

The State of Research on Racial/Ethnic Discrimination in The Receipt of Health Care

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Objectives. We conducted a review to examine current literature on the effects of interpersonal and institutional racism and discrimination occurring within health care settings on the health care received by racial/ethnic minority patients.

Methods. We searched the PsychNet, PubMed, and Scopus databases for articles on US populations published between January 1, 2008 and November 1, 2011. We used various combinations of the following search terms: discrimination, perceived discrimination, race, ethnicity, racism, institutional racism, stereotype, prejudice or bias, and health or health care. Fifty-eight articles were reviewed.

Results. Patient perception of discriminatory treatment and implicit provider biases were the most frequently examined topics in health care settings. Few studies examined the overall prevalence of racial/ethnic discrimination and none examined temporal trends. In general, measures used were insufficient for examining the impact of interpersonal discrimination or institutional racism within health care settings on racial/ethnic disparities in health care.

Conclusions. Better instrumentation, innovative methodology, and strategies are needed for identifying and tracking racial/ethnic discrimination in health care settings. (*Am J Public Health.* 2012;102:953–966. doi:10.2105/AJPH.2012.300773)

Racial/ethnic minorities suffer disproportionate morbidity and mortality from chronic diseases, including cancer, heart disease, diabetes, and stroke. US racial/ethnic health disparities are a consequence of several factors including the disproportionate prevalence of less healthy lifestyles, low socioeconomic status, resource-poor neighborhood environments, and poorer access to care. Another factor is the poorer care received by minority patients after they enter the health care system. The 2005 National Healthcare Disparities Report indicated that White patients receive better quality of care than 53% of Hispanic, 43% of African American, 38% of American Indian/Alaska Native, and 22% of Asian and Pacific Islander patients.¹ An updated report in 2010 showed no changes in disparities in 30 of 41 quality core measures for Hispanics, 40 of 47 measures for African Americans, 13 of 19 measures for Asians, and 15 of 22 measures for American Indian or Alaska Natives compared with Non-Hispanic Whites.² Efforts to eliminate these disparities are hampered by the lack of a full understanding of all proximal causes including

any role that racial/ethnic discrimination within the health care system might play.

Racial discrimination is defined as “(1) differential treatment on the basis of race that disadvantages a racial group and, (2) treatment on the basis of inadequately justified factors that disadvantage a racial group,”^{3(p39)} and has been linked to racial/ethnic disparities in health outcomes. Not all discrimination occurs at the individual level or is intended. Seemingly benign policies, practices, structures, and regulations also have the potential to be discriminatory and are collectively referred to as institutional racism. Individual level discrimination and institutional racism may compound the negative effects of other health determinants,⁴ thereby placing racial/ethnic minorities in double jeopardy.

Results of a recent nationwide poll of the United States showed that 74% of African Americans, 69% of other non-Whites, and 30% of Whites report personally experiencing general race-based discrimination.⁵ Research studies have shown that general experiences with racial/ethnic discrimination are associated with a variety of adverse health outcomes

including higher mortality⁶; lower use of cancer screening⁷; elevated blood pressure^{8,9}; higher levels of C-reactive protein¹⁰; substance use^{11,12}; mental and physical health^{13,14} including mood, anxiety, and psychiatric disorders¹²; increased depressive symptoms¹⁵; weight gain¹⁶; high body mass index¹⁷; and smoking.¹⁸ Not all studies, however, have found a significant association between general race/ethnicity-based discrimination and health.^{19,20} Although racial/ethnic discrimination within health care settings and health systems has also been implicated in health disparities,²¹ little is known about the empirical evidence supporting its prevalence or the association with poor health outcomes.

We provide a review of the scientific literature on the prevalence, perception of and effect of racial/ethnic discrimination and institutional racism within health care settings. Our specific objectives were to examine the extent to which recent literature addressed the following research questions:

1. What research methods are currently being used to measure receipt of discriminatory health care?
2. What is the current prevalence of racial/ethnic discrimination in health care settings?
3. Has the perception of or receipt of discriminatory health care changed over time?
4. How does racial/ethnic discrimination influence health in health care settings?
5. How do system level factors, such as institutional practices, policies and regulations contribute to discriminatory health care services?

This review summarizes results of recent research, identifies currently used instrumentation and methodology, and identifies areas where additional research is needed and is a resource for researchers with interest in working in this topic area.

METHODS

We searched the PsychInfo,²² PubMed,²³ and SciVerse Scopus (Scopus) databases²⁴ for articles that focused on US populations published between January 1, 2008 and November 1, 2011. The beginning of the timeframe (2008) was chosen because of the 2009 publication by Williams and Mohammed²⁵ that reviewed the literature on discrimination and health from 2005 to 2007 from a methodological perspective. Kressin et al.²⁶ reviewed the psychometric properties of instruments used to examine discrimination. Our review differs from these in that we specifically examined current literature with a focus on racial/ethnic discrimination by health professionals or that occur within health care settings as opposed to discrimination occurring in the general community. Our cutoff date of November 1, 2011 reflects the publication date of the most current literature available at the time of our review.

Combinations of the following terms were used to search the 3 databases: discrimination, perceived discrimination, race, ethnicity, racism, institutional racism, stereotype, prejudice, and bias combined with health or health care in the text, title, or abstract (e.g., racial discrimination and health, racial discrimination and health care, racism and health and racism and health care; see Appendix A [available as a supplement to the online version of this article at <http://www.ajph.org>] for all search terms). A search of all 3 databases was also conducted with the names of commonly used instruments used to assess discrimination (e.g., Everyday Discrimination, Experiences of Discrimination, Perceptions of Racism Scale, Schedule of Racist Events, Implicit Association Test, Racism in Health Care Index, Perceived Prejudice in Health Care, Multiple Discrimination Scale, and General Experiences of Ethnic Discrimination) as search terms. These instruments were identified through a PubMed search with the search terms “measurement and racial discrimination” and through personal knowledge of the lead author. Other than time of publication, there were no other limits applied for the search. The last date the search was performed was November 18, 2011 for PubMed, November 23, 2011 for PsychNet,

and December 13, 2011 for Scopus; however, only articles published between January 1, 2008 and November 1, 2011 were used in the review.

To be eligible for inclusion in this review articles had to be published in English; focused on US health care providers, patients, or US health care settings; and original research articles that reported quantitative or qualitative results of racial/ethnic discrimination, patient or provider perceptions of race/ethnicity-based discrimination within US health care settings, or discriminatory attitudes and beliefs of US patients or health care providers. We initially identified 5024 articles, of which 1185 were found to be duplicates of articles found in other searches of the same database or of one of the other databases. After these were deleted, 3839 unique articles remained from the combined searches of the 3 databases using the search terms in Appendix A (available as a supplement to the online version of this article at <http://www.ajph.org>). Titles of the remaining articles were first examined to determine their general relevance to the current review. Abstracts of articles that appeared to focus on racial/ethnic discrimination were then reviewed for inclusion ($n = 686$). Abstracts from dissertations; commentaries, letters to editors, editorials or that did not report original research; did not report results of research on US populations, or that did not provide information on the health care setting were deleted ($n = 509$). One hundred seventy-seven abstracts were further reviewed for inclusion, of which 94 were later found not to meet the inclusion criteria, leaving 83 articles of which 58 met the inclusion criteria after further review (Figure 1). These 58 articles are summarized in the current study.

RESULTS

The results of the literature search are presented by topic area. Each section addresses 1 of the 5 research questions.

