Designing Health Promotion and Disease Prevention For Vulnerable Populations

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Personal/ Professional Financial Relationships: Jada Bussey-Jones

External Industry Relationships *	Company Name	Role
Equity, stock, or options in biomedical industry companies or publishers	None	
Board of Directors or officer	None	
Royalties from Emory or from external entity	None	
Industry funds to Emory for my research	None	
Other	None	

*** Race is used in clinical/ professional cases. As context, the use of race demonstrates social – not biologic – implications of race categories in this teaching session.**

All images of people in this PPT (other than my family) were downloaded from Google Images and are openly available on the WWW.

OBJECTIVES

Objectives this session

- Describe the impact/ importance of diversity on adverse health and communities
- Recognize how our backgrounds inform our perspectives and how we relate to pts and colleagues
- Explore example programs/ structural change

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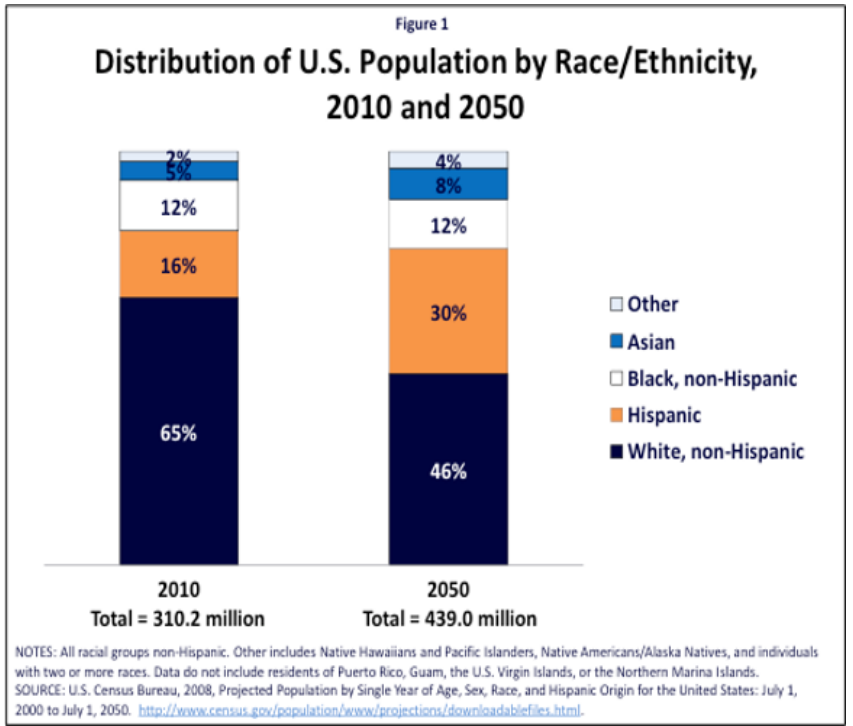
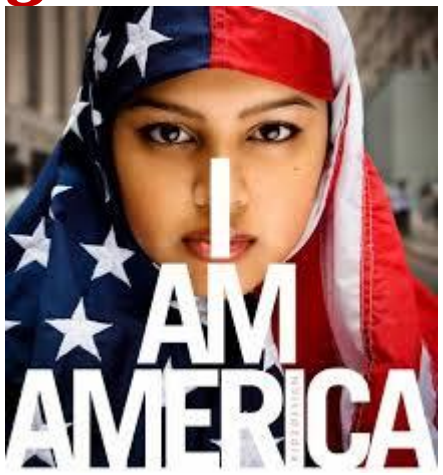
Why is this important

- Increasing diversity in US
- Current climate…



Challenging Times…



Importantly…

- We are having this discussion b/c biases/ diversity impact:
  - Our profession
  - Our patients
  - Our communities

  - Goal is to think about our role…

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Implicit Bias

Implicit Bias:

Attitudes or stereotypes that affect our understanding, actions, and decisions in an unconscious manner

- are pervasive
- do not necessarily align with our declared beliefs
- generally but not always favor our own ingroup
- are malleable

Ohio State University Kirwin Institute for the Study of Race and Ethnicity.
http://kirwaninstitute.osu.edu/research/understanding-implicit-bias/ Accessed 10/4/17

Impact of unconscious bias on clinical & workplace decisions

- Recruitment
- Hiring decisions
- Salary & resource allocation
- Performance reviews
- Retention/Promotion
- Teamwork
- Clinical Environment

My Biases

We are not born to exhibit racial prejudice – we learn it…early in life

- Newborn infants demonstrated no spontaneous preference for faces from either their own-or other-ethnic groups.
- 3-month-old infants demonstrated a significant preference for faces from their own ethnic group.

