24 February 2025

Hello Boyd Winslow,

Thank you for taking the time to write your recent essay in Richmond Times Dispatch concerning the injection of race into medical practice. I suspect that it may have arisen from some unwelcome experience with training sessions aimed at rooting out implicit bias. If so, then I sympathize. I also suffered through my share of such trainings, which struck me as wastes of time, irritating, useless, and perhaps counterproductive.

However I was troubled by some of the arguments that appeared in the essay. I recognize that they may have been truncated by space limitations, but they ended up, to my eye, as unfair depictions of reality.

Your essay seems to me to be a journey through three questions:
(1) Is unconscious bias a fantasy?
(2) Is unconscious bias a fantasy in medical settings?
(3) Do attempts to turn physicians away from supposed unconscious bias do any good?
I'll consider them one by one.

(1) Is unconscious bias a fantasy?

You wrote

> " *'unconscious bias'…the assumption that people are inherently prejudiced against those who don't share their skin color. Yet there's no evidence that such bias exists, and what's worse, in practice this assumption has only been applied to white people*."

I was surprised to read that there was no evidence regarding racial bias. This isn't my area, and starting out, I didn't know of evidence one way or the other, but I expected there to be considerable research on the topic. From my own experience, if I'm walking late at night to my car in the VCU area and I see coming towards me a person in a business suit who otherwise looks like Santa Claus, I will probably react quite differently than if I see someone black, in his twenties, in a tank top. I will – I confess it -- be more wary in the second case. I have no indication that he intends to do me harm. This is bias, and it's not a product of reasoned analysis. It's unconscious bias (though I can recognize it upon reflection). You might respond, with some justification, that the probability of the second person doing me harm is higher than the first and that I would do well to take heed. That may be true. There may be survival value in such bias, but it's bias nonetheless.

Never mind my blathering. Maybe I'm an outlier (probably not [Quillian 2001]). The question is whether there's real ***evidence*** on the matter. I paid a visit to PubMed (free) and Web of Science (requires institutional subscription but is better for psychology and sociology research) and found thousands of articles on "unconscious bias" or "implicit bias", far more than I could read in a lifetime.

I read a tiny slice of the articles but found that there's ***lots*** of evidence that humans are stuffed with bias, including racial bias [e.g. Nosek 2010; Morehouse 2023]. Evidently, bias is part of being human. Some view bias as an evolutionary adaptation, a characteristic that, for example, leads to quicker and perhaps more adaptive results than slower decisions made in a more contemplative

mode [Haselton 2016]. Needless to say, bias can also lead to deplorable outcomes. I could read more, but let's move on, because I think you're more interested in the second question.

(2) Is unconscious bias a fantasy in medical settings?

You wrote:

> "*The fundamental premise of the medical profession is that doctors should "do no harm" to the patient in front of us, regardless of their race or any other characteristic.... To this day, medicine remains one of the most colorblind and equality-obsessed institutions in the country.*"

How do you know this? Personal experience provides a useful portal, but in the end, we need hard evidence that generalizes well beyond what you've seen yourself. I would be highly surprised if the wiring of our brains that we are born with is markedly changed by passage through medical school. Indeed, a study of 2521 physicians found that scores on an implicit bias test were not much different from scores of those in the general population [Sabin 2009].

"Do no harm" has its limits. How could it help if the harm derives from impulses of which you are unconscious? Even though medicine has paid tribute to "do no harm" for centuries, I don't think I need to trot out the well known examples of past abhorrent racial practices that the oath was not able to prevent.

But in the end, it matters little if physicians, like the rest of us, are burdened by unconscious bias. Humans are capable of withstanding the biases to which we are prone. What matters is whether there is a connection between unconscious bias and clinical outcomes.

Let's see if there's any ***evidence*** on the point. Does implicit bias lead to clinical harm? You offer an issue that is commonly put forth as an example of racial bias in medicine:

> "*The justification... is that Black mothers tend to have higher mortality rates... A great many factors influence mortality rates, including other health problems and distance from medical facilities. Accusing doctors of racism won't address any of those issues.... Where is the evidence for this diagnosis?*"

Implicit racial bias (evidently common in the US population) is not the same as overt racism (rare in both the general population and amongst medical practitioners [Zestcott 2016]). There are indeed many factors influencing mortality rate, as you say, and some associated with societal biases and not with biases of individual practitioners (e.g. the role of exposure to air pollution in the disparity of pregnancy outcomes [Dzekern 2024]). And it's true, a recent review of 318 studies on racial and ethnic biases in reproductive medicine concluded that there was insufficient evidence to point to clinician bias as a cause of the obvious disparities. However, the authors added that this was not evidence of an absence of bias but rather of an absence of research [Lewis 2025]. They called for moving beyond the vast majority of studies that merely report disparities and begin to use tools aimed at understanding the causes.

