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How is Bias Established? Interpreting Disparities of Care

Abstract

It is a central claim of the literature on racial and ethnic disparities of care that socioeconomic and other variables do not fully explain these differences and that bias on the part of doctors also contributes importantly. By the same token, however, before a case for bias can be made, other explanations for observed disparities must be ruled out. Over the last two decades, this principle of exclusion has eroded. Documenting a change in the norms of the literature, the present article reviews a number of arguments that allege or suggest bias by doctors even while other explanations for disparities remain open. This practice is in evidence in the most influential work in the literature, the Institute of Medicine's report *Unequal Treatment* (2003). In effect, *Unequal Treatment* altered the ground rules by making it possible to allege or suggest bias without abiding by the methodological (as well as ethical) requirements for so doing.

Ground Rules

The historic report issued by the Institute of Medicine in 2003, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Healthcare*, more than suggested that American medicine was tainted with bias (Smedley, Stith, and Nelson 2003). In the sense that its conclusions probably did not reflect the general consensus of medical opinion in the early 21st century, *Unequal Treatment* was ahead of its time. Now that those conclusions have become something more like mainstream or even official positions, the hour has come to examine a

tectonic change in the practices of argument and inference apparent both in the IOM report and the literature inspired by it.

If factors other than bias on the part of doctors cannot account for racial or ethnic disparities of care, then and only then can we reasonably infer bias. The residual character of a finding of bias is noted throughout the IOM report itself; for example, “When differences in treatment attributable to insurance, access to care, health status, and other factors are eliminated . . . racial and ethnic healthcare disparities still remain” (160). The implication is that biased decisions by doctors—even doctors who believe in equality—fill the explanatory gap. By the same token, a case for bias on the part of providers can be made only after other credible explanations for observed disparities have been ruled out. While an awareness of potential confounders is a requisite of any investigation, in an investigation of disparities it also seems like an ethical necessity to exhaust plausible alternatives before reaching a conclusion as accusatory as one of bias. Like a guilty verdict, a judgment of bias requires, or should require, the elimination of reasonable doubt.

The Institute of Medicine report was written at the behest of Congress, whose charge itself appears to reflect an understanding of bias as an explanation that remains when more readily documented causes of disparate care have been excluded. Specifically, the Institute was asked to “assess the extent of racial and ethnic differences in healthcare that are not otherwise attributable to known factors such as access to care (e.g., ability to pay or insurance coverage)” (UT 30). This wording suggests that at the time of *Unequal Treatment* it was generally recognized that one cannot infer bias without first accounting for “known factors.”

In medicine, too, it seems to have been understood that a claim of bias should be a last resort. Thus, because bias is difficult to examine directly, it “may be supported only after all other potential factors have been examined and disproved” (Harris, Andrews, and Elixhauser 1997). Or as a 2001 editorial by Epstein and Ayanian puts it, “Racial bias has always remained a possible explanation for residual racial differences in treatment, after other explanatory factors have been accounted for” (Epstein and Ayanian 2001). However, even identifying, much less ruling out, competing explanations for disparities of care can also be difficult.

Working with the national registry of myocardial infarction patients from June 1994 to April 1996, Taylor et al. documented disparities in the administration of reperfusion therapies to black and white patients with acute MI (Taylor et al. 1998). Using the same database, some of the same researchers, writing in the same issue of the same journal, found nonblack minorities “were generally as likely to receive intravenous thrombolytic therapy (with the exception of Asian-Pacific islanders) and undergo both coronary arteriography and revascularization procedures as their white counterparts” (Canto et al. 1998). In short, these paired studies revealed different patterns. If the doctors held “negative stereotypes about minorities” (as *Unequal Treatment* puts it [172]), we would expect that attitude to mark their treatment of both nonwhite populations, not just one. But if not bias, exactly what might account for the under-receipt of reperfusion therapies by the black patients? In addition to signs and symptoms less indicative of MI, Taylor et al. propose a number of possible confounders, including unspecified cultural differences. Lastly (and without mentioning the companion study), they also raise the possibility of bias, albeit without specifically noting that bias can be shown only after other credible explanations fall short.

“To many observers,” state the authors of *Unequal Treatment*, “the mechanism behind disparities that comes most immediately to mind is provider prejudice” (161). Confronting the prospect of working through any number of potential confounders, some may prefer to shorten the task of investigating the causes of disparities by embracing the conclusion “that comes most immediately to mind.” Many a reader of the Taylor et al. study probably leaps mentally to a verdict of bias. In a 2010 study where a small sample of doctors and nurses were interviewed to ascertain how they account for racial disparities of care, the practice of holding bias in abeyance is portrayed as a sort of bad habit in need of correction. “Typically, respondents initially named system and/or patient factors, and named provider bias only after the interviewer explained that research controlling for patient and system factors still yields unequal treatment for patients of different races. After hearing that their prior explanations did not account for all of the disparities, several respondents cited provider bias as a possible explanation” (Clark-Hitt et al. 2010]. An appropriate delay in invoking bias is interpreted by the authors as a form of denialism to be challenged by determined “educational efforts.” They would have no quarrel with a respondent who invoked bias immediately, albeit without knowing much about the state of the evidence.

