



# 2022 Robert S. Daniels, MD Lecture: Diversity in Graduate Medical Education

William McDade, MD, PhD  
Chief Diversity, Equity and Inclusion Officer  
Accreditation Council for Graduate Medical Education  
Adjunct Professor of Anesthesiology  
Rush Medical College





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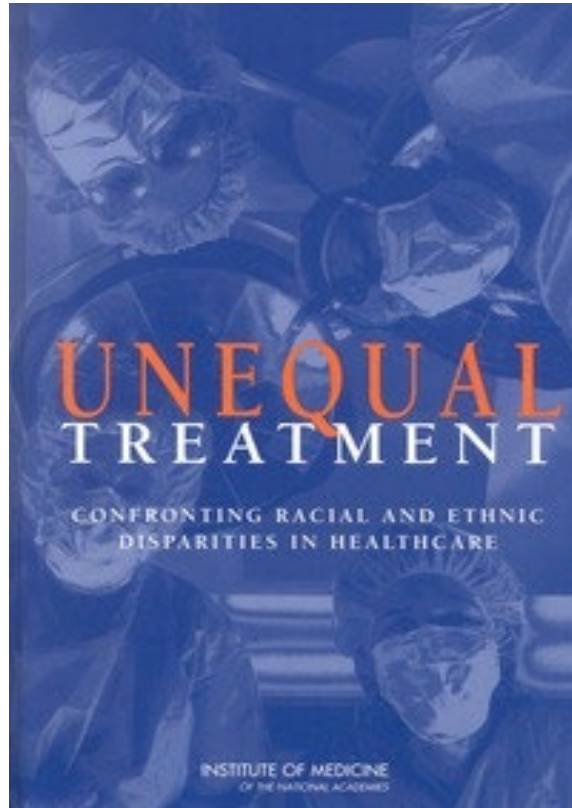


# Dean Daniels



- Dean LSU School of Medicine 1986-95
  - University of Cincinnati College of Medicine graduate
  - Board certified psychiatrist
  - Chairman of the Department of Psychiatry, Dean of the College of Medicine and Senior Vice President for the Medical Center at the University of Cincinnati
  - Associate Dean for Social and Community Medicine, University of Chicago
- Recent past lecturers
- Dan Hunt, MD, MBA
  - Stuart Slavin, MD

# Evidence of racial and ethnic disparities in healthcare



Nat Academy Press 2002  
<http://www.nap.edu/catalog/10260.html>

- 584 pages detailing the extent of racial and ethnic differences in health outcomes that are not otherwise attributable to known factors such as access to health care
- **Disparities consistently found across a wide range of disease areas and clinical services**
- Disparities are found even when clinical factors, such as stage of disease presentation, co-morbidities, age, and severity of disease were adjusted
- Disparities are **found across a range of clinical settings**, including public and private hospitals, teaching and non-teaching hospitals, etc.
- Disparities in care are **associated with higher mortality** among minorities (e.g., Bach et al., 1999; Peterson et al., 1997; Bennett et al., 1995)



# ACGME foundational principles in DEI

- Society must view health care disparities as a deficiency in healthcare quality
- Health equity is a means to achieve elimination of health care disparities
- Increasing workforce diversity is a means to achieve health equity
- Inclusion is a tool to ensure that diversity is successful



# Why does diversity matter?

- We live in racially segregated communities
- Disease burden and health and healthcare inequities are strongly concentrated in residential areas of historically marginalized individuals
- People tend to seek medical care within their community
- Historically marginalized practitioners tend to practice in underserved communities and serve their historically marginalized residents
- There are high odds that a Black, Latinx or Asian physician will disproportionately see a patient of their same race or ethnicity
- The percentage of historically marginalized physicians trained in the US has not changed in 15 years



# Workforce diversity matters to the elimination of health disparities

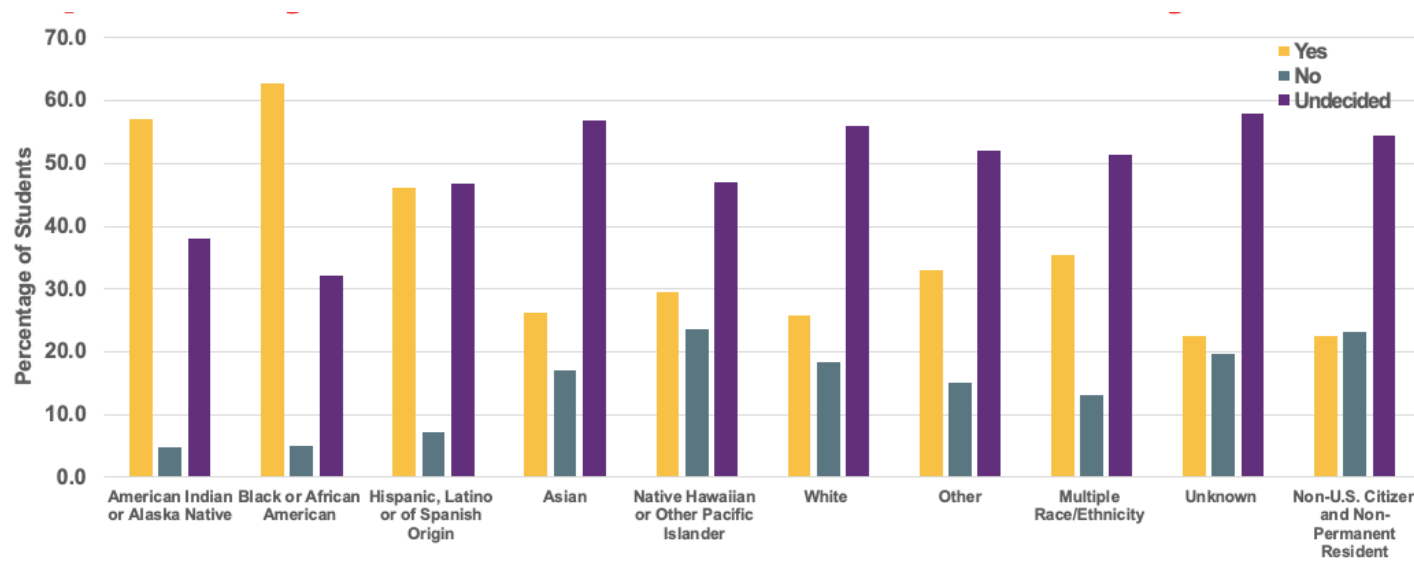
- Eliminating health care disparities is consistent with the mission of the ACGME to improve health care and population health by assessing and enhancing the quality of resident physicians' education through advancements in accreditation **and education.**
- ACGME envisions a health care system where the quadruple aim has been realized, aspiring to advance a transformed system of GME with global reach that is immersed in evidence-based, data-driven, clinical learning and care environments defined by excellence in clinical care, safety, cost effectiveness, professionalism, **and diversity and inclusion.**
- Educating physicians who are more likely to serve underserved patients and locate in minority communities increases health care access and improves trust, communication and outcomes for those most at risk for health disparities



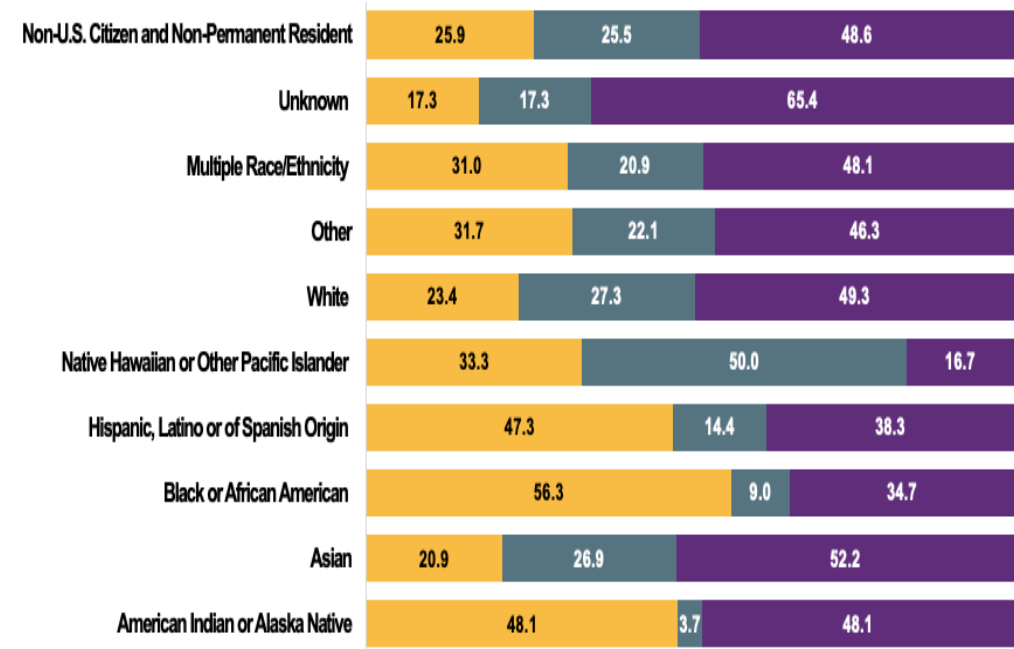


# Can you predict who is more likely to serve underserved and marginalized communities?

AAMC Matriculating Student Questionnaire



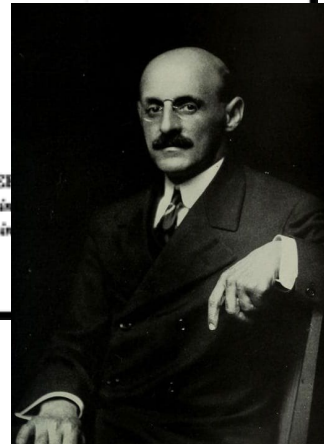
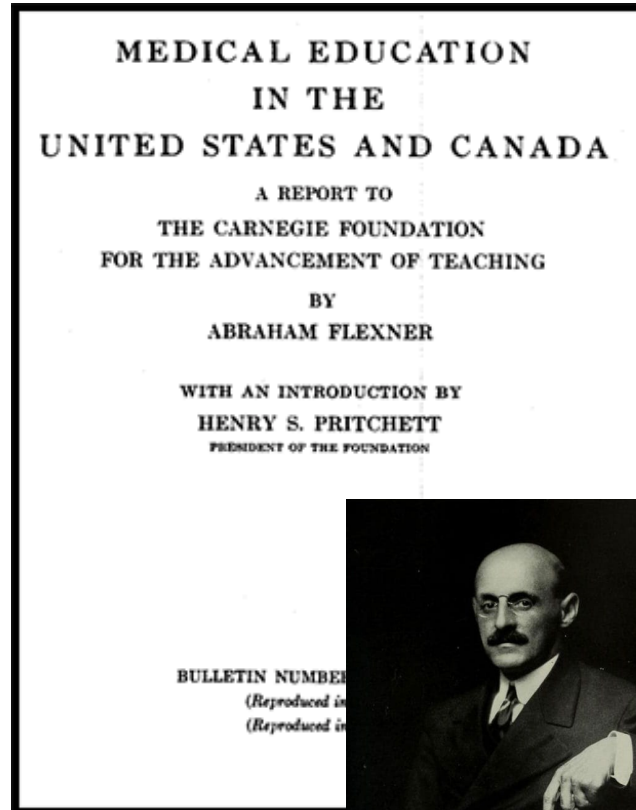
AAMC Graduating Student Questionnaire



AAMC: Data Warehouse, MSQ\_R, GQ\_R, and IND\_IDENT\_R tables as of December 30, 2020. MSQ\_R last updated 1/9/2020. GQ\_R last updated 8/26/2020. IND\_IDENT\_R last updated 12/3/2020.

# Workforce diversity matters to the elimination of health disparities

Stems from the Flexner report in 1910 which stated that the reason to leave the two Black medical schools in place, after suggesting closure of the other five at the time, was to ensure a supply of negro physicians to serve the black population to prevent spread of disease to the overall population.



## CHAPTER XIV

### THE MEDICAL EDUCATION OF THE NEGRO

THE medical care of the negro race will never be wholly left to negro physicians. Nevertheless, if the negro can be brought to feel a sharp responsibility for the physical integrity of his people, the outlook for their mental and moral improvement will be distinctly brightened. The practice of the negro doctor will be limited to his own race, which in its turn will be cared for better by good negro physicians than by poor white ones. But the physical well-being of the negro is not only of moment to the negro himself. Ten million of them live in close contact with sixty million whites. Not only does the negro himself suffer from hookworm and tuberculosis; he communicates them to his white neighbors, precisely as the ignorant and unfortunate white contaminates him. Self-protection not less than humanity offers weighty counsel in this matter; self-interest seconds philanthropy. The negro must be educated not only for his sake, but for ours. He is, as far as human eye can see, a permanent factor in the nation. He has his rights and due and value as an individual; but he has, besides, the tremendous importance that belongs to a potential source of infection and contagion.

The pioneer work in educating the race to know and to practise fundamental hygienic principles must be done largely by the negro doctor and the negro nurse. It is important that they both be sensibly and effectively trained at the level at which their services are now important. The negro is perhaps more easily "taken in" than the white; and as his means of extricating himself from a blunder are limited, it is all the more cruel to abuse his ignorance through any sort of pretense. A well-taught negro sanitarian will be immensely useful; an essentially untrained negro wearing an M.D. degree is dangerous.

Make-believe in the matter of negro medical schools is therefore intolerable. Even good intention helps but little to change their aspect. The negro needs good schools rather than many schools,— schools to which the more promising of the race can be sent to receive a substantial education in which hygiene rather than surgery, for example, is strongly accentuated. If at the same time these men can be imbued with the missionary spirit so that they will look upon the diploma as a commission to serve their people humbly and devotedly, they may play an important part in the sanitation and civilization of the whole nation. Their duty calls them away from large cities to the village and the plantation, upon which light has hardly as yet begun to break.



