



RACIAL CONCORDANCE IN MEDICINE:

THE RETURN OF SEGREGATION

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EXECUTIVE SUMMARY

Do patients have better health outcomes after seeing physicians of the same race? The ongoing reality of disparate health outcomes, with black patients typically experiencing worse outcomes than members of other racial groups, has drawn significant attention to this question. Prominent medical organizations as well as political leaders – including members of the Supreme Court of the United States – now assume that “racial concordance” would improve health outcomes. Under this framework, medical schools are prioritizing diversity in student admissions, while medical providers are debating ways to match patients and physicians by race. The assumption behind such actions is that people of certain races are inherently biased toward members of other races, a problem that racial concordance would purportedly solve.

Medical research does not support racial concordance. While advocates point to a small number of studies, they are generally cherry-picked and decisively outweighed by the full body of scientific research on the topic. Four of five existing systematic reviews of racial concordance in medicine show no improvement in outcomes. For example, the most recent systematic review (Miller et al., 2023) focused on patient-physician communication and observed that there were 12 analyses that demonstrated benefit of racial concordance, eight that demonstrated harm, and 86 that demonstrated no difference. “Results reveal little evidence to suggest that patients of color who share racial or ethnic identity with their physicians experience a different quality of physician communication.”

While an earlier review (Shen et al., 2018) found evidence of “better patient-physician communication,” close inspection reveals that its outlier judgement is derived from unexplained omission of studies that contradict its conclusion and distorted characterization of the studies featured in the review.

The few studies that find evidence of benefit from racial concordance must be contextualized against the backdrop of a much larger body of evidence. Even if there were specific occasions in which racial concordance was beneficial, the systematic reviews indicate that benefit was the exception rather than the norm. Moreover, careful analysis of two of the studies most cited by advocates of racial concordance reveals why those findings should be treated with skepticism and why differences in outcomes don’t necessarily provide evidence of differences in quality of treatment.

Given the evidence, it is irresponsible for medical organizations and political actors to push, in practice or policy, for racial concordance in medicine, with the attendant radical restructuring of healthcare along racial lines. This concept amounts to the return of segregation of medicine, sowing seeds of distrust between physicians and patients of different races. That is a recipe for even worse health outcomes for members of every race – the exact opposite of what racial concordance’s proponents seek.

OFFICIAL NARRATIVES CLAIM THAT RACIAL CONCORDANCE MATTERS

The theory that racial concordance is linked to better care or outcomes enjoys official support across the healthcare establishment. The Association of American Medical Colleges, which represents all accredited medical schools in the United States, passionately embraced the idea in an amicus brief filed in *Students for Fair Admissions v. Harvard* (one of the two 2023 Supreme Court rulings against affirmative action). Its argument makes sloppy factual errors, including assertions that assignment of a black baby to a black doctor doubles the likelihood that the infant would survive (*in reality, it is claimed to be associated with a 99.7 percent survival rate instead of 99.6 percent among white doctors*).¹ The AAMC also argues that black doctors are better at treating the pain of black patients, even though *the referenced studies support no such claim*.² ▼



The screenshot shows the top portion of a Fox News article. At the top left is the Fox News Channel logo. To its right is a navigation menu with links for U.S., Politics, World, Opinion, Media, Entertainment, and More. Further right are search and login buttons. Below the navigation is a red 'OPINION' tag. The main headline reads 'Supreme Court Justice Jackson's second error reveals another industry gone woke'. Below the headline is a sub-headline: 'Jackson's error exposes left's woke corruption of the field of medicine'. The author is listed as 'By Jay P. Greene' with 'OPINION' and 'Fox News' tags. The publication date is 'Published July 31, 2023 4:00am EDT'.

Nevertheless, the amicus brief is co-signed by 14 organizations involved in training healthcare providers (e.g., the American Association of Colleges of Nursing and the American Association of Colleges of Pharmacy), 26 organizations representing healthcare providers (e.g., the American Medical Association and the American Academy of Pediatrics) and five organizations that represent medical school students (e.g., the American Medical Student Association and the Student National Medical Association). The theory of racial concordance benefits has also been reported as a matter of undisputed fact by leading national media outlets, including *PBS*,³ *NBC*,⁴ *CNN*,⁵ *CBS*,⁶ *The Associated Press*,⁷ and *The Washington Post*.⁸

SYSTEMATIC REVIEWS ARE KEY TO EVALUATING CLAIMS FOR RACIAL CONCORDANCE

WHAT ARE SYSTEMATIC REVIEWS?

Scientific inquiry is an iterative process. Questions are never “settled” by a single study. Rather, they are constantly revisited using new data, new methodological approaches, or refined instruments. Sometimes dozens or even hundreds of studies attempt to answer similar or identical research questions.

Consider, for example, the efficacy of multivitamins. Dozens of studies have attempted to understand whether they can prevent heart disease, cancer, or other ailments. Anyone interested in understanding what science says about the topic would be overwhelmed by the effort to locate and read each study and decide what all of it means. On the other hand, it would be unwise to select a single study—perhaps one that aligns with what one hopes to observe or one that makes for a **punchy headline**⁹— and assume that the findings are dispositive. ▼

Luckily, scientists have created techniques for making judgements from large bodies of evidence. “Systematic review” is one such technique. In conducting systematic reviews, researchers define parameters for identifying relevant literature on a topic (e.g., limiting it by time period, research methodologies, or to peer-reviewed studies). Then they rigorously search archives (typically online) to locate every study that meets their criteria. Next, researchers read each study, describe the findings and render a judgement about what it means for answering the question at hand. In the case of multivitamins, for example, a recent systematic review of 84 studies culminated in the **conclusion that** “Vitamin and mineral supplementation was associated with little or no benefit in preventing cancer, cardiovascular disease, and death, with the exception of a small benefit for cancer incidence with multivitamin use.”¹⁰

Systematic reviews are not perfect. They rely on researchers’ judgement to identify which studies should be included. Researchers must have the knowledge and skills to make sense of what the sum of evidence means. Moreover, systematic reviews are limited by how good the underlying studies are. Technical limitations involved in rigorously evaluating certain research questions can introduce flaws. Studies can

≡ **CNN** health

Study finds potential link between daily multivitamin and improved cognition in older adults

also be undermined by technical errors, or purposeful manipulation of data to arrive at a preferred outcome (i.e., p-hacking). Aggregating studies does not eliminate these concerns, especially if the research question lends itself to biased measurement. It wouldn't be surprising, for example, to spuriously and repeatedly observe a link between multivitamin use and longevity if individuals who take multivitamins are more likely to eat healthy food and regularly exercise.

Despite their flaws, systematic reviews remain one of the best methods for adjudicating research questions. At the very least they are better than cherry-picking preferred studies, whether out of convenience or intent to support a specific position.

WHAT SYSTEMATIC REVIEWS HAVE BEEN CONDUCTED ON PATIENT-PROVIDER RACIAL CONCORDANCE?

- ▼ The most recent systematic review on racial concordance in medicine was published by [Miller et al.](#) in June 2023.¹¹ The authors identify four other systematic reviews that have touched upon questions of racial concordance in medicine, as seen in Table One.

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Research Article

The Relationship of Race/Ethnicity Concordance to Physician-Patient Communication: A Mixed-Methods Systematic Review

Ann Neville Miller , Venkata Naga Sreelalitapriya Duvuuri, Kishan Vishanagra, Akhila Damarla, Diana Hsiao, Andrew Todd & ...show all

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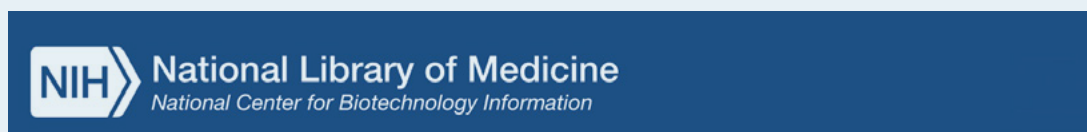
Shen et al.(2018) review the literature that assesses a possible link between patient-provider racial concordance and patient-provider communication. The Miller review identifies 33 studies published between 2006 and 2022. It concludes, “In most analyses, after accounting for covariates, no relationship was found between race/ethnicity concordance

and communication variables. Race/ethnicity concordance with their physician does not appear to influence the quality of communication for most patients from minoritized groups.” The Shen review, however, identifies 40 quantitative peer-reviewed studies published between 1995-2016. It claims to find support for a link between racial concordance and better communication. The reasons that these reviews reach different conclusions are discussed in the next section of this report.

A review by [Meghani et al.](#) (2009) looks at 27 studies published in the United States between 1980 and 2008.¹² It aims to address what the research says about whether racial concordance is associated with health outcomes, which are categorized in the domains of “healthcare utilization, patient-provider communication, preference, satisfaction, or perception of respect.” The review observes that “no clear patterns” emerge in any of the domains.

Otte et al. (2022) limit their review to a more recent era (i.e., 2016–2021) and ask whether various types of concordance (e.g., race, gender, language) are associated with patient experiences and outcomes.¹³ Of the 23 studies they identify, 14 touch upon racial concordance. Otte et al. identify four studies with positive impacts, eight with neutral impacts, and two with negative impacts. They conclude, “Regardless of the methodology and patient setting, most reviewed studies resulted in no significant association between patient–provider racial concordance and improved patient outcomes. **Racially concordant care did not affect factors such as quality of surgical care, hospitalist performance patient trust, and quality of care outcomes (i.e., trust, satisfaction, and decision-making propensity).**”

- ▼ Zhao et al. (2019) exclusively look at studies on surgical patients. The review identifies one study related to “satisfaction” and five studies related to “outcomes,” which they define broadly, including measures of healthcare utilization and ratings of physicians.¹⁴ The one study that looked at satisfaction observed racial, gender, and sexual orientation preference among black, non-heteronormative women. None of the studies, however, detected an association with racial concordance and quality of care.



