Strategy for Improving Diversity Within Anesthesiology

Demicha D. Rankin, MD
Assistant Professor-Clinical
Anesthesiology Residency Program Director
The Ohio State University Wexner Medical Center

THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER

Disclosures

I have no disclosures to report.

Objectives

- Objective 1: Review literature that recognizes bias which may contribute to an underrepresentation of minorities and women in leadership positions in Academic Anesthesiology.
- Objective 2: Identify opportunities to reduce individual and institutional bias to improve diversity in gender, race, and ethnicity within Academic Anesthesiology.

Sex Roles (2016) 75:95–109
DOI 10.1007/s11199-016-0586-1

ORIGINAL ARTICLE

Published online: 5 February 2016

But You Don't Look Like A Scientist!: Women Scientists with Feminine Appearance are Deemed Less Likely to be Scientists

Sarah Banchefsky[1] · Jacob Westfall[2] · Bernadette Park[1] · Charles M. Judd[2]

[1] Department of Psychology and Neuroscience, University of Colorado Boulder, Muenzinger D244, Boulder, CO 80309-0345, USA

[2] Department of Psychology, The University of Texas at Austin, SEA 4.208, 108 E. Dean Keeton Stop A8000, Austin, TX 78712-1043, USA

Abstract Two studies examined whether subtle variations in feminine appearance erroneously convey a woman's likelihood of being a scientist. Eighty photos (half women) of tenured/tenure-track science, technology, engineering, and math (STEM) faculty at elite research universities were selected from the Internet. Participants, naïve to the targets' occupations, rated the photos on femininity and likelihood of being a scientist and an early childhood educator. Linear mixed model analysis treated both participants and stimuli as random factors, enabling generalization to other samples of participants and other samples of stimuli. Feminine appearance affected career judgments for female scientists (with increasing femininity decreasing the perceived likelihood of being a scientist and increasing the perceived likelihood of being an early childhood educator), but had no effect on judgments of male scientists. Study 2 replicated these findings with several key procedural modifications: the presentation of the stimuli was manipulated to either be blocked by gender or completely randomized, questions pertaining to the stimuli's appearance were removed, and a third career judgment likelihood rating was added (i.e., early childhood educator). In both studies, results suggest that for women pursuing STEM, feminine appearance may erroneously signal that they are not well suited for science.

Orchestrating Impartiality: The Impact of "Blind" Auditions on Female Musicians

By Claudia Goldin and Cecilia Rouse*

A change in the audition procedures of symphony orchestras—adoption of "blind" auditions with a "screen" to conceal the candidate's identity from the jury—provides a test for sex-biased hiring. Using data from actual auditions, in an individual fixed-effects framework, we find that the screen increases the probability a woman will be advanced and hired. Although some of our estimates have large standard errors and there is one persistent effect in the opposite direction, the weight of the evidence suggests that the blind audition procedure fostered impartiality in hiring and increased the proportion women in symphony orchestras. (JEL J7, J16)

Source: *The American Economic Review*, Vol. 90, No. 4 (Sep., 2000), pp. 715-741
Published by: American Economic Association
Stable URL: http://www.jstor.org/stable/117305

JSTOR

Project Implicit®

"Project Implicit is a non-profit organization and international collaborative network of researchers investigating implicit social cognition - thoughts and feelings outside of conscious awareness and control. Project Implicit is the product of a team of scientists whose research produced new ways of understanding attitudes, stereotypes and other hidden biases that influence perception, judgment, and action."

What is the impact of implicit association in healthcare?

Implicit bias vs explicit bias

Implicit Bias among Physicians and its Prediction of Thrombolysis Decisions for Black and White Patients

Alexander R. Green, MD, MPH[1], Dana R. Carney, PhD[2], Daniel J. Pallin, MD, MPH[3], Long H. Ngo, PhD[4], Kristal L. Raymond, MPH[5], Lisa I. Iezzoni, MD, MSc[6], and Mahzarin R. Banaji, PhD[2]

[1]The Disparities Solutions Center, Massachusetts General Hospital, Harvard Medical School, 50 Staniford Street, Suite 901, Boston, MA 02114, USA; [2]Department of Psychology, Harvard University, Boston, MA, USA; [3]Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA; [4]Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, USA; [5]University of North Carolina-Chapel Hill, Chapel Hill, NC, USA; [6]The Institute for Health Policy, Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA.

