Departmental Anti-Racism & Equity Initiative – DARE: Infusing Equity into Medical Education

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Disclosure

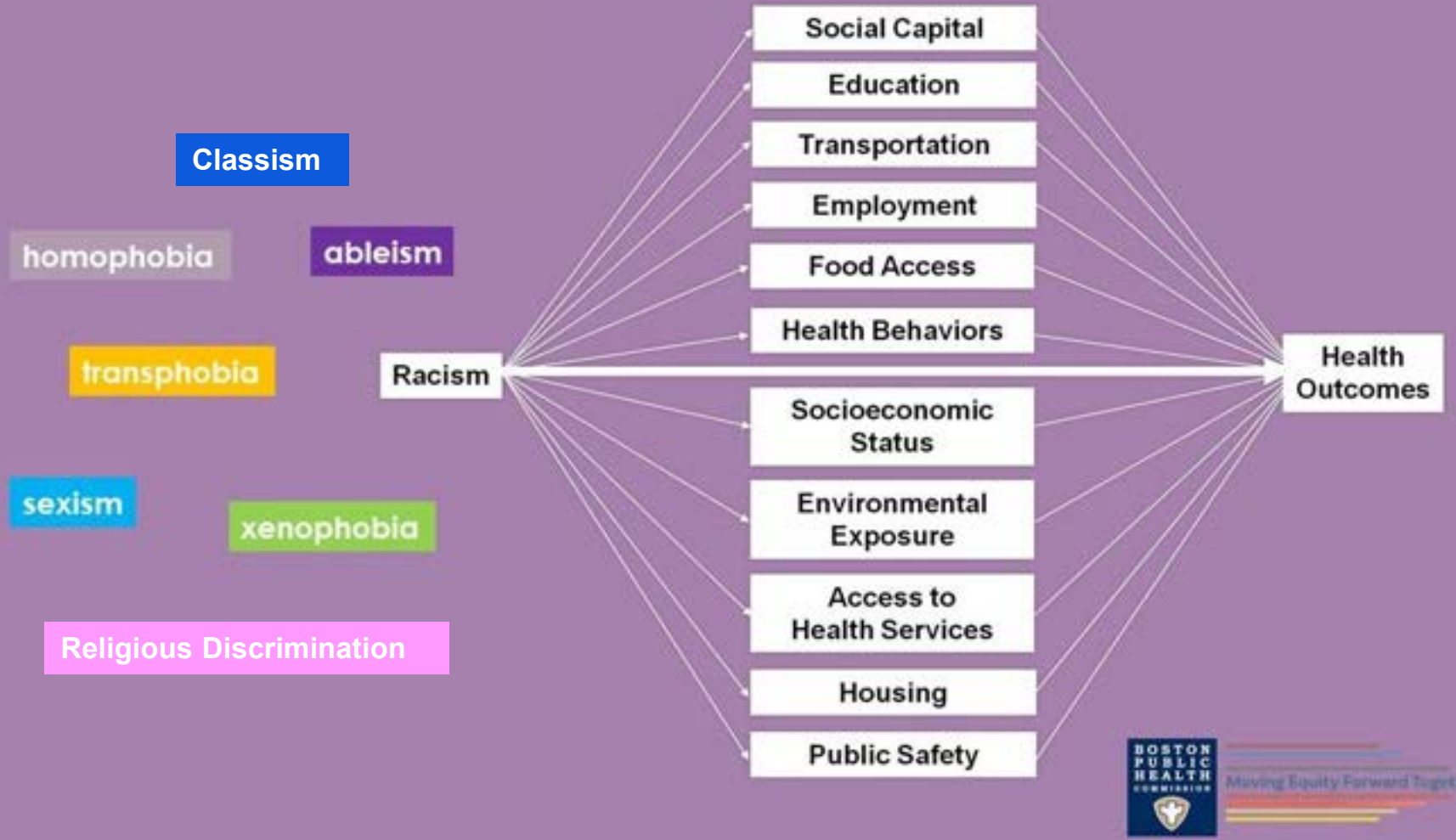
I have no financial disclosures

Objectives

Upon completion of this activity, participants will be able to...

- To define race and racism
- Recognize manifestations of racism in medical education
- Implement strategies to infuse anti-racism and equity into medical education

Background


Classism
homophobia
ableism
transphobia
Racism
sexism
xenophobia
Religious Discrimination
Social Capital
Education
Transportation
Employment
Food Access
Health Behaviors
Socioeconomic Status
Environmental Exposure
Access to Health Services
Housing
Public Safety
Health Outcomes
BOSTON PUBLIC HEALTH COMMISSION
Moving Equity Forward Together

Definitions

“race is the child of racism, not the father”

Ta-Nehisi Coates, Between the World and Me

IMPERIAL FEDERATION: MAP OF THE WORLD SHOWING THE EXTENT OF THE BRITISH EMPIRE IN 1886.

Race

The history of race

- 1500s Concept of race is introduced
- 1700s Climate theory vs “curse”
- 1800s Polygenesis
- 1900s Eugenics movement

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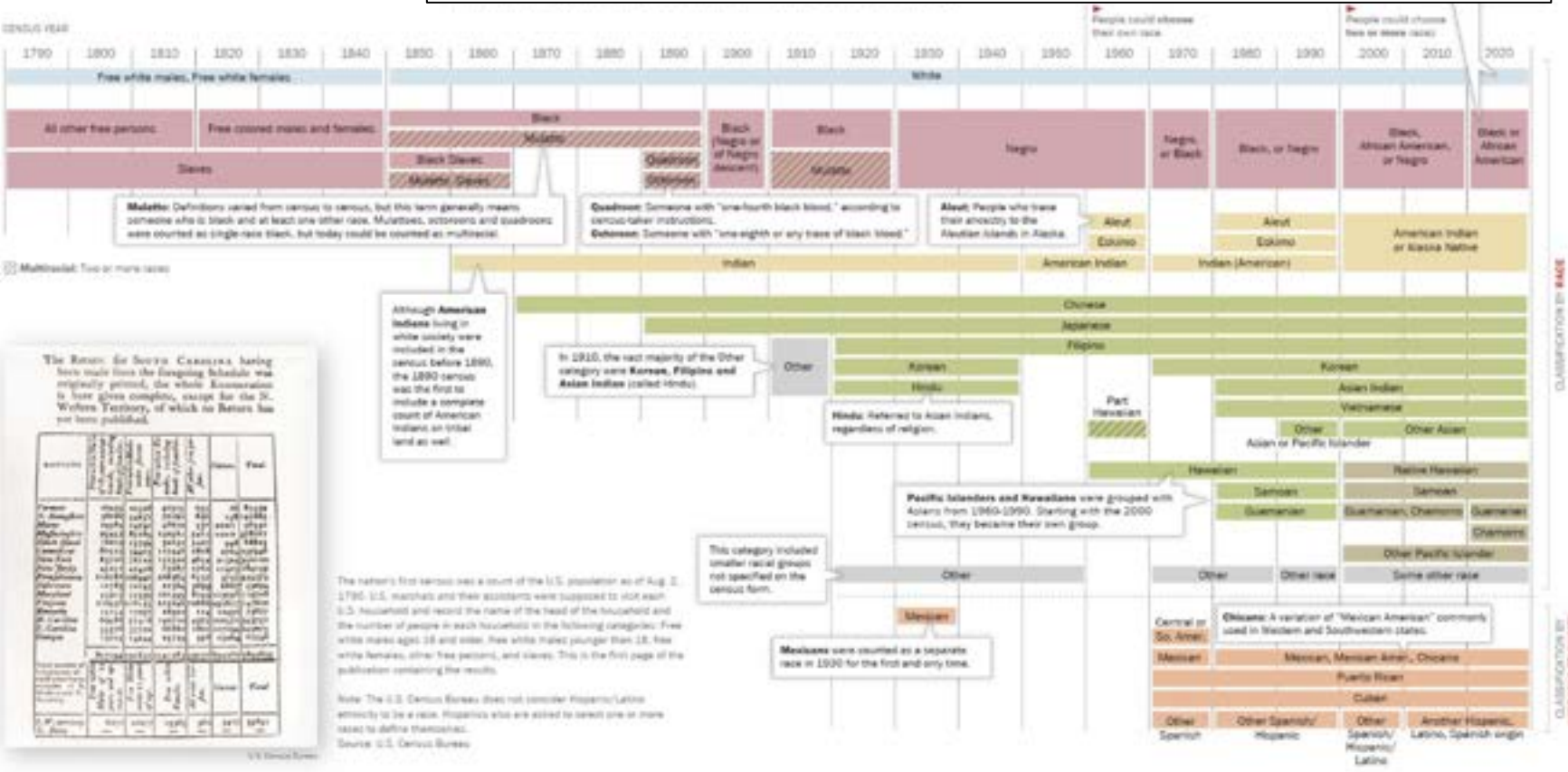
20th & 21st century biologic, anthropologic and population genetic science demonstrates that humans do not have biological races

Race is a social category

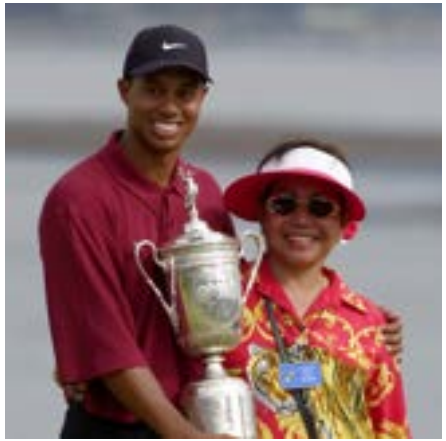
1. Race is a created social-political construct based on a person's skin color and other characteristics.
2. Race-based designations change over time and place.
3. Race is not based on genetics or biology.

