non-minorities, even when accounting for access-related factors, such as insurance status and income.[36] Their report calls for raising awareness as one strategy to eliminate disparities in health care. Our findings improve our understanding of perceived discrimination among AI/ANs and highlight new issues that invite further inquiry in populations that identify with more than one race.

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REFERENCES

1. Blank R, Dabady M, Citro C, ed. Measuring racial discrimination. US National Academies Press; 2004. Available at: http://www.nap.edu/books/0309091268/html/. Accessed on: 3/15/05.
2. Nelson AR, Hill MN, Lavizzo-Mourey R, et al. Healthcare provider prejudice or bias. In: Smedley BD, Stith AY, Nelson AR, eds. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. Washington, DC: The National Academies Press; 2003:162–174.
3. Dressler WW. Lifestyle, stress, and blood pressure in a southern Black community. *Psychosom Med*. 1990;52:182–198.
4. Guthrie BJ, Young AM, Williams DR, Boyd CJ, Kintner EK. African American girls' smoking habits and day-to-day experiences with racial discrimination. *Nurs Res*. 2002;51:183–189.
5. Guyll M, Matthews KA, Bromberger JT. Discrimination and unfair treatment: relationship to cardiovascular reactivity among African American and European American women. *Health Psychol*. 2001;20:315–325.
6. Landrine H, Klonoff EA. The Schedule of Racist Events: a measure of racial discrimination and a study of its negative physical and mental health consequences. *J Black Psychol*. 1996;22:144–168.