ORIGINAL RESEARCH

Do Physicians' Implicit Views of African Americans Affect Clinical Decision Making?

M. Norman Oliver, MD, MA, Kristen M. Wells, MPH, PhD, Jennifer A. Joy-Gaba, PhD, Carlee Beth Hawkins, MA, and Brian A. Nosek, PhD

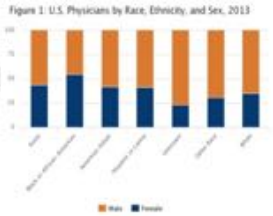
Background: Total knee replacement (TKR) is a cost-effective treatment option for severe osteoarthritis (OA). While prevalence of OA is higher among blacks than whites, TKR rates are lower among blacks. Physicians' implicit preferences might explain racial differences in TKR recommendation. The objective of this study was to evaluate whether the magnitude of implicit racial bias predicts physician recommendation of TKR for black and white patients with OA and to assess the effectiveness of a web-based instrument as an intervention to decrease the effect of implicit racial bias on physician recommendation of TKR.

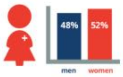
Conclusions: **Physicians possessed explicit and implicit racial biases, but those biases did not predict treatment recommendations. Clinicians' biases about the medical cooperativeness of blacks versus whites, however, may have influenced treatment decisions. (J Am Board Fam Med 2014;27:177–188.)**

AAMC data

AAMC Physician

Figure 1: U.S. Physicians by Race, Ethnicity, and Sex, 2013





Among all younger non-white physicians, women make up a greater percentage of the workforce.

Blacks and African-Americans comprise only 4 percent of the physician workforce.

Race and Ethnicity	Women	Men
Asian (n=119,355)	52006	67349
Black or African-American (n=40,499)	22146	18353
American Indians or Alaska Native (n=3,475)	1455	2020
Hispanic or Latino (n=43,685)	17917	25768
Unknown (n=281,346)	65096	216250
Other Race (n=3,861)	1180	2681
White (=464,302)	161402	302900

Race and Ethnicity	% of Women	% of Men
Asian (n=119,355)	43.60%	56.40%
Black or African-American (n=40,499)	54.70%	45.30%
American Indians or Alaska Native (n=3,475)	41.90%	58.10%
Hispanic or Latino (n=43,685)	41.00%	59.00%
Unknown (n=281,346)	23.10%	76.90%
Other Race (n=3,861)	30.60%	69.40%
White (=464,302)	34.80%	65.20%

Note: These data exclude missing sex and inactive physicians.

Source: AAMC Data Warehouse: Minority Physician Database, AMA Masterfile, and other AAMC data sources, as of 1/22/2014.http://aamcdiversityfactsandfigures.org/section-ii-current-status-of-us-physician-workforce/

Figure 10: U.S. Physicians by Graduation Year, Race, Ethnicity, and Sex, 1980–2012

Source: AAMC Data Warehouse: Minority Physician Database, AMA Masterfile, and other AAMC data sources, as of 1/22/2014.

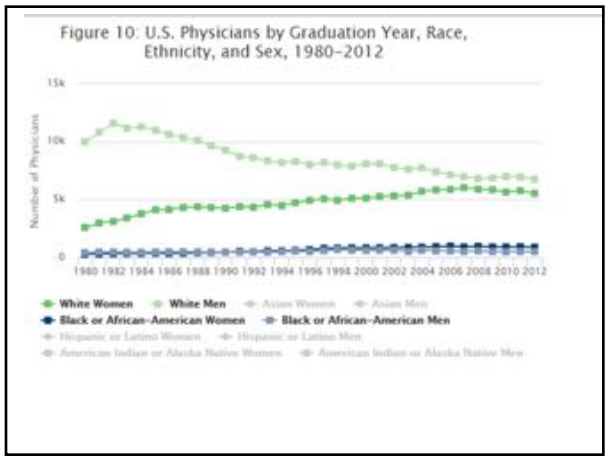


Figure 10: U.S. Physicians by Graduation Year, Race, Ethnicity, and Sex, 1980-2012
Number of Physicians
15k
10k
5k
0
1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012
White Women
White Men
Asian Women
Asian Men
Black or African-American Women
Black or African-American Men
Hispanic or Latino Women
Hispanic or Latino Men
American Indian or Alaska Native Women
American Indian or Alaska Native Men

