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CENTER FOR HEALTH EQUITY, DIVERSITY & INCLUSION

Implicit Bias in Clinical Care and the Learning Environment

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Brief Survey

Learning Objectives

Introduction: racism and social determinants of health

1. Define implicit bias and how it is manifested
2. Recognize how implicit bias may be operating in the clinical setting and learning environment
3. Apply strategies to minimize impact of implicit bias

Allegories on Race and Racism

Camara Phyllis Jones, MD, MPH, PhD

Research Director, SDOH and Equity, National Center for Chronic Disease Prevention and Health Promotion, President, American Public Health Association



Levels of Racism: A Theoretic Framework and a Gardener's Tale

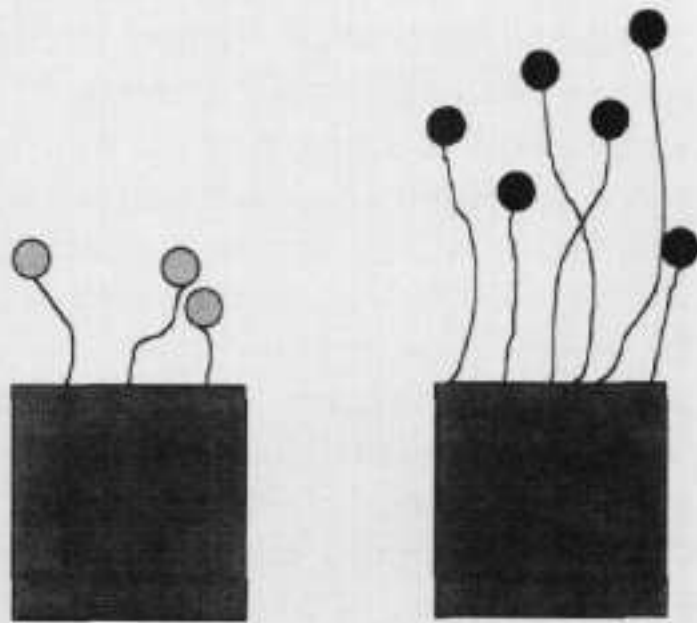
Camara Phyllis Jones, MD, MPH, PhD

Race-associated differences in health outcomes are routinely documented in this country, yet for the most part they remain poorly explained. Indeed, rather than vigorously exploring the basis of the differences, many scientists either adjust for race or restrict their studies to one racial group.¹ Ignoring the etiologic clues embedded in group differences

cess to the goods, services, and opportunities of society by race. Institutionalized racism is normative, sometimes legalized, and often manifests as inherited disadvantage. It is structural, having been codified in our institutions of custom, practice, and law, so there need not be an identifiable perpetrator. Indeed, institutionalized racism is often evident as traction in the

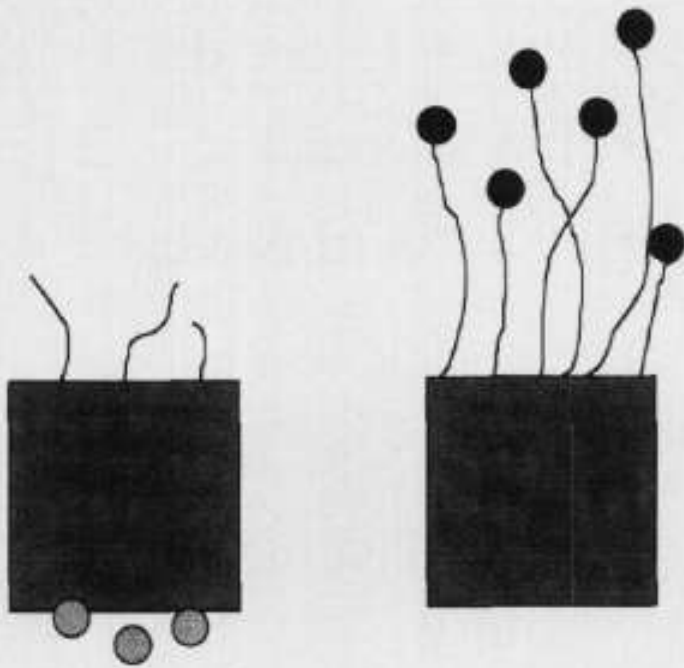
Jones CP. Levels of Racism: A Theoretic Framework and a Gardener's Tale. *American Journal of Public Health*. 2000;90(8):1212-1215.

Institutionalized racism



- Initial historical insult
- Structural barriers
- Inaction in face of need
- Societal norms
- Biological determinism
- Unearned privilege

Personally mediated racism



- Intentional
- Unintentional
- Acts of commission
- Acts of omission
- Maintains structural barriers
- Condoned by societal norms