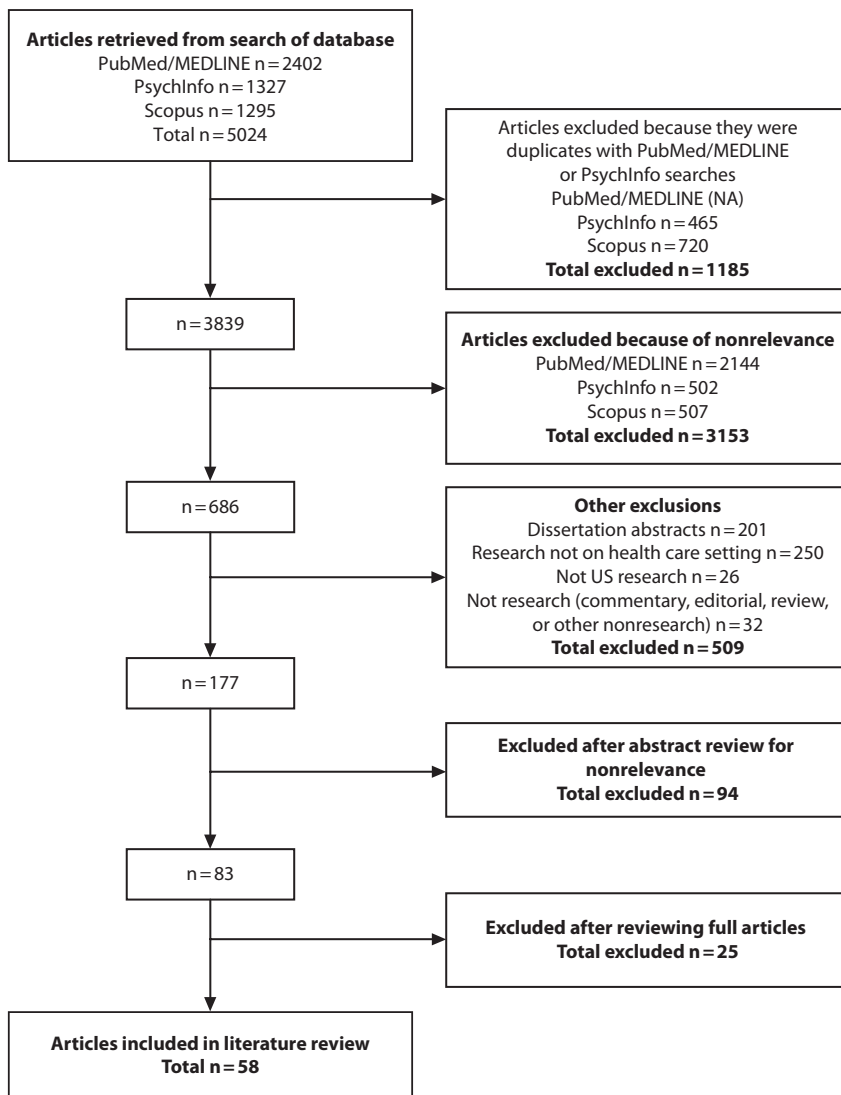
Measurement of Racial/Ethnic Discrimination in Health Research

The accuracy of research findings is only as good as the tools used to measure them. Optimal measures of racial/ethnic discrimination

in health care settings assess the actual occurrence of or potential for discriminatory events, the impact of discriminatory events among individuals who experienced them, and the effect if any, on the patients' interactions with their health care provider.²⁶ Three published reviews examined measures used to assess discrimination in health research.^{25–27} In general, measures examined in 2 of the previous reviews^{26,25} primarily assessed general experiences of discrimination and thus only provided limited information on measures to assess racial/ethnic-discrimination in health care settings. As a component of a review that focused on personally mediated racism, Kressin et al.²⁶ examined 16 measures that contained at least 1 item on perceived discrimination in health care settings. The majority of the measures reviewed by Kressin focused on attitudes and behaviors of health care workers perceived to be discriminatory (e.g., poorer service, less respect, and unfair treatment), and only 2 contained items that assessed discriminatory receipt of health care.²⁶ Table 1 lists the questions used by investigators to assess racial/ethnic discrimination in the health care setting in the articles included in the current review (for a more complete list, see Table A, available as a supplement to the online version of this article at <http://www.ajph.org>).

Methodological approaches. Several basic methodological approaches can be used to obtain information about occurrences of or effects of discrimination including official counts; matched, residual, observational, and laboratory studies; in-depth interviews; and surveys.²⁸ The strengths and limitations of each are provided in Table 2. In the current review, patient survey was the most widely used approach for assessing perception of health care discrimination (Table B describes the methods and results of the reviewed studies and is available as a supplement to the online version of this article at <http://www.ajph.org>).^{12,29–63}

Survey data were used to examine the proportion of respondents who ever experienced a discriminatory event attributed to race/ethnicity in the health care setting or when getting medical care,^{31,32,37,40,41,43–45,50,56,58,60–65} recent discriminatory experiences (e.g., within last month–5 years),^{12,30,33–35,46,48,49,52–54,59} frequency of discriminatory events,^{31,33}



Note. NA = not applicable.

FIGURE 1—Quorum diagram of literature review on racial/ethnic discrimination in health care settings.

perceptions of specific provider behaviors (e.g., treats me with respect and dignity, looks down on me)^{39,43,45,48–50,53} length of time since last discriminatory event,³³ while receiving treatment of a specific condition,^{29,36,63} general beliefs regarding discrimination in health care settings,^{38,51,66} and methods of coping with discriminatory treatment.¹²

Assessing the prevalence of perceived discrimination among patients was the sole focus of 11 articles,^{35–37, 43,48,67–71} whereas the association of perceived race/ethnicity-based

discrimination with specific health outcomes was the focus of 20 articles.^{12,29,30,32–34,39,40,44–46,49–54,57,59,63,72} Outcomes examined included treatment adherence,²⁹ health care utilization,^{30,41,46} depression,⁶⁸ cancer screening,³³ health status,^{34,40,46,54} functional limitations,³⁴ patient-provider communication,^{39,53} comfort with providing information on race/ethnicity,⁴⁴ blood pressure control,^{45,50} quality of care,^{49,50,53,57} psychiatric disorders,¹² quality of life,⁵¹ locus of control,⁵⁴ and chronic health conditions.⁵⁹

In-depth interviews and focus groups were the second most frequently used approach and were used to elicit information on patient perspectives of discrimination in cancer care,⁶⁹ provider explanations for racial disparities in medical treatment,⁶⁸ patient perceptions of discriminatory behavior by providers and its effect on compliance with treatment recommendations,⁶⁷ description of health provider behaviors perceived to be discriminatory,^{73,74} perspectives regarding race and race-related conversations within the health care workplace,⁷⁵ patient perspectives of barriers to care,⁷¹ and perception of the role of racial discrimination in health care disparities.⁷⁶

The Implicit Association Test (IAT),⁷⁷ a variation of the matched study approach was used in 7 articles to examine implicit racial/ethnic biases.^{76,78,79,80–84} Another previously popular method the case vignette, another form of the matched pair study; was used in only 2 of the reviewed studies to assess racial differences in treatment recommendations.^{82,84} None of the reviewed studies used other methodological approaches listed in Table 2. Because residual studies would not specifically focus on measurement of discrimination, articles using this approach were not included in this review.

Measures of perceived discrimination. Twenty-six articles measured respondent perception of health care discrimination (Table B, available as a supplement to the online version of this article at <http://www.ajph.org>). Established scales or their adaptations were used to measure perceived discrimination in 14 articles,^{12,30–32,38,39,43,45,48–51,53,54} and investigators developed their own measures in 8 articles.^{29,36,67,68,71,75,76} The original or an adapted version of the Experiences of Discrimination Scale was the most frequently used measure of perceived discrimination.^{12,30,31,43,48,49,79}

Survey data specific to health care settings were obtained from a single question which assessed the occurrence of any race/ethnicity-based discriminatory health care event^{12,29,30,36,42,44,48,49,52,56,57,59} with either a question on attribution³⁵ or length of time since the experience^{33,35} (Table 1; see also Tables A and B, available as supplements to the online version of this article at <http://www.ajph.org>). Only 1 survey conducted longitudinal assessments (6-month intervals) of discriminatory health care experiences.²⁹

TABLE 1—Selected Measures Used in the Reviewed Studies to Assess Racial/Ethnic Bias and Perception of Racial/Ethnic Discrimination in Health Care Settings.

Name of Instrument	Target Population	Strengths	Weaknesses	Questions Related to the Health Care Setting
CHS, 2003 and 2005	Multiracial/ethnic sample via telephone survey.	NA	Only 2 questions are related to discrimination in the health care setting.	"(1) Was there ever a time when you would have gotten better medical care if you had belonged to a different race or ethnic group?" (2) Think about the last time this happened. How long ago was that?"
CHS Discrimination Module ⁴⁰⁰	Multiracial/ethnic sample via telephone survey.	Two approaches were tested using early attribution and late-attribution of reasons for discrimination. Field testing was conducted with the 2009 CHS data. More than 51,000 adults were surveyed in 2007.	Data from this particular module are not currently available for public use.	"Over your entire lifetime... (1) How often have you been treated unfairly or been discriminated against when getting medical care because you are (FILL)? Would you say... (Never, rarely, Sometimes or Often) (2) How often have you been treated unfairly when getting medical care? Would you say... (Never, Rarely, Sometimes OR often). (3) Were you treated unfairly because of your ancestry or national origin, gender or sex, race or skin color, age, the way you speak English (language/accent)? If yes, specify... (4) Which of these do you think is the main reason why you were treated unfairly? (5) How stressful have these experiences of unfair treatment usually been for you? Would you say... (Not at all stressful, A little stressful, Somewhat stressful, OR extremely stressful)."
Coronary Artery Risk Development in Young Adults http://www.cardia.dopm.uab.edu	Initial cohort of 5115 AA and White men and women followed since 1985	Questions on discrimination were asked in 1992, 2000, and 2010, which permits tracking of the prevalence of perceived discrimination over time.	Only asks 1 question on discrimination related to health care.	"Have you ever experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior in any of the following 7 situations because of your race or color? At school, getting a job, at work, getting housing, getting medical care from the police or in courts, on the street or in a public setting?"
Commonwealth Fund 2001 Health Care Quality Survey ⁵³	8290 NHW, Hispanic, AA and Asian Americans.	Asks about specific interactions perceived to be discriminatory (i.e., judged unfairly or treated with disrespect)	NA	"Now thinking about all of the experiences you have had with health care visits in the last 2 years, have you ever felt that the doctor or medical staff you saw judged you unfairly or treated you with disrespect because of... your race or ethnic background? What happened to make you feel that you were judged unfairly or treated with disrespect? [open ended] Do you think there was ever a time when you would have gotten better medical care if you had belonged to a different race or ethnic group? Over the last 2 years, has a family member or friend been treated unfairly when seeking medical care specifically because of race or ethnic background?"
Everyday Discrimination—Healthcare Specific Adaptation ⁴³	AA and White veterans. Validated for use in Black, Latino, and White working class population.	Specifically adapted to assess information about health care discrimination. Also assesses the frequency of discriminatory experiences.	NA	"When getting health care, how often has each experience happened to you because of your race or color (1) Treated with less courtesy than other people, (2) Treated with less respect than other people, (3) Received poorer services than other people (4) Had a doctor or nurse act as if he or she thinks you were not smart (5) Had a doctor or nurse act as if he or she was afraid of you (6) Had a doctor or nurse act as if he or she was better than you (7) Felt like a doctor or nurse was not listening to what you were saying."

