DEBUNKING FRAKES AND GRUBER'S NEW STUDY ON RACIAL CONCORDANCE

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SUMMARY

The claim that patients have better outcomes when they are treated by a doctor of the same race is the key to efforts to maintain racial preferences in medical education and hiring. However, the evidence does not support the alleged benefits of "racial concordance," as it is called in the research literature. **Systematic reviews of studies** on the effects of racial concordance do not show better outcomes for patients treated by doctors of the same race. Even a highly touted study cited by a Supreme Court justice that purported to prove the benefits of racial concordance was later revealed to be marred by **researcher misconduct** and a Harvard economist was **unable to replicate the results** when **adding an obvious statistical control**.

Advocates for race-based preferences in medical education and hiring have grown desperate in their efforts to maintain racial preferences in the face of court decisions and legislation that seek to eliminate them. A **new study in *The Review of Economic Studies*** offers to rescue them, but, as this analysis will show, it turns out to be no more credible than past claims. There continues to be no scientific basis for maintaining racial preferences in medical education and hiring.

DESCRIBING THE NEW STUDY

The new study, "The Effect of Provider Diversity on Racial Health Disparities: Evidence from the Military," is authored by health economists Michael Frakes and Jonathan Gruber. It is self-consciously framed as providing evidence that could influence future Supreme Court decisions on racial preferences in medicine. **It notes**:

> **These findings are particularly timely in light of the recent Supreme Court decisions in** *Students for Fair Admissions Inc. v. University of North Carolina* **and** *Students for Fair Admissions Inc. v. President & Fellows of Harvard College*, **which will significantly limit the ability of medical schools to use race as a consideration in medical school admissions and thereby hamstring affirmative action programmes as a tool to increase the diversity of the physician workforce.... Judicial consideration of affirmative action is unlikely to have ended with the** *Students for Fair Admissions* **opinion, with the Supreme Court being expected to consider next the legality of affirmative action programmes in the workplace, as distinct from college admissions.... Though with generalizability caveats, our analysis contributes to this ongoing conversation.**

Frakes and Gruber's contribution consists of a very complicated study that draws upon a large amount of data. They examine health outcomes of military personnel served by medical facilities located on bases. The proportion of black physicians[1] varies across these facilities, with an average of 8.2 percent and a standard deviation of 6.6 percent. This means that at about 68 percent of these military medical facilities, black doctors make up between 1.6 and 14.8 percent of their physicians.

Frakes and Gruber take advantage of the fact that military personnel are often transferred from one base to another, which then results in their on-base medical facility having a higher or lower share of black doctors. Focusing their analysis on black and non-black patients who experience the same base to

base transfers, Frakes and Gruber are able to compare health outcomes for black relative to non-black patients as a result of experiencing a change in the black share of doctors at those facilities.

Importantly, their analysis does not examine the effect of patients actually being treated by a black doctor. It only considers health outcomes for black and non-black patients as a result of being on a base whose medical facility has a higher or lower percentage of black physicians.

Frakes and Gruber offer a few explanations for the unusual choice to conduct a racial concordance study without actually examining the effects of black patients receiving care from black doctors. First, they argue that "the policy question of relevance to current debates over affirmative action and related matters [is]: how will a systematic increase in the share of the medical provider workforce that is Black change the racial health gap?"

Second, they note that because patients choose their doctors, "there may not be a one-to-one correspondence between more racial diversity of providers and more concordant visits by race." Focusing on the effects of concordance may not capture the full effects of increasing the black share of doctors if there are "spillover" effects by which the performance of non-black doctors is affected by having more black colleagues.

When Frakes and Gruber examine health outcomes for black patients relative to non-black patients who are transferred to a base with a higher share of black doctors at its health facility, they observe positive outcomes. In particular, they find that increasing the black share of doctors by 6.6 percentage points (one standard deviation) is associated with an additional 2.992 "medication fill days" and a 0.0018 reduction in "the incidence of mortality" during the period examined, which was between 2003 and 2013. "Medication fill days" measures whether patients fill and renew their prescriptions with greater fidelity. The more days the prescription is filled, the better the patient is adhering to the doctor's instructions, likely resulting in better health outcomes. A reduction of 0.0018 in the incidence of mortality meant that there were 18 fewer deaths per 10,000 patients.