**Table 1. Unadjusted Association Between Disadvantaged Population and Receipt of Care From White vs Black, Hispanic, and Asian Physicians, Medical Expenditure Panel Survey, 2010**

Patient Characteristic	No. (%)		Unadjusted Odds Ratio (95% CI) <sup>a</sup>	Millions of Patients With a Hispanic Physician, No. (%)	Unadjusted Odds Ratio (95% CI) <sup>b</sup>	Millions of Patients With an Asian Physician, No. (%)	Unadjusted Odds Ratio (95% CI) <sup>c</sup>
	Millions of Patients With a White Physician	Millions of Patients With a Black Physician					
All patients	62.2 (100.0)	3.3 (100.0)		5.9 (100.0)		9.8 (100.0)	
Non-Hispanic whites	53.2 (86.8)	1.1 (34.7)	1 [Reference]	2.4 (41.5)	1 [Reference]	5.2 (53.7)	1 [Reference]
Minorities	9.0 (13.2)	2.2 (65.3)	12.30 (8.30-18.00)	3.5 (58.5)	8.20 (5.98-11.23)	4.6 (46.3)	5.40 (4.16-6.99)
Black, non-Hispanic	4.1 (7.1)	1.9 (63.9)	23.24 (16.28-33.17)	0.5 (16.8)	2.65 (1.81-3.87)	1.0 (16.3)	2.56 (1.90-3.44)
Hispanic	3.1 (5.5)	0.1 (5.3)	0.96 (0.49-1.88)	2.7 (52.6)	19.04 (13.47-26.93)	1.1 (17.7)	3.68 (2.62-5.18)
Asian	0.9 (1.7)	0.1 (5.1)	3.06 (1.15-8.17)	0.3 (9.0)	5.63 (2.67-11.86)	2.3 (31.2)	25.73 (16.92-39.13)
Other	0.9 (1.7)	0.1 (7.4)	4.60 (1.78-11.94)	0.02 (1.1)	0.61 (0.17-2.15)	0.2 (3.8)	2.25 (1.19-4.25)
<b>Income</b>							
High/middle	48.9 (78.5)	2.1 (64.5)	1 [Reference]	3.9 (65.5)	1 [Reference]	7.0 (70.9)	1 [Reference]
Low	13.4 (21.5)	1.2 (35.5)	2.03 (1.46-2.75)	2.1 (34.5)	1.92 (1.44-2.55)	2.8 (29.1)	1.49 (1.23-1.81)
<b>Medicaid</b>							
None	54.8 (93.2)	2.5 (78.4)	1 [Reference]	4.4 (81.8)	1 [Reference]	7.9 (85.2)	1 [Reference]
Medicaid	4.0 (6.8)	0.7 (21.6)	3.75 (2.72-5.18)	1.0 (18.2)	3.04 (2.29-4.04)	1.4 (14.8)	2.38 (1.85-3.06)
Any health insurance	58.8 (94.3)	3.1 (95.2)	1 [Reference]	5.4 (90.1)	1 [Reference]	9.3 (94.0)	1 [Reference]
Uninsured	3.5 (5.7)	0.1 (4.8)	0.83 (0.49-1.41)	0.6 (9.9)	1.83 (1.30-2.57)	0.6 (6.0)	1.07 (0.78-1.47)
English home language	60.6 (97.3)	3.2 (96.8)	1 [Reference]	3.9 (66.7)	1 [Reference]	7.9 (80.4)	1 [Reference]
Non-English home language	1.7 (2.7)	0.1 (3.2)	1.18 (0.51-2.69)	2.1 (33.4)	17.83 (12.80-24.82)	1.9 (19.6)	8.69 (6.19-12.19)

<sup>a</sup> Odds of patients in a demographic group reporting a black physician relative to non-Hispanic white patients reporting a black physician.

<sup>b</sup> Odds of patients in a demographic group reporting a Hispanic physician

relative to non-Hispanic white patients reporting a Hispanic physician.

<sup>c</sup> Odds of patients in a demographic group reporting an Asian physician relative to non-Hispanic white patients reporting an Asian physician.



# Primary care physicians who treat Blacks and Whites

Cross-sectional analysis of a nationally representative sample of 150,391 visits by black and white Medicare beneficiaries to 87,893 physicians

Most visits by black patients were with a small group of physicians (80% of visits were accounted for by 22% of physicians) whereas these same physicians (19,492) only saw 22% of white patients; 68,311 physicians saw 78% of white patients, but only 20% of black patients.

Physicians treating black patients report greater difficulties in obtaining access for their patients to subspecialists, diagnostic imaging, and nonemergency hospital admission.

**A black physician was 39.9 times more likely to see a black patient than was a white physician.**



Bach, PB et al. N Engl J Med 2004;351:575-84.

## Primary Care Physicians Who Treat Blacks and Whites

Peter B. Bach, M.D., M.A.P.P., Hoangmai H. Pham, M.D., M.P.H.,  
Deborah Schrag, M.D., M.P.H., Ramsey C. Tate, B.S., and J. Lee Hargraves, Ph.D.

### ABSTRACT

#### BACKGROUND

In the United States, black patients generally receive lower-quality health care than white patients. Black patients may receive their care from a subgroup of physicians whose qualifications or resources are inferior to those of the physicians who treat white patients.

#### METHODS

We performed a cross-sectional analysis of 150,391 visits by black Medicare beneficiaries and white Medicare beneficiaries 65 years of age or older for medical "evaluation and management" who were seen by 4355 primary care physicians who participated in a biannual telephone survey, the 2000-2001 Community Tracking Study Physician Survey.

#### RESULTS

Most visits by black patients were with a small group of physicians (80 percent of visits were accounted for by 22 percent of physicians) who provided only a small percentage of care to white patients. In a comparison of visits by white patients and black patients, we found that the physicians whom the black patients visited were less likely to be board certified (77.4 percent) than were the physicians visited by the white patients (86.1 percent,  $P=0.02$ ) and also more likely to report that they were unable to provide high-quality care to all their patients (27.8 percent vs. 19.3 percent,  $P=0.005$ ). The physicians treating black patients also reported facing greater difficulties in obtaining access for their patients to high-quality subspecialists, high-quality diagnostic imaging, and nonemergency admission to the hospital.

# Benefits of racially concordant care

- Addresses the unfortunate reality of how we trust in American society
- Intention to adhere to medical advice is heightened
- Patient satisfaction is better among historically marginalized individuals who receive racially concordant care
- Improved clinical outcomes in some categories has been shown
- Improves access to care for individuals who would rather forego care than to receive it in an environment that dehumanizes them, discriminates against them, and fails to communicate effectively with them



# Increasing racial/ethnic diversity in the physician workforce supports concordance

- Isn't forcing people to work where they don't want to work
- Isn't limiting patient access to the best physicians
- Isn't forcing patients to only see doctors of their own race/ethnicity
- Proximity is an important factor, but not the only factor
- Physicians' willingness to work in disadvantaged communities and to accept Medicare/Medicaid
- Patient choice plays a role



# Care provided by a physician who shares the racial identity of the patient

Why do individuals seek out physicians of their same race/ethnicity/religion?

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- Comfort/familiarity
- Language concordance/improved communication
- Safety- psychological, physical
- Trust, respect
- Shared worldview
- Proximal location

Why do physicians disproportionately care for patients of their same race/ethnicity/religion?

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- Race-conscious professionalism<sup>1</sup>
  - Sense of doing a societal good; Recognition of unique role; job satisfaction
  - Identifies with the population served
  - Sense of belongingness
- Exclusion from markets
  - Discrimination/Racism
  - Elitism



# Race-conscious professionalism

Describes the process black professionals confront when attempting to navigate the competing demands of professionalism, racial obligations, and personal integrity

Hispanic and black physicians tend to not leave minority communities once they settle in such areas, and when they move, they tend to move to areas similar to those that they are from.

Wilkins D. Identities and roles: Race, recognition, and professional responsibility. MD Law Rev. 1998. 57:1502–1595.

Brown T et al. Does the under- or overrepresentation of minority physicians across geographical areas affect the location decisions of minority physicians? Health Serv Res 2009 44(4):1290-308

## Race-Conscious Professionalism and African American Representation in Academic Medicine

Brian W. Powers, Augustus A. White, MD, PhD, Nancy E. Oriol, MD, and Sachin H. Jain, MD, MBA

### Abstract

African Americans remain substantially less likely than other physicians to hold academic appointments. The roots of these disparities stem from different extrinsic and intrinsic forces that guide career development. Efforts to ameliorate African American underrepresentation in academic medicine have traditionally focused on modifying structural and extrinsic barriers through undergraduate and graduate outreach, diversity and inclusion initiatives at medical schools, and faculty development programs. Although essential, these initiatives fail to confront the unique intrinsic forces that shape career development.

America's ignoble history of violence, racism, and exclusion exposes African American physicians to distinct personal pressures and motivations that shape professional development and career goals. This article explores these intrinsic pressures with a focus on their historical roots; reviews evidence of their effect on physician development; and considers the implications of these trends for improving African American representation in academic medicine. The paradigm of "race-conscious professionalism" is used to understand the dual obligation encountered by many minority physicians not only to pursue excellence

in their field but also to leverage their professional stature to improve the well-being of their communities. Intrinsic motivations introduced by race-conscious professionalism complicate efforts to increase the representation of minorities in academic medicine. For many African American physicians, a desire to have their work focused on the community will be at odds with traditional paths to professional advancement. Specific policy options are discussed that would leverage race-conscious professionalism as a draw to a career in academic medicine, rather than a force that diverts commitment elsewhere.

Notwithstanding important progress, substantial challenges remain in ameliorating racial inequalities in health and health care in the United States. One enduring challenge is the underrepresentation of minority populations, especially African Americans, among the faculty at academic medical centers (AMCs). At each stage of career development, African Americans remain less likely than other physicians to hold academic appointments. Despite constituting 13% of the American population as of 2014, African Americans accounted for only 7.4% of associate professors, 3.8% of associate professors,

In this Perspective, we explore the intrinsic pressures that contribute to African American underrepresentation at AMCs with a focus on their historical roots; review evidence of their effect on physician career development; and consider the implications for AMCs seeking to improve African American representation among their faculties. We conclude by providing specific policy options.

### Extrinsic Versus Intrinsic Forces In Shaping Career Development as Factors Contributing to Underrepresentation

medicine have traditionally been focused on modifying these extrinsic forces through tactics such as undergraduate and graduate outreach, diversity and inclusion initiatives at medical schools, and faculty development programs.

Although these are essential programs, we believe the prevailing focus on extrinsic factors has obscured the role intrinsic forces play on the decision to pursue and sustain a career in academic medicine. America's ignoble history of violence, racism, and exclusion exposes African American physicians to distinct personal pressures and motivations that

Powers, BW et al. Academic Medicine 2016. 91(7):913-5

Brian W. Powers, Nancy E. Oriol, Sachin H. Jain Journal of Health Care for the Poor and Underserved, Volume 26, Number 1, February 2015, pp. 73-81





# Does diversity matter for health?

Black subjects were likely to talk with a black doctor about more of their health problems

Black doctors were more likely to write additional notes about the subjects

CV disease impact was significant, leading to a projected 19% reduction in the black-white male gap in cardiovascular morbidity and 9% in CV mortality

Diabetes, cholesterol screening and invasive testing were up 20%; return visits were up 20%

Flu shots were significantly more likely in concordant pairings



M Alsan, O Garrick, and GC Graziani, NBER Working Paper No. 24787, June 2018, Revised September 2018

## Does Diversity Matter for Health? Experimental Evidence from Oakland\*

Marcella Alsan<sup>†</sup>

Owen Garrick<sup>‡</sup>

Grant Graziani<sup>§</sup>

June 2018

### Abstract

We study the effect of diversity in the physician workforce on the demand for preventive care among African-American men. Black men have the lowest life expectancy of any major demographic group in the U.S., and much of the disadvantage is due to chronic diseases which are amenable to primary and secondary prevention. In a field experiment in Oakland, California, we randomize black men to black or non-black male medical doctors and to incentives for one of the five offered preventives — the flu vaccine. We use a two-stage design, measuring decisions about cardiovascular screening and the flu vaccine before (*ex ante*) and after (*ex post*) meeting their assigned doctor. Black men select a similar number of preventives in the *ex-ante* stage, but are much more likely to select every preventive service, particularly invasive services, once meeting with a doctor who is the same race. The effects are most pronounced for men who mistrust the medical system and for those who experienced greater hassle costs associated with their visit. Subjects are more likely to talk with a black doctor about their health problems and black doctors are more likely to write additional notes about the subjects. The results are most consistent with better patient-doctor communication during the encounter rather than differential quality of doctors or discrimination. Our findings suggest black doctors could help reduce cardiovascular mortality by 16 deaths per 100,000 per year — leading to a 19% reduction in the black-white male gap in cardiovascular mortality.

JEL CLASSIFICATION CODES: I12, I14, C93

KEYWORDS: Homophily, social distance, mistrust, behavioral misperceptions, health gradients

\*We thank Pascaline Dupas and the J-PAL Board and Reviewers who provided important feedback that improved the design and implementation of the experiment. We thank Jeremy Bulow, Kate Casey, Arun Chandrasekhar, Raj Chetty, Karen Eggleston, Erica Field, Michael Greenstone, Seema Jayachandran, Damon Jones, Melanie Morten, Maria Polyakova, Al Roth, Kosali Simon, Ebonya Washington and Crystal Yang for their helpful comments. Javaricia Ivory, Matin Mirramezani, Edna Idna, Anlu Xing and especially Morgan Foy provided excellent research assistance. We thank the study doctors and field staff team for their participation and dedication. We thank the administration at Stanford and J-PAL particularly Lesley Chang, Rhonda McClinton-Brown, Dr. Mark Cullen, Dr. Douglas K. Owens, Ann Dohn, Ashima Goel, Atty. Ann James, Atty. Tina Dobleman, Nancy Lonhart, Jason Bauman and Sarah Shah. The study was made possible by support through the Abdul Latif Jameel Poverty Action Lab - Health

# Race matters in perinatal mortality

1.8 million hospital births in Florida between 1992 and 2015; Black newborn deaths are 3x greater than that of whites

Patient–physician concordance benefitted Black newborns with Black physicians by 53–56% compared to discordant care

No significant improvement in maternal mortality based on racial concordance



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

Brad N. Greenwood<sup>a,1,2</sup>, Rachel R. Hardeman<sup>b,1</sup>, Laura Huang<sup>c,1</sup>, and Aaron Sojourner<sup>d,1</sup>

<sup>a</sup>School of Business, George Mason University, Fairfax, VA 22030; <sup>b</sup>School of Public Health, University of Minnesota–Twin Cities, Minneapolis, MN 55455; <sup>c</sup>Harvard Business School, Harvard University, Boston, MA 02163; and <sup>d</sup>Carlson School of Management, University of Minnesota–Twin Cities, Minneapolis, MN 55455

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

Recent work has emphasized the benefits of patient–physician concordance on clinical care outcomes for underrepresented minorities, arguing it can ameliorate outgroup biases, boost communication, and increase trust. We explore concordance in a setting where racial disparities are particularly severe: childbirth. In the United States, Black newborns die at three times the rate of White newborns. Results examining 1.8 million hospital births in the state of Florida between 1992 and 2015 suggest that newborn–physician racial concordance is associated with a significant improvement in mortality for Black infants. Results further suggest that these benefits manifest during more challenging births and in hospitals that deliver more Black babies. We find no significant improvement in maternal mortality when birthing mothers share race with their physician.

racial bias | birthing outcomes | concordance | mortality | health care

The relationship between a decision maker’s ascriptive characteristics and advocates who do or do not share those characteristics has long been a source of intense scrutiny by scholars across a wide range of disciplines. Researchers in sociology have noted the benefits of female leadership for young women working at firms (1, 2). Management scholars note increased leniency in enforcing regulatory compliance when inspectors and their targets share similar backgrounds (3). Economists have shown that academic performance is higher when students share race with teachers (4). In addition, legal scholars have found higher incarceration rates among defendants paired with judges of a different race (5).