When the investigators in this study imply that each and every competing explanation for each and every disparity of care has been looked into and found wanting, they exaggerate. After characterizing bias as an explanation that remains “after other explanatory factors have been accounted for,” Epstein and Ayanian themselves proceed to suggest that “subtle” racial bias lurks behind the disparity identified in the article on which they comment—namely, unequal rates of post-MI cardiac catheterization for white and black patients, regardless of the

race of the attending doctor—without considering all explanations proposed in that article (Chen et al. 2001). As in this instance, critics do not necessarily wait to allege, imply, or suggest bias until other credible explanations for observed disparities are off the table. And among these critics are the authors of *Unequal Treatment* (Satel and Click 2005).

An indicator of the difficulty of investigating an issue as tangled as disparities of care is that all studies listed in the annotated bibliography in *Unequal Treatment* carry important limitations—for example, they are retrospective, or they do not assess socioeconomic status (SES), or they do not account for comorbidities. While the authors of *Unequal Treatment* deem the evidence from studies of cardiovascular disparities particularly telling, it turns out that 18 of the 24 listed in the review lack controls for SES. Cited throughout *Unequal Treatment*, studies like these often find disparities; but many do not raise the possibility of bias even hypothetically, thus honoring the rule against inferring bias unless and until “other explanatory factors have been accounted for.” For example, in a study that found black patients at one site markedly less likely than white counterparts to undergo bypass surgery, Peterson et al. note that “race may be only a surrogate marker for other socioeconomic factors” including family support; appropriately, they do not suggest bias (Peterson et al. 1997). Nor does a 1999 study finding racially disparate rates of surgery for early-stage non-small-cell lung cancer (Bach et al. 1999). It is on this sort of foundation that *Unequal Treatment* mounts a case for bias. The authors seem to believe that by weaving studies together they can make a sort of rope bridge that overcomes the deficiencies of the individual strands of evidence for bias. In effect, they argue beyond the evidence, thereby changing the rules that govern the making of a claim of bias.

Before *Unequal Treatment* an unofficial rule held that disparities of care cannot be ascribed to bias unless other possible contributors are excluded. By contrast, *Unequal Treatment* holds that unless bias itself is excluded, it remains a credible explanation for disparities of care. Hence, “These streams of evidence lead the committee to conclude that bias, stereotyping, prejudice, and uncertainty on the part of healthcare professionals cannot be ruled out” (178). Presumably, the surest way to disprove bias on the part of the doctor is to show that a disparity of care reduces to a disparity of access; that is, it arose before the patient ever met the doctor. But if a disparity originates after the patient crosses the threshold, the possibility will remain theoretically open that doctors somehow caused it, if only by expressing bias unconsciously—a topic with its own literature, including *Unequal Treatment*. The net effect of this resetting of the terms of argument is to make it easier to float suggestions and suspicions of bias.

From Last Resort to First Principle

The disparities literature arose in the latter 20th century, and as disturbing inequalities of treatment and outcome were documented one by one, investigators sought to estimate the effect of contributing variables like demographic factors and access to care, albeit on the basis of incomplete information. To some, this effort to ascribe disparities to sources other than the quality of care may have appeared like an elaborate effort to deny the obvious. They knew, of course, that any number of causes combine to produce disparities, but they were convinced that medicine in general and doctors individually were implicated, and they must have wearied

of reading about the role of anything and everything except bias on the part of the doctor. As Geiger comments in a digital chapter appended to *Unequal Treatment*, “Explanations [of disparities], which were necessarily speculative in most cases, were drawn from the same repetitive list of possibilities” (Geiger 2003). From this point of view, the review of possible reasons for observed disparities resembles a tiresome round-up of the usual suspects. In 1996 the same author strongly implied that American medicine was infected with racism, even while confessing, “We do not yet know enough to make that charge definitively” (Geiger 1996). Incorporating a review essay by Geiger, *Unequal Treatment* also strongly implies bias without being able to make the charge definitively; hence its repeated citation of outspoken critics of bias in medicine and its repeated deployment of arguments that point to bias, all the while using carefully tentative language. But with the construction of a sort of preliminary case for the influence of racial and ethnic bias on the practice of medicine, the principle that a showing of bias requires the refutation of alternatives was effectively reduced to a paper requirement, if that.