What Census Calls Us
A Historical Timeline

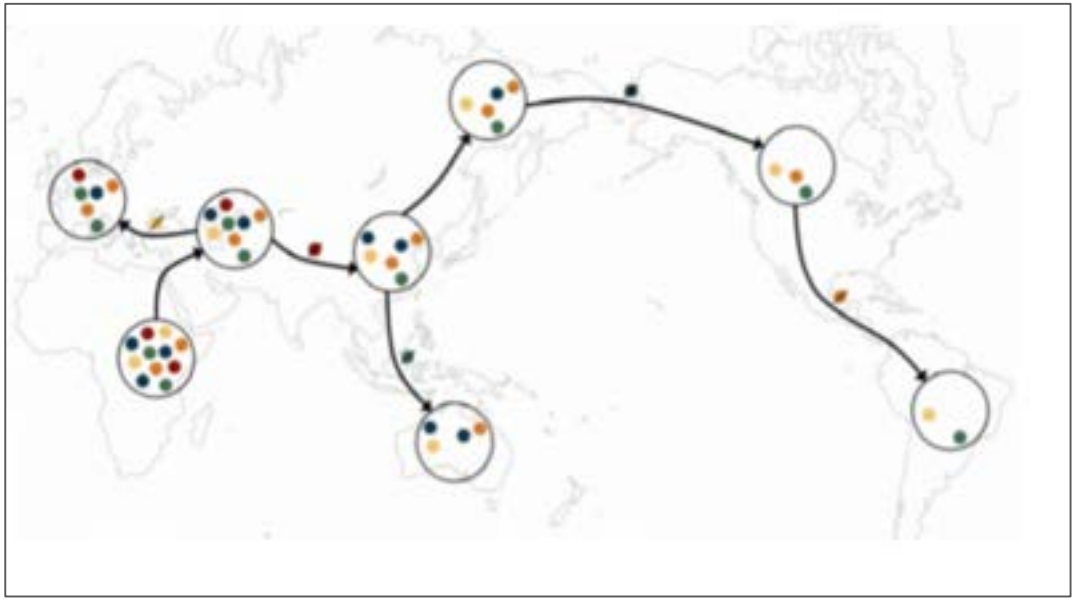
Definition of race changes over space and time

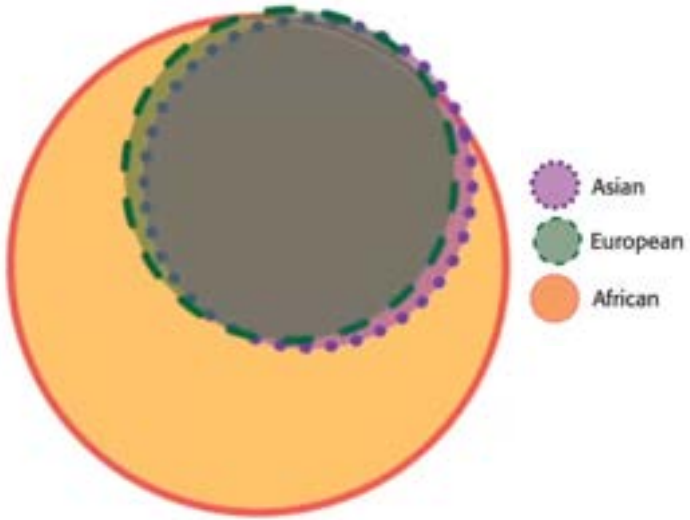


Race is not based on genetics or biology



There is greater genetic diversity *within* a single racial group than *between* them





Yu et al. Larher Genetics, 2002.

Racism

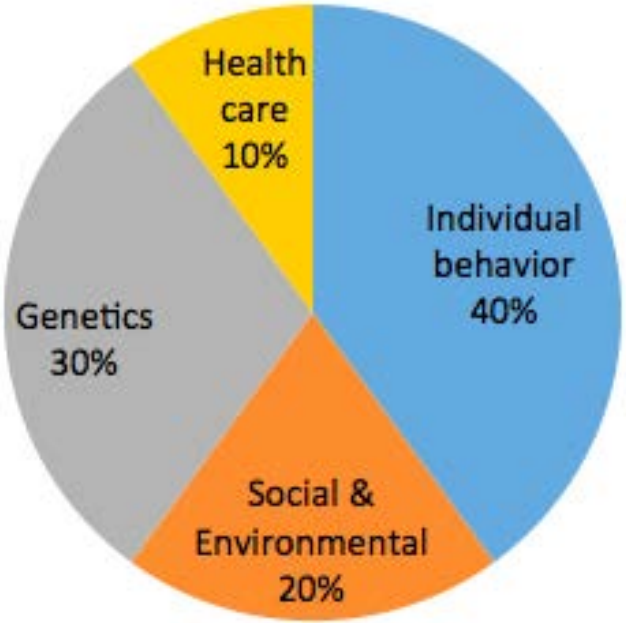
Racism is a system of structuring opportunities and assigning value based on someone's race. Racism unfairly disadvantages some individuals and communities, and unfairly advantages others.

Levels of Racism

- Institutionalized/Structural
- Personally-mediated
- Internalized

Jones, C. AJPH, 2008.

The major risk factors of M&M in our society are social in nature



Impact of Different Factors on Risk of Premature Death

Impact of Different Factors on Risk of Premature Death. Schroeder, SA (2007). We Can Do Better – Improving the Health of the American People. NEJM. 357:1221-8.

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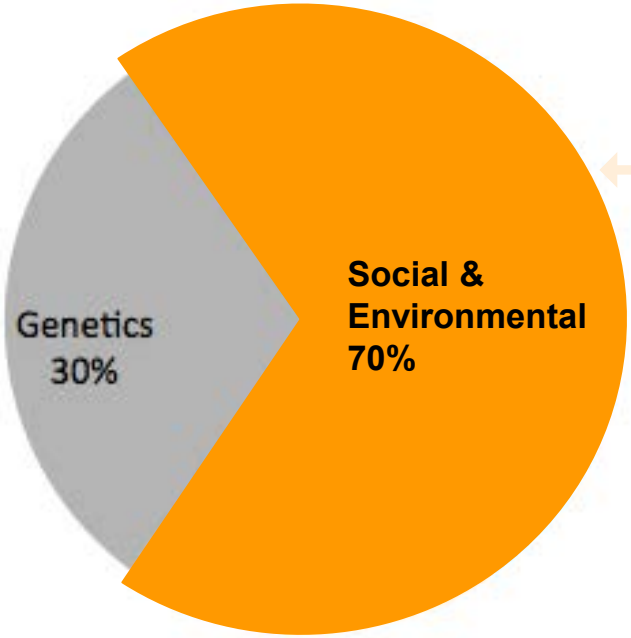

Race/Racism
Sexism
Transphobia
Homophobia
Classism
Agism
Ablism
Neurodiverse discrimination
Xenophobia
Relgious discrimination
Language discrimination
…

Impact of Different Factors on Risk of Premature Death

Impact of Different Factors on Risk of Premature Death. Schroeder, SA (2007). We Can Do Better – Improving the Health of the American People. NEJM. 357:1221-8.

How does discrimination manifest in medical education?

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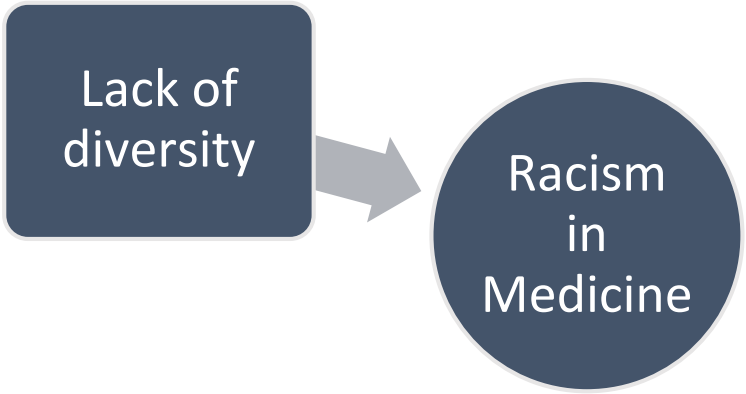

Lack of diverse representation in cases

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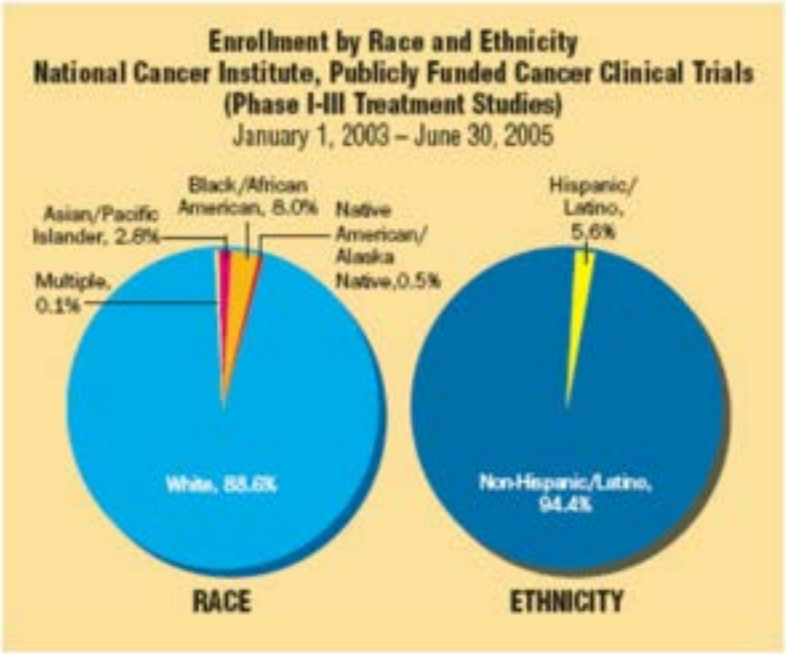
Perspective

How Medical Education Is Missing the Bull's-eye

LaShyra Nolen, B.S.

