

[CLICK TO VIEW RECORDING](#)

# Exploring Implicit Bias in Clinical Medicine

**DOM Onboarding  
September 29, 2021**



**Christina Harris, MD**

**Keith Norris, MD PhD**

**Teresa Seeman, PhD**

**UCLA Department of Medicine**

**Office for Equity, Diversity and Inclusion**

# Conflicts of Interest

## Our Personal Biases Based on our Life Experiences



From UCLA Health Care Workers rally for Black Lives Matter – June 2020

A billionaire has donated ten million dollars to the UCLA Dept Med Practice Plan and it helps to provide ½ day a week off for education. What are your thoughts about this billionaire?

You are on the admission committee and your Dean calls you. A request for a favor has been made - the billionaire's son wants to go to medical school but has poor grades and a low MCAT score. The Dean wants you to help admit the son. What do you do?  
What are your thoughts about this billionaire now?

This may be both explicit and implicit bias



# **Personal Identity Exercise**

## **Grab a Piece of Paper.**



# Personal Identity Exercise

Race/Ethnicity

Class/Socioeconomic Status

Gender

Sexual Orientation

Religion Faith/Spirituality

Birth Order

Nationality

Citizenship, Residence or Legal Immigration Status

Where you went to undergrad/med school

Hometown/State

Hair Color/Texture

Age

Weight/Body Type

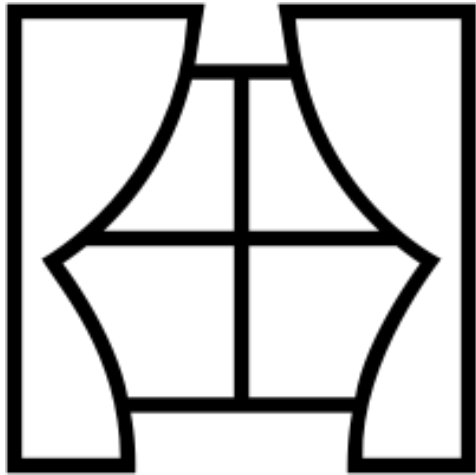
Political Party

Personal Health Status

Relationship Status

Being a parent

# Increasing Our Equity Consciousness



**Understand how forms of systemic oppression operate to advantage some groups and disadvantage others.**

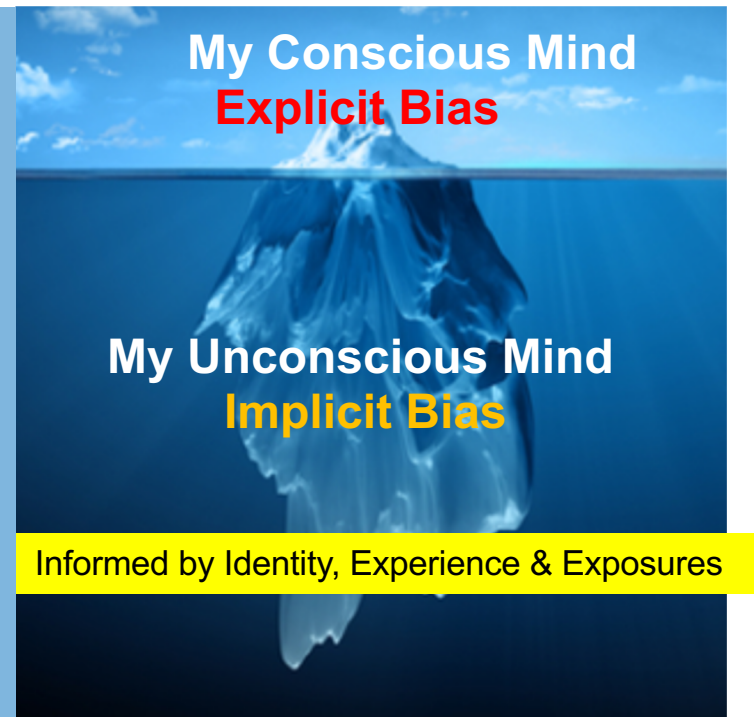


**How have our lived experiences shaped our beliefs, attitudes and biases about ourselves and others.**

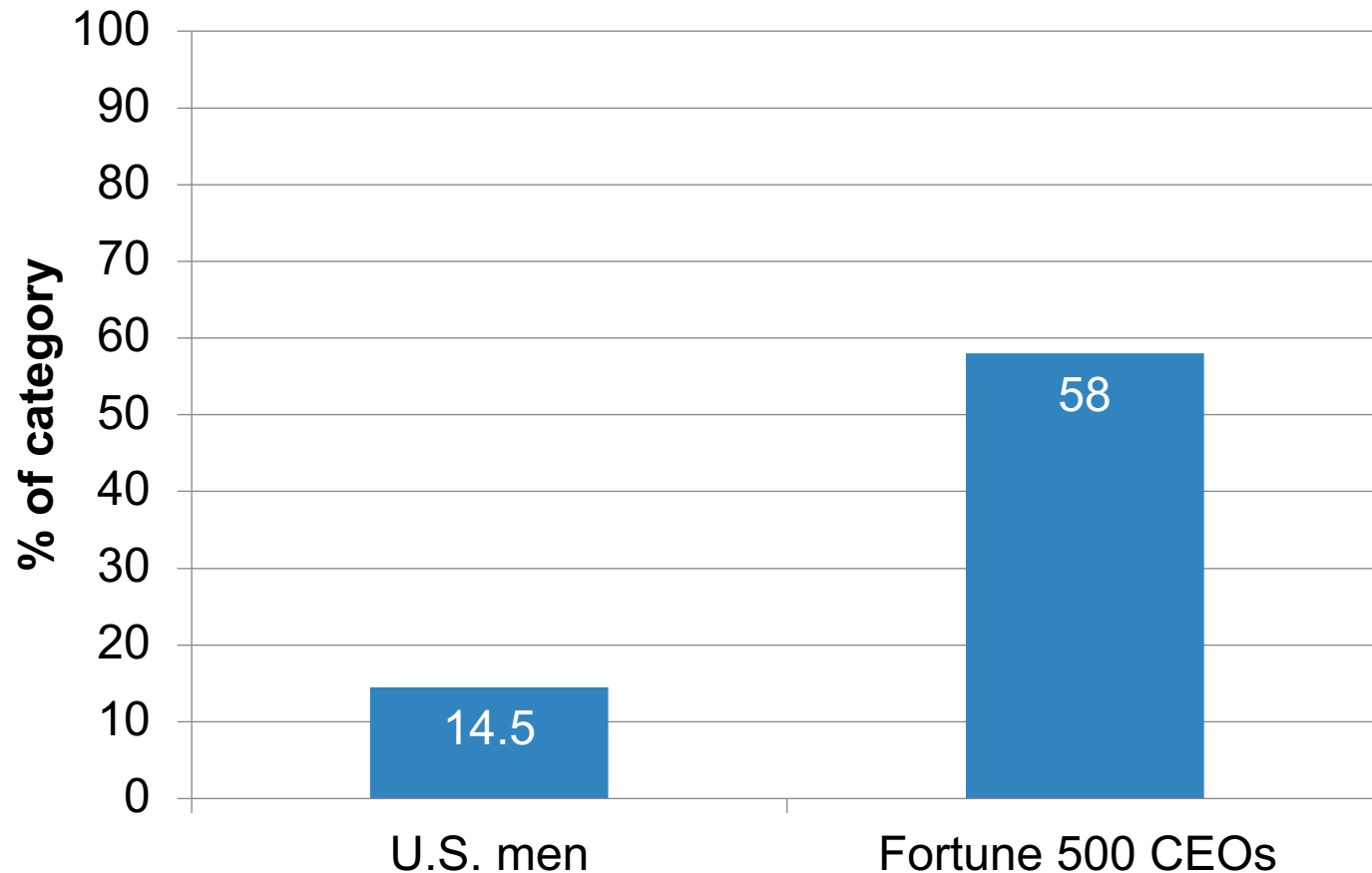
# What is Implicit Bias?

Everyone has it.....

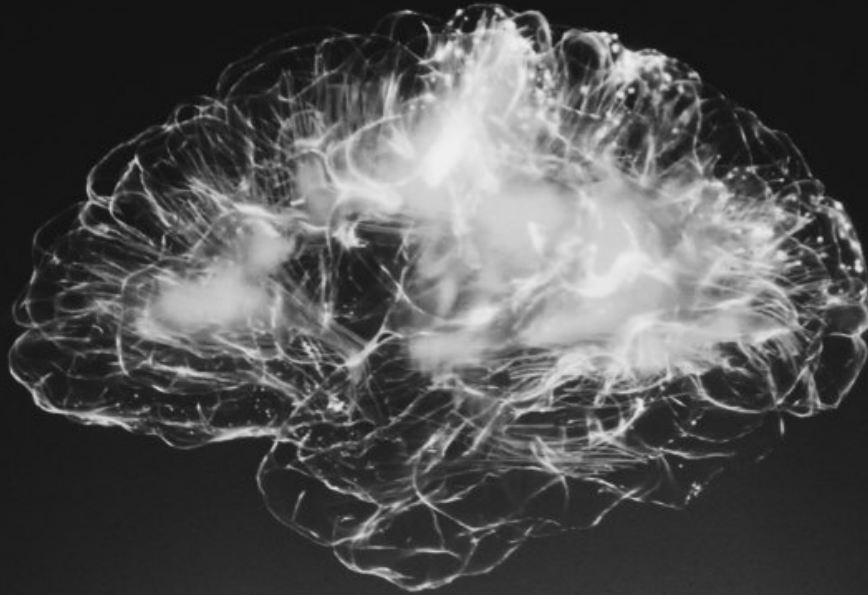
Attitudes, thoughts or stereotypes that affect our understanding, actions and decisions in an unconscious manner; are involuntarily formed and are typically unknown to us



# Implicit Bias: Leadership & Height (% CEO's over 6' tall)



# Bias and the Brain



- Mental shortcuts
- Automatic
- Organize & categorize information

# The Making of Implicit Bias

## Priming

Psychological phenomena in which an exposure to a stimulus is used to elicit an associated response.