Race, gender, and language concordance in the care of surgical patients: A systematic review

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TABLE ONE: SYSTEMATIC REVIEWS OF THE EFFECTS OF RACIAL CONCORDANCE IN MEDICINE

Systematic Review	Scope	Inclusion criteria	Number of studies featured in review	Conclusion
Miller et al., 2023	Whether there is an association between patient/provider racial concordance and quality of patient/provider communication	Studies published In English between 2006-2022	33	“Race/ethnicity concordance with their physician does not appear to influence the quality of communication for most patients from minoritized groups.”
Shen et al., 2018	Whether there is an association between patient/provider racial concordance and quality of patient/provider communication for black patients	Quantitative peer-reviewed studies from the United States published between 1995-2016	40	“Collectively, the included studies suggest racial concordance is a consistent predictor of better patient-physician communication with the exception of communication quality.”
Meghani et al., 2009	Whether there is an association between patient/provider racial concordance and minority patients’ health outcomes	Studies published in the United States between 1980-2008	27	“Analysis suggested that having a provider of same race did not improve ‘receipt of services’ for minorities. No clear pattern of findings emerged in the domains of healthcare utilization, patient provider communication, preference, satisfaction, or perception of respect.”
Otte, 2022	Whether “racial, gender, or multifactorial concordance (e.g., race, age, gender, education, language) are associated with patient experience and outcomes”	Studies published between 2016-2021	23 overall; 14 look at racial concordance	“Regardless of the methodology and patient setting, most reviewed studies resulted in no significant association between patient-provider racial concordance and improved patient outcomes. Racially concordant care did not affect factors such as quality of surgical care, hospitalist performance patient trust, and quality of care outcomes (i.e., trust, satisfaction, and decision-making propensity).”
Zhao et al., 2019	Whether patient/provider race, gender, and language concordance are associated with outcomes or satisfaction for surgical patients	Studies published in the United States between 1998 and 2018	16 overall but 6 that look at racial concordance specifically	“Three studies analyzed patient adherence to provider recommendations and found that in all 3 studies, race, gender, and language concordance had no effect on adherence. We saw no effect of race concordance on the quality of care.”

Some of these reviews look at the same studies, and the reviews themselves do not amount to an exhaustive catalog of all studies on the topic of racial concordance in medicine. Nevertheless, these reviews should carry some weight in the effort to find out what research says about the theory that doctor-patient racial concordance provides benefits to patients.

The research base could be categorized thematically into three major branches: one concerning communication, one concerning healthcare utilization (i.e., likelihood of seeking or receiving healthcare), and one concerning provision of care (i.e., clinical outcomes or patient perceptions of quality of care received). The subsequent sections clarify what the five systematic reviews, taken together, say about these three streams of research.

WHAT DO SYSTEMATIC REVIEWS DETERMINE ABOUT HYPOTHESIZED BENEFITS OF RACIAL CONCORDANCE WHEN IT COMES TO COMMUNICATION BETWEEN DOCTORS AND PATIENTS?

Many of the studies that touch upon racial concordance in medicine evaluate whether it leads to better communication between patient and provider. The comparatively high focus on communication is almost certainly determined by practicality rather than priority. While communication has some value, it is mostly as a means to improve health outcomes that affect quality of life, longevity, and physical function.

In conducting a systematic review of the literature on racial concordance and communication, Miller et al. suggest, “Physicians may communicate differently in medical encounters with racially or ethnically concordant patients, leading to different clinical outcomes.” To evaluate this theory, the researchers examine 33 studies and then observe and classify each concordance outcome. They look at whether it’s associated with improved communication, worse communication, or no difference in communication. A single study could have multiple concordance outcomes if, for example, it features multiple methodologies (e.g., surveys and observation) or renders a separate estimate for each racial or ethnic group, or if it measures multiple outcomes. Next, Miller et al. categorize each outcome along six dimensions (Table Two):

- Affective communication (“expressing empathy/compassion/concern, establishing interpersonal affiliation, friendliness/rapport-building, showing respect for patients’ perspectives, treating the patient with respect/disrespect, professionalism in communication, and general physician negative or positive affect”)
- Informational exchange (“listening carefully, eliciting concerns/encouraging expression of problems, asking biomedical or psychosocial questions, explaining clearly, giving information, advice-giving, answering patients’ questions, and problem-solving either generically or about specific aspects of the visit”)
- Patient centeredness
- Nonverbal behavior
- Shared decision-making
- Global (“satisfaction with communication, spending sufficient time, discrimination associated with communication, and generic “communication quality”)

TABLE TWO: CHARACTERIZATION OF STUDIES PROFILED IN MILLER SYSTEMATIC REVIEW

Communication and exchange	Number of analyses in which concordant relationships were associated with better physician-patient communication	Number of analyses in which concordance made no difference in physician communication	Number of analyses in which concordant relationships were associated with worse physician communication
Affective Communication	2	20	0
Informational Exchange	2	38	6
Patient centeredness	0	5	0
Nonverbal behavior	5	8	1
Shared decision-making	0	7	0
Global	3	8	1
Total	12	86	8

The results overwhelmingly indicate that racial concordance is not associated with improved outcomes. For example, 20 of 22 “affective communication” outcomes did not reveal a difference between concordant and discordant relationships. When it comes to information exchange, 38 of 46 outcomes demonstrated no difference between concordant or discordant relationships. Only 2 outcomes indicated that concordant pairings were associated with better outcomes, and 6 indicated that concordant pairings were associated with worse outcomes. Across the various measures, 12 outcomes suggested some benefits of racial concordance, 86 didn’t demonstrate a difference, and 8 demonstrated evidence of harm. The distribution of outcomes closely resembles what would be observed through chance.

The outcomes overwhelmingly suggest that no relationship exists between racial concordance and communication between doctors and patients. The review concludes there is “little evidence to suggest that patients of color who share racial or ethnic identity with their physicians experience a different quality of physician communication.”

The review by Shen et al. (Table Three) limits its focus to black patients. It assesses whether there are differences in patient-physician communication among black patients compared to other patients and whether racial concordance among black patients and physicians is associated with any difference in quality of communication.

The Shen review organizes studies along the following dimensions:

- Communication quality: “being patient centered and/or patients perceiving their communication interaction as positive”
- Communication satisfaction: “Patients’ degree of satisfaction with communication”
- Information-giving: “Patients’ sharing information regarding diagnosis, prognosis, treatment options, etc.”
- Partnership building: “Communication in a style that promotes patients’ participation”
- Participatory decision-making: “Degree to which patient actively participates in conversation and/or decision making”
- Positive and negative affect: “Amount of physician talk with positive or negative affect”
- Visit/time and talk-time ratio: “Length of visit” and “utterances of patients and/or physician verbal dominance in clinical encounters”

The review mentions whether each study addresses overall differences in patient-physician communication or whether it addresses differences in situations with black patient-physician racial concordance. Table Three includes only studies that the reviewers judged to be a measure of whether racial concordance correlates with communication. Overall, 10 of 18 “main findings” feature descriptions that would suggest a positive correlation between communication and racial concordance. One presents mixed evidence, and seven give the impression of null evidence. The review concludes that “collectively, the included studies suggest racial concordance is a consistent predictor of better patient-physician communication with the exception of communication quality.”

TABLE THREE: CHARACTERIZATION OF STUDIES PROFILED IN SHEN SYSTEMATIC REVIEW

	Study	Findings	Correlation between racial concordance and communication
Quality	Street et al., 2007 ¹⁵	“Quality of physician communication did not differ significantly with respect to race or racial concordance variables.”	Null
	Malat, 2001 ¹⁶	“The effect of racial concordance is negligible for spent enough time.”	Null
	Jerant et al., 2011 ¹⁷	“Racial concordance was not a significant predictor of the quality of provider communication.”	Null
	Schnittker & Liang, 2006 ¹⁸	“Racial concordance had no statistically significant effect on communication quality.”	Null
	Sweeney et al., 2016 ¹⁹	“Patient-provider racial concordance did not have a significant bearing on patient ratings of communication controlling for other sociodemographic variables.”	Null

TABLE THREE: CHARACTERIZATION OF STUDIES PROFILED IN SHEN SYSTEMATIC REVIEW (CONTINUED)

	Study	Findings	Correlation between racial concordance and communication
Satisfaction	Cooper et al., 2003 ²⁰	“Global satisfaction ratings differed significantly by racial concordance” (i.e., satisfaction ratings were higher in racially concordant pairings).	Positive
	Gupta & Carr, 2008 ²¹	“Racial concordance was not significantly related to satisfaction with communication.”	Null
	Laveist & Nuru-Jeter, 2002 ²²	“Both black and white patients reported the highest level of satisfaction if they were race concordant.”	Positive
	Saha et al., 1999 ²³	“Blacks with racially concordant as opposed to non-concordant physicians more often rated physicians as excellent in overall communication, treating with respect, explaining medical problems, and listening to their concerns, and being accessible.”	Positive
	Saha et al., 2003 ²⁴	“Patient-physician race concordance was not associated with better rated patient-physician interactions.”	Null
Information-giving	Gordon et al., 2006a ²⁵	“Patients in black discordant and white discordant visits perceived that their physicians shared less information compared with patients in white concordant visits.”	Positive
Partnership building	Gordon et al., 2006a	“Patients in black discordant and white discordant visits perceived that their physicians engaged in less partnership building compared with patients in white concordant visits.”	Positive
Participatory decision-making	Cooper et al., 2003	“In models that adjusted for patient and physician characteristics, patients in race-concordant visits rated their physicians as more participatory than did patients in race-discordant visits.”	Positive
Positive and negative affect	Street et al., 2007	“Physician positive talk did not differ significantly with respect to race or racial concordance variables.”	Null
Visit/time and talk-time ratio	Cooper et al., 2003	“Race-concordant visits were longer by about 2.2 minutes ... and had slower speech speed in the dialogue of the patient and physician.”	Positive
Other	Stepanikova et al., 2012 ²⁶	“There was little difference in white physicians’ behavior toward black versus white patients before or after adjusting for covariates. ... Black physicians interviewing black patients displayed higher levels of positive non-verbal communication compared to other racial combinations.”	Mixed
	Gordon et al., 2006a	“Patients in black discordant and white discordant visits perceived that their physicians were less supportive compared with patients in white concordant visits.”	Positive
	Malat, 2001	“Patients are 1.4 more times likely to report excellent respect with racially concordant doctors.”	Positive

