



Systemic racism and U.S. health care

Joe Feagin*, Zinobia Bennefield

Department of Sociology, Texas A&M University, College Station, TX 77845, USA



ARTICLE INFO

Article history:

Available online 19 September 2013

Keywords:

United States
Systemic racism
Health care system
Medical system
Public health

ABSTRACT

This article draws upon a major social science theoretical approach—systemic racism theory—to assess decades of empirical research on racial dimensions of U.S. health care and public health institutions. From the 1600s, the oppression of Americans of color has been systemic and rationalized using a white racial framing—with its constituent racist stereotypes, ideologies, images, narratives, and emotions. We review historical literature on racially exploitative medical and public health practices that helped generate and sustain this racial framing and related structural discrimination targeting Americans of color. We examine contemporary research on racial differentials in medical practices, white clinicians' racial framing, and views of patients and physicians of color to demonstrate the continuing reality of systemic racism throughout health care and public health institutions. We conclude from research that institutionalized white socioeconomic resources, discrimination, and racialized framing from centuries of slavery, segregation, and contemporary white oppression severely limit and restrict access of many Americans of color to adequate socioeconomic resources—and to adequate health care and health outcomes. Dealing justly with continuing racial “disparities” in health and health care requires a conceptual paradigm that realistically assesses U.S. society's white-racist roots and contemporary racist realities. We conclude briefly with examples of successful public policies that have brought structural changes in racial and class differentials in health care and public health in the U.S. and other countries.

© 2013 Elsevier Ltd. All rights reserved.

Introduction

Decades of research indicate that a serious U.S. public health problem involves *systemic* white racism and its negative effects on minds and bodies in all racial groups, most especially Americans of color. Dealing justly with racial inequalities in health requires a conceptual analysis realistically assessing society's white-racist roots and contemporary structural-racist realities. We draw on the black counter-framed tradition and social science research in that tradition by Joe Feagin (2006; 2010) and other analysts (Bonilla-Silva, 1997; Feagin & Feagin, 1978; Feagin & Vera, 1995). Systemic racism theory is firmly grounded in the race-critical literature created since the 1960s black civil rights movement and first articulated for the health care system by Kwame Ture and Charles Hamilton (1967: 3–4). They argued that “racism” involves “predication of decisions and policies on considerations of race for the purpose of subordinating a racial group.” While recognizing individual racism, they accented institutional (what we term systemic) racism that is “less overt” and “less identifiable in terms of specific individuals committing the acts. But it is no less destructive of human life.”

We use important concepts from this analytical tradition—which has more fully illuminated key aspects of systemic racism than previous work on U.S. racial matters—and use that lens to assess the extensive impact of systemic racism in the medical and public health world. Absent an adoption of systemic racism concepts, which go beyond the “structural stigma” paradigm, that world is unlikely to seriously address racist realities and, thus, is likely to perpetuate them.

Systemic racism theory (Feagin, 2006; 2010) details these major dimensions of U.S. racism: the (1) dominant racial hierarchy, (2) comprehensive white racial framing, (3) individual and collective discrimination, (4) social reproduction of racial-material inequalities, and (5) racist institutions integral to white domination of Americans of color. The U.S. is a country with systemic oppression—centuries of genocide, 336 years of slavery and legal segregation, about 85 percent of U.S. history. Since the 17th century a white elite has played the central role in maintaining racialized institutions and a rationalizing white framing, while ordinary whites have usually supported oppression because of white privilege. Over about 20 generations, whites have inherited socioeconomic resources from ancestors who benefitted unjustly from slavery, segregation, and other racial oppression. Unjust enrichment of whites from this oppression brought unjust impoverishment for people of color. To the present, Americans of color have

* Corresponding author.

E-mail address: feagin@tamu.edu (J. Feagin).

been economically impoverished and unhealthy because white Americans have long used extensive discrimination and resistance to change to insure they as a group are economically much better off and generally healthier.

Today, unjustly inherited white resources and continuing discrimination restrict access of many Americans of color to better jobs, quality education, healthy neighborhoods, quality health care, and political power. From the beginning a white racial framing with its major elements—not only racial bias, but also *racial ideologies, images, narratives, emotions, and inclinations to discriminate*—has aggressively defended this unequal and unjust society.

Powerful white actors and racial framing

The conceptual language of most contemporary health researchers regarding racial matters is euphemistic or white-concealing—for example, vague white-framed language such as “racial disparities.” Research on disparities typically focuses on health problems faced by people of color and neglects the white perpetrators of racist practices and institutions creating these problems. As researchers concerned with accuracy, we focus here on the roles, framing, and institutionalized actions of influential whites and problematize them as responsible for many health-related problems. In the literature we observe little attention to powerful, mostly white decisionmakers whose racial framing and racialized actions have created, shaped, or maintained these health inequalities—and the health-related institutions imbedding racial framing and inequalities.

The majority-white decisionmakers include public health researchers and policymakers, medical educators and officials, hospital administrators, and insurance and pharmaceutical executives, as well as important medical personnel. A substantial majority are white. According to an [Association of American Medical Colleges report \(2010\)](#), three quarters of those practicing medicine are white. Incomplete data suggest that whites are more dominant in prestigious specialties and heading up major medical practices, associations, hospital systems, and public health institutions. Some 77 percent of AMA delegates are white, as are 85 percent of AMA board members. At NIH, the director and six deputy directors are white, as are 23 of 27 directors of NIH agencies. The decision-making top of this complex is overwhelmingly white. Some 90 per cent of NIH branch and lab chiefs are white, as are 83 percent of senior investigators ([Gottesman 2011, 2](#)).

Over the last century, mainstream researchers working on inequality have developed relatively weak individualistic concepts such as “bias,” “prejudice,” and “cultural competence.” Stronger analytical concepts are necessary—such as systemic racism, white discriminators, white racial framing—to make better sense of society's racist realities.

Significant data strongly suggest the majority of white health care and public health personnel and researchers operate from this white framing, with its pro-white and anti-racial-others orientations. This framing includes normalized notions (e.g., stereotypes, images, narratives, ideologies) of biologically and culturally distinct racial groups, and it links to discriminatory practices accounting for institutionalized inequalities in health care and health.

