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Race and Trust in the Health Care System

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SYNOPSIS

Objective. A legacy of racial discrimination in medical research and the health care system has been linked to a low level of trust in medical research and medical care among African Americans. While racial differences in trust in physicians have been demonstrated, little is known about racial variation in trust of health insurance plans and hospitals. For the present study, the authors analyzed responses to a cross-sectional telephone survey to assess the independent relationship of self-reported race (non-Hispanic black or non-Hispanic white) with trust in physicians, hospitals, and health insurance plans.

Methods. Respondents ages 18–75 years were asked to rate their level of trust in physicians, health insurance plans, and hospitals. Items from the Medical Mistrust Index were used to assess fear and suspicion of hospitals.

Results. Responses were analyzed for 49 (42%) non-Hispanic black and 69 (58%) non-Hispanic white respondents ($N=118$; 94% of total survey population). A majority of respondents trusted physicians (71%) and hospitals (70%), but fewer trusted their health insurance plans (28%). After adjustment for potential confounders, non-Hispanic black respondents were less likely to trust their physicians than non-Hispanic white respondents (adjusted absolute difference 37%; $p=0.01$) and more likely to trust their health insurance plans (adjusted absolute difference 28%; $p=0.04$). The difference in trust of hospitals (adjusted absolute difference 13%) was not statistically significant. Non-Hispanic black respondents were more likely than non-Hispanic white respondents to be concerned about personal privacy and the potential for harmful experimentation in hospitals.

Conclusions. Patterns of trust in components of our health care system differ by race. Differences in trust may reflect divergent cultural experiences of blacks and whites as well as differences in expectations for care. Improved understanding of these factors is needed if efforts to enhance patient access to and satisfaction with care are to be effective.

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There is a well-documented legacy of racial discrimination toward African Americans in medical research and clinical settings. Perhaps most notably, the 1932 U.S. Public Health Service Tuskegee Syphilis Study on Untreated Syphilis in the Negro Male, in which federally funded investigators withheld available treatment from African American men with syphilis, serves as a striking example of this legacy.¹⁻³ Recent research has demonstrated that African Americans' knowledge of this history of racial discrimination is associated with reluctance to participate in medical research and may be associated with low rates of trust in medical researchers and clinicians.^{4,5}

Differences in trust of health care providers have been implicated in racial disparities in health and access to health care and in lower rates of satisfaction with physician visits among African Americans than among other population groups.^{4,6,7} Trust is considered to be a vital element of the therapeutic alliance and may be closely related to the degree to which patients seek routine medical care, adhere to prescribed medications, and maintain long-term relationships with medical providers and health insurers.⁸⁻¹¹ Thus, findings regarding racial differences in trust may contribute insight into racial disparities in health and health care.¹²

While many studies have focused on the patient-physician relationship and attitudes toward health care,¹²⁻¹⁴ little work has been done to investigate racial differences in attitudes toward different components of health service delivery. We sought to examine differences between African Americans and whites in attitudes toward physicians, health insurance plans, and hospitals. We hypothesized that African Americans would be more likely than white Americans to have distrusting attitudes toward all three of these components of health care delivery.

METHODS

Study design and population

As part of a cross-sectional study designed to assess individuals' willingness to donate organs or blood, we surveyed people about their trust in physicians, health insurers, and hospitals. The study population was defined as all residents living in 14 ZIP Codes (chosen to include populations with a broad variety of demographic characteristics) in the Baltimore metropolitan area, including inner city and suburban areas. Subjects were ages 18-75 years. Potential subjects were excluded from participation if they had characteristics that might serve as contraindications to becoming live kidney donors, including personal histories of kidney

failure or kidney disease, kidney transplant, or congenital defect of the kidney.

Survey administration

Telephone numbers were drawn by random selection with equal probability sampling techniques.¹⁵ Three trained interviewers placed telephone calls and administered the survey. For telephone numbers with no answer, a minimum of eight repeat calls were made during various times of the day. Once a household was reached, a respondent was identified using the Troldahl-Carter-Bryant method, which employs enumeration of the age and gender of household members to randomly select respondents.¹⁶

Questionnaire content

We asked respondents about their demographic information, type of health insurance, employment status, and previous exposure to the medical system.