Reviews by Shen et al. and Miller et al. try to answer similar questions and yet arrive at notably different conclusions. **This raises the question: Why did they arrive at different answers, and who is correct?**

Much of the difference might be attributable to how each review captures information from the studies it examines. Miller et al. tabulate the number of outcomes in each study and categorize each outcome as showing a positive, neutral, or negative correlation between communication and racial concordance. Shen et al., for their part, focus on the “main findings” of each study, though they do not define the term “main finding.” For example, the review summarizes the 2002 Laveist & Nuru-Jeter study as finding that “both black and white patients reported the highest levels of satisfaction if they were race concordant.” A closer inspection of that study is called for, however. It reveals that concordance among black patients and providers was associated with higher levels of satisfaction compared to pairings of black patients and white or Asian doctors, but not to pairings with Hispanic doctors. The Miller et al. review would have more accurately observed that racial concordance was associated with better communication in two situations (black-Asian pairings and black-white pairings) and neutral communication in another (the black-Hispanic pairing). Similarly, the “main findings” listed for Saha et al., 1999 omits the point that concordance was not associated with the likelihood of black respondents claiming that they were “very satisfied” with the care they received. The Miller et al. review would have observed that five concordance measures were positive and one was neutral.

Some of the difference is also explained by the Shen review’s curious and inconsistent categorizations. For example, studies by [Gordon et al. \(2006b\)](#),²⁷ [Martin et al. \(2009\)](#)²⁸ and [Ghods et al. \(2008\)](#)²⁹ are flagged in the Shen review as studies that measure differences in communication between races (irrespective of doctor race) but not mentioned in the Shen review as measures of racial concordance. In fact, all three studies yield mixed or null concordance findings.

Finally, the conclusions could be partially attributable to which studies were featured in each review. Most differences are explained by the inclusion criteria set by each study. For example, studies published between 2017 and 2022 would have appeared in the Miller



review but not the Shen review. The same goes for doctoral dissertations that were not published in peer-reviewed journals, and qualitative research studies. On the other hand, studies published from 1995–2005 would have been included in the Shen review but omitted from the Miller review. Some discrepancies, however, are not clearly explained by inclusion criteria. For example it is unclear why studies by [Kwan et al. \(2013\)](#)³⁰ and [Schoenthaler \(2012\)](#)³¹ were omitted altogether from the Shen review. The decision to omit these studies and to not classify findings in [Gordon et al. 2006b](#), [Martin et al. \(2009\)](#) or [Ghods et al. \(2008\)](#) as racial concordance studies leads to a more positive outlook on the correlation between racial concordance and patient–physician communication than if those studies were included, as seen in Table Four.

TABLE FOUR: STUDIES OMITTED FROM SHEN REVIEW FOR UNCLEAR REASONS

Study	Findings as described in Miller review
Kwan et al., 2013	“No statistically significant relationship of racial concordance to provider communication domains: compassion, elicited concerns, explained results, decided together, lack of clarity, discrimination due to race.”
B.C. Martin et al., 2009	“No statistically significant relationships between racial concordance and explains options to patient, shows respect, asks patient about other treatment. Patients who see same race provider have 1.22 times higher odds to report providers asked them to participate in their treatment decisions but this became non-significant when adjusting for covariates.”
Schoenthaler et al., 2012	“Patients in discordant relationships rated providers more likely to give clear instructions on how to take medicine, listened to them, talked about things they could do to help themselves feel better, help solve problems than concordant providers. No difference in asked if had questions, helped with concerns about medication, friendly, gave clear explanation of how medicine would affect, listened to concerns, encouraged expression of problems, asked about concerns.”
Ghods et al., 2008	“Rapport-building exchange higher in race-concordant visits. No difference in biomedical information exchange, psychosocial information exchange, depression specific exchange, physician positive affect, patient positive affect, patient negative affect.”
Gordon et al., 2006	“Patients with spouse present in racially discordant triad interactions received significantly less patient-initiated information but the same amount of doctor-initiated information. However, after controlling for patients’ participation and clustering by doctors, racial discordance did not predict information-giving. Patients in discordant interactions were significantly less active participants when compared with patients in racially concordant interactions.”

The Miller review omits one study ([Gupta and Carr, 2008](#)) that is featured in Shen et al. and published within its chosen timeframe (2006–2022). That study presents mixed evidence of a correlation between concordance and communication. It is not clear why Miller et al. left it out of their review.

Finally, the different conclusions between the two reviews might be partially explained by how the researchers grouped the findings. Specifically, a theorized connection between satisfaction with communication and racial concordance appears promising, given the body of evidence presented in

the Shen review on satisfaction. Notably, a study (Assari, 2019) featured in the Miller review that was published too recently to be featured in the Shen review bolsters the theorized association between racial concordance and satisfaction with communication.³²

In sum, it appears that the Miller review was correct to conclude that the literature base contradicts the premise that the quality of communication (e.g., expressing empathy, demonstrating respect, demonstrating positive affect) differs among racially concordant patient-doctor dyads compared to discordant dyads. There is, however, some evidence to suggest that satisfaction with communication is higher in concordant dyads.

WHAT DO SYSTEMATIC REVIEWS DETERMINE ABOUT HYPOTHESIZED BENEFITS OF RACIAL CONCORDANCE WHEN IT COMES TO UTILIZATION OF HEALTHCARE?

It is widely thought that doctors can serve their patients better by convincing them to make and show up at regular appointments, as well as receive regular health screenings. Is increased healthcare utilization associated with racial concordance? Several studies offer that hypothesis, and it could be true if racially concordant pairings were associated with a better rapport between patients and doctors or with patients trusting their doctors more.

Meghani et al. (2014) conducted a broad systematic review of the literature that addresses patient-provider racial concordance and health outcomes among minority patients. The review flags “utilization of healthcare” as an outcome of interest. The identified studies and the description of their outcomes can be seen in Table Five.

TABLE FIVE: STUDIES IDENTIFIED IN THE MEGHANI REVIEW RELATED TO UTILIZATION OF CARE

Study	Title	Major findings
Konrad et al., 2005 ³³	“Use of antihypertensive medications”	“African Americans using public sources of care used medications more often if their physician was African American; whereas African Americans who switched physicians were more likely to use medications if their new physician was white.”
Lasser et al., 2005 ³⁴	“Missed appointment rates in primary care”	“Race-concordance between patients and providers had only modest effect on missed appointment rates when compared to other factors such as site of care.”
LaVeist et al., 2003 ³⁵	“Failure to use needed care and delay in using needed care”	“Patients with regular providers of same race/ ethnicity had lower odds of failing to use the needed health services and were less likely to delay seeking care. While pattern of findings was consistent for each racial/ethnic group, it did not reach significance for Hispanics and Asians.”

Study	Title	Major findings
Murray-Garcia et al., 2001 ³⁶	“Visits made to race-concordant residents”	“African American, Asian, and Latino medical residents disproportionately served patients from their own racial/ethnic background. When adjusted for resident’s second language proficiency, Latino and Asian patients remained more likely to see Latino and Asian residents.”
Saha et al., 1999	“Use of preventative care and needed health services”	“Black patients with black physicians were more satisfied with their physicians and reported use of preventive care during the previous year. Hispanics in race concordant relationship were satisfied with their health care but not with their physicians.”
Saha et al., 2003	“Use of basic healthcare services”	“Race-concordance was not associated with satisfaction or use of health services for African Americans, Hispanics or Asians. Only 10% of respondents preferred a physician of their own race/ethnicity. In this group, Blacks were least likely and Hispanics were most likely to state such a preference.”
Sterling et al., 2001 ³⁷	“Retention in outpatient substance abuse treatment”	“Patient-therapist race matching did not have an effect on treatment retention for people seeking outpatient substance abuse treatment.”

The Konrad et al. (2005) study finds evidence in one setting that racial concordance is beneficial, and it finds evidence of harm in another. Konrad et al. conclude that impacts of racial concordance could be “contextually conditioned.” A more sensible answer is that patterns can emerge for any number of reasons and that the mixed outcomes should be treated as evidence that racial concordance is not associated with utilization of healthcare.

The Murray-Garcia et al. study concludes that doctors serve more patients who share their ethnicity, but it says nothing about utilization of care. It’s unclear why this study was featured in the review.

Among the remaining studies that the Meghani review flags, the Lasser study finds “modest” effects on missing primary care appointments, but the results are not disaggregated by race. The results suggest that concordance effects are larger for white patients than for black patients, although it is unclear whether either outcome independently reaches the threshold of statistical significance, a technical term which describes the likelihood that the result wasn’t produced by random chance.

