WHO TRUSTS HEALTHCARE INSTITUTIONS? RESULTS FROM A COMMUNITY-BASED SAMPLE

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Objective: The goal of this research was to examine racial differences in trust in various healthcare institutions.

Method: In telephone interviews, 195 Whites, 183 Blacks, and 171 Latinos from Durham, NC indicated how often they trust various institutions (community doctors, local hospitals, county health department, insurance companies, and state and federal government) to do what is best for patients.

Results: In bivariate analyses, trust in various healthcare institutions was associated with race; Whites and Latinos trusted physicians more often than Blacks, and Latinos trusted the health department, insurance companies, and both government entities more often than Whites and Blacks (*P*s<.01). In adjusted analyses controlling for marital status, financial status, and education, race was still associated with trust. Whites trusted physicians more often than Blacks, and Latinos trusted insurance companies, the state government, and the federal government more often than Whites and Blacks (*P*s<.01).

Conclusions: Racial differences in trust of healthcare institutions vary by institution type. Future studies of trust and interventions designed to improve trust must account for race and target institution differences. (*Ethn Dis.* 2004;15:97–103)

Key Words: Blacks, Ethnicity, Healthcare Institutions, Latinos, Race, Trust

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INTRODUCTION

During the past few decades, research has documented racial disparities in access to health care, use of healthcare services, and health outcomes.[1–4] For example, Blacks and Latinos are less likely to use ambulatory care and mental health services than Whites.[2,5,6] In addition, Blacks are less likely than Whites to receive antiretroviral therapy,[7] cardiac catheterization,[8,9] coronary artery bypass grafting,[9] and transplants.[10] Blacks are also less likely to donate blood and organs[11] and participate in medical research.[10,12–14] Although much research has been devoted to identifying the causes of these disparities, the reasons are not sufficiently understood. Several potential causes have been identified, including financial barriers, such as income and health insurance status, and language barriers.[4,15,16] Individual differences in attitudes and perceptions, such as trust, may play a role.[11,17,18]

Patients' trust is an essential component to the provider-patient relationship. Patients expect that their healthcare provider will be competent, communicate openly, have compassion, keep personal information confidential, and generally act in their best interest. Distrust of physicians can lead to behaviors that, directly or indirectly, negatively affect health. For instance, people who are less trusting of their physician tend to have poor health status,[19] be less adherent to medication regimens,[20] and not follow recommendations for avoiding risky behaviors.[19] Furthermore, distrusting individuals are less satisfied[19–21] and have shorter relationships with their physician.[20,22,23]

In addition to being concerned about the trustworthiness of their physicians, patients' trust in other institutions, such as health insurance companies and the government, is important. These institutions can and do affect the care physicians give. For instance, managed care can challenge physicians' ability to give the best care by offering financial incentives to limit testing, restricting referrals and open communication with patients, and contradicting medical decisions.[24] Distrust in larger institutions negatively affects the medical community at large by diverting money for treatment to utilization review or management.[25]

Improving trust of healthcare institutions could help reduce disparities in access to, use of, and quality of health care. An important first step is to identify the individuals and institutions in need of interventions—those individuals who are least trusting and those institutions perceived as least trustworthy.

Previous research has documented racial differences in trust of the medical community.[11,13,16,18,21,26] For example, studies have reported that Blacks and Latinos trust physicians less than Whites do.[27,28] Some studies have reported that Blacks trust hospitals less than Whites do,[21] although other studies have found no differences.[28] Racial differences in distrust are not limited to the medical

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community; Blacks have also stated that they lack trust in other institutions, such as the federal government, that affect health care. For instance, some Blacks believe that acquired immunodeficiency syndrome was created so that the government could commit genocide against the Black population.[29] Distrust in other institutions is also shown by Blacks' and Latinos' hesitation to participate in medical research[12,13,30] and Blacks' hesitation to donate blood.[11]

Many investigators have recognized the importance of investigating racial differences in trust. Progress has been limited, however, because much of this research has looked at only Blacks. Whether trust operates similarly (ie, as a barrier) among different minority groups is important to determine so that interventions can be tailored appropriately. Past research is also limited because much of it has investigated trust in physicians and hospitals and largely ignored other institutions that can affect health care and outcomes. Finally, many studies have assessed trust only in patients who are seen at a healthcare facility, which misses people who do not seek care and for whom distrust may be even more important.