Race/ethnicity was self-reported in response to the fixed-choice questions "How would you describe your race?" and "How would you describe your ethnicity?" The answer choices for race were "American Indian or Alaskan Native," "Asian/Pacific Islander," "black," "white," and "other." The answer choices for ethnicity were "Hispanic" or "not of Hispanic origin."

To assess trust in physicians and health insurance plans, we asked respondents to rate their agreement with two statements derived from the Trust in Physician Scale,^{10,13,17,18} which had been previously validated among the general public and convenience samples: (a) "I trust my physician to put my medical needs above all other considerations when treating my medical problems" and (b) "I trust my health plan to put my medical needs above all other considerations when treating my medical problems." Responses on a five-point scale were "completely agree," "mostly agree," "somewhat agree," "agree a little," and "not agree at all."

To assess trust in hospitals, we asked respondents to rate their agreement with the following statement derived from the Medical Mistrust Index:^{19,20} "I trust hospitals." This index has been used to measure trust and concerns about discrimination in populations of patients with chronic illness but has not been validated among the general public.

We also assessed attitudes of fear and suspicion toward hospitals using other items from the Medical Mistrust Index. These included: "Hospitals are places where people go to die"; "People should always follow the advice given to them at hospitals"; "Patients have sometimes been deceived or misled at hospitals"; "I am afraid of hospitals"; "Hospitals often want to know

more about your personal affairs or business than they really need to know"; and "Hospitals have sometimes done harmful experiments on patients without their knowledge." Responses on a five-point scale were "strongly agree," "agree," "no opinion," "disagree," and "strongly disagree."

For each question about trust in and attitudes about hospitals, participants were asked to base their opinions on hospitals in general and not on any specific hospital, doctor, nurse, or other staff member with whom they might have had contact in the past.

Statistical analysis

We limited our analysis to data on individuals who self-identified as non-Hispanic black or non-Hispanic white because of the small number of respondents who reported other racial/ethnic identifications. We compared differences in characteristics for the two racial groups using chi-square analysis for categorical variables and ANOVA for continuous variables (e.g., age). For questions regarding trust in physicians and health insurance plans, responses were dichotomized to "mostly or completely agree" (reported below as agreement with the statement) vs. "somewhat agree" or less. For questions regarding trust and suspicion of hospitals, responses were dichotomized to "agree or strongly agree" (reported as agreement with the statement) vs. "no opinion" or less. We grouped respondents answering "no opinion" with those reporting disagreement with statements about trust and suspicion of hospitals because we sought to understand whether race was associated with affirmative agreement.

To measure the presence, strength, and independence of the association of self-reported race with trust in physicians, health insurance plans, and hospitals and attitudes about hospitals, we performed both simple and multivariate logistic regression. In multivariable logistic regression analyses, we adjusted for age as a categorical variable (18–30 years; 31–50 years; >50 years), gender, education (high school or less; 2–4 years of college; graduate or professional), annual household income (<\$40,000; \$40,000–\$80,000; >\$80,000), type of health insurance (private; Medicare; Medical Assistance [Medicaid]; CHAMPUS/CHAMPVA; no insurance), belonging vs. not belonging to a health maintenance organization, employment status (full-time or part-time employment; student/retired/homemaker; disabled/unemployed), and prior exposure to medical environments. Prior exposure to medical environments encompassed subject-reported interface with medical professionals for the care of one or more specific medical conditions and subject-reported history of medical care requiring hos-

pitalization. The conditions considered were heart attack or stroke, hepatitis, kidney stones, diabetes, hypertension, cancer, HIV/AIDS, alcohol or drug abuse, and depression or anxiety.

The variables for adjustment were selected either on the basis of our identification of cofounders in a bivariate analysis (i.e., education, household income, employment status) or because previously published literature demonstrated potential associations with trust^{10,11,18,21–23} (i.e., age, gender, type of insurance, type of health insurance, and prior exposure to medical system). We converted adjusted odds ratios to absolute probabilities.²⁴ Differences in adjusted percentages should be interpreted as absolute differences between percentages of respondents agreeing with statements after adjustment for potential cofounders. A two-sided *p*-value <0.05 was considered statistically significant.