Continued

TABLE 1—Continued

Experiences of Discrimination ¹⁰¹	Validated for use in Black, Latino, and White working class population.	Cronbach's α was ≥ 0.74 for the 3 race/ethnic groups on the 9 item version ranged between 0.67–0.87 on the 9 and 7 item situation and frequency scales for each race/ethnic group.	Subject to bias from differences in perception, interpretation, and the willingness to disclose discriminatory experiences.	“(1) Have you ever experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior in getting (medical care) because of your race, ethnicity, or color? (2) How many times did this happen? (3) If you feel you have been treated unfairly, do you usually (1 = accept it as a fact of life, 2 = try to do something about it)? (4) If you have been treated unfairly, do you usually (1 = talk to other people about it, 2 = keep it to yourself)” Modeled on The Schedule of Racist Events—Measures discrimination as a type of stress in several domains including health care. Eighteen items from which 3 ratings are produced: (1) Recent Discrimination, (2) Lifetime Discrimination and (3) Appraised Discrimination. One question related to health care: (1) How often have you been treated unfairly by people in helping jobs (by doctors, nurses, psychiatrists, case workers, dentists, school counselors, therapists, social workers and others) because of your race/ethnic group?
General Experiences of Ethnic Discrimination ¹⁰²	Multiethnic—NHW, AA, API, Latinos	Could not evaluate the convergent validity as a measure of perceived stress.	The Cronbach's α for the 4 subscales was, 0.93–0.95 for AAs, 0.93–0.94 for Latinos, 0.91–0.94 for Asian-Americans and Whites 0.91–0.92 for Whites.	Modeled on The Schedule of Racist Events—Measures discrimination as a type of stress in several domains including health care. Eighteen items from which 3 ratings are produced: (1) Recent Discrimination, (2) Lifetime Discrimination and (3) Appraised Discrimination. One question related to health care: (1) How often have you been treated unfairly by people in helping jobs (by doctors, nurses, psychiatrists, case workers, dentists, school counselors, therapists, social workers and others) because of your race/ethnic group?
JHSDIS ¹⁰³	AA	JHSDIS was found to be psychometrically sound in both the every day and lifetime scales.	The instrument was developed for use among African Americans in the southeastern United States.	JHSDIS was designed to assess daily discrimination, effect of skin color, and lifetime prevalence of discrimination. The instrument includes items developed from focus group findings, the Everyday Discrimination instrument, the MacArthur Foundation Midlife Development in the United States Survey, 2 measures of the effects of skin color on treatment by Blacks and Whites from the Detroit Area Study and 2 items designed to assess comparable frequency of events from early life to present time and overall contribution to life stress. Question related to health care (See Everyday Discrimination Scale)
IAT	NA	Implicit measures are thought to be less biased than explicit measures.	There is disagreement regarding the validity of the IAT.	“The IAT produces measures derived from latencies of responses to two tasks. These measures are interpreted in terms of association strengths by assuming that subjects respond more rapidly when the concept and attribute mapped onto the same response are strongly associated (e.g., flowers and pleasant) than when they are weakly associated (e.g., insects and pleasant).”
Multiple Discrimination Scale ²⁹	Gay, HIV positive AA men.	NA	NA	Uses 10 items on each of 3 parallel scales to capture discrimination based on AA race/ethnicity, HIV status, and sexual orientation. Includes 1 question on institutional discrimination (health care) in past year.

Continued

TABLE 1—Continued

Perceived Discrimination in Health Care Measure ^{0,4}	AA, White, and other race individuals with HIV.	NA	NA	When getting health care, have you ever had any of the following things happen to you because of your age or color (Y/N)? (1) Been treated with less courtesy than other people? (2) Been treated with less respect than other people? (3) Received poorer services than others? (4) Had a doctor or nurse act as if he or she thinks you are not smart? (5) Had a doctor or nurse act as if he or she is afraid of you? (6) Had a doctor or nurse act as if he or she is better than you? (7) Felt like a doctor or nurse was not listening to what you were saying? Stereotypes that doctors have about Blacks/African Americans (AA) have not affected me personally. (1) I never worry that doctors will view my behaviors as stereotypically AA. (2) I feel like doctors interpret all of my behaviors in terms of the fact that I am AA. (3) Most doctors do not judge AAs on the basis of their race (4) My being AA does not influence how doctors treat me (5) I almost never think of the fact that I am AA when I interact with doctors. (6) Most doctors have a lot more racist thoughts than they actually express. (7) I often think that doctors are unfairly accused of being racist. (8) Most doctors have a problem viewing AAs as equals"
Perceived Prejudice in Health Care—Modified ^{0,5,0,6}	Designed to measure perceived prejudice in health care among women	Chonbach's α for the total scale = 0.78. Internal consistency of GPP Chonbach's α = 0.60. Internal consistency of PEP Chonbach's α = 0.76. Chonbach's α for reliability is 0.79 for the total scale, 0.75 for the GPP, and 0.73 for the PEP.	Doesn't separate the reasons for personal prejudice.	Composed of 2 subscales General Perception of Prejudice subscale " Measures general beliefs regarding prejudice in health care delivery systems (1) All people can obtain quality health care regardless to their race or ethnic group. (2) Immigrants often receive poorer quality health care delivery (3) African Americans/Blacks and Latinos/Hispanics have fewer options for health care than White people. "PEP subscale" Measures perception of personally experiencing bias in health care. (1) Sometimes I've been ignored by a provider just because of my gender or because I am poor or lesbian/gay or a member of a minority racial/ethnic group. (2) I haven't always been treated respectfully by doctors and nurses. (3) I have experienced discrimination in a health care provider's office (4) My own health care has never been affected by discrimination."
PRS ^{0,7}	African-Caribbean patients in the United Kingdom.	Instrument was acceptable to the study population. Statistical evaluation showed it to be equivalent to the unmodified PRS.	The scale was designed for use in AAs. Unclear whether the group that agreed to participate differed significantly from the group that did not.	The PRS is based on 3 dimensions and 4 domains. "Dimension 1—Frequency of exposure to individual, institutional, overt, covert, attitudinal, and behavioral racism over the past year or over one's life. Dimension 2—Emotional responses to perceived racism. Dimension 3—Behavioral coping responses to perceived racism. Domains—Domains include employment, academic, public, and racist statements. Only 1 question specifically refers to the health care setting: I have been denied hospitalization or medical care."

Continued

TABLE 1—Continued

Perceptions of Racism Scale ⁸⁸	AA women	Criterion validity was not assessed.	Conbach's α reliability for the total scale was 0.88-0.91.	Respondents indicate their level of agreement with the following statements: "(1) African American women experience negative attitudes when they go to a White doctor's office. (2) Doctors treat African American and White women the same. (3) Sometimes if you are African American in a White doctor's office, it's as if you don't belong there. (4) Racial discrimination in a doctor's office is common. (5) In most hospitals, African American women and White women get the same kind of care. (6) Doctors and nurses act the same way to White and African American pregnant women. (7) African American women can receive the care they want as equally as White women. (8) African American pregnant women have fewer options for health care."
Racism in Health Care Index ^{43,109}	AA and White veterans	NA	NA	Likert-type scale measures indicating the extent to which respondents disagree with the following statements: (1) Doctors treat African American and White people the same. (2) Racial discrimination in a doctor's office is common. (3) In most hospitals, African American and Whites receive the same kind of care. (4) African Americans can receive the care they want as equally as White people can.
Reactions to Race Module of the BRFSS http://www.cdc.gov/brfss/questionnaires/pdf-ques/2010brfss.pdf	All racial/ethnic groups in selected states	Specific questions vary by year. Only 2 States were fielding this module with the BRFSS in 2009.	Specifically asks about experiences when seeking health care.	"(1) Within the past 12 months, when seeking health care, do you feel your experiences were worse than, the same as, or better than for people of other races? (2) Within the past 30 days, have you experienced any physical symptoms, for example, a headache, an upset stomach, tensing of your muscles, or a pounding heart, as a result of how you were treated based on your race? (3) Within the past 30 days, have you felt emotionally upset, for example angry, sad, or frustrated, as a result of how you were treated based on your race? (1 = yes, 2 = no, 7 = Don't know/not sure, 9 = refused)
Schedule of Racist Events ¹⁰²	AA	Only includes 1 item on discrimination experienced within the health care setting	High reliability Chronbach's $\alpha > 0.91$ and high internal validity for past year and lifetime discrimination, and assessment of stress.	"How many times have you been treated unfairly by people in helping jobs (by doctors, nurses, psychiatrists, case-workers, dentists and therapists . . .)? (1) How many times in your entire life? [1-6], (2) How many times in the past year? [1-6], and (3) How stressful was this for you? [1-6]."