7. Schulz A, Israel B, Williams D, Parker E, Becker A, James S. Social inequalities, stressors and self reported health status among African American and White women in the Detroit metropolitan area. *Soc Sci Med*. 2000;51(11): 1639–1653.
8. Schulz A, Williams DR, Israel B. Unfair treatment, neighborhood effects, and mental health in the Detroit metropolitan area. *J Health Soc Behav*. 2000;41:314–332.
9. Williams DR, Spencer M, Jackson JS, Contrada RJ, Ashmore RD. Race, stress, and physical health: the role of group identity. In: Contrada RJ, Ashmore RD, eds. *Self, Social Identity, and Physical Health: Interdisciplinary Explorations*. New York City, NY: Oxford University Press, Inc; 1999:71–100.
10. Yen IH, Ragland DR, Greiner BA, Fisher JM. Racial discrimination and alcohol-related behavior in urban transit operators: findings from the San Francisco Municipal Health and Safety Study. *Public Health Rep*. 1999;114: 448–458.
11. Yen IH, Ragland DR, Greiner BA, Fisher JM. Workplace discrimination and alcohol consumption: findings from the San Francisco Municipal Health and Safety Study. *Ethnic Disparities*. 1999;9:70–80.
12. Landrine H, Klonoff EA. Racial discrimination and cigarette smoking among Blacks: findings from two studies. *Ethnic Disparities*. 2000;10:195–202.
13. Williams DR, Yu Y, Jackson J, Anderson N. Racial differences in physical and mental health; socioeconomic status, stress, and discrimination. *J Health Psychol*. 1997;2: 335–351.
14. Bird ST, Bogart LM. Perceived race-based and socioeconomic status (SES)-based discrimination in interactions with healthcare providers. *Ethn Dis*. 2001;11(3):554–563.
15. Krieger N. Racial and gender discrimination: risk factors for high blood pressure? *Soc Sci Med*. 1990;30(12):1273–1281.
16. Krieger N, Sidney S. Racial discrimination and blood pressure: the CARDIA study of young Black and White adults. *Am J Public Health*. 1996;86(10):1370–1378.
17. Lillie-Blanton M, Brodie M, Rowland D, Altman D, McIntosh M. Race, ethnicity, and the healthcare system: public perceptions and experiences. *Med Care Res Rev*. 2000;57(suppl 1):218–235.
18. Ren XS, Amick BC, Williams DR. Racial/ethnic disparities in health: the interplay between discrimination and socioeconomic status. *Ethn Dis*. 1999;9(2):151–165.
19. Centers for Disease Control and Prevention, United States Department of Health and Human Services. Health disparities experienced by American Indians and Alaska Natives. *Morb Mortal Wkly Rep*. 2003; 52(30):697.
20. US Census Bureau American FactFinder. DP-1. Profile of general demographic characteristics: 2000, data set: Census 2000 summary file 1 (SF 1) 100-percent data, geographic area: California. Available at: http://factfinder.census.gov/servlet/QTTable?_bm=y&-geo_id=04000US06&-qr_name=DEC_2000_SF1_U_DP1&-ds_name=DEC_2000_SF1_U&-_lang=en&-_sse=on. Accessed on: 3/15/05.
21. Holtby S, Zahnd E, Yen W, Lordy N, McCain C, DiSogra C. *Health of California's Adults, Adolescents, and Children: Findings from CHIS 2001*. Los Angeles, Calif: UCLA Center for Health Policy Research; 2004.
22. UCLA Center for Health Policy Research. 2001 California Health Interview Survey public use files. 2003. Available at: http://www.chis.ucla.edu/main/default.asp?page=puf. Accessed on: 1/19/04.
23. Office of Management and Budget. Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity. 1997. Available at: http://www.whitehouse.gov/omb/fedreg/ombdir15.html. Accessed on: 8/20/04.
24. UCLA Center for Health Policy Research, California Department of Health Services, Public Health Institute. California Health Interview Survey 2001 adult questionnaire. 2001. Available at: http://www.chis.ucla.edu/pdf/CHIS2001_adult_q.pdf. Accessed on: 1/19/04.
25. Agency for Healthcare Research and Quality, USDHHS. National Healthcare Disparities Report. Appendix D, Table 127d. Adults not treated with a great deal of dignity and respect, by education, United States 2001. Available at: http://www.qualitytools.ahrq.gov/disparitiesreport/archive/2003/_tables/1.Access%20to20Health%20Care/02-AccessTables/127.xls. Accessed on: 3/30/05.
26. Johnson RL, Saha S, Arbelaez JJ, Beach MC, Cooper LA. Racial and ethnic differences in patient perceptions of bias and cultural competence in health care. *J Gen Intern Med*. 2004;19(2):101–110.
27. Ngo-Metzger Q, Legedza AT, Phillips RS. Asian Americans' reports of their healthcare experiences. Results of a national survey. *J Gen Intern Med*. 2004;19(2):111–119.
28. Stehr-Green P, Bettles J, Robertson LD. Effect of racial/ethnic misclassification of American Indians and Alaskan Natives on Washington State death certificates, 1989–1997. *Am J Public Health*. 2002;92(3):443–444.
29. Sugarman JR, Lawson L. The effect of racial misclassification on estimates of end-stage renal disease among American Indians and Alaska Natives in the Pacific Northwest, 1988 through 1990. *Am J Kidney Dis*. 1993;21(4): 383–386.
30. Sugarman JR, Soderberg R, Gordon JE, Rivara FP. Racial misclassification of American Indians: its effect on injury rates in Oregon, 1989 through 1990. *Am J Public Health*. 1993;83(5):681–684.
31. Thoroughman DA, Frederickson D, Cameron HD, Shelby LK, Cheek JE. Racial misclassification of American Indians in Oklahoma State surveillance data for sexually transmitted diseases. *Am J Epidemiol*. 2002;155(12): 1137–1141.
32. Pinel EC. Stigma consciousness: the psychological legacy of social stereotypes. *J Pers Soc Psychol*. 1999;76(1):114–128.
33. Pearson D, Cheadle A, Wagner E, Tonsberg R, Psaty BM. Differences in sociodemographic, health status, and lifestyle characteristics among American Indians by telephone coverage. *Prev Med*. 1994;23(4):461–464.
34. Peterson DE, Remington PL, Kuykendall MA, Kanarek MS, Diedrich JM, Anderson HA. Behavioral risk factors of Chippewa Indians living on Wisconsin reservations. *Public Health Rep*. 1994;109(6):820–823.
35. Dion KL, Kawakami K. Ethnicity and perceived discrimination in Toronto. *Can J Behav Sci*. 1996;28(3):203–213.
36. Nelson AR, Hill MN, Lavizzo-Mourey R, et al. Summary. In: Smedley BD, Stith AY, Nelson AR, eds. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. Washington, DC: The National Academies Press; 2003:1–27.

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