- The Coalition of Cancer Cooperative Groups evaluated accrual to NCI publicly funded treatment trials from January 2003 through June 2005. The data presented in the figures below show accrual rates by racial and ethnic status:



Source: Baseline Study of Patient Accrual Onto Publicly Sponsored Trials," Coalition of Cancer Cooperative Groups for the Global Access Project, National Patient Advocate Foundation, April 2006.

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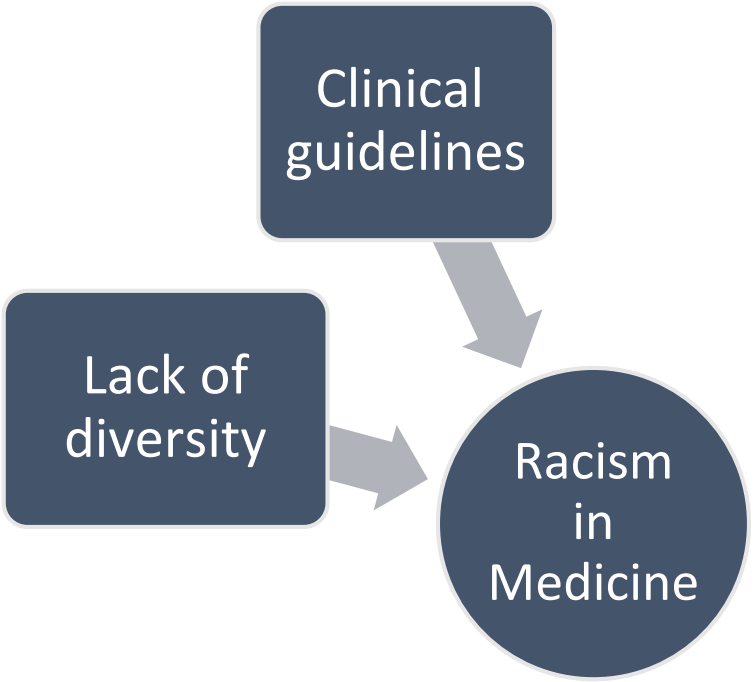
ORIGINAL ARTICLE

Perioperative Bridging Anticoagulation in Patients with Atrial Fibrillation

Table 1. Baseline Characteristics of the Patients.*

Characteristic	No Bridging (N=950)	Bridging (N=934)
Age — yr	71.8±8.74	71.6±8.88
Male sex — no. (%)	696 (73.3)	686 (73.4)
Race — no. (%)†		
White	860 (90.5)	849 (90.9)
Nonwhite	88 (9.3)	82 (8.8)
Unknown	2 (0.2)	3 (0.3)

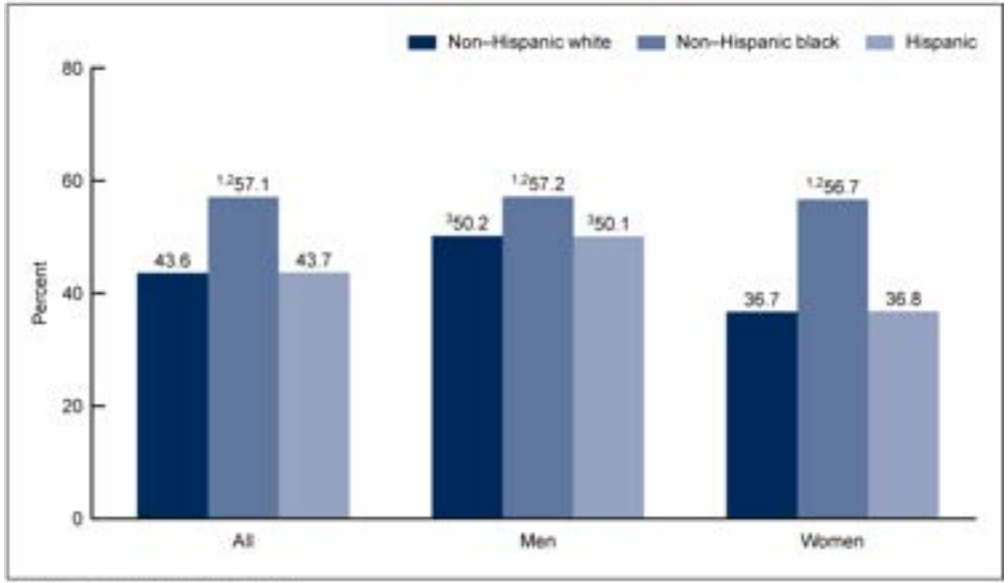
How does discrimination manifest in medical education?



Race as Risk Factor

Differences in HTN prevalence by Race & Ethnicity

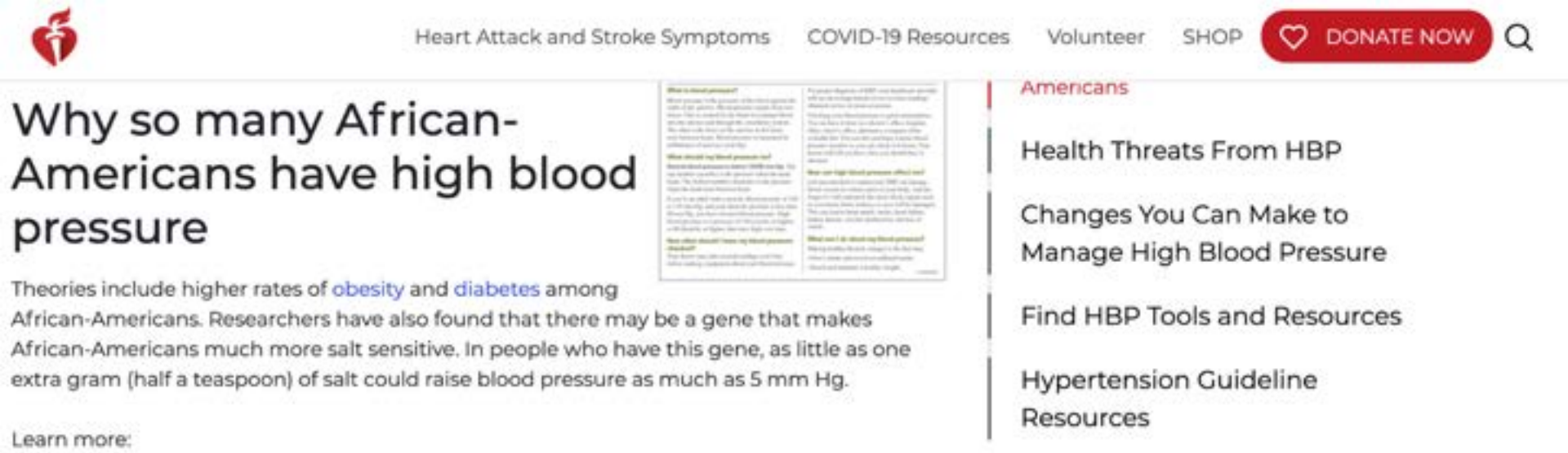
Figure 2. Age-adjusted prevalence of hypertension among adults aged 18 and over, by sex and race and Hispanic origin: United States, 2017–2018