Examples of Structures or Systems Impacted by Racism

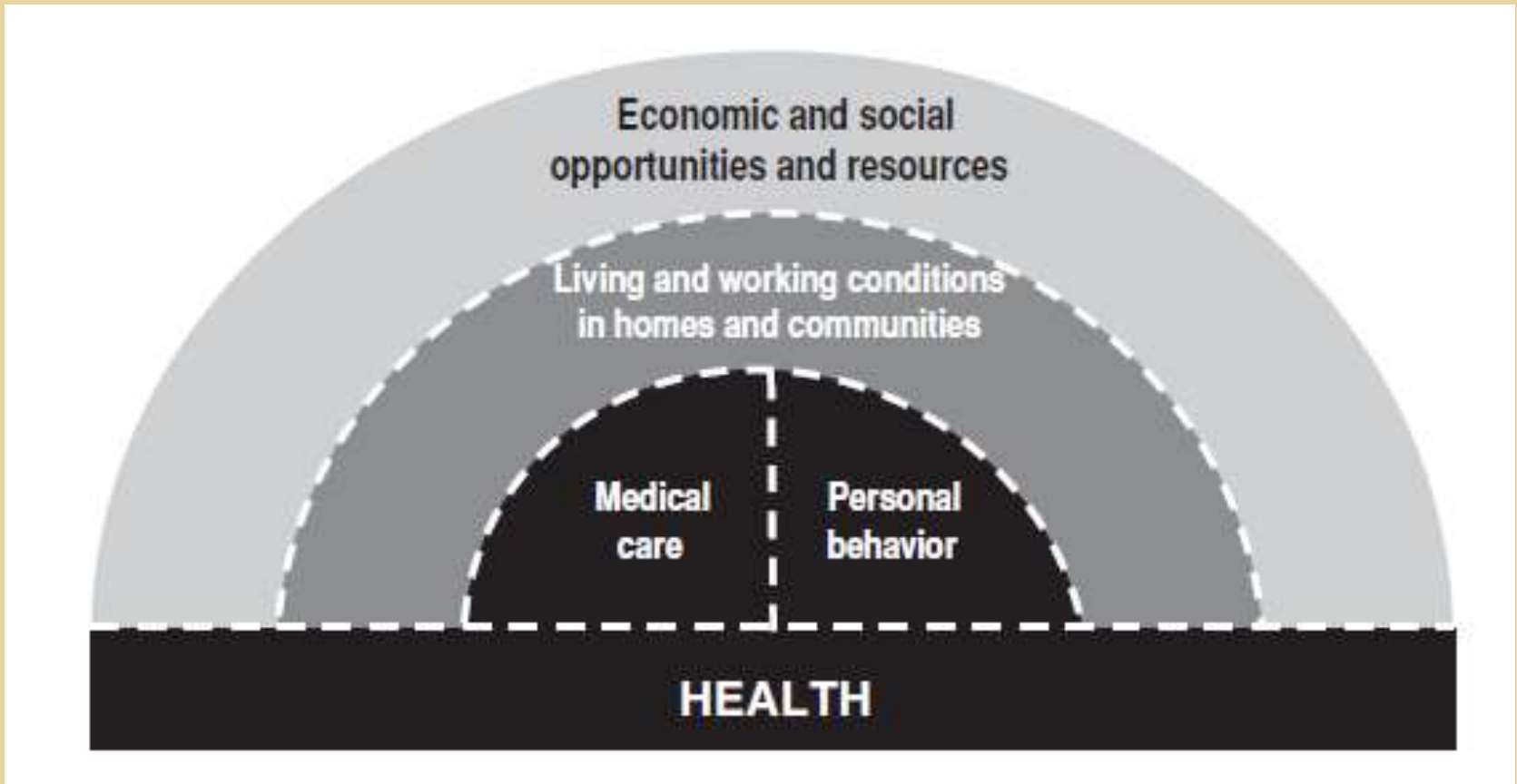
- Education
- Neighborhoods
- Criminal Justice
- Government
- Healthcare

Racism and Health Outcomes

Associated with:

- Cellular aging (i.e. shorter telomeres)
- Allostatic load (i.e. biological “wearing out” of bodily systems)
- Poorer mental health status
- Chronic health conditions
- Unhealthy lifestyle behaviors (i.e. smoking, alcohol)
- Relationships complex—differences based on: recent immigrant status, age, gender, race, coping style, resilience