It is difficult to test the idea that bias in individual practitioners might play a role in disparate patient outcomes. In one provocative study of 1.8 million births in Florida [Greenwood 2020], newborn black babies cared for by physicians of the same identified race had a mortality rate 42% less than

those cared for by physicians of a discordant race. There was only a negligible difference for white babies. There are many possible reasons for this, and the authors were careful not to ascribe the difference to implicit racial bias, but the described phenomenon is clearly one that warrants attention (and note, this study describes a symptom of a greater problem -- it is not an argument that patients should choose physicians with concordant races). I should add that there was no difference in maternal mortality on the basis of race concordance.

Another health disparity often ascribed to implicit bias is in the area of pain management. One study on medical students and residents (at University of Virginia) found that an appreciable number held unfounded racial beliefs (e.g. black patients have thicker skin than white patients) and that those having these beliefs are more likely to underestimate pain in black patients and to recommend inaccurate pain treatment [Hoffman 2016]. However, one could argue that this finding is related not to implicit bias but rather to misinformation, which could be (and judging from this study, should be) better addressed in medical school. A second study associated implicit bias with differential pain management. The authors trained standard patients (black and white actors) to present unannounced with the same story regarding pain from metastatic bone cancer. On average, the unsuspecting physicians prescribed opioids less frequently when confronted with black actors, and the degree to which this was true correlated with scores they received in an implicit bias test (they were less likely to prescribe to blacks if the test showed implicit racial bias) [Fiscella 2021].

Looking at the big picture, however, while there have been some studies that show a convincing association between implicit bias and clinical behavior, there have been many more that show little or no association [Chapman 2013, Hall 2015, Fitzgerald 2017, Maina 2018]. It is interesting that there remains a consistent association between scores on implicit racial bias tests and poorer ***communication*** with black patients [Maina 2018; Gonzalez 2024], leading to poorer health outcomes [Zestcott 2016].

You wrote:

> "*There's no such scientific rigor with unconscious bias* [in medicine].... *Where is the evidence for this diagnosis?... The answer is that no evidence exists.*"

It isn't true that there is no evidence regarding an effect of unconscious bias on medical judgement. The conclusions one may draw from some evidence conflicts with conclusions drawn from other evidence, indicating a complicated reality. You may dispute the significance of some of the evidence, as have others, but it exists. Much of the evidence relies on what is called the Implicit Association Test (IAT). It's a test that I personally couldn't sit for without throwing the computer across the room, but millions of others have tolerated it. The validity of the IAT has been challenged [Blanton 2015; Carlsson 2016; Maxfield 2021] and defended [Cvencek 2021; Greenwald 2022]. Scientific rigor necessarily has a different standard for experiments of human psychology than experiments on protons and electrons. It is hardly possible to do a double-blind controlled experiment regarding implicit bias. Humans are complex entities. But many of the experiments regarding implicit bias are just as rigorous as any others in social psychology.

In the end, it doesn't matter what the IAT measures, whether it's true implicit bias or just differences in familiarity with culturally enforced stereotypes. We don't need to know its basis. Body temperature has been used for centuries as a signal of disease, most of that time with no understanding of the physiological basis. What matters is whether there is a correlation between

the measure (temperature or IAT) and the phenomenon (disease or clinical disparities). It seems that the correlation is patchy for IAT, present only under some circumstances and consistently validated only with respect to clinician/patient communication. That's a reasonable starting point from which to seek improvement.

(3) Do attempts to turn physicians away from supposed unconscious bias do any good?

> "*…unconscious bias [is] presented as a sweeping problem with a sweeping solution — i.e., endless training that calls you racist… where is the proof that the cure works?*"

The problem with this statement is that there is no single purported cure. You may be reacting to a program that might have been particularly idiotic, but there is a bewildering variety of educational strategies that are employed in training sessions intended to address racial disparities attributed (rightly or wrongly) to implicit bias [Mavis 2022]. Your statement should end, "*Where is the proof that **any** cure works?*"

Here I must agree with you – proof regarding any large-scale cure is wanting. Greenwald et al (2022) reviewed a large number of training studies. None showed convincing changes in behavior resulting from the training, and commercially available programs generally provided no follow-up to measure effectiveness [Greenwald 2022]. This analysis is particularly interesting because Greenwald is one of the inventors of the Implicit Association Test and a champion of its use. A more recent article focused on medical implicit bias training and analyzed studies related to the ability of training to affect patient outcomes [Fricke 2024]. Of the few studies that overlapped with this question, only one – concerning communication skills – reported a significant effect on patients. Similar discouraging conclusions have been reached in other broad meta-analyses [FitzGerald 2019; Vela 2022].