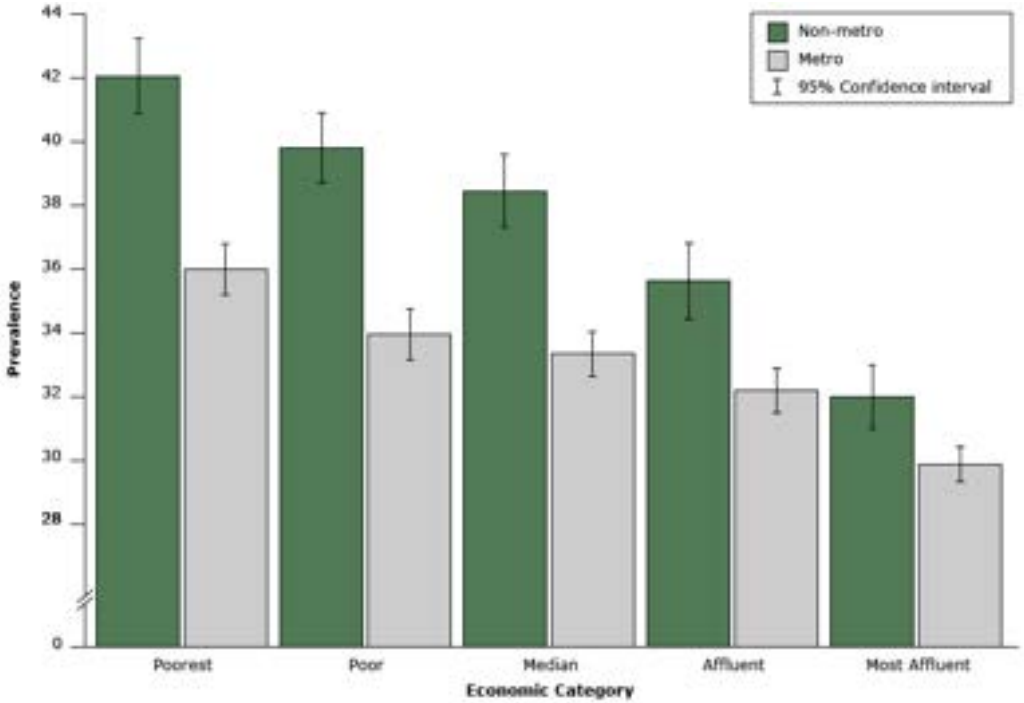
[1]Significantly different from non-Hispanic white.
[2]Significantly different from Hispanic.
[3]Significantly different from women in the same race and Hispanic-origin group.
NOTES: Hypertension is defined as systolic blood pressure greater than or equal to 130 mmHg or diastolic blood pressure greater than or equal to 80 mmHg, or currently taking medication to lower blood pressure. All estimates are age adjusted by the direct method to the U.S. Census 2000 population using age groups 18–39, 40–59, and 60 and over. Access data table for Figure 2 at: https://www.cdc.gov/nchs/data/databriefs/db364-tables-508.pdf#2.
SOURCE: NCHS, National Health and Nutrition Examination Survey, 2017–2018.

NCHS, National Health and Nutrition Examination Survey, 2017–2018.

Medicine looks for genetic reasons to explain racial differences in outcomes



Differences in HTN prevalence by income/SES ~~→ research into low-income gene~~



Shaw KM et al *Prev Chronic Dis*. 2016

Racism causes increased risk of HTN in Black Americans

- Profound difference in hypertension prevalence between Nigerian and Jamaican populations vs US Black populations

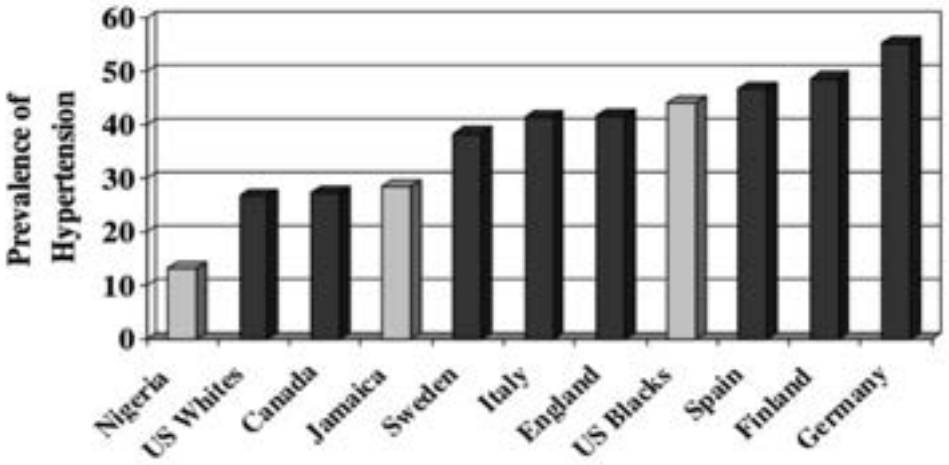


Figure 4
Hypertension Prevalence (140/90 mmHg or Treatment), African and European Descent Populations; Ages 35–64, Age Adjusted

Cooper et al, 2005; Ordunez et al, 2013; Gomez-Olive et al, 2017

Experiences of racism have a pathophysiological impact on individual health

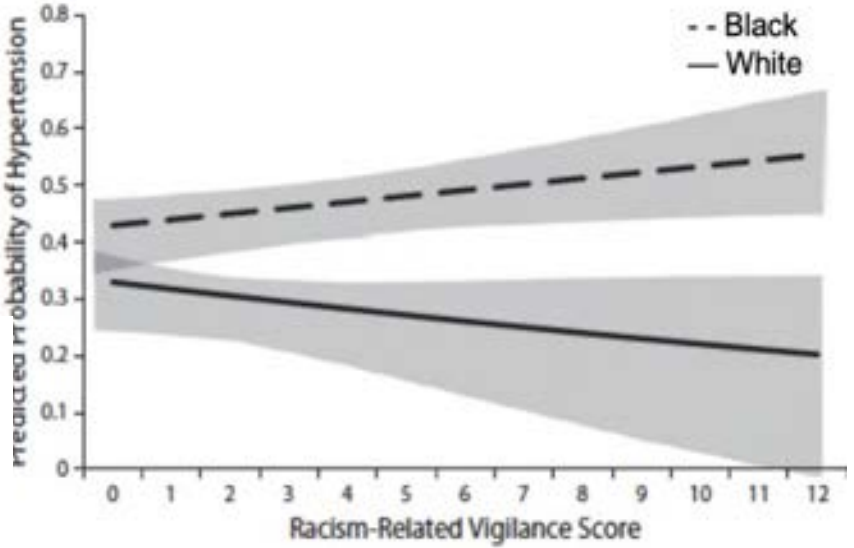
- Elevated cortisol
- Elevated heart rate
- Elevated blood pressure
- Elevated rates of anxiety and depression

Hypertension
Volume 76, Issue 3, September 2020, Pages 715-723
https://doi.org/10.1161/HYPERTENSIONAHA.119.14492

JACKSON HEART STUDY

Discrimination and Hypertension Risk Among African Americans in the Jackson Heart Study

Aliana T. Forde, Mario Sims, Paul Muntner, Tené Lewis, Amanda Onwuka, Kari Moore, and Ana V. Diez Roux



Forde et al. HTN, 2020; Clark et al. J Ado Health, 2006; Hicken et al, AJPH. 2013; Stephanikova et al. AJPM, 2017.

Race in Clinical Tools

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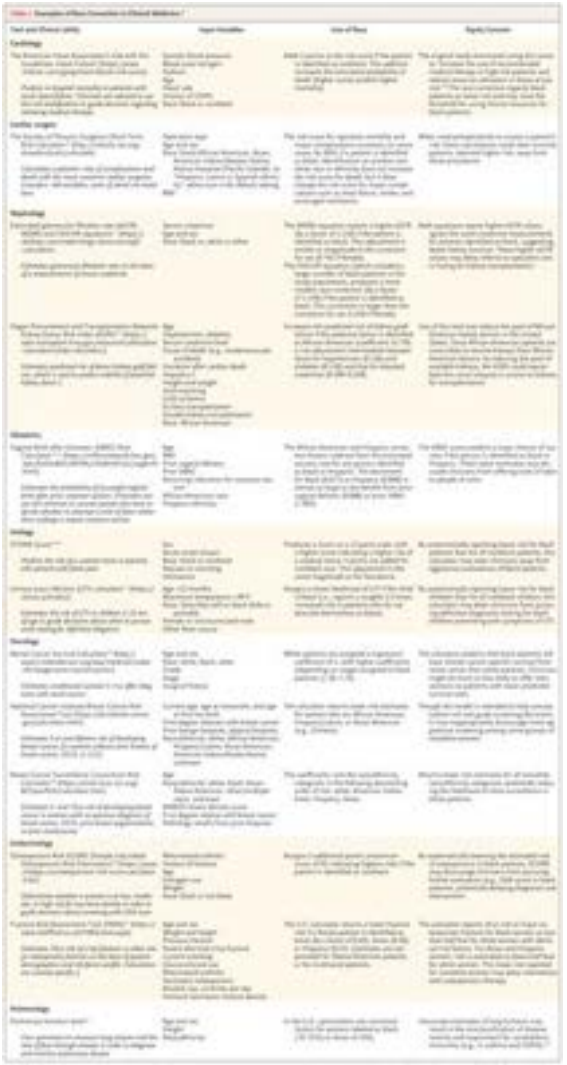
MEDICINE AND SOCIETY