The LaVeist et al. study finds that white patients who have white doctors were significantly more likely to utilize “needed care” and less likely to “delay using needed care.” Black patients with black doctors were also significantly more likely to utilize needed care, but there was not a statistically significant difference in the likelihood of delays in using needed care. Racial concordance made no statistically significant difference, however, when it came to Hispanic or Asian patient-doctor

relationships. Altogether then, concordance was associated with better care in three of eight outcomes measured. When it comes to minority patients (the focus of Meghani's review), only one of six outcomes is associated with improved receipt of care.

The Saha et al., 1999 review straddles the line between utilization of care and communication, and it is featured in both the Shen systematic review and the Meghani review. It features three measures of healthcare utilization: whether patients received "preventative care," whether they received "all needed care," and whether they ever delayed seeking care. Saha et al. observe that among white patients, concordance was associated with receiving preventative care (i.e., one of three outcomes). Among black patients, it was associated with receiving preventative care or needed care (i.e., two of three outcomes). None of the measures were associated with receipt of care among Hispanic patients. The likelihood of receiving preventative care is no different in black patient-physician dyads than it is for discordant dyads (i.e., black patients with nonblack doctors) if the sample is restricted to patients "who said that their choice of regular physician was not influenced by the physician's race or ethnicity. ...This suggests that for the majority of blacks, physician race did not appear to influence the likelihood of receiving preventative care." In summary, among minority patients, racial concordance was associated with improved receipt of care in two of six outcomes. One of those two positive outcomes is explained by patient preference rather than other potential factors, such as quality of care.

The Saha et al. (2003) study—which is also featured in the Shen review— asks respondents whether they have received age-appropriate screenings (e.g., mammograms and colorectal cancer screenings for those age 50 and older). The various screenings are aggregated into a single measure. The researchers observe that racial concordance is not associated with changes in receipt of these services among any of the four racial groups.

The Sterling et al. (2001) study features retrospective analysis of black patients in an outpatient cocaine addiction facility. Follow-up surveys assess the "life-time and recent severity of problems in seven areas commonly affected among alcohol- and drug-dependent individuals. These include medical status, employment, alcohol use, drug use, criminal activity, family/social relationships and psychiatric symptoms." Among the patients, none of the seven measures were associated with patient-provider racial concordance. Additional



NIH National Library of Medicine
National Center for Biotechnology Information

> [Addiction](#). 2001 Jul;96(7):1015-22. doi: 10.1046/j.1360-0443.2001.967101511.x.

The effect of therapist/patient race- and sex-matching in individual treatment

R C Sterling ¹, E Gottheil, S P Weinstein, R Serota

Affiliations + expand

PMID: 11440612 DOI: [10.1046/j.1360-0443.2001.967101511.x](#)

analysis considered measures of “follow-up functioning, such as being employed, not having been jailed, weekly self- help group attendance, enrollment in school or job-training programs and either inpatient or outpatient treatment involvement.” Among these measures, concordance was associated with fewer jailings, but discordance was associated with continuing treatment in less intensive outpatient settings, which the review labeled “a positive outcome.” In assessing utilization of healthcare, the Meghani review concludes, “Only two studies in the category of ‘utilization of healthcare’ found a positive association between patient provider race-concordance and utilization of health services.”


The review by Otte et al. focuses on the effect of concordance (along dimensions of race, gender, and social circumstances) on outcomes broadly defined. It does not specifically flag which of the studies it reviews address healthcare utilization, but closer inspection reveals that four of the 14 studies that address racial concordance match those criteria.

- ▼ **Mendoza et al.** (2021) conduct interviews with Hispanic women to assess whether racial concordance has any association with the likelihood that patients received a mammogram within the past year.³⁸ They do not observe any association.

SPRINGER LINK

Original Paper | [Published: 03 March 2021](#)

Mammography Screening Among Latinas: Does Gender and Ethnic Patient-Physician Concordance Matter?

[Sonia Mendoza-Grey](#) , [Jose Ramos-Muniz](#), [Adria N. Armbrister](#) & [Ana F. Abraido-Lanza](#)

Journal of Immigrant and Minority Health **23**, 986–992 (2021) | [Cite this article](#)

488 Accesses | 3 Citations | 4 Altmetric | [Metrics](#)

Saha and Beach (2020) conduct an experiment in which primary care patients with coronary risk factors or disease were shown video vignettes “depicting a physician reviewing cardiac catheterization results and recommending coronary artery bypass graft (CABG) surgery.”³⁹ Saha and Beach observe that black patients in concordant dyads express a higher likelihood of

undergoing CABG while white patients in concordant dyads are neither more nor less likely to express intentions to undergo CABG. Fidelity to these intentions is not tracked.

A study by **Malhotra et al.** (2017) examines rates of breast, cervical, and colorectal cancer screening among black, white, and Hispanic patients.⁴⁰ It observes that concordance is not associated with different rates of screening among black or white patients, but that Hispanics in discordant dyads were less likely to undergo breast or colorectal cancer screenings.

A study by **Ma et al.** (2019) retrospectively examines whether racial concordance is associated with the likelihood of seeking preventative care, visiting a doctor for new

problems, or visiting a doctor for ongoing problems.⁴¹ Compared to whites in concordant dyads, Asians and Hispanics in concordant dyads were more likely to engage in the three activities. Black patients in concordant dyads were neither more nor less likely than whites in concordant dyads to engage in the three activities. It isn't clear how the outcomes compare to discordant pairings within each racial group. It is possible, for example, that Asian and Hispanic patient-doctor dyads are no more likely to pursue these forms of care compared to discordant Asian and Hispanic dyads. Similarly, it is possible that black and white dyads are more likely to pursue these forms of care than discordant dyads.

The Zhao review looks at the association between various types of patient-provider concordance and patient preferences and surgical outcomes. The scope of this review includes one study that touches upon utilization of healthcare. Specifically, a study by ▼ Walsh et al. (2010) surveyed Vietnamese Americans and found that patients in a sample aged 50-79 were neither more nor less likely to be up-to-date on fecal occult blood tests, sigmoidoscopies, or colonoscopies if they were in racially concordant patient-provider dyads.⁴²



Healthy Colon, Healthy Life

A Novel Colorectal Cancer Screening Intervention

[Judith M.E. Walsh](#), MD, MPH, [Rene Salazar](#), MD, [Tung T. Nguyen](#), MD, [Celia Kaplan](#), DrPH, MA, [Lamkieu Nguyen](#), MD, [Jimmy Hwang](#), PhD, [Stephen J. McPhee](#), MD, and [Rena J. Pasick](#), DrPH

WHAT DO SYSTEMATIC REVIEWS CONCLUDE ABOUT THE HYPOTHESIZED BENEFITS OF RACIAL CONCORDANCE WHEN IT COMES TO THE PROVISION OF HEALTHCARE?

The same logic behind the theory that racial concordance could be associated with healthcare utilization (e.g., greater levels of trust or empathy) raises the prospect that racial concordance could also be linked to the provision of healthcare (i.e., healthcare provider decision-making). The Meghani review identifies eight studies that address this possibility.

A study by [King et al. \(2004\)](#) found that once the FDA approved the use of protease inhibitors as a treatment for HIV, black patients with white healthcare providers received the treatment later than black patients with black providers.⁴³ This pattern remained true after controlling for patient and provider characteristics and provider attitudes.

A study by [Malat et al. \(2001\)](#)—featured in the Shen systematic review—examined whether there was any association between racial concordance for white and black patients and if patients thought their doctor spent enough time with them during visits. The concordance variable was not significant overall, or in either group.

- ▼ [McKinlay et al. \(2002\)](#) assess whether racial concordance is associated with the diagnosis of depression or polymyalgia rheumatica, an inflammatory syndrome of the shoulders and hips.⁴⁴ After watching video vignettes, racially concordant black or white doctors are neither more nor less likely to diagnose those conditions. They demonstrate no difference in the level of certainty of their diagnosis or the tests they order to make a diagnosis.



Comparative Study > [J Health Soc Behav. 2002 Mar;43\(1\):92-106.](#)

The unexpected influence of physician attributes on clinical decisions: results of an experiment

[John B McKinlay](#)¹, [Ting Lin](#), [Karen Freund](#), [Mark Moskowitz](#)

[Modi et al. \(2007\)](#) randomly assign two versions of a video vignettes that differ by patient race (i.e., black or white).⁴⁵ They observe whether racial concordance is associated with the recommendation for a percutaneous endoscopic gastrostomy tube (i.e., feeding tube, or PEG) for advanced dementia patients. No differences are observed among Asian and

white physicians, but black physicians are more likely to recommend PEG placement for black patients compared to white patients. Notably, the researchers acknowledge that the efficacy of PEG tube placements among advanced dementia patients was unknown at the time of the study. Most guidance now cautions against its use in patients with advanced dementia.

Stevens et al. (2003) conduct phone interviews with parents to ask them about their child's pediatrician.⁴⁶ Domains of inquiry include accessibility of the provider (e.g., whether the provider would usually be able to see the child the same day), utilization (i.e., each service sought from the provider, including acute care, regular checkups and utilization), interpersonal relationships, strength of affiliation (e.g., whether they are the source of care for new health problems), services available (e.g., lead poisoning tests) and services received (e.g., discussions about nutrition). No differences are observed among Asian, black, or Hispanic doctors. Utilization is greater among white concordant dyads, but the other five measures are not significant for white dyads.