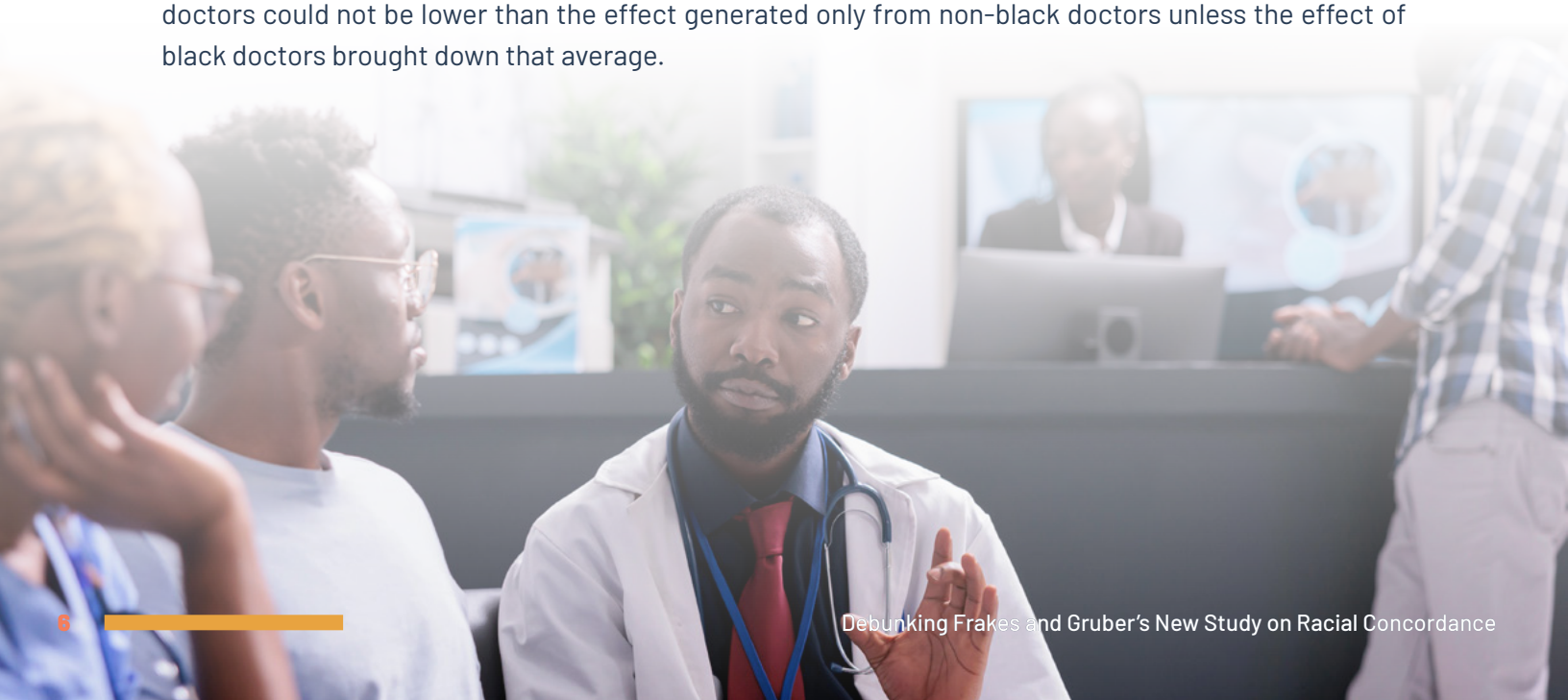
THE ODD BENEFIT OF BLACK DOCTORS WITHOUT RACIAL CONCORDANCE

Most readers of the Frakes and Gruber study would assume that the mechanism by which a higher percentage of black doctors benefits black patients is by increasing the likelihood that black patients will be served by those black doctors and that the racial concordance improves outcomes. But buried deep in **a supplementary appendix** in Table A20, we learn that the entire effect they observe could be caused by the improved outcomes of black patients who are served by non-black physicians in facilities that have a higher share of black doctors. That is, the racial concordance benefit readers may imagine is produced without any racial concordance.

In Table A20 of the online appendix to the study, Frakes and Gruber report the results for patients who never see black doctors, both before and after they are transferred from one military base to another. Given the low percentage of black doctors, even in facilities with a higher share, almost half of all patients in the sample never see a black doctor. In the analysis examining medication fill days, 63,116 of the 130,952 subjects in the full analysis are served exclusively by non-black doctors. In the mortality analysis, it is 96,016 out of 197,748.