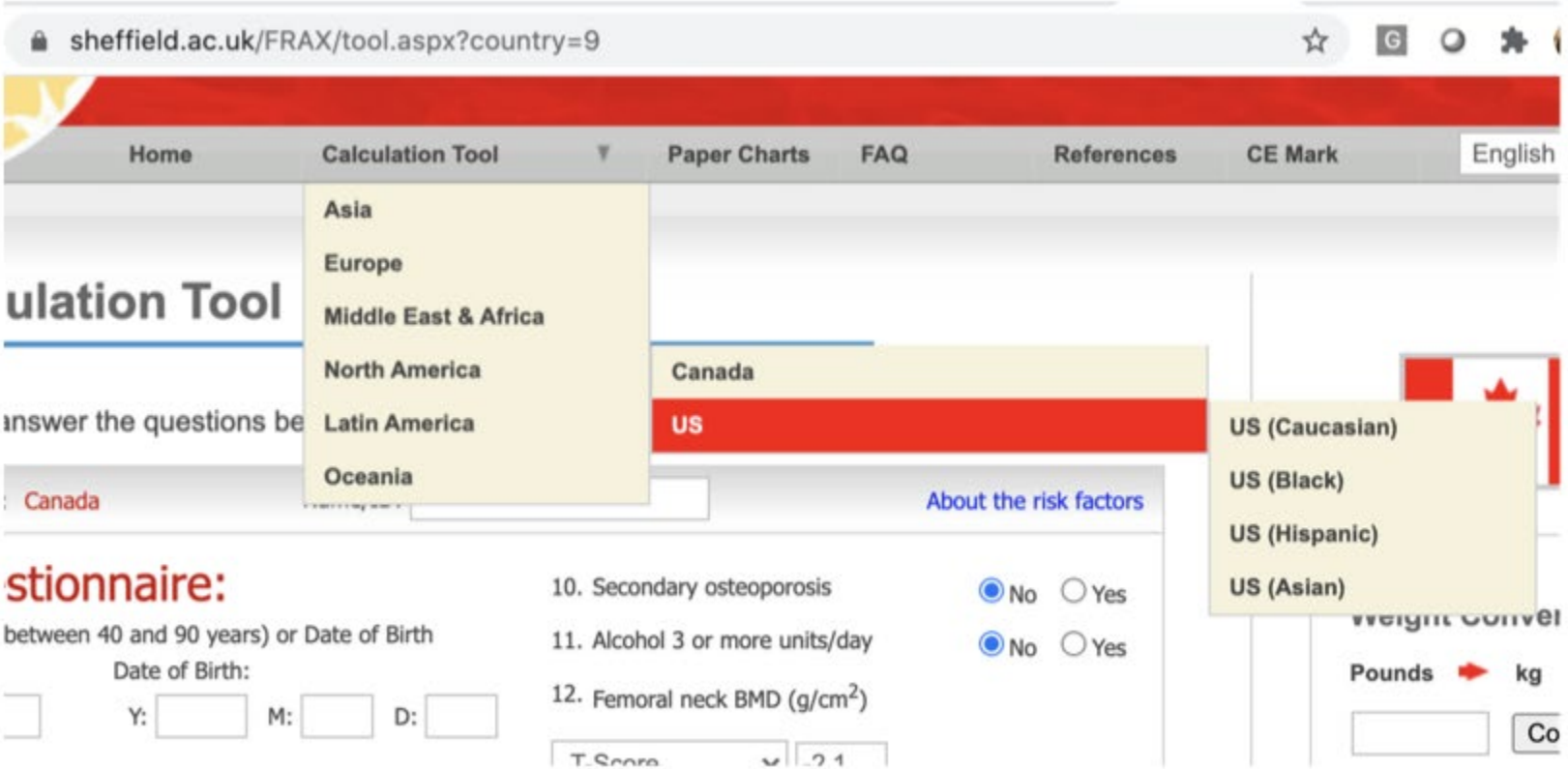
Hidden in Plain Sight — Reconsidering the Use of Race Correction in Clinical Algorithms

Darshali A. Vyas, M.D., Leo G. Eisenstein, M.D., and David S. Jones, M.D., Ph.D.

August 27, 2020
N Engl J Med 2020; 383:874-882
DOI: 10.1056/NEJMms2004740



FRAX Calculator used to guide osteoporosis treatment



Race/Ethnicity	10 year risk of major fracture	10 year risk of hip fracture
US (White/Caucasian)	14%	4.2%
US (Black)	6.3%	1.8%
US (Asian)	8%	2.4%
US (Hispanic)	8%	2.4%
Canada	12%	3.7%

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Pulmonary Function Tests

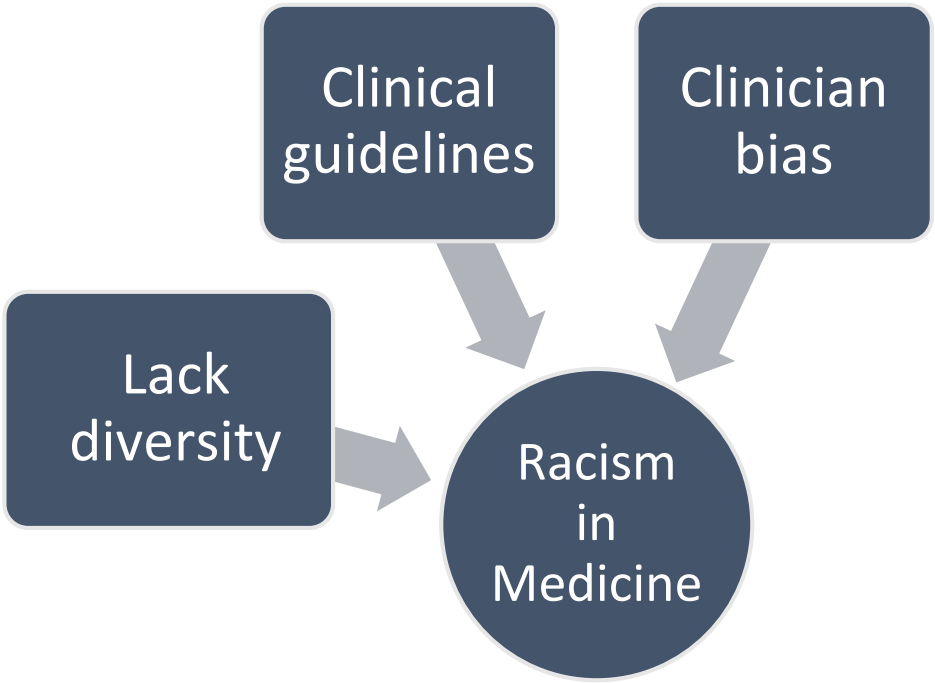
- Spirometry adjusts results for people identified as Asian and Black - suggesting lower lung capacity
- Origins of these standards date back to studies completed by Dr Samuel Cartwright who examined the lung capacity of enslaved Black people compared to white people

Average Capacity of Lungs.

	In usual Vigor		Not in usual Vigor		Total	
	No. Men	Cubic Inches	No. Men	Cubic Inches	No. Men	Cubic Inches
White Soldiers, Earlier Series	4 837	175.655	1 915	155.699	6 752	169.995
White Soldiers, Later Series	8 895	187.868	1 541	166.321	10 436	184.686
Sailors	1 104	179.217	–	–	1 104	179.217
Students	288	204.382	–	–	288	204.382
Full Blacks	1 631	165.319	221	149.697	1 852	163.455
Mulattoes	671	161.635	138	145.428	809	158.870
Indians	504	185.058	7	179.286	511	184.978

Braun L; Race, ethnicity and lung function: A brief history. *Can J Respir Ther.* 2015; 51: 99-101

How does discrimination manifest in medical education?



The New England Journal of Medicine 1999

The Effect of Race and Sex on Physicians' Recommendations for Cardiac Catheterization

Kevin A. Schulman, M.D., Jesse A. Berlin, Sc.D., William Harless, Ph.D., Jon F. Kerner, Ph.D., Shyrl Sistrunk, M.D., Bernard J. Gersh, M.B., Ch.B., D.Phil., Ross Dubé, Christopher K. Taleghani, M.D., Jennifer E. Burke, M.A., M.S., Sankey Williams, M.D., John M. Eisenberg, M.D., William Ayers, M.D., et al.

Cleveland Manchanda EC, Marsh RH, Osuagwu C, et al. Heart Failure Admission Service Triage (H-FAST) Study: Racialized Differences in Perceived Patient Self-Advocacy as a Driver of Admission Inequities. *Cureus*. 2021

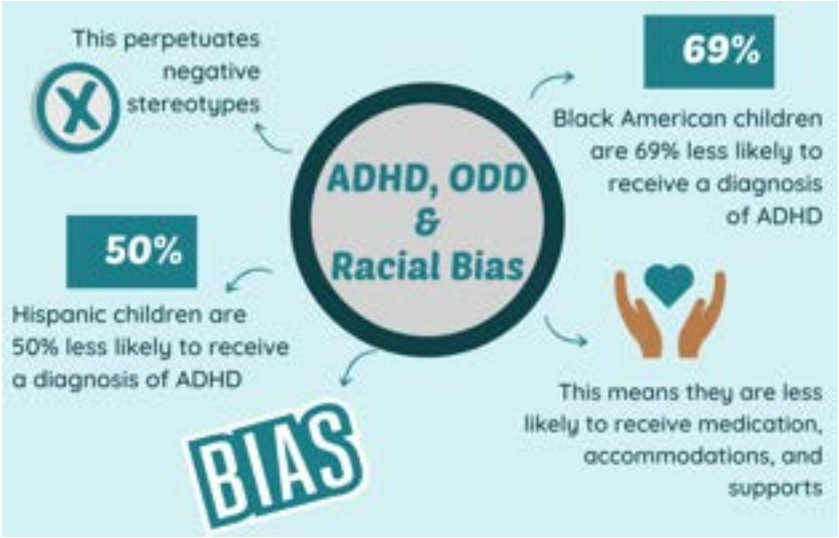
RESEARCH ARTICLE | ECONOMIC SCIENCES

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

Brad N. Greenwood, Rachel R. Hardeman, Laura Huang, and Aaron Sojourner Authors Info & Affiliations