However, despite the prevalence of these findings, little evidence on the effect of gender and racial concordance in medicine existed until recently. Although received work indicates

approaches to address this pressing social issue. Furthermore, to the extent that newborns cannot verbally communicate with their physician, we are able to observe the effects of concordance without trust or communication issues affecting the patient–physician relationship. Inasmuch as prior research has struggled to disentangle the mechanisms behind concordance’s effect (10, 26), the setting allows us to explore concordance in the absence of one invoked mechanism—communication. Thus, if concordance effects manifest, we are able to rule out communication as the exclusive mechanism.

Research posits that racial concordance between a newborn and their physician may mitigate disparities for at least two reasons. First, research suggests concordance is not only salient for adults. Indeed, a growing body of literature explores the question of whether actors exhibit different levels of bias toward both children and adults. Wolf et al. (27), for example, examine whether adults’ spontaneous racial bias toward children differs from their spontaneous racial bias toward adults, finding that people have significantly greater favorability toward their in-group. Strikingly, this bias was exhibited equally toward adults and children. It is therefore possible that such an effect might manifest exclusively as a function of spontaneous bias. At the same time, extant research indicates that mortality across White and Black newborns is starkly different (28), suggesting Black newborns may have different needs and be more medically challenging to treat due to social risk factors and cumulative racial and socioeconomic disadvantages of Black pregnant women (29). To the extent that physicians of a social outgroup are more likely to be aware of the challenges and issues that arise when treating their group (10, 30, 31), it stands to reason that these physicians may be more equipped to treat patients with complex needs.



# Hazard of depending on racially concordant care to eliminate health disparities

- Racial and ethnic health inequities occur because of other factors, more social than medical.
- The social determinants of health contribute to excess morbidity and mortality that does not have a solely medical solution:
- The political determinants of health recognize how inequitable policies, politics, regulations, and laws have impaired access to care and contribute to health inequities<sup>1</sup>

Lack of access to healthy foods and food practices

Inundation with ultra-processed foods

Community and interpersonal violence

Lack of access to greenspace for play and exercise

Toxic environmental conditions

Housing insecurity, Inadequate transportation and education

Poverty/wealth gap

Allostatic load and exposure to Adverse Childhood Events

Inadequate transportation

Neighborhood disinvestment

Over-policing

Residential segregation

Structural racism<sup>2</sup>

<sup>1</sup>Dawes, D.E., 2020. *The political determinants of health*. Johns Hopkins University Press.

<sup>2</sup>Pronk, N.P., Kleinman, D.V. and Richmond, T.S., 2021. Healthy People 2030: Moving toward equitable health and well-being in the United States. *EClinicalMedicine*, 33.

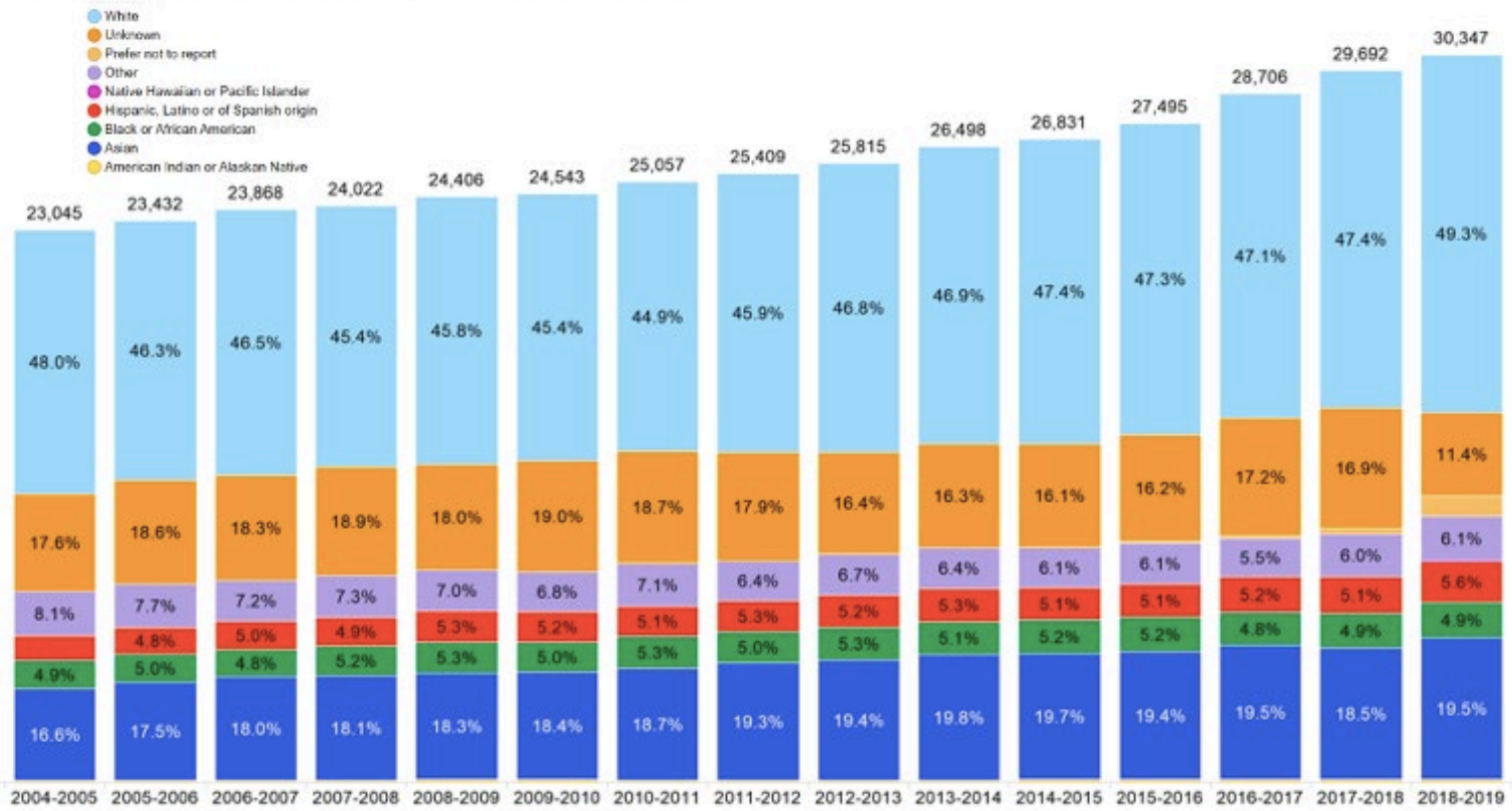
# Hazard of depending on racially concordant care to eliminate health disparities

We have not graduated enough Black, Latinx and Indigenous physicians over the past 40 years to satisfy the demand for concordant care

All physicians must embrace cultural humility<sup>1</sup> to improve the care they give to patients from historically marginalized groups

<sup>1</sup>Tervalon M, Murray-Garcia J. Cultural humility versus cultural competence: a critical distinction in defining physician training outcomes in multicultural education. *J Health Care Poor Underserved*. 1998;9:117–25.

## Pipeline Graduates 2004-2005 to 2018-2019 Academic Year



ACGME Data Resource Book Academic Years 2004-2019

# ACGME actions

## Common Program Requirements

**Section I.C.** enjoins programs in partnership with their SIs to engage in practices to increase workforce diversity and provide for inclusivity

**Section VI.B.6** enjoins programs to provide a civil, equitable, professional learning environment

**Section II.A.4.a).(10)** protects complainants from retaliation and intimidation

**Section V.** begins to shift emphasis to ultimate success on specialty board certification examination from the sole use of first-time performance to assess program quality

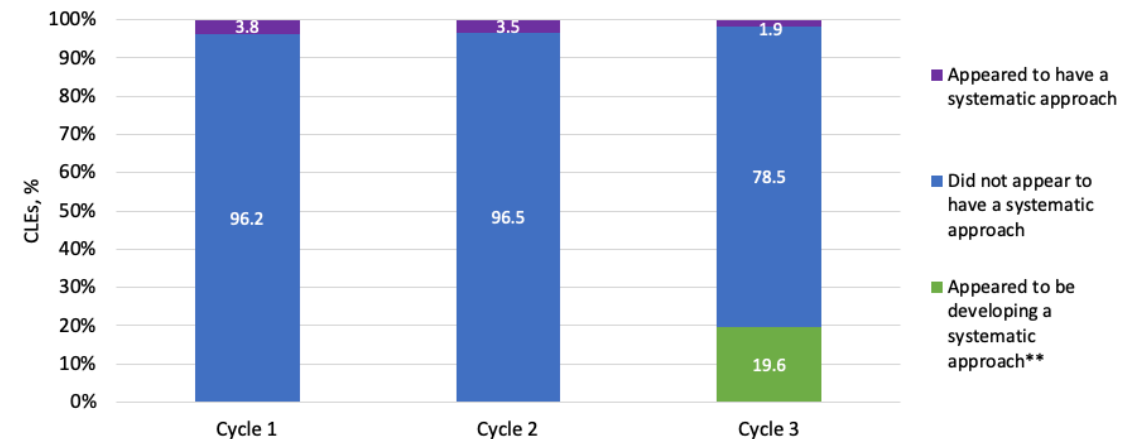
McDade WA. Increasing Graduate Medical Education Diversity and Inclusion. *J Grad Med Educ.* 2019;11(6):736-738. doi:10.4300/JGME-D-19-00760.1

## Clinical Learning Environment Review

**HQ Pathway 5:** Resident, fellow, and faculty member education on eliminating health care disparities

**HQ Pathway 6:** Resident, fellow, and faculty member engagement in clinical site initiatives to eliminate health care disparities

Percentage of CLEs with a Systematic Approach to Eliminating Health Care Disparities



# Common Program Requirements Section V: First-time pass rate

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ACGME seeks to improve the quality of resident education, and a measure of this has been the first-time specialty certification exam pass rate

Each specialty residency review committee had been able to set its own floor as to what constituted a successful first-time pass rate

ACGME has now made the first-time pass rate the same for all specialties

ACGME is now concerned with collection of longitudinal board certification data to examine ultimate pass rate compared to first-time pass rate with respect to quality of performance in practice

Historically marginalized students have lower median scores on standardized examinations for MCAT and USMLE Steps 1 and 2 than whites



# Testing outcomes are to be anticipated

Wealth gap

Differential preparation

Exclusion from learning communities

Imposter syndrome

Stereotype threat

## Academic redlining in medicine

Sunny Nakae, Andrew M. Subica

**Conflict of Interest:** The authors have no competing or conflicting interests to disclose.

**Abstract:** Despite concerted efforts over the past decade to increase diversity in U.S. medical schools, persistent applicant and enrollment gaps remain for students from underrepresented racial and economic backgrounds. To understand these gaps, we propose a new theory of 'academic redlining' as a widespread practice in medical schools that systematically excludes students from underrepresented backgrounds from entry into medicine through the nearly universal use of Medical College Admissions Test (MCAT) cutoff scores. In this paper, we provide evidence that academic redlining via the MCAT disenfranchises students from underrepresented backgrounds prior to and during the admissions process due to structural racism, and describe the three core mechanisms that cause medical schools to engage in academic redlining: (1) the pursuit of institutional prestige, (2) market competition and pressure, and (3) market bands. Given the persistent lack of diversity in medicine—which contributes to devastating health care disparities—medical schools redouble their commitments to diversity, equity, and inclusion, structural alternatives within medical schools' admissions and education practices are offered to curtail the practice of academic redlining in medical school admissions and medicine.

**Author affiliations:** Sunny Nakae, Department of Medical Education, California University of Science and Medicine, 1501 Violet St, Colton, CA, 92324, USA; Andrew M. Subica, Department of Social Medicine, Population, and Public Health, University of California Riverside School of Medicine, 900 University Ave, Riverside, CA, 92521, USA.

**Correspondence:** Sunny Nakae, M.S.W., Ph.D., California University of Science and Medicine, 1501 Violet St, Colton, CA 92324. Phone: 312-731-4201 email: [sunnynakae@gmail.com](mailto:sunnynakae@gmail.com)

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### INTRODUCTION

Despite current efforts to improve diversity, medicine continues to experience a profound lack of diversity due to the striking absence of physicians from underrepresented racial and economic backgrounds.<sup>1,2</sup> In 2018, despite African Americans and Latinas comprising 13% and 18% of the U.S. population, respectively, only 5% of physicians were African American and 6% were Latina.<sup>3,4</sup> These low numbers have created severe disparities in physician access, quality medical care, and health status among patients from these underrepresented groups<sup>1,2,5</sup> based on significant evidence that the presence of underrepresented health providers may decrease health disparities by improving patient outcomes, satisfaction, and communication.<sup>6,7,8</sup>

A major driver of this diversity crisis is the low, unequal medical school admissions rates of students from underrepresented backgrounds.<sup>9</sup> The *Flexner Report* of 1910 led to the purposeful closure of schools that trained racial, ethnic, and gender minority groups.<sup>10,11</sup> Since

then, medical schools have struggled to enroll women, students from low-income families, and racial/ethnic minorities.<sup>11</sup> While successful efforts to reduce the gender gap led women to surpass men in total medical school enrollment in 2019,<sup>12</sup> similar efforts have failed to bridge the admissions gap for students from underrepresented racial and economic backgrounds.<sup>13,14</sup> For example, the Association of American Medical Colleges' 'Project 3,000 by 2000' campaign to increase medical school enrollment from underrepresented groups fell far short of its goal.<sup>15</sup> Consequently, admissions rates for underrepresented students have remained persistently low, resisting local and national efforts to promote diversity in medical school admissions and enrollment.<sup>16</sup>

In this paper, we argue that the workforce diversity challenges facing medicine are the direct consequence of a significant but underrecognized structural problem in the medical school admissions process: the systematic exclusion of qualified applicants from underrepresented racial and economic backgrounds due to the use of the Medical College Admissions Test (MCAT).<sup>17</sup> We name this exclusionary practice 'academic redlining' because of its stark parallels to the discriminatory 'redlining' practice that denied generations of minorities homeownership and wealth-building by labeling qualified minority homebuyers and neighborhoods unworthy of loans based on race.<sup>18</sup>

### Historical Redlining

Redlining refers to corporate and government housing loan discrimination by federal agencies, lenders, and developers based on racially-biased assessments of minority neighborhoods as inherently undesirable and less valuable—an "unconstitutional and discriminatory racial policy."<sup>18</sup> This discriminatory labeling began in the 1930's with the denial of home loans to qualified minority homebuyers, with banks using racism to manipulate the value of investments and assets at the expense of minority neighborhoods. Over time, redlining wrought numerous ill effects on minorities by (1) denying millions of residents from low-income, mostly African American neighborhoods homeownership; and (2) diminishing property values for existing African American homeowners. Following redlining, residential segregation increased and the chasm of household wealth rose dramatically;



Nakae, S. and Subica, A.M., 2021. Academic redlining in medicine. *Journal of the National Medical Association*, 113(5), pp.587-594.