The structural approach: an important research shift

An increasing number of articles in the research literature have begun to locate racism in the health care context and health disparities ([Gee & Ford, 2011](#); [Paradies, 2006](#); [Walters et al., 2011](#)). We offer our theoretical insights to assist in substantially expanding their conceptual implications in the direction of a much more institutional and systemic racism direction. Generally, these articles

fail to situate analysis of racism in pivotal research by those working in the tradition of the racial-realism founders of critical race theory. Assessing U.S. racism without drawing on the institutional racism research of critical researchers such as Ture and Hamilton, Derrick Bell, Joe Feagin, and Eduardo Bonilla Silva leads to recurring major oversights and errors, such as unreflectively equating individual prejudice with “racism.”

For example, an article by [Camara P. Jones \(2000\)](#) briefly and insightfully lists three types of racism, including institutional racism, but has no references to this extensive critical race research; it theorizes a category of “personally mediated racism” in a way that accents individual prejudice without adequately contextualizing that in institutionalized racism. In 2003 Krieger noted that racism was coming out of the “closet” and being named as a determinant of population health, but that one still had to defend racism research. Health disparities involve both individual and institutional actions generating “oppressive systems” ([Krieger, 2003](#)). She categorized structural pathways by which racism harms health but did not develop the concept of institutional racism drawing on critical race research. Recently, [Gee and Ford \(2011\)](#) have accented “structural racism” as a concept needing integration into disparities research and do, briefly, cite some critical race research. Yet, they only begin to take the steps necessary for analyzing well the impact of *white-controlled* systemic racism on health care.

Numerous empirical studies have studied individual discrimination by medical professionals (e.g., [Williams & Mohammed, 2009](#)). However, as [Ture and Hamilton \(1967\)](#) long ago argued, while such individual acts are important, they constitute a tiny snapshot of the larger institutional racism picture. Other micro- and meso-level research, such as that on residential segregation ([Acevedo-Garcia, 2003](#); [LaVeist, 1989, 1993](#); [Massey, 1988](#); [Williams & Collins, 2001](#)), identifies aspects of inequality in U.S. institutions and some health consequences, but typically fails to draw on the critical literature on systemic racism and to assess directly how the racist actions of specific white actors regularly shape those institutions and their health consequences.

We recognize the importance of this relatively new emphasis on certain structural determinants of health. However, using historical and contemporary data, we emphasize white-created systemic racism as it operates at the micro-individual level and also at the meso and macro levels of the health care system. Studies of individual discrimination and residential segregation are evidence at the micro and meso levels, respectively, that a theory of systemic racism at the broader macro level is accurate and necessary for a full explanation of U.S. racism and health inequalities.

Phelan and Link (2004) have pioneered in a fundamental-cause-of-disease theory seeking to explain socioeconomic and racial disparities. [Phelan, Link, Diez-Roux, Kawachi, and Levin \(2004: 268\)](#) argue the “fundamental cause explanation posits that the use of resources to benefit health, by groups and individuals, is purposeful.” [Link and Phelan \(1995\)](#) and [Phelan, Link, and Tehranifar \(2010\)](#) accent racial disparities in health, but do not examine how racial and socioeconomic status are closely interwoven. Many generations of unjust enrichment from oppression have resulted in whites having superior resources. People with high socioeconomic status utilize superior resources for better health, while individuals with low status have historically been denied such resources. Health researchers need to better specify the racially advantaged identities and advantages of privileged whites who control the differential allocation of relevant resources. This accent on resource inequality along socioeconomic and racial lines marks an important shift, but draws little on the critical-race tradition and does not explicitly

articulate the ongoing racist realities of the institutionalized *white* racial framing and practices of the health care system.

Individual experiences of health care and broader public health issues should be considered together when examining racism and health. Socioeconomic fundamentals, many generated by racist practices in institutions other than health care, significantly shape public health, but so do practices of medical and other health decisionmakers. Although health care providers care for individuals, their racial views are not just individualized, but are part of the shared white racial frame learned in society (Feagin, 2010). Provider-patient relationships that are racialized affect the health of populations. Americans of color get much health information and treatment from white or white-oriented professionals. Among other analysts (e.g., Williams, 2012), Roberts (1996: 117–122) argues that (mostly white) doctors' treatment decisions about women of color involving ethical dilemmas are not just individual decisions, but are shaped by the power most such practitioners secure from society's gender/racial hierarchies. All physician-patient relationships, especially those involving white (or white-oriented) physicians and patients of color, are relationships shaped by societal-power imbalances, and thus are matters of public health. Medical decisions are not isolated from contextual constraints, but centrally involve groups of white or white-oriented physicians and large publics of color. Consider that black women are less likely to contract breast cancer than whites, yet, if they contract it, they are much more likely to die. Black women with white physicians are often not educated as well about preventive care, are not screened as effectively, or are not as often referred to state-of-the-art treatments as white women with white physicians (Ginty, 2005; Roberts, 2011; loc. 2540–48). As a result, morbidity rates associated with breast cancer are affected by patient–physician interaction, as well as by unjust distribution of health care resources from generations of systemic racism.

Historically, medical and other health organizations, such as the American Medical Association, have contributed significantly to white bio-racist framing of Americans of color –and have done little to counter continuing bio-racist framing in white (and white-oriented) practitioners', officials', and researchers' minds. Consider the explosion of genome science and “race.” Roberts (2011, loc. 5589–96) summarizes: Biologized “race is central to every aspect of the new science and technology that is emerging from genomic research.” Pseudo-scientific, biological-race categories are thereby reinforced (Daniels & Schulz, 2006).

Important historical background: persisting systemic racism

Generally, the medical and public health communities, including their mostly white leadership and leading medical schools, seem unwilling to examine the current impacts of past racial oppression on U.S. medical and public health institutions. Systemic racism and medical/biological science, including the latter's medical and public health practices, evolved together in society. Medical treatments and public health practices were frequently matters involving a white-racist framing. For example, in the 18th–19th centuries prominent white physicians, medical professors, and biological scientists played a central role in creating the conception of “race” at the heart of the still-dominant white racial framing (Feagin, 2010).

Roberts (1996: 123) argues contemporary dehumanizing medical treatments of black women are grounded in a racist history of medical experimentation. In the 19th century, profit-driven growth of the scientific medical system pressed white physicians and scientists to discover technologies and treatments to serve whites. In the South medical experiments were carried out on black women that no white physician would try on whites. This resulted in death

for many enslaved women and set the model for continued use of African Americans as guinea pigs for medical progress, as well as for white physicians' provision of inadequate care for them (Washington, 2006). Black women were often denied treatment for real ailments, resulting in excruciatingly painful deaths for many (Roberts, 1996; Washington, 2006). The racialized abuse endured today by black patients frequently replicates the racialized abuse their ancestors suffered.