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

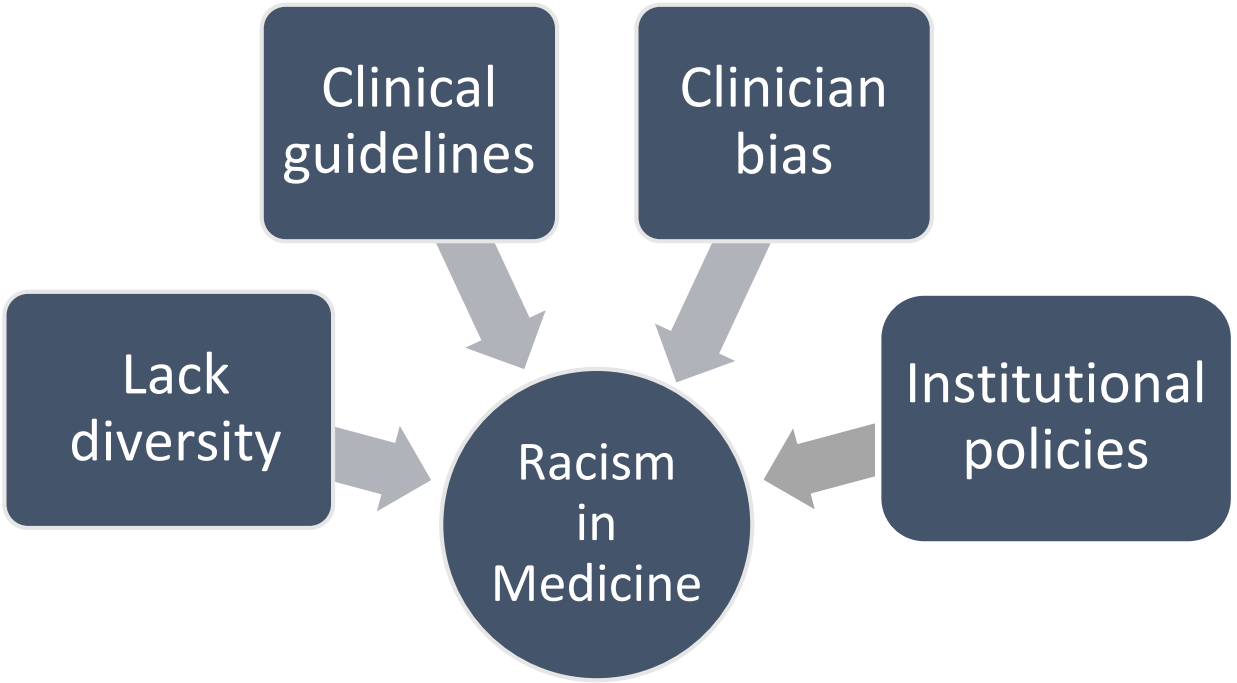
August 17, 2020 | 117 (35) 21194-21200 | https://doi.org/10.1073/pnas.1913405117



- Black newborn infants had improved mortality if cared for by a Black physician
- Indigenous, Hispanic and Black children are more likely to be diagnosed with Oppositional Defiant Disorder (ODD) or Conduct Disorder (CD) and have Attention Deficit Disorder (ADD) and/or Autism Spectrum Disorder (ASD) missed compared to White children

Ballentine KL (2019). Understanding Racial Differences in Diagnosing ODD Versus ADHD Using Critical Race Theory. *Families in Society*; Coker et al (2016). Racial and Ethnic Disparities in ADHD Diagnosis and Treatment. *Pediatrics*.; Mandell, DS et al (2002). Race differences in the age at diagnosis among Medicaid-eligible child with autism. Journal of the American Academy of Child and Adolescent Psychiatry; Mandell, DS et al (2007). Disparities in diagnoses received prior to a diagnosis of autism spectrum disorder. *Journal of autism and developmental disorders*..

How does discrimination manifest in medical education?



Patients of color are more likely to receive care from students and trainees

CRIMSON CARE COLLABORATIVE

The NEW ENGLAND JOURNAL of MEDICINE

MEDICINE AND SOCIETY

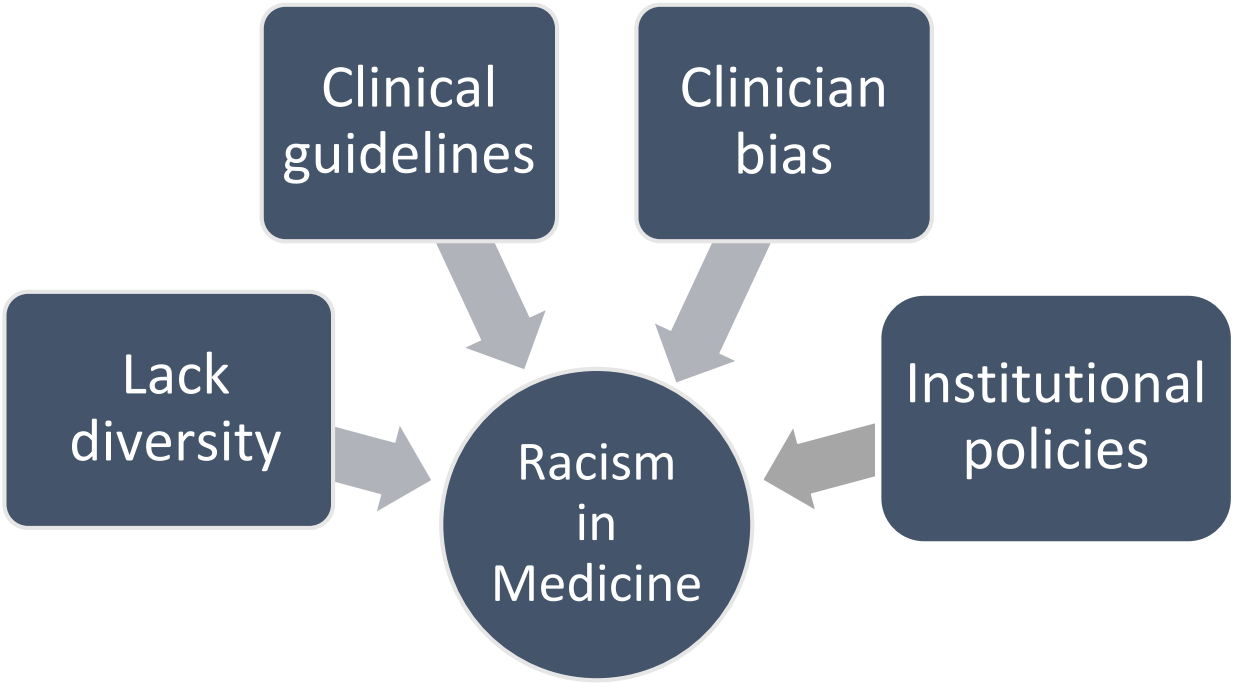
Debra Malina, Ph.D., Editor

Dismantling Structural Racism in the Academic Residency Clinic

Rahul Vanjani, M.D., Andrea Pitts, Ph.D., and Pranav Aurora, M.D.

James & Armstrong. AMA Journal of Ethics. 2023

How does discrimination manifest in medical education?



Medical trainees believe falsehoods about physiologic differences based on race

Statement (quoted from study)	% endorsing belief
Blacks' nerve endings are less sensitive than whites'	20%
Black people's blood coagulates more quickly than whites'	39%
Blacks' skin is thicker than whites'	58%
Blacks age more slowly than whites	23%

Hoffman et al. PNAS, 2016.

DARE (Departmental Anti-Racism & Equity Initiative)

How to combat discrimination in medical education?

Sherri-Ann Burnett-Bowie, MD, MPH (she/her/hers)

Aisha James, MD (she/her/hers)

Rashmi Jasrasaria, MD (she/her/hers)

Amanda Jowell, MS2 (she/her/hers)

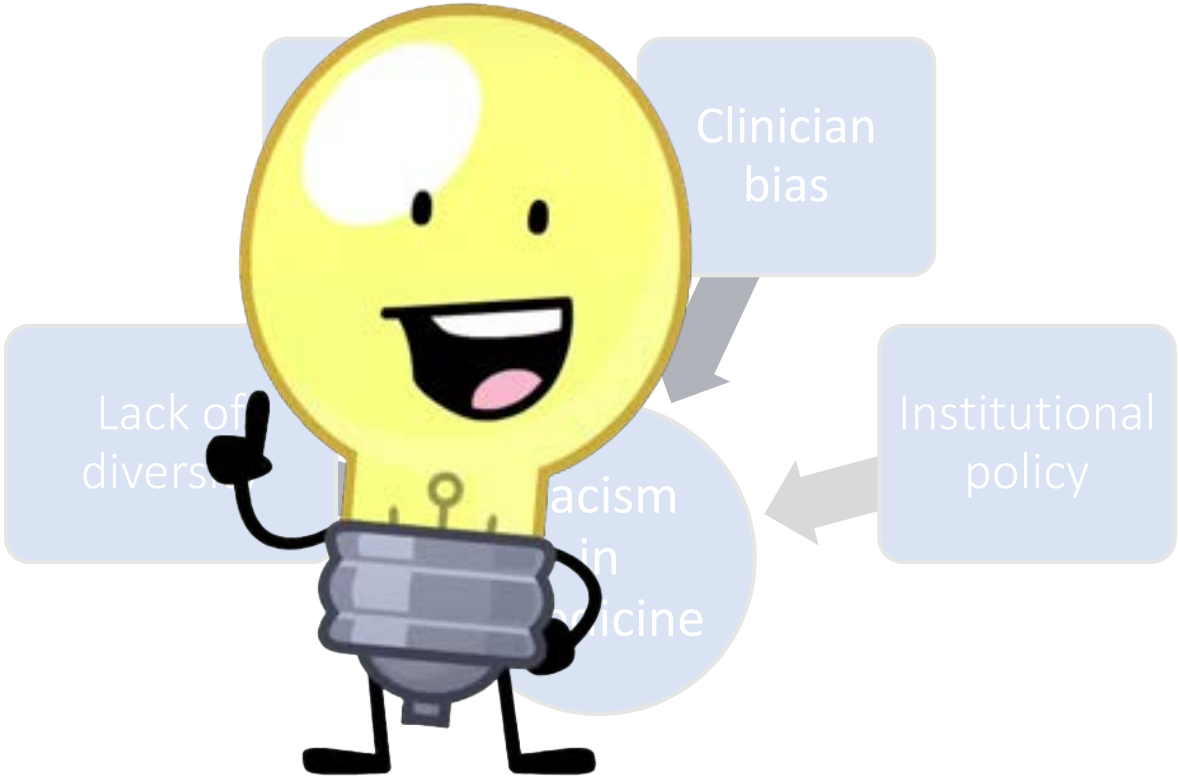
Michael Kelly, MD (he/him/his)

Madeleine Matthiesen, MD (she/her/hers)

Darshali Vyas, MD (she/her/hers)

Jessica Zeidman, MD (she/her/hers)

How to combat discrimination in medical education?



