Unconscious Bias
How what we don't know can hurt our patients

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Overview

• A little about unconscious thinking and bias
• Exercise looking at our own unconscious biases
• How it relates to medicine and medical education
• Video highlighting unconscious biases - reflection
• Wrap-up and Q & A
So are we in complete control of our decisions and behaviors?
Are doctors, nurses, and other health care professionals susceptible?
You wrote “ZYPREXA.”
Will your patient leave the pharmacy with something else?

With over 4,000 drugs on the market and more than 8 million prescriptions filled every day, medication errors can and do occur. For example, ZYPREXA and Zyrtec® (cetirizine HCl) have been mistaken, once for the other, in the past.

To help avoid such medication errors, the Institute for Safe Medication Practices (ISMP) recommends that physicians:

- Print the medication’s brand name and generic name on all prescriptions.
- Include dosage form, strength, and full instructions.
- Pronounce the name for the patient or caregiver, and have them say it back to you.
- Remind the patient to check for anything unusual (eg, capsules instead of the usual tablets) before they leave the pharmacy.

Please take special care when prescribing any medication. Millions of patients and their families are counting on you.
osteoarthritis movement

MOBIC (meloxicam) tablets

For relief of the signs and symptoms of osteoarthritis

7.5 mg once daily • Specially priced

MOBIC is contraindicated in patients with known hypersensitivity to meloxicam. It should not be given to patients who have experienced asthma, urticaria, or allergic-type reactions after taking aspirin or other nonsteroidal anti-inflammatory drugs (NSAIDs). Severe, rarely fatal, anaphylactoid-like reactions to NSAIDs have been reported in such patients.

Please see accompanying Brief Summary of Prescribing Information.
PREVACID serves up:

- The most indications of any acid-suppressing agent
- The most administration options of any PPI
- Greatest PPI formulary availability

Symptomatic response to therapy does not preclude the presence of gastric malignancy. PREVACID is contraindicated in patients with known hypersensitivity to any component of the formulation. For further information, including adverse events, please see the brief summary of prescribing information for PREVACID on the adjacent page.

*Proton pump inhibitor.

Based on Scott-Lawrence audit for the total number of H2As and PPIs. 1999.

Visit our website at www.prevacid.com

PREVACID LANSOPRAZOLE 15-mg and 30-mg capsules
What about messages about race, ethnicity and other social groupings?
Jennifer Kearney, general manager of the Natick Collection. Mandarin Oriental general manager Susanne Hatje told the Globe travelers will be more price-sensitive for a while, but reservations at the hotel are going "very well" and will likely exceed the company's sales forecasts for rooms as well as events.

Pallotta, who built the mansion in Weston, declined to comment.

But among some who've lived through the aftermath of past plined culture. Referring to the credit crunch and financial bail-out, Advent's Brooke, who's often called the elder statesman of Boston venture capital, said, "This is a dose of salt. Things have gone a little too far and it will be a painful recovery, but we'll come through it."

John Caldwell, an out-of-work Dorchester house painter, leaned against a tree on Boylston Street in the Back Bay recently, flagging down passersby for spare change. Across the street, work-$500 a night.

"Five hundred dollars a night?" Caldwell said, shaking his head. "People are barely making it right now."

Others nearby said they were amazed to learn condominiums at the Mandarin Oriental have sold for as much as $14 million.

"Whoever buys those condos, it will have to be cash," said Jeanette Zarbano of Medford, an employee of the Massachusetts Convention Center Authority. "You'd better have the money."

‘There’s more help than customers in every store I’ve been in.’

JERRY GORDON, shopping in Natick

‘People are barely making it right now.’

JOHN CALDWELL, an unemployed house painter flagging people down in the Back Bay for spare change
A Dorchester man was charged yesterday with a shocking midday murder aboard an MBTA bus last spring, part of a spate of violence that gripped the city at the time.

Jonathan Sanders, 19, who is already in custody on an unrelated probation violation, is accused of fatally shooting 18-year-old Dwayne Graham in the head aboard the No. 23 bus on March 30, 2007.

Sanders is expected to be arraigned this week in Dorchester District Court. His arrest was made "amid an ongoing investigation on the streets of Boston and behind the closed doors of the Suffolk County Grand Jury," according to authorities.

"Though more than a year passed, we never abandoned our shared efforts to find justice for Dwayne Graham and his loved ones," said Suffolk County District Attorney Daniel Conley.