If *Unequal Treatment* is the most influential document of any kind in the disparities literature, high on the list of the most influential studies is van Ryn and Burke’s study of doctors’ perceptions of patients, published three years before (and cited at many points in *Unequal Treatment* itself). Based on a survey in which doctors rate statements like “This patient is the kind of person I could see myself being friends with” or “This patient is likely to fail to comply with medical advice,” the study finds that black patients are viewed less favorably than whites in one respect after another. However, this does not establish that stereotypes govern clinical decisions; hence the authors’ acknowledgment that their study “does not provide direct

evidence regarding quality of care and it is unclear whether these differences in perceptions [of white and black, and affluent and non-affluent patients] are associated with differences in care or outcome” (van Ryn and Burke 2000). This disclaimer has not deterred interpretation of the study as cold proof of the influence of racism in American medicine. Just as *Unequal Treatment* concedes the absence of “direct evidence that provider biases affect the quality of care for minority patients” (10-11) but goes on to suggest, imply, or propose exactly that, the literature is willing to pass over the absence of evidence—not just “direct” evidence—of biased decision-making in the van Ryn and Burke study. (At several points *Unequal Treatment* misreads that study as showing “provider bias and its impact on physician decision-making” [200; cf. 166, 173, 201, 426, 430-431].) The general message of the critics of racial and ethnic disparities is not that doctors hold prejudices which may or may not shape clinical decisions; it is that doctors’ deeply held prejudices *necessarily* shape their behavior. At the same time, by insisting that these prejudices operate beyond the doctor’s ken and volition, the critics soften the tone of their accusations. “Forgive them, for they know not what they do.”

As propriety requires, critics of disparities sometimes concede (as above) that they do not really have the evidence to make the charge of bias stick and that confirmation of bias awaits further study. In a recent investigation Hagiwara et al. confess they cannot show that doctors’ use of first-person pronouns contributes to dissatisfaction, mistrust, or nonadherence on the part of black patients, but they remain convinced that the suspect pronouns are implicated in unfavorable outcomes some way yet to be determined; after all, “The literature on physician bias in racially discordant patient-physician communication is still relatively new” (Hagiwara et al. 2017). It is hard to imagine such an argument being made if the principle of

working through the evidence before claiming bias had not already been broken. More ambitious and comprehensive in its preliminary conclusions is the van Ryn article of 2002, which finds “sufficient evidence for the hypothesis that provider behavior contributes to race/ethnicity disparities in care to warrant further study” (van Ryn 2002). Confronting a similar lack of proof of the influence of bias on clinical practice, *Unequal Treatment* makes a provisional case for it, always pointing its tentative conclusions in the same direction. We might call it proof by anticipation. But if bias can be shown only after the evidence has been gathered and evaluated, then a finding of bias while the case remains open is surely invalid. An anticipatory finding of bias is a contradiction in terms.

In the disparities literature, it is above all the axiom of unconscious bias that enables critics and commentators to overlook gaps in the evidence, secure in the knowledge that bias exists whether or not other explanations of disparate treatments or outcomes have been exhausted. The claim that doctors are subject to “the automatic, unconscious, and ubiquitous nature of fundamental social cognition processes” gives some idea of the absolutism of the concept of a racial/ethnic bias built deeply into the practice of medicine (van Ryn and Fu 2003). This statement co-authored by van Ryn would seem to nullify the disclaimer in her own and Burke’s much-cited study of doctors’ perceptions of black patients. That is, the possibility that doctors’ likes and dislikes do not dictate their clinical decisions vanishes if these unthinking judgments operate like a law of nature.

Unsurprisingly, many seem to regard the van Ryn and Burke study of doctors’ perceptions as proof that racial disparities in medicine trace back, in the final analysis, to providers’ bias. A malicious influence which is all at once fundamental, universal, and

inescapable makes ordinary evidence mundane by comparison. If much of the disparity literature holds it as a first principle that doctors are ruled by unconscious bias, it does not need to refute other possible causes for racial disparities before invoking this one. A first principle comes at the beginning, not the end, of inquiry; it is a preconception, not a conclusion.

Here I offer a few examples of arguments that impute or suggest bias while an alternative explanation of observed disparities remains quite obviously, and often explicitly, in play. A few of these exhibits come from *Unequal Treatment*; all others come from articles in the mainstream of the literature, most of which garnered about 100 citations (and one over 500). The texts in question span 20 years, from 2001 to 2021.

Beyond the Evidence

Although the authors of *Unequal Treatment* accept the presumption of unconscious bias, they recognize that attributing disparities in treatment or outcome to bias requires the evaluation of other possibilities. Hence, “The majority of studies find that racial and ethnic disparities remain even after adjustment for socioeconomic differences and other healthcare access-related factors” (5). Bias, then, is a finding of exclusion. Before a verdict of bias can be pronounced, many variables—prominently including, but not limited to, those just named—should be weighed and rival explanations eliminated. Thus the observation later in *Unequal Treatment* that “Almost all of the studies reviewed here find that as more potentially confounding variables are controlled, the magnitude of racial and ethnic disparities in care decreases” (50). Yet the impression left by *Unequal Treatment* is that American medicine is

extensively contaminated with bias, not that bias is largely an appearance that dissolves upon analysis. The authors strain the evidence, stating that racial and ethnic stereotypes *may* influence the practice of medicine, but implying far more and repeatedly echoing the work of van Ryn, who maintains that stereotypes operate *necessarily*, not least because they are unconscious and therefore outside the holder's control.