Clinical guidelines

Clinician bias

education?

in Medicine

Attitudes and Actions Related to Racism: the Anti-RaCism (ARC) Survey Study

Sherri-Ann M. Burnett-Bowie, MD, MPH[1], Jessica A. Zeidman, MD[2], Alexander E. Soltoff[2], Kylee T. Carden[3], Aisha K. James, MD, Med[2,4], and Katrina A. Armstrong, MD, MSCE[2]

DEPT ANTI-RACISM & EQUITY EDUCATION (DARE) CHECKLIST

DO

- ☐ Use images and/or patient cases with diverse representation
- ☐ Include information on inequities in disease
- ☐ Discuss how bias, systemic racism, + other forms of oppression contribute to inequities (i.e., racism as risk factor and NOT race)
- ☐ Address inclusion/exclusion of diverse populations when presenting research

AVOID

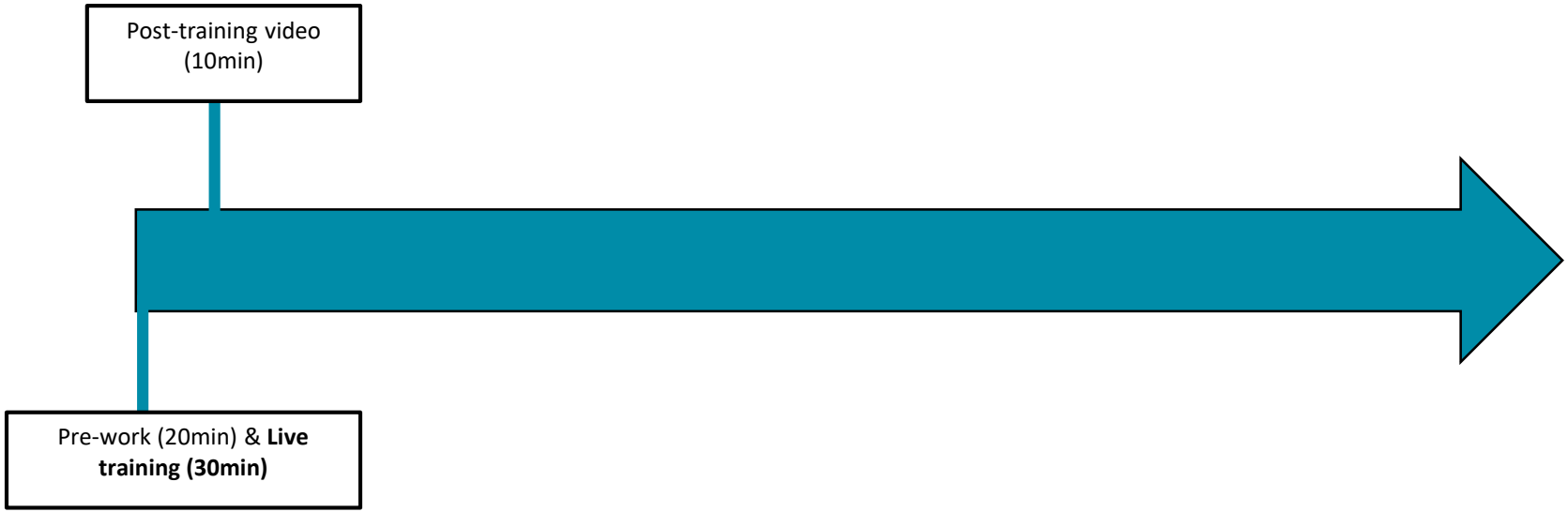
- ☐ Using images that only present a historically included group(s)
- ☐ Using cases or images that present or confirm historical stereotypes
- ☐ Using out of date terminology for historically excluded groups
- ☐ Conflating race with genetics

© Massachusetts General Hospital

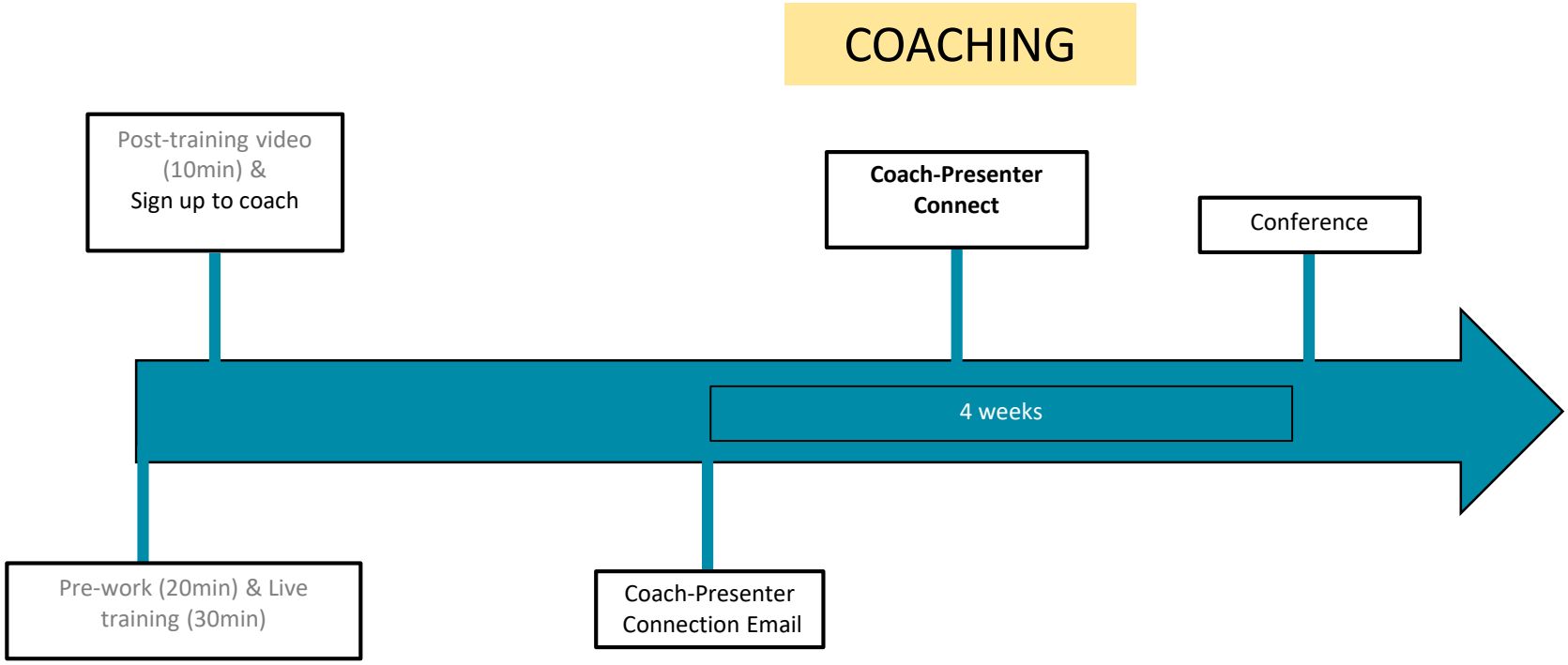
Dissemination of DARE checklist using a coaching model

DARE Timeline

TRAINING



DARE Timeline



AAMC Association of American Medical Colleges

MedEdPORTAL® The Journal of Teaching and Learning Resources

Journal of Graduate Medical Education

An Anti-Racism and Equity Initiative Improves Residency Educational Conferences

Aisha K. James, MD, MEd
Madeleine I. Matthiesen, MD
Rashmi Jasrasaria, MD
Amanda R. Jowell, BA
Michael S. Kelly, MD
Darshali A. Vyas, MD
Jessica A. Zeidman, MD
Sherri-Ann M. Burnett-Bowie, MD, MPH

ABSTRACT

Background Graduate medical education curricula may reinforce systemic inequities and bias, thus contributing to health disparities. Curricular interventions and evaluation measures are needed to increase trainee awareness of bias and known inequities in health care.