The shooting occurred around 3:45 p.m. at the busy intersection of Washington Street and Columbia Road in Dorchester. Graham died the next day, one of a series of victims the last week of that month.

On March 24, 2007, a 22-year-old college student from Kentucky who was in town visiting family was slain amid crossfire outside a Dorchester house party. Four nights later a 24-year-old male was gunned down on Blue Hill Avenue in Dorchester.

And hours after Graham was shot, a 27-year-old Iraq War veteran was killed on McLellan Street in Dorchester.

Boston Police put three "Safe Street Teams" on the ground that month and added nine more in hot spots last summer. And the Guardian Angels, a citizen patrol that roamed Boston through the 1980s, returned to a tepid welcome from the community.
"Race and Poverty in America: Public Misperceptions and the American News Media"
Dr. Martin Gilens - Yale University

- While African-Americans make up 29 percent of the nation's poor, they constitute 62 percent of the images of the poor in the leading news magazines, and 65 percent of the images of the poor on the leading network television news programs.
Negative messages about Blacks and Latinos portrayed in the media

- Crime (untrustworthy)
- Drugs (immoral)
- Violence (dangerous)
- Poverty (lazy)
- Welfare (undeserving)
But these are just some of the stereotypes we have internalized

Imagery exercise

• Clear your mind and close your eyes and imagine the individuals who I am about to describe

• Try to conjure up the most detailed and textured images of each individual you can including physical characteristics, dress, setting and context
Imagery exercise

• African American Woman
• Single Mother
• Extremely Wealthy
• Chief of Cardiology
Imagery exercise

- Gay Man
- Japanese Ancestry
- Father of Two
- Just Celebrated 82nd Birthday
Imagery exercise

- Female Lawyer
- American Indian
- Chippewa Nation
- 64 Years Old
- Works for Multinational Corporation
Imagery exercise

• White Male
• World Class Athlete
• Engineer
• Requires Wheelchair for Mobility
First impressions exercise

- First impressions are clues to unconscious biases
- Take a look at the following pictures and pay attention to the very first thoughts about the characteristics of the person that come into your mind
Background: IAT

- In early 1990s Banaji, Greenwald, et.al. began work on a tool called the *Implicit Association Test (IAT)*
- Tests response times to certain categorizing tasks
- Now a well accepted tool for measuring biases that people may not be aware of
- Not strongly correlated with conscious bias
European American or Good

African American or Bad

Peace
African American or Good

European American or Bad

[Image of a blurred face]
General race IAT scores are a normally distributed continuous variable ranging from about -1 to +1 (mean +0.26)

– Negative scores reflect pro-Black bias, positive scores reflect pro-White bias (can be categorized as slight, moderate, or strong)
Two important books that feature the IAT

- **Blink** by Malcolm Gladwell
  - Thin-Slicing, Snap Judgments, and the Power of Thinking Without Thinking

- **Seeing Patients** by Augustus A. White, III, M.D.
  - Unconscious Bias in Health Care
What do these unconscious associations do?

Can they affect the way clinicians make decisions about patients?

What is the evidence that clinician biases contribute to racial/ethnic disparities in health care?
Stereotypes and decision-making

• Normal, functional, adaptive (but often unconscious) cognitive process

• Applied most to:
  1) Race  2) gender  3) age

• Activated most often in situations of:
  1) Stress  2) time pressure  3) multi-tasking
Paved With Good Intentions: Do providers contribute to racial/ethnic disparities in health care?

VanRyn, et al., AJPH, 2003

- Over 30 studies supporting provider contribution
- Model for stereotypes/biases leading to disparities
  - Lower expectations for minority patients (e.g. tight control of diabetes)
  - Less effort spent communicating with minority patients (e.g. influenza vaccine)
  - Gatekeeper - (e.g. African-Americans with renal failure less likely to be placed on renal transplant list - not related to preference)
The Effect of Race and Sex on Physicians’ Recommendations for Cardiac Catheterization
Schulman, et.al. NEJM 1999

- 720 physicians at ACP, AAFP
- Identical video vignettes of pt w/chest pain randomized by pt characteristics (race, sex, age)
- Asked about perceptions of patient and how they would treat patient
- No difference by race in physician perception of CAD likelihood
- Black patients referred less often for cardiac cath (85% vs. 91%, OR 0.6, p=0.02)

- Race of patient affected physicians’ perceptions of and attitudes towards patients after controlling for covariates
- African Americans perceived less: pleasant, intelligent, educated, adherent to medical advice
Physicians less likely to prescribe antiretrovirals to patients that are likely to be non-adherent.