Note: AA = African American; API = Asian/Pacific Islander; AI/AN = American Indian/Alaska Native; BRFSS = Behavioral Risk Factor Surveillance System; CHS = California Health Interview Survey; GPP = general perception of prejudice; IAT = Implicit Association Test; JHSDIS = Jackson Heart Study Discrimination Scale; NA = Not applicable; NHW = non-Hispanic White; PEP = personal experience of prejudice; PRS = Perceived Racism Scale; Y/N = yes/no. For a more complete list, see Table A, available as a supplement to the online version of this article at <http://www.ajph.org>.

Measurement of Implicit bias. The IAT is a timed computer-based measure of unconscious bias assessed by measuring the time it takes to match members of social groups to particular attributes (e.g., good, bad, cooperative, and stubborn).⁷⁷ Unconscious biases in health care settings were measured with adaptations of the IAT in all identified articles that measured implicit bias.^{76,78-84} Seven of the reviewed studies used the IAT to assess implicit race/ethnicity-based bias among current health care providers or clinical trainees.^{76,78,80-84} Studies using the IAT investigated implicit racial attitudes and cultural competency,⁷⁶ the role of physician's implicit biases in shaping physicians' and patients' perceptions in racially discordant medical interactions,⁷⁸ unconscious bias and its association with clinical assessment among medical students,⁷⁹ and an educational intervention to reduce implicit bias among medical students.⁸⁰ Sabin et al.⁸¹ used the race attitude, compliant patient, and quality of care IATs to assess racial bias and quality of care provided by pediatricians and White-Means et al. examined objective and subjective cognitive processes among allied health and medical students.⁸²

Two studies examined the correlation between measures of implicit and explicit racial attitudes.^{83,84} In a somewhat novel application among US-born Blacks, Krieger et al. examined the correlation between implicit and explicit measures of being a target of racial/ethnic discrimination personally and for the respondents' racial/ethnic group.⁸³ Sabin et al. examined the correlation between implicit and explicit racial attitudes in a physician subgroup.⁸⁴

Data Sources. Surveys with questions on discrimination identified in the reviewed articles included the Behavioral Risk Factor Surveillance System (BRFSS; <http://www.cdc.gov/BRFSS>), Coronary Artery Risk Development in Young Adults (CARDIA; http://www.cardia.dopm.uab.edu/o_ucd.htm), the California Health Interview Survey (CHIS; <http://www.chis.ucla.edu>), and the Commonwealth Fund Health Care Quality Surveys (<http://www.commonwealthfund.org>). Data from the California Health Interview Surveys and the Commonwealth Fund Health Quality Survey were the most frequently used

secondary data sources and were used in 14 studies.^{33-35,44-46,50,53,56-59,63,70}

Because of the populations targeted, sampling design, and response rates, data from these surveys could not be used to provide reliable national estimates of the prevalence of discrimination encountered in health care settings. For example, although the BRFSS incorporated the Reactions to Race module as an optional module in 2002, only 9 states fielded the module in 2004 and only 2 in 2009; furthermore, overall BRFSS survey response rates are low in general.⁸⁵ The Commonwealth Fund last fielded the Health Care Quality Survey in 2006. Data from cohort studies such as CARDIA could be used to assess trends in the prevalence of perceived discrimination within defined populations, but CARDIA is not a national probability sample. CHIS, a biennial survey, included 1 question on discrimination encountered in health care settings and an attribution question on the 2001, 2003, and 2005 surveys and tested a discrimination module in 2007 and 2009; however, the discrimination module is not publicly available, and the sample includes California residents only.

Prevalence and Perception of the Racial/Ethnic Discrimination in Health Care Encounters

The reported prevalence of race/ethnicity based discrimination from local, regional, or state cross-sectional or cohort studies was between 6.9% and 52.0% for African Americans, 4.2% and 13.4% for Latinos and 0.4% and 6.0% for Non-Hispanic Whites.^{30,31,34,40,43,52,60,62,73} A small number of studies also reported perceived discrimination in health care of between 8.0% and 8.9% for American Indian patients,^{30,34} 12.3% for Puerto Ricans in the United States,⁶⁶ 7.5% for Southeast Asians,³⁰ and between 3.0% and 9.1% for Asian/Pacific Islanders,^{34,35,47,48,57,59} which varied by nativity and time since immigration in 1 study.⁵⁹ Perceptions of racial/ethnic discrimination was also found in Veterans Affairs facilities, generally considered to be equally accessible to all veterans, retirees, and their family members.^{31,39,42,43} Patients did not report that they were subjected to race/ethnicity-based health care discrimination in all studies⁶⁹ nor among all minority groups.³⁶

The percentage of people who reported race/ethnicity-based discrimination in health care settings was higher in studies that covered longer reporting periods compared with studies with shorter periods (2 months–5 years).

Results of these studies show that African Americans and Latinos more frequently report race/ethnicity-based discrimination during their health care encounters compared with Non-Hispanic Whites,^{31,34,35,40,43,47,48,51,52,57} as do minority women compared with minority men^{33,41} and US-born Latinos compared with foreign-born Latinos.⁵³ Perceived racial/ethnic discrimination within health care settings was also more frequently reported by patients who were younger than 65 years, of low socioeconomic status and uninsured or publicly insured or with no usual source of care.³⁴

Behaviors perceived to be discriminatory were described by Mexican American patients and families or African American women in 2 studies.^{72,73} Behaviors perceived by Mexican American patients of terminally ill children to be discriminatory included preferential treatment to White patients such as moving the Mexican American child out of a patient room into hall when a White child was admitted, allowing entire White families to visit after hours while limiting visits to 1 person at a time for Mexican American patients, and attending to the needs of White patients and family members while ignoring Mexican American family members and patients. In another study behaviors perceived by African American women to be racial profiling, biased or discriminatory included patients who arrived after they did being treated ahead of them, White patients being permitted to see the doctor without an appointment, the condescending tone of White providers/staff such as references to “you people.”⁷³

Two studies examined geographic variation in reports of discrimination in health care encounters.^{34,52} Of the 114 people (4.8%) who reported health care discrimination in the 2004 through 2008 Behavioral Risk Factor Surveillance System (BRFSS) 13.1% resided in the North, 37.1% in the South, 48.6% in the East and 1.2% in the West.⁵² In a study that examined urban and rural differences in discrimination by site of care D'Anna et al., found