# Modified program requirements regarding first-time board pass rates

Intended to reduce overreliance on USMLE Step 1 performance

Reduces the unintended consequences of the emphasis now placed on Step 1

Allows medical schools to stress their distinctive strengths as opposed to having a national curriculum

May improve ability to diversify specialties that have overemphasized the importance of USMLE Step 1 performance and that currently have little diversity



McDade, W., Vela, M.B. and Sánchez, J.P., 2020. Anticipating the impact of the USMLE Step 1 pass/fail scoring decision on underrepresented-in-medicine students. *Academic Medicine*, 95(9), pp.1318-1321



# Disparate impact analysis

Logistic regression showed **white examinees** compared with nonwhite examinees (black individuals, Asian individuals, and individuals of other races) (OR, 1.8; 95%CI, 1.03-3.0) were more likely to pass the qualifying examination on the first try

**White, non-Hispanic examinees** compared with Hispanic examinees (OR, 2.4; 95%CI, 1.2-4.7) were more likely to pass the certifying examination on the first try

Yeo, H.L., Dolan, P.T., Mao, J. and Sosa, J.A., 2020. Association of demographic and program factors with American Board of Surgery qualifying and certifying examinations pass rates. *JAMA surgery*, 155(1), pp.22-30.

JAMA Surgery | Original Investigation

## Association of Demographic and Program Factors With American Board of Surgery Qualifying and Certifying Examinations Pass Rates

Heather L. Yeo, MD, MHS, MBA, MS; Patrick T. Dolan, MD, MS; Jialin Mao, MD, MS; Julie A. Sosa, MD, MA

**IMPORTANCE** American Board of Surgery board certification requires passing both a written qualifying examination and an oral certifying examination. No studies have been conducted assessing the effect of sociodemographic variables on board passage rates.

**OBJECTIVE** To evaluate if trainee sociodemographic factors are associated with board passage rates.

**DESIGN, SETTING, AND PARTICIPANTS** This national and multi-institutional prospective observational cohort study of 1048 categorical general surgery trainees starting in 2007-2008 were surveyed. Data collection began in June 2007, follow-up was completed on December 31, 2016, and analysis began September 2018.

**MAIN OUTCOMES AND MEASURES** Survey responses were linked to American Board of Surgery board passage data.

**RESULTS** Of 662 examinees who had complete survey and follow-up data, 443 (65%) were men and 459 (69%) were white, with an overall board passage rate of 87% (n = 578). In a multinomial regression model, trainees of Hispanic ethnicity were more likely to not attempt the examinations (vs passed both) than non-Hispanic trainees (odds ratio [OR], 4.7; 95% CI, 1.5-14). Compared with examinees who were married with children during internship, examinees who were married without children (OR, 0.3; 95% CI, 0.1-0.8) or were single (OR, 0.4; 95% CI, 0.2-0.9) were less likely to fail the examinations. Logistic regression showed white examinees compared with nonwhite examinees (black individuals, Asian individuals, and individuals of other races) (OR, 1.8; 95% CI, 1.03-3.0) and examinees who performed better on their first American Board of Surgery In-Training Examination (OR, 1.03; 95% CI, 1.02-1.05) were more likely to pass the qualifying examination on the first try. White examinees compared with nonwhite examinees (OR, 1.8; 95% CI, 1.1-2.8), non-Hispanic compared with Hispanic examinees (OR, 2.4; 95% CI, 1.2-4.7), and single women compared with women who were married with children during internship (OR, 10.3; 95% CI, 2.1-51) were more likely to pass the certifying examination on the first try.

**CONCLUSIONS AND RELEVANCE** Resident race, ethnicity, sex, and family status at internship were observed to be associated with board passage rates. There are multiple possible explanations for these worrisome observations that need to be explored. Tracking demographics of trainees to help understand passage rates based on demographics will be important. The American Board of Surgery already has begun addressing the potential for unconscious bias among board examiners by increasing diversity and adding implicit bias training.

← Invited Commentary page 30

+ Author Audio Interview

+ Supplemental content



# Does USMLE performance predict physician quality?

The validity argument about using USMLE Step 1 and 2 scores for postgraduate residency selection decisions is neither structured, coherent, nor evidence based.

The exam was not designed for this purpose and represents a misuse of a tool to assess minimum competency for practice

Scores are not associated with measures of clinical skill acquisition among advanced medical students, residents, and subspecialty fellows



Assessment and Testing

## Are United States Medical Licensing Exam Step 1 and 2 Scores Valid Measures for Postgraduate Medical Residency Selection Decisions?

William C. McGaghie, PhD, Elaine R. Cohen, and Diane B. Wayne, MD

### Abstract

#### Purpose

United States Medical Licensing Examination (USMLE) scores are frequently used by residency program directors when evaluating applicants. The objectives of this report are to study the chain of reasoning and evidence that underlies the use of USMLE Step 1 and 2 scores for postgraduate medical resident selection decisions and to evaluate the validity argument about the utility of USMLE scores for this purpose.

#### Method

This is a research synthesis using the critical review approach. The study first describes the chain of reasoning that underlies a validity argument about using

test scores for a specific purpose. It continues by summarizing correlations of USMLE Step 1 and 2 scores and reliable measures of clinical skill acquisition drawn from nine studies involving 393 medical learners from 2005 to 2010. The integrity of the validity argument about using USMLE Step 1 and 2 scores for postgraduate residency selection decisions is tested.

#### Results

The research synthesis shows that USMLE Step 1 and 2 scores are not correlated with reliable measures of medical students', residents', and fellows' clinical skill acquisition.

#### Conclusions

The validity argument about using USMLE Step 1 and 2 scores for postgraduate residency selection decisions is neither structured, coherent, nor evidence based. The USMLE score validity argument breaks down on grounds of extrapolation and decision/interpretation because the scores are not associated with measures of clinical skill acquisition among advanced medical students, residents, and subspecialty fellows. Continued use of USMLE Step 1 and 2 scores for postgraduate medical residency selection decisions is discouraged.

# Academic considerations in holistic admission

Since holistic admission relies less on standardized test performance history, expectations that standardized testing ability will improve without intervention to address the skills deficit is harmful:

- Provide individualized education supplementation
- Remove or reduce significance of standardized testing requirements from assessment and promotion in training



## A Plea to Reassess the Role of United States Medical Licensing Examination Step 1 Scores in Residency Selection

Charles G. Prober, MD, Joseph C. Kolars, MD, Lewis R. First, MD, and Donald E. Melnick, MD

### Abstract

The three-step United States Medical Licensing Examination (USMLE) was developed by the National Board of Medical Examiners and the Federation of State Medical Boards to provide medical licensing authorities a uniform evaluation system on which to base licensure. The test results appear to be a good measure of content knowledge and a reasonable predictor of performance on subsequent in-training and certification exams. Nonetheless, it is disconcerting that the test preoccupies so much of students' attention with attendant substantial

costs (in time and money) and mental and emotional anguish.

There is an increasingly pervasive practice of using the USMLE score, especially the Step 1 component, to screen applicants for residency. This is despite the fact that the test was not designed to be a primary determinant of the likelihood of success in residency. Further, relying on Step 1 scores to filter large numbers of applications has unintended consequences for students and undergraduate medical education curricula.

There are many other factors likely to be equally or more predictable of

performance during residency. The authors strongly recommend a move away from using test scores alone in the applicant screening process and toward a more holistic evaluation of the skills, attributes, and behaviors sought in future health care providers. They urge more rigorous study of the characteristics of students that predict success in residency, better assessment tools for competencies beyond those assessed by Step 1 that are relevant to success, and nationally comparable measures from those assessments that are easy to interpret and apply.

**T**he National Board of Medical Examiners and the Federation of State Medical Boards developed the three-step United States Medical Licensing

with an equated numerical score with high reliability (designed to represent equivalent meaning over time) and a pass or fail determination. The passing score

some evidence that the results of licensing examinations may predict future clinical quality and outcomes.<sup>3-7</sup>





## USMLE program announces upcoming policy changes

Posted: February 12, 2020

Today, the Federation of State Medical Boards (FSMB) and the National Board of Medical Examiners® (NBME®), co-sponsors of the United States Medical Licensing Examination® (USMLE®), announced upcoming policy changes to the USMLE program.

- [Changing Step 1 score reporting from a three-digit numeric score to reporting only pass/fail;](#)
- [Reducing the allowable number of exam attempts on each Step or Step Component from six to four;](#) and
- [Requiring all examinees to successfully pass Step 1 as a prerequisite for taking Step 2 Clinical Skills](#)

These new policies will continue to enable the USMLE program to provide high-quality assessments for the primary user of exam results (state medical boards) while also addressing other considerations, such as exam security and unintended consequences of secondary score uses. The secondary uses of Step 1 scores for residency screening, in particular, have been the focus of extensive discussion over the past year at the FSMB and NBME, within the USMLE program, and with multiple stakeholders within the broader medical education and regulatory communities.

"These new policies strengthen the integrity of the USMLE and address concerns about Step 1 scores impacting student well-being and medical education," said Humayun Chaudhry, DO, MACP, President and CEO of the FSMB. "Although the primary purpose of the exam is to assess the knowledge and skills essential to safe patient care, it is important that we improve the transition from undergraduate to graduate medical education."

"The USMLE program governance carefully considered input from multiple sources in coming to these decisions. Recognizing the complexity of the environment and the desire for improvement, continuation of the status quo was not the best way forward," reported Peter Katsufakis, MD, MBA, President and CEO of NBME. "Both program governance and staff believe these changes represent improvements to the USMLE program and create the environment for improved student experiences in their education and their transition to residency."

These policy changes are currently planned to be phased in over the next 11-24 months. For specific information on each policy, consult the links above to the detailed statements accompanying each policy change. A podcast supplementing the information contained in this announcement is below.



# Do we overemphasize standardized examination performance?

94-99% of physicians ultimately pass their board certifying examinations

Considerable evidence correlates MCAT with USMLE Step 1 score, and USMLE Step 1 score with first-time specialty examination performance

First-time passage has not been shown to correlate with stronger clinical performance.

No correlation between high quality practice outcomes for physicians trained in programs that selected trainees with higher standardized medical licensure scores. Using standardized test scores to determine who is the “best” clinician was not supported in this study.

Complication rates for graduates in practice best correlated with the complication rate of the residency program in which they trained. The effect persisted for 17 years post-residency.

Judging medical training programs by subsequent patient outcomes places the evaluation of medical training much closer to its purpose than do evaluations based on admission selectivity, board scores, or rankings by news magazines or leaders in the field.

## ORIGINAL CONTRIBUTION

### Evaluating Obstetrical Residency Programs Using Patient Outcomes

David A. Asch, MD, MBA

Sean Nicholson, PhD

Sindhu Srinivas, MD, MSCE

Jeph Herrin, PhD

Andrew J. Epstein, PhD, MPP

**Context** Patient outcomes have been used to assess the performance of hospitals and physicians; in contrast, residency programs have been compared based on non-clinical measures.

**Objective** To assess whether obstetrics and gynecology residency programs can be evaluated by the quality of care their alumni deliver.

**Design, Setting, and Patients** A retrospective analysis of all Florida and New York obstetrical hospital discharges between 1992 and 2007, representing 4 906 169 deliveries performed by 4124 obstetricians from 107 US residency programs.

**Main Outcome Measures** Nine measures of maternal complications from vaginal and cesarean births reflecting laceration, hemorrhage, and all other complications after vaginal delivery; hemorrhage, infection, and all other complications after cesarean delivery; and composites for vaginal and cesarean deliveries and for all deliveries regardless of mode.

**Results** Obstetricians' residency program was associated with substantial variation in maternal complication rates. Women treated by obstetricians trained in residency programs in the bottom quintile for risk-standardized major maternal complication rates had an adjusted complication rate of 13.6%, approximately one-third higher than the 10.3% adjusted rate for women treated by obstetricians from programs in the top quintile (absolute difference, 3.3%; 95% confidence interval, 2.8%-3.8%). The rankings of residency programs based on each of the 9 measures were similar. Adjustment for medical licensure examination scores did not substantially alter the program ranking.

**Conclusions** Obstetrics and gynecology training programs can be ranked by the maternal complication rates of their graduates' patients. These rankings are stable across individual types of complications and are not associated with residents' licensing examination scores.

JAMA. 2009;302(12):1277-1283

www.jama.com

**M**ANY PHYSICIANS AND NON-physicians likely assume that some residency programs tend to produce better physicians than others—either because those residency programs train physicians better or because those residency programs can recruit more capable trainees. Although plausible, these intuitions have not been empirically tested. This information could be useful in at least 2 different ways.<sup>1</sup> First, identifying which training programs produce better physicians and separating out the effects that are due to the ability to attract better trainees might indicate what makes better programs better. Some of these factors might be exportable to other programs, raising the quality of medical education more broadly. Second, by identifying which training programs produce better physicians, patients could use this information when selecting a physician, much as patients in some circumstances

of those programs. The advantages of using obstetrics to evaluate the connection between training and clinical outcomes, such as hemorrhage, infection, and laceration, occur with sufficient frequency and have enough clinical meaning to patients to

Asch DA, et al. *JAMA*. 2009;302(12):1277–1283. doi:10.1001/jama.2009.1356



# Holistic admission is an equity practice that transcends recruitment

- Reverse engineering approach to find those characteristics that are common to individuals who became exemplar physicians that were recognizable prior to beginning their medical careers
- Evidence that holistic admission is not inferior to current selection methods with respect to harm to patient care would be comforting
- Risk of conflating present circumstances with covid disruption with forays into holistic admission
- Providing what is necessary for each learner to be successful in their program defines equity and forms the basis of the ACGME-required individualized learning plan
- Some learners may need skills development in standardized testing, others in cultural humility, others in manual dexterity, others in executive functioning – as educators we have the responsibility to determine what is necessary and to supply it



# CBME: Promise

CBME is organized around competencies, or predefined abilities, as outcomes of the curriculum.

The CBME paradigm employs redefined concepts of competence and its development.

CBME has the potential to transform contemporary medical education.