Same physicians felt that African-Americans less likely to be adherent to treatment.
“I treat all my patients the same”  
(The “not me!” phenomenon)  
Maybe the biases that are contributing to racial/ethnic disparities in health care are primarily unconscious
Implicit Bias among Physicians and its Prediction of Thrombolysis Decisions for Black and White Patients

Green AR, Carney DR, Pallin DJ, Ngo LH, Raymond KL, Iezzoni LI, Banaji MR.

J Gen Intern Med. 2007 Sep;22(9):1231-8.
Studies showing racial disparities in thrombolytic therapy for acute MI

- Canto
- Peterson adj RR 0.85 (men)
- Allison adj OR 0.55

Taylor, et. al. adj OR 0.76, Weitzman, et. al. adj OR 0.5
Specific Aims

• To determine whether residents physicians demonstrate implicit pro-white bias similar to studies among non-physicians

• To determine whether unconscious biases are associated with differences in physicians’ decisions about thrombolysis based on patient race
Methods: study design

- Internet based cross-sectional survey of residents

  Case vignette: 50 year-old man in ED with chest pain and EKG changes suggestive of AMI (randomized photo of Black or White patient)

  - Likelihood that patient’s chest pain is CAD: very unlikely = 1 to very likely = 5

  - Would you give thrombolyis?: yes/no, and definitely would = 1 to definitely would not = 5

  - Demographics: 7 questions

- Implicit Association Tests
Vignette pictures
Physicians’ explicit (self-described) biases toward black or white patients
Mean IAT scores (n=220)

<table>
<thead>
<tr>
<th>MD race/ethnicity</th>
<th>IAT Score</th>
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<tbody>
<tr>
<td>All residents:</td>
<td>+0.36</td>
</tr>
<tr>
<td>White:</td>
<td>+0.40</td>
</tr>
<tr>
<td>Black/AA:</td>
<td>-0.04*</td>
</tr>
<tr>
<td>Hispanic:</td>
<td>+0.36</td>
</tr>
<tr>
<td>Asian/PI:</td>
<td>+0.38</td>
</tr>
<tr>
<td>Other:</td>
<td>+0.22</td>
</tr>
</tbody>
</table>

No differences by:

- Age
- Specialty
- Sex
- City
- Training year
- %black pts seen
- Socioeconomic background

* P<0.05
IAT Score Predicts Thrombolysis Decisions

Degree of implicit anti-black bias (IAT score)

Low

High

Treatment with thrombolysis
Black pt
White pt

ß = -0.19
ß = 0.17

P = 0.009
More recent studies on unconscious bias and clinical decision-making

• “As pediatricians’ implicit pro-White bias increased, prescribing narcotic medication decreased for African American patients but not for the White patients”

More recent studies on unconscious bias and clinical decision-making

• “Black patients perceived physicians who had more implicit bias (assessed with the Implicit Association Test) as less warm and friendly in their encounter”


• “Black patients feel less respected by the physician, like the physician less, and have less confidence in the physician regarding their medical encounters when the physician exhibits greater implicit racial bias”

Using EEG alpha oscillations (a measure of negative emotion) participants showed similar activation patterns when feeling sad themselves as when they observed in-group members feeling sad, but not when observing out-group members feeling sad.
Educational model on unconscious bias

Reflective exercise

Film-Based Case Study

- Group discussion
- Discuss all of the ways that unconscious biases could potentially impact care and outcomes
- Think broadly and creatively - no right or wrong answers
Possible unconscious biases

- Nephrologist may have assumed that he didn’t want a transplant
- “…just going to ruin it anyway”
- May have assumed dialysis was good enough
- Lack of rapport or good communication may be due to unconscious bias or discomfort and avoidance of patient
- Flawed system not questioned by nephrologists or others as it only affects minorities
- Unconscious bias may be ingrained into the minds of patients also so they don’t question the system
- Others?
Summary

• Racial/ethnic disparities in health care are widespread and health care providers may contribute

• Negative images, messages, and other experiences about race/ethnicity (and culture, language, age, etc.) may lead to unconscious biases

• Unconscious biases may influence the care we provide patients and contribute to racial/ethnic disparities

• Need to move beyond blame and toward solutions - research, education, systems of care
Questions?