Determinants of Health



Social Determinants of Health



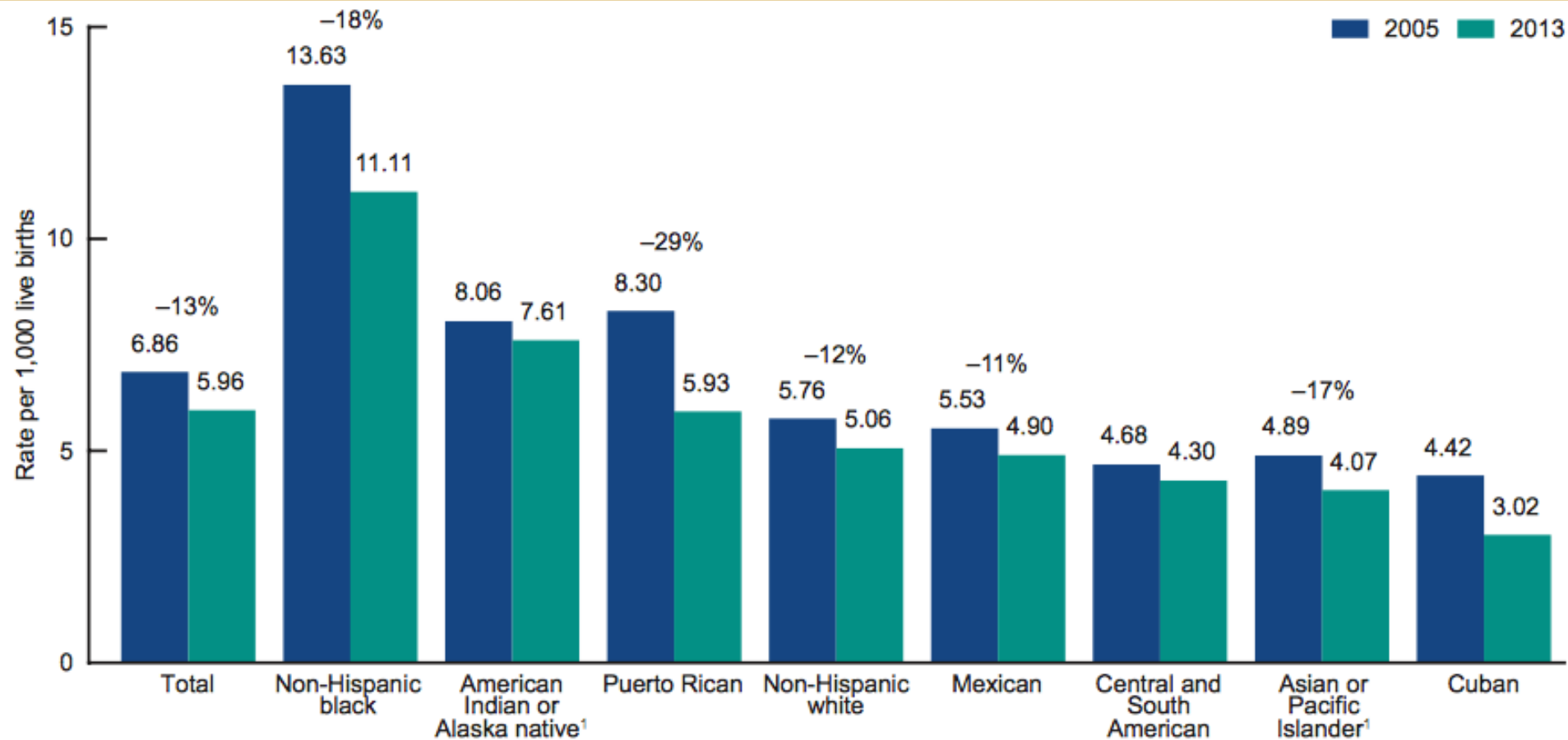
- Factors associated with where people live, work, and play
- Non-medical
- Structure other “individual” causes of health
 - Knowledge, attitudes, beliefs
 - Behaviors
 - Genetic endowment (e.g. epigenetics)
- “Causes of the causes”

Embodiment

The material and social world in which we live is biologically incorporated into us in a societal and ecologic context, thereby creating population patterns of health, injury, disease, and well-being.

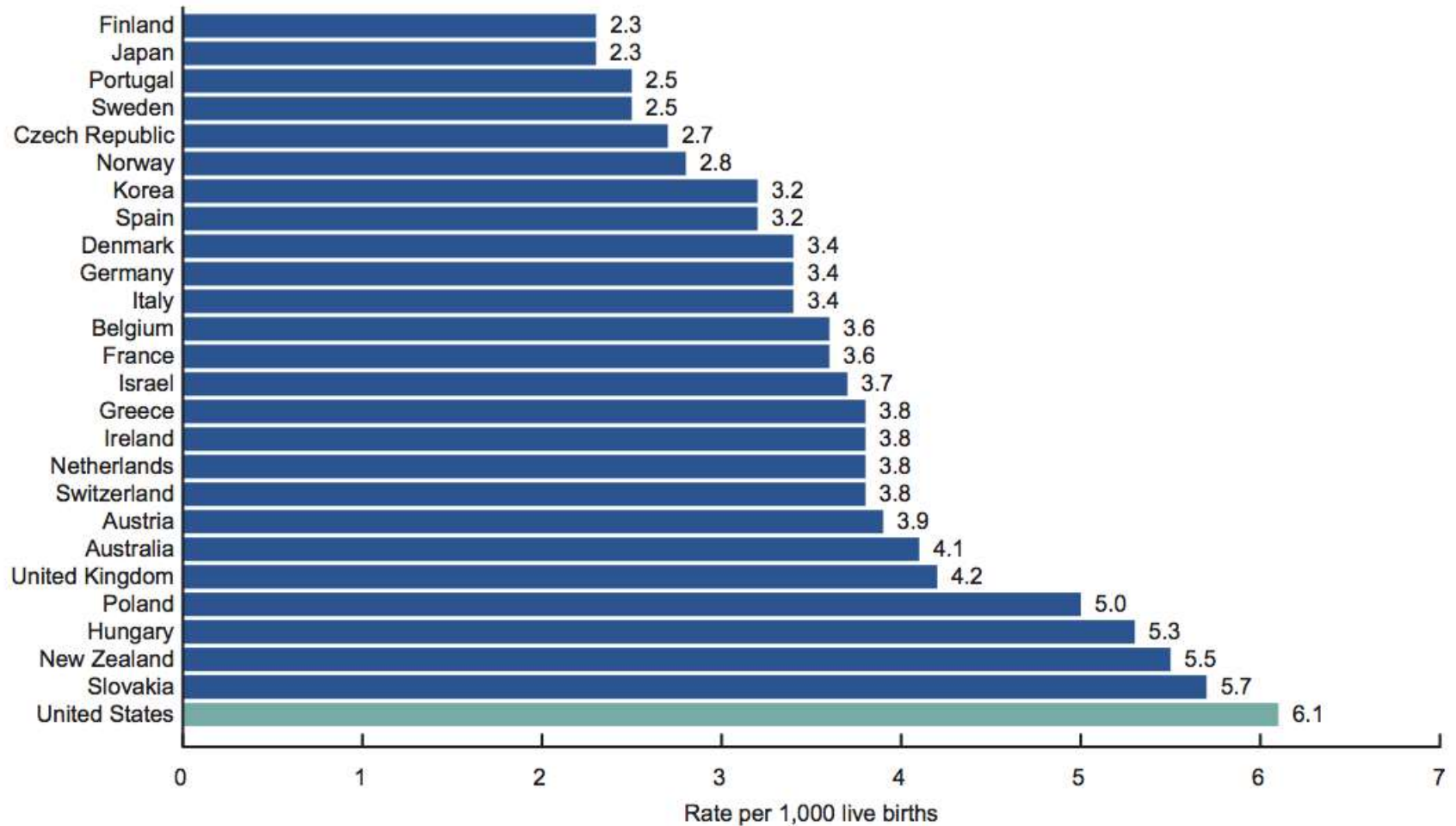
What explains these inequities is the cumulative interplay, at multiple levels and over time, of exposure, susceptibility and resistance, as well as accountability and agency: both for social disparities in health and research.