Medical historians and reporters often exalt white physicians and medical scientists who committed *atrocities*. For example, James Marion Sims is venerated as the father of gynecology. Rarely do mainstream accounts assess his sadistic treatment of blacks. In the mid-1800s black children died from a neuromuscular disease caused by mineral/vitamin deficiencies. Convinced it was caused by misplaced skull bones, Sims conducted surgical experiments without anesthesia (Sims, 1884). He “took a black baby from its mother, made incisions in its scalp, then wielded a cobbler's tool to pry the skull bones into new positions” (Washington, 2006: 62). Sims (1884) forced Anarcha, an enslaved girl suffering from fistulas, to kneel in agony while he inserted a speculum into her vagina and attempted to close ravaged openings by abrading their edges before suturing (Sims, 1884; Washington, 2006). Other whites held Anarcha as she screamed. Only when perfected did he perform this surgery on whites, with anesthesia (Sims, 1884).

Collaborative actions of abusive experimentation and malpractice by early medical scientists and physicians often set a white model for later discriminatory experimentation and treatment. Throughout the first half of the 20th century, black women were recurring victims of involuntary sterilization and hysterectomies (Hartmann, 1995). One was Fannie Lou Hamer, later a civil rights leader. In 1961 she was hospitalized to have a uterine tumor removed; the white doctor performed a hysterectomy instead. “I went to the doctor who did that to me and I asked him, ‘Why? Why had he done that to me?’ He didn't have to say nothing – and he didn't.” (DeMuth, 1964: 538, 549). Hamer was silenced by powerful white agents of a systemically racist system. Hundreds of black women have reported a similar story; thousands more probably remain undocumented (Hartmann, 1995).

Black women suffered at the hands of physicians and scientists involved in early 20th century “eugenics.” According to Washington (2006: 191), “Eugenics was appropriated to label Black women as sexually indiscriminate and as bad mothers who were constrained by biology to give birth to defective children. The demonization of Black parents, particularly mothers, as medically and behaviorally unfit has a long history, but twentieth century eugenicists provided the necessary biological underpinnings to scientifically validate these beliefs.” Margaret Sanger, birth control pioneer, helped to devise a 1939 “Negro Project,” which sought to reduce the black population through negative eugenics (Sanger, 1922). Partly due to Sanger's lobbying, numerous forms of birth control were tested in black communities. Because of high levels of hormones in early pills, black women were placed at high risk of hypertension and stroke; early IUDs were silent killers in African American communities because of the high rate of infection associated with them (Washington, 2006). White women were mostly sheltered from these effects. White government officials supported birth-control-eugenics and forced sterilization by funding experimentation. Thousands suffered and died in this highly racist medical system (Darity & Turner, 1972, 1973).

In 1932 the U.S. Public Health Service joined with Tuskegee Institute in its “Study of Syphilis in the Untreated Male.” White study directors sought a cure for the disease and to study how it manifested, positing that it affected neurological systems of white men but only sexual organs of black men—because in these directors' racist framing blacks had primitive brains and sexual

desires. After a good treatment for syphilis was discovered, white physicians withheld it to examine how syphilis ravaged black bodies. Many died or passed on the disease (Jones & Tuskegee Institute, 1981). Moreover, in 1951 Henrietta Lacks, a black woman, went to John Hopkins hospital for a lump in her abdomen. Diagnosed with cancer, she was treated with radiation. Blood samples were taken without her knowledge. Doctors abandoned radiation for antibiotics because they believed her condition to be caused by venereal disease. She died, and her stolen blood cells were given to George Grey. He discovered they survived exponentially longer than other cell samples and mass-produced them for profit. Her cells have been used to help develop a polio vaccine and research cancer. Not until the 1970s did the public learn her cells had started a multi-billion dollar industry. Lacks got posthumous credit for her “donation” to science, but her children have not been given any money generated, nor has anyone been sanctioned for cell theft (Skloot, 2010).

Much of this historical white-racist framing of black patient inferiority and white medical superiority remains operative in health-related institutions. Key elements of age-old racism are evident in institutionalized discrimination targeting patients of color—and white insistence on white authority, norms, and framing as medically and organizationally correct. There are great similarities to this racist past in commonplace white condescension and the institutionalized practice of ignoring black patients’ and physicians’ perspectives on barriers in health-related organizations. The contemporary neglect of this racist history is also related to systemic racism, for it is rarely taught in historically white medical schools and schools of public health (Hoberman, 2012).

Differential racial treatments today: health care providers

Much research demonstrates the systemically racist character of contemporary health patterns, medical framing and practices, and health care institutions. Numerous disparities reports demonstrate that Americans of color “continue to suffer from greater health problems than their white counterparts African-American women are more likely to die of breast cancer than women of any other racial or ethnic group. American Indians are nearly three times as likely to be diagnosed with diabetes as White Americans. Eighty-two percent of the pediatric AIDS cases.... consisted of African-American and Latino children” (Association of American Medical Colleges, 2010: 11.) Such inequalities do not result from something inherent in Americans of color, but are health consequences of systemic racism’s pathways of negative impact.

Numerous studies demonstrate African Americans, Latinos, Native Americans, and Asian Americans receive a poorer quality of health care (Chin, Walters, Cook, & Huang, 2007; Smedley, Stith, & Nelson, 2003). One review noted that researchers have “repeatedly documented racial and ethnic differences in access to invasive diagnostic and therapeutic interventions for heart disease and stroke. Study findings have consistently indicated that African Americans are less likely to receive pharmacological therapy, diagnostic angiography and catheterization, and invasive surgical treatments for heart disease and stroke relative to white Americans with similar clinical disease characteristics” (Mayberry, Mili, & Ofili, 2000: 122). In one study actors portrayed black and white patients with coronary disease symptoms. Some 720 physicians were asked to look at these recorded interviews and other patient data, assess the probability of disease, and suggest treatments. Blacks were less likely to be recommended for standard catheterization, compared to whites with similar occupations and medical histories. Another study found black patients with lung cancer were less likely to receive the best surgical treatment than white patients (Bach et al., 1999; Fincher et al., 2004; Schulman et al., 1999).