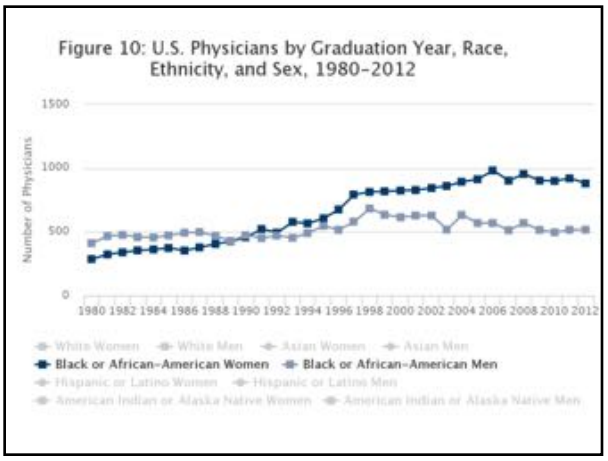
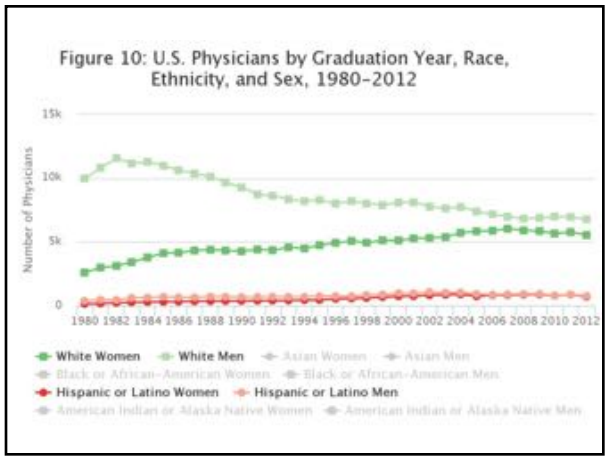


Figure 10: U.S. Physicians by Graduation Year, Race, Ethnicity, and Sex, 1980-2012
Number of Physicians
1500
1000
500
0
1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012
White Women
White Men
Asian Women
Asian Men
Black or African-American Women
Black or African-American Men
Hispanic or Latino Women
Hispanic or Latino Men
American Indian or Alaska Native Women
American Indian or Alaska Native Men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Number of Physicians
15k
10k
5k
0
1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012
White Women
White Men
Asian Women
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Black or African-American Men
Hispanic or Latino Women
Hispanic or Latino Men
American Indian or Alaska Native Women
American Indian or Alaska Native Men

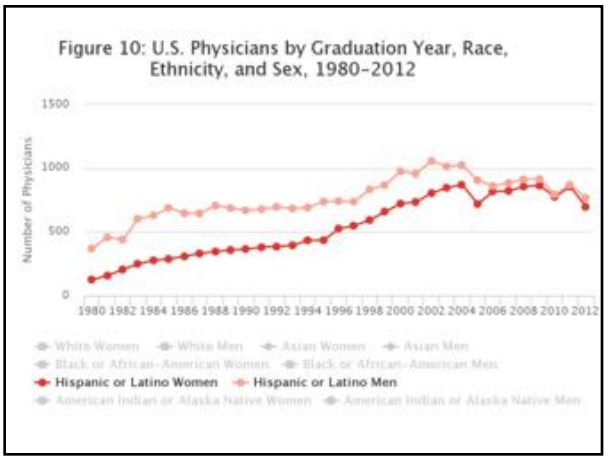


Figure 10: U.S. Physicians by Graduation Year, Race, Ethnicity, and Sex, 1980-2012
Number of Physicians
1500
1000
500
0
1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012
White Women
White Men
Asian Women
Asian Men
Black or African-American Women
Black or African-American Men
Hispanic or Latino Women
Hispanic or Latino Men
American Indian or Alaska Native Women
American Indian or Alaska Native Men