Unequal Treatment concerns both racial and ethnic disparities in care, and if bias operated automatically, we would presumably expect similar patterns to show up in the care of black and Hispanic patients. Yet at the time of *Unequal Treatment* several studies had reported divergent patterns of cardiovascular care for these groups. As noted, companion studies published in 1998 found inferior treatment of black but not Hispanic patients with acute MI; neither is mentioned in the narrative section of *Unequal Treatment* devoted to cardiovascular care. The 1995 study by Carlisle et al. is cited, but not its finding that "volume adjustment diminished disparities in angiography and bypass graft surgery while eliminating disparities in angioplasty for Latinos, and had little effect on disparities in bypass graft surgery and angioplasty for African Americans" (Carlisle, Leake, and Shapiro 1995). According to *Unequal Treatment*, Hannan et al. found both black and Hispanic patients significantly less likely than whites to undergo CABG (coronary artery bypass graft) when standard criteria of appropriateness and necessity were applied (48); but this is half true. Hannan et al. actually found as follows: "When patients . . . were limited to what RAND categorized as necessary for CABG surgery, African-American patients, but not Hispanic patients, were less likely to receive CABG surgery than white non-Hispanic patients" (Hannan et al. 1999). The authors of *Unequal*

Treatment, who strongly imply that the ultimate cause of disparities of care is bias against nonwhite patients, do not ask why this bias seems to act so paradoxically at times.

Also paradoxical is the finding of a noted study in which doctors who viewed vignettes of “patients” with chest pain referred black women, but not black men, for cardiac catheterization at a lower rate than white men (Schulman et al. 1999). Although this is the first study cited in *Unequal Treatment* as evidence that conscious or unconscious bias influences clinical decisions, and although it is discussed at some length, the authors disregard a published correction by the editors of the *New England Journal of Medicine* revealing that the disparity in question traced largely to the work of a single actress impersonating a black patient (Curfman and Kassirer 1999). A supposedly systematic bias could never explain something as irregular as a pattern of clinical decisions disfavoring black women but not black men; but it turns out that this finding was probably spurious to begin with. The editors conclude that in the study as published “the evidence of racism and sexism was overstated” (Curfman and Kassirer 1999).

This, then, is the first exhibit of the power of bias over clinical decisions offered in *Unequal Treatment*. The last in the series of six is the van Ryn and Burke study which, as we have seen, provides no such evidence at all. Another study concerns therapists, not medical doctors, while a fourth “suffers from a very small sample size,” among other limitations noted by the authors of *Unequal Treatment* themselves (165). With studies like this as their bricks, the authors seem to know their evidence is too weak, as yet, to support an indictment of the medical profession. Hence their practice of making tentative or preliminary accusations, as at the end of Chapter 4: “Bias, stereotyping, prejudice, and clinical uncertainty on the part of healthcare providers may contribute to racial and ethnic disparities in healthcare. While

indirect evidence from several lines of research support this statement, a greater understanding of the prevalence and influence of these processes is needed and should be sought through research” (178). With a sort of suggestive finding of biased care issued while gaps in the evidence remain, it appears that a determination of racial or ethnic bias is not a last resort after all. It is as if a verdict of “Guilty, but pending” had been issued in the middle of a trial.

This suggestion of bias before, not after, the exclusion of competing explanations of disparities in treatment or outcome is followed by a passage printed in boldface which emphasizes both the high probability of the conclusion and the incompleteness of the evidence for it. After repeating verbatim that ignorant attitudes (conscious or unconscious) on the part of doctors and nurses may be responsible for disparities in medicine, the authors add,

However, few studies have attempted to assess these mechanisms, and therefore direct evidence bearing on the possible role of these factors, especially prejudice, is not yet available. The committee finds strong, but circumstantial evidence for the role of bias, stereotyping, prejudice, and clinical uncertainty from a range of sources, including studies of social cognition and “implicit” stereotyping, but urges more research to identify how and when these processes occur. (178)

If we accept the need to withhold a judgment of bias until alternative explanations are evaluated, we must conclude that finding doctors guilty by innuendo before the evidence has even been gathered represents not just an overreach but a shift in the ground rules of argument. Nor can studies or theories from social psychology make up for a lack of evidence

from the realm of clinical medicine. To imply that findings like those of van Ryn and Burke offer “strong, but circumstantial evidence” of the influence of bias on the actual practice of medicine is to dilute the concept of evidence.

But how is it possible to reach a provocative conclusion about the practice of medicine on the strength of a theory of social cognition? Consider the characteristic claim in *Unequal Treatment* that white psychiatrists in an emergency department are likely to misdiagnose minority patients simply because they understand these patients less well than their own group.

Suppose a psychiatrist in an emergency situation must decide whether to commit a patient after a failed suicide attempt. Unless the psychiatrist can get sufficient information to be assured that the patient is no longer a threat to harm himself, hospitalization is indicated. A black or Latino patient who is less well understood by the doctor is, in this case, more likely to be hospitalized because without sufficient information, the doctor must go with the prior that the patient might be a danger to himself. (168)

In this case, it is actually readers who lack sufficient information, in that we are told nothing about actual rates of hospitalization after suicide attempts and what might account for them. We are simply to assume that a psychiatrist hospitalizes patients on the basis of snap judgments, sociological hunches, or unconscious preferences. Is this what the authors mean by circumstantial evidence? Later in *Unequal Treatment* the authors concede they do not in fact know if doctors are more likely to fail minority patients because they (doctors) simply do not

understand them. Data from prospective trials, note the authors, “will . . . assist in determining if physicians experience greater uncertainty in assessing presenting complaints of cultural or linguistic minority patients, or if their treatment decisions for these patients fail to correspond to accepted standards of care” (236). This appears to be another instance of a verdict of “Guilty, but pending.”