- ▼ **Stevens et al.** (2005) probe whether racial concordance is associated with the likelihood of receiving basic preventative services or family-centered care within black, Hispanic, and white doctor-patient dyads.⁴⁷ The researchers do not observe any difference in unadjusted comparison, nor do they observe differences after controlling for urbanicity.



The parent-provider relationship: does race/ethnicity concordance or discordance influence parent reports of the receipt of high quality basic pediatric preventive services?

Gregory D Stevens¹, Ritesh Mistry, Barry Zuckerman, Neal Halfon

Tai-Seale et al. (2005) record interactions between patients and providers and observe the likelihood of assessing patients for depression.⁴⁸ They find that assessment for depression is more frequent in racially discordant dyads than racially concordant dyads. Results were aggregated, so it is not possible to disentangle which pairings this was true for.

Finally, **Zayas et al.** (2005) set out to assess whether there are differences in diagnoses of psychiatric illness among immigrant Hispanics if they are evaluated by Spanish-speaking Hispanic psychiatrists, or non-Hispanic psychiatrists who do not speak Spanish.⁴⁹

However, the study design consists of ten patients who were seen by two Hispanic psychiatrists and then two non-Hispanic psychiatrists. Researchers watched the videos with translators and inferred diagnoses from those videos. The Meghani review classifies the results as not statistically significant. A better appraisal, however, would recognize that sample size limitations and variation in the conditions of the experiment (i.e., treating patients versus watching videos with translators) does not readily lend itself to answer the question at hand.

The Meghani review appropriately concludes that the evidence does not support the theory that racial concordance is associated with provision of care.

The Zhao review on surgical patients does not identify which studies address provision of care, but closer inspection reveals that one study would fall under this domain. A study by [Bickell et al. \(2012\)](#) solicits feedback from women undergoing treatment for early-stage breast cancer and observes no differences by racial concordance in terms of overall ratings of care received.⁵⁰ The study also devises a quality-of-care metric. High quality care is defined as “receipt of radiotherapy for women undergoing breast-conserving surgery, receipt of hormonal therapy for women with estrogen receptor-positive tumors ≥ 1 cm, and chemotherapy for women with estrogen receptor-negative tumors ≥ 1 cm. Poor-quality care was defined as episodes in which needed adjuvant therapy was not received.” Racial concordance is not associated with perceptions of care or the likelihood of receiving high- or low-quality care. Results are aggregated across racial groups, so it is not possible to determine whether this was true for all potential dyads.



Quality of Breast Cancer Care: Perception Versus Practice

[Nina A. Bickell](#), [Jennifer Neuman](#), [Kezhen Fei](#), [Rebeca Franco](#), and [Kathie-Ann Joseph](#)

The Otte review similarly does not specifically flag which studies address provision of care, but closer inspection reveals that two studies fit the profile. Takeshita et al. (2020) review a large data set which includes measures of patient satisfaction.⁵¹ Among Asian, black, Hispanic, and white dyads, they observe that white patients are less likely to give the maximum score to Asian doctors than to white doctors. Takeshita et. al also observe that black patients are less likely to give the maximum score to white and Asian doctors than to black doctors. None of the other dyad pairings are significant. The analysis only addresses the likelihood of receiving maximum scores, so it isn't clear whether the results are true of average scores.



Crawford et al. (2017) assess satisfaction in the inpatient setting with a tool specifically devised to assess hospitalists.⁵² Provider race was not associated with scores among white patients, but black patients assigned lower scores to black hospitalists compared to white hospitalists (i.e., concordance was negatively associated with ratings).

Nazione et al. (2019) conduct an experiment in which participants watch a video of a white or black doctor making a recommendation to eat a healthier diet.⁵³ Participants then evaluate the doctors on the dimensions of trust, likeability, rapport, intention to disclose, similarity, and satisfaction. Black patients in racially concordant dyads reported higher levels of similarity, but white participants in concordant dyads were less likely to want to keep their physician compared to black participants in either study condition. All other results were null.

Oguz (2018) uses data from the Medical Expenditure Panel Survey to evaluate determinants of patient satisfaction with provider care.⁵⁴ White men and women in racially concordant dyads report higher levels of satisfaction than white men and women in discordant dyads. Conversely, Hispanic men report lower levels of satisfaction in concordant dyads. Hispanic women did not demonstrate any clear pattern.

HIGHLY CITED STUDIES

Two studies published in recent years warrant closer inspection. These studies have been widely cited in support of race-based admission into medical school. Justice Ketanji Brown Jackson cited one in her dissent in a recent Supreme Court ruling on affirmative action, *Students for Fair Admissions v. University of North Carolina*. These studies do not meaningfully tilt the evidence in a more positive direction. **Indeed, they must be understood in the context of a much larger evidence base that overwhelmingly rejects the idea that racial concordance is associated with improved care.** Moreover, even these more rigorous studies fail to establish any significant benefit from having healthcare providers and patients of the same racial/ethnic background.

THE OAKLAND STUDY

- At first blush, the Oakland, California, study by [Alsan et al. \(2019\)](#) seems to support the value of racial concordance in healthcare.⁵⁵ It conducts a true experiment in which people are randomly assigned—some receive racially concordant care and others do not. This means researchers should be able to distinguish between causal and spurious relationships with high confidence. The study appears in the *American Economic Review*, which is the leading journal in the field of economics. Without looking closely, most social scientists would give a lot of credence to a study like this.

American Economic Review 2019, 109(12): 4071–4111
<https://doi.org/10.1257/aer.20181446>

Does Diversity Matter for Health? Experimental Evidence from Oakland[†]

By MARCELLA ALSAN, OWEN GARRICK, AND GRANT GRAZIANI*

We study the effect of physician workforce diversity on the demand for preventive care among African American men. In an experiment in Oakland, California, we randomize black men to black or non-black male medical doctors. We use a two-stage design, measuring decisions before (pre-consultation) and after (post-consultation) meeting their assigned doctor. Subjects select a similar number of preventives in the pre-consultation stage, but are much more likely to select every preventive service, particularly invasive services, once meeting with a racially concordant doctor. Our findings suggest black doctors could reduce the black-white male gap in cardiovascular mortality by 19 percent. (JEL I12, I14, C93)

But even a modest amount of scrutiny reveals serious flaws in the Oakland study, rendering it not credible. The most glaring problem is that there is no statistically significant benefit of racial concordance following the initial and most direct test of the question, when patients are shown photos of the doctors to whom they have been randomly assigned. Statically significant differences only materialize after those doctors visit with patients and try to convince them to agree to more medical interventions. This is less clearly a test of the effect of the

race of the doctor than of the doctor's persuasiveness. In addition, in the fully specified analysis, those alleged benefits only become statistically significant after controlling for another post-treatment outcome, which is a major violation of standard experimental

research protocols. A valid experiment cannot control for some of its results by looking at its other results.

In addition, the highly limited scope of the study raises serious questions about the ambitious extrapolations and assumptions required to support the study's conclusion that "black doctors could reduce the black-white male gap in cardiovascular mortality by 19 percent" (p. 4071). **Despite its experimental research design and publication in a high-status academic journal, the Oakland study does not establish a causal link between racial concordance and improved health outcomes.** It also does not support its grand claims about how much progress would occur from expanding the number of black doctors, even if it could establish that causal link.

REVIEW OF THE OAKLAND STUDY'S DESIGN

To examine the effects of patients and doctors being of the same racial background, the Oakland study set up a temporary clinic staffed by 14 male doctors, 6 of whom were black and 8 of whom were not black. They recruited black male patients from 19 barbershops and 2 flea markets in the East Bay area. Nearly 1,400 prospective patients were paid \$25 to complete a baseline survey and then promised \$50 and free transportation to the clinic. Of those prospective patients, 637 accepted the offer and fully enrolled in the study.

Once at the clinic, patients were taken into a private room and handed an electronic tablet. The tablet showed patients a standard introduction as well as the name and photo of the doctor who would see them that day. The tablet then offered patients the option of having four preventive health screenings: a Body-Mass-Index (BMI) measurement, a blood pressure check, a blood draw to measure cholesterol levels, and a blood draw to screen for diabetes. They were also offered the option of getting the flu vaccine, and by lottery, some were offered financial incentives to get that shot. Before seeing the doctor in person but after seeing the doctor's photo, the patients indicated on the tablet which of these five interventions they'd be interested in receiving.