## Associations

Created and reinforced through priming. They occur without conscious guidance or intention. “Shortcuts” based on how we have been primed.



## Assumptions

# The Making of Implicit Bias

## Priming



## Associations

**Historical experience**  
**Family experiences**  
**Personal experiences**  
**Media**  
**Education**

**Racism**  
**Sexism**  
**Heterosexism**  
**Classism**  
**Ablism**  
**Ageism**

**Women as less competent, overly emotional,  
and their bodies as objects to be judged.**

**Immigrants from Central America  
and Mexico are dangerous**

**Gay men as flamboyant and  
effeminate.**

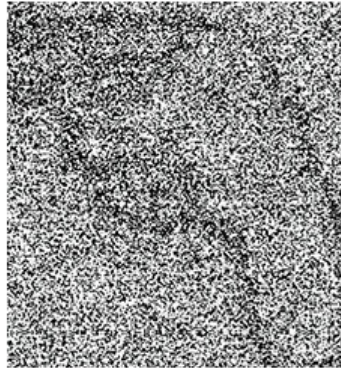
**Blacks as less intelligent, aggressive,  
sassy and more likely to commit crime.**

# The Making of Implicit Bias

Priming



Associations



**Brain cells that fire together, wire together!**



# The Making of Implicit Bias

Priming



Associations



What patient is capable of  
Likelihood if compliance  
What they value  
How they experience illness  
What their home life is like

Assumptions

**Brain cells that fire together, wire together!**

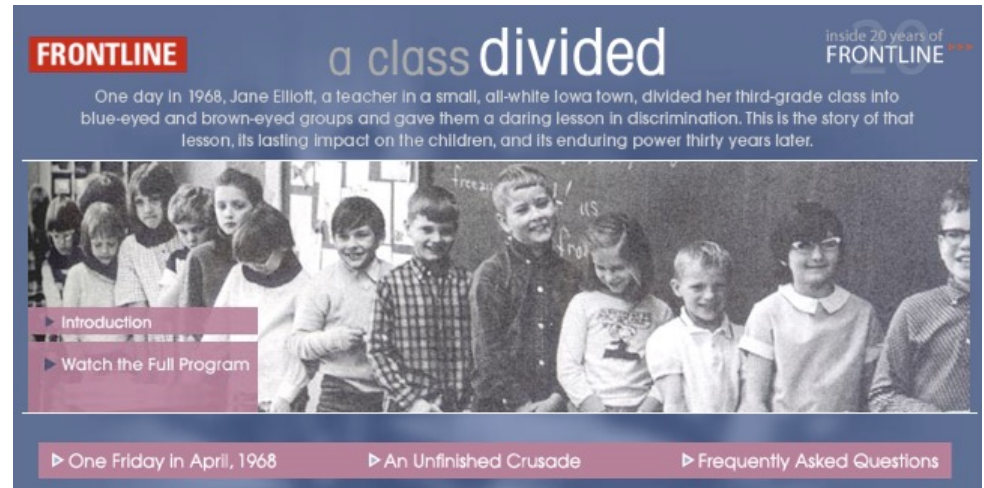
# Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites

Kelly M. Hoffman<sup>a,1</sup>, Sophie Trawalter<sup>a</sup>, Jordan R. Axt<sup>a</sup>, and M. Norman Oliver<sup>b,c</sup>

**Table 1. Percentage of white participants endorsing beliefs about biological differences between blacks and whites**

Item	Study 1: Online sample (n = 92)	Study 2			
		First years (n = 63)	Second years (n = 72)	Third years (n = 59)	Residents (n = 28)
<b>Blacks age more slowly than whites</b>	23	21	28	12	14
<b>Blacks' nerve endings are less sensitive than whites'</b>	20	8	14	0	4
<b>Black people's blood coagulates more quickly than whites'</b>	39	29	17	3	4
<b>Whites have larger brains than blacks</b>	12	2	1	0	0
Whites are less susceptible to heart disease than blacks*	43	63	83	66	50
Blacks are less likely to contract spinal cord diseases*	42	46	67	56	57
<b>Whites have a better sense of hearing compared with blacks</b>	10	3	7	0	0
<b>Blacks' skin is thicker than whites'</b>	58	40	42	22	25
Blacks have denser, stronger bones than whites*	39	25	78	41	29
<b>Blacks have a more sensitive sense of smell than whites</b>	20	10	18	3	7
<b>Whites have a more efficient respiratory system than blacks</b>	16	8	3	2	4
<b>Black couples are significantly more fertile than white couples</b>	17	10	15	2	7
Whites are less likely to have a stroke than blacks*	29	49	63	44	46
<b>Blacks are better at detecting movement than whites</b>	18	14	15	5	11
<b>Blacks have stronger immune systems than whites</b>	14	21	15	3	4
False beliefs composite (11 items), mean (SD)	22.43 (22.93)	14.86 (19.48)	15.91 (19.34)	4.78 (9.89)	7.14 (14.50)
Range	0–100	0–81.82	0–90.91	0–54.55	0–63.64
Combined mean (SD) (medical sample only)			11.55 (17.38)		