## Competency-based medical education: theory to practice

JASON R. FRANK<sup>1</sup>, LINDA S. SNELL<sup>2</sup>, OLLE TEN CATE<sup>3</sup>, ERIC S. HOLMBOE<sup>4</sup>, CAROL CARRACCIO<sup>5</sup>, SUSAN R. SWING<sup>6</sup>, PETER HARRIS<sup>7</sup>, NICHOLAS J. GLASGOW<sup>8</sup>, CRAIG CAMPBELL<sup>9</sup>, DEEPAK DATH<sup>10</sup>, RONALD M. HARDEN<sup>11</sup>, WILLIAM IOBST<sup>12</sup>, DONLIN M. LONG<sup>13</sup>, RANI MUNGROO<sup>14</sup>, DENYSE L. RICHARDSON<sup>15</sup>, JONATHAN SHERBINO<sup>16</sup>, MAN SILVER<sup>17</sup>, SARAH TABER<sup>18</sup>, MARTIN TALBOT<sup>19</sup> & KENNETH A. HARRIS<sup>20</sup>

<sup>1</sup>Royal College of Physicians and Surgeons of Canada and University of Ottawa, Canada, <sup>2</sup>McGill University and Royal College of Physicians and Surgeons of Canada, <sup>3</sup>Center for Research and Development of Education, University Medical Center, Utrecht, the Netherlands, <sup>4</sup>American Board of Internal Medicine, USA, <sup>5</sup>Department of Pediatrics, University of Maryland, Baltimore, USA, <sup>6</sup>Accreditation Council for Graduate Medical Education, USA, <sup>7</sup>University of New South Wales, Australia, <sup>8</sup>Australian National University, Canberra, Australia, <sup>9</sup>Royal College of Physicians and Surgeons of Canada and University of Ottawa, Canada, <sup>10</sup>McMaster University and Royal College of Physicians and Surgeons of Canada, <sup>11</sup>University of Dundee, Scotland, <sup>12</sup>American Board of Internal Medicine, USA, <sup>13</sup>Johns Hopkins University, Baltimore, USA, <sup>14</sup>Canadian Association of Internes and Residents, <sup>15</sup>University of Toronto and Royal College of Physicians and Surgeons of Canada, <sup>16</sup>McMaster University, Hamilton, and Royal College of Physicians and Surgeons of Canada, <sup>17</sup>University of Toronto, <sup>18</sup>Royal College of Physicians and Surgeons of Canada, <sup>19</sup>University of Sheffield, England, <sup>20</sup>Royal College of Physicians and Surgeons of Canada, University of Ottawa and University of Western Ontario, Canada

### Abstract

Although competency-based medical education (CBME) has attracted renewed interest in recent years among educators and policy-makers in the health care professions, there is little agreement on many aspects of this paradigm. We convened a unique partnership – the International CBME Collaborators – to examine conceptual issues and current debates in CBME.

We engaged in a multi-stage group process and held a consensus conference with the aim of reviewing the scholarly literature of competency-based medical education, identifying controversies in need of clarification, proposing definitions and concepts that could be useful to educators across many jurisdictions, and exploring future directions for this approach to preparing health professionals.

In this paper, we describe the evolution of CBME from the outcomes movement in the 20th century to a renewed approach that, focused on accountability and curricular outcomes and organized around competencies, promotes greater learner-centredness and de-emphasizes time-based curricular design. In this paradigm, competence and related terms are redefined to emphasize their multi-dimensional, dynamic, developmental, and contextual nature. CBME therefore has significant implications for the planning of medical curricula and will have an important impact in reshaping the enterprise of medical education.

We elaborate on this emerging CBME approach and its related concepts, and invite medical educators everywhere to enter into further dialogue about the promise and the potential perils of competency-based medical curricula for the 21st century.



Frank, J.R., Snell, L.S., Cate, O.T., Holmboe, E.S., Carraccio, C., Swing, S.R., Harris, P., Glasgow, N.J., Campbell, C., Dath, D. and Harden, R.M., 2010. Competency-based medical education: theory to practice. *Medical teacher*, 32(8), pp.638-645.

# Competency-based education

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How do we know when a physician is ready to care for patients?

What degree of uncertainty do we tolerate as acceptable for the unsupervised care of patients?

What surrogates can we use to assure us that without directly seeing a physician entering the field in the care of patients that the patients seen will receive appropriate care?

When we use surrogates, when we observe, when we evaluate, do we see things objectively or could there be bias built into our observations?





# Dreyfus Model of Skill Acquisition

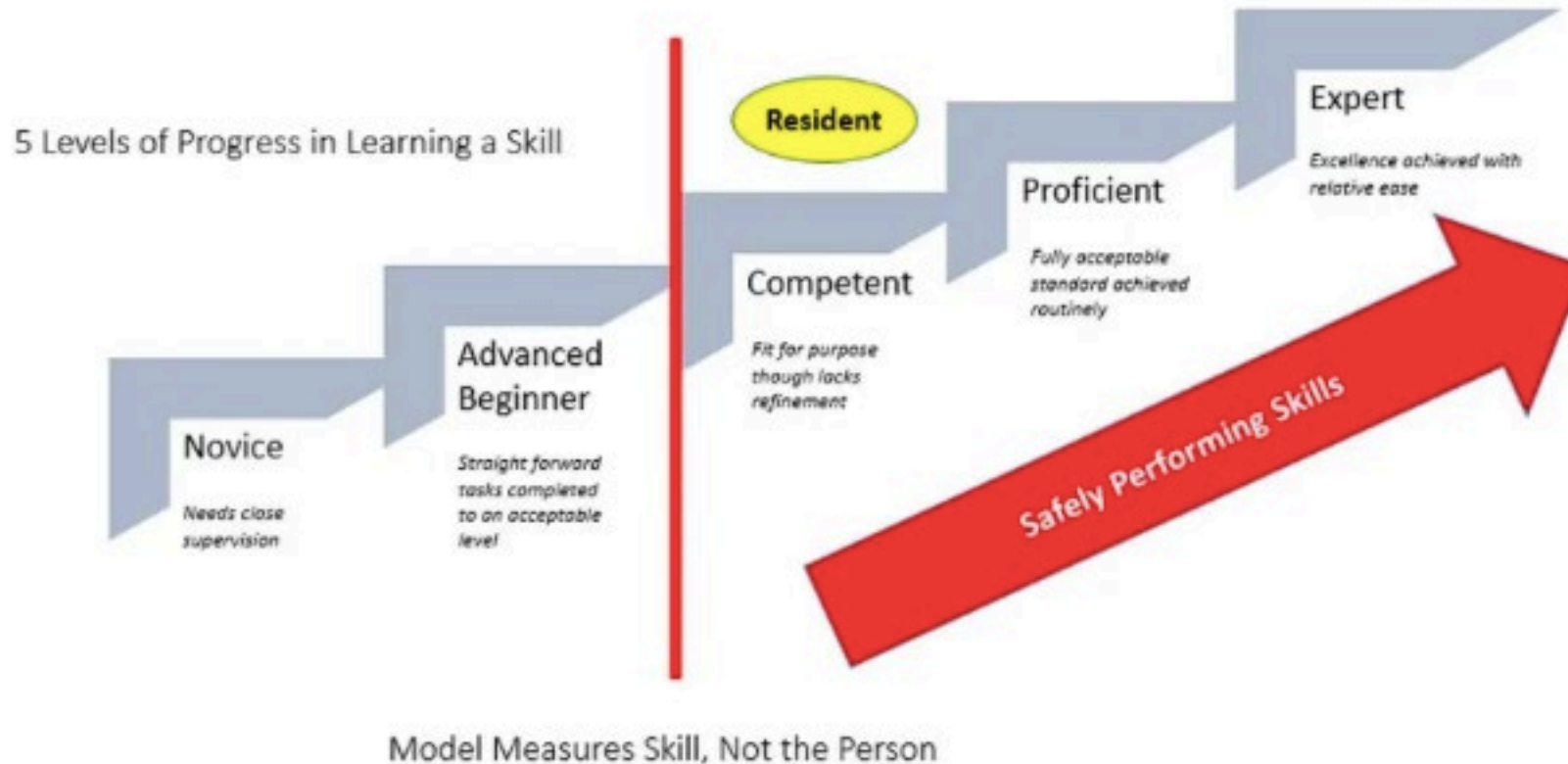


Figure from <https://mimicsimulation.com/7379-2/>

## ***Dreyfus Model of Skills Acquisition***

Dreyfus, S.E., 2004. The five-stage model of adult skill acquisition. *Bulletin of science, technology & society*, 24(3), pp.177-181.



# CBME: Overarching Challenges

Inadequate faculty development in teaching in a competence framework

Inertia to change from the current model

CBME will require that individuals, institutions, and regulatory bodies hold one another accountable for achieving the defined outcomes

What role does bias play?

## Overarching challenges to the implementation of competency-based medical education

Kelly J. Caverzagie<sup>a</sup>, Markku T. Nousiainen<sup>b</sup>, Peter C. Ferguson<sup>b</sup>, Olle ten Cate<sup>c</sup>, Shelley Ross<sup>d</sup>, Kenneth A. Harris<sup>e</sup>, Jamiu Busari<sup>f</sup>, M. Dylan Bould<sup>g</sup>, Jacques Bouchard<sup>h</sup>, William F. Iobst<sup>i,j</sup>, Carol Carraccio<sup>k</sup> and Jason R. Frank<sup>e,l</sup>, on behalf of the ICBME Collaborators

<sup>a</sup>Division of General Internal Medicine, Department of Internal Medicine, University of Nebraska Medical Center, Omaha, NE, USA; <sup>b</sup>Division of Orthopaedic Surgery, Department of Surgery, University of Toronto, Toronto, Canada; <sup>c</sup>Centre for Research and Development of Education, University Medical Center Utrecht, Utrecht, The Netherlands; <sup>d</sup>Department of Family Medicine, University of Alberta, Edmonton, Canada; <sup>e</sup>Royal College of Physicians and Surgeons of Canada, Ottawa, Canada; <sup>f</sup>Maastricht University, Maastricht, The Netherlands; <sup>g</sup>University of Ottawa, Ottawa, Canada; <sup>h</sup>University of Calgary, Calgary, Canada; <sup>i</sup>American Board of Internal Medicine, Philadelphia, PA, USA; <sup>j</sup>The Commonwealth Medical College, Scranton, PA, USA; <sup>k</sup>American Board of Pediatrics, Chapel Hill, NC, USA; <sup>l</sup>Department of Emergency Medicine, University of Ottawa, Ottawa, Canada

### ABSTRACT

Medical education is under increasing pressure to more effectively prepare physicians to meet the needs of patients and populations. With its emphasis on individual, programmatic, and institutional outcomes, competency-based medical education (CBME) has the potential to realign medical education with this societal expectation. Implementing CBME, however, comes with significant challenges. This manuscript describes four overarching challenges that must be confronted by medical educators worldwide in the implementation of CBME: (1) the need to align all regulatory stakeholders in order to facilitate the optimization of training programs and learning environments so that they support competency-based progression; (2) the purposeful integration of efforts to redesign both medical education and the delivery of clinical care; (3) the need to establish expected outcomes for individuals, programs, training institutions, and health care systems so that performance can be measured; and (4) the need to establish a culture of mutual accountability for the achievement of these defined outcomes. In overcoming these challenges, medical educators, leaders, and policy-makers will need to seek collaborative approaches to common problems and to learn from innovators who have already successfully made the transition to CBME.

### Introduction

Medical education is faced with daunting challenges. Despite the investment of significant resources by governments and regulatory bodies worldwide to subsidize medical training, physicians continue to enter the workforce lacking skills in interprofessional teamwork, information management, quality improvement (Crosson et al. 2011), and even basic surgical skills (Mattar et al. 2013). Furthermore, an imbalance of physician specialty choices combined with the geographic maldistribution of practicing

### Practice points

- Regulatory organizations around the world must work together to establish policies that support the development, implementation, and assessment of competency-based medical education programs.
- To prepare to meet the needs of patients and populations in the future, academic health centers and teaching institutions must align and integrate their efforts to improve clinical care and educational programming.



Caverzagie, K.J., Nousiainen, M.T., Ferguson, P.C., Ten Cate, O., Ross, S., Harris, K.A., Busari, J., Bould, M.D., Bouchard, J., Iobst, W.F. and Carraccio, C., 2017. Overarching challenges to the implementation of competency-based medical education. *Medical teacher*, 39(6), pp.588-593.

# Case of Dr. Jones



Black, woman PGY2 (CA1) resident physician starting at an elite urban university-based anesthesia program

She has a deliberate, slower pace of speaking with a decidedly southern drawl

Very thorough in her presentations in a field that values rapid decision-making

Because attendings staff multiple rooms, conversations on performance of trainees is often discussed, “Can I leave this resident alone or does she require 1:1 supervision beyond the tutorial first month?”



# Linguistic discrimination in writing assessment

Writing errors invoke strong emotional reactions from teachers

Results indicate linguistic discrimination against African American “errors” and a leniency for ESL errors in writing assessment.

1-2012

## Linguistic Discrimination in Writing Assessment: How Raters React to African American “Errors,” ESL Errors, and Standard English Errors on a State-Mandated Writing Exam

David M. Johnson

Kennesaw State University, djohnson@kennesaw.edu

Lewis VanBrackle

Kennesaw State University, lvanbrac@kennesaw.edu

### **Linguistic Discrimination in Writing Assessment: How Raters React to African American “Errors,” ESL Errors, and Standard English Errors on a State-Mandated Writing Exam**

#### **Abstract**

Raters of Georgia’s (USA) state-mandated college-level writing exam, which is intended to ensure a minimal university-level writing competency, are trained to grade holistically when assessing these exams. A guiding principle in holistic grading is to not focus exclusively on any one aspect of writing but rather to give equal weight to style, vocabulary, mechanics, content, and development. This study details how raters react to “errors” typical of African American English writers, of ESL writers, and of standard American English writers. Using a log-linear model to generate odds ratios for comparison of essays with these error types, results indicate linguistic discrimination against African American “errors” and a leniency for ESL errors in writing assessment.

Johnson, D. and VanBrackle, L., 2012. Linguistic discrimination in writing assessment: How raters react to African American “errors,” ESL errors, and standard English errors on a state-mandated writing exam. *Assessing Writing*, 17(1), pp.35-54.