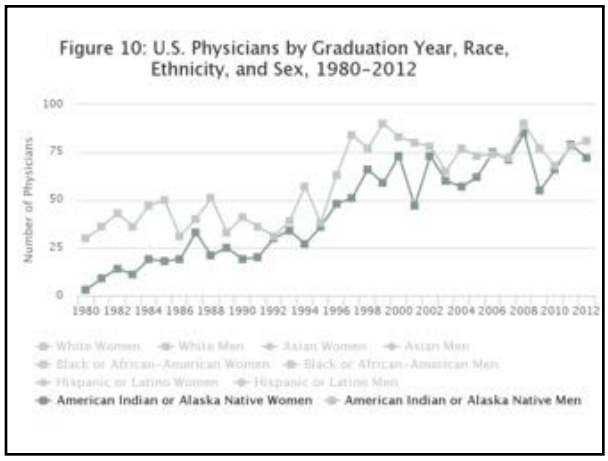
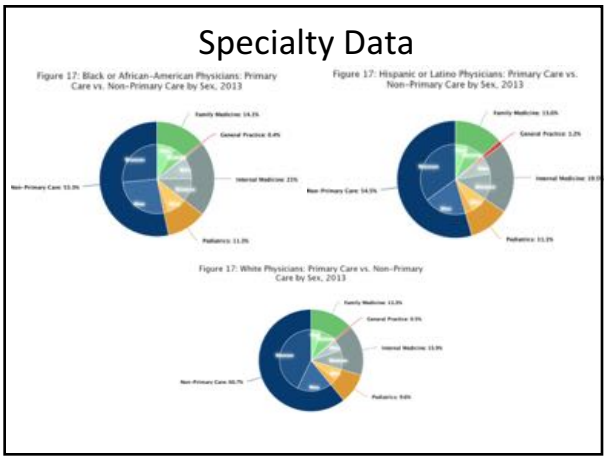
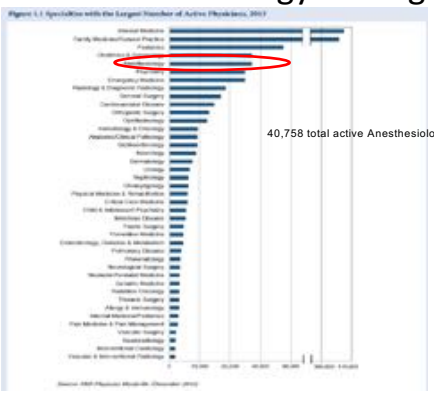


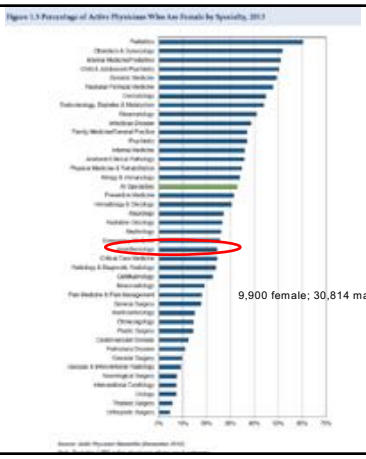
Figure 10: U.S. Physicians by Graduation Year, Race, Ethnicity, and Sex, 1980-2012
Number of Physicians
100
75
50
25
0
1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012
White Women
White Men
Asian Women
Asian Men
Black or African-American Women
Black or African-American Men
Hispanic or Latino Women
Hispanic or Latino Men
American Indian or Alaska Native Women
American Indian or Alaska Native Men


Specialty Data
Figure 17: Black or African-American Physicians: Primary Care vs. Non-Primary Care by Sex, 2013
Figure 17: Hispanic or Latino Physicians: Primary Care vs. Non-Primary Care by Sex, 2013
Figure 17: White Physicians: Primary Care vs. Non-Primary Care by Sex, 2013

Anesthesiology demographics



40,758 total active Anesthesiologists (2013)



9,900 female; 30,814 male Anesthesiologists (2013)

ORIGINAL COMMUNICATION

The Association Among Specialty, Race, Ethnicity, and Practice Location Among California Physicians in Diverse Specialties

Kara Odom Walker, MD, MPH; Gerardo Moreno, MD, MSHS; Kevin Grumbach, MD

Table 2. Percent of Racial and Ethnic Groups by Specialty Practicing in Designated Service Areas in California[a]