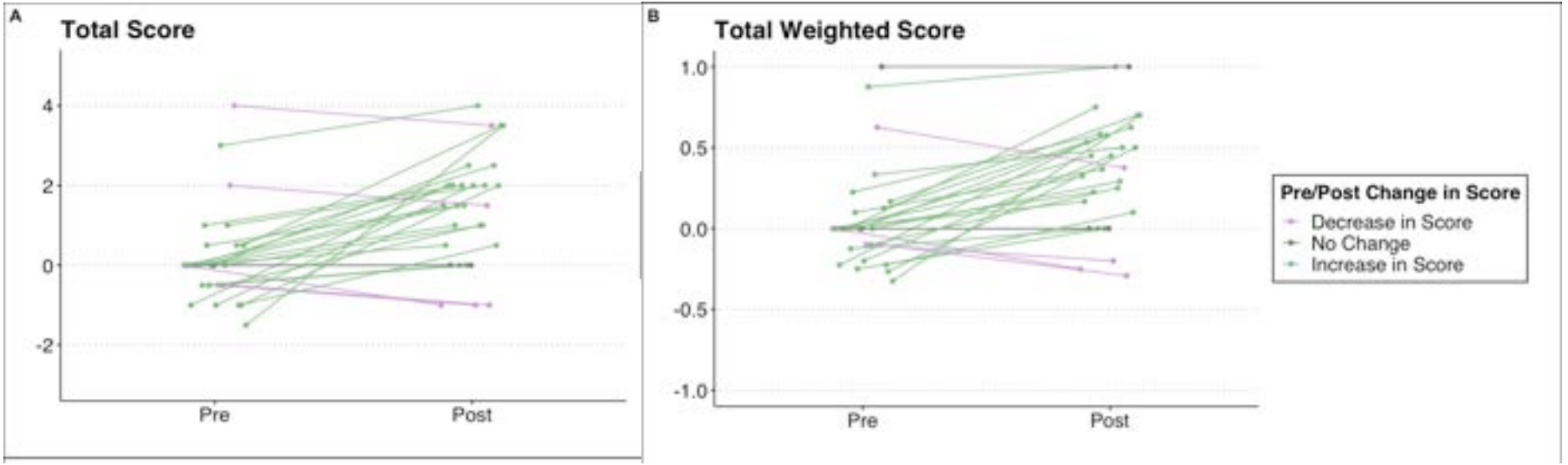
Objective This study sought to improve the content of core noontime internal medicine residency educational conferences by implementing the Department of Medicine Anti-Racism and Equity (DARE) educational initiative.

Methods DARE best practices were developed from available anti-racism and equity educational materials. Volunteer trainees and faculty in the department of medicine of a large urban academic medical center were recruited and underwent an hourlong training to utilize DARE best practices to coach faculty on improving the anti-racist and equity content of educational conferences. DARE coaches then met with faculty to review the planned 2021-2022 academic year (AY) lectures and facilitate alignment with DARE best practices. A rubric was created from DARE practices and utilized to compare pre-intervention (AY21) and post-intervention (AY22) conferences.

Evaluation

Photos (if no photos, please skip question)		
☐ Images mostly represent only historically included groups	☐ Images used do not involve particular group	☐ Images mostly reflect diversity of presentations and individuals
Graphics (if no graphics, please skip question)		
☐ Graphics include historically excluded groups in a stereotypical way and/or fail to reflect impact of bias	☐ Graphics used do not contain information about historically excluded groups	☐ Graphics reflect impact of bias or systemic inequities on historically excluded groups
Research studies (if no studies mentioned, please skip question)		
	☐ Racial classifications and patient population not discussed or defined	☐ Racial classifications defined and relevance explicitly and accurately discussed
Case mentions race/ethnicity (if no cases used, please skip question)		
☐ Reinforces historical stereotypes	☐ Not mentioned in the case	☐ Moves beyond historical stereotypes
Impact of race/ethnicity on inequities (on disease prevalence, management, or outcomes)		
☐ Inequities not explained or explained in ways that reinforce stereotypes or falsehoods	☐ Impact of race on prevalence, management, or outcomes not discussed	☐ Discussion specifically on how bias, systemic racism, and/or other forms of oppression contribute to inequities in care

Results


A
Total Score
4
2
0
-2
Pre
Post
B
Total Weighted Score
1.0
0.5
0.0
-0.5
-1.0
Pre
Post
Pre/Post Change in Score
Decrease in Score
No Change
Increase in Score

Anti-racist & equity lecture content *increased* after coaching

- ↑ Discussion of racism's impact on health inequity
- ↑ Appropriate use of race in clinical vignettes
- ↑ Diversity of photos
- ↑ Discussion of research demographics

AAMC Association of American Medical Colleges

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Journal of Graduate Medical Education

An Anti-Racism and Equity Initiative Improves Residency Educational Conferences

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ABSTRACT

Background Graduate medical education curricula may reinforce systemic inequities and bias, thus contributing to health disparities. Curricular interventions and evaluation measures are needed to increase trainee awareness of bias and known inequities in health care.

Objective This study sought to improve the content of core noontime internal medicine residency educational conferences by implementing the Department of Medicine Anti-Racism and Equity (DARE) educational initiative.

Methods DARE best practices were developed from available anti-racism and equity educational materials. Volunteer trainees and faculty in the department of medicine of a large urban academic medical center were recruited and underwent an hourlong training to utilize DARE best practices to coach faculty on improving the anti-racist and equity content of educational conferences. DARE coaches then met with faculty to review the planned 2021-2022 academic year (AY) lectures and facilitate alignment with DARE best practices. A rubric was created from DARE practices and utilized to compare pre-intervention (AY21) and post-intervention (AY22) conferences.

Mini-DARE Coach Training

DEPT ANTI-RACISM & EQUITY EDUCATION (DARE) CHECKLIST

DO

- ☐ Use images and/or patient cases with diverse representation
- ☐ Include information on inequities in disease
- ☐ Discuss how bias, systemic racism, + other forms of oppression contribute to inequities (i.e., racism as risk factor and NOT race)
- ☐ Address inclusion/exclusion of diverse populations when presenting research

AVOID

- ☐ Using images that only present a historically included group(s)
- ☐ Using cases or images that present or confirm historical stereotypes
- ☐ Using out of date terminology for historically excluded groups
- ☐ Conflating race with genetics

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Cirrhosis

Devon is Portuguese speaking a 17 y/o male PMH of biliary atresia s/p kasai and alcohol abuse who presents with worsening abdominal pain and low-grade fever.

Identify items present from the AVOID column of the checklist

- ❑ Using images that only present a historically included group(s)
- ❑ Using cases or images that present or confirm historical stereotypes
- ❑ Using out of date terminology for historically excluded groups
- ❑ Conflating race with genetics

Devon is a Portuguese speaking 17 y/o male PMH of biliary atresia s/p kasai and alcohol abuse who presents with worsening abdominal pain and low-grade fever.

Identify items present from the AVOID column of the checklist

X Using images that only present a historically included group(s)

- ❑ Using cases or images that present or confirm historical stereotypes

X Using out of date terminology for historically excluded groups

- ❑ Conflating race with genetics

Devon is a Portuguese speaking 17 y/o male PMH of biliary atresia s/p kasai and alcohol abuse who presents with worsening abdominal pain and low-grade fever.

Cirrhosis

☐ **AVOIDED** using out of date/stigmatizing terminology
** AVOIDED adding race, ethnicity, language, sexuality in 1-liner*

☐**AVOIDED** Images only present in historically included group(s)

☐**DO** Images and/or patient cases include varied age, gender expression/identity, abilit y, race, ethnicity, religion and sexual orientation

Devon (he/his) ~~Portuguese speaking~~ is a 17 y/o male PMH of biliary atresia s/p kasai and ~~alcohol abuse~~ alcohol use disorder presents with worsening abdominal pain and low-grade fever.

Cystic Fibrosis

Risk factors:

- Family History
- Lower risk in non-White populations

Diagnosis:

- Newborn screen
- Sweat chloride test
- Gene testing

Share changes you could make to ADD items from the DO column

- ❑ Use images and/or patient cases with diverse representation
- ❑ Include information on inequities in disease
- ❑ Discuss how bias, systemic racism, + other forms of oppression contribute to inequities (i.e., racism as risk factor and NOT race)
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- Newborn screen
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- Gene testing

Cystic Fibrosis

☐**AVOIDED** Images only present a historically included group(s)

☐**AVOIDED** Conflating race with genetics

☐**DO** Images and/or patient cases include varied age, gender expression/identity, ability, race, ethnicity, religion and sexual orientation

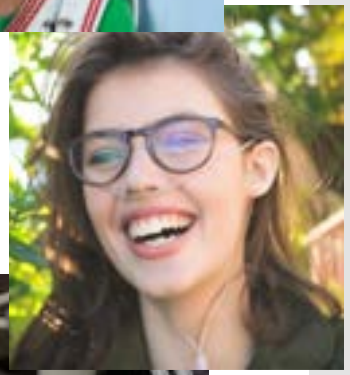
☐**DO** Include information on inequities in disease prevalence, management, and outcomes

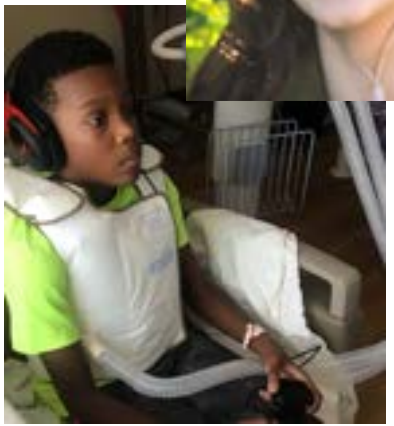
Risk factors:

- Family History
- ~~Lower risk in non-White patients~~
- **Identified more often in White populations, but affects individuals of all racial/ethnic backgrounds**

Diagnosis:

- Newborn screen
- Sweat chloride test
- Gene testing
- **Delays in diagnosis (& treatment) for patients from racial/ethnic minorities contributes to poorer outcomes in people of color**





Thank you