RESULTS

Respondent characteristics

A total of 175 households were contacted and agreed to randomization of respondents within the household. Among randomly selected potential participants, 125 were eligible and agreed to participate (71%). This study population was similar to the underlying population in the 14 ZIP Code areas, according to 1990 Census data for Metropolitan Baltimore, with respect to all demographic characteristics with the exception of gender (more females in the study population than in the underlying population, which was 53% female.²⁵

For the present study, we analyzed data on the 49 non-Hispanic black respondents (42% of study sample) and the 69 non-Hispanic white respondents (58%), for a total *N* of 118, representing 94% of the total survey population. For convenience, we will refer to these individuals as "black" or "white" in the remainder of this report.

As a group, black participants reported having less education and less income than white respondents, and they were more likely to report being disabled or unemployed (*p*<0.01 for each of these comparisons) (see Table).

Trust in physicians, health insurance plans, and hospitals

A majority of all respondents trusted their physicians (71%) and trusted hospitals (70%), but fewer trusted their health insurance plans (28%) (Figure 1). Before and after adjustment for potential cofounders, black and white respondents differed in their trust in physicians, health insurance plans, and hospitals. Black re-

Table. Self-reported sociodemographic characteristics of study sample

Characteristic	Total sample (N = 118) Number (Percent)	Non-Hispanic black (n = 49) Number (Percent)	Non-Hispanic white (n = 69) Number (Percent)	p-value ^a
Age in years				0.676
18–30	21 (18)	9 (18)	12 (17)	
31–50	58 (49)	26 (53)	32 (46)	
>50	39 (33)	14 (29)	25 (36)	
Gender				0.740
Male	43 (36)	17 (35)	26 (38)	
Female	75 (64)	32 (65)	43 (62)	
Education				<0.01
High school or less	46 (39)	26 (53)	20 (29)	
2–4 years of college	44 (37)	19 (39)	25 (36)	
Graduate or professional	27 (23)	4 (8)	23 (33)	
Annual household income				<0.01
\$0–\$40,000	52 (44)	28 (57)	24 (35)	
\$40,001–\$80,000	40 (34)	17 (35)	23 (33)	
>\$80,000	18 (15)	1 (2)	17 (25)	
Type of insurance				0.224
Private	98 (83)	38 (78)	60 (87)	
Medicare	4 (3)	2 (4)	2 (3)	
Medical Assistance ^b	5 (4)	3 (6)	2 (3)	
CHAMPUS/CHAMPVA	2 (2)	0 (0)	2 (3)	
No insurance	8 (7)	6 (12)	2 (3)	
Belong to a managed care organization				0.140
Yes	62 (53)	30 (61)	32 (46)	
No	53 (45)	17 (35)	36 (52)	
Employment status				<0.01
Full-time or part-time	90 (76)	40 (82)	50 (72)	
Student, retired, homemaker	24 (20)	5 (10)	19 (28)	
Disabled, unemployed	4 (3)	4 (8)	0 (0)	
Exposure to medical system				0.564
No history of specific conditions ^c and no hospitalizations	9 (8)	4 (8)	5 (7)	
History of one or more specific conditions, ^c no hospitalizations	5 (4)	3 (6)	2 (3)	
One or more hospitalizations, no history of specific conditions ^c	54 (46)	19 (39)	35 (51)	
History of one or more specific conditions ^c and one or more hospitalizations	50 (42)	23 (47)	27 (39)	

^aChi-square tests.^bMedicaid.^cHeart attack or stroke, hepatitis, kidney stones, diabetes, hypertension, cancer, HIV/AIDS, alcohol or drug abuse, and depression or anxiety.

spondents were less likely to trust their physicians (adjusted absolute difference 37%, $p=0.01$) and more likely to trust their health insurance plans (adjusted absolute difference 28%, $p=0.04$) (Figure 1). The difference between black and white respondents in trusting hospitals (absolute adjusted difference 13%) was not statistically significant.