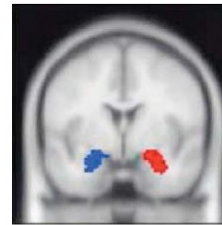
# Ingroups and Outgroups



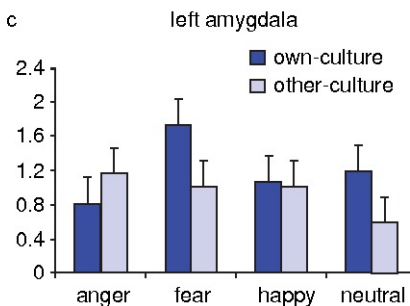
a



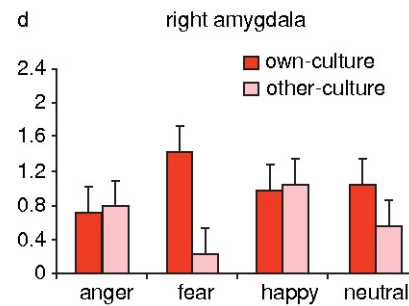
b



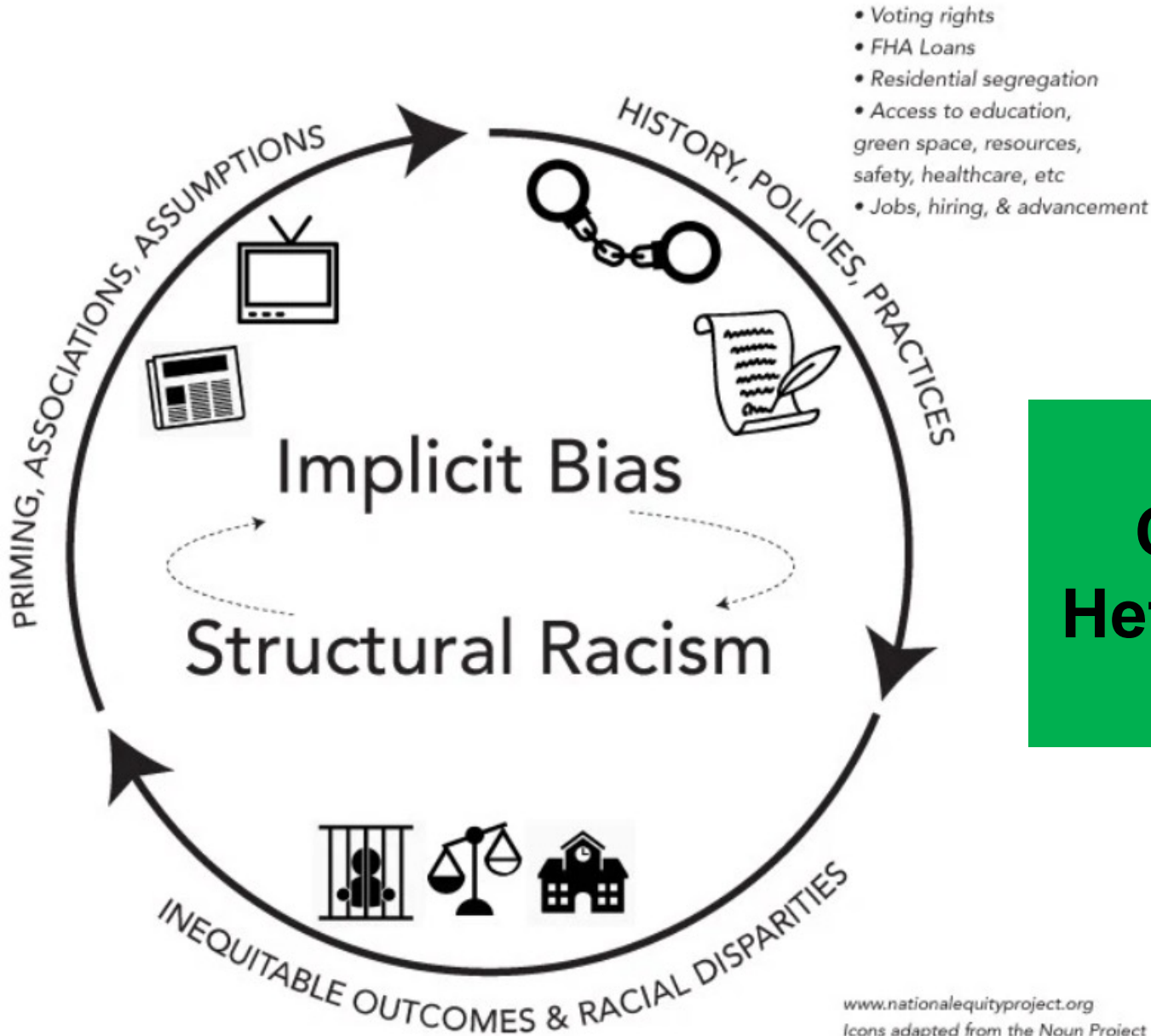
c



d



# Cycle of Inequities



**Sexism**  
**Classism**  
**Heterosexism**  
**Ableism**

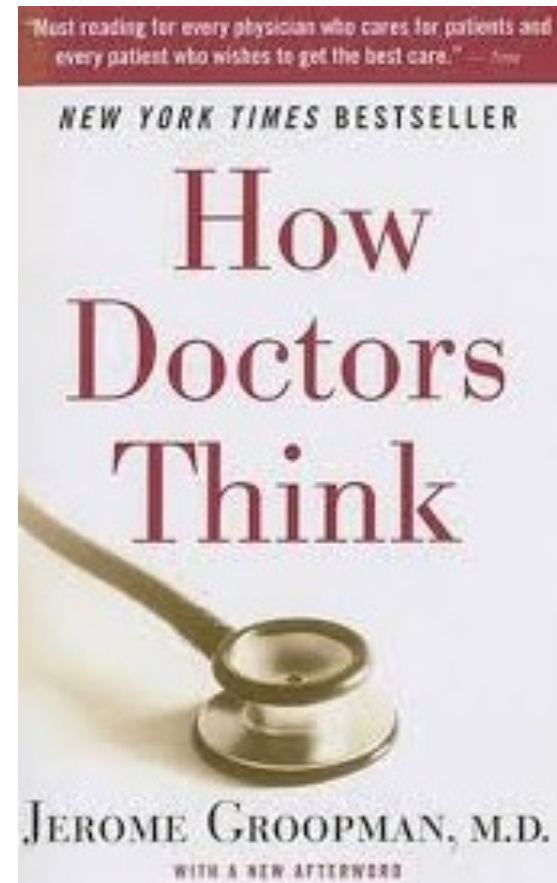
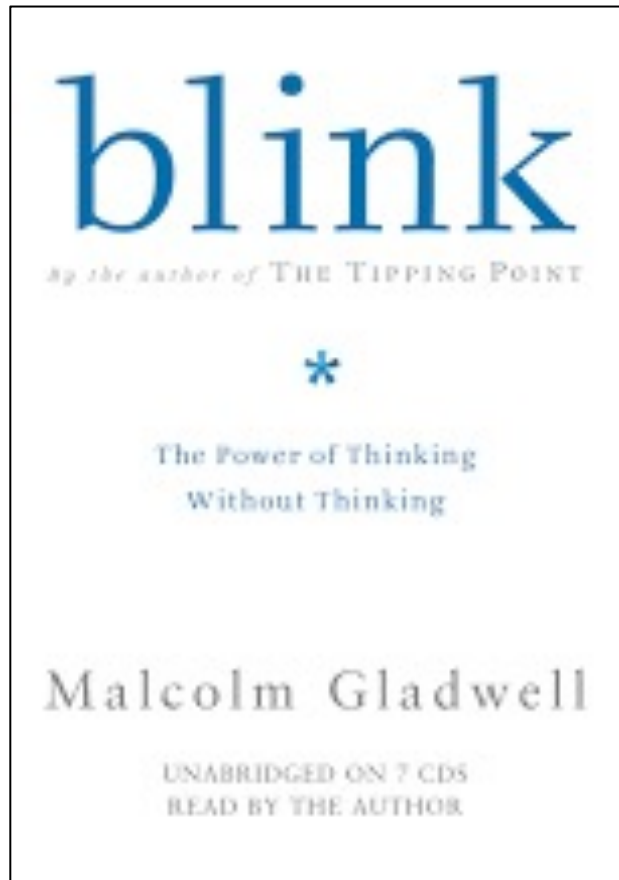


*“Implicit biases come from the culture. I think of them as the thumbprint of the culture on our minds. Human beings have the ability to learn to associate two things together very quickly—that is innate. What we teach ourselves, what we choose to associate is up to us.”*

Dr. Mahzarin R. Banaji, quoted in Hill, Corbett, & Rose, 2010, p. 78

# Clinical Decision Making in Medicine

- Pattern recognition is important
- Cultivating intuition and expertise



**But sometimes can lead to discriminatory behaviors, inequity and unfairness.**

# Clinical Decision Making in Medicine

**Confirmation bias:**  
Seeing what you think you should see

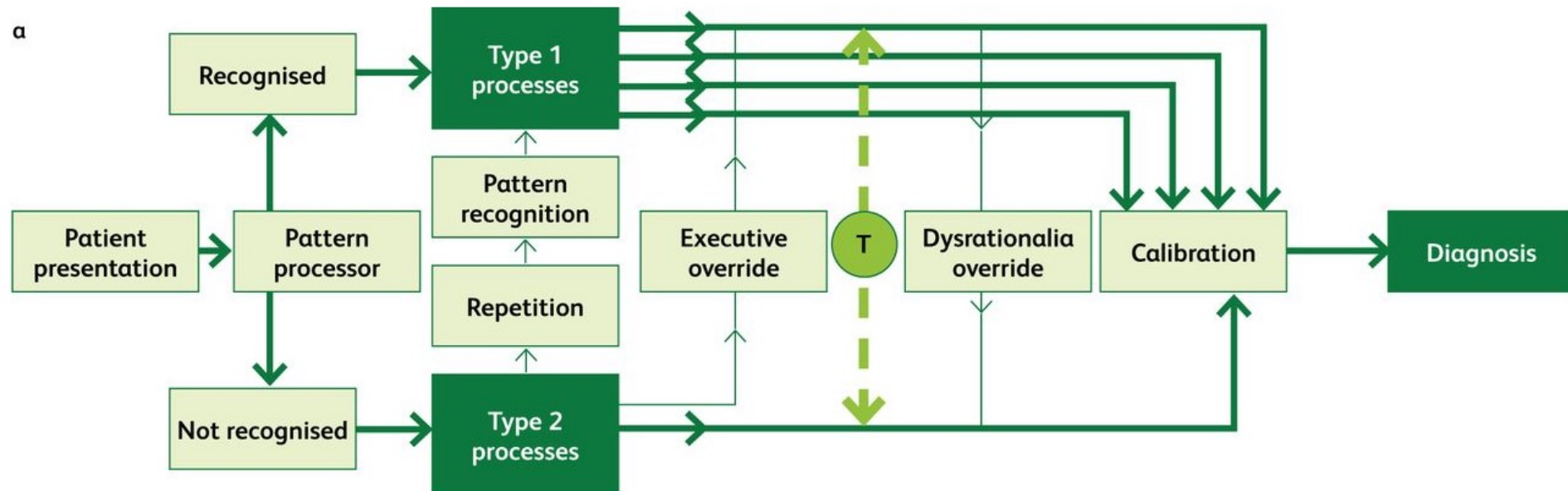
**Anchoring bias:**  
Focus on initial information

**Hassle bias:**  
Path of least resistance

**Overconfidence bias:**  
Relying on prior team's expertise

**Availability bias:**  
What your last patient looked like

**Implicit Bias:**  
Attitudes, thoughts and stereotypes



# Implicit Bias Is....

## Increased by

- ✓ stress
- ✓ time pressure
- ✓ multi-tasking
- ✓ lack of clear criteria for decision-making
- ✓ ambiguous or incomplete information
- ✓ lack of familiarity with group


## **NOT** reduced by

- X good intentions
- X someone else telling you to reduce your bias
- X suppressing bias
- X avoiding people from other groups
- X thinking you don't have bias