Infant Mortality by Race & Hispanic Origin of Mother: United States 2005 & 2013



¹Includes persons of Hispanic and non-Hispanic origin.
NOTE: Percent change indicates significant change between 2005 and 2013.
SOURCE: CDC/NCHS, National Vital Statistics System.

International Infant Mortality



NOTES: Canada's 2010 data were not available from the Organisation for Economic Co-operation and Development (OECD) at the time of manuscript preparation. The 2009 infant mortality rate for Canada was 4.9. If the 2010 data for Canada had been available, the U.S. ranking may have changed. Deaths at all gestational ages are included, but countries may vary in completeness of reporting events at younger gestational ages.

SOURCES: CDC/NCHS, linked birth/infant death data set (U.S. data); and OECD 2014 (all other data). Data are available from: <http://www.oecd.org>.

Figure 1. Infant mortality rates: Selected Organisation for Economic Co-operation and Development countries, 2010

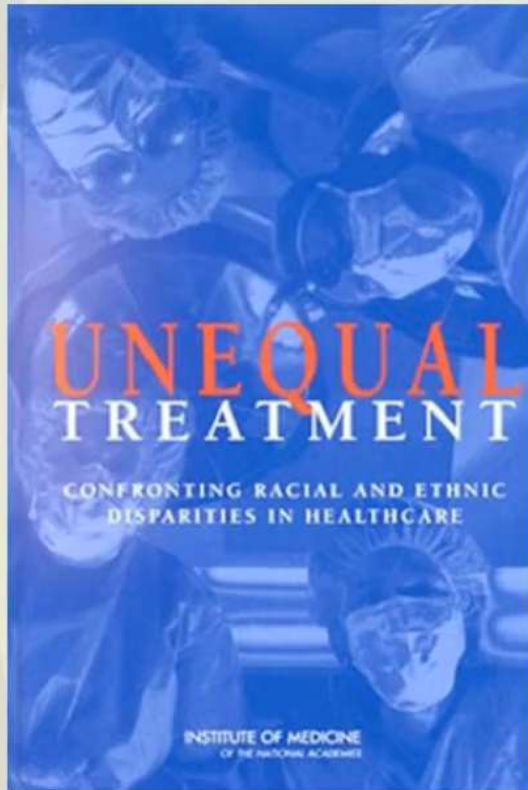
Objective 1

Implicit Bias

What is it and how is it manifested in health care?

Definition of Terms

- **Bias:** an attitude that projects favorable or unfavorable dispositions toward people
- **Stereotype:** shared set of beliefs, fixed impression of a group
- **Prejudice:** negative attitudes and beliefs about out-group vs. in-group
- **Discrimination:** behavioral manifestation of bias, stereotyping, and prejudice, the way others are treated
- **In-group favoritism:** advantaging “people who are like me”
- **Aversive racism:** people who explicitly support egalitarian principles and believe themselves to be non-prejudiced but also unconsciously harbor negative feelings and beliefs
- **Stigma:** the process by which certain human characteristics are labeled as socially undesirable and linked with negative stereotypes about a class of individuals, resulting in social distance from or discrimination towards labeled individuals (NIH)



Discrimination in Health Care

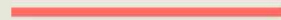
“Differences in care that emerge from biases and prejudice, stereotyping, and uncertainty in communication and clinical decision-making”

