

of patient perceptions of discrimination, and the key findings were that perceived discrimination was associated with a staggering array of negative outcomes. Perceived discrimination not surprisingly leads patients of color to have greater levels of mistrust of health care providers and greater tendencies to avoid or underutilize health services. It also is linked to both more psychiatric disorders and physical outcomes, such as greater bodily pain and diabetes complications (Shavers et al., 2012), mistrust of providers, and avoidance of health care systems. Among the few items not associated with perceived discrimination was lower utilization of the flu shot.

Research has been conducted to determine whether physicians' perceptions of patient race may affect treatment (e.g. Lewis et al, 2009; Albert, et al., 2010). In a summary review of this literature, van Ryn & Williams (2003) concluded that patient race "can influence providers' beliefs about and expectations of patients, independent of other factors." Other findings suggest that some physicians have explicit racial stereotypes that affect their treatment recommendations (van Ryn & Saha, 2011; van Ryn & Burke, 2000; van Ryn et al., 2006). In addition, researchers have identified patients' stereotype threat as a potential obstacle to positive medical outcomes and suggested that providers take steps to prevent stereotype threat from being triggered (Burgess et al., 2010).

### 1. Implicit Bias in Health Care

The literature suggesting that implicit bias may play a role in health care disparities is convincing. The most highly cited early study (Schulman et al., 1999) involved 720 physicians who were asked to diagnose and recommend treatment based upon videos of actors portraying patients of different races who used identical scripts and gestures

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to explain their primary symptoms, associated cardiac symptoms, relief of symptoms, and duration of symptoms. The physicians were 40% less likely to refer African Americans for cardiac catheterization than whites, with African American women receiving the lowest referral rates. Researchers opined that their findings "may suggest bias on the part of the physician [and] ... could be the result of subconscious perceptions rather than deliberate actions or thoughts" (Schulman et al., 1999).

In another study, researchers analyzed both implicit and explicit racial attitudes of self-identified medical doctors (Sabin et al., 2009). They found that levels of bias largely mirrored those of the general population, with doctors showing a more favorable bias toward white Americans over black Americans. The greatest bias toward whites was found among white male doctors. Hispanic doctors also showed strong preference for whites, and black male doctors showed low levels of preference for whites. Among women, white female doctors showed lower levels of preference for whites than white male doctors, and black female doctors showed no preference for any racial group. In a study of whether

doctors' implicit attitudes may affect treatment decisions, Green et al. assessed both explicit and implicit racial attitudes and then presented the doctors with descriptions of hypothetical cardiology patients, systematically varying the race of the patients. The doctors did not report explicit biases toward black patients, but had more negative implicit attitudes toward blacks and held stereotypes of blacks as uncooperative patients. The more negative the doctors' implicit attitudes, the less likely respondents were to recommend thrombolytic drugs for black patients (Green, et al., 2007).

In addition to these general trends, doctors in some fields may demonstrate less biased behavioral responses to racial difference. For example, pediatricians have shown notably lower levels of implicit bias, at the same time as they held mild implicit associations that black patients were "less cooperative" than white patients (Sabin et al., 2008). However, the researchers who conducted this study did not find that implicit attitudes predicted white patients receiving better health care. The researchers note that pediatricians are more likely to be female and that females generally have lower implicit preferences for whites, as well as noting that the sample size was small and may therefore not be generalizable (Sabin et al., 2008).

A study of pharmacy, nursing, and medical students in 2009 did not replicate the Sabin et al. pediatrician study (White-Means et al., 2009). While finding that medical pre-professionals on a whole scored much higher on cultural competency than the general population, they also found that the participants' levels of implicit bias were similar or even somewhat stronger than those found in the general population (though researchers suggest that the location of the study in the Southern Delta Region may account for the difference) (White-Means et al., 2009). Researchers found that self-reports of cultural competency and levels of implicit bias were not significantly correlated. This study did not measure whether IAT levels of preference can be linked directly with health outcomes; rather, it intended to assess whether further study is warranted.

## **2. Racial Anxiety and Health Care**

Although implicit bias research emphasizes its effects on decisions made by medical professionals, in domains such as health care, the effects of racial anxiety can create independent sources of disparate treatment. Even if a physician or nurse makes correct diagnoses and treatment recommendations, if racial difference affects personal interaction with patients, those patients may have worse health outcomes.

Research using observational and retrospective studies of medical interactions has found that race can affect the interactions between physicians and patients (Dovidio et al., 2008; Cooper et al., 2003; Johnson et al., 2004; Gordon et al., 2006). In a broad literature review, Ferguson and Candib (2002) found that physicians working with patients of color may be less likely to be empathic, to elicit sufficient information, or to encourage patients to participate in medical decision-making. Research also shows that African American patients experience greater levels of distrust toward white counselors in clinical settings (Watkins & Terrell, 1988), a finding that has serious consequences for both mental and physical health care (Watkins et al., 1989).

For example, in studies using recordings of patients of color interacting with doctors of other races, researchers found that people of color tend to have shorter visits with white doctors and to have less patient-doctor positive affect (Cooper et al., 2003; Johnson et al., 2004). In a study of breast cancer patients, a context in which black

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women have shown significantly worse outcomes even when income and insurance availability are held constant, Siminoff et al. (2006) found that white doctors spent significantly less time engaging in relationship-building activities with patients of color. These racial dynamics clearly affect the quality of services, as well as how much care a patient receives or pursues. Patient health outcomes have been linked directly to the level of satisfaction and trust patients have in their doctors (Dovidio et al., 2008; Hall et al., 1988). Black

patients have been found to be less likely to schedule appointments and more likely to delay or postpone an appointment if they have a white doctor (LaVeist et al., 2003). To the extent that racial disparities in treatment are eliminated, however, health outcome disparities are “substantially attenuated or absent” (Dovidio et al., 2008; Bach et al., 2002).