TABLE 2—Methodological approaches for studying racial/ethnic discrimination

Strategy	Description	Strengths and Limitations
Official counts	Official counts of governmental or nongovernmental reported incidences of discrimination	<p>Limitations:</p> <ul style="list-style-type: none"> Data are not collected for scientific research purposes Comprehensiveness of reports is dependent upon the victim’s willingness or inclination to report discrimination, legal definitions of discrimination
Matched studies	Studies in which participants are matched on relevant characteristics except race/ethnicity and subjected to similar types of encounters and then compared (e.g., seeking health care, applying for a job).	<p>Strengths:</p> <ul style="list-style-type: none"> Can employ a quasi-experimental design in natural settings with real outcomes <p>Limitations:</p> <ul style="list-style-type: none"> It is difficult to completely match testers on all physical and other characteristics such as body language, speech patterns, and attitudes. This is less of a problem for studies without a physical encounter between the “tester” and “test subject.” Ethical issues regarding what may be perceived as deceptive practices. The subjective nature of some outcomes can bias results
Residual studies	Studies that attempt to explain racial/ethnic differences in outcomes through stratification or control for other relevant variables (e.g., SES, insurance status, income, education)	<p>Limitations:</p> <ul style="list-style-type: none"> Residuals or differences in outcomes associated with race cannot be definitely linked with discrimination. Control for explanatory variables such as SES might partially explain racial/ethnic differences but does not explain or account for why SES differences exist (i.e., discrimination or other reason?). Residual models only capture the results of successful discrimination not the occurrences of discriminatory behavior
Observational studies	Studies in which occurrences of racial discrimination are measured in real-world settings (e.g., ethnographic and participant observer studies)	<p>Strengths:</p> <ul style="list-style-type: none"> Ability to do in depth studies, third party assessments, and evaluation of real-world encounters <p>Limitations:</p> <ul style="list-style-type: none"> Typically small-scale studies with limited generalizability Only discrimination that is directly observed can be evaluated Results are subject to the perception of 1 or a small number of observers. Difficulty in assuring that participants do not vary on relevant characteristics other than race
Laboratory studies	Use nondirective and subliminal techniques to measure racial discrimination and racial/ethnic preference	<p>Strengths:</p> <ul style="list-style-type: none"> Use experimental designs, can evaluate nonverbal responses such as body language, blood pressure, response times, etc. <p>Limitations:</p> <ul style="list-style-type: none"> Representativeness of samples and limited generalizability Difficulty in associating what happens in the lab with the real world.
In-depth interviews	Semistructured conversations with a small number of participants, typically recorded (e.g., focus groups)	<p>Strengths:</p> <ul style="list-style-type: none"> More detailed information can be elicited than that obtained from more highly structured approaches <p>Limitations:</p> <ul style="list-style-type: none"> Generally have small unrepresentative samples which severely limits generalizability Can be subject to investigator influence
Survey studies	Studies in which participants are from a representative sample of a defined population	<p>Strengths:</p> <ul style="list-style-type: none"> Large sample sizes Designed to be generalizable to specific populations Use of questionnaires or structured interviews reduces the likelihood of investigator influence <p>Limitations:</p> <ul style="list-style-type: none"> Variations in how discrimination is conceptualized and defined Issues surrounding the operationalization of specific items Self reports depend on respondent awareness of being discriminated against Evaluation of Institutional racism or discrimination is difficult to examine in surveys

Note. SES = socioeconomic status.
 Source. Adapted from Smith.²⁸

that urban residents more frequently than rural residents reported race/ethnic-based discrimination when receiving health care in a private doctor's office or within an HMO plan but not at other health care sites.³⁴

Experiences with racial/ethnic discrimination in health care settings were not limited to patients. Three studies examined the bias, prejudice, stereotyping, and discriminatory attitudes or behaviors of patients toward providers.⁸⁶⁻⁸⁸ In a national cross-sectional survey of 529 physicians, October 2006 through February 2007, 60% of African American, 33% of Asian, 17% of Hispanic or Latino, 30% of Non-Hispanic White, and 42% of other race physicians reported a belief that patients refused care from them because of their race/ethnicity.⁸⁶ After 9/11, 41.2% of Arab American nurses in another survey reported more intimidation, 32.4% reported more suspicious treatment, and 15.2% reported more frequent patient refusals of treatment by them. In a study of direct care workers 32% to 54% reported hearing racial/ethnic comments perceived to be intentionally hurtful from residents or clients, other staff members, and patient family members.⁸⁸

Impact of Perceived Discrimination Within the Health Care Setting

Eighteen studies addressed the impact of patient perception of racial/ethnic discrimination within health care settings (Table B, available as a supplement to the online version of this article at <http://www.ajph.org>).^{12,29-33,35,37,41,44-46,49,52,53,57,77} Perceived racial/ethnic discrimination during health care encounters was associated with poorer self-reported health status,^{40,46,53} lower perceived quality of care,⁵⁷ greater bodily pain,³¹ more psychiatric disorders,^{12,32} lower colorectal screening among women but not men,³³ worse diabetes care and more diabetic complications,⁵² poor adherence to antiretroviral therapy,²⁹ underutilization of health services,⁴⁶ physical and emotional functional limitations,³⁵ delays in seeking care,^{30,84} failure to adhere to recommendations,^{30,45,84} societal distrust,³⁷ unmet needs for health care utilization,⁴⁷ lower levels of comfort in providing information about race/ethnicity in health care settings,⁴⁴ and interruptions in care, mistrust of providers, and avoidance of health care systems.⁸⁴ Not all

studies however, found a negative impact of perceived discrimination.^{41,49,51} Perceived racial discrimination when seeking health care was not significantly associated with lower utilization of the flu shot⁴¹ or less medication intensification among diabetes patients.⁴⁹ In the Myaskovsky et al. study, African American patients with spinal cord injuries who reported more discrimination also reported better occupational functioning.⁵¹

Trends and Temporal Patterns in the Prevalence of Perceived Racial/Ethnic Discrimination in Health Care Settings

None of the reviewed studies examined trends or temporal patterns of perceived racial/ethnic discrimination in health care settings.

Mechanisms Through Which Race/Ethnicity Influence Health in Health Care Settings

Eight articles examined racial/ethnic attitudes, biases, stereotypes, and behaviors among current or health care providers in training.^{68,71,76,77,80-82,84} Findings from the majority of the reviewed articles provide evidence of the prevalence of provider explicit and implicit biases, attitudes and beliefs that could negatively affect the health care delivered to racial/ethnic minority patients. Included were less patient involvement in decision-making,⁷⁷ disbelief of the existence of health care disparities,⁶⁸ belief of a lack of role of racial discrimination in health care disparities,⁷⁶ and implicit preferences for White race⁸⁰⁻⁸² and light skin color.⁸¹ By contrast, Sabin et al. found that medical faculty and residents had more explicit positive beliefs regarding patient compliance for African Americans compared with European Americans.⁸⁰

Institutional Racism and System Level Factors

The causes of discriminatory care are not limited to the personal biases and prejudices of providers or patients. Relatively absent from the literature were studies that examined institutional racism or racial/ethnic variation in the impact of specific federal and institutional regulations, policies, and practices on the receipt of health care. In a notable exception, an audit study of 273 specialty practices in Cook

County, Illinois, showed that 66% of persons posing as parents of a sick or injured child requiring urgent care who mentioned Medicaid-CHIP (Children Health Insurance Program) were denied an appointment compared with 11% of patients with private insurance.⁸⁹ Among clinics that scheduled appointments for both types of patients, those with Medicaid-CHIP waited 22 days longer for an appointment than did privately insured patients. The potential discriminatory impact of this practice becomes apparent when considering the substantial numbers of minority children insured through state CHIP programs.⁹⁰ Although low Medicaid reimbursement rates were thought to contribute to this practice, it provides a good example of how policies, regulations, and practices can result in discriminatory behavior.

DISCUSSION

We examined the availability of data on the prevalence, trends, mechanisms, and institutional policies and practices associated with racial/ethnic discrimination in health care settings. Although there were a number of studies that described race/ethnicity based discriminatory behaviors, attitudes, biases and preferences that could potentially contribute to discriminatory health care we found no studies that specifically addressed the US prevalence or trends. Also, relatively absent were studies that addressed how institutional racism impacts the health care received by racial/ethnic minority patients.

None of the measures used in the reviewed studies captured information on all 3 aspects of effective measures as described by Kressin et al. (i.e., assessed the actual occurrence or potential for discriminatory events, impact of discriminatory events among individuals who experienced them, and the effect if any, on the patients' interactions with their health care provider).²⁶ There was also wide variation in the length of time for which discrimination was assessed (i.e., lifetime, varying time intervals), which would be expected to greatly influence the reported prevalence of perceived discrimination and adds to the difficulty in comparing rates across studies. Furthermore, many of the studies that examined perceived racial discrimination in health care settings provided little, if any, information about the specific

actions perceived to be discriminatory, specific context in which the discriminatory act occurred (e.g., emergency room, doctors office, or health clinic), or the specific perpetrator (e.g., nurse, office staff, or physician), which would be helpful in developing targeted interventions.

Unconscious biases and stereotyping that can underlie decision-making contribute to the difficulty of assessing the actual impact of race/ethnic discrimination in health care settings on access to and receipt of optimal care. Whereas patients are a good source of information about perceived discriminatory provider behaviors, system characteristics perceived to be discriminatory, and the personal consequences of perceived discrimination, they may be unknowledgeable about the standard of care for their disease or condition. Provider and other staff surveys that examine their observations of practices within their institutions therefore may be a better source of information on the prevalence of racial/ethnic discrimination in health care settings and its association with the receipt of health care.