Patient Perceptions of Discrimination

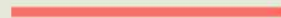
Delay in seeking care



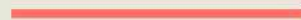
Mistrust in the provider



Patient stress level



Adherence to treatment



Continuity of Care

Science of Implicit Bias

Implicit and Explicit Beliefs

Aggressive

Attractive

Competent

Likeable

Trustworthy



First Impressions

Willis & Todorov, 2006

Unknown Face



First Impressions are Made Quickly

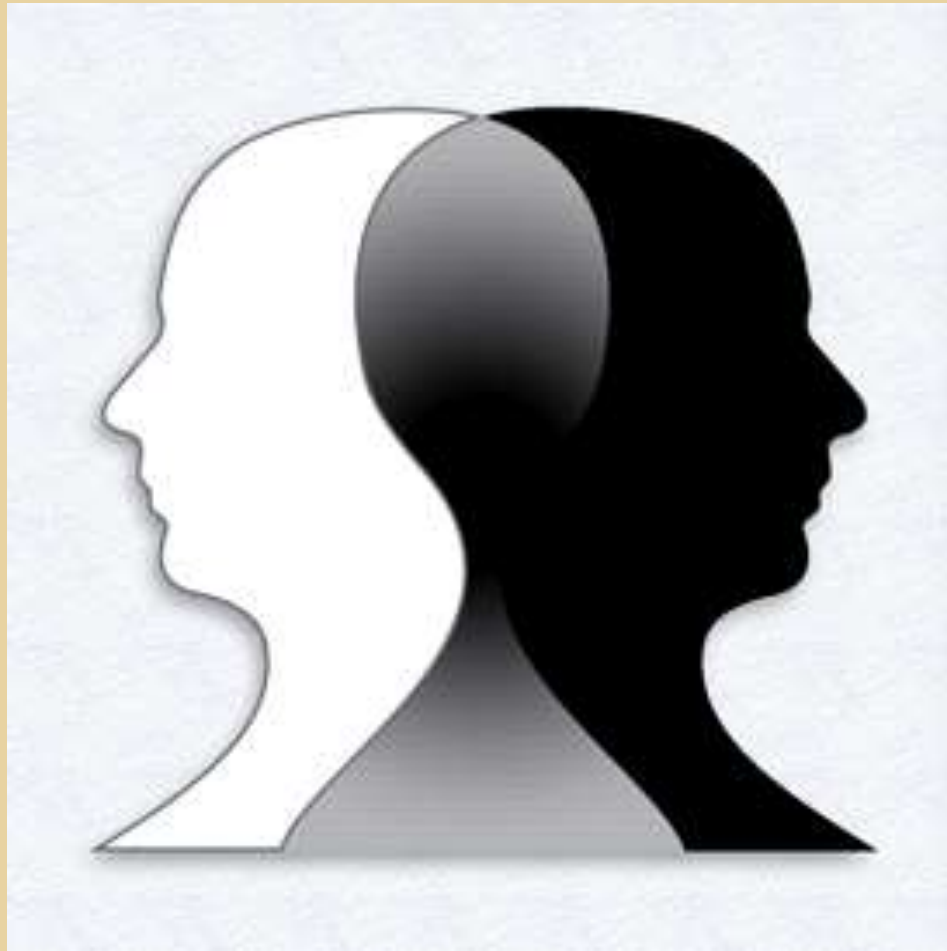
- Exposure to an unknown face for one-tenth of a second was enough to judge these traits (implicitly)
- Judgment did not change with increased of one second, but confidence in the judgment increased

Implicit and Explicit Beliefs

Explicit
Attitudes and
Beliefs

Can report
Rational

Higher level
thinking



Implicit
Attitudes and
Beliefs

Automatic
Hidden
Unaware

Lower level
thinking

Implicit and Explicit Beliefs Can Disagree

- Implicit and self-reported attitudes and beliefs may differ, and a person may be unaware that they hold contradictory beliefs.
- Even those holding egalitarian values may hold negative implicit attitudes and beliefs

Measuring Implicit Beliefs



Implicit Association Test (IAT)

A widely used, indirect measure of implicit social cognition.

Greenwald, et al., 1998



Implicit Association Test (IAT)

Responses to images that are more easily associated will be quicker than those that are less easily associated.

**Implicit
Association
Test (IAT)**



Project Implicit®

Project Implicit

www.implicit.harvard.edu

Race Implicit Association Test



If there is a quicker association of this face with the concept of "good"



...than there is with this face,

...then the individual is said to have a pro-white bias.

Other Implicit Association Tests



Implicit Bias and Behavior

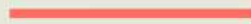
Found IAT measures of implicit attitudes better predictor than self-reported ones.

Not a diagnostic instrument.

A high bias score does not mean a person will discriminate.

Implicit Bias and Decision Making

Clinical uncertainty



Heavy workload



Fatigue



Pressure of time

Croskerry, 2001, 2010

Summary

Implicit attitudes and beliefs are hidden.

Implicit bias is common, even among egalitarian individuals.

Ambiguity, fatigue, heavy workload are conditions in which implicit bias may affect decision-making.