We conducted a community-based survey to determine to what degree Whites, Blacks, and Latinos trust various healthcare institutions—community doctors, local hospitals, county health services, insurance companies, and the state and federal government—to do what is best for patients. We also assessed a number of demographic variables that might partially account for racial differences in trust, such as education and financial status.

METHOD

Study Population and Recruitment

The method of recruitment was similar to that used in the Kaiser Family Foundation's survey on race, ethnicity, and the healthcare system.[18] The sampling strategy was designed with two goals in mind: to obtain a sample representative of Durham County, NC, and to obtain approximately equal numbers of Whites, Blacks, and Latinos. A sample of Whites and Blacks was obtained by using standard list-assisted random-digit dialing methods. Active blocks of telephone numbers—including area code + three-digit exchange + two digit block number—that contained three or more residential directory listings were selected with probabilities in proportion to the number of listed phone numbers. Next, two digits were added randomly to complete the phone number. This method guarantees coverage of every assigned phone number, regardless of whether the number is listed in a directory, purposely unlisted, or too new to be listed. The numbers were compared against business directories; matching numbers were deleted from the list. To increase the odds of identifying Black households, Census tracks that had 10% or more Black households were identified; these Census tracks were then matched to phone exchanges. Because Durham has few Latino households, and the Latino population is not clustered, we could not use the same methods to recruit Latinos. Therefore, Latinos were recruited from a Durham County list of Latino surname households. When used in combination with the random-digit dialing sample, the surname method is appropriate to oversample Latinos.

A minimum of 15 attempts was made to contact each household. Interviewers asked to speak to the youngest male currently at home. If one was not available, they asked to speak to the oldest female currently at home. The interviews were conducted by Princeton Survey Research Associates between October 14 and December 16, 2002.* Respondents were interviewed in English or Spanish, according to their preference.

The proportion of working numbers where a request for interview was made was 77% (2615/3384). The proportion of contacted numbers where consent for interview was at least initially obtained was 54% (1415/2615). The proportion of initially cooperating and eligible interviews that were completed was 83% (1175/1415). Forty-four calls were interrupted, yielding a final study population of 1131 individuals. The response rate, which was calculated by multiplying 77% × 54% × 96%, was 40%; this rate is only slightly lower than that of the original Kaiser Family Foundation study (49%).[18]

Half of the items were adapted from the Kaiser Family Foundation's survey on race, ethnicity, and the healthcare system.[18,31] Other items were developed through literature reviews and a survey of physicians. Cognitive interviews were conducted with 10 Black and 10 Latino adults to examine their understanding of the instructions and questions, and to assure that most important factors related to barriers and access to health care were included. Given the length of the survey, the instrument was divided into three components: the core survey, additional items for split-half sample 1, and additional items for split-half sample 2. All subjects completed the core survey items but only one of the two split-half sets of questions. The split-half set that included the questions of current interest was administered to 586 participants. Data from respondents who were not White, Black, or Latino were excluded, yielding a sample of 549 for the current analyses.

* These data were collected before a teenage Mexican immigrant, Jésica Santillan, received incompatible organs during a transplant operation at Duke University.

Measures

The survey consisted of 40 questions, one of which dealt with issues of trust and formed the basis for this report. It asked, "How much of the time do you think you can trust (institution) to do what is best for patients?" Response scales ranged from *almost none of the time* (coded as 1) to *almost all of the time* (4). Other possible responses included *don't know* and *refuse to respond.* Institutions included community doctors, Duke University Hospital, Durham Regional Hospital, Durham Veterans Affairs Medical Center, Lincoln Community Health Center, Durham County Health Department, insurance companies, North Carolina state government, and the federal government.

Durham County is served by three tertiary care hospitals: Duke University Hospital (hereafter Duke), Durham Regional Hospital, and the Durham VA Medical Center (hereafter VA); Duke and Durham Regional are owned and operated by Duke Health System. All three facilities are teaching hospitals. Residents and medical students in all disciplines (except pediatrics at the VA) rotate through each hospital for some portion of their training. Attending physicians with academic appointments at Duke provide all staff coverage for Duke and the VA. Many of these attending physicians work in both facilities. Durham Regional is staffed primarily through attending physicians who maintain active outpatient practices in the surrounding community. Some of the specialty services at Durham Regional are staffed by Duke University faculty. Duke also staffs a hospital-owned outpatient clinic, Duke Outpatient Clinic. This facility is staffed by internal medicine house staff that, along with attending supervision, provides care for approximately 5,000 Durham County residents who do not have private health insurance. Additional care for uninsured are provided though the Duke Obstetrics and Gynecology Clinic and the Duke Pediatrics Practice in hospital or community practice settings. Lincoln Community Health Center is the only federally funded community health center in Durham County. They provide a wide range of services to the medically under-served, including Latinos and patients without insurance. Lincoln collaborates with other institutions (eg, Duke, Durham County Health Department) to provide health care to Durham community residents.