Though they await the findings of prospective trials, the authors misreport an important one at the very outset of *Unequal Treatment*, contending that it shows black patients “are likely to receive a lower quality of basic clinical services such as intensive care.” The claim that black patients receive inferior care when their lives are at stake is surely arresting. However, upon reviewing the source cited—an investigation based on a sample of 17,440 consecutive ICU admissions in 40 hospitals—we find that it ends as follows: “Thus, once a patient is admitted to an ICU, race appears to have little effect on therapy and no effect on patient outcomes” (Williams et al. 1995). The study finds “no significant racial difference in risk-adjusted hospital mortality.”

Cited over 10,000 times, the Institute of Medicine report set the tone of the investigation of racial and ethnic disparities in medicine, and its suggestions of bias despite gaps in the evidence—and despite the methodological requirement of working through the evidence before such a judgment can be pronounced at all—is not an anomaly in the literature.

The Allocation of Ten Minutes

The argumentation of the disparities literature is grounded largely on statistical patterns on the one hand and a doctrinal belief in unconscious bias on the other. Little rests on direct observation. For investigators of differential outcomes, the clinical encounter offers the prospect of acquiring such evidence. The hope of many is that the scrutiny of meetings between doctor and patient will capture what *Unequal Treatment* describes as the “mechanisms” of racial and ethnic disparities—that is, “how and when” they arise. At the same time, the identification in *Unequal Treatment* of nervous blinking as a possible signal of bias (162) alerts us that the search for indicators of bias can be excessively minute and tendentious.

Published a few years before *Unequal Treatment* but not cited in it was a study of 4352 visits averaging 10 minutes, in which doctors spent 1.1% less time answering questions from black than white patients, and 2.4% less time chatting (Oliver et al. 2001). So trivial are these and other findings that the authors themselves wonder if they possess clinical significance. But if such findings are too slight to constitute disparities in any meaningful sense, they are assuredly also too slight to support an allegation as serious as one of racism. Nevertheless, many beans make a heap, and Oliver et al. believe the pattern of trifling differences they have uncovered may add up to evidence of racial bias. Their study exemplifies what it means to entertain a finding of bias without bothering to exclude other possible reasons for observed differences of treatment.

So it is that the authors conclude that the differences inventoried in their article “may represent appropriate tailoring of services to meet unequal needs” but on the other hand “could also represent racial bias.” What is noteworthy about this formulation is not just that it leverages paltry differences into a provocative suggestion, but that it proposes bias regardless of

an admittedly credible explanation of the differences at issue—namely, the “appropriate tailoring” of conversation. The fact is that as long as an adequate explanation of observed disparities remains, there is no case for racial bias to be made. Racial bias should be shown by elimination, not suggested on the grounds of suspicion.

Ironically enough, Oliver et al. themselves call attention to a factor that could account for the marginally different profiles of doctors’ conversations with black and white patients in their study. “Racial and cultural differences between physicians and patients have effects on physician-patient communication, including the content of discussion during the clinical encounter, and could be another reason for the differences noted in our study.” Despite this acknowledgment, however, they hold that “racial stereotyping of African-American patients by predominantly white physicians” may be responsible for the suspect pattern. It appears they regard the unmasking of racism as an imperative that justifies floating a grave accusation despite the meagerness of the evidence. Unless a reader of this study were already convinced that doctors’ speech patterns are determined by racial stereotypes, it seems improbable that the minimal differences observed and the haphazard effort to account for them would be enough to persuade him or her that these patterns reflect actual racial bias.

A Study of Adherence

According to *Unequal Treatment*, “evidence suggests that provider-patient communication is directly linked to patient satisfaction, adherence, and subsequently, health outcomes” (200). Literature in the tradition of *Unequal Treatment* tends to regard

nonadherence in particular as an index of bias directed toward the patient in the doctor's office. If this chain of inference holds good, then, by the same token, equivalent levels of adherence among minority and nonminority patients in a given sample imply that no bias was exhibited. In a striking example of the liberties sometimes taken in the disparities literature, a study of diabetic patients finds virtually no differences of adherence and therefore no presumptive evidence of bias, and yet also finds "that racial/ethnic discrimination is an important barrier to diabetes management" (Ryan, Gee, and Griffith 2008). In other words, although the study suggests as persuasively as a retrospective analysis could that no bias marked the clinical encounter, it still finds grounds to impute bias (albeit somewhat ambiguously). This suggests that if bias must be ruled out as an explanation of disparities, it may not be possible to do so even if good evidence to support a claim of bias is lacking. Proving a negative turns out to be difficult indeed.