The doctor to whom they were randomly assigned and whose photo had been shown to them on the tablet then came in for a

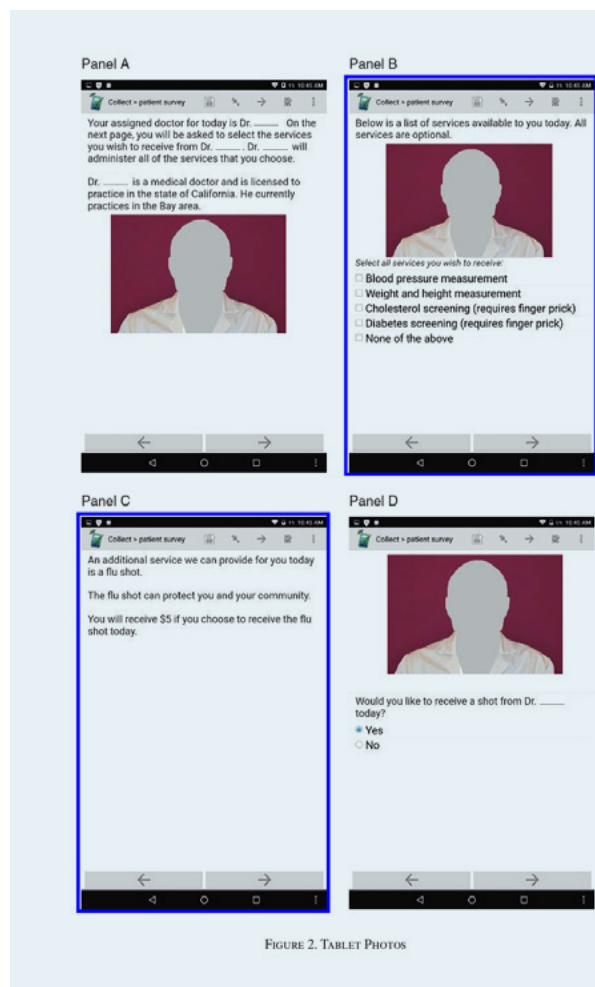


FIGURE 2. TABLET PHOTOS

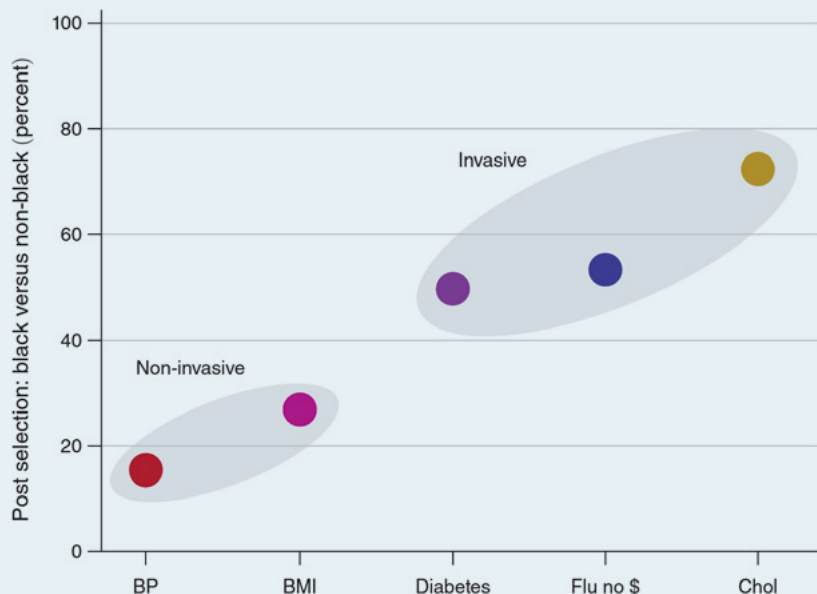
consultation. Of the 637 black male patients, 313 were randomly assigned to a black doctor and were in the treatment group. The patients in the control group, 324 in all, were randomly assigned to a non-black doctor. The doctors were told by the researchers to get patients to agree to receive as many of these five interventions as they could. The doctors then administered the interventions when patients consented to them.

THE OAKLAND STUDY'S RESULTS

Patients were shown a photo of the doctor who was selected for them by random assignment, but the race of the doctor made no statistically significant difference in their willingness to receive any of the five preventative health interventions. That is, the experiment clearly demonstrates that simply altering the race of the doctor by lottery has no effect on health outcomes.

- But after the doctors visited with patients, some of the patients who were randomly assigned to see a black doctor changed the initial response—they were significantly more likely to agree to have their blood drawn for cholesterol and diabetes tests, as well as receive flu shots. The race of the doctor made no observable difference in the patients' likelihood to agree to have their BMI or blood pressure measured.

Panel A. Post percent differences by preventives



In the fully specified model meant to test whether black doctors improve the willingness of black patients to receive invasive interventions (i.e., blood draws) relative to the non-invasive ones (i.e., blood pressure and BMI scans), only one result was statically significant. That result subtracted (or controlled for) the effect of the photo on patient choices when estimating the effect of the doctor on the final choices patients made about which interventions to receive. That is, the significant result estimated how much of a change seeing the doctor in person made relative to seeing the photo of the doctor on a tablet.

Both the post-tablet and post-consultation outcomes came after patients had been exposed to the experimental intervention of knowing whether their doctor was black or not. The study misleadingly refers to the post-tablet set of outcomes as “pre-consultation” measures. But those measures are post-treatment outcomes. Framing it as “pre” a second treatment step falsely suggests otherwise.

DISCUSSION OF THE OAKLAND STUDY

Black patients in the Oakland study who were randomly assigned to a black doctor and then shown a photo of that doctor were no more likely to be interested in receiving preventative health interventions than black patients who were randomly assigned to a non-black doctor and then presented with a photo. When the only difference between the treatment and control group is the race of the doctor to whom patients know they’ve been assigned, racial concordance does not matter. **This is the strongest and most direct test of the racial concordance hypothesis, because the only difference between the treatment and control group is the race of the doctor and the patient’s knowledge of that race.** And when this study tests the racial concordance hypothesis directly, it disconfirms claims about benefits from having doctors whose race matches that of patients.

The study only finds effects after doctors visit with the patients and try to persuade them to agree to more interventions. At that point, however, the study is no longer clearly testing the effect of the race of the doctor. Instead, it may be measuring the average persuasiveness of six doctors who are black, relative to the persuasiveness of 8 doctors who are not black. The race of the doctor may or may not be an important factor in how persuasive those doctors are to the patients. The Oakland study does not give any definite answer, however.

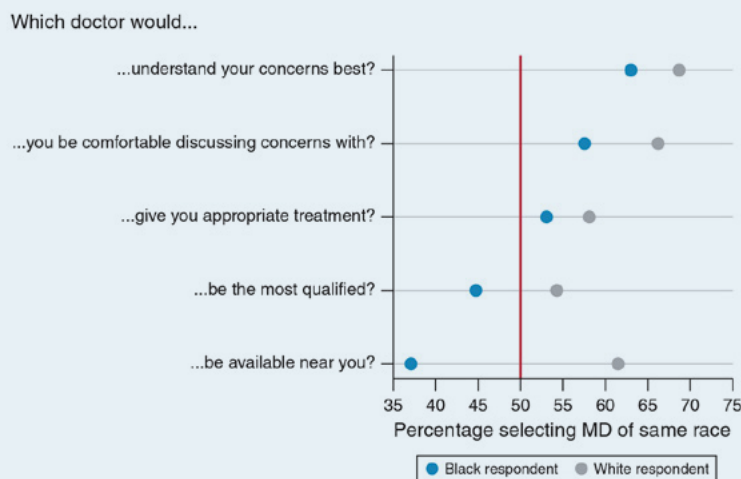


FIGURE 5. NON-EXPERIMENTAL PREFERENCE FOR CONCORDANCE

Notes: Figure plots the percent of black and white survey respondents who select a doctor of the same race in response to various questions. Choice set included black, white, or Asian male doctors.

The doctors may have differed in how motivated they were to get patients to agree to the interventions. As the study acknowledges, “The doctors, subjects, and field staff were not informed that doctor race was being randomized, though they could have inferred it” (p. 4082). If the doctors were aware that the study was examining the effects of racial concordance, which seems likely, it is possible that sympathy with the racial concordance hypothesis would exceptionally motivate the 6 black doctors while undermining the motivation of the 8 non-black doctors to get patients to agree to interventions. **Rather than being a true test of racial concordance, as the post tablet results are, the post-consultation results could be a test of the motivation of a handful of doctors. But again, it is not possible to draw a strong conclusion.**

TABLE 9—DOCTOR CHARACTERISTICS AND QUALITY

	Years of experience (1)	Medical school rank (2)	Internist (3)	Board question performance (4)
<i>Panel A. Occupational characteristics</i>				
Black mean	15.17	24.00	0.67	0.78
Non-black mean	12.25	11.00	1.00	0.83
<i>p</i> -value	0.74	0.85	0.09	0.66
	Persuade black men	Persuade white men	Most comply	>5 black patients/week
<i>Panel B. Persuasiveness and patient panel characteristics</i>				
Black mean	0.50	0.33	0.50	0.67
Non-black mean	0.75	0.75	1.00	0.38
<i>p</i> -value	0.35	0.13	0.03	0.30
Observations	14	14	14	14

Notes: Table reports mean doctor characteristics by race. See online Data Appendix and text for variable definitions. Wilcoxon rank-sum test *p*-values are reported in rows 3 and 6.

The fact that the study design failed to include a sample of white patients also prevents it from distinguishing between the effects of racial concordance and the effects of differential motivation of the doctors. If the 6 black doctors were simply trying harder or had more persuasive personalities and/or the 8 non-black doctors exerted less effort or were less persuasive people, then we might have seen a white sample of patients also do better with the black doctors. Because

there was not a white sample of patients, however, we are unable to disconfirm obvious alternative explanations.

Even if the doctors were not aware of the purpose of the study or differentially motivated by it, a group of six doctors may have differed in their persuasiveness from another group of 8 doctors simply by chance. While there were 637 patients in the study, it is more accurate to view this study as having a sample size of 14 doctors, which is remarkably under-powered for the purposes of drawing conclusions about racial concordance. The authors are aware of how small their sample size is: “When estimating standard errors for the main treatment effect of interest, we approach the data as if our design involved randomizing clusters of patients to a particular doctor instead of individual assignment of subjects to doctors of a given race” (p. 4083). Due to the tiny sample, the conventional approach of clustering standard errors for each doctor is unreliable: “These standard errors are likely incorrect given the small number of clusters. ...” (p. 4083-4). The authors report these unreliable standard errors anyway, but are also forced to employ a different, unconventional approach to test statistical significance.