# Ottawa learner handoff experiment


Faculty raters divided into three groups: positive, negative or no LH prior to watching 6 simulated learner-patient encounter videos and used mini-CEX tool to rate performance

Learner handoff, a form of indirect prior performance information, led to an assimilation effect on both mean and overall clinical competence in mini-CEX ratings

LH influenced mini-CEX ratings despite raters' awareness of the potential for bias



## How biased are you? The effect of prior performance information on attending physician ratings and implications for learner handover

Tammy Shaw<sup>1,4</sup>  · Timothy J. Wood<sup>2</sup> · Claire Touchie<sup>1,2,3</sup> · Debra Pugh<sup>1,3</sup> · Susan M. Humphrey-Murto<sup>1,2</sup>

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### Abstract

Learner handover (LH), the process of sharing of information about learners between faculty supervisors, allows for longitudinal assessment fundamental in the competency-based education model. However, the potential to bias future assessments has been raised as a concern. The purpose of this study is to determine whether prior performance information such as LH influences the assessment of learners in the clinical context. Between December 2017 and June 2018, forty-two faculty members and final-year residents from the Department of Medicine at the University of Ottawa were assigned to one of three study groups through quasi-randomisation, taking into account gender, speciality and rater experience. In a counter-balanced design, each group received either positive, negative or no LH prior to watching six simulated learner–patient encounter videos. Participants rated each video using the mini-CEX and completed a questionnaire on the raters' general impressions of LH. A significant difference in the mean mini-CEX competency scale scores between the negative ( $M=5.29$ ) and positive ( $M=5.97$ ) LH groups ( $P<.001$ ,  $d=0.81$ ) was noted. Similar findings were found for the single overall clinical competence ratings. In the post-study questionnaire, 22/28 (78%) of participants had correctly deduced the purpose of the study and 14/28 (50%) felt LH did not influence their assessment. LH influenced mini-CEX scores despite raters' awareness of the potential for bias. These results suggest that LH could influence a rater's performance assessment and careful consideration of the potential implications of LH is required.

Shaw, T., Wood, T.J., Touchie, C., Pugh, D. and Humphrey-Murto, S.M., 2021. How biased are you? The effect of prior performance information on attending physician ratings and implications for learner handover. *Advances in Health Sciences Education*, 26(1), pp.199-214.

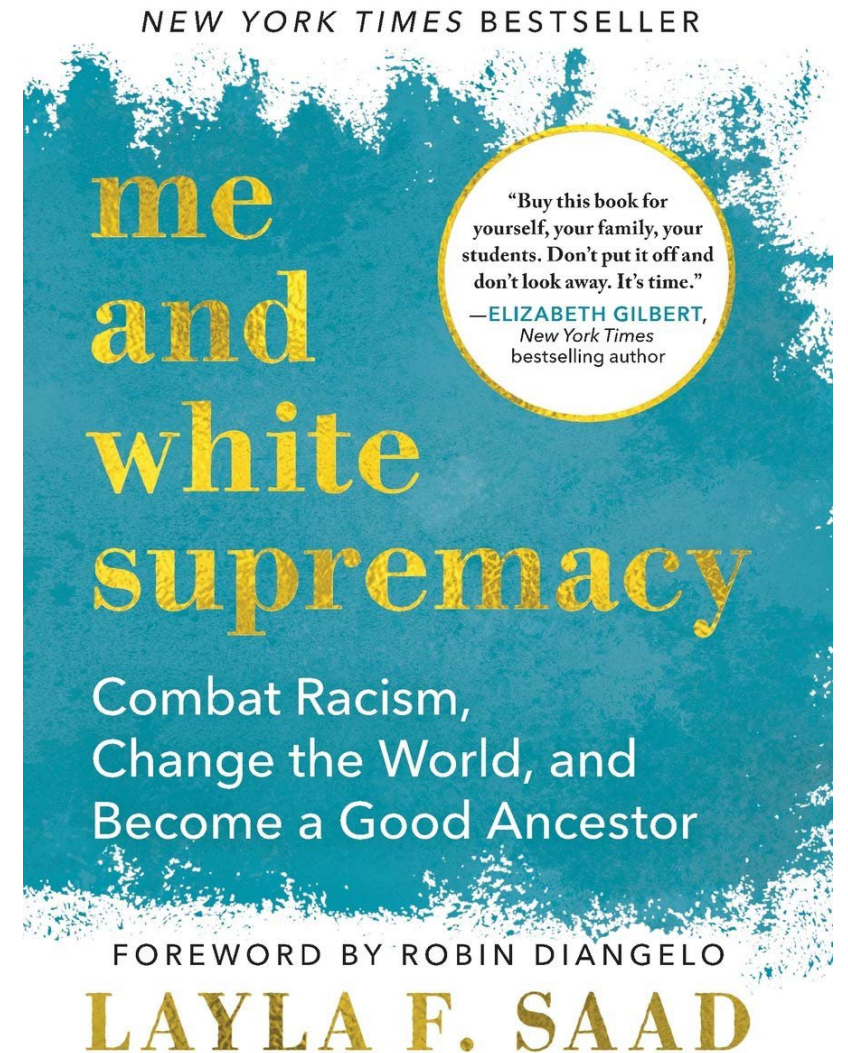


# Can assessment be fair to all?

Education occurs in the context of broader societal conditions

We live in rather insular communities that have grown increasingly polarized and non-interactive so we rely on group think, stereotyping, and media projections to know one another

Racialized ideologies of white supremacy undergird systems, institutions and are held by some individuals without being explicitly stated



Saad, Layla F. *Me and white supremacy: Combat racism, change the world, and become a good ancestor*. Sourcebooks, Inc., 2020.

# Structural Racism – Racism without Racists

- Woven into society's fabric
- Demonstrates how past mistreatment drives current inequities
- Focused much more on outcomes than on bad actors
- Measured by outcomes like disparities
- May appear as subtle, unconscious, unintended structures or normative values that are based upon privileges afforded primarily to the dominant culture – White privilege: Unasked for and unearned
- Remedy requires a change in social structures

Bonilla-Silva, E., 2006. *Racism without racists: Color-blind racism and the persistence of racial inequality in the United States*. Rowman & Littlefield Publishers.

Jones, C.P., 2002. Confronting institutionalized racism. *Phylon* (1960-), pp.7-22.

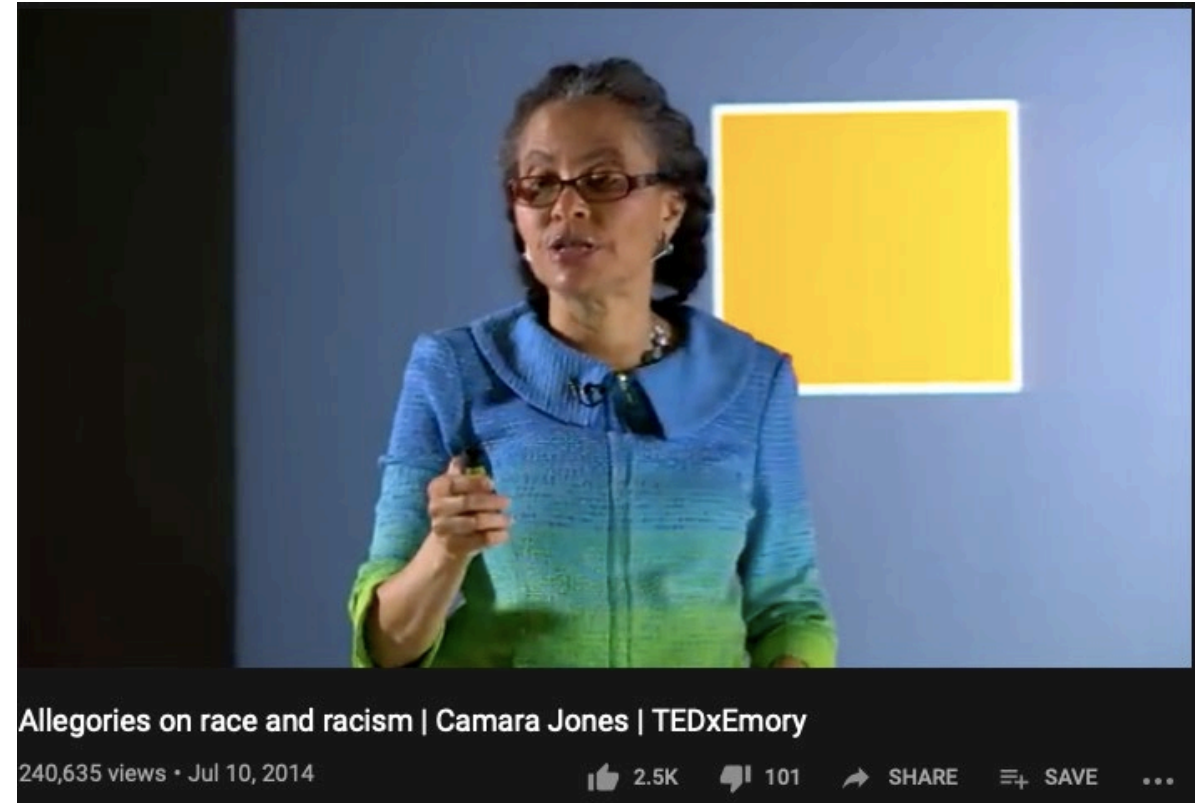


# Naming racism in order to dismantle it

- Institutionalized/Structural
- Personally-mediated
- Internalized

Examine structures, policies, practices, norms, and values to answer the questions:

- How are these inequities being maintained?
- How could race be operating here?



<https://www.youtube.com/watch?v=GNhcY6fTyBM>

The Gardner's Tale





# What value do you place on AOA?

After controlling for USMLE Step 1 scores, research productivity, community service, leadership activity, and Gold Humanism membership, the **study found that black** (adjusted odds ratio [aOR], 0.16; 95%CI, 0.07-0.37) **and Asian** (aOR, 0.52; 95%CI, 0.42-0.65) **medical students remained less likely to be AOA members than white medical students.**

Boatright, D., Ross, D., O'Connor, P., Moore, E. and Nunez-Smith, M., 2017. Racial disparities in medical student membership in the Alpha Omega Alpha Honor Society. *JAMA internal medicine*, 177(5), pp.659-665.



Research

JAMA Internal Medicine | Original Investigation

## Racial Disparities in Medical Student Membership in the Alpha Omega Alpha Honor Society

Down Boatright, MD, MBA; David Ross, MD, PhD; Patrick O'Connor, MD, MPH; Edward Moore, PhD; Marcella Nunez-Smith, MD, MHS

**IMPORTANCE** Previous studies have found racial and ethnic inequities in the receipt of academic awards, such as promotions and National Institutes of Health research funding, among academic medical center faculty. Few data exist about similar racial/ethnic disparities at the level of undergraduate medical education.

**OBJECTIVE** To examine the association between medical student race/ethnicity and induction into the Alpha Omega Alpha (AOA) honor society.

**DESIGN, SETTING, AND PARTICIPANTS** This study analyzed data from the Electronic Residency Application Service, the official service used by US medical students to apply to residency programs. A total of 4655 US medical students from 123 allopathic US medical schools who applied to 12 distinct residency programs associated with one academic health center in the 2014 to 2015 academic year were studied.

**MAIN OUTCOMES AND MEASURES** Membership in the AOA society among black, white, Hispanic, and Asian medical students.

**RESULTS** A total of 4655 unique applications were analyzed in the study (median age, 26 years; 2133 women [45.8%]). Overall, self-reported race/ethnicity in our sample was 2605 (56.0%) white (691 [71.5%] of AOA applicants were white), 276 (5.9%) black (7 [10.7%] AOA), 186 (4.0%) Hispanic (27 [2.8%] AOA), and 1170 (25.1%) Asian (168 [17.4%] AOA). After controlling for US Medical Licensing Examination Step 1 scores, research productivity, community service, leadership activity, and Gold Humanism membership, the study found that black (adjusted odds ratio [aOR], 0.16; 95% CI, 0.07-0.37) and Asian (aOR, 0.52; 95% CI, 0.42-0.65) medical students remained less likely to be AOA members than white medical students. No statistically significant difference was found in AOA membership between white and Hispanic medical students (aOR, 0.79; 99% CI, 0.45-1.37) in the adjusted model.

**CONCLUSIONS AND RELEVANCE** Black and Asian medical students were less likely than their white counterparts to be members of AOA, which may reflect bias in selection. In turn, AOA membership selection may affect future opportunities for minority medical students.

JAMA Intern Med. 2017;177(5):659-665. doi:10.1001/jamainternmed.2016.0623  
Published online March 6, 2017.

[Invited Commentary page 657](#)

[Related articles pages 651 and 722](#)

**Author Affiliations:** Department of Emergency Medicine, Yale School of Medicine, New Haven, Connecticut (Boatright); Fellow, Robert Wood Johnson Clinical Scholars Program, Veterans Affairs Scholar (Boatright); Department of Psychiatry, Yale School of Medicine, New Haven, Connecticut (Ross); Section of General Internal Medicine, Yale School of Medicine, New Haven, Connecticut (O'Connor); Department of Engineering, Central Connecticut State University, New Britain (Moore); Equity Research and Innovation Center, Section of General Internal Medicine, Yale School of Medicine, New Haven, Connecticut (Nunez-Smith).

**Corresponding Author:** Down Boatright, MD, MBA, Department of Emergency Medicine, Yale School of Medicine, PO Box 208088, New Haven, CT 06520-8088 (down.boatright@yale.edu).

# Bias blindspot



Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

ScienceDirect

Journal of Experimental Social Psychology 43 (2007) 565–578

Journal of  
Experimental  
Social Psychology

[www.elsevier.com/locate/jesp](http://www.elsevier.com/locate/jesp)

Valuing thoughts, ignoring behavior: The introspection  
illusion as a source of the bias blind spot <sup>☆</sup>

Emily Pronin <sup>\*</sup>, Matthew B. Kugler

*Department of Psychology, Green Hall, Princeton University, Princeton, NJ 08544, USA*

Received 3 September 2005; revised 16 May 2006

Available online 20 July 2006

Communicated by Fiedler

- Studied groups who were taught about the nature of implicit bias
- The participants could be taught how to recognize the various types of bias described in this presentation
- They could not recognize the same biases when they had engaged in them themselves
- The problem with implicit bias is in the name
- Implicit means that it is functioning a level below cognition, and therefore recognizing that you are engaged in it requires you to access behavior that is inaccessible
- Therefore, you must assume bias is present and instead look at mechanistic changes to limit its effect as opposed to attempting to solve the problem of introspection inaccessibility

as the value that people  
using bias in themselves  
s in themselves, but not  
observers had access to  
if rely on introspections  
a guiding judgment and  
y to bias.

while being blind to it  
a range of cognitive  
see Pronin, Gilovich,  
a related question:  
ot?

mechanism contribut-  
nowledge bias more  
s. This mechanism  
o introspective infor-  
ation, when drawing



Pronin, E., & Kugler, M.B. (2007). Valuing thoughts, ignoring behavior: The introspection illusion as a source of the bias blind spot. *J Experimental Soc. Psychology*, 43, 565-578.