Findings from the reviewed studies suggest that racial/ethnic discrimination may be prevalent in health care settings and potentially influence the health care received by minority patients. However, little is known about the national prevalence or trends in race/ethnicity-based discrimination in US health care systems. This situation results in part from the fact that Federal statistics on racial/ethnic discrimination in the United States are primarily limited to findings from audit programs for housing, hate crimes, and other complaints filed with US agencies such as the Equal Employment Opportunity Commission (EEOC) and the Fair Housing Commission.²⁸ In the absence of federally mandated surveillance, much of what we know about the receipt of discriminatory health care comes from small research studies that focus on racial/ethnic disparities in receipt of treatment and outcomes, and that are not generally designed to provide information on what, if any, portion of observed disparities is a result of racial/ethnic discrimination. Accurate measurement and tracking of the incidence and prevalence of prejudice, bias, and other discriminatory attitudes in health care settings, therefore, is not only important to increasing the visibility of discrimination

as a health risk but will help clarify its relationship to racial/ethnic disparities in health outcomes.⁹¹

There is a continuing need for innovative methodology, better instrumentation, and strategies for identifying racial/ethnic and other types of discrimination in health care settings, particularly because of the somewhat subjective manner in which health care is delivered. For example, Shields et al. were successful in using actors (standardized patients) portraying patients with stage IV lung cancer to evaluate patient-centered communication.⁹² Using standardized patients to monitor receipt of discriminatory care in a manner similar to housing and employment audits might be a feasible method for directly assessing racial discrimination in health care receipt. There is also a need to create data resources that facilitate tracking of reports of the receipt of discriminatory care and to establish a system of accountability that facilitates positive change.

An interesting area for future investigation is the role of stereotype threat defined as “being at risk of confirming, as self-characteristic, a negative stereotype about one’s group.”^{93(p797)} A number of racial/ethnic stereotypes are prevalent in health care settings.^{77,79,84,94-96} Stereotype threat in the clinical setting is posited to be more likely to occur when features of the setting make prevailing stereotypes of minority patients salient.⁹⁴ However, only 1 research study within the review period examined the impact of stereotype threat on the receipt or utilization of health care. In a review of studies on stereotype threat, Burgess et al.⁹⁴ concluded that stereotype threat in clinical settings contributed to treatment nonadherence and influenced patient outcomes. Stereotype threat also resulted in impaired communication between patients and providers, with patients discounting feedback and disengaging by avoiding going to the doctor and exhibiting the stereotyped behavior which, in turn, reinforced provider beliefs and their clinical decision-making.⁹⁴

Study Limitations

Of note, our review only included studies published in English on US populations from 2008 to November 1, 2011 that focused on racial/ethnic discrimination occurring in health care settings. Therefore, other studies are likely

to exist that may provide insight into available measures, prevalence, trends, and systematic factors that were not examined in this review. In addition, because we were interested in data sources and measures currently used by researchers as evidenced by the published literature, we only evaluated surveys used in the reviewed studies.

Future Research Directions

The existing literature suggests that racial/ethnic discrimination may be prevalent in US health care settings but more research including national studies are needed. Several gaps in the research literature were also identified and should be considered for future research studies. As Gee⁹⁷ suggests, there is a need to address discrimination at both the interpersonal and structural levels. Doing so will help us to understand how discrimination operates within health care settings while identifying targets for intervention. Studies should include systematic examinations of patient-physician interactions, particularly as they relate to communication styles and non-verbal behaviors that have the potential to elicit the perception of discrimination among diverse patients. Although it is possible that some providers purposely engage in discriminatory care, unconscious bias among well-meaning providers is the more likely culprit. Additional research is needed that explores whether and under what conditions the implicit attitudes of providers affect the quality of the medical care delivered to racial/ethnic minority patients. Physicians who are trained to be aware of implicit biases can be sensitized to their potential for bias,^{77,79,94,96} which may encourage self-regulation⁷⁷ and facilitate decision-making based on the specific needs and resources available to individual patients.

There is also need to assess how racial/ethnic discrimination faced by racial/ethnic minority health providers within their workplaces (i.e., hospitals and clinics) influence the availability of minority health care providers, and as a consequence, minority patient perception of the accessibility of appropriate care.

The introduction of health care reform, which has provisions that affect access to and the composition of health insurance plans, hospital availability, and other federal policies;

provides a unique opportunity for research on the effect of health system policies on the receipt of discriminatory care. In recognition of the need for additional research, The National Cancer Institute (NCI) has recently reissued the program announcement “*The Effect of Racial/Ethnic Discrimination on Healthcare Delivery*,”⁴⁸ for investigators interested in pursuing research in this topic area. ■

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Contributors

All authors contributed to the conceptualization of the project. V. L. Shavers, P. Fagan, and D. Jones reviewed the literature, participated in writing, reviewing and editing the article. W. M. P. Klein reviewed and edited the draft article. J. Boyington and C. Moten provided comments on the draft article and E. Rorie performed the initial literature search.

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References

1. Agency for Healthcare Research and Quality. National Healthcare Disparities Report, 2005. Rockville, MD. Available at: <http://www.ahrq.gov/qual/nhdr05/fullreport/Index.htm>. Accessed August 3, 2011.
2. Agency for Healthcare Research and Quality. 2010 National Healthcare Disparities Report. Rockville, MD.

Available at: <http://www.ahrq.gov/qual/nhdr10/nhdr10.pdf>. Accessed August 3, 2011.

3. Blank RM, Dabady M, Citro CF, eds. *Measuring Racial Discrimination*. Panel on Methods for Assessing Discrimination. Committee on National Statistics, Division of Behavioral and Social Sciences and Education. National Research Council of the National Academies. Washington, DC: National Academies Press; 2004.
4. Mays VM, Cochran SD, Barnes NW. Race, race-based discrimination, and health outcomes among African Americans. *Annu Rev Psychol*. 2007;58:201–225.
5. Langer G. Racial discrimination: Obama, Gates and the Police. *ABC News*. Available at: <http://blogs.abcnews.com/thenumbers/2009/07/racial-discrimination-obama-gates-and-the-police.html>. Accessed July 23, 2009.
6. Barnes LL, de Leon CF, Lewis TT, Bienias JL, Wilson RS, Evans DA. Perceived discrimination and mortality in a population-based study of older adults. *Am J Public Health*. 2008;98(7):1241–1247.
7. Mouton CP, Carter-Nolan PL, Makambi KH, et al. Impact of perceived racial discrimination on health screening in Black women. *J Health Care Poor Underserved*. 2010;21(1):287–300.
8. Lewis TT, Barnes LL, Bienias JL, Lackland DT, Evans DA, Mendes de Leon CF. Perceived discrimination and blood pressure in older African American and White adults. *J Gerontol A Biol Sci Med Sci*. 2009;64(9):1002–1008.
9. McClure HH, Snodgrass JJ, Martinez CR Jr, Eddy JM, Jiménez RA, Isordia LE. Discrimination, psychosocial stress, and health among Latin American immigrants in Oregon. *Am J Hum Biol*. 2010;22(3):421–423.
10. Lewis TT, Aiello AE, Leurgans S, Kelly J, Barnes LL. Self-reported experiences of everyday discrimination are associated with elevated C-reactive protein levels in older African-American adults. *Brain Behav Immun*. 2010;24(3):438–443.
11. Okamoto J, Ritt-Olson A, Soto D, Baezconde-Garbanati L, Unger JB. Perceived discrimination and substance use among Latino adolescents. *Am J Health Behav*. 2009;33(6):718–727.
12. McLaughlin KA, Hatzenbuehler ML, Keyes KM. Responses to discrimination and psychiatric disorders among Black, Hispanic, female, and lesbian, gay, and bisexual individuals. *Am J Public Health*. 2010;100(8):1477–1484.
13. Pascoe EA, Smart Richman L. Perceived discrimination and health: a meta-analytic review. *Psychol Bull*. 2009;135(4):531–554.
14. Seaton EK. The influence of cognitive development and perceived racial discrimination on the psychological well-being of African American youth. *J Youth Adolesc*. 2010;39(6):694–703.
15. Lambert SF, Herman KC, Bynum MS, Ialongo NS. Perceptions of racism and depressive symptoms in African American adolescents: the role of perceived academic and social control. *J Youth Adolesc*. 2009;38(4):519–531.
16. Cozier YC, Wise LA, Palmer JR, Rosenberg L. Perceived racism in relation to weight change in the Black Women’s Health Study. *Ann Epidemiol*. 2009;19(6):379–387.
17. Roberts CB, Vines AI, Kaufman JS, James SA. Cross-sectional association between perceived discrimination and hypertension in African-American men and women:

the Pitt County Study. *Am J Epidemiol*. 2008;167(5):624–632.