Self-identified race was assessed with two questions. One asked whether participants are Latino or of Hispanic origin or descent, such as Mexican, Puerto Rican, Cuban, or some other Latin American background. The second question asked what their race is; response options included White, African American/Black/Black Latino, Asian, Other, don't know, and refuse. Other demographic information included age, sex, marital status, highest level of education attained, and whether participants were born in the United States or another country. Additionally, financial status was assessed using a single item with four response options, including *you are having difficulty paying the bills, no matter what*; *enough money to pay bills, but you have to cut back*; *enough money to pay bills but little to spare for extras*; and *bills are paid and still have enough for extra*s. Latinos who completed interviews in Spanish indicated how well they speak English if they have to speak it on the telephone using a 3-point scale ranging from *not too well* (coded as 1) to *very well* (3).

Analyses

Due to small cell sizes, highest level of education and marital status were dichotomized (0=no college, 1=college; 0=not currently married, 1=currently married), and the first two categories of financial status were combined (hereafter *difficulty paying bills*). Age and facility with English were treated as continuous variables, with higher numbers corresponding to older age and better language ability. Initial inspection of the data revealed that immigration status and language of interview were highly related to Latino race (see Table 1); therefore, we present only descriptive statistics for immigration status and language of interview.

Analyses were performed with SAS version 8.02. Initial bivariate analyses were conducted to select covariates for a multivariable model that examined the effect of race on trust. Specifically, analysis of variance and independent samples *t* tests were conducted to examine relations between trust in each institution and the categorical demographic variables; Pearson correlations were calculated for the continuous demographic variables. The significant demographic variables (education, financial status, and marital status) were then entered as between-subjects factors, along with race, into a mixed model, with trust in

Table 1. Characteristics of respondents

Demographic Variable	*N* (%)
Race	
White	195 (36)
Black	183 (33)
Latino	171 (31)
Female	289 (53)
Not married	307 (56)
Attended college	315 (57)
Financial status	
Bills are paid, enough money for extras	197 (36)
Bills are paid, little to spare for extras	185 (34)
Bills are paid, have to cut back	67 (12)
Difficulty paying bills no matter what	83 (15)
From United States (all respondents)	374 (68)
From United States (Latinos)	17 (10)
Interview in English (all respondents)	404 (74)
Interview in English (Latinos)	27 (16)
Facility with English (Latinos)	
Not too well	97 (57)
Somewhat well	35 (20)
Very well	10 (6)

Within each demographic, totals and percentages may not equal 549 and 100, respectively, because of missing data.

Table 2. Descriptive statistics: trust in institutions

Institution	M (SD)	Frequencies (%)					
		Almost All of the Time	Most of the Time	Only Some of the Time	Almost None of the Time	Don't Know	Refused
Community doctors	2.89 (.80)	116 (21)	234 (43)	131 (24)	19 (4)	45 (8)	4 (1)
Duke University Hospital	3.17 (.80)	188 (34)	207 (38)	72 (13)	16 (3)	63 (12)	3 (1)
Durham Regional Hospital	3.11 (.77)	143 (26)	204 (37)	74 (14)	11 (2)	114 (21)	3 (1)
Durham VA Medical Center	2.95 (.88)	76 (14)	100 (18)	59 (11)	15 (3)	295 (54)	4 (1)
Health department	2.81 (.91)	84 (15)	131 (24)	92 (17)	28 (5)	211 (38)	3 (1)
Lincoln Community Center	2.88 (.96)	98 (18)	119 (22)	70 (13)	33 (6)	227 (41)	2 (0)
Insurance companies	2.38 (.93)	64 (12)	126 (23)	192 (35)	79 (14)	84 (15)	4 (1)
State government	2.40 (.89)	56 (10)	136 (25)	190 (35)	68 (12)	96 (18)	3 (1)
Federal government	2.40 (.92)	62 (11)	129 (24)	189 (34)	73 (13)	91 (17)	5 (1)

Within institution, percentages may not total 100 due to rounding.

institutions as a repeated measure; this analysis was analyzed with Proc Mixed using the Maximum Likelihood estimation procedure. Interactions between race and education, financial status, and marital status were tested to make sure these variables could be treated as covariates; none was significant. Post-hoc *t* tests were conducted to probe the interaction between race and institution type.