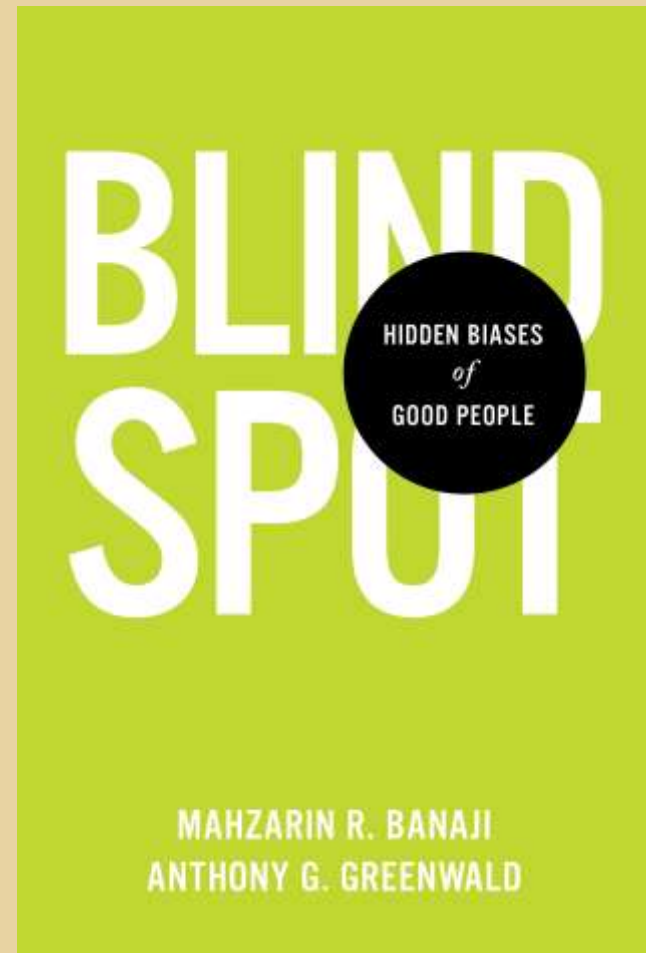
Implicit Bias

How might it be operating in clinical care and teaching?

Carla the Quilter



- Carla, a woman in her late 20s, was rushed to the emergency room by her boyfriend
- She had cut her hand on glass bowl as it slipped to the ground and shattered



Banaji & Greenwald, 2013



Her hand was cut from mid-palm to wrist and
bleeding



BF told the ED resident that quilting was very important to Carla and worried about damage to her fine motor control



The resident stated that he was confident the hand would heal well if he could “just stitch it up quickly”



As the doctor prepared Carla's hand, a student volunteer walked by and recognized Carla, who in addition to being a quilter, was also an assistant professor at Yale



The ED doctor stopped in his tracks and said,
“You are a professor at Yale?”

Within seconds Carla was headed for the surgery department and the best hand surgeon in Connecticut was called in

After hours of surgery Carla's hand was restored to pre-injury function



What Happened Here?

In-group favoritism: Favoring someone
that you think is like yourself

Less an act of overt hostility and more
an act of an absence of helping

Can increase the relative advantages of
those who are already advantaged

Implicit Bias in Health Care

- Some studies find implicit bias and others do not
- Some studies show that implicit bias is associated with quality of care and others do not
- Most studies focus on medicine but other types of providers are included too
- Few studies exist for clinical behavior and outcomes, few measure actual care

2007

Green, et al., Treatment
Acute Coronary Symptoms

- Physicians hold strong implicit attitudes favoring white Americans vs. Black Americans (IAT)
- Stronger pro-White bias- less likely to refer Black patients to treatment for acute coronary symptoms
- African American physicians no implicit bias

2014

Blair, et al., Implicit Bias:
Hypertension

- Implicit racial bias exists
- No differences in treatment intensification for White, Latino, and Black patients
- Increase of clinician bias from average to strong associated with change of less than 5% in all outcomes