In the survey-based study in question, by Ryan et al., "among Whites, 89.4%, 71.1%, 73.5%, and 87.1% reported HbA1c, foot exam, eye exam, and blood pressure tests, respectively. Correspondingly, among non-Whites the estimates were 88.7%, 74.9%, 74.4%, and 90.6%, respectively." If adherence is considered a reflection of communication and/or satisfaction with the doctor (a common assumption in the literature), these very similar percentages suggest that no inference of bias on the part of the doctors concerned can be drawn. Nevertheless, Ryan et al. conclude (as noted) that discrimination appears to inhibit the management of diabetes. How can this be?

Regardless of the nearly identical rates of adherence across groups, about 4% of the study subjects reported—that is, perceived—discrimination, and those who did so managed

their disease much more poorly. Where other studies suggest a pattern of discrimination even though a reasonable explanation for observed disparities remains open, Ryan et al. identify an adverse outcome of “racial/ethnic discrimination” while giving no reason to believe that such a pattern of practice exists. Despite acknowledging that “it is possible that we do not account for all relevant factors” contributing to the “association between discrimination and diabetes management,” they disregard the likelihood that discrimination has not, in fact, taken place—that is, that the perception of discrimination is in this instance unfounded. In fact, they use “perceived discrimination” and “discrimination” interchangeably, as if the difference between the two were purely nominal. Thus, while reporting the effects of *perceived* discrimination on diabetes management, they find that “*discrimination* was associated with a 38.3%, 45.4%, and 47.1%, lower probability of blood pressure, foot, and hemoglobin testing” (emphasis added). Both in equating these terms and ignoring the possibility that a perception of discrimination can be mistaken, Ryan et al. follow the general practice of the literature, including *Unequal Treatment*.

A Study of Shared Decision-Making

Since *Unequal Treatment*, the literature has emphasized that black patients are denied the level of participatory decision-making enjoyed by whites. Among the studies concerned with this question is a 2016 investigation which finds that black patients aged 50-74 were informed of the pro’s and con’s of PSA (prostate-specific antigen) testing at a markedly lower rate (Leyva et al. 2016). Although it is a theme of the disparities literature that minority

patients receive preventive services less often, here doctors are faulted for making sure black patients receive a preventive test. Like others, this study fails to consider a plausible explanation of the disparity in question.

A few years after the U. S. Preventive Services Task Force recommended against routine PSA testing, Leyva et al. conducted a national survey to determine not only if men in the 50-74 category had ever had the test, but, more critically, if they had ever been informed that (a) the decision to be tested was theirs; (b) medical opinion about the test was divided; and (c) its effect on mortality was unknown. Whether or not they had ever undergone testing, only 10% of respondents were in possession of all three elements of informed decision-making. While that was disturbing enough, the force of this finding was doubled by the discovery that far fewer black than white patients reported being informed on each of the three points.

Attempting to make sense of this disparity, the authors recognize they must consider alternative hypotheses, if any; and in that spirit they admit that it is possible that “the present findings reflect an awareness among health-care providers that African Americans have an increased risk of prostate cancer and, as such, may realize the added benefit from earlier screening and detection.” As Leyva et al. note, however, even this is not really an argument against leaving the decision to the patient. “These men should be informed of both the known harms and potential benefits of screening at an earlier age and SDM [shared decision-making] should proceed with an understanding that there are no comparative data to demonstrate that men at higher than average risk for prostate cancer will benefit more from screening when compared to those at average risk.” However, one doubts doctors would unilaterally

recommend PSA testing for black patients simply on the grounds that they are at increased risk of a disease which is often indolent.

For some reason, Leyva et al. fail to mention that black Americans have a prostate-cancer (PCa) *mortality* two to three times higher than whites. Given that a difference in mortality is the ultimate disparity, it seems misguided to highlight the racially disparate provision of information about PSA testing without so much as mentioning the racially disparate rate of death from PCa in the United States. Arguably, doctors could still provide black patients with information about their risk status and the uncertainties of PSA testing and leave the decision to them. However, some might regard such a course as an abdication.

At the time of the Leyva et al. study, it is entirely possible that doctors who recommended PSA testing for black patients with or without providing with information about the test's controversies acted not out of disregard for the patient but a sense of medical duty. At least this alternative needs to be considered before suggesting bias (as the authors do at one point). In view of the elevated PCa mortality among black Americans—perhaps the highest in the world (Reddy et al. 2003)—doctors may have felt it would be unconscionable *not* to ensure that their black patients in the age group of the survey received PSA testing. If part or all of this mortality difference is owing to belated diagnosis, then PSA testing—a prelude to diagnosis—takes on heightened importance. A study discussed in *Unequal Treatment* found that among black and white PCa patients on active military duty, the black patients “presented at a significantly higher state of cancer development than whites” (56). Such patients might well have benefited from timely PSA testing. Likewise, if PCa advances more rapidly from the

indolent to the aggressive in black patients as some evidence suggests (Powell et al. 2010), then arresting it at an early stage becomes a matter of urgency.