Most people would not be inclined to believe sweeping claims about “reduc[ing] the black-white male gap in cardiovascular mortality by 19 percent” based on a study of 14 doctors. But there are further reasons not to believe such bold conclusions. The patients who completed the study differed dramatically from the broader black population, undermining our ability to generalize results to the entire black community. The 637 black men who completed the study even differed significant from the nearly 1,400 who were initially recruited to participate and completed a baseline survey: “Subjects who redeemed the clinic coupon were 13 percentage points more likely to be unemployed (compared to 18 percent among non-participants) and 19 percentage points more likely to have a high school education or less (compared to 44 percent among non-participants). In terms of health and health care utilization, they had significantly lower self-reported health, were less likely to have a primary care physician, and more likely to have visited the emergency room” (p. 4074).

While 65 percent of the patients in this study had no more than a high school diploma, almost 90 percent of all black people over the age of 25 have completed at least high school.⁵⁶ Only 6.5 percent of the black population was unemployed when this study was conducted, compared to 31 percent of the patients who completed the study.⁵⁷ Almost two-thirds of the patients in this study had no health insurance, compared to 11 percent of the U.S. black population.⁵⁸ Given the stark differences between the sample and the broader black population, it would be reckless to extrapolate from one to the other.

In addition, the claim that black patients having black doctors would “reduce the black-white male gap in cardiovascular mortality by 19 percent” requires a number of absurd assumptions about the benefits of receiving one round of preventative health screens, as well as assumptions about the ability to scale up the number of black doctors without altering quality. As the authors note, “The health value estimates come from cost-effectiveness simulations in which the screen-positive population obtains and complies with guideline-recommended therapy” (p. 4077). But their study only measures willingness to receive one set of preventative health screenings and never examines compliance with guidelines-recommended therapy.

As the authors further concede, “These calculations presume that there is a supply of African American male doctors who could screen and treat black male patients. This might not be a safe assumption. Black males are especially underrepresented in the physician workforce, comprising about 12 percent of the US male population but only 3 percent of male doctors.” (p. 4078) **The ability to dramatically increase the number of black doctors and allocate them such that every black patient would have a black doctor seems extremely unlikely.**

THE FLORIDA STUDY

- ▼ The Florida study by Greenwood et al. (2020) is also widely cited as proof of the benefits of racial concordance between healthcare providers and patients.⁵⁹ One thing going for it is that it looks like a rigorous analysis of a very large data set. The fact that it claims racial concordance would reduce black infant mortality by about 1.29 per 1,000 black babies born also bolsters its influence.

Physician–patient racial concordance and disparities in birthing mortality for newborns

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Edited by Christopher W. Kuzawa, Northwestern University, Evanston, IL, and approved July 16, 2020 (received for review August 2, 2019)

STUDY DESIGN

The researchers obtained hospital records for all babies born in Florida between 1992 and 2015. Those records included information on the race of the baby, comorbidities, whether the baby died, the hospital name, date of delivery, as well as the name of the attending physician for the newborn. Research assistants then searched for photos of the physicians to classify the doctors by race.

After excluding doctors and babies who were not identified as black or white, the study examined the infant mortality rates of 1.8 million babies, based on whether the race of the attending physician was concordant with that of the baby. Black babies have significantly higher infant mortality rates than do white babies, but the study found that the elevated rate was partially reduced when black babies had black doctors rather than white doctors. The infant mortality rate for white babies did not depend on whether the attending physician was white or black.

Without any controls, the study finds that black newborns with black attending physicians have 4.94 fewer deaths per 1,000 births than black newborns with white attending physicians. As controls are added, however, the benefit of having a black doctor for black newborns shrinks. In the specification controlling for the type of insurance covering the newborn, a set of 65 comorbidities, time (measured in quarters of years), hospital, hospital interacted with time, as well as a variable for each doctor, the effect shrinks to 1.29 fewer deaths per 1,000 black newborns.

It is important to note that this study is not a randomized experiment; babies are not randomly assigned to doctors of different races. In a supplement, the researchers acknowledge this limitation, but they suggest that the process by which doctors are assigned to babies approximates randomness: “Conversations with physicians suggest that the assignment of newborns to physicians is done in a quasirandom manner (based on which pediatricians happen to be on call).” Because of this, they conclude, controlling for observables with a series of variables should be sufficient to draw reasonable causal conclusions.

Those controls mean that the study compares outcomes by race for newborns who have the same doctor, the same insurance coverage, the same set of comorbidities, in the same hospital, at roughly the same point in time. Given this large set of controls, accounts of doctor assignment to babies which approximates randomization, and nearly 1.8 million cases, it is understandable why some people would be inclined to see the results as strong evidence in support of the benefits of racial concordance in health care.

WHY THE RESULTS OF THE FLORIDA STUDY ARE NOT CREDIBLY CAUSAL

The problem with having nearly 1.8 million observations is that even very subtle non-random processes of how doctors are assigned to newborns can yield a spurious result, and a large set of control variables will not fix that. We have many reasons to believe that the process by which doctors are assigned to newborns is not random and is instead strongly related to the likelihood that newborns will die. Consider that the magnitude of the claimed protective benefit of black newborns having black doctors shrinks dramatically as additional controls are introduced. In a truly randomized experiment, introducing controls should improve the precision of estimated treatment effects, but it should not dramatically alter their magnitude. **In this study, though, the treatment effect shrinks by almost 75% when controls are added, indicating that assignment to treatment (black babies having a black doctor) is strongly connected to other factors related to infant mortality.**

Significance

A large body of work highlights disparities in survival rates across Black and White newborns during childbirth. We posit that these differences may be ameliorated by racial concordance between the physician and newborn patient. Findings suggest that when Black newborns are cared for by Black physicians, the mortality penalty they suffer, as compared with White infants, is halved. Strikingly, these effects appear to manifest more strongly in more complicated cases, and when hospitals deliver more Black newborns. No such concordance effect is found among birthing mothers.

Specifically, we can see that white doctors are more likely to be assigned to black newborns who have more medical issues than are black doctors. The study, in Table S1a, reports that black newborns with white doctors have an average of 1.775 comorbidities, compared to 1.648 for black newborns who have black doctors. That difference in the number of comorbidities represents roughly 8 percent of a standard deviation, which is about the same as the standard deviation difference in infant mortality between black newborns who have black and white doctors.

Group	All Included Patients	White Phys, Black Patient		Black Phys, Black Patient		White Phys, White Patient		Black Phys, White Patient		Black Patient Omitted		White Patient Omitted		Other Patients Omitted		
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Observations	1,812,979	362,597		97,304		1,222,228		130,850		521,740		1,215,864		1,075,315		
Variable																
Patient Expired	0.004	0.064	0.009	0.094	0.004	0.062	0.003	0.054	0.003	0.053	0.006	0.077	0.0029	0.054	0.003	0.058
Patient Black	0.254	0.435	1	0	1	0	0	0	0	0	1	0	0	0	0.000	0.000
Physician Black	0.126	0.332	0	0	1	0	0	0	1	0	0	0	0	0	0.064	0.245
Pediatrician	0.792	0.406	0.777	0.416	0.712	0.453	0.806	0.396	0.762	0.426	0.665	0.472	0.671	0.470	0.688	0.463
Male Phys	0.647	0.478	0.645	0.479	0.457	0.498	0.674	0.469	0.513	0.500	0.548	0.498	0.612	0.487	0.580	0.494
Length of Stay	3.543	8.919	4.726	12.831	3.366	8.070	3.207	7.523	3.531	7.993	4.582	11.892	3.374	7.718	3.387	7.756
Medicaid	0.407	0.491	0.621	0.485	0.645	0.479	0.312	0.463	0.518	0.500	0.659	0.474	0.431	0.495	0.460	0.498
Medicare	0.002	0.040	0.002	0.047	0.001	0.038	0.001	0.037	0.002	0.039	0.002	0.041	0.001	0.037	0.003	0.052
Self-Pay	0.052	0.222	0.052	0.221	0.067	0.251	0.051	0.220	0.053	0.224	0.071	0.257	0.062	0.243	0.115	0.319
Residency	0.453	0.498	0.501	0.500	0.449	0.497	0.440	0.496	0.447	0.497	0.435	0.496	0.413	0.493	0.514	0.500
Cesarean	0.297	0.457	0.298	0.457	0.303	0.459	0.294	0.456	0.319	0.466	0.300	0.458	0.306	0.461	0.318	0.466
Num Comorbid	1.567	1.691	1.775	1.853	1.648	1.617	1.469	1.625	1.845	1.787	1.751	1.836	1.550	1.703	1.582	1.629

Table S1a. Newborn Patient Summary Statistics. Note: Patient Expired Scaled 0/1 in this Table.

But the analysis includes controls for a set of 65 commodities, so shouldn't that fully adjust for this observed difference? **Unfortunately, controlling for the presence of each commodity, which can be done after looking at hospital records, does not control for the severity of each comorbidity, which was not recorded and is not controlled for in this study.** If black newborns, on average, have more severe health issues, which other evidence strongly indicates is the case, and if babies with more serious medical problems are more likely to be assigned to a white doctor, the results of this study would be significantly biased. With more than 1.8 million observations, a slight uncontrolled bias like this might yield the false result that black doctors are protective against infant mortality for black newborns when the true effect was null or even in reverse.