[ocfs.ny.gov/main/recc/presentations/2017-03-Our-Brains-on-Race.pptx](https://ocfs.ny.gov/main/recc/presentations/2017-03-Our-Brains-on-Race.pptx)



# Measuring Bias: The Implicit Association Test (IAT)



The 2013 general audience book that fully explains the IAT

**Project Implicit®**

**PROJECT IMPLICIT SOCIAL ATTITUDES**  
Log in or register to find out your implicit associations about race, gender, sexual orientation, and other topics!  
E-mail Address:  **LOGIN** **REGISTER**

Or, continue as a guest by selecting from our available language/nation demonstration sites:  
United States (English) **GO!**

**PROJECT IMPLICIT MENTAL HEALTH**  
Find out your implicit associations about self-esteem, anxiety, alcohol, and other topics! **GO!**

**PROJECT IMPLICIT FEATURED TASK**  
Measure your implicit associations toward issues concerning race, religion, weight, or other topics **GO!**

- Gender-Career IAT** *Gender - Career.* This IAT often reveals a relative link between family and females and between career and males.
- Skin-tone IAT** *Skin-tone ('Light Skin - Dark Skin' IAT).* This IAT requires the ability to recognize light and dark-skinned faces. It often reveals an automatic preference for light-skin relative to dark-skin.
- Presidents IAT** *Presidents ('Presidential Popularity' IAT).* This IAT requires the ability to recognize photos of Donald Trump and one or more previous presidents.
- Weight IAT** *Weight ('Fat - Thin' IAT).* This IAT requires the ability to distinguish faces of people who are obese and people who are thin. It often reveals an automatic preference for thin people relative to fat people.
- Native IAT** *Native American ('Native - White American' IAT).* This IAT requires the ability to recognize White and Native American faces in either classic or modern dress, and the names of places that are either American or Foreign in origin.
- Weapons IAT** *Weapons ('Weapons - Harmless Objects' IAT).* This IAT requires the ability to recognize White and Black faces, and images of weapons or harmless objects.
- Disability IAT** *Disability ('Disabled - Abled' IAT).* This IAT requires the ability to recognize symbols representing abled and disabled individuals.
- Age IAT** *Age ('Young - Old' IAT).* This IAT requires the ability to distinguish old from young faces. This test often indicates that Americans have automatic preference for young over old.
- Asian IAT** *Asian American ('Asian - European American' IAT).* This IAT requires the ability to recognize White and Asian-American faces, and images of places that are either American or Foreign in origin.

## Against Stereotype

African American or **Good**


European American or **Bad**



## Stereotype

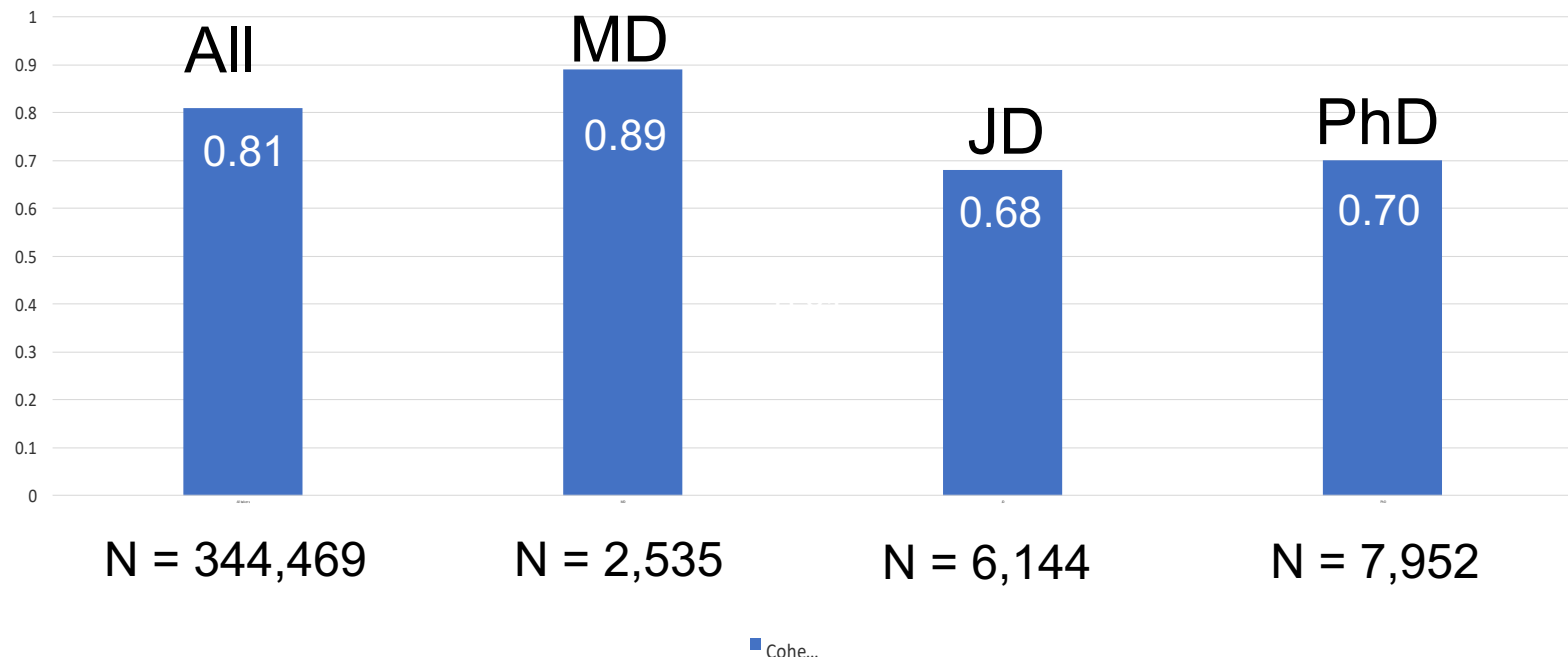
European American or **Good**

African American or **Bad**



# Race Implicit Association Test (IAT)

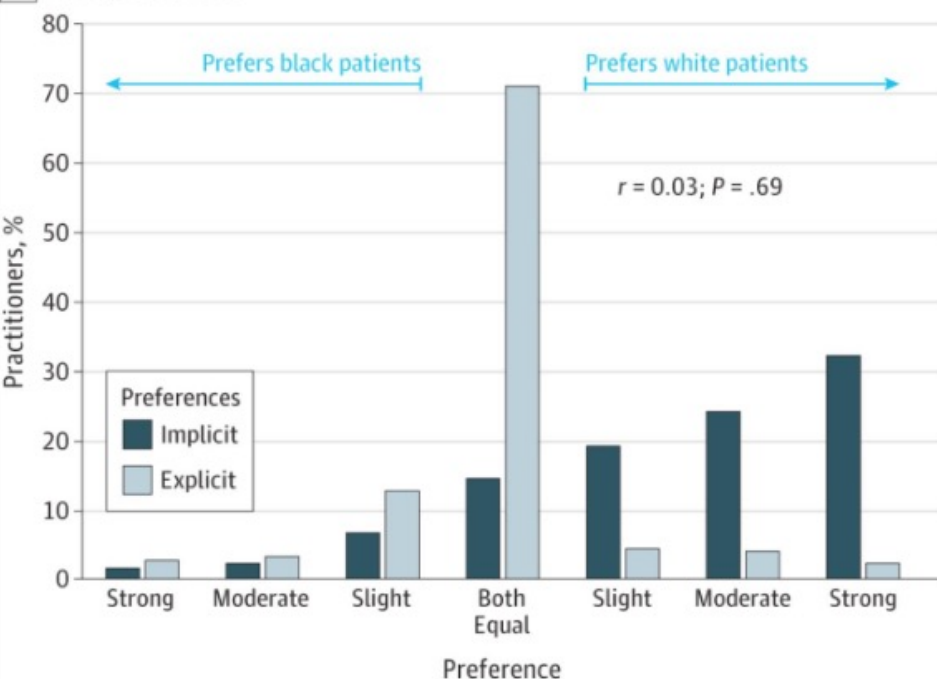
## Doctors, Researchers and Lawyers



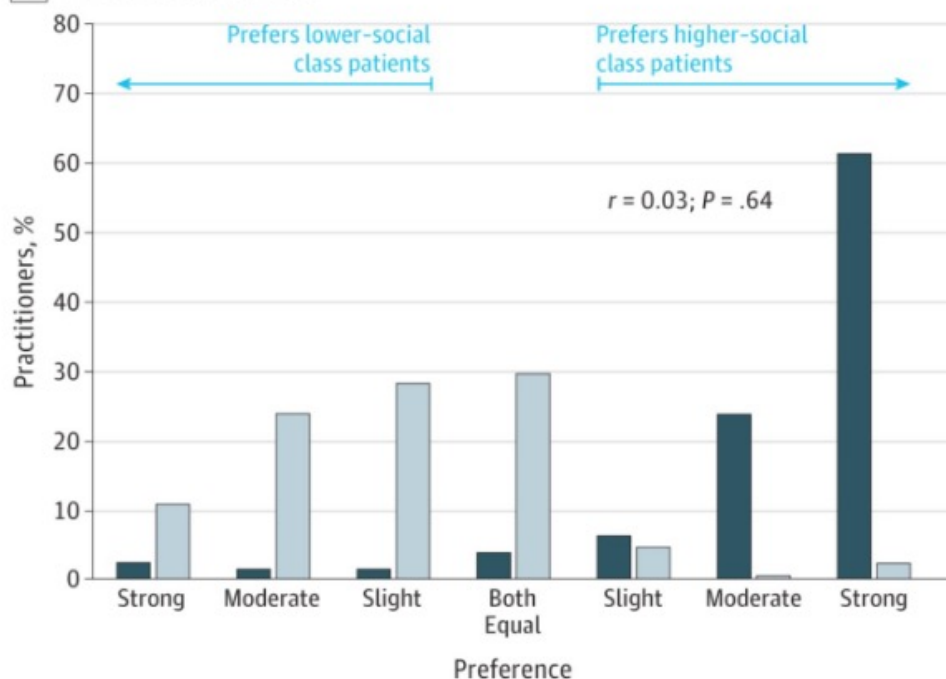
D of 0.5 = medium effect  
D of 0.8 = large effect