Separate analyses were performed to examine whether responding *don't know* to the trust questions was associated with any demographic variables. A dummy variable was created for each institution in which *don't know* was coded as 1, any other response as 0. Chi-square tests were performed for dichotomous demographic variables (ie, sex, college, and married), and logistic regression models were conducted for multi-level demographic variables (ie, race and financial status).

To account for the increased risk of capitalizing on chance afforded by the large sample size, a significance criterion of $P<.01$ was used for bivariate analyses (including analyses of *don't know* responses) and post hoc contrasts. A criterion of $P<.05$ was used for multivariable analyses because they require more power. Throughout this article, Cohen's *d* is used as the effect size index. Conventionally, *d*s of .20, .50, and .80 are interpreted as small, medium, and large effects, respectively.[32] These effect sizes correspond to the proportion of a standard deviation (one fifth, one half, and four fifths) that separates two means. For example, if the standard deviation of trust in community physicians is .80, a medium difference between means is .40.

RESULTS

The mean age of respondents was 42.0 (SD=17.2). The majority of respondents were female, not married, had some education beyond high-school, and did not have money for extras after paying bills (see Table 1). Most Latinos were not born in the United States, completed the interview in Spanish, and said they do not speak English well.

Most respondents trusted community doctors and medical centers almost all of the time or most of the time (see Table 2). Trust was less frequent for health insurance companies and the state and federal government. A number of participants responded *don't know* in relation to the VA hospital, health department, and community center, which we discuss below.

Race and Trust in Institutions

In unadjusted analyses, race was related to trust in healthcare institutions (see Table 3). Whites and Latinos trusted physicians more often than Blacks, *d*s=.29 and .39, respectively. Latinos trusted the health department, insurance companies, the state government, and the federal government more often than Whites and Blacks, $.43<ds<.85$.

In adjusted analyses, several covariates were significant. Respondents who did not attend college trusted the institutions more often ($M=2.89$) than those who did ($M=2.70$), $F(1, 518)=10.30$, $P<.01$, $d=.28$. Also, married respondents trusted more often ($M=2.86$) than those who were not married ($M=2.73$), $F(1, 518)=6.08$, $P=.01$, $d=.22$. Financial status was not significant, $F<1$. Finally, the main effect of institution type was significant, $F(8, 3033)=79.99$, $P<.001$. Respondents trusted Durham Regional ($M=3.12$) and Duke ($M=3.18$) most often, followed by community doctors ($M=2.91$), the VA ($M=2.92$), Lincoln ($M=2.86$), and health department ($M=2.82$); they trusted insurance companies ($M=2.46$), the state government ($M=2.45$), and the federal government ($M=2.44$) least often, $.07<ds<.30$.

Although the covariates were significant, the effect of race remained significant, $F(2, 518)=4.20$, $P<.02$, $d=.18$. A post hoc *t* test indicated that Latinos trusted institutions more often

Table 3. Bivariate (unadjusted) relations between race and trust in institutions

Institution	White (a)	Black (b)	Latino (c)	Significant Comparisons*
Community doctors	2.94	2.72	3.04	a–b b–c
Duke University Hospital	3.22	3.08	3.22	
Durham Regional Hospital	3.16	3.06	3.11	
Durham VA Medical Center	2.97	2.84	3.02	
Health department	2.67	2.66	3.07	a–c b–c
Lincoln Community Center	2.87	2.72	3.04	
Insurance companies	2.20	2.33	2.72	a–c b–c
State government	2.16	2.28	2.83	a–c b–c
Federal government	2.15	2.28	2.84	a–c b–c

* $P \leq .01$.