18. Nguyen KH, Subramanian SV, Sorensen G, Tsang K, Wright RJ. Influence of experiences of racial discrimination and ethnic identity on prenatal smoking among urban Black and Hispanic women. *J Epidemiol Community Health*. 2010;Epub ahead of print.
19. Shelton RC, Puleo E, Bennett GG, McNeill LH, Sorensen G, Emmons KM. The association between racial and gender discrimination and body mass index among residents living in lower-income housing. *Ethn Dis*. 2009;19(3):251–257.
20. Albert MA, Cozier Y, Ridker PM, et al. Perceptions of race/ethnic discrimination in relation to mortality among Black women: results from the Black Women’s Health Study. *Arch Intern Med*. 2010;170(10):896–904.
21. Coffey RM, Andrews RM, Moy E. Racial, ethnic, and socioeconomic disparities in estimates of AHRQ patient safety indicators. *Med Care*. 2005;43(3 suppl):I48–I57.
22. American Psychological Association. *PsychNet*. Washington, DC. Available at: <http://psychnet.apa.org>. Accessed November 17, 2011.
23. U.S. National Library of Medicine. National Institutes of Health. PubMed Database. National Center for Biotechnology Information, U.S. National Library of Medicine. Bethesda, MD. Available at: <http://www.ncbi.nlm.nih.gov/pubmed>. Accessed November 17, 2011.
24. Elsevier BV. *SciVerse Scopus*. Available at: <http://www.scopus.com/home.url>. Accessed November 17, 2011.
25. Williams DR, Mohammed SA. Discrimination and racial disparities in health: evidence and needed research. *J Behav Med*. 2009;32(1):20–47.
26. Kressin NR, Raymond KL, Manze M. Perceptions of race/ethnicity-based discrimination: a review of measures and evaluation of their usefulness for the health care setting. *J Health Care Poor Underserved*. 2008;19(3):697–730.
27. Bastos JL, Celeste RK, Faerstein E, Barros AJ. Racial discrimination and health: a systematic review of scales with a focus on their psychometric properties. *Soc Sci Med*. 2010;70(7):1091–1099.
28. Smith TW. *Measuring Racial and Ethnic Discrimination. GSS Methodological Report #96*. Chicago, IL: National Opinion Research Center. April 2002. Available at: http://publicdata.norc.uchicago.edu/gss/DOCUMENTS/REPORTS/Methodological_Reports/MR096.pdf. Accessed April 5, 2011.
29. Bogart LM, Wagner GJ, Galvan FH, Klein DJ. Longitudinal relationships between antiretroviral treatment adherence and discrimination due to HIV-serostatus, race, and sexual orientation among African-American men with HIV. *Ann Behav Med*. 2010;40(2):184–190.
30. Burgess DJ, Ding Y, Hargreaves M, van Ryn M, Phelan S. The association between perceived discrimination and underutilization of needed medical and mental health care in a multi-ethnic community sample. *J Health Care Poor Underserved*. 2008a;19(3):894–911.
31. Burgess DJ, Grill J, Noorbaloochi S, et al. The effect of perceived racial discrimination on bodily pain among older African American men. *Pain Med*. 2009;10(8):1341–1352.
32. Canady RB, Bullen BL, Holzman C, Broman C, Tian Y. Discrimination and symptoms of depression in pregnancy among African American and White women. *Womens Health Issues*. 2008;18(4):292–300.

33. Crawley LM, Ahn DK, Winkleby MA. Perceived medical discrimination and cancer screening behaviors of racial and ethnic minority adults. *Cancer Epidemiol Biomarkers Prev.* 2008;17(8):1937–1944.
34. D'Anna LH, Ponce NA, Siegel JM. Racial and ethnic health disparities: evidence of discrimination's effects across the SEP spectrum. *Ethn Health.* 2010(a);15(2):121–143.
35. D'Anna LH, Stevens GD, Ck Malotte, Tsai KY. Does health care setting matter in reports of discrimination? *J Ambulatory Care Manage.* 2010(b);33(4):314–327.
36. De Marco M, Thorburn S, Zhao W. Perceived discrimination during prenatal care, labor, and delivery: an examination of data from the Oregon Pregnancy Risk Assessment Monitoring System, 1998–1999, 2000, and 2001. *Am J Public Health.* 2008;98(10):1818–1822.
37. Durant RW, Legedza AT, Marcantonio ER, Freeman MB, Landon BE. Different types of distrust in clinical research among Whites and African Americans. *J Natl Med Assoc.* 2011;103(2):123–130.
38. Hammond WP. Psychosocial correlates of medical mistrust among African American men. *Am J Community Psychol.* 2010;45(1-2):87–106.
39. Hausmann LRM, Hannon MJ, Kresevic DM, Hanusa BH, Kwok CK, Ibrahim SA. Impact of perceived discrimination in healthcare on patient-provider communication. *Med Care.* 2011;49(7):626–633.
40. Hausmann LR, Jeong K, Bost JE, Ibrahim SA. Perceived discrimination in health status in a racially diverse sample. *Med Care.* 2008(a);46(9):905–914.
41. Hausmann LRM, Jeong K, Bost JE, Ibrahim SA. Perceived discrimination in health care and use of preventive health services. *J Gen Intern Med.* 2008(b);23(10):1679–1684.
42. Hausmann LR, Jeong K, Bost JE, Kressin NR, Ibrahim SA. Perceived racial discrimination in health care: a comparison of Veterans Affairs and other patients. *Am J Public Health.* 2009;99(suppl 3):S718–S724.
43. Hausmann LRM, Kressin NR, Hanusa BH, Ibrahim SA. Perceived racial discrimination in health care and its association with patients' healthcare experiences: does the measure matter? *Ethn Dis.* 2010;20(1):40–47.
44. Kandula NR, Hasnain-Wynia R, Thompson JA, Brown ER, Baker DW. Association between prior experiences of discrimination and patients' attitudes towards health care providers collecting information about race and ethnicity. *J Gen Intern Med.* 2009;24(7):789–794.
45. Kressin NR, Orner MB, Manze M, Glickman ME, Berlowitz D. Understanding contributors to racial disparities in blood pressure control. *Circ Cardiovasc Qual Outcomes.* 2010;3(2):173–180.
46. Lee C, Ayers SL, Kronenfeld JJ. The association between perceived provider discrimination, healthcare utilization and health status in racial and ethnic minorities. *Ethn Dis.* 2009;19(3):330–337.
47. Lee MA, Ferraro KF. Perceived discrimination and health among Puerto Rican and Mexican Americans: buffering effect of the Lazo matrimonial? *Soc Sci Med.* 2009;68(11):1966–1974.
48. Lyles CR, Karter AJ, Young BA, et al. Correlates of patient-reported racial/ethnic health care discrimination in the Diabetes Study of Northern California (DISTANCE). *J Health Care Poor Underserved.* 2011(a);22(1):211–225.
49. Lyles CR, Karter AJ, Young BA, et al. Patient-reported racial/ethnic healthcare provider discrimination and medication intensification in the Diabetes Study of Northern California (DISTANCE). *J Gen Intern Med.* 2011(b);Epub ahead of print.
50. Manze M, Rose AJ, Orner MB, Berlowitz DR, Kressin NR. Understanding racial disparities in treatment intensification for hypertension management. *J Gen Intern Med.* 2010;25(8):819–825.
51. Myaskovsky L, Burkitt KH, Lichy AM, et al. The association of race, cultural factors, and health-related quality of life in persons with spinal cord injury. *Arch Phys Med Rehabil.* 2011;92(3):441–448.
52. Peek ME, Wagner J, Tang H, Baker DC, Chin MH. Self-reported racial discrimination in health care and diabetes outcomes. *Med Care.* 2011;49(7):618–625.
53. Perez D, Sribney WM, Rodríguez MA. Perceived discrimination and self-reported quality of care among Latinos in the United States. *J Gen Intern Med.* 2009;24(Suppl 3):548–554.
54. Pieterse AL, Carter RT. An exploratory investigation of the relationship between racism, racial identity, perceptions of health, and health locus of control among Black American women. *J Health Care Poor Underserved.* 2010;21(1):334–348.
55. Price EG, Powe NR, Kern DE, Golden SH, Wand GS, Cooper LA. Improving the diversity climate in academic medicine: faculty perceptions as a catalyst for institutional change. *Acad Med.* 2009;84(1):95–105.
56. Shariff-Marco S, Klassen AC, Bowie JV. Racial/ethnic differences in self-reported racism and its association with cancer-related health behaviors. *Am J Public Health.* 2010;100(2):364–374.
57. Sorkin DH, Ngo-Metzger Q, De Alba I. Racial/ethnic discrimination in health care: impact on perceived quality of care. *J Gen Intern Med.* 2010;25(5):390–396.
58. Stepanikova I, Cook KS. Effects of poverty and lack of insurance on perceptions of racial and ethnic bias in health care. *Health Serv Res.* 2008;43(3):915–930.
59. Yoo HC, Gee GC, Takeuchi D. Discrimination and health among Asian American immigrants: disentangling racial from language discrimination. *Soc Sci Med.* 2009;68(4):726–732.
60. Dailey AB, Kasl SV, Holford TR, Lewis TT, Jones BA. Neighborhood- and individual-level socioeconomic variation in perceptions of racial discrimination. *Ethn Health.* 2010;15:145–163.
61. Nazione S, Silk K. Employees' views of discrimination in a community health department. *Howard J Commun.* 2011;22:220–221.
62. Kessler K, Kuroki LM, Allsworth JE, Secura GM, Roehl KA, Peipert JF. Perceived racial, socioeconomic and gender discrimination and its impact on contraceptive choice. *Contraception.* 2011;84(3):273–279.
63. Ryan AM, Gee GC, Griffith D. The effects of perceived discrimination on diabetes management. *J Health Care Poor Underserved.* 2008;19(1):149–163.
64. Nguyen DD, Ho KH, Williams JH. Social determinants and health service use among racial and ethnic minorities: findings from a community sample. *Soc Work Health Care.* 2011;50(5):390–405.
65. Penner LA, Dovidio JF, Edmondson D, et al. The experience of discrimination and Black-White health disparities in medical care. *J Black Psychol.* 2009;35:180–203.
66. Todorova IL, Falcón LM, Lincoln AK, Price LL. Perceived discrimination, psychological distress and health. *Social Health Illn.* 2010;32(6):843–861.
67. Greer TM. Perceived racial discrimination in clinical encounters among African American hypertensive patients. *J Health Care Poor Underserved.* 2010;21(1):251–263.
68. Clark-Hitt R, Malat J, Burgess D, Friedemann-Sanchez G. Doctors' and nurses' explanations for racial disparities in medical treatment. *J Health Care Poor Underserved.* 2010;21(1):386–400.
69. Campesino M. Exploring perceptions of cancer care delivery among older Mexican American adults. *Oncol Nurs Forum.* 2009;36(4):413–420.
70. Gee GC, Ro A, Shariff-Marco S, Chae D. Racial discrimination and health among Asian Americans: evidence, assessment, and directions for future research. *Epidemiol Rev.* 2009;31:130–151.
71. Subban JE, Terwoord NA, Schuster RJ. With or without intent: how racial disparities prevent effective implementation of care. *J Nutr Health Aging.* 2008;12(10):770S–775S.
72. Rankin KM, David RJ, Collins JW Jr. African American women's exposure to interpersonal racial discrimination in public settings and preterm birth: the effect of coping behaviors. *Ethn Dis.* 2011;21(3):370–376.
73. Davies B, Larson J, Contro N, Cabrera AP. Perceptions of discrimination among Mexican American families of seriously ill children. *J Palliat Med.* 2011;14(1):71–76.
74. Sims CM. Ethnic notions and healthy paranoia: understanding of the context of experience and interpretations of healthcare encounters among older Black women. *Ethn Health.* 2010;15(5):495–514.
75. Nunez-Smith M, Curry LA, Berg D, Krumholz HM, Bradley EH. Healthcare workplace conversations on race and the perspectives of physicians of African descent. *J Gen Intern Med.* 2008;23(9):1471–1476.
76. Steed R. Attitudes and beliefs of occupational therapists participating in a cultural competency workshop. *Occup Ther Int.* 2010;17(3):142–151.
77. Greenwald AG, McGhee DE, Schwartz JLK. Measuring individual differences in implicit cognition: the implicit association test. *J Pers Soc Psychol.* 1998;74(6):1464–1480.
78. Penner LA, Dovidio JF, West TV, et al. Aversive racism and medical interactions with Black patients: a field study. *J Exp Soc Psychol.* 2010;46(2):436–440.
79. Haider AH, Sexton J, Sriram N, et al. Association of unconscious race and social class bias with vignette-based clinical assessments by medical students. *JAMA.* 2011;306(9):942–951.
80. Teal CR, Shada RE, Gill AC, et al. When best intentions aren't enough: helping medical students develop strategies for managing bias about patients. *J Gen Intern Med.* 2010;25(suppl 2):S115–S118.
81. Sabin JA, Rivara FP, Greenwald AG. Physician implicit attitudes and stereotypes about race and quality of medical care. *Med Care.* 2008;46(7):678–685.
82. White-Means S, Zhiyong Dong, Hufstader M, Brown LT. Cultural competency, race, and skin tone bias among pharmacy, nursing, and medical students: implications for addressing health disparities. *Med Care Res Rev.* 2009;66(4):436–455.
83. Krieger N, Carney D, Lancaster K, Waterman PD, Kosheleva A, Banaji M. Combining explicit and implicit