Researchers have found barriers for blacks and the poor in getting kidney transplants, and that black patients are less likely to receive transplants than whites. The reasons suggested by one group of researchers included physicians’ “subconscious bias” and “financial disincentives” (Alexander & Sehgal, 1998). Another study found most black patients with end-stage renal disease wanted transplants, yet large differences in proportions of black and white patients referred by physicians for transplantation were not explained by control variables (Ayanian et al., 1999). Implied or explicit in some of these studies is blaming patients of color for being too passive, in contrast to white patients who have better health because they “actively” seek it. One study reported in the *New England Journal of Medicine* (Anonymous, 1996) showed that among Medicare patients blacks with circulatory problems were much more likely to have a leg amputated than otherwise comparable whites, and blacks with prostate cancer were much more likely than others to have testicles removed. Black patients with problems comparable to whites got less attention from nurses, fewer tests, and less sophisticated or no heart treatments. Other researchers have found significant racial differences in access to best therapies for HIV/AIDS, prenatal care, and child health services (e.g., Mayberry et al., 2000).

Another study (Gemson, Linson, & Messeri, 1988) found physicians with 50 percent or more black and Hispanic patients differed greatly in treatments of patients compared to physicians with 50 percent or more white patients. The former were less likely to recommend mammography screening, influenza immunization for older patients, and smoking cessation programs. Physicians with more patients of color often failed to recommend best treatments and seemed to be highly influenced by a racial framing of health behaviors of patients of color. A study of emergency room care found that (predominantly black) children with sickle-cell disease got less attention to pain than nonblack (apparently mostly white) children with bone fractures (Zempsky, Corsi, & McKay, 2011). One overview study (Cintron & Morrison, 2006) examined medical articles on pain and found patients of color were more likely to have their pain taken too lightly and less likely to have it medically recorded accurately than white patients. In a majority of studies patients of color were less likely than whites to get best quality pain management.

In addition, researchers have found that for decades African Americans have frequently been misdiagnosed by (mostly white) mental health professionals. Beginning in the 1960s, black men seen by clinicians as anti-establishment protestors were frequently diagnosed as “schizophrenic” or otherwise mentally ill (Metzl, 2010). African Americans in some areas are today at a greater risk than whites “of being conscripted into [health care] research without giving their consent, because Blacks are more likely than Whites to receive their health care from emergency rooms” (Washington, 2006: 397). One scandal involving medical research since the 1940s is the heavy use of people of color as “guinea pigs.” Their health is often negatively affected, yet they are frequently abandoned once research is completed. In 1945, white doctors, working with the Atomic Energy Commission, injected plutonium into patients of color without consent to observe effects of radiation, without follow-up care (Washington, 2006; Welsome, 1999). Recently, prisoners of color have been used for drug trials, including for drugs too toxic for use on the general population (Mitford, 1973; Washington, 2006).

In some research areas the needs of Americans of color get little attention. In spite of high rates of certain cancers (Ginty, 2005), black women are less likely than whites to be prescribed innovative cancer treatments or combination therapy or to be included in important research on these cancers (Dressler, 1993; Ginty, 2005). Karen Jackson of the Sisters Network has criticized foundation-

funded research: “Some clinical trials are set up to automatically exclude women of color. In breast cancer studies, for instance, most research is done on the estrogen-positive form of the disease and not on the estrogen-negative form common among African American women” (Ginty, 2005: 1). This lack of inclusion may be one reason African Americans die from such cancers at higher rates.

One problem with much research on differential medical treatment is that researchers focus on the “trees” and neglect “forest” issues. For example, in 2003 the Institute of Medicine published an important report on differential treatment (Smedley et al., 2003). It provides an excellent overview of research at the time, but tiptoes around the contextual issue of institutional and systemic racism. The term “institutional racism” does not appear in the report, “institutional discrimination” appears once in passing, and there is no analysis in the main body of the report on the elite, mostly white, administrators and professionals who control major decisionmaking at the top of the racially inequalitarian health care institutions.

Implicit bias: only one aspect of the white racial frame

Mainstream researchers have attempted to explain health care differentials. Some focus on patients of color as having problems communicating with or distrusting physicians, yet do not systematically examine why. Others reference the medical system as less responsive to patients of color, but such commentaries are usually underdeveloped or written in the passive voice with hidden causal agents. Researchers speak of “unknown” or “complex” causes. In no article that we have seen are the systemic discrimination and associated white racial framing in health care and public health institutions systematically analyzed in regard to health disparities.

Some research demonstrates one aspect of racial framing by health professionals. Several studies examine the “implicit” or “unconscious” bias of providers and make use of the implicit association test (IAT). When given this test of supposedly unconscious stereotyping, most whites associate images of black faces with negative words and traits (e.g., negative character traits). Most have more difficulty in linking photos of black faces to pleasant words and positive traits than they do for white faces. Analyses of thousands of face-reaction tests show the overwhelming majority of whites reveal an antiblack, pro-white bias (Dasgupta, McGhee, Greenwald, & Banaji, 2000). Other research shows that IAT scores predict interracial behaviors better than explicitly measured attitudes (Greenwald et al., 2009).

One study using the IAT online examined responses of 2535 self-identified physicians. Seventy percent revealed they implicitly preferred whites to blacks. White physicians, most of this sample, revealed the strongest implicit white preference. Black physicians showed no implicit preference for white or black Americans (Sabin, Nosek, Greenwald, & Rivara, 2009). Another study of mostly white pediatricians found that they revealed an implicit preference for whites over blacks, but the preference was not as great as that found for other whites. These pediatricians also revealed a stereotype of black patients as more compliant than whites (Sabin, Rivara, & Greenwald, 2008). A related study (Sabin & Greenwald, 2012) found that pediatricians’ IAT scores were correlated with differentials in recommended pain treatments favoring white patients. One review of five studies found that four studies documented an implicit antiblack bias among clinicians, but only one of two that examined the impact of implicit bias on treatments found a connection (Blair, Steiner, & Havranek, 2011).

In the few studies faulting practitioners for racial bias, analysts speak of “well-intentioned” or “fatigued” practitioners who exhibit *unconscious* bias. One research group suggests that “Even well-intentioned providers who are motivated to be nonprejudiced

may stereotype racial/ethnic minority members, particularly under ... time pressure, fatigue, and information overload—are frequently found in health care settings” (Burgess, Fu, & Van Ryn, 2004: 1154). John Hoberman (2012) cites numerous medical literature examples of similar health professionals and researchers tiptoeing around realities of “medical racism” with such an accent on unconscious bias.

Beyond implicit bias: more extensive racial framing

Understanding systemic racism and how it shapes health and health care requires going beyond a conceptualization of individual racial biases disconnected from a broad white racial framing and associated structural power inequalities. Systemic discrimination has long been reproduced by a well-institutionalized white framing—through recurring racial stereotypes and prejudices (“biases”), but also through racist ideologies, images, narratives, emotions, and inclinations to discriminate in practice. Much research (Feagin, 2006, 2010) demonstrates that an age-old, white racial framing remains central to most white minds.