(M=2.91) than Blacks (M=2.71). This main effect was qualified by a significant interaction with institution type, $F(16, 3033)=6.17$, $P<.001$ (see Figure 1). Post hoc contrasts indicated that Whites trusted physicians slightly but significantly more often than Blacks, $t=2.76$, $d=.05$. Furthermore, Latinos trusted insurance companies slightly more often than Whites, $t=3.38$, $d=.12$, and Blacks, $t=2.75$, $d=.10$. Latinos also trusted the state government somewhat more often than Whites, $t=4.57$, $d=.17$, and Blacks, $t=4.09$, $d=.15$. Finally, Latinos trusted the federal government somewhat more often than Whites, $t=4.98$, $d=.18$, and Blacks, $t=4.46$, $d=.16$.

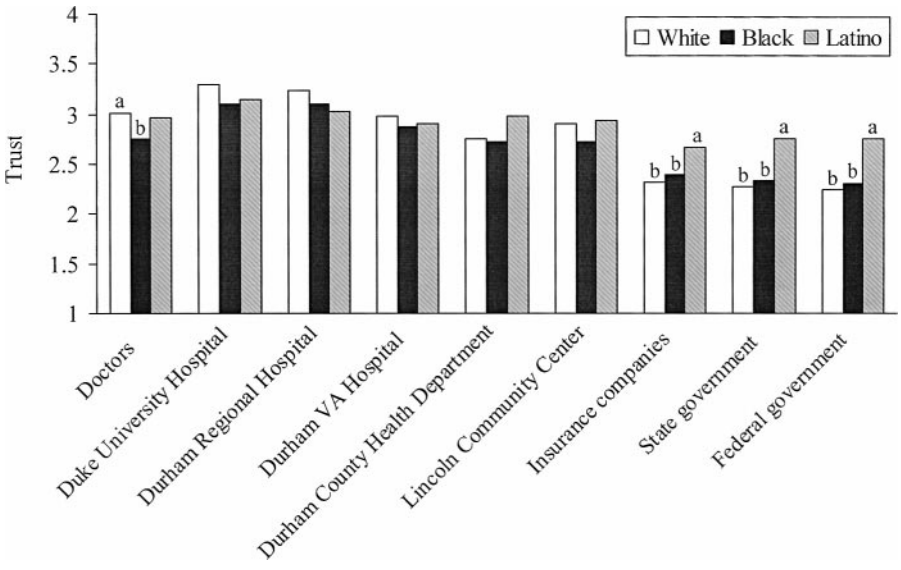

Fig 1. Adjusted least-squares means of trust in various healthcare institutions as a function of race. Bars with different subscripts differ at $P \leq .01$.

"Don't Know" Responses

A *don't know* response was used frequently for some of the institutions (see Table 2)—in particular, the VA hospital, health department, and community center. The large numbers of *don't know* responses are likely due to never having received care from those institutions.

We examined whether demographic variables were associated with responding *don't know*. In relation to Lincoln Community Health Center, the odds of saying don't know were less among Blacks (OR: .14, CI: .09 to .23), $\chi^2(1)=14.88$, and Latinos (OR: .10, CI: .06 to .17), $\chi^2(1)=35.54$, than Whites. The odds were greater among those of highest financial status (OR: 3.29, CI: 2.09 to 5.20) than those of lowest financial status, $\chi^2(1)=27.95$. Respondents who attended college were more likely to respond *don't know* (73.57%) than those who did not attend college (26.43%), $\chi^2(1)=39.73$.

In relation to the Durham County Health Department, the odds of responding *don't know* were less along Latinos than among Whites (OR: .34, CI: .22 to .53), $\chi^2(1)=10.03$. Also, respondents who attended college were more likely to respond *don't know* (66.82%) than those who did not attend college (33.18%), $\chi^2(1)=11.59$.

In relation to insurance companies, the odds of responding *don't know* were less among Blacks (OR: .87, CI: .42 to 1.81), $\chi^2(1)=8.37$, but greater among Latinos (OR: 4.70, CI: 2.60 to 8.52). $\chi^2(1)=41.76$, than Whites. The odds were less among those of highest financial status (OR: .47, CI: .25 to .91) than those of lowest financial status, $\chi^2(1)=8.76$. Finally, respondents who attended college were less likely to respond *don't know* (34.52%) than those who did attend college (65.48%), $\chi^2(1)=21.91$.

In sum, some significant associations were found for the institutions with larger percentages of *don't know* responses. They are sensible because the community health center and the health department provide services to the medically underserved.