- measures of racial discrimination in health research. *Am J Public Health*. 2010;100(8):1485–1492.
84. Sabin J, Nosek BA, Greenwald A, Rivara FP. Physicians' implicit and explicit attitudes about race by MD race, ethnicity, and gender. *J Health Care Poor Underserved*. 2009;20(3):896–913.
85. Schneider KL, Clark MA, Rakowski W, Lapane KL. Evaluating the impact of non-response bias in the Behavioral Risk Factor Surveillance System (BRFSS). *J Epidemiol Community Health*. 2010;Epub ahead of print.
86. Nunez-Smith M, Pilgrim N, Wynia M, et al. Health care workplace discrimination and physician turnover. *J Natl Med Assoc*. 2009;101(12):1274–1282.
87. Kulwicki A, Khalifa R, Moore G. The effects of September 11 on Arab American nurses in metropolitan Detroit. *J Transcult Nurs*. 2008;19(2):134–139.
88. Ejaz FK, Rentsch JH, Noelker LS, Castora-Binkley M. Racism reported by direct care workers in long-term care settings. *Race Soc Probl*. 2011;3:92–98.
89. Bisgaier J, Rhodes KV. Auditing access to specialty care for children with public insurance. *N Engl J Med*. 2011;364(24):2324–2333.
90. Brach C, Lewit EM, VanLandeghem K, et al; Child Health Insurance Research Initiative. Who's enrolled in the State Children's Health Insurance Program (SCHIP)? An overview of findings from the Child Health Insurance Research Initiative (CHIRI). *Pediatrics*. 2003;112(6 Pt 2):e499–e507.
91. Ågren G, Linna K, Lööv L, Ytterberg H. Discrimination—A Threat to Public Health. Final Report—Health and Discrimination Project. Frykaman J, ed. Available at: http://www.fnise/PageFiles/4465/r200622_diskrimination_eng.pdf. Accessed August 3, 2011.
92. Shields CG, Coker CJ, Poulsen SS, et al. Patient-centered communication and prognosis discussions with cancer patients. *Patient Educ Couns*. 2009;77(3):437–442.
93. Steele CM, Aronson J. Stereotype threat and the intellectual test performance of African Americans. *J Pers Soc Psychol*. 1995;69(5):797–811.
94. Burgess DJ, Warren J, Phelan S, Dovidio J, van Ryn M. Stereotype threat and health disparities: what medical educators and future physicians need to know. *J Gen Intern Med*. 2010;25(Suppl 2):S169–S177.
95. Woolf K, Cave J, Greenhalgh T, Dacre J. Ethnic stereotypes and the underachievement of UK medical students from ethnic minorities: qualitative study. *BMJ*. 2008;337:a1220.
96. Clark PA. Prejudice and the medical profession: a five-year update. *J Law Med Ethics*. 2009;37(1):118–133.
97. Gee GC. A multilevel analysis of the relationship between institutional and individual racial discrimination and health status. *Am J Public Health*. 2008;98(9 suppl):S48–S56.
98. *The Effect of Racial/Ethnic Discrimination on Health-care Delivery*. (PA 11–162 [R01], PA 11–163 [R21] and PA-164 [R03]). Available at: <http://grants.nih.gov/grants/guide/pa-files/PA-11-162.html>. Accessed March 14, 2012.
99. Shariff-Marco S, Gee GC, Breen N, et al. A mixed-methods approach to developing a self-reported racial/ethnic discrimination measure for use in multiethnic health surveys. *Ethn Dis*. 2009;19(4):447–453.
100. Krieger N, Smith K, Naishadham D, Hartman C, Barbeau EM. Experiences of discrimination: validity and reliability of a self-report measure for population health research on racism and health. *Soc Sci Med*. 2005;61(7):1576–1596.
101. Landrine H, Klonoff EA, Corral I, Fernandez S, Roesch S. Conceptualizing and measuring ethnic discrimination in health research. *J Behav Med*. 2006;29(1):79–94.
102. Sims M, Wyatt SB, Gutierrez ML, Taylor HA, Williams DR. Development and psychometric testing of a multidimensional instrument of perceived discrimination among African Americans in the Jackson Heart Study. *Ethn Dis*. 2009;19(1):56–64.
103. Bird ST, Bogart LM. Perceived race-based and socioeconomic status(SES)-based discrimination in interactions with health care providers. *Ethn Dis*. 2001;11(3):554–563.
104. Ohm R, Rosen L. Psychometric evaluation of the perceived prejudice in health care scale-modified (PPHC-M) among baccalaureate student nurses. *J Transcult Nurs*. 2011;22(3):282–289.
105. Facione NC, Facione PA. Perceived prejudice in healthcare and women's health protective behavior. *Nurs Res*. 2007;56(3):175–184.
106. McNeilly MD, Anderson NB, Armstead CA, et al. The perceived racism scale: a multidimensional assessment of the experience of White racism among African Americans. *Ethn Dis*. 1996;6(1-2):154–166.
107. Green NL. Development of the perceptions of racism scale. *Image J Nurs Sch*. 1995;27(2):141–146.
108. LaVeist TA, Nickerson KJ, Bowie JV. Attitudes about racism, medical mistrust, and satisfaction with care among African American and White cardiac patients. *Med Care Res Rev*. 2000;57(suppl 1):146–161.