# We must increase diversity

## Common Program Requirement I.C.

The Program, in partnership with its Sponsoring Institution, **must** engage in practices that focus on **mission-driven, ongoing, systematic recruitment and retention** of a diverse workforce of **residents**, fellows (if present), **faculty** members, senior administrative staff members, and other relevant members of its academic community. (Core)

Who is the target of diversity?

Goal is to improve health care and population health, target should reflect that end

Long-term strategy is to increase the overall numbers of UIM in medicine, emphasizing use of resources in a cooperative approach, as opposed to competition for today's few UIM candidates

Opportunity for partnership with community STEM programs and UME

AMCs have resources and can provide mentors, shadowing opportunities, and research experiences

AMCs have also constructed barriers and can remove them to enhance access





# Program data active core orthopedics residents 2021-2022

There are 160 Black residents across all 5 years of orthopedic core programs. 19 programs (9.4%) account for 50% of all Black residents. 40.8% (82) of programs account for all Black residents. 59.2% programs (119) do not have a single Black resident in all 5 years

There are 124 LHS+ residents across all 5 years of orthopedic core programs. 22 programs (10.9%) account for 50% of all LHS+ residents. 39.3% (79) of programs account for all LHS+ residents. 60.7% programs (122) do not have a single LHS+ resident in all 5 years

Black Residents	Programs Reporting	LHS+ Residents	Programs Reporting	Black, Native American or LHS+ Residents	Programs Reporting
14	1	17	1	17	2
13	0	16	0	16	0
12	0	15	0	15	0
11	0	14	0	14	0
10	0	13	0	13	0
9	0	12	0	12	0
8	0	11	0	11	0
7	0	10	0	10	0
6	2	9	0	9	0
5	3	8	0	8	2
4	1	7	0	7	1
3	12	6	0	6	2
2	16	5	0	5	5
1	47	4	0	4	6
0	119	3	3	3	18
	201	2	23	2	31
		1	52	1	53
		0	122	0	81
			201		201



# Program data active core pediatrics residents 2021-2022

There are 414 Black residents across all 3 years of pediatric core programs. 34 programs (16.3%) account for 50% of all Black residents. 72.2% (151) of programs account for all Black residents. 58 programs (27.8%) do not have a single Black resident in all 3 years

There are 446 LHS+ residents across all 3 years of pediatric core programs. 28 programs (13.4%) account for 50% of all LHS+ residents. 71.3% (149) of programs account for all LHS+ residents. 60 programs (28.7%) do not have a single LHS+ resident in all 3 years

Black Residents	Programs Reporting	LHS+ Residents	Programs Reporting	Black, Native American or LHS+ Residents	Programs Reporting
11	1	23	1	24	2
10	1	20	1	20	1
9	1	13	1	18	1
8	3	11	2	14	1
7	5	10	2	13	2
6	9	9	1	12	4
5	7	8	4	11	2
4	13	7	3	10	5
3	19	6	3	9	6
2	35	5	5	8	7
1	57	4	10	7	10
0	58	3	26	6	11
	209	2	35	5	15
		1	55	4	26
		0	60	3	31
			209	2	34
				1	32
				0	19
					209

# We must increase diversity

Assess processes to look for norms that are not aligned with the desired outcome and may lack an evidence base

Consider reducing the importance of such elements in your resident selection process in favor of holistic approaches that align with your mission

Reexamine your mission to see whether it address the greatest needs in healthcare

Assess processes to look for ways in which systemic or institutional racism is operating

Undermine mechanisms through which implicit bias may unfavorably alter operations and/or decision-making

Use strategies employed by the GME community and that are evidenced-based to drive change in every program and institution

Equity Matter Resources


Fundamentals of DEI in GME (Available now)

Resource Collection (Available Q1 2023)




- 20+ learning modules as part of a structured, self-paced educational experience.
- 18 AMA PRA Category 1 Credits™ currently available. Registration to Learn at ACGME requires, no cost
- To access, register through the link below. Please allow up to 24 hours for confirmation.

<https://dl.acgme.org/pages/equity-matters>



### Video Library

The Equity Matters Video Library houses all the individual components of the Equity Matters curriculum and is accessible to anyone in the medical education community. No CME credit is provided for completion of the library's resources. To ensure a safe environment, it is recommended that organizations using these videos show them under the proper guidance of a trained facilitator for large viewings.



### CME Learning Path

The Equity Matters CME Learning Path is a structured, self-paced educational experience designed for individuals that want to move toward meaningful change in addressing issues related to diversity, equity and inclusion while being cognizant of the impact on the audience.

**ELECTIVE**


### Equity Matters - Module 1

Course

2.25 AMA PRA Category 1 Credits™

- Trauma-Responsive Cultures Part 1 (35 mins)
- Trauma-Responsive Cultures Part 2 (45 mins)
- The History of Race in Medicine: From Enlightenment to Flexner (32 mins)
- The New History of the Intersection of Race in Medicine: Fast Forward to 2021 (24 mins)

[Continue](#)





# What happens when you increase diversity in an environment unaccustomed to it?

- Matriculation of residents from underrepresented groups requires social adaptation of the learning environment
- Mitigate cultural underexposure or indifference
  - - Cease stereotypical projections
  - - Reduce of environmental elements that trigger imposter syndrome
  - - Effectively address uncivil behavior
- Diversity education, implicit bias training and mandatory demonstration of competence often engender resistance and resentment in the environment. Work is needed in medical education to determine:
  - Most effective training (who and how best) and settings (where and why)
  - - Persistence of training (when)



# How common are abuse and discrimination?

- 7409 residents (99.3% of the eligible residents) from all 262 surgical residency programs surveyed
- 31.9% reported discrimination based on gender, 16.6% reported racial discrimination, 30.3% reported verbal or physical abuse (or both), and 10.3% reported sexual harassment.
- 65.1% of the women reported gender discrimination and 19.9% reported sexual harassment.
- Patients and families were most frequent sources of gender discrimination (43.6% of residents) and racial discrimination (47.4%), whereas attending surgeons were the most frequent sources of sexual harassment (27.2%) and abuse (51.9%).



Hu and Ellis et al. NEJM (2019) DOI: 10.1056/NEJMsa1903759

## SPECIAL ARTICLE

### Discrimination, Abuse, Harassment, and Burnout in Surgical Residency Training

Yue-Yung Hu, M.D., M.P.H., Ryan J. Ellis, M.D., M.S.C.I.,  
D. Brock Hewitt, M.D., M.P.H., Anthony D. Yang, M.D., Elaine Ooi Cheung, Ph.D.,  
Judith T. Moskowitz, Ph.D., M.P.H., John R. Potts III, M.D., Jo Buyske, M.D.,  
David B. Hoyt, M.D., Thomas R. Nasca, M.D., and Karl Y. Bilimoria, M.D., M.S.C.I.

#### ABSTRACT

##### BACKGROUND

Physicians, particularly trainees and those in surgical subspecialties, are at risk for burnout. Mistreatment (i.e., discrimination, verbal or physical abuse, and sexual harassment) may contribute to burnout and suicidal thoughts.

##### METHODS

A cross-sectional national survey of general surgery residents administered with the 2018 American Board of Surgery In-Training Examination assessed mistreatment, burnout (evaluated with the use of the modified Maslach Burnout Inventory), and suicidal thoughts during the past year. We used multivariable logistic-regression models to assess the association of mistreatment with burnout and suicidal thoughts. The survey asked residents to report their gender.

##### RESULTS

Among 7409 residents (99.3% of the eligible residents) from all 262 surgical residency programs, 31.9% reported discrimination based on their self-identified gender, 16.6% reported racial discrimination, 30.3% reported verbal or physical abuse (or both), and 10.3% reported sexual harassment. Rates of all mistreatment measures were higher among women; 65.1% of the women reported gender discrimination and 19.9% reported sexual harassment. Patients and patients' families were the most frequent sources of gender discrimination (as reported by 43.6% of residents) and racial discrimination (47.4%), whereas attending surgeons were the most frequent sources of sexual harassment (27.2%) and abuse (51.9%). Proportion of residents reporting mistreatment varied considerably among residency programs (e.g., ranging from 0 to 66.7% for verbal abuse). Weekly burnout symptoms were reported by 38.5% of residents, and 4.5% reported having had suicidal thoughts during the past year. Residents

# National Evaluation of Racial/Ethnic Discrimination in US Surgical Residency Programs

- 6956 residents in 301 programs sampled, 1346 (23.7%) reported discrimination (race/ethnicity/religion)
- Discrimination rates were higher in blacks (171 of 242 [70.7%]), Asians (442 of 963 [45.9%]), Latinx (122 of 482 [25.3%]), and other nonwhites (175 of 526 [33.3%]) compared with whites (435 of 3455 [12.6%]).
- For Blacks:
- Different standards of evaluation (92 of 240 [38.3%])
- Denied opportunities (39 of 242 [16.1%])
- Slurs and hurtful comments (60 of 242 [24.8%])
- Mistaken nonphysician 62.4%, someone else 55.8%



TK Yuce et al. April 15, 2020. doi:10.1001/jamasurg.2020.0260

## Letters

### RESEARCH LETTER

#### National Evaluation of Racial/Ethnic Discrimination in US Surgical Residency Programs

Discrimination in medicine has been associated with decreased productivity, as well as increased alcohol use, depression, attrition, and suicidality among physicians.<sup>1,2</sup> In surgical training, discrimination is common<sup>2</sup> but has not been comprehensively evaluated among racial/ethnic minorities. The objectives of this study were to (1) determine the national prevalence and sources of discrimination based on race/ethnicity in US general surgery programs, (2) identify factors associated with discrimination, and (3) assess its association with resident wellness.

**Methods** | Resident physicians training in Accreditation Council for Graduate Medical Education-accredited general surgery programs were administered a survey following the 2019 American Board of Surgery In-Training Examination. Residents were asked about their experiences with various types of discriminatory behavior based on race/ethnicity or religion<sup>3,4</sup> within that academic year. Burnout, thoughts of attrition, and suicidality were assessed with established instruments.<sup>2</sup> The proportion of minority faculty members within each program was obtained from the Association of American Medical Colleges. This study was reviewed by the Northwestern University institutional review board office and was determined to not meet the definition of human-subjects research. As a re-

sult, this study was deemed exempt from full review and informed consent procedures.

Descriptive statistics were calculated. A multivariable regression model was developed to examine resident and program characteristics associated with discrimination. Adjusted analyses were repeated with stratification by sex to evaluate for potential interactions between race and sex. We performed  $\chi^2$  tests to assess the associations of discrimination with burnout, thoughts of attrition, and suicidality. All tests were 2-sided with  $\alpha = .05$ , using Stata version 15.1 (StataCorp). Data were collected in January 2019. The dates that data were analyzed include June 2019 to August 2019.

**Results** | A total of 6956 clinically active residents from 301 programs completed the survey (response rate, 85.6%). Of the 5679 who responded to the relevant questions, 1346 (23.7%) reported experiencing discrimination based on race/ethnicity or religion. Discrimination rates were higher in black respondents (171 of 242 [70.7%]), Asian respondents (442 of 963 [45.9%]), Hispanic respondents (122 of 482 [25.3%]), and other nonwhite respondents (175 of 526 [33.3%]) compared with white respondents (435 of 3455 [12.6%]). The most common discriminatory behavior was being mistaken for another person of the same race, experienced by 135 of 240 black residents (56.3%; 2 individuals did not respond to this question) and 361 of 963 Asian residents (37.6%; 4 individuals did not respond), with nurses and staff as the most common source (413 [43.8%]). Black residents frequently reported being mis-

Table 1. Prevalence and Most Common Sources of Discrimination Based on Race/Ethnicity or Religion\*

Characteristic	Respondents, No. (%)						P value <sup>c</sup>	Most common source of discrimination <sup>d</sup>	
	All (N = 5679) <sup>b</sup>	White (n = 3455)	Black (n = 242)	Hispanic (n = 482)	Asian (n = 963)	Other/prefer not to say (n = 526)		Source	Respondents reporting this type of discrimination, No. (%)
Overall prevalence	1346 (23.7)	435 (12.6)	171 (70.7)	122 (25.3)	442 (45.9)	175 (33.3)	<.001	NA	NA
<b>Discrimination components</b>									
Different standards of evaluation	468 (8.2)	100 (2.9)	92 (38.0)	52 (10.8)	137 (14.2)	86 (16.3)	<.001	Attending physicians	243 (63.0)
Denied opportunities	250 (4.4)	69 (2.0)	39 (16.1)	27 (5.6)	59 (6.1)	55 (10.5)	<.001	Attending physicians	138 (67.3)
Mistaken for a nonphysician	482 (8.5)	51 (1.5)	151 (62.4)	66 (13.7)	150 (15.6)	63 (12.0)	<.001	Patients and their families	327 (73.2)
Slurs and/or hurtful comments	416 (7.3)	116 (3.4)	60 (24.8)	40 (8.3)	129 (13.4)	70 (13.3)	<.001	Patients and their families	126 (35.5)
Socially isolated	208 (3.7)	65 (1.9)	28 (11.6)	26 (5.4)	37 (3.8)	51 (9.7)	<.001	Colleagues	117 (70.1)
Mistaken for another person of the same race	998 (17.6)	300 (8.7)	135 (55.8)	74 (15.4)	361 (37.5)	127 (24.2)	<.001	Nurses/staff	413 (43.8)

# Race and the Learning Environment

- Medical students from racial and ethnic minorities experience more racially-attributable microaggressions than their peers
- **Studies suggest that the higher prevalence of depression symptoms and burnout among this subgroup of students subjected to microaggressions is likely driven by factors within the learning environment rather than individual traits**
- Medical schools need to do more to improve the learning environment for nonwhite students.



Research Report

## A Prognostic Index to Identify the Risk of Developing Depression Symptoms Among U.S. Medical Students Derived From a National, Four-Year Longitudinal Study

Liselotte N. Dyrbye, MD, MHPE, Natalie M. Wittlin, MS, Rachel R. Hardeman, PhD, MPH, Mark Yeazel, MD, MPH, Jeph Herrin, PhD, John F. Dovidio, PhD, Sara E. Burke, PhD, Brooke Cunningham, MD, PhD, Sean M. Phelan, PhD, MPH, Tait D. Shanafelt, MD, and Michelle van Ryn, PhD, MPH

### Abstract

#### Purpose

To determine baseline individual and school-related factors associated with increased risk of developing depression symptoms by year four (Y4) of medical school, and to develop a prognostic index that stratifies risk of developing depression symptoms (Depression-PI) among medical students.

#### Method

The authors analyzed data from 3,743 students (79% of 4,732) attending 49 U.S. medical schools who completed baseline (2010) and Y4 (2014) surveys. Surveys included validated scales measuring depression, stress, coping, and social support. The authors collected demographics and

school characteristics and conducted multivariate analysis to identify baseline factors independently associated with Y4 depression symptoms. They used these factors to create a prognostic index for developing depression. They randomly divided the data into discovery ( $n = 2,455$ ) and replication ( $n = 1,288$ ) datasets and calculated  $c$  statistics ( $c$ ).