As it turns out, among the patients who only see non-black doctors, the benefit for black patients in medical facilities that also have more black doctors is estimated to be even larger than for the black patients who see doctors of all races. In the analysis restricted to those who see only non-black doctors, there is a 3.661 increase in medication fill days and a 0.0020 reduction in mortality as the share of black doctors increases. This compares to 2.992 medication fill days and a 0.0018 reduction in mortality for black patients in the full sample who see both black and non-black doctors.

Frakes and Gruber never run a statistical test to see if the results from the restricted sample differ significantly from the results in the full sample, but the estimated effects are larger for black patients who only see non-black doctors. Based on these estimated effects, it would have to be the case that the effect of black patients seeing black doctors in medical facilities with a higher share of black doctors is either substantially smaller or could even be negative. The combined result of black and non-black doctors could not be lower than the effect generated only from non-black doctors unless the effect of black doctors brought down that average.



Interestingly, Frakes and Gruber never report the result from an analysis that examined the effect for black patients treated by black doctors. That is, they never conduct an analysis of the effect of racial concordance in a study that seems to be about racial concordance. Perhaps they were concerned that the choice by black patients to see a black doctor is not random and would undermine the ability to know whether the results were caused by the black doctor or by the self-selection of certain kinds of patients to have a black doctor. But there is a conventional solution for this concern in economic research, which would involve using the percentage of black doctors at each base to estimate whether black patients would choose a black doctor.[2] This type of analysis is widely believed to permit drawing causal conclusions, but Frakes and Gruber never report this type of analysis for reasons that are unclear. Or perhaps, the decision not to report the result for black patients seeing black doctors is that it likely shows a substantially smaller effect given the other results they do report.

In experiments, it is common to examine the effect of being randomly assigned to the treatment group for individuals who then decline to receive that treatment. Those subjects are sometimes called "never-takers" because they never "take-up" the treatment despite having been randomly assigned to the treatment group. Frakes and Gruber describe their analysis in Table A20 as an analysis of never-takers: "If the primary focus of this paper were to estimate one-to-one provider-patient racial concordance effects and if we were to explore that question via our movers strategy, one can view this exercise as estimating our reduced form on a sub-group of patients that are akin to 'never-takers.'" If we imagine a randomized experiment on the effect of radiation treatment on certain tumors, the never-takers would be the subjects randomly assigned to get that treatment who decide not to receive the radiation. They remain in the treatment group for the purposes of a randomized experiment, but we wouldn't expect them to experience any of the potential benefit.

If there really is a significant effect of treatment, one would normally expect the results for never-takers to be non-existent, or at least much smaller. Never-takers shouldn't receive the same or even larger benefit as the overall treatment effect because they never actually receive the treatment. Yet, in Table A20 Frakes and Gruber run a never-taker analysis and oddly show equal or larger benefits than the treatment effect in their main analysis.

WHAT COULD ACCOUNT FOR THEIR STRANGE SET OF RESULTS?

Frakes and Gruber offer two explanations for why black patients might benefit from being treated by non-black doctors in facilities with a greater share of black doctors. First, they suggest "white providers may learn from their newly expanded Black-provider peers on how to better treat the Black patient population, including how to build trust and communication with Black patients." This seems like an implausible explanation given the pattern of results they report. If we can infer that black doctors in their study demonstrated little or no advantage in serving black patients, it is unclear how they would teach their non-black colleagues to be more effective than they are.

Second, Frakes and Gruber suggest that "Black chronic-disease patients being treated by white providers may nonetheless gain greater trust in the medical system as a whole when witnessing or hearing about greater Black-provider involvement in treating chronic conditions in the community." That is, a higher share of black doctors improves outcomes for black patients served by non-black doctors because black patients see more black doctors in the hallway and therefore trust their non-black doctors more.

This also seems like a preposterous explanation given how few black doctors there are and how small the variation is between facilities with higher and lower shares of black doctors. How would black patients detect a meaningful difference between a facility that had 6 percent black doctors and one that had 13 percent? And how would patients know the difference between who was a doctor, nurse, or other medical professional and respond only to the variation in the number of black doctors and not to other black staff in those facilities?