Fear and suspicion of hospitals

Fewer than half of all respondents agreed with the statement "Hospitals are places where people go to die," and fewer than half said, "I am afraid of hospitals," while majorities agreed with the statements "People should always follow the advice given to them at hospitals" and "Patients have sometimes been deceived or misled at hospitals." However, black participants were more likely than white participants to report concerns about personal privacy and the potential for harmful experiments in hospitals by agreeing that "Hospitals often want to know more about your personal affairs or business than they really need to know" (adjusted absolute difference 33%, $p<0.01$) and "Hospitals have sometimes done harmful experiments on patients without their knowledge" (adjusted absolute difference 30%, $p=0.01$) (Figure 2).

Age and exposure to medical establishments were also associated with trust and attitudes toward hospitals. Respondents who were older than 50 were more likely to report having trust in their physicians (82%) than their youngest counterparts, ages 18 to 30 (56%, $p<0.05$). Those reporting specific medical conditions

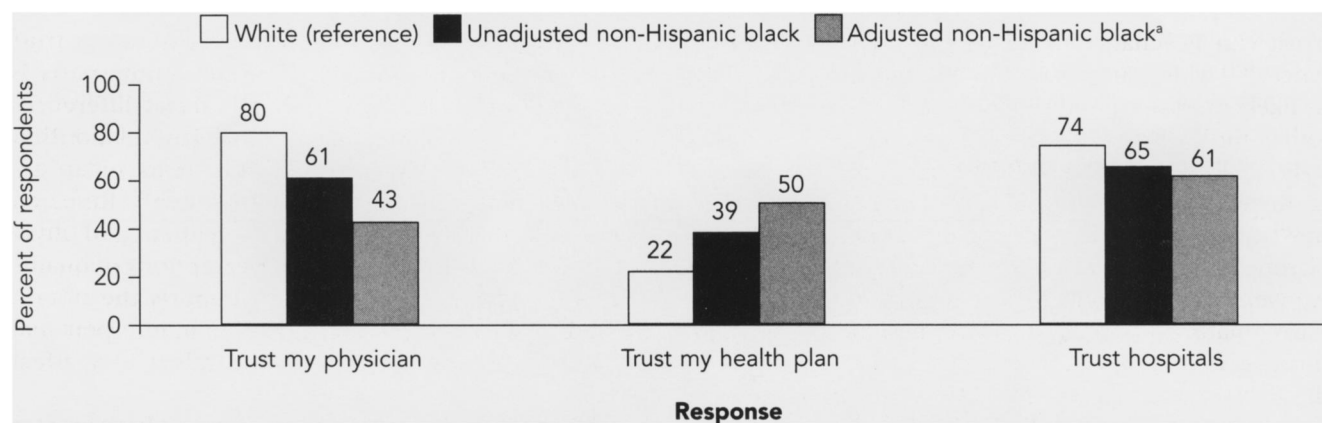
or prior hospitalizations were less likely to agree with the statement "People should follow the advice given them at hospitals" (66%) than those not reporting these conditions or prior hospitalizations (80%, $p<0.05$). These variables were included in multivariate models examining the effect of race on trust and attitudes.