Characteristic	Practice Location Shortage Designation	
	Medically Underserved Area, %	Health Professional Shortage Area, %
Facility-based specialties[c]		
White	15.1 (13.8-16.3)	11.1 (10.0-12.2)
African American	19.8 (12.7-27.0)	16.5 (9.9-23.2)
Latino	18.4 (12.4-24.4)	16.0 (10.3-21.6)
Asian	17.7 (15.6-19.8)	11.9 (10.1-13.7)
Pacific Islander	22.4 (15.1-29.7)	17.6 (10.9-24.3)
Other	14.4 (9.1-19.6)	13.8 (8.7-18.9)
P value	.06	.04

[a] *P* values assessed by χ^2 tests.
[b] Primary care = family medicine, internal medicine, and pediatrics.
[c] Facility-based = anesthesiology, emergency medicine, and radiology.

Journal of Vascular Surgery®

April Supplement 2010

Minorities in academic medicine: Review of the literature

Marc A. Nivet, Ed.D., *New York, NY*

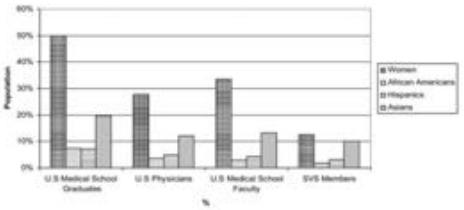


Fig. Proportion of women and minorities in medicine.

Physician path to leadership roles

Minorities struggle to advance in academic medicine: A 12-y review of diversity at the highest levels of America's teaching institutions

Peter T. Yu, MD,[a,*] Pouria V. Parsa, MD,[b] Omar Hassanein, MD,[a] Selwyn O. Rogers, MD, MPH,[b] and David C. Chang, PhD, MPH, MBA[a]

[a]Department of Surgery, University of California, San Diego, San Diego, CA, USA
[b]Department of Surgery, Harvard Medical School, Boston, Massachusetts

ORIGINAL CONTRIBUTION

JAMA The Journal of the American Medical Association

Racial and Ethnic Disparities in Faculty Promotion in Academic Medicine

Di Fang, PhD
Ernest Moy, MD, MPH
Lois Colburn, MA
Jeanne Hurley

JOURNAL OF WOMEN'S HEALTH
Volume 17, Number 8, 2008
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Model of Excellence in Leadership Development

Fixing the System, Not the Women: An Innovative Approach to Faculty Advancement

Abstract

Women in academic medicine are approaching parity without power. Although the number of women choosing careers in medicine has grown substantially over the last 35 years, there has not been a commensurate increase in the percentage of women in senior leadership positions. To redress this situation at the University of Illinois College of Medicine (UICM), the Faculty Academic Advancement Committee (FAAC) was established in January 2003. FAAC's long-term goals are to create an institution whose faculty, department leaders, and deans reflect the gender and ethnic profile of the college's student body and to enable excellence in research, teaching, and patient care while promoting work/life balance. Commissioned as a Dean's Committee, FAAC brings together a diverse group of faculty and academic professionals from inside and outside the college to learn, reflect, and act. FAAC has committed to increasing the percentage of tenured women faculty and advancing women into leadership positions by carrying out an ambitious evidence-based institutional transformation effort. FAAC's initiatives—data gathering, constituency building, department transformation, policy reform, and advocacy—have helped to create an enabling environment for change at UICM. This case study outlines the history, conceptual approach, structure, initiatives, and initial outcomes of FAAC's efforts.

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Resident and Program Director Gender Distribution by Specialty

Timothy R. Long, M.D., Beth A. Elliott, M.D., Mary Ellen Warner, M.D., Michael J. Brown, M.D., and Steven H. Rose, M.D.

Results: Specialties with higher percentages of female PDs had a higher percentage of female residents enrolled ($r = 0.83$, $p = 0.005$). The number of female PDs appointed from July 1, 2006, through June 30, 2010, was greater than the number appointed before July 1, 2006, in emergency medicine ($p < 0.001$), family medicine ($p = 0.02$), and for all PDs ($p = 0.005$). Female PDs were fewer than expected based on the gender distribution of medical school faculty in 7 of the 10 specialties.

Conclusions: Women remain underrepresented in PD appointments relative to the proportion of female medical school faculty and female residents. Mechanisms to address gender-based barriers to advancement should be considered.