Even if the spillover explanations were possible, Frakes and Gruber expect us to believe that these spillover effects don't just account for a small portion of the overall benefit, but produce the entirety of the reported effect. This stretches credulity beyond what any reasonable person would accept.

ALTERNATIVE EXPLANATIONS

So, if the magic of having more black doctors does not simply rub off on their non-black colleagues, what could explain why non-black doctors seem to be more effective with black patients relative to non-black patients in facilities with more black doctors? One does not have to explain how magic tricks are done to know that one is watching a magic trick. Similarly, there is no requirement to explain the strange results reported by Frakes and Gruber given the implausibility of the explanations they offer.

Nonetheless, there might be simple ways to account for what Frakes and Gruber have found without having to believe that it is caused by having more black doctors in medical facilities. For example, it is possible that there is variation in the average quality of training among non-black doctors across military bases. Higher quality non-black doctors can improve health outcomes for black patients relative to white patients given that the black patients tend to have more serious health challenges that are more sensitive to the quality of care. The statistical controls in the Frakes and Gruber study may not fully capture average differences in health conditions between black and non-black patients so that relative outcomes for black patients could still be driven by the quality of the non-black doctors.

Higher quality non-black doctors may have been more likely to have attended higher status medical schools where they may be more likely to have been taught that it should be a priority to hire more black colleagues. That is, high status medical schools believe more strongly in the benefits of racial concordance and more strongly inculcate that belief in their graduates. If that is the case, higher quality non-black doctors may have relative benefits for black patients and be more inclined to recruit and retain black colleagues. Again, the higher share of black doctors could be the result of something that causes better relative outcomes for black patients rather than being the cause of those better outcomes.

This hypothesis is both plausible and perfectly consistent with the results that Frakes and Gruber report. It is not necessary to prove these alternative explanations to doubt the conclusions of the Frakes and Gruber study. Instead, it is incumbent on Frakes and Gruber to offer a plausible explanation for their own findings while ruling out all alternative explanations. They have not met either burden.

OTHER FACTORS TO CONSIDER

There are other reasons to be suspicious of the Frakes and Gruber study. First, Jonathan Gruber became infamous for bragging about misleading the public with opaque analyses to pass the Affordable Care Act, or Obamacare. Gruber was a key architect and advocate for Obamacare. In a **2013 video of a panel discussion**, which went viral a year later, he said: "This bill was written in a tortured way to make sure CBO [Congressional Budget Office] did not score the mandate as taxes. Lack of transparency is a huge political advantage. And basically, call it the stupidity of the American voter or whatever, but basically that was really, really critical to getting the thing to pass." As **Timothy Carney summarized** Gruber's remarks: "Obamacare's defenders thought their bill was best for Americans, but apparently felt they were up against the 'stupidity of the American voter,' as Gruber put it. We silly Americans just don't know what's good for us, and so Obama and Gruber had to lie to get us to take our medicine."

Especially given how self-consciously the conclusion of the Frakes and Gruber study is aimed at influencing a future Supreme Court decision, there is every reason to suspect that Gruber is up to his old tricks of using complicated social science to steer policy in the way he thinks best.

There is additional reason to suspect policy bias in the Frakes and Gruber study given the incomplete and imbalanced way in which it reviews past research. For example, they fail to mention that the Greenwood et al study was **unsuccessfully replicated** by a subsequent study when it **added an obvious statistical control** or that the study was **marred by researcher misconduct**. Instead, they describe its findings in an excessively positive fashion: "Justice Jackson referenced the racial concordance findings of the Greenwood et al. (2020) article summarized above in arguing that the diversification of medical school graduates is not 'a trendy slogan. It saves lives.'" Frakes and Gruber also fail to mention any of the null findings from **systematic reviews of the literature on racial concordance**, nor do they raise **methodological concerns with the Aslan et al study** that they also favorably reference.

Furthermore, there is ambiguous language in the Frakes and Gruber study that raises questions about the extent to which they are even examining the effects of hiring more black doctors. They use the terms

"doctor" or "physician" 35 times, mostly in the literature review and conclusion. But in describing their analysis they are careful to use the term "provider," which might include other medical professionals such as physician assistants, nurse practitioners, occupational and physical therapists, and others. The term provider appears 354 times in their article.