A slowly growing research literature indicates many white health care providers harbor a broad racial framing of Americans of color, one that can be causative in their not providing equitable health care. Such framing involves not only implicit bias but also more overt racial perspectives that shape white (and white-oriented) physicians’ interactions with patients of color. One study found that (mostly white) physicians tend to view black patients and those with low incomes less favorably than white patients and those with higher incomes. White patients were viewed as more intelligent and likely to follow professional advice (Van Ryn & Burke, 2000). Research has shown that many white physicians automatically assume that black women lack the drive to follow medical instructions or the income necessary to afford medication (Dressler 1993; Ginty 2005). One rare study (Malat, Clark-Hitt, Burgess, Friedemann-Sanchez, & Van Ryn, 2010) conducted interviews with white doctors and nurses about how they explain racial inequalities. They most often blamed patients themselves—black patients for being passive and failing to make medical requests of practitioners. They rarely implicated white practitioners’ discrimination in explaining inequality in care.

One survey of physicians found most whites agreed with a statement that patients rarely suffer racial discrimination in medical treatments, while only a small minority of black physicians also agreed (Clark-Hitt et al., 2010). Another study (Snipes et al., 2011) found white and black physicians hold similar beliefs that medical information is most important for decision-making. Focus groups with white and black physicians revealed that most whites (the majority had few patients of color) consciously expressed the view that patients’ race (apparently including racial experience) was unimportant in treatment decision-making and that medical history should drive decision-making. Whites exhibited discomfort in talking about race. Most black physicians (a substantial majority with many patients of color) had no difficulty in discussing racial matters, and many reported patients’ racial backgrounds, experience, and cultural understandings were relevant to treatments.

These limited studies suggest important elements of deep racial framing beyond “bias,” such as racially framed interpretations, as revealed by white or white-oriented decisionmakers in key roles in health-related institutions. Venturing beyond implicit bias, they point strongly to systemic racism at the heart of health inequalities. Researchers assessing racial inequalities in health outcomes usually ignore the central importance of white decisionmakers in significant institutional roles who operate out of this white frame in shaping or sabotaging the health of people of color. Structural explanations of disparities that accent differentials in socioeconomic

resources or housing segregation are important for moving away from biological-race, blame-the-victim approaches, but do not offer a sufficient explanation for persisting racial differentials (Daniels & Schulz, 2006).

Linking racial framing to treatment

White-oriented health practitioners typically bring to interactions with patients of color the broad racial framing that whites have long used. Only a few studies show more explicitly that physicians' racial framing includes views of how suitable black patients are for important procedures or how likely black patients are to follow a physician's directions (Anonymous, 2001; Feagin & McKinney, 2003). One study found that physicians were less trusting of nonwhite HIV patients. Researchers suggested this distrustful view might explain why patients of color got inadequate pain management compared to whites (Moskowitz et al., 2011).

One Harvard study examined the connection between explicit and unconscious racial bias of 287 Boston and Atlanta physicians and their thrombolysis recommendations for white and black patients. These mostly white physicians showed no overt bias for white or black patients when asked explicit questions, yet showed a prowhite, antiblack bias on the IAT. As prowhite bias increased, so did their likelihood of treating white and black patients differently in regard to procedures like "thrombolysis for myocardial infarction" (Green et al., 2007). Another recent study (Cooper et al., 2012) of mostly white and Asian inner-city physicians found those with greater implicit racial bias and stereotyping in regard to patient compliance were more likely to dominate dialogs with black patients, have less positive patient responses during the visit, and get more negative patient ratings on trust and confidence. Another study of Johns Hopkins' medical students found that a substantial majority exhibited an implicit preference for whites, but this preference did not translate into discrimination in judgments about vignette-based clinical assessments (Haider et al., 2011).

The importance of listening to patients and physicians of color

Another issue is the lack of detailed attention paid by white health decisionmakers to views of black patients, physicians, and community representatives about health issues. A growing number of studies (Burgess et al. 2008; Hausmann, Jeong, Bost, & Ibrahim, 2008; Krieger, 1990; Ryan, Gee, & Grith, 2008) have reported on the important, often revealing views of patients of color. One Seattle survey (Seattle and King County Department of Public Health, 2001) found that African Americans and Native Americans were 3–4 times as likely as whites to report discrimination in health care.

Researchers have found that white physicians who accept, consciously or unconsciously, the white frame's old racial stereotypes are likely to communicate negative feelings in verbal or nonverbal treatment behavior, sometimes causing patients of color to withhold the health self-disclosure necessary for effective treatment (Ridley, 1984). While concordance studies indicate many patients prefer practitioners from their racial-ethnic group (Saha, Komaromy, Koepsell, & Bindman, 1999), this situation is especially difficult for African Americans facing a mostly nonblack health care system. Given their personal and collective history of experiencing medical racism, many African American women and men feel uncomfortable expressing medical concerns to professionals who are disproportionately white men. Because many white physicians treat patients of color inadequately, the latter often prefer physicians of color or physicians from their racial group (Saha, Arbelaez, & Cooper, 2003). Patients of color often rate them

as superior to white physicians in decision making and providing information, treating patients with respect, or being available (Cooper-Patrick et al., 2009; Saha, Taggart, Komaromy, & Bindman, 2000). Assessing the literature, Sabin et al. (2009) have summarized the consequences stemming from experiences of people of color with recurring discrimination by health care personnel—added stress, distrust of health care practitioners, delays in seeking medical care and returning for follow-ups, and not adhering to prescribed treatments or screening recommendations. These studies thus link well-institutionalized, discriminatory medical practices to likely effects on morbidity and mortality rates for populations of color. A survey (Peterson, Friedman, Ash, Franco, & Carr, 2004) of faculty at two dozen medical schools found a substantial majority of underrepresented minority (mostly black) faculty reported racial barriers, while only 29 percent of white faculty agreed there were racial barriers.

Conclusion: seeking systemic solutions

Racism in health care and public health institutions is multi-dimensional and systemic. We recognize that generations of white-imposed racism in other institutions—including employment, housing, and education—have contributed greatly to racial inequalities in health. We accent here the racial character and impact of health care institutions and their practitioners on these significant health inequalities. Importantly, we emphasize that even much race-critical literature does not call out specifically and analyze *who* controls these major institutions. Racialized health and health care inequalities are centrally generated by the direct and indirect discriminatory actions of powerful white decisionmakers and other key decisionmakers operating out of a white racial framing. Over centuries racial framing and consequent discrimination by health-related decisionmakers have produced and institutionalized health care inequalities for Americans of color and have also reinforced racist decisions in other major institutions. Operating jointly, these decisions have had significant negative impacts on morbidity and mortality for Americans of color. White racism is systemic and involves far more than individual racial bias.