DISCUSSION

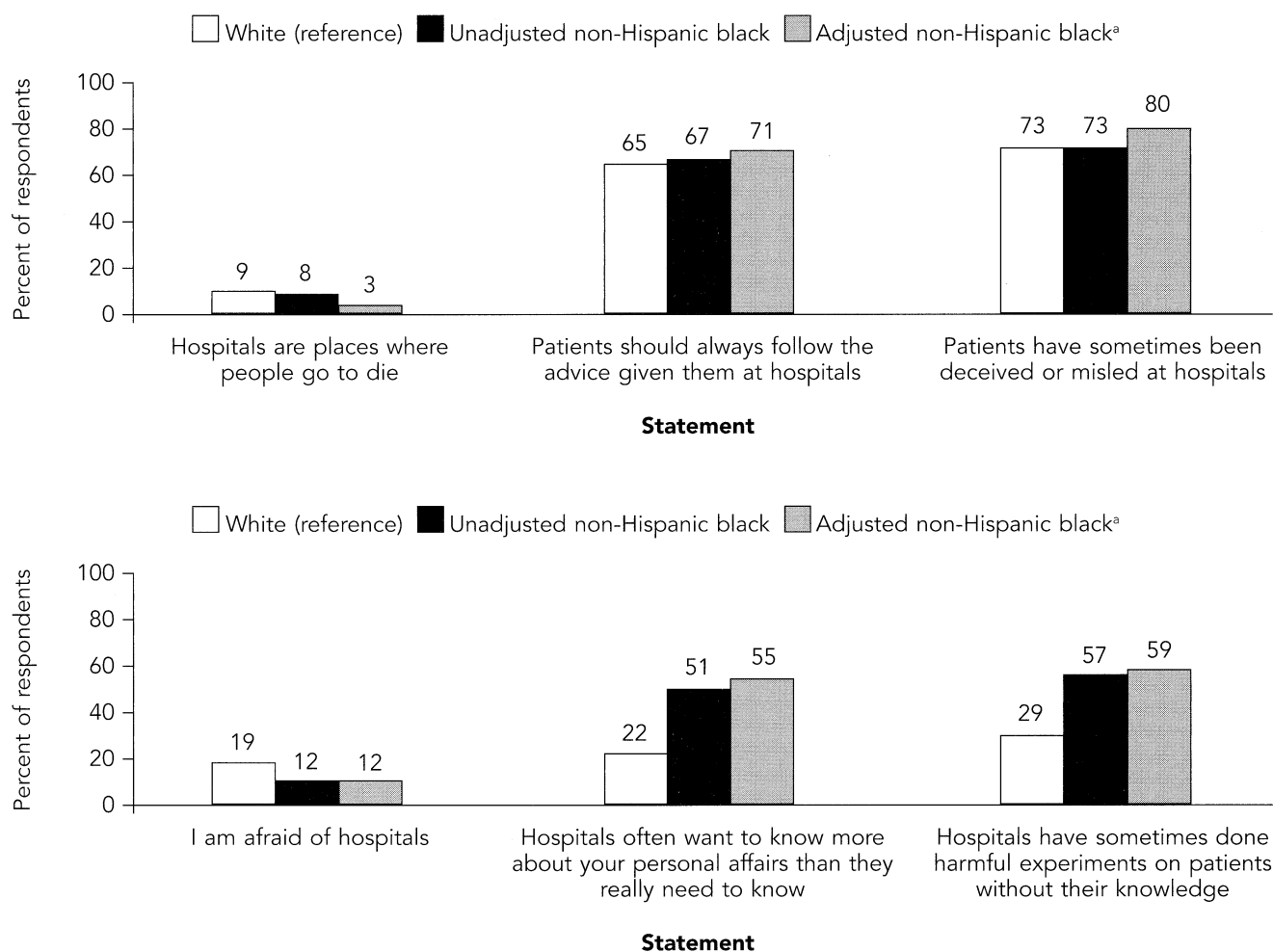
In this population-based study, respondents reported a high degree of trust in physicians and hospitals and a lesser degree of trust in their health insurance plans. However, patterns of trust in physicians, health insurance plans, and hospitals differed by race. Non-Hispanic black respondents were less likely than non-Hispanic white respondents to trust their physicians and more likely to trust their health care plans. There was no statistically significant difference in trust in hospitals. Black respondents were, however, more likely than their white counterparts to express concerns about personal privacy and the occurrence of harmful experiments in hospitals. While racial differences in perceptions of physician style and trust have been documented,⁷ studies have not juxtaposed attitudes toward physicians with attitudes toward other important elements of the health care delivery system.

Racial variation in trust of different health care entities may reflect divergent cultural experiences that affect the domains of both interpersonal and institutional trust. Interpersonal and institutional forms of

Figure 1. Percentage of respondents agreeing with statements about trust in different components of the health care delivery system



^aAdjusted for self-reported age, gender, education, household income, type of health insurance, membership in a managed care organization, employment status, and previous exposure to medical environments.