In a footnote, Frakes and Gruber suggest that "provider" really means "doctor" when they write: "This exercise, however, can only be performed on those patients that see military doctors for their chronic-disease care given the above provider-race data-availability limitations." Given that they describe their analysis as examining "military doctors" and use the term provider interchangeably in that sentence, it is possible that they really mean doctor when they say provider. In this report, I have followed their example and freely use the term doctor or physician as if it were the same as provider.

Using the term "provider" so frequently is an odd choice and might indicate that they are also including non-doctors in their analysis. I have emailed Frakes, the corresponding author, requesting clarification but he has not responded. So, it is possible that their dominant use of the term provider is meant to conceal that they are also including a substantial number of other health professionals in their analyses. If that is the case, it is unclear whether the effects they observe are being driven by higher rates of black doctors or by higher rates of other black health professionals. It could then be an error to assume that increasing the black proportion of doctors would produce these benefits.

The ways in which the Frakes and Gruber study changed from its initial release as **a working paper in 2022** and to its final published form in 2025 also raise alarms. The apparent focus of the study switched from "racial concordance" to "provider diversity," as is reflected in the change in title from "Racial Concordance and the Quality of Medical Care: Evidence from the Military" to "The Effect of Provider Diversity on Racial Health Disparities: Evidence from the Military." The main analysis did not change, but the explanation for the result certainly did.

In the earlier version, there are only two mentions of the word "spillover," which is the term used to convey the indirect process by which the presence of a higher share of black doctors improves outcomes for

black patients who are treated by non-black doctors. By contrast, a variant of the word "concordance" is used 132 times in the original version of the study. In the brief discussion of spillover effects in the earlier version, Frakes and Gruber connect spillover effects to racial concordance, saying that the mechanism of spillover "can still be seen as emanating from the concordance/discordance inquiry motivating this paper" since "negative discordance effects may stem from provider-knowledge deficiencies."

In the final published version of the study, however, the emphasis is remarkably changed. The word spillover appears 17 times, while a variant of the word concordance is reduced to 54 mentions. This changed emphasis matters because it is clear in the original version of the study that Frakes and Gruber thought of their study as examining the effects of racial concordance. Not only did they mention concordance frequently, but the original version of the paper features a prominent set of analyses showing that increasing the share of black doctors in medical facilities leads to an almost commensurate increase in racially concordant medical visits by black patients. This is moved to an appendix in the published version of the study. The analysis restricting the sample to patients who never see a black doctor did not appear in the earlier paper.

Reviewers must have been struck by the oddity of a study about racial concordance that never included an analysis of the effects of black patients being treated by black doctors and demanded that analyses of direct concordant effects be added. It was at this point that Frakes and Gruber include the analysis for patients who never see black doctors as the share of black doctors in facilities increases, but they oddly still never show the effect for black patients who do see black doctors as a result of transferring to a military base with a higher percentage of black doctors.

It is clear that the results undermined their concordance narrative, so they buried the added analysis in an appendix, moved the analyses about how a rising share of black doctors increases the likelihood of concordant doctor visits from the main text to the appendix, and shifted the language in the study from an emphasis on concordance to one more about spillover effects. They tried to keep the political message they wished to convey to the Supreme Court intact even as the added results undermined their initial framing.

CONCLUSION

Advocacy groups wishing to maintain racial preferences in medical hiring will almost certainly cite the Frakes and Gruber study in future court cases and legislative debates about the issue. Frakes and Gruber consciously produced their study with this use in mind. But as is often the case with advocacy-oriented research, this study is not a reliable basis for making policy decisions.

The Frakes and Gruber study appears scientifically rigorous and is authored by economists from high-status universities, but a closer examination of its methods, results, and motivation reveal it to be scientifically unsound and an abuse of academic authority.

ENDNOTES

1 Frakes and Gruber use the term "black military provider share." As is discussed later in the report, it is unclear whether provider is meant to be synonymous with doctor or physician or if the term includes other health professionals, such as physician assistants, nurse practitioners, and occupational therapists.

2 This conventional solution was first developed by the University of Chicago economist, James Heckman, who won a Nobel Prize in economics for this innovation. For readers who are interested in learning more about how Heckman's Instrumental Variable approach works, they can read this summary: **https://www.publichealth.columbia.edu/research/population-health-methods/instrumental-variables#:~:text=Summary,is%20'as%20if'%20randomly%20assigned** Or watch this video: **https://www.youtube.com/watch?v=gpm2SEAl40w&t=70s**

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