Some analysts say "you can't change structural inequalities" and "let's focus on what we can change." However, numerous countries have made progress in reducing health inequalities. Research on Canada and European countries shows that shifting health care framing and structuring to accent well-run nationalized health care has positive systemic impacts. Countries with nationalized systems not so linked to race and class usually have less health inequality than the U.S. (Olafsdottir, 2007; Wilson, 2009). In the U.S., the white-black mortality gap lessened during the 1960s–1980s era of anti-poverty programs—which era significantly reduced segregation in health-related institutions and racial-socioeconomic differences (Krieger et al., 2008; Roberts, 2011, Kindle loc. 2900–2912). That mortality gap increased in the 1980s with conservative efforts rolling back government programs substantially benefiting Americans of color.

Our leading public health institutions, the 30-billion-dollar National Institutes of Health, have done much to improve health research, yet remain substantially white-run and white-oriented. Only recently (2010) was the NIH minority health center redesignated the National Institute on Minority Health and Health Disparities—with expanded, if modest, funding for minority health initiatives (National Institute on Minority Health and Health Disparities, 2012). Additionally, disparities research efforts at numerous other NIH institutes and centers are ongoing, but overall remain seriously underfunded (Thomson, Mitchell, & Williams, 2006). Public agencies' and private foundations' periodic studies of health inequalities are moving in the correct direction, yet have

usually brought modest positive health policy results for Americans of color. Major, publicly discussed research on systemic health-related racism and its mostly white decisionmakers has barely begun (see Lukachko, Hatzenbuehler, & Keyes, 2014; Williams, 2012), yet this seems the minimum national effort necessary to move the white majority's political will to back significant health policy changes.

We need to press influential white (and white-oriented) administrators, researchers, and politicians who structure and control health-related institutions to step away from dominant white racial framing and learn counter-framing from Americans of color. Comprehensive research and other educational efforts to publicly voice experiences of people of color with institutionalized racism in health-related institutions—and their policy solutions—constitute one step. These voices will likely say that tier-generated health care inequalities (see Golub et al., 2011) should be eliminated and that all populations must have access to the best medical facilities and staffing.

Another educational effort should involve calling out and teaching about the commonplace racist framing and structured-in practices of white (and white-oriented) administrators and professionals who still mostly control historically white medical, public health, and research-funding institutions. They too need to listen to the important voices and counter-framing of people of color. One recent study (Ginther et al., 2011) found that black NIH applicants were significantly less likely than comparable whites to receive research funding. Consider also condescending public health efforts that take the form of apparently benevolent whites seeking to free people of color from “destructive health habits.” These “white savior” efforts are similar to those of Western missionaries who have tried to convert people overseas to “better” western folkways (Warwick, 2006). Instead, we need to forthrightly problematize the unhealthy racist framing and damaging discrimination of white public health officials and health care personnel.

Beyond education, those concerned about structural reform in health-related institutions need to organize for change. One goal would be an accent on aggressive enforcement of existing civil rights laws. Title VI of the 1964 Civil Rights Act bans discrimination in health-related institutions: “No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” Yet this law has rarely been assertively enforced in our health-related institutions (Fauci, 2001).

In sum, while the current efforts of some health-related researchers and public health organizations to research racial disparities in health do advance the country in the direction of equity in health and health care, no lasting changes for all Americans will occur until systemic racism is more directly conceptualized, focused upon, and eradicated.

Acknowledgment

We are indebted to Jessie Daniels and Verna Keith for comments on earlier drafts.

References

- Acevedo-Garcia, D., et al. (2003). Future directions in residential segregation and health research: a multilevel approach. *American Journal of Public Health*, 93(2), 215–221.
- Alexander, G. C., & Sehgal, A. R. (1998). Barriers to cadaveric renal transplantation among blacks, women, and the poor. *Journal of the American Medical Association*, 280, 1148–1152.
- Anonymous. (1996). The New England Journal of Medicine produces flat-out proof of racism in medicare-funded medicine. *Journal of Blacks in Higher Education*, 13, 39.