Bearing on this point is a statistic cited several times in *Unequal Treatment*: that black Medicare patients underwent bilateral orchiectomy at a rate more than double that of whites. Checking the source of the figure, we discover that according to Medicare data from 1986 to 1992 (the dawn of the PSA era),

bilateral orchiectomy was 2.2 times as frequent among black men as among whites; in 90 percent of these cases, the principal diagnosis was prostate cancer. Although the rate of prostate cancer among the elderly is only 1.3 times as high in black men as in white men, bilateral orchiectomy is performed primarily to treat metastatic prostate cancer, and data from the Surveillance, Epidemiology, and End Results program show that at the time of diagnosis, black men had 2.2 times the rate of metastatic prostate cancer found in white men, a racial difference similar to that in the case of bilateral orchiectomy.

(Gornick et al. 1996)

Aware of the elevated risk of metastatic disease in black men, a doctor might well deem PSA testing a necessity. In the same year Leyva et al. published their findings, an article argued that black Americans need separate prostate-cancer screening guidelines and that the existing policy of informing patients about PSA testing and leaving the decision to them fails black patients (Shenoy et al. 2016).

The Leyva et al. study appears to assume that especially in a matter as uncertain as the merits of PSA testing, it is ethically preferable to leave the decision to the patient. The patient may not see it that way. A study roughly contemporaneous with *Unequal Treatment* found that “African-American and Hispanic respondents were more likely to prefer that physicians make the decisions” (Levinson et al. 2005).

A Literature Review

Taking up the call issued in *Unequal Treatment* for research into the mechanisms by which disparities of treatment and outcome arise, many studies scrutinize the clinical encounter for signs of racial or ethnic bias. According to the theory behind this analysis, the doctor’s witting or unwitting expressions of bias, which minority patients pick up on, can translate on the patient’s side into dissatisfaction, nonadherence, and a poor outcome. Since *Unequal Treatment*, the literature on the clinical encounter has grown so voluminous that it includes reviews of itself, focused mainly on communication patterns. Among these is one by Shen et al. published in 2018, whose Results summary reads as follows:

Studies were heterogeneous in health contexts and communication measures. Results indicated that black patients consistently experienced poorer communication quality, information-giving, patient participation, and participatory decision-making than white patients. Results were mixed for satisfaction, partnership building, length of visit, and talk-time ratio. Racial concordance was more clearly associated with better

communication across all domains except quality, for which there was no effect. (Shen et al. 2018)

Confusingly, results on some measures (like “patient participation”) are negative while those on closely related measures (like “partnership building”) are mixed. How communication can be better and yet of equal quality in racially concordant visits is also bewildering. Passing from the Abstract to the review itself, we encounter more questions. For example, in the section of the review devoted to studies in which observers rate the quality of physician-patient communication, the largest by far is that of Oliver et al., who tendentiously interpret findings of no significance, as noted above. Another, much-cited study is accurately reported to show that “physicians were more verbally dominant with black than with white patients”; what Shen et al. do not report is that most of the black patients’ visits were with black doctors (Johnson et al 2004). All of these troubles point to a problem with the equilibration of evidence and conclusions in the Shen et al. review, which has itself been cited over 500 times.

To suggest that observed disparities may be owing to racial bias before eliminating less inflammatory hypotheses amounts to a violation of a methodological principle. Shen et al. do just this, concluding that “In reference to the physician’s role, communication differences may be reflective of physicians’ biases and prejudices. Alternatively, the physician may be responding to differences in expressed patient preferences for shared decision-making and involvement.” Thus, an innocent explanation of communication differences reported in the literature on racial disparities remains alive even as the authors raise the specter of “physicians’ biases and prejudices.” If we need only suspect bias (not show it by elimination), this is the

result. Given that the Shen et al. Abstract concludes with a recommendation to train doctors to communicate with minority patients, it is clear that the non-innocent explanation is the one they accept.

Before suggesting that doctors disfavor black patients across a range of categories redundantly based on participation (such as “patient participation” and “participatory decision-making”), commentators would do well to remember that “cultural backgrounds may influence the ability or desire of patients to engage” in making medical decisions (Hawley and Morris 2017). Just as the marginal differences between black and white medical visits found by Oliver et al. could reflect slightly different ways of being a patient, so different valuations of shared decision-making could account for patterns observed in some black visits. That coders of audiotaped visits in the studies tabulated by Shen et al. tended to rate communication between black patients and doctors worse than the patients themselves suggests the doctors may have been better attuned to the patients than outside evaluators.

Considering that Shen et al. concede that patient preferences could account for the somewhat different profile of black and white visits, it seems ironic that they deny exactly this, citing the authority of the Institute of Medicine. “Factors such as health insurance status, socioeconomic status, access to care, *and patient preferences* all contribute to disparities, but a report from the Institute of Medicine (IOM) notes that they do not fully account for racial and ethnic disparities in the care received by patients” (emphasis added). And the slant shown in the matter of patients’ preferences is also shown with respect to their satisfaction. When Shen et al. state that of 12 studies considered, “only one . . . indicated that black patients reported higher satisfaction with patient-physician communication than white patients,” they neglect to

point out that this one study had no fewer than 109,980 subjects, of whom 8791 were black (Fongwa et al. 2008).