# Unconscious Race and Social Class Bias Among Acute Care Surgical Clinicians and Clinical Treatment Decisions

**A** Race preferences



**B** Social class preferences



Haider AH, et al. Unconscious Race and Social Class Bias Among Acute Care Surgical Clinicians and Clinical Treatment Decisions. *JAMA Surg.* 2015;150(5):457–464.



# Implicit bias in healthcare professionals: a systematic review

## Healthcare professionals have implicit bias

- Almost all studies found evidence for implicit biases among physicians and nurses to a similar degree as the general population
- Race/ethnicity, gender, socioeconomic status, age, mental illness, weight, having AIDS, brain injured patients perceived to have contributed to their injury, intravenous drug users, disability, and social circumstances.

## Implicit bias affects clinical judgement and behavior

- 20 out of 25 studies found that bias was evident either in the diagnosis, the treatment recommendations, the way the visit went, or the number of studies ordered

# Bias in Action – Medicine



Clinical Care

Workforce

Workplace

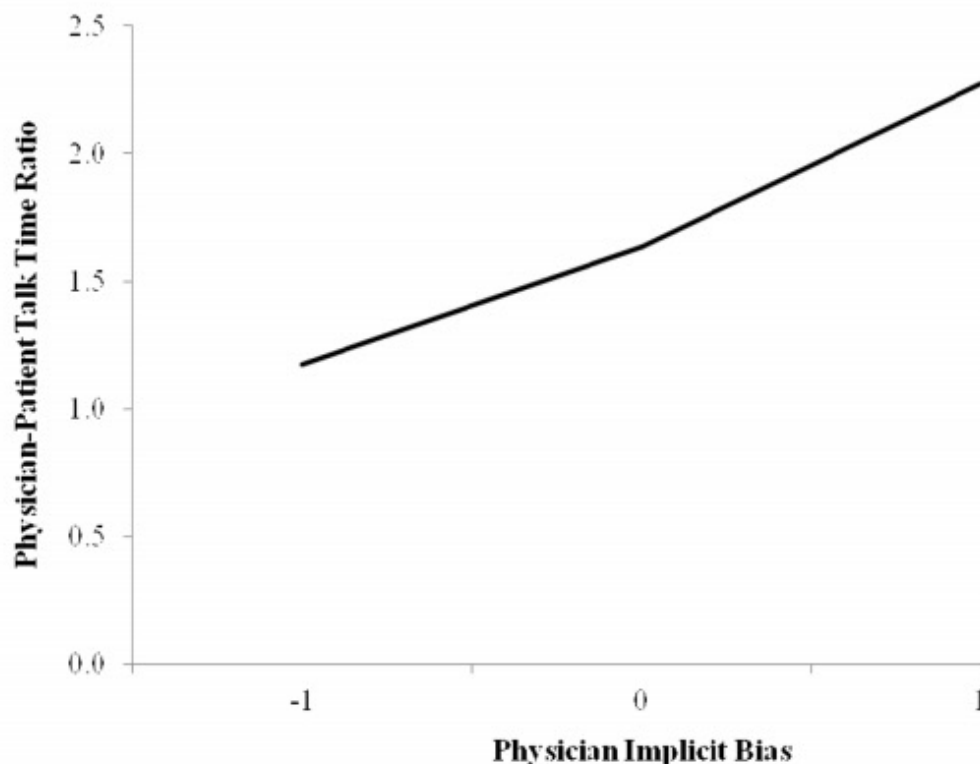
Patient-  
Provider  
Interactions

Clinical  
Decision  
Making

Patient Health  
Outcomes

# Patient-Provider Interactions

## Racial Attitudes, Physician-Patient Talk Time Ratio, and Adherence in Racially Discordant Medical Interactions



The higher the racial implicit bias, the higher the physician-patient talk time ratio

## The Associations of Clinicians' Implicit Attitudes About Race With Medical Visit Communication and Patient Ratings of Interpersonal Care

Higher race bias against Black patients

- More verbal dominance
- Lower patient positive affect
- Poor ratings of interpersonal care

## Physician Racial Bias and Word Use during Racially Discordant Medical Interactions

- High implicit bias associated with more use of person plural pronouns
- “We’re going to take our medicine, right?”



## TIME USE IN CLINICAL ENCOUNTERS: ARE AFRICAN-AMERICAN PATIENTS TREATED DIFFERENTLY?

M. Norman Oliver, MD, MA, Meredith A. Goodwin, MS, Robin S. Gotler, MA,  
Patrice M. Gregory, PhD, MPH, and Kurt C. Stange, MD, PhD  
Charlottesville, Virginia, Cleveland, Ohio, and New Brunswick, New Jersey

Significantly lower proportion of time intervals:

- Chatting
- Planning treatment
- Providing health education
- Assessing patients' health knowledge
- Answering questions

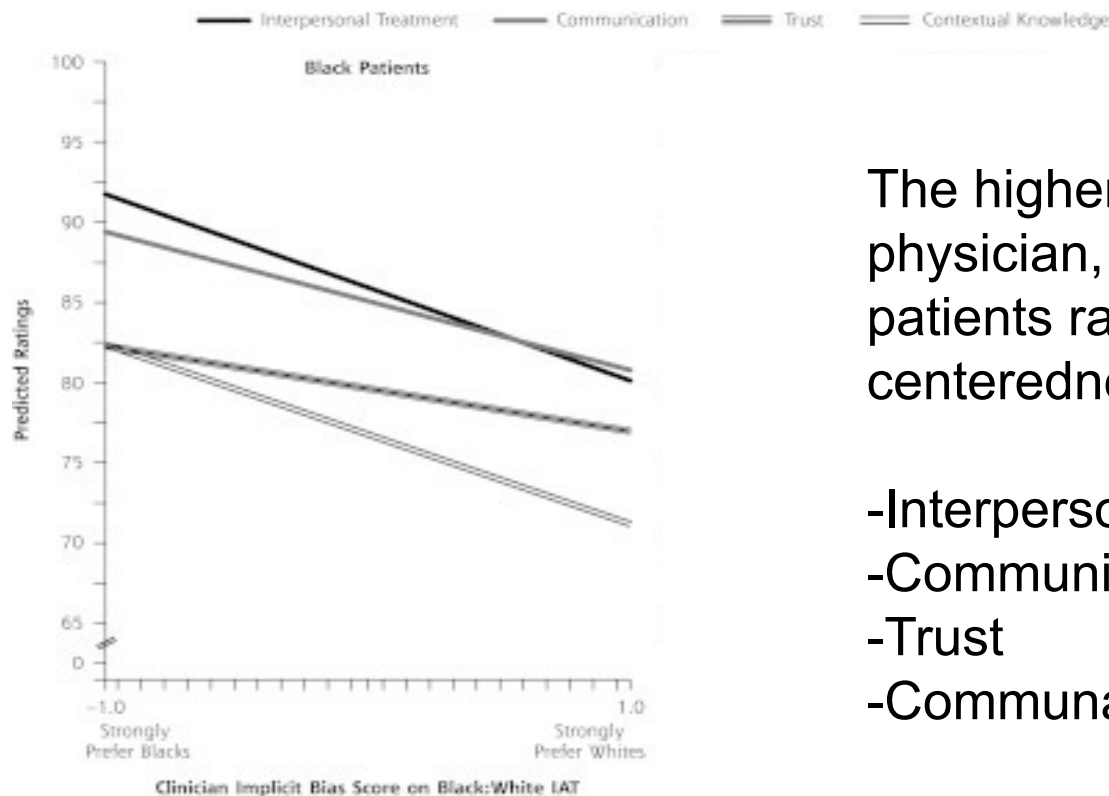
More time intervals discussing:

