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

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

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.


Rate per 1,000 live births

- Total: 6.86 in 2005, 5.96 in 2013 (-13%)
- Non-Hispanic black: 13.63 in 2005, 11.11 in 2013 (-18%)
- American Indian or Alaska native: 8.06 in 2005, 7.61 in 2013 (-5%)
- Puerto Rican: 8.30 in 2005, 6.30 in 2013 (-29%)
- Non-Hispanic white: 5.93 in 2005, 5.06 in 2013 (-12%)
- Mexican: 5.76 in 2005, 5.53 in 2013 (-11%)
- Central and South American: 4.90 in 2005, 4.30 in 2013 (-17%)
- Asian or Pacific Islander: 4.68 in 2005, 4.07 in 2013 (-17%)
- Cuban: 4.42 in 2005, 3.02 in 2013 (-30%)

1Includes persons of Hispanic and non-Hispanic origin.

NOTE: Percent change indicates significant change between 2005 and 2013.

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, they 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”

Institute of Medicine, Unequal Treatment, 2003, p. 160
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
First Impressions

Aggressive
Attractive
Likeable
Competent
Trustworthy

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

Nosek, et al., 2007, Burgess et al., 2007, Banaji & Greenwald, Dovidio & Gaerner 2000
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)

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.

Greenwald et al., 2009
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 a glass bowl as it slipped to the ground and shattered.
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

Banaji & Greenwald, 2013
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

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

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

Stereotype made salient

Impaired cognition

Increased anxiety

Working memory reduction

Altered aspirations

Steele, 1997, Burgess et al., 2010
Non Verbal Contagion of Bias

2015
Willard, Isaac, Carney

Racial bias is a communicable attribute

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

Genuinely egalitarian individuals can shape social structure to be more equal
Bias in Course Content

40% Female

Exception: Reproduction 62.4% female

22% 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
Is bias operating in clinical clerkship grades?

2007
Lee, Vaishnavi, Lau, Andriole, Jeffe

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 ≥ 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 interaction.

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

Willard, Isaac, Carney, 2015
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

Trix & Psenka, 2003
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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