Figure 2. Percentage of respondents agreeing with statements about fear and suspicion of hospitals

^aAdjusted for self-reported age, gender, education, household income, type of health insurance, membership in a managed care organization, employment status, and previous exposure to medical environments.

trust can be characterized by the nature of experiences on which such trust is based. Interpersonal trust is likely to arise from direct personal experiences with other individuals (for example, one's personal physician), while institutional trust is likely to incorporate general impressions of professional institutions formed not only on the basis of personal experiences but also through secondhand experiences and social cues (e.g., conversation with others, media portrayals, and legal or regulatory protective measures designed to prevent racial discrimination).^{11,23} For African Americans, who have historically been victims of both interpersonal and institutional racial discrimination, both personal and institutional relationships may be affected by concerns about continued discrimination.^{26,27} Our finding

that African Americans were less likely to report trust in their physicians than their white counterparts is consistent with published findings of racial differences in perceptions of the patient-physician relationship and may reflect African Americans' fears regarding interpersonal race-based discrimination.^{7,28,29} Research demonstrating that concordance in patient and physician race is positively related to perceptions of quality of care and patient satisfaction supports the notion that fear of race-based discrimination in interpersonal relationships with health care providers may affect trust.^{28,29}

African Americans have been shown to have greater awareness of the documented history of racial discrimination in the health care system than white Ameri-

cans, and this greater awareness of historical discrimination has been associated with less trust of clinical and research institutions.⁵ This is consistent with our finding of greater concern among African Americans about the potential for harmful experiments being performed in hospitals.

Perceptions of distrust may be more pervasive in relation to health care settings in which race/ethnicity cannot easily be hidden, such as a private physician's office or hospital; in contrast, health plan administrative personnel are rarely in visible contact with patients, and many private health plans have not collected information on race/ethnicity.³⁰ Racial anonymity may enhance African Americans' trust in their health plans. If greater trust is related to fewer concerns about race-based discrimination, trust of health plans may be negatively impacted by current policies to augment the reporting of race/ethnicity data on health plan enrollees.³¹ An alternative explanation for greater trust in health plans among African Americans may be racial differences in expectations of health plan performance. Some work has shown that expectations of health plan performance affect trust.²³ Although little has been done in this area, research has demonstrated racial differences in perceptions of public services (e.g., police, fire, and school services) that are linked to differential past daily life experiences.²⁶ African Americans who currently have health insurance may be more trusting of their health insurance plans than white enrollees because of family histories of deprivation of even a minimum level of health insurance coverage.

Limitations of this analysis deserve mention. First, the study sample consisted of a small group of people living in a diverse metropolitan area of the mid-Atlantic region whose sociodemographic characteristics may have differed from those of the general population. This may limit the generalizability and power of our findings. Second, although we were able to identify a relationship between race and attitudes toward physicians, health insurance plans, and hospitals, we did not assess the reasons for these attitudes. Newly developed scales designed to independently assess trust in health insurers may more fully elucidate reasons for racial differences in perceptions of health insurance plans.³² Third, little is known about whether people respond differently to questions about their own physician, hospital, or health insurance plan than about physicians, hospitals, or health insurance plans in general. Fourth, as in any study, participants may have differed from non-participants. One criterion for exclusion from this study was a personal history of kidney disease, which might exclude a person from becoming a live kidney donor. If people with kidney

disease are more distrusting of physicians, health insurance plans, and hospitals than the population as a whole, our results might reflect the attitudes of people who were more trusting than non-participants. Fifth, our study design was cross-sectional in nature. The results may be subject to respondents' recall bias (e.g., inaccurate memories of health care system contact). Finally, it is possible that respondents could have provided socially desirable answers. Notwithstanding these limitations, our findings identify intriguing differences in attitudes toward different health care entities that may contribute to racial variation in health and access to health care services.

In summary, this study identifies racial differences in patterns of trust of physicians, health insurance plans, and hospitals. These differences may be related to minority group members' awareness of a legacy of discrimination in the health care system. Sensitivity of health care providers to perceptions of trust in various components of health care delivery and further research to understand not only potential motivators for distrust but also the importance of distrust in affecting health care decisions may help to improve the state of health and health care for racial/ethnic minorities in the United States.

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