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# Editorial Columns

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## How Does Race Matter, Anyway?

In two articles published since 2001, Balsa and McGuire (2001, 2003) have used the language and tools of economic theory to examine several phenomena that can influence doctors' decision making during clinical encounters that patients and result in racial disparities in health care. These articles, which adapted and extended earlier theoretical developments in labor economics, were published in an economics journal and are unlikely to have been read by many health services researchers. Therefore, a brief summary of the articles is in order.

Balsa and McGuire (2003) identified prejudice, clinical uncertainty, and stereotyping as distinct mechanisms that can operate within the clinical encounter and lead to racial disparities in care. Drawing on the literature in social psychology, they defined prejudice as the holding of a negative attitude or affect against members of another racial group; e.g., white physicians may be prejudiced against black patients. By modeling prejudice as a psychological cost experienced by white physicians when they treat black patients, Balsa and McGuire showed that prejudiced white physicians would provide less care to blacks than to whites.

Balsa and McGuire (2003) also considered the effects of two types of clinical uncertainty. In the first type, physicians were assumed to have only noisy indicators of patients' clinical condition—perhaps as a result of imperfect diagnostic tests—so they were necessarily uncertain about patients' precise diagnosis or severity. The investigators found that under such circumstances physicians would be forced to rely on prior probabilities—e.g., the prevalence of disease—in making diagnostic and treatment decisions. Thus, for instance, if the prevalence of disease were lower in blacks than in whites, even unprejudiced physicians would be less likely to recommend treatment to black patients than to white patients. As a result, more black patients than white patients who would benefit from treatment would remain untreated.

In the second type of uncertainty, Balsa and McGuire (2003) assumed that physicians have no trouble assessing the diagnosis and severity of patients in their own racial group, but the indicators of patients' clinical condition are noisy for patients from a different racial group, possibly due to miscommunication and misunderstanding resulting from cultural or language differences. They showed that even unprejudiced physicians would be forced to rely on

prior probabilities to a greater degree when treating black patients than white patients. Thus, diagnoses and treatment recommendations of white physicians would be less well “matched” to individuals’ needs for black patients than for whites. Balsa and McGuire also pointed out that because the recommended care would, on average, be less beneficial for blacks than for whites, blacks could rationally react by going to the physician less often or complying less with treatment. Balsa and McGuire (2001, 2003) referred to the racially contingent diagnostic and treatment decisions that can arise from either type of uncertainty as statistical discrimination.

Balsa and McGuire (2003) also considered the role of stereotypes. Following contemporary social psychology, they defined stereotyping as the process by which people use social categories (e.g., race or gender) in acquiring, processing, and recalling information about others (Dovidio 1999). They emphasized that stereotypes are a cognitive mechanism for simplifying and organizing social information in a complex world, that they tend to be negative and exaggerated (Ashmore and Del Boca 1981), and that they are not necessarily accompanied by a negative affect. Drawing on models of stereotyping in labor economics, they showed that certain negative stereotypes—e.g., blacks are less likely to comply with treatment—can result in less care for blacks, especially if the stereotypes are self-fulfilling.

Finally, in a brief analysis of policy implications, Balsa and McGuire (2003) observed that corrective actions for disparities must derive from an understanding of the underlying mechanisms. Specifically, efforts to improve information and reduce noise in the clinical encounter would reduce disparities that arise from clinical uncertainty. However, disparities that arise from prejudice and stereotypes are likely to be harder to deal with. Efforts to combat prejudice and eliminate stereotypes could help, and rule-based policies regarding criteria for treatment and treatment rates in different racial groups could be effective in some cases.

In this issue of *Health Services Research*, Balsa, McGuire, and Meredith (2005) attempt to conduct empirical tests of the role of statistical discrimination in health care. Using data from the Medical Outcomes Study (Tarlov et al. 1989), the investigators assess the factors that influence white doctors’ decisions to diagnose black and white patients with hypertension, diabetes, or depression after an ambulatory visit. For each disease, they estimate a

“traditional disparities regression” in which they model a doctor’s decision to diagnose a patient as a function of patient and physician characteristics as well as a “signal” emitted by the patient. For hypertension, a positive signal is the patient’s affirmative response to a previsit question asking whether he has ever been told he has hypertension. For diabetes, a positive signal is the patient’s affirmative response to an analogous previsit question or his report that he takes insulin. For depression, a positive signal is constructed from the responses to a previsit mental health screener and symptom questionnaire. The investigators then compare the results of the traditional disparities regression and a “statistical discrimination regression” in which they add disease prevalence (to identify physicians’ use of prior probabilities) and an interaction between black race and a positive signal (to identify communication problems between white doctors and black patients) to the model’s explanatory variables.

Balsa, McGuire, and Meredith (2005) find that sex, age, and a positive signal are significantly associated with the doctor’s diagnosis in the traditional disparities regressions for hypertension and diabetes (race is not significant). However, age and sex are not significant in the statistical discrimination regressions, whereas disease prevalence matters. They conclude that these findings provide strong evidence for doctors’ use of prior probabilities in diagnosing hypertension and diabetes, consistent with the first type of uncertainty discussed earlier. Results for depression are less clear cut, although the findings suggest that miscommunication between white physicians and black patients—the second type of uncertainty—plays a role in doctors’ decisions to diagnose depression.

Balsa and McGuire’ (2001, 2003) theoretical investigations and insights represent an important contribution to our understanding of the distinct phenomena that may operate within clinical encounters to produce health care disparities. Their careful dissection of the effects of prejudice, clinical uncertainty, and stereotyping lend conceptual discipline to our thinking about what may happen when physicians and patients of different races interact. However, devising valid empirical tests of the contribution of these phenomena is likely to be much harder, perhaps impossible in most cases. Empirical analyses may be unable to disentangle the underlying mechanisms responsible for observed disparities, or they may be difficult to interpret.