Table 2.2 Number and Percentage of ACGME Residents/Fellows by Sex and Specialty, 2013

Specialty	Total Residents and Fellows	Male		Female	
		Number	Percent	Number	Percent
All Specialties	116,675	62,925	53.9	53,750	46.1
Allergy & Immunology	305	104	34.1	201	65.9
Anatomic/Clinical Pathology	2,289	1,052	46.0	1,237	54.0
Anesthesiology	5,630	3,603	63.9	2,036	36.1
Cardiovascular Disease	2,596	2,037	78.5	559	21.5
Child & Adolescent Psychiatry	907	353	38.9	554	61.1
Critical Care Medicine	1,848	1,237	66.9	611	33.1
Dermatology	1,190	427	35.9	763	64.1
Emergency Medicine	5,599	3,502	62.5	2,097	37.5

AAMC

Moving Forward

Implicit Racial Bias in Medical School Admissions

Quinn Capers IV, MD, Daniel Clinchot, MD, Leon McDougle, MD, and Anthony G. Greenwald, PhD

Abstract

Problem
Implicit white race preference has been associated with discrimination in the education, criminal justice, and health care systems and underrepresentation of African Americans into the medical profession, where they and other minorities remain underrepresented. Little is known about implicit racial bias in medical school admissions committees.

Approach
To measure implicit racial bias, all 140 members of the Ohio State University College of Medicine (OSUCOM) admissions committee took the Black-white implicit association test (IAT) prior to the 2012–2013 cycle. Results were collated by gender and student versus faculty status. To ensure that committee members took the IAT on the admissions process, members took a survey at the end of the cycle, which 100 (71%) completed.

Outcomes
All groups (men, women, students, faculty) displayed significant levels of implicit white preference; men ($d = 0.693$) and faculty ($d = 0.820$) had the largest bias measures ($P < .001$). Most survey respondents (61%) thought the IAT might be helpful in reducing bias; 48% were conscious of their individual results when interviewing candidates in the next cycle, and 21% reported knowledge of their IAT results influenced their admissions decisions in the subsequent cycle. The class that matriculated following the IAT exercise was the most diverse in OSUCOM's history at that time.

Next Steps
Future directions include preceding and following the IAT with more robust reflection and education on unconscious bias. The authors join others in calling for an examination of bias at all levels of academic medicine.

Research

Original Investigation

Minority Faculty Development Programs and Underrepresented Minority Faculty Representation at US Medical Schools

James P. Garvin, MD, MPH; Emem Adonga, BA; Elorm Asikame, BS; Margo Brooks Carthon, PhD

Mentoring Programs for Underrepresented Minority Faculty in Academic Medical Centers: A Systematic Review of the Literature

Published in final edited form as:
Acad Med. 2011 October ; 86(10): 1221–1231. doi:10.1097/ACM.0b013e31823ab044.

Faculty Diversity Programs in U.S. Medical Schools and Characteristics Associated with Higher Faculty Diversity

Kathleen Raquel Page, MD[assistant professor]
Department of Medicine, the Johns Hopkins University School of Medicine, Baltimore, Maryland

Laura Castillo-Page, PhD[senior director], and
Diversity Policy and Programs, Association of American Medical Colleges, Washington, D.C.

Scott M. Wright, MD[professor]
Department of Medicine, the Johns Hopkins University School of Medicine, Baltimore, Maryland

Action Plan

Individual level

- Acknowledge and address stereotypes, bias, and privilege
  - Personal reflection and consultation with other physicians
- Consider taking the Implicit Association Test (IAT)
  - https://implicit.harvard.edu/implicit/takeatest.html
- Conscious effort to negate stereotypes; visualize positive images
  - Engage in immersion experiences to facilitate development of more accurate perceptions of marginalized groups

Plan

Institutional level

- Make it a priority: clear goals, held accountable, integrated into evaluation criteria
- Workshops, faculty development
  - Begin with leadership
  - Make education ongoing
- Holistic reviews of faculty candidates
- Structured interviews
  - Exclude discussion or evaluation of criteria that is not related to the position
- Commit to predetermined credentials; gender neutral titles
- Decide whom to include not who to exclude

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Thank you
Questions, comments?