Among all studies tabulated in the Shen et al. review, this survey of Medicare enrollees, conducted in 2002, stands out for its scale. (The next largest study of the 11 paired with it has 7778 subjects, of whom 863 were black; two others have 88 and 61 patients respectively. The next largest study in the entire dataset has 22,440 subjects and reports no connection between racial concordance and the quality of communication [Jerant et al. 2011].) If doctors regularly communicated poorly with black patients across many indices as Shen et al. maintain, we would expect that unfortunate pattern to be borne out in what is incomparably the largest study of the 40 under review. Instead, the Medicare study reports the following result: “African Americans reported better doctor/nurse communication ($p \leq .0001$ and effect size 0.07) and rated their personal doctor or nurse more positively than did Whites ($p \leq .0001$ and effect size 0.09).” So much for the claim in the Shen et al. Abstract that black patients experienced “consistently poorer communication quality” across all included studies.

A Survey of Mistrust

In 2021 a survey of Californians found the “odds of reporting medical mistrust were 73% higher . . . and 49% higher . . . for non-Hispanic Black and Hispanic adults when compared with non-Hispanic White adults, respectively” (Bazargan et al. 2021). The report concludes with an impassioned appeal for “addressing structural racism” in medicine, correcting the “discrimination and disparities that frame our health care system,” instituting “antiracism

education,” and identifying racism and other forms of oppression “as the root causes of inequality-driven mistrust.” The language of the study’s abstract is more measured, concluding that *if* the high levels of mistrust reported by black patients are caused by perceived discrimination, then remedial measures are warranted. “Perceived discrimination is correlated with medical mistrust. If this association is causal, that is, if perceived discrimination causes medical mistrust, then decreasing such discrimination may improve trust in medical clinicians and reduce disparities in health outcomes.” Yet mistrust itself could lead someone to see discrimination, especially if such perception turns upon the interpretation of subtle, ambiguous cues, as the disparities literature has maintained from *Unequal Treatment* forward. Is perceived discrimination then the root cause of black mistrust of medicine, or does mistrust breed perceptions of discrimination (or both)?

Despite their full-throated indictment of medicine, the authors finally cannot say. As they acknowledge in delineating their study’s limitations, “The cross-sectional design prevents determination of any causal relationships.” While this may be boilerplate language (for identical statements are found throughout the literature), the fact remains that the study’s inability to determine causality invalidates its identification of racism as a “root cause” of black mistrust of medicine and also, therefore, the demand for measures to eradicate racism inside and outside the institution of medicine. In other words, the study acknowledges that it cannot justify its own accusatory rhetoric. It is as if one and the same proceeding ended in a guilty verdict and a mistrial.

If bias must be shown by elimination, then this study does not establish bias, because it cannot exclude the possibility that mistrust of medicine bred the perception of bias. But if bias

stands as an explanation of disparities unless and until it is positively excluded, then this study substantiates bias merely by identifying a disparity and indicting bias as its cause.

A Counterexample

Disparities in medicine can be discussed without innuendo or rhetorical excess, and with due recognition of possible explanations other than bias. This is the case in many of the studies from the 1990's cited here—studies conducted before the theory of unconscious bias caught on and became an article of belief in the disparities literature. But even in the post-*Unequal Treatment* era, it remains possible to investigate disparities without nudging the reader toward preconceived conclusions.

An example is a 2008 study of differential rates of opioid prescription to whites and minorities which does not assume that the disparity in question points to bias, subconscious or otherwise. Instead the authors conclude that the most probable explanation lies in miscommunication. “Causes of disparities in medical care are complex, and simple racial/ethnic bias is unlikely to fully explain the problem [of less prescription of opioids for minority patients]. Race and ethnicity influence all aspects of the therapeutic relationship, including how (or whether) patients articulate painful symptoms to their physician, what kinds of treatment are requested, and how physicians and allied health staff interpret those symptoms” (Pletcher et al. 2008). An indication that this explanation has merit is that even one-session tutorials designed to help minority patients communicate with their doctor “have improved pain control and reduced disparities between whites and minorities with cancer.” (Such tutorials have also

helped diabetics with their A1c and other patients with the management of symptoms [Ashton et al. 2003].) If racial or ethnic bias can be inferred only after other reasons for disparities in care have been examined and found lacking, in the case of unequal rates of opioid prescription an alternative remains alive—one that is not only demonstrably credible, but arguably more credible than the notion that the prescribers are acting out their unconscious bigotry.

The qualities necessary for an investigation of disparities in medicine amount to an ethos. The ethos calls equally for methodological care, principled argument, avoidance of innuendo and foregone conclusions, and respect for all persons. We might think of this ethos as an investigative analogue of the clinical principle of not doing harm. In the case of arguments that draw on other arguments that reach accusatory conclusions before the evidence is in, the harm is to the norms of evidence themselves.

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