There have been many studies on training that measure the immediate perceptions of the participants or compare results of an IAT before and after [FitzGerald 2019; Vela 2022], but the durations of changes in IAT scores when they occur are generally not measured or are short term [Greenwald 2022]. In any event, it is not at all clear how such results relate to real world patient outcomes. Even if some training were shown to be effective, it remains to be established how long the effect lasts. Is it really necessary to repeat the training every two years?

This is not to say that a large-scale program is incapable of reducing medical disparities based on implicit bias, just that no such program has been validated, within the limits of the literature I've seen. Certain interventions appear to have been effective in the small scale

Summary

Where are we? The starting point is that racial disparities exist in health care. You acknowledge this, at least with respect to maternal health, and Stanley Goldfarb (Chairman, Do No Harm) acknowledges this in general [Goldfarb 2022]. This is a settled point, and in a sane world it would be a major focus of our attention, as Goldfarb acknowledges.

Second, humans are built to have unconscious bias. Sometimes it saves their lives, sometimes it harms others. Humans are also capable of overcoming unconscious bias and acting with conscious direction. In the U.S., race is a common object of unconscious bias.

Third, physicians are humans. It would be astonishing if they had mental wiring different from other humans and lacked unconscious bias. However, from their training, they may be more capable than most to overcome its influence.

Fourth, unconscious bias has some demonstrated effect on clinical outcomes, but in most cases there is no measurable effect. The greatest effect is seen in an area where physicians are called upon to draw most on intuition – communication with patients.

Finally, there is no credible evidence that large-scale interventions (e.g. training programs) diminish the influence of unconscious bias on clinical practices. This is too bad, because while unconscious physician bias is probably not a major cause of disparate health outcomes, it surely has some effect, most notably through failures in communication. It would be nice to have a proven method to combat it.

I think these are conclusions everyone should be able to subscribe to. Having done so, we could return to the big initial question: How can we reduce disparate health outcomes? Instead, one side of the debate is concerned with getting physicians into training sessions where the first step is generally to shove their noses into an implicit association test, where they can learn what they should already know – they're human. Never mind that available evidence says that established training programs do not affect disparate health outcomes. Even strong supporters of mandated training sessions have admitted that evidence of efficacy doesn't exist. They say that a mandate is necessary in order to grow an evidence base to determine what training is effective and what is not [Cooper 2022]. It would be understandable that a state's population of health care providers would object to a requirement that they serve as guinea pigs.

But this other side of the debate is equally single minded. They, like the proponents of training mandates, cast all aspects of the debate in terms of race. The chief failing of the mandate, in their words, is that it casts physicians as racists.

My God! Sticks and stones… Why can't we all just keep our eyes on the big goal: How to address health disparities! If we do, we might find a type of training that ***does*** work to improve communication. That effective training might even use the word "race".

But, you may say, human physiology is fundamentally the same for all -- Why should race enter medicine? Well, imagine that you are called upon to travel to the jungles of Papua New Guinea to practice there for a few years. You know nothing of the area, and it is certain that there will be times when you misunderstand your patients (even with a translator), because you interpret their behavior using the wrong cultural lens. In such circumstances, you would jump at the chance to invest a few hours in a class that explains to you the cultural peculiarities you will encounter. That investment would save you from countless hours of confusion and false steps. The U.S. is a country with many cultures, and no physician can understand them all. It should be a relief to invest time in training sessions that facilitate physician-patient communication… so long as the training sessions work.

Both sides seem to me to operate under the presumption that they know what's right. and then they knit a story around whatever available evidence they can find to support their beliefs. Needless to

say, this is not science and is not a good strategy to achieve what should be the greater goal of each side.

Physicians are in a position of playing a critical role in solving the problem of health disparities. It's a shame that a segment of them that you gave voice to has allowed itself to be dragged to the sidelines of the discussion. I agree, the bill you spoke against, SB740/HB1649 should never have passed in its current form. However, if physicians had set aside the insults they imagine to be hurled at them and focused instead on working with legislators to improve the bill, it might now be something that all can agree takes positive steps towards addressing health disparities.

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