- What is to be accomplished
- Providing substance use assessment and advice



# Patient-Provider Interactions

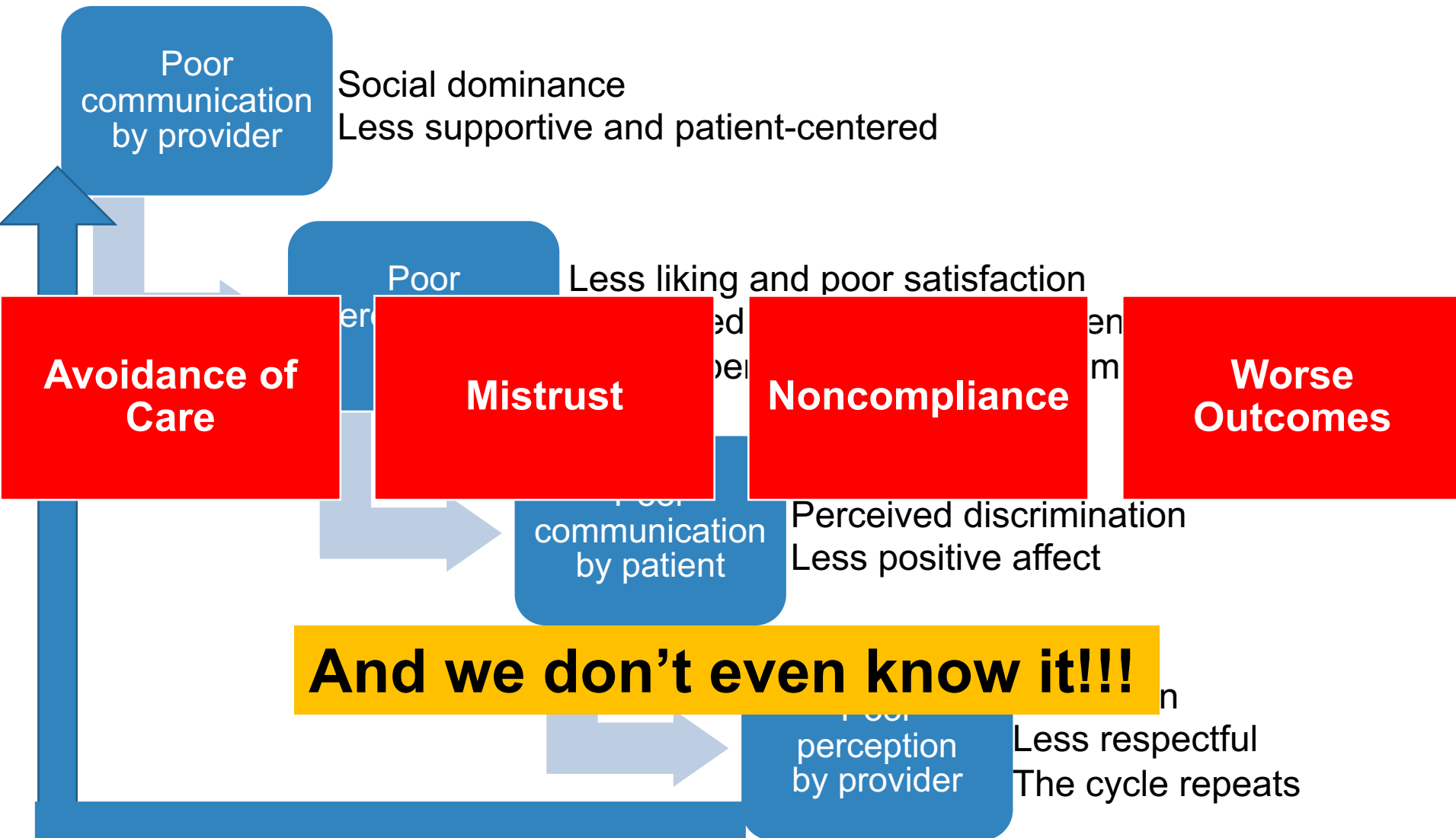
## Clinicians' Implicit Ethnic/Racial Bias and Perceptions of Care Among Black and Latino Patients



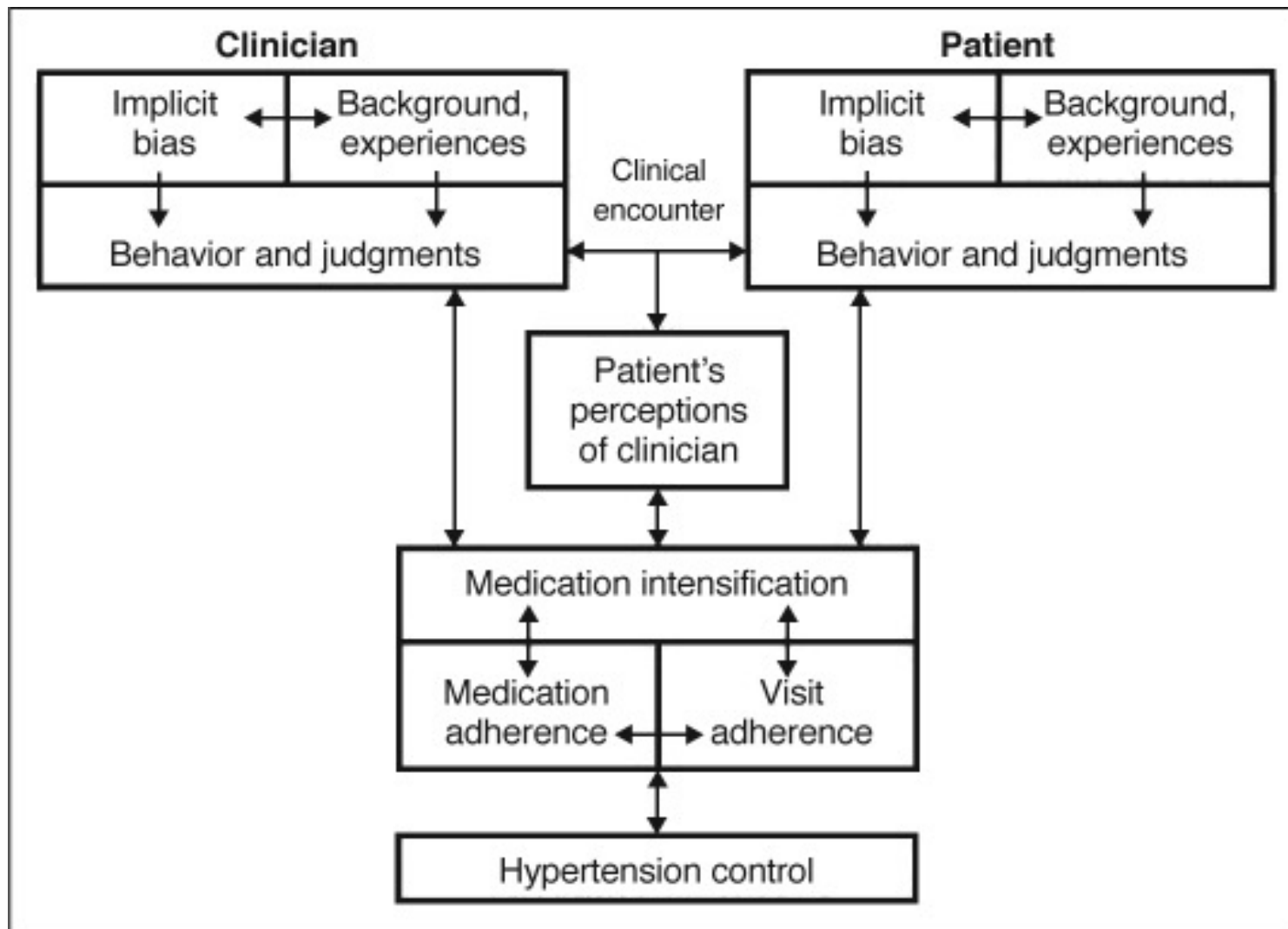
The higher the implicit bias in white physician, the lower their black patients rated their patient centeredness:

- Interpersonal treatment
- Communication
- Trust
- Communal knowledge

# Bias and Physician Communication



# Bias in Action – Clinical Care



# Clinical Decision Making

## 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.,  
AND JOSÉ J. ESCARCE, M.D., Ph.D.



**Women and Blacks - 60% less likely to be referred for Catheterization**

Schulman KA, et al.: The effect of race and sex on physician's recommendations for cardiac catheterization. *N Engl J Med* 340:618-626, 1999