For example, Balsa, McGuire, and Meredith (2005) interpret their findings in the current article that disease prevalence is associated with doctors’ diagnoses of hypertension and diabetes as strong evidence of doctors’ use of prior probabilities when making diagnostic decisions. But more likely, this

finding reflects doctors' use of detailed clinical information from the medical history, physical examination, and laboratory tests performed during the visit, including a review of medications taken by the patient, blood pressure readings, and measured levels of blood glucose and glycosylated hemoglobin. This detailed information was not incorporated into the "signal" emitted by the patient, as defined in the study. Physicians would not be expected to use prevalence data, per se, to diagnose hypertension or diabetes in individual patients when simple tests to confirm the diseases are inexpensive and readily available.

By contrast, Balsa, McGuire, and Meredith (2005) interpret their findings for depression as evidence that race affects doctors' diagnostic decisions through the quality of physician-patient communication. Thus, they posit that white doctors have more difficulty interpreting the clinical manifestations of depression in black than in white patients, possibly resulting from cultural or language differences. If Balsa et al. are correct, doctors would be expected to rely more on white patients' reports, or "signals," about symptoms of depression than on black patients' reports.

Poor communication between white physicians and minority patients has received growing attention as a potential cause of racial disparities in health care (van Ryn 2002; Ashton et al. 2003). Factors suggested to underlie communication problems include physician-patient differences in the "explanatory model of sickness," discordance in language or dialect, differences in usage or interpretation of terms and idioms, differences in communication styles, and imbalance of power and trust. As Balsa, McGuire, and Meredith (2005) emphasize, miscommunication is more likely to play a role in the diagnosis of depression, where the patient's history holds sway, than in the diagnosis of hypertension or diabetes, for which there are objective tests.

Simply establishing that miscommunication is important, however, is insufficient to rule out a role for other phenomena, including prejudice and stereotyping. Balsa, McGuire, and Meredith (2005) recognize that some communication problems between white doctors and black patients could be solved by additional effort on the doctor's part, and they examine doctors' efforts by comparing visit length for black and white patients. But their finding that visit length did not differ by patient race is not supported by other research (e.g., Cooper et al. 2003). Moreover, broadly viewed, physician effort extends beyond visit length to communication style.

There is evidence that doctors adopt different communication patterns with black patients compared with white patients. For instance, black patients rate their visits as less "participatory" than do white patients (Kaplan et al. 1995; Cooper-Patrick et al. 1999). Thus, black patients are less likely than

whites to report that doctors often asked them to help make decisions among alternative treatments, often gave them some control over their treatment, or often asked them to take some of the responsibility for their treatment. Roter et al. (1997) found that doctors are more likely to adopt a narrowly biomedical communication pattern with black patients than with white patients.

Differences in doctors' communication style by patient race, possibly characterized by narrower and more routine communication patterns with black patients, could be viewed as reflecting insufficient "effort" on the part of doctors to overcome communication barriers with patients of a different racial group. In turn, insufficient effort could derive from doctors' lack of knowledge, prejudice, or negative stereotypes doctors hold about black patients. Van Ryn and Burke (2000) found that white doctors perceived black patients as more likely than white patients to abuse drugs and alcohol, to be unintelligent and uneducated, and to fail to comply with medical advice, even controlling for patients' observable characteristics. White doctors also reported lower feelings of affiliation with black than with white patients. It is not hard to imagine that such views could have a profound influence on how hard doctors try to understand patients and to make themselves understood.

It is now well accepted that black patients are more likely to choose black doctors when they have a choice, and that black patients report higher quality of care, higher satisfaction with care, and higher trust in their doctors when they are treated by black doctors (e.g., Saha et al. 1999; Doescher et al. 2000; La Veist and Nuru-Jeter 2002). However, it is neither practical nor desirable to rest the equitable treatment of black patients within the health care system on race concordance with their doctors. Doctors of all racial and ethnic groups must be able to provide high-quality care to all their patients.

Balsa, McGuire, and Meredith (2005) argue that to contend effectively with racial disparities in health care it is necessary to understand the source of the problem. They underscore that disparities arising from prejudice are of a very different character than disparities arising from doctors' application of the rules of conditional probability in the face of imperfect information—that is, from statistical discrimination—and that disparities from different sources require different solutions. Of course, Balsa et al. are correct in concept. The problem is that, in practice, the varied cognitive and affective phenomena that can lead to health care disparities are likely to occur simultaneously and to be extremely difficult to disentangle.

Given this reality, eliminating racial disparities in healthcare will require a multifaceted approach. Medical students, residents, and practicing doctors would benefit from training to develop awareness of their use of stereotypes,

understand the effects of stereotypes, and elicit and incorporate individualizing patient information into their perceptions of patients (van Ryn and Burke 2000). Interventions to improve physician–patient communication are also likely to yield rewards. Efforts to promote doctors’ cultural competence could enhance their ability to communicate with and provide high-quality care to patients from diverse racial and ethnic groups (Betancourt 2004). Initiatives to empower minority patients to become more informed and active users of health care could enhance patients’ ability to communicate with their doctors and take responsibility for their own care (Cooper-Patrick et al. 1999). Finally, systemic strategies, including strengthening the stability of physician–patient relationships in health plans, promoting consistent and equitable care through the use of evidence-based guidelines, implementing multidisciplinary treatment and preventive care teams, and increasing the number of minority doctors and other health care providers have a crucial role to play as well (Institute of Medicine 2003).

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