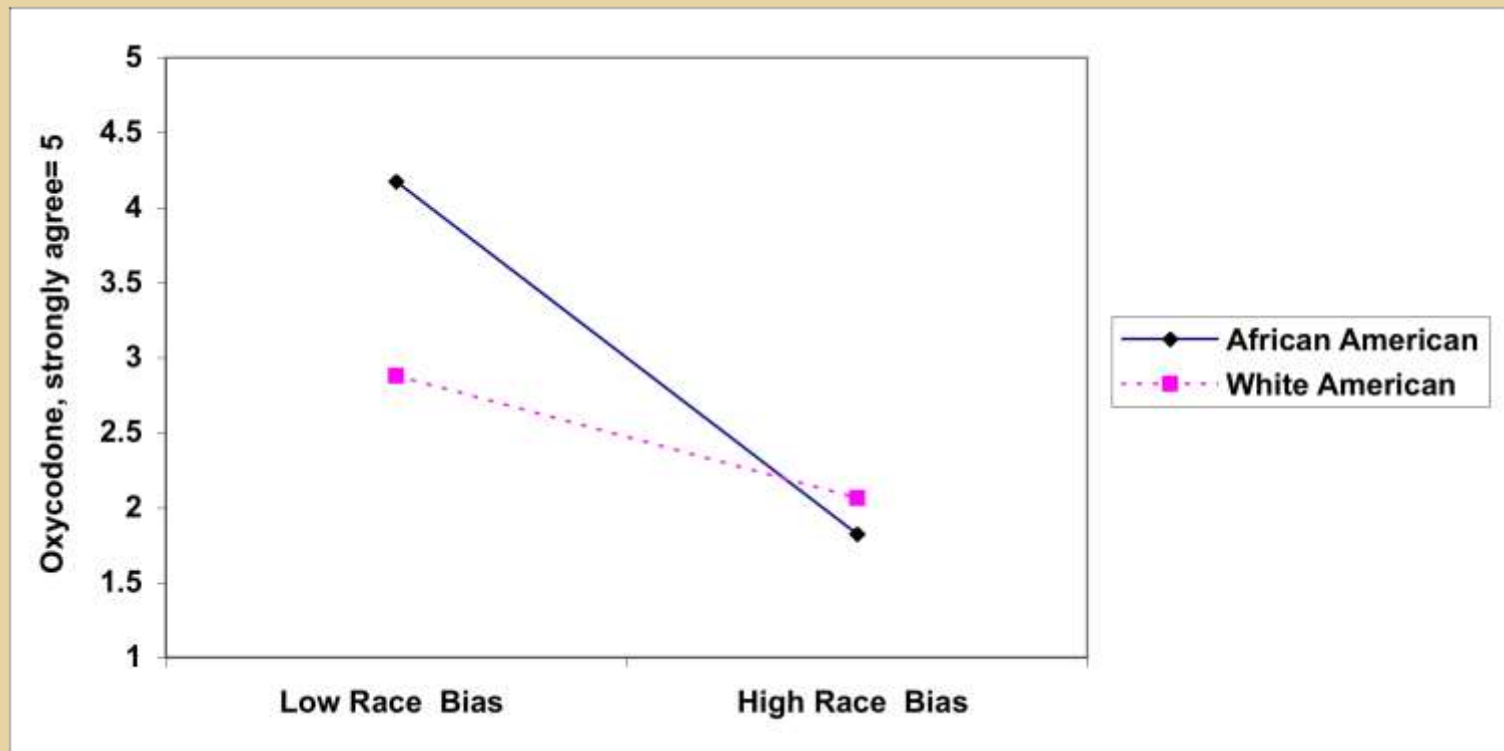
2008 & 2012

Sabin et al., Pediatrician Study

- Pediatricians show weak implicit race bias
- Moderate implicit association of race & medical adherence
- Strong explicit attitudes favoring African Americans
- Bias NOT associated with treatment recommendations: ADHD, UTI, Asthma

Implicit Race Bias: Pain Management

Pediatricians with low implicit pro-white bias were more likely to agree with the recommendation to prescribe narcotic pain medication for AA patient



Real World Care

2012

Cooper, et al.

Stronger clinician
implicit bias favoring
White Americans
over Black Americans

Lower patient positive affect

Patients less liking of the clinician

Less confidence in clinician

Lower perceived respect from
clinician

More clinician verbal dominance

Learning Environment



Stereotype threat

Bias as contagious

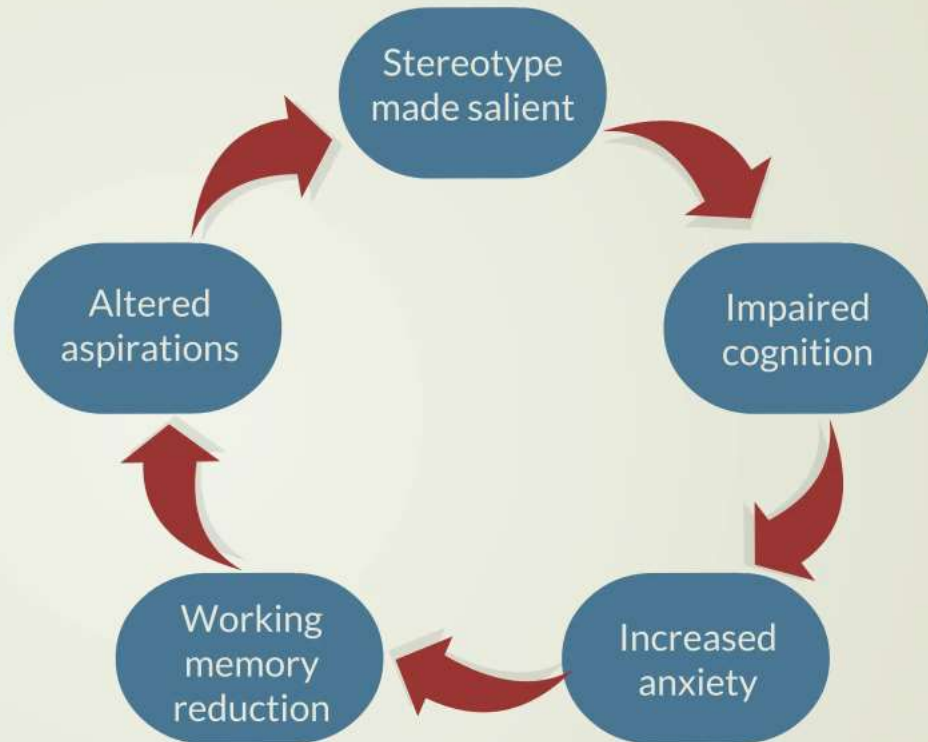
Bias in the curriculum

Bias in letters of recommendation

Bias in evaluation and assessment

Organizational climate and inclusive culture

Stereotype Threat



Steele, 1997, Burgess et al., 2010

Non Verbal Contagion of Bias

2015

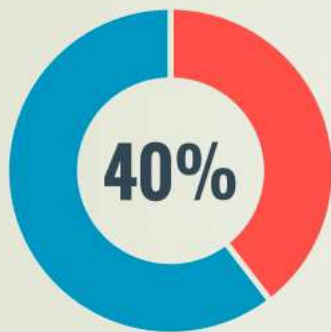
Willard, Isaac, Carney

Just observing subtle negative bias toward a Black person may shift an individual's bias.