Let's walk through other evidence that suggests how probable it is that this bias produces a false result in this study. The second most common cause of infant mortality, after "congenital malformations," is low birth weight, which is associated with **14.8 percent** of all infant deaths.⁶⁰ Low birth weight is **defined** by the World Health Organization as a weight less than 2,500 grams.⁶¹ The Florida data set used in this study does classify a weight of less than 2,500 grams as one of its 65 comorbidities. But very low weight babies, who weigh less than 1,500 grams, are at even more serious risk, and the Florida data set does not have information on this more serious risk. It indicates whether babies are in one of three categories between 1,500 and 2,500 grams, but not whether they weigh less than 1,500 grams. Black newborns are almost **three times more likely than** as white newborns to weigh less than 1,500 grams.⁶²

Black newborns don't just have more comorbidities, they also tend to have more severe cases of those comorbidities. The Florida data set has information on the type of comorbidities but is almost entirely lacking in information on the severity of those cases. **Without that information, the study is unable to control for the severity of comorbidities that are strongly related to infant mortality rates, biasing its estimates of racial concordance effects.**

Importantly, black newborns aren't just more likely to have severe cases of comorbidities, they are also more likely to be assigned to white doctors when they have those more severe cases. This happens because the attending doctor for newborns with challenging health issues is more likely to be a specialist certified to address those issues than a pediatrician or family practice physician. Black doctors are significantly less likely to be found in those specialized fields. For example, 5.2 percent of **pediatricians**⁶³ and **family practice**⁶⁴ physicians are black, compared to 3.8 percent of **neonatologists**,⁶⁵ **pediatric cardiologists**,⁶⁶ and 1.8 percent of **pediatric surgeons**.⁶⁷

It is also important to note that the 65 comorbidities for which the Florida study controls may sound like an impressive number of serious medical conditions, but many are just administrative classifications that pose no threat to newborn lives. (See Table of 65 comorbidities, reproduced below.) For example, the 65 comorbidities include “diaper rash,” “hearing loss,” “congenital hydrocele” (swollen testicles), “congenital pigmentary anomalies of skin” (birth marks), “encounter for hearing examination following failed hearing screening,” “exam ears & hearing NEC,” “injuries to scalp due to birth trauma” (bruising or forceps marks), and “redundant prepuce and phimosis” (extra foreskin). Several of the categories are largely redundant and control for little or no additional information, such as two categories for single live-born baby delivered by cesarean, one for babies born vaginally, and another for babies born without mention of whether they were born cesarean.

While many of the comorbidity categories provide no information about life-threatening conditions, other information that would identify newborns at serious risk of dying is not present among the 65 comorbidity categories. For example, “septicemia (sepsis) of newborn,” does not distinguish between newborns with non-life-threatening infections and those that are in shock and facing imminent danger.

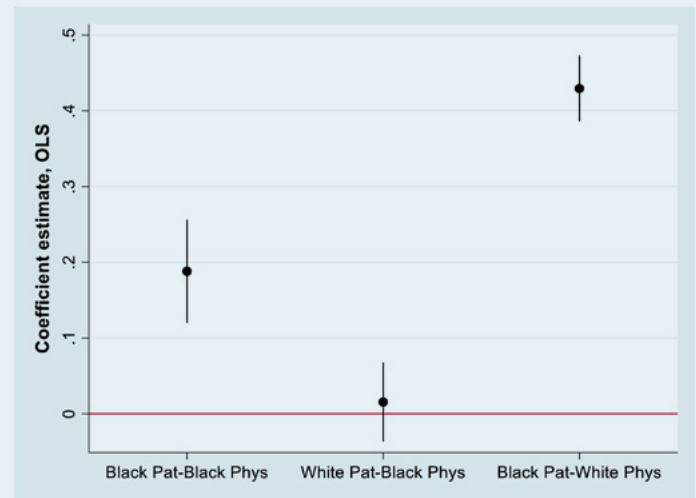


Fig. 1. Effect of racial concordance on patient survival, disaggregated based on column 4 of Table 1. Patient White–Physician White serves as the baseline. Estimates displayed in the absence of the physician fixed effect to allow comparison across physician race. Includes controls, hospital fixed effect, and time fixed effects. The 95% CI is displayed.

When the Florida study says that it controls for 65 comorbidities, people may be inclined to think that it captures an immense amount of information about health challenges, allowing for an apple-to-apple comparison of babies and the race of their assigned doctors. But many of the 65 categories are meaningless when assessing life-threatening conditions and others fail to distinguish between mild and dangerous manifestations of the same condition. The 65 comorbidities are mere administrative categories not designed for a study meant to isolate the effect of a doctor's race. Therefore, using them fails to yield apple-to-apple comparisons.

There was no theoretical reason to use these particular 65 comorbidities. The Florida study used them simply because they are what the state collected from hospital administrators and made available to the researchers. **In general, state data collection was not designed for the purposes of this study and did not collect other information that might be useful for studying factors related to infant mortality.** For example, the researchers do not have information from the state on how many black and white infants with life-threatening conditions were transferred to other hospitals and assigned to other doctors before dying, making the assignment of infants to hospitals and doctors clearly non-random. Researchers also do not have information on cases where no effort by doctors could have saved their lives or where choices were made not to attempt to do so. In short, administrative data from hospitals is so incomplete that it cannot provide a sufficient set of controls to isolate causal effects.

The Florida study, then, does not demonstrate the protective benefits of black newborns having black doctors. **Instead, it only documents that black newborns are more likely to have severe issues that increase their risk of infant mortality.** Those severe cases are more likely to have white attending physicians because white doctors are more prevalent in the specialized fields that treat those severe issues.

Compression of umbilical cord affecting fetus or newborn	Heavy-for-dates' infants	Observation for other specified suspected conditions	Single liveborn infant, delivered vaginally
24 completed weeks of gestation	Hemolytic disease of fetus or newborn	Observation for suspected infectious condition	Single liveborn, born in hospital without mention of cesarean section
31-32 completed weeks of gestation	Hemolytic disease of fetus or newborn due to ABO isoimmunization	Ostium secundum type atrial septal defect	Single liveborn, born in hospital, delivered by cesarean section
33-34 completed weeks of gestation	Hypothermia of newborn	Other preterm infants, 1,500-1,749 grams	Syndrome of 'infant of a diabetic mother'
35-36 completed weeks of gestation	Hypoxemia of newborn	Other preterm infants, 1,750-1,999 grams	Transient neonatal thrombocytopenia
Abnormality in fetal heart rate or rhythm before the onset of labor	Infections specific to the perinatal period	Other preterm infants, 2,000-2,499 grams	transitory neonatal electrolyte disturbances
Anemia of prematurity	Injuries to scalp due to birth trauma	Other preterm infants, 2,500 grams and over	Transitory tachypnea of newborn
Congenital hydrocele	Newborn (suspected to be) affected by maternal infectious and parasitic diseases	Other specified conditions involving the integument of fetus and newborn	Twin birth, mate liveborn
Congenital pigmentary anomalies of skin	Interstitial emphysema	Patent ductus arteriosus	Twin birth, mate liveborn, delivered by cesarean section
Cutaneous hemorrhage of fetus or newborn	'Light-for-dates' without mention of fetal malnutrition	Post-term infant	Umbilical hernia
Diaper or napkin rash	'Light-for-dates' without mention of fetal malnutrition, 2,500 grams and over	Primary apnea of newborn	Undiagnosed cardiac murmurs
disturbances of temperature regulation of newborn	Meconium staining	Redundant prepuce and phimosis	Unspecified fetal and neonatal jaundice
Encounter for hearing examination following failed hearing screening	Need for prophylactic vaccination and inoculation against unspecified single disease	Respiratory distress syndrome in newborn	Vaccination not carried out because of caregiver refusal
Exam ears & hearing NEC	Need for prophylactic vaccination and inoculation against viral hepatitis	Respiratory problems after birth	Vascular hamartomas
Ventricular septal defect	Neonatal bradycardia	Hearing Loss	
Feeding problems in newborn	Neonatal hypoglycemia	Septicemia [sepsis] of newborn	
Hallucinogenic agents affecting fetus or newborn via placenta or breast milk	Neonatal jaundice associated with preterm delivery	Single liveborn infant, delivered by cesarean	

Table S2. Comorbidities included in estimations.

CONCLUSION

Racial health disparities are a persistent and tragic phenomenon. Trying to understand the root causes and potential solutions to these disparities is a noble cause. Yet distorting the evidence is not, even when pursued in the name of addressing the disparities. Many studies that investigate racial concordance hypothesize that black patients might have less trust in doctors due to the trauma inflicted by the Tuskegee Experiment. One of the lessons of the Tuskegee Experiment is that medical professionals are morally and professionally obligated to tell the truth. When it comes to the state of evidence on racial concordance in medicine, it's clear that many influential individuals and organizations are derelict in that responsibility. There is no justification for radically restructuring healthcare along racial lines.

The implications for racial concordance should be clear. First, attempts to match patients to doctors on the basis of race hold no promise for producing better care or better outcomes. Instead, as common sense dictates, patient-provider pairings should be determined by convenience, practicality, and expertise. Second, efforts to increase the number of doctors from any particular racial group will not result in better patient care. Attempts by the Association of American Medical Colleges or medical schools to deprioritize merit and skirt the Supreme Court's ban on affirmative action would instead jeopardize patient care. **Research indicates** that strong academic readiness (e.g., as measured by undergraduate GPA and MCAT scores), not racial concordance, predicts clinical performance.⁶⁹

Progress toward eliminating racial health disparities has been slow, and philanthropies and publicly funded research grants have staked millions on racial concordance as a potential solution. Yet the fashionable idea that doctors see patients as members of a racial group rather than as individuals fails to withstand scrutiny—and it promises a return of racial segregation. What's old need not become new again. The idea of separating the races should be relegated to the ash heap of history, not revived by the false and dangerous claim that they are needed to improve health outcomes.

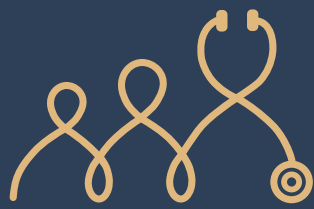
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