- Anonymous. (2001). Racial disparities in medical care. *The New England Journal of Medicine*, 344(19), 1471–1473.
- Association of American Medical Colleges. (2010). *Diversity in the physician workforce: Facts & figures 2010* (pp. 11). Washington, D.C.: Association of American Medical Colleges.
- Ayanian, J. Z., et al. (1999). The effect of patients' preferences on racial differences in access to transplantation. *New England Journal of Medicine*, 341, 1661–1669.
- Bach, P. B., et al. (1999). Racial differences in the treatment of early-stage lung cancer. *New England Journal of Medicine*, 341, 1198–1205.
- Blair, I. V., Steiner, J. F., & Havranek, E. P. (2011). Unconscious (implicit) bias and health disparities: where do we go from here? *Permanent Journal*, 15(2), 71–78.
- Bonilla-Silva, E. (1997). Rethinking racism: toward a structural interpretation. *American Sociological Review*, 62(3), 465–480.
- Burgess, D. J., Ding, Y., Hargreaves, M., et al. (2008). The association between perceived discrimination and underutilization of needed medical and mental health care in a multi-ethnic community sample. *Journal of Health Care for the Poor and Underserved*, 3, 894–911.
- Burgess, D. J., Fu, S. S., & Van Ryn, M. (2004). Why do providers contribute to disparities and what can be done about it? *Journal of General Internal Medicine*, 19, 1154–1159.
- Chin, M. H., Walters, A. E., Cook, S. C., & Huang, E. S. (2007). Interventions to reduce racial and ethnic disparities in health care. *Medical Care Research and Review*, 64(5), 75–285.
- Cintron, A., & Morrison, C. A. (2006). Pain and ethnicity in the United States: a systematic review. *Journal of Palliative Medicine*, 9(6), 1454–1473.
- Clark-Hitt, R., et al. (2010). Doctors' and nurses' explanations for racial disparities in medical treatment. *Journal of Health Care for the Poor and Underserved*, 21, 387–390.
- Cooper-Patrick, L., Gallo, J., Gonzales, J., et al. (2009). Race, gender, and partnership in the patient-physician relationship. *The Journal of the American Medical Association*, 282(6), 583–589.
- Cooper, L. A., Roter, D. L., Carson, K. A., Beach, M. C., Sabin, J. A., Greenwald, A. G., et al. (2012). The associations of clinicians' implicit attitudes about race with medical visit communication and patient ratings of interpersonal care. *American Journal of Public Health*, 102, 979–987.
- Daniels, J., & Schulz, A. J. (2006). Whiteness and the construction of health disparities. In Leith Mullings, & Amy J. Schulz (Eds.), *Gender, race, class, and health* (pp. 89–127). San Francisco, CA: Jossey-Bass.
- Darity, W. A., & Turner, C. B. (1972). Family planning, race consciousness and the fear of race genocide. *American Journal of Public Health*, 62, 1454–1459.
- Darity, W. A., & Turner, C. B. (1973). Fears of genocide among black Americans as related to age, sex, and region. *American Journal of Public Health*, 63, 1029–1034.
- Dasgupta, N., McGhee, D. E., Greenwald, A. G., & Banaji, M. R. (2000). Automatic preference for white Americans: eliminating the familiarity explanation. *Journal of Experimental Social Psychology*, 36, 316–328.
- DeMuth, J. (1964). Sick and tired of being sick and tired. *The Nation*, 538, 549.
- Dressler, W. W. (1993). Health in the African American community: accounting for health inequalities. *Medical Anthropology Quarterly*, 7(4), 321–416.
- Fauci, C. A. (2001). Racism and health care in America: legal responses to racial disparities in the allocation of kidneys. *Boston College Third World Law Journal*, 21, 35–68.
- Feagin, J. R. (2006). *Systemic racism: A theory of oppression*. New York: Routledge.
- Feagin, J. R. (2010). *Racist America*. Revised ed. New York: Routledge.
- Feagin, J. R., & Feagin, C. (1978). *Discrimination American style: Institutional racism and sexism*. Englewood Cliffs, N.J.: Prentice-Hall.
- Feagin, J. R., & McKinney, K. (2003). *The many costs of racism*. Lanham, MD: Rowman and Littlefield.
- Feagin, J. R., & Vera, H. (1995). *White racism: The basics*. New York: Routledge.
- Fincher, C., et al. (2004). Racial disparities in coronary heart disease: sociological view of the medical literature on physician bias. *Ethnicity & Disease*, 14, 360–371.
- Gee, G., & Ford, C. (2011). Structural racism and health inequities: old issues, new directions. *Du Bois Review*, 8(1), 115–132.
- Gemson, D. H., Linson, J., & Messeri, P. (1988). Differences in physician prevention practice patterns for white and minority patients. *Journal of Community Health*, 15(1), 53–64.
- Ginther, D. K., Schaffer, W. T., Schnell, J., Masimore, B., Liu, F., Haak, L. L., et al. (2011). Race, ethnicity, and NIH research awards. *Science*, 333, 1015–1019.
- Ginty, M. M. (2005). Black women at higher risk for major diseases. *We News*. Available at <http://womensnews.org/story/health/050225/black-women-at-higher-risk-major-diseases> Accessed 13.10.09.
- Golub, M., et al. (2011). Community mobilizes to end medical apartheid. *Progress in Community Health Partnerships: Research, Education, and Action*, 5(3), 317–325.
- Gottesman, M. (2011). Valuing diversity at NIH. *NIH Catalyst*, 19, 2.
- Green, A. R., et al. (2007). Implicit bias among physicians and its prediction of thrombolysis decisions for black and white patients. *Journal of General and Internal Medicine*, 22, 1231–1238.
- Greenwald, A. G., Poehlman, A. T., Uhlman, E., et al. (2009). Understanding and using the implicit association test: III. meta-analysis of predictive validity. *Journal of Personality and Social Psychology*, 97, 17–41.
- Haider, A. H., et al. (2011). Association of unconscious race and social class bias with vignette-based clinical assessments by medical students. *The Journal of the American Medical Association*, 306(9), 942–951.
- Hartmann, B. (1995). *Reproductive rights and wrongs: The global politics of population control*. Boston: South End Press.
- Hausmann, L. R. M., Jeong, K., Bost, J. E., & Ibrahim, S. A. (2008). Perceived discrimination in health care and health status in a racially diverse sample medical care. *Medical Care*, 46(9), 905–914.