## Implicit Bias and Impact on Care

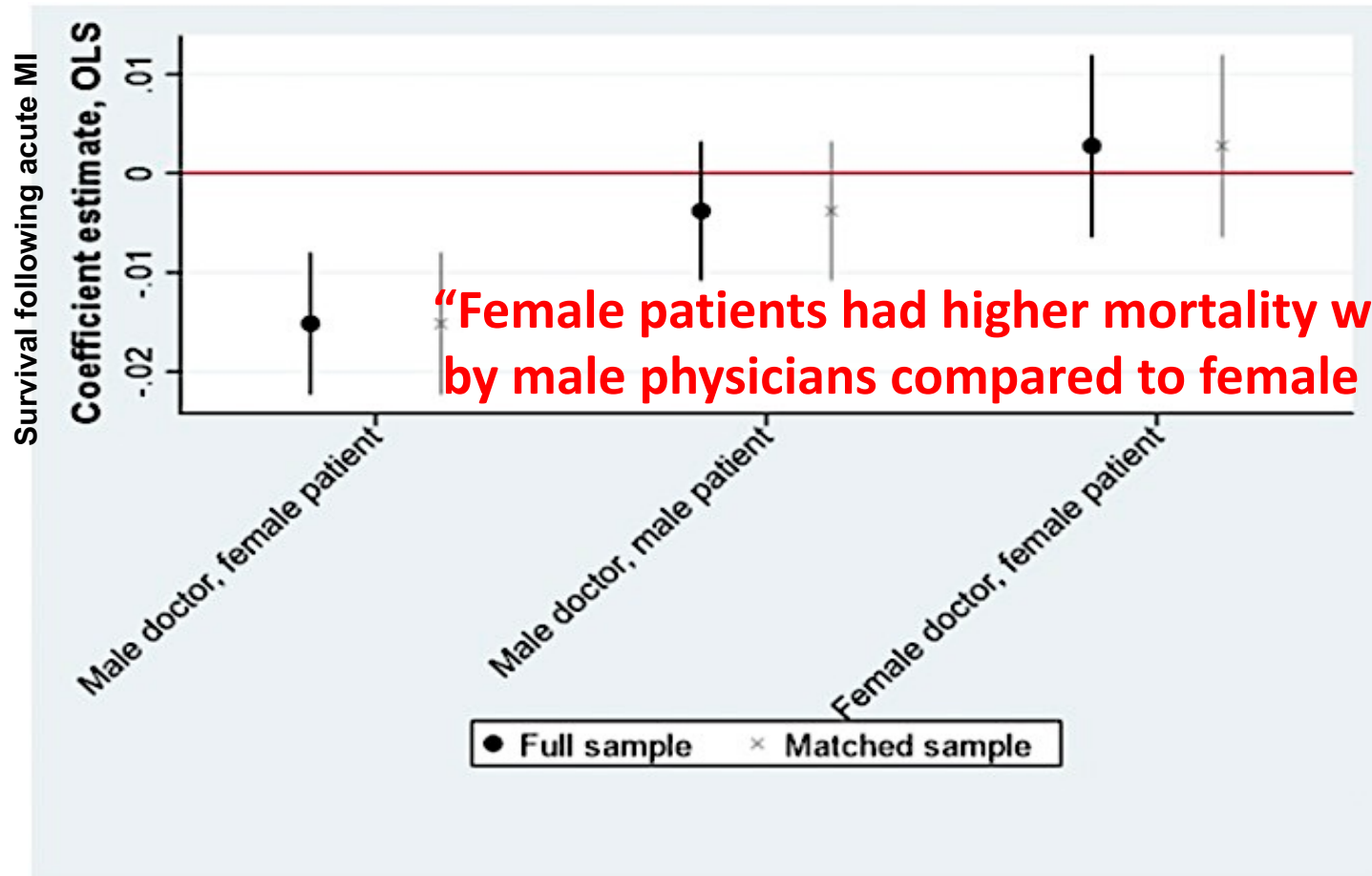
**Black and Latino patients are less likely to receive pain medication, even for acute injuries.**

**Black patients less likely to receive thrombolysis when presenting with acute CVA**

**Women are three-times less likely to be referred for total knee replacement than men even when clinically indicated and are less likely to be diagnosed with COPD than men despite having similar histories and medical examinations.**

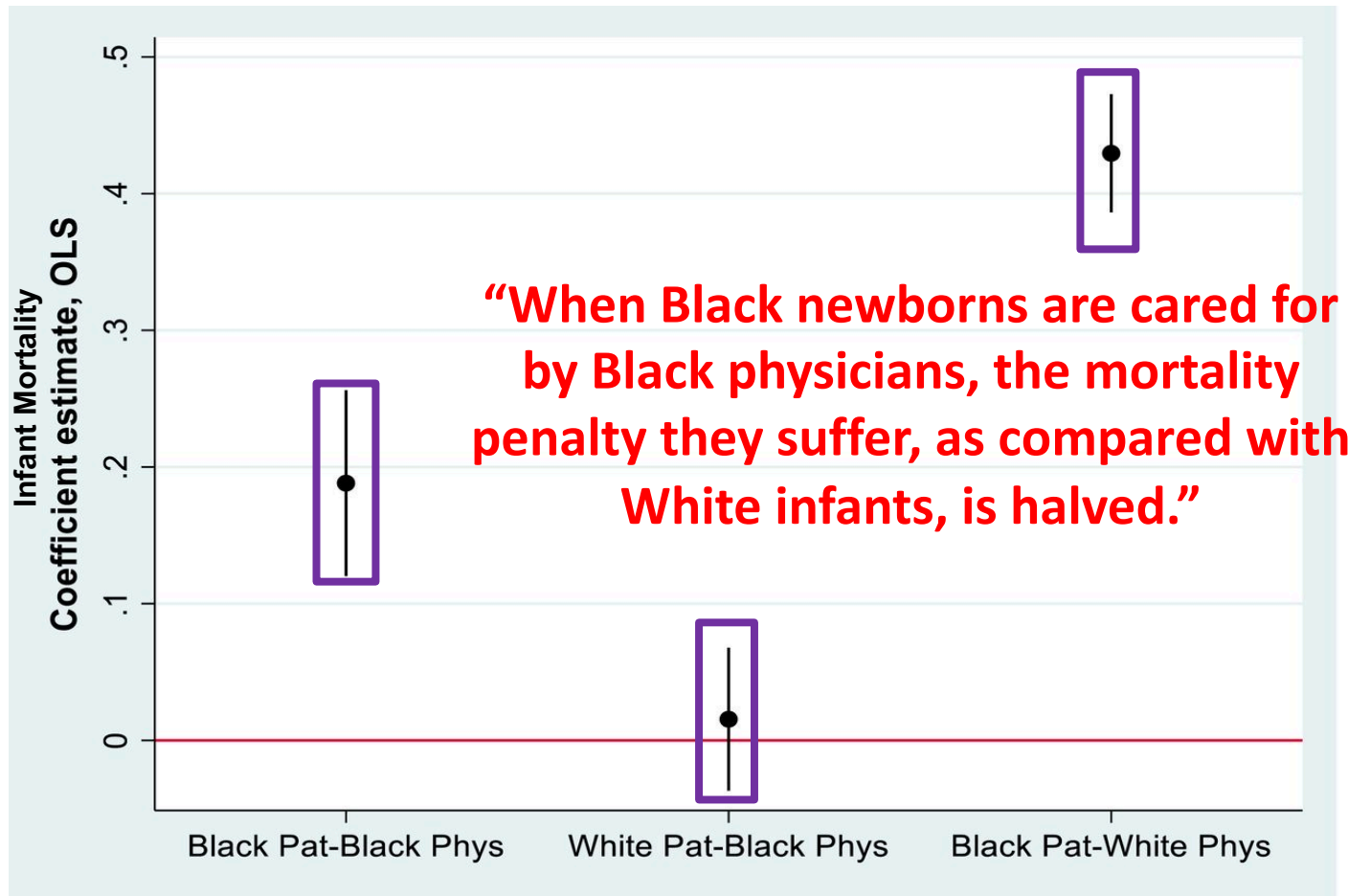
**Physicians are less likely to treat suicidal ideation in elderly patients even though those 85 and older have the second highest rate of suicide of any age group.**

## Gender Concordance on Female Survival



Greenwood BN, et al. Patient-physician gender concordance and increased mortality among female heart attack patients. *Proceedings of the National Academy of Sciences of the United States of America*. 2018;115(34):8569-74.

## Racial Concordance on Infant Mortality



# Small Group Clinical Vignette: Discussion and Debrief



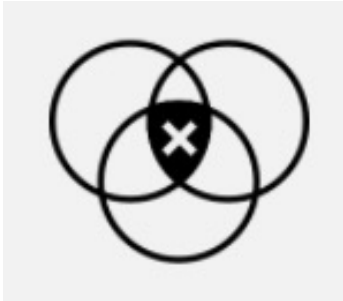


**Can we decrease our implicit  
bias in clinical care?**

# Mitigate the Effect of Bias

- Recognize and accept that everyone has bias.
- Recognizing the factors that increase bias:
  - Emotional States
  - Ambiguous scenarios
  - Low-effort cognitive processing
  - Distracted or pressured decision-making circumstances
  - When the person is not part of your “ingroup”
- Be Mindful. Be Self-Awareness. **Be Honest.**
- Modify your routine and retrain your brain

# Examples of research-proven strategies to neutralize or mitigate implicit biases.



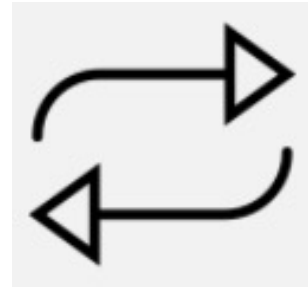
## Common Identity Formation:

During the interview inquire about possible common group identities between you and the patient



## Perspective Taking:

Taking a few moments to visualize patient's life and what they have gone through leading up to this encounter.



## Consider the Opposite:

After initial assessment, take a mental pause and actively look for evidence for the opposite conclusion.