Racial bias is a communicable attribute

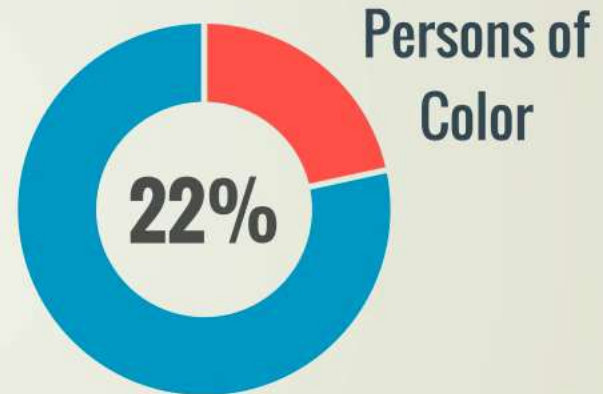
Genuinely egalitarian individuals can shape social structure to be more equal

Bias in Course Content



Female

Exception: Reproduction 62.4% female



Persons of Color

34% of US population is non white

Martin, Kirgis, Sid, Sabin, 2016

Medical School Faculty Letters: Women

Bias in Letters



Significantly shorter

First name vs. "Doctor"

Doubt raisers

Mentioned interpersonal relation

Referred to personal life

Trix, Psenka, 2003

2007

Lee, Vaishnavi, Lau,
Andriole, Jeffe

Is bias operating
in clinical
clerkship grades?

Lower grades associated with:

Older age

Lower quality clerkship experience

Non-white race

Male gender

Less assertive, more reticent

Medical Student Experiences

2014

van Ryn, et al.

Asked to report on formal and informal curricula and Race IAT in Y1 and Y4

Overall small decrease in implicit race bias

49%

Had heard negative comments about African American patients from attendings or residents

Having heard such comments predicted an increase in race bias

Mistreatment and Minority Students

- Perceived mistreatment is particularly harmful for minority students
- Students are faced with the possibility that mistreatment is due to their race or ethnicity
- Reinforces stereotype threat and can result in diminished performance

Burgess et al., 2010

Medical Student Mistreatment 2016

- **Publicly Humiliated**
- Threatened with Physical Harm
- **Physically Harmed**
- Perform Personal services
- **Denied Opportunities because of gender**
- Asked to exchange sexual favors
- Unwanted sexual advance
- **Offensive sexist remarks**
- **Lower evaluations/grades because of gender**
- Denied Opportunities because of race/ethnicity
- Racially/ethnically offensive remarks
- Lower grades because of race/ethnicity
- **Denied opportunities because of sexual orientation**
- Offensive remarks because of your sexual orientation
- Lower grades because of sexual orientation
- Other negative or offensive behavior

Bold: UW students reporting “yes” is \geq 75% of national percentile benchmark

How Implicit Bias Creates Barriers

Snap Judgements

In-group favoritism

Presumptions of competence

Greater comfort around those who are similar

Subjective assessments of potential

Banaji & Greenwald, 2013

<http://www.engr.washington.edu/lead/biasfilm/>

Summary

Discrimination may be more favoritism than hostility.

Research on implicit bias's effect on health outcomes is mixed.

Biases operate in classroom and clinical learning environments.

Objective 3

Implicit Bias

Applying strategies to minimize impact.

What Not to Do

Don't try to change people's
implicit attitudes

Teaching cultural competence
is not enough

Penner et al., 2014, Perry, Murphy, Dovidio, 2015, Zestcott, 2016

Strategies to Interrupt Implicit Bias

Collect data, monitor equity

Reduce discretion, increase objectivity

Promote diversity

Teaching strategies

Recognize bias in letters

Imagery and role modeling

Accountability

Collect Data

- Collect data organizational, individual levels
- Monitor equity – find patterns, ongoing process
- If disparities/differences exist explore why
 - Differential treatment
 - Biased perceptions
 - Cultural differences
 - Measurable differences- why?

Develop Objective Processes

Reduce discretion and subjectivity
in decisions

Develop standardized, objective processes

Create standardized decision tools

Follow clinical guidelines

Why Promote Diversity?

58%

More accurate
answers in diverse
groups than
homogeneous ones

Levine, et al., 2014

Why Promote Diversity?

Differences only evident
with interreaction.

More time in groups = more
accurate answers.

Better critical thinking

Improved error detection

More accurate answers

How to Promote Diversity?

Use best practices in hiring, etc.

UWSOM best practices training

CEDI search committee tool kit

Pipeline programs

Inclusive admissions

Supportive medical school climate

Teaching Strategies

Historical context of racism

Psychological basis for implicit bias

Would do vs. Should do exercises

Build confidence in intergroup interactions

Teach perspective-taking & affective empathy

Demonstrate and promote patient centeredness, communication

Positive Images and Role Modeling

Viewing another person engaged in discrimination can without awareness or consent shape racial bias

Individuals who are genuinely egalitarian can have a positive impact on another person and shape positive attitudes

Identify Bias in Writing and Reading Letters of Recommendation

Examples of Bias Expressed in Letters of recommendation

- **Negative language:** *While not the best student I have had*
- **Hedges:** *It appears that her/his health is stable*
- **Unexplained:** *Now that she/he has chosen to leave the laboratory*
- **Faint praise:** *She/he is void of mood swings and temper tantrums*
- **Grindstone:** *She/he is conscientious and meticulous- suggests has to work so hard to achieve*

Reduce Stereotype Threat

Value multiple perspectives

Provide opportunities to affirm individual's strengths

Affirm high standards and confidence that all students have the ability to meet those standards

Develop Organizational Accountability

Survey stakeholders

Employee or student diversity

Organizational climate survey

Equity in student assessment

Assign responsibility

Continuous improvement

Summary

Collect data

Promote diversity

Objective processes

Strategies for learning environment

Thank you!

The Team



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Brief Survey