- Hoberman, J. (2012). *Black and blue: The origins and consequences of medical racism*. Berkeley, California: University of California Press.
- Jones, C. (2000). Levels of racism: a theoretic framework and a Gardener's tale. *American Journal of Public Health*, 90(8), 1212–1215.
- Jones, J. H., & Tuskegee Institute. (1981). *Bad blood: The Tuskegee syphilis experiment*. New York and London: Free Press.
- Krieger, N. (1990). Racial and gender discrimination: risk factors for high blood pressure? *Social Science & Medicine*, 30, 1273–1281.
- Krieger, N. (2003). Does racism harm health? Did child abuse exist before 1962? On explicit questions, critical science, and current controversies: an ecosocial perspective. *American Journal of Public Health*, 93(2), 194–199.
- Krieger, N., Rehkopf, D. H., Chen, J. T., Waterman, P. D., Marcelli, E., & Kennedy, M. (2008). The fall and rise of US inequities in premature mortality: 1960–2002. *PLoS Medicine*, 5(2), 227–241.
- LaVeist, T. (1989). Linking residential segregation to the infant mortality race disparity in U.S. cities. *Sociology and Social Research*, 73(2), 90–94.
- LaVeist, T. (1993). Segregation, poverty, and empowerment: health consequences for African Americans. *The Milbank Quarterly*, 71(1), 41–64.
- Link, B. G., & Phelan, J. (1995). Social conditions as fundamental causes of disease. *Journal of Health and Social Behavior*, 35, 80–94.
- Lukachko, A., Hatzembuehler, M. L., & Keyes, K. M. (2014). Structural racism and myocardial infarction. *Social Science & Medicine*, 103, 42–50. <http://dx.doi.org/10.1016/j.socscimed.2013.07.021>.
- Malat, J., Clark-Hitt, R., Burgess, D. J., Friedemann-Sanchez, G., & Van Ryn, M. (2010). White doctors and nurses on racial inequality in health care in the USA: whiteness and colour-blind racial ideology. *Ethnic and Racial Studies*, 33, 1431–1450.
- Massey, D. (1988). The dimensions of residential segregation. *Social Forces*, 67(2), 281–315.
- Mayberry, R., Mili, F., & Ofili, E. (2000). Racial and ethnic differences in access to medical care. *Medical Care Research and Review*, 57, 108–145.
- Metzl, J. (2010). *The protest psychosis: How schizophrenia became a black disease*. Boston: Beacon.
- Mitford, J. (1973). *Kind and unusual punishment: The prison business*. New York: Alfred A. Knopf.
- Moskowitz, D., Thom, D. H., Guzman, D., Penko, J., Miaskowski, C., & Kushel, M. (2011). Is primary care providers' trust in socially marginalized patients affected by race? *Journal of General Internal Medicine*, 26(8), 846–851.
- National Institute on Minority Health and Health Disparities. (2012). *Important events in NIMHD history*. Retrieved 10.15.12, from <http://www.nih.gov/about/almanac/organization/NIMHD.htm>.
- Olafsdottir, A. (2007). Fundamental causes of health disparities: stratification, the welfare state, and health in the United States and Iceland. *Journal of Health and Social Behavior*, 48, 239–253.
- Paradies, Y. (2006). A systematic review of empirical research on self-reported racism and health. *International Journal of Epidemiology*, 35, 888–901.
- Peterson, N., Friedman, R., Ash, A., Franco, S., & Carr, P. (2004). Faculty self-reported experience with racial and ethnic discrimination in academic medicine. *Journal of General Internal Medicine*, 19(3), 259–265.
- Phelan, J. C., Link, B. G., Diez-Roux, A., Kawachi, I., & Levin, B. (2004). Fundamental causes' of social inequalities in mortality: a test of the theory. *Journal of Health and Social Behavior*, 45(3), 265–285.
- Phelan, J. C., Link, B. G., & Tehranifar, P. (2010). Social conditions as fundamental causes of health inequalities theory, evidence, and policy implications. *Journal of Health and Social Behavior*, 51(1), S28–S40.
- Ridley, C. R. (1984). Clinical treatment of the nondisclosing black client. *American Psychologist*, 39, 1234–1244.
- Roberts, D. (1996). Reconstructing the patient: starting with women of color. In S. M. Wolf (Ed.), *Feminism and bioethics: Beyond reproduction* (pp. 124). New York: Oxford University Press.
- Roberts, D. (2011). *Fatal invention*. New York: The New Press. Kindle electronic edition.
- Ryan, A. M., Gee, G. C., & Grith, D. (2008). Effects of perceived discrimination on diabetes management. *Journal of Health Care for the Poor and Underserved*, 19(1), 149–163.
- Sabin, J. A., & Greenwald, A. G. (2012). The influence of implicit bias on treatment recommendations for 4 common pediatric conditions: pain, urinary tract infection, attention deficit hyperactivity disorder, and asthma. *American Journal of Public Health*, 102(5), 988–995.
- Sabin, J., Nosek, B. A., Greenwald, A., & Rivara, F. P. (2009). Physicians' implicit and explicit attitudes about race by MD race, ethnicity, and gender. *Journal of Health Care for the Poor and Underserved*, 20(3), 896–913.
- Sabin, J. A., Rivara, F. P., & Greenwald, A. G. (2008). Physician implicit attitudes and stereotypes about race and quality of medical care. *Medical Care*, 46(7), 678–685.
- Saha, S., Arbelaez, J., & Cooper, L. (2003). Patient-physician relationships and racial disparities in the quality of health care. *American Journal of Public Health*, 93(10), 1713–1719.
- Saha, S., Komaromy, M., Koepsell, T. D., & Bindman, A. B. (1999). Patient-physician racial concordance and the perceived quality and use of health care. *Archives of Internal Medicine*, 159(9), 997.
- Saha, S., Taggart, S. H., Komaromy, M., & Bindman, A. B. (2000). Do patients choose physicians of their own race. *Health Affairs*, 19(4), 76–83.
- Sanger, M. (1922). *The pivot of civilization*. New York: Brentano's Publishers.
- Schulman, K., et al. (1999). The effect of race and sex on physicians' recommendations for cardiac catheterization. *The New England Journal of Medicine*, 340(8), 618–626.
- Seattle and King County Department of Public Health. (2001). *Racial and ethnic discrimination in healthcare settings*. Seattle, WA: Seattle and King County Department of Public Health.
- Sims, J. M. (1884). *The story of my life*. New York: D. Appleton.
- Skloot, R. (2010). *The immortal life of Henrietta Lacks*. New York: Crown Publishing Group.
- Smedley, B. D., Stith, A. Y., & Nelson, A. R. (2003). *Unequal treatment: confronting racial and ethnic disparities in health care*. Washington, D.C.: National Academies Press.
- Snipes, S., et al. (2011). Is race medically relevant? A qualitative study of physicians' attitudes about the role of race in treatment decision-making. *BMC Health Services Research*, 11, 183.
- Thomson, G. E., Mitchell, F., & Williams, M. (2006). *Examining the health disparities research plan of the National Institutes of Health: Unfinished business*. Washington, D.C.: National Academies Press.
- Ture, K., & Hamilton, C. (1967). *Black power*. New York: Random House.
- Van Ryn, M., & Burke, J. (2000). The effect of race and socio-economic status on physicians' perceptions of patients. *Social Science & Medicine*, 50, 813–828.
- Walters, K. (2011). Bodies don't just tell stories, they tell histories embodiment of historical trauma among American Indians and Alaska Natives. *Du Bois Review*, 8(1), 179–189.
- Warwick, A. (2006). *Colonial pathologies: American tropical medicine, race, and hygiene in the Philippines*. Durham, NC: Duke University Press.
- Washington, H. A. (2006). *Medical apartheid: The dark history of medical experimentation on black Americans from colonial times to the present*. New York, New York: Harlem Moon.
- Welsome, E. (1999). *The plutonium files*. New York: The Dial Press.
- Williams, D. R. (2012). Miles to go before we sleep: racial inequities in health. *Journal of Health and Social Behavior*, 53(3), 279–295.
- Williams, D. R., & Collins, C. (2001). Racial residential segregation: a fundamental cause of racial disparities in health. *Public Health Reports*, 116(5), 404–416 (Washington, D.C.: 1974).
- Williams, D., & Mohammed, S. (2009). Discrimination and racial disparities in health: evidence and needed research. *Journal of Behavioral Medicine*, 32(1), 20–47.
- Wilson, A. E. (2009). Fundamental causes of health disparities: a comparative analysis of Canada and the United States. *International Sociology*, 24, 93–113.
- Zemsky, W. T., Corsi, J. M., & McKay, K. (2011). Pain scores: are they used in sickle cell pain? *Pediatric Emergency Care*, 27(1), 27–28.