## Counter-Stereotypical Exemplars:

Focus on individuals you admire and respect who are in the same demographic as the patient

**Take a moment for a bias check**

**Real World Case:**

**What do disparities look like  
in real life?**

# Quality Care: System & Provider Knowledge/Bias

A 75 year old obese Black female with DM was brought to a local ER by her daughter with progressive confusion, anxiety & change in mental status over 1-2 days.

At the ER, her BP was low requiring vasopressors and she was admitted to the ICU for care.

Diagnosis rendered was - “End Stage Alzheimer's Disease” and recommendations were for DNR status and transfer to hospice.

No further evaluation or treatment was offered.

What are possible risk factors for this diagnosis & recommendation

What Resources might have changed her treatment?

# Let's give her a lot of social capital

Her daughter contacted UCLA medical colleagues - transferred arranged to Reagan Medical Center.

A complete medical evaluation was conducted and treatment initiated. She returned to baseline and was discharged and the patient continued to teach UCLA students & fellows.

- She was a national leader in community partnering to address health disparities

4 months later she received Medal, the highest



Was her situation due to substandard hospital care due to poor diagnostic testing ?

Might it have been due to bias?

Provider, Health System?

What possible individual level biases?  
Age, Gender, Race, Weight, Perceived SES, other?

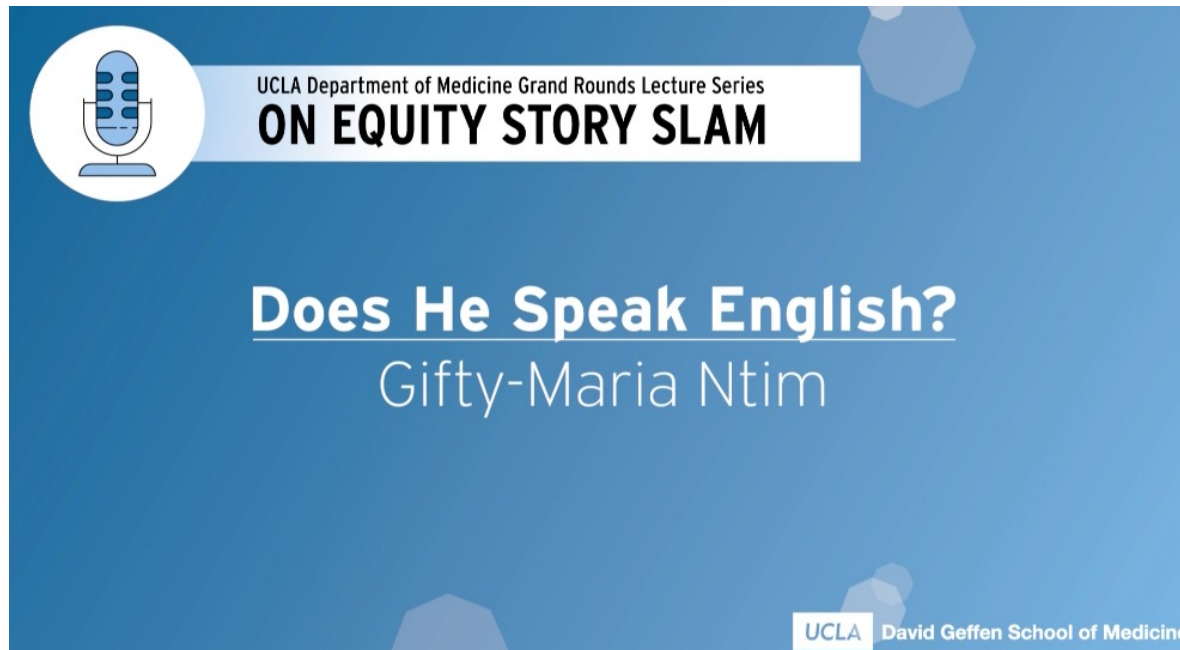
What would her outcome likely have been without extensive social capital?

How often might this be happening every day to others in similar situations without the resources?

**One thing  
about them  
tables...  
They  
ALWAYS  
turn**

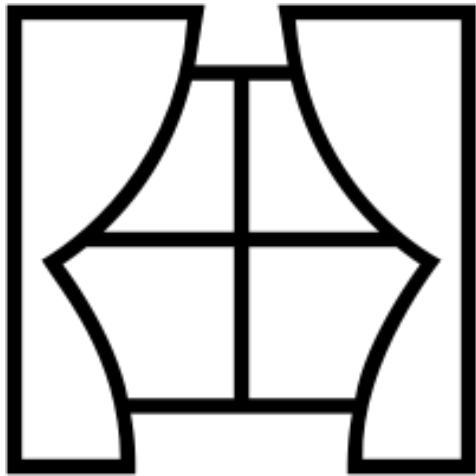


# Does He Speak English? - Gifty-Maria Ntim



Watch here: <https://vimeo.com/530837384/3839d0fde4>

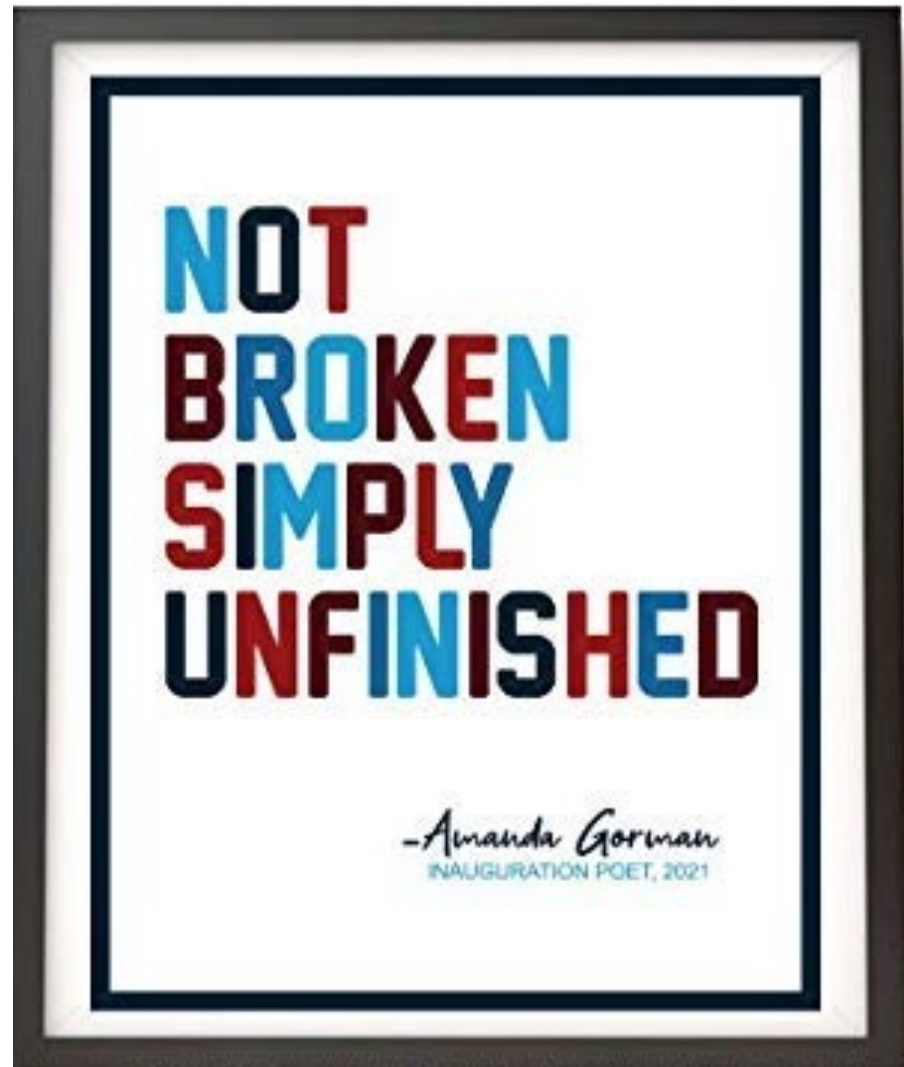
# Increasing Our Equity Consciousness



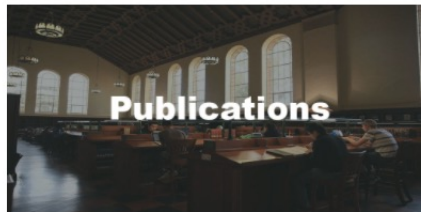
**Understand how forms of systemic oppression operate to advantage some groups and disadvantage others.**



**How have our lived experiences shaped our beliefs, attitudes and biases about ourselves and others.**



# Resources



<https://edi.med.ucla.edu>

# Allegories on Race and Racism | Camara Jones

Telling Stories  
Allegories  
"race" and racism

Camara Phyllis Jones,  
MD, MPH, PhD



11:00

**TED** Ideas worth spreading

WATCH



Heather C. McGhee | TEDWomen 2019

## Racism has a cost for everyone



14:13

## YouTube- "Implicit Bias Bruin X"

### Preface: Biases and Heuristics

Vice Chancellor Jerry Kang

**BRUIN X**

**UCLA** Equity, Diversity and Inclusion

Play (k)

0:03 / 5:13



## NY Times

**UCLA** David Geffen School of Medicine