DISCUSSION

While previous research has examined racial differences in trust of the medical community, this research has been limited because of its failure to include minority groups other than Blacks and its focus on physicians and hospitals as opposed to other institutions. Furthermore, most assessments of trust have come from patients who use the facilities. Previous research suggested that Blacks are less trusting of physicians[27,28] and hospitals.[21] Blacks would similarly be expected to trust the state and federal government less than Whites because of their history of being used as experimental subjects.[13,14] Although we found that Blacks trusted physicians to do what is best for patients less often than Whites, we found no Black-White differences in frequency of trust in relation to the other institutions.

The finding that Latinos trusted insurance companies and both government entities more often than Whites or Blacks is surprising given research showing disparities in Latinos' healthcare access and utilization.[1,2] Because most of our Latino respondents were not born in the United States, one possible explanation for this discrepancy is that they immigrated because they believed the United States would offer them better opportunities. By virtue of a halo effect, they may believe that everything in the United States is trustworthy. Another possible interpretation of these results is that Latinos responded in what they felt was a more socially desirable way.

Implications and Future Research

One question that naturally arises from these findings is: Do people trust or distrust healthcare institutions? Our response scale measured both frequency and quality of trust. Most means were near the midpoint of the response scale (ie, 2.5), which indicates that respondents were largely ambivalent. What might it take to push someone either in the direction of trust or distrust? History tells us that publicized incidences of malpractice and abuse of research subjects can lead people to distrust.[33–36] Negative personal experiences likely influence people's attitudes as well.[37] While patient trust is important, a small amount of skepticism could be healthy if it promotes improvements in healthcare institutions. Distrust may also be detrimental if it causes patients to avoid necessary care. Further research on calibration of the trust items is needed before these inferences can be supported.

Another question is how significant the racial and educational differences in trust are. The effect sizes were small in magnitude (many smaller than the .20 that is traditionally considered a small effect). Research is needed to determine whether differences of this magnitude would have real-world implications (eg, less trusting individuals would avoid seeking preventive health care).

Assuming these findings are of public health significance, they suggest that, although minorities in general have less access to health care than Whites,[16,38] interventions for reducing barriers should be tailored to specific racial/ethnic groups. Furthermore, they underscore the need to create culturally sensitive and appropriate interventions that target trust to reduce barriers to health care. If, as previous research has suggested,[16,24] distrust is a barrier for Blacks, interventions should be targeted toward increasing trust. In contrast, interventions designed to increase trust may not be as important for Latinos. Instead, interventions may focus on more pressing issues such as language problems, financial constraints, and lack of insurance and familiarity with the healthcare system, although financial constraints are barriers to Blacks as well.[16,39] Such considerations should be implemented with the ultimate goal of reducing racial disparities in quality and quantity of health care.

Our understanding of the relationship between race and trust could be enhanced in many ways. For example, Blacks may not distrust medical institutions more than Whites generally, as we found, but be wary of specific practices. Blacks are more likely than Whites to believe that doctors would not inform patients of risks[12] and that patients are sometimes deceived or misled by hospitals.[21] Research is also needed to uncover the experiential and environmental factors that mediate or moderate the relation between race and trust.

Furthermore, they [these research findings] underscore the need to create culturally sensitive and appropriate interventions that target trust to reduce barriers to health care.

While the current findings are informative, they should be interpreted with caution due to our sampling method. For one, the large percentage of females may limit the ability to generalize our results to men. Second, we asked about some institutions unique to Durham, NC (community doctors, hospitals, county health department); therefore, findings may not generalize to other parts of the state or the country. Third, the non-random sampling of Blacks and Latinos limits the external validity of our results. Fourth, the relatively low response rate limits the generalizability of our results to those individuals who were reached and who consented to participate. Fifth, frequencies of trust in the VA hospital, health department, and community health center may have been different if we had had a lower percentage of *don't know* responses. Finally, this study was cross sectional, which precludes drawing causal inferences about the relationship between race and trust.

Although disparities exist in healthcare access, utilization, and quality, they should not be considered permanent. However, conditions cannot improve without a real effort on behalf of the healthcare community. Methods for improving and maintaining trust must be developed so that, ultimately, disparities in health care may dwindle.

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Data analysis and interpretation: Voils, Oddone, Weinfurt, Bosworth
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