#### Results

The authors identified eight independent prognostic factors for experiencing depression symptoms during training within the discovery dataset: age; race; ethnicity; tuition; and baseline depression symptoms, stress, coping behaviors, and social support.

The Depression-PI stratified four risk groups. Compared with the low risk group, those in the intermediate, high, and very high risk groups had an odds ratio of developing depression of, respectively, 1.75, 3.98, and 9.19 ( $c = 0.71$ ). The replication dataset confirmed the risk groups.

#### Conclusions

Demographics; tuition; and baseline depression symptoms, stress, coping behaviors, and social support are independently associated with risk of developing depression during training among U.S. medical students. By stratifying students into four risk groups, the Depression-PI may allow for a tiered primary prevention approach.

*Editor's Note: An Invited Commentary on this article by G.W. Gengoux and L.W. Roberts appears on pages 162–165.*

**M**edical student depression is an important ethical concern for medical

review and meta-analysis estimated the prevalence of depression or depressive symptoms among medical students to be 27.2%, suggesting that depression is 2.2 to 5.2 times more common among medical students than similarly aged individuals in the general U.S. population (11).

allocation. Previous longitudinal studies evaluating depression among U.S. medical students have been single-institution studies and have primarily focused on the first year of medical school.<sup>10–16</sup> Few studies have followed students into postgraduate training and evaluated

Dyrbye, LN et al. Acad Med. 2019 Feb;94(2):217-226

# Burnout impairs job performance

- Ability to focus wanes
- Engagement with work suffers
- Feelings of apathy and hopelessness
- Increased irritability, emotional exhaustion
- Lack of productivity and poor performance



Dyrbye, LN et al. JAMA (2010) 304(11):1173



## Relationship Between Burnout and Professional Conduct and Attitudes Among US Medical Students

Lise Lott N. Dyrbye, MD, MPH  
 E. Stanford Masarik, Jr, MD  
 Anne Eschler, MD  
 William Harper, MD  
 David Bowen, MD, MPH  
 Steven J. Durning, MD  
 Matthew R. Thomas, MD  
 Christine Moutier, MD  
 Denise Satele, BA  
 Jeffrey Sloan, PhD  
 Tait D. Shanahan, MD

**Context:** The relationship between professionalism and distress among medical students is unknown.

**Objective:** To determine the relationship between measures of professionalism and burnout among US medical students.

**Design, Setting, and Participants:** Cross-sectional survey of all medical students attending 7 US medical schools (overall response rate, 2682/4400 [61%]) in the spring of 2009. The survey included the Maslach Burnout Inventory (MBI), the PRIME-MD depression screening instrument, and the SF-8 quality of life (QOL) assessment tool, as well as items exploring students' personal engagement in unprofessional conduct, understanding of appropriate relationships with industry, and attitudes regarding physicians' responsibility to society.

**Main Outcome Measures:** Frequency of self-reported cheating/dishonest behaviors, understanding of appropriate relationships with industry as defined by American Medical Association policy, attitudes about physicians' responsibility to society, and the relationship of these dimensions of professionalism to burnout, symptoms of depression, and QOL.

**Results:** Of the students who responded to all the MBI items, 13.54% of 2566 (52.8%) had burnout. Cheating/dishonest academic behaviors were rare (endorsed by <10%) in comparison to unprofessional conduct related to patients (endorsed by up to 48%). Only 14% (95% CI, 12.5-15.5) of students had opinions on relationships with industry consistent with guidelines for 6 scenarios. Students with burnout were more likely to report engaging in 1 or more unprofessional behaviors than those without burnout (85.0% vs 21.9%; odds ratio [OR], 1.88; 95% confidence interval [CI], 1.59-2.24). Students with burnout were also less likely to report holding altruistic views regarding physicians' responsibility to society. For example, students with burnout were less likely to want to provide care for the medically underserved than those without burnout (79.3% vs 85.0%; OR, 0.68; 95% CI, 0.55-0.85). After multivariable analysis adjusting for personal and professional characteristics, burnout was the only aspect of distress independently associated with reporting 1 or more unprofessional behaviors (OR, 1.76; 95% CI, 1.45-2.18) or holding at least 1 less altruistic view regarding physicians' responsibility to society (OR, 1.65; 95% CI, 1.3-2.01).

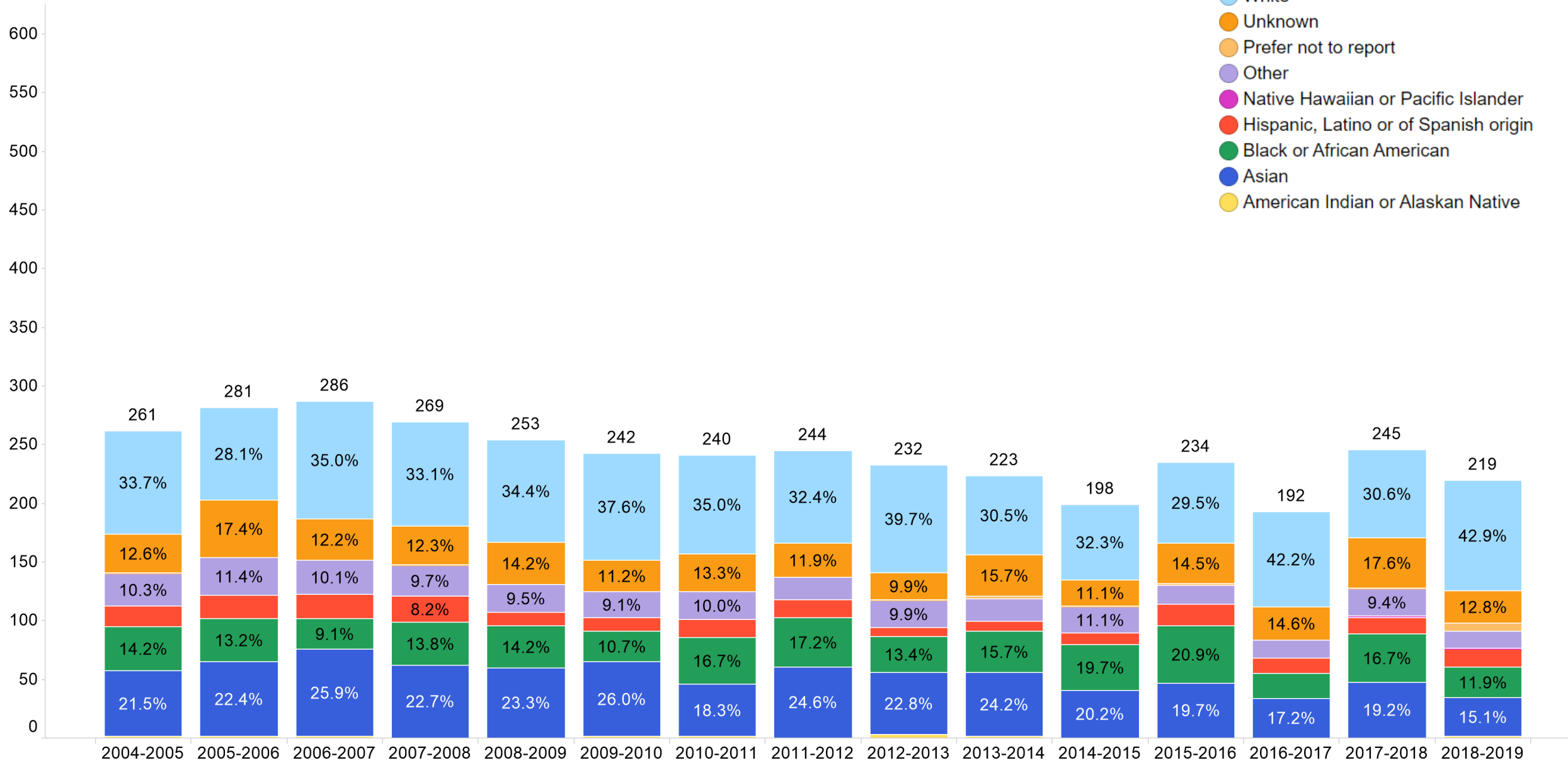
**Conclusion:** Burnout was associated with self-reported unprofessional conduct and less altruistic professional values among medical students at 7 US schools.

JAMA. 2010;304(11):1172-1180. [www.jama.com](http://www.jama.com)

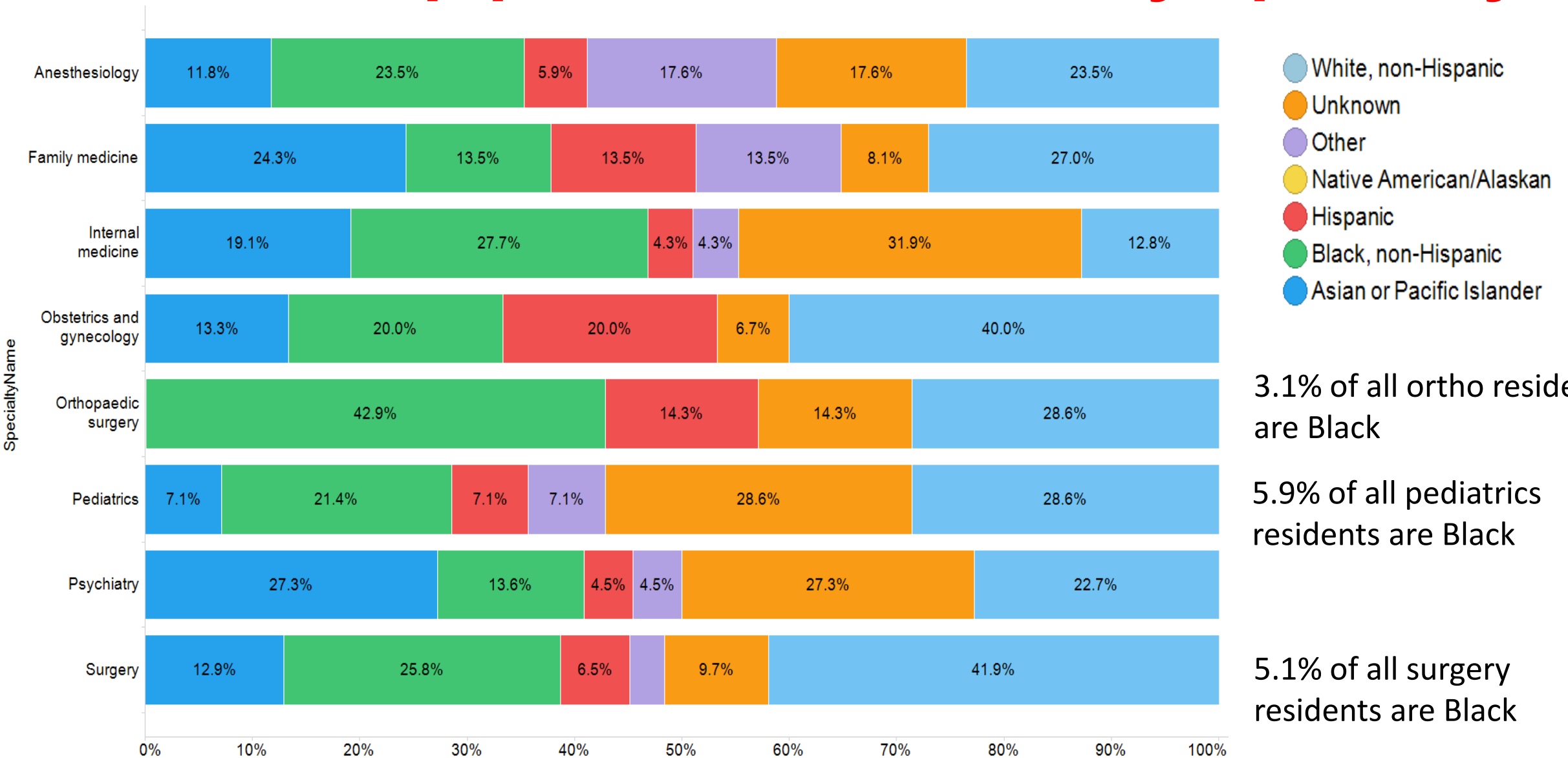
**Author Affiliations:** Mayo Clinic College of Medicine (Dr Dyrbye, Thomas, and Shanahan) and Mayo Clinic Department of Health Services Research (Dr Satele and Dr Sloan); Rochester, Minnesota: University of Minnesota School of Medicine (Dr Bowen); Birmingham, Alabama: University of Alabama at Birmingham School of Medicine (Dr Harper); University of Washington School of Medicine (Dr Eschler); University of Chicago Pritzker School of Medicine (Dr Bowen); Illinois: Dr Harper; University of Minnesota Medical School (Minneapolis) (Dr Bowen); Uniformed Services University of the Health Sciences, Bethesda, Maryland (Dr Durning); and University of California, San Diego (Dr Masarik).

**Corresponding Author:** Lise Lott N. Dyrbye, MD, MPH, Mayo Clinic, 600 Highland Drive, MN 55905 (dyrb@mayo.edu).

# Pipeline Dismissed by Ethnicity (%)



# 2015-2016 pipeline dismissed by specialty



# We must foster inclusivity

## **Common Program Requirement**

**VI.B.6.** Programs, in partnership with their Sponsoring Institutions, must provide a professional, equitable, respectful, and civil environment that is free from discrimination, sexual and other forms of harassment, mistreatment, abuse, or coercion of students, residents, faculty, and staff. (Core)

Recognize that the opposite of inclusion isn't exclusion, it is incomplete

Inclusivity is more than a seat at the table, it is giving voice to everyone at the table and valuing each for what they contribute because of who they are

Instilling a sense of belongingness to all in the learning environment

Eliminating threats to wellbeing and success

Providing resources according to need in an equitable fashion



# ACGME Office of Diversity, Equity, and Inclusion

Contact Us at [diversity@acgme.org](mailto:diversity@acgme.org)

Bill McDade, MD, PhD  
[wmcdade@acgme.org](mailto:wmcdade@acgme.org)  
312.755.7472

Morgan Passiment, MSJ  
[mpassiment@acgme.org](mailto:mpassiment@acgme.org)  
312.755.5012

Montrelle Clayton  
[mclayton@acgme.org](mailto:mclayton@acgme.org)  
312.755.7422

Denzel Avant, MS, MA  
[davant@acgme.org](mailto:davant@acgme.org)  
312.755.7406

Patrick Guthrie  
[pguthrie@acgme.org](mailto:pguthrie@acgme.org)  
312.755.7468

Allison Simpson, MA  
[asimpson@acgme.org](mailto:asimpson@acgme.org)  
312-755-5040

**Thank you**