*David J. Kelly, University of Sheffield, United Kingdom

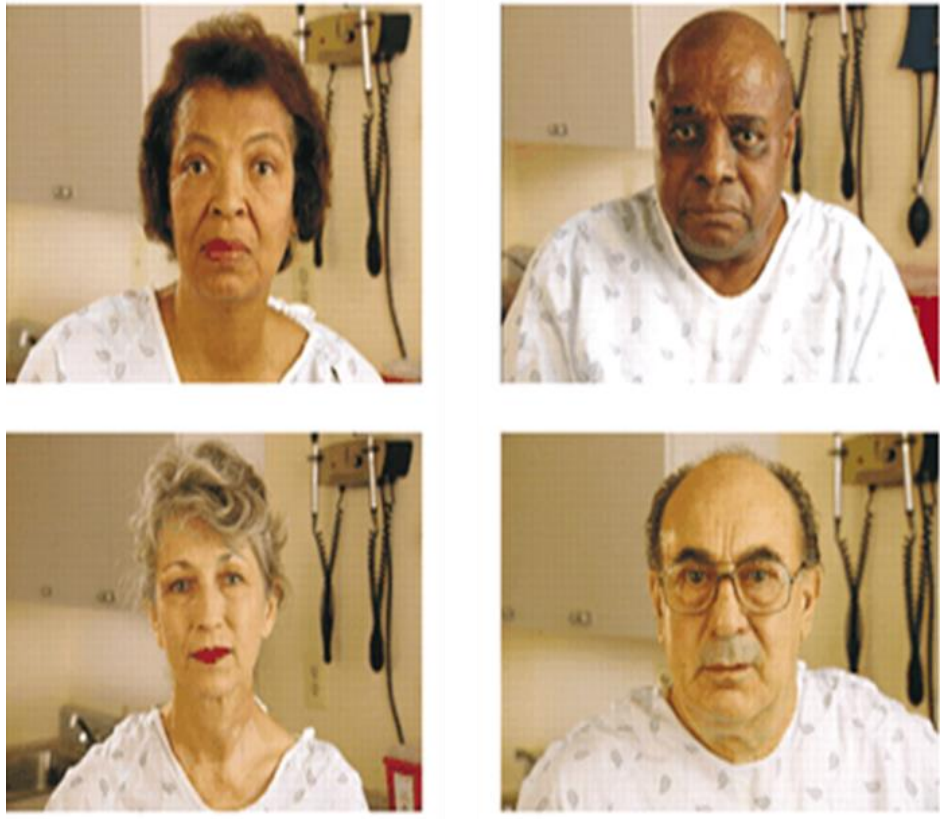

picture a doctor
YAHOO!

Clear if unspoken message about who leads

Clinical Medicine & Bias

So, is it possible to have bias but tx pts. equally?

IOM: RACE & MEDICAL CARE



Across Healthcare

- Minorities receive fewer procedures and poorer quality medical care than whites.

Difference Persist After Controlling For

- Insurance
- SES
- Stage and severity of disease, co-morbidity
- Medical facility

Persist in Medicare & the VA Health System

- Differences in economic status and insurance coverage are expected to be minimized

Institute of Medicine, 2002
Shulman KA. N Engl J Med 1999; 340: 618–626

Physicians & Implicit Bias

Study Population: ~300 IM/EM residents at 4 AMCs in Atlanta and Boston;

Study Design: Internet Clinical vignette of black or white patient presenting to ED with ACS, followed by a questionnaire and three IAT's.

Measures: IAT scores, decision for thrombolysis, assessment of explicit racial biases by questionnaire .

J Gen Intern Med. 2007 Sep; 22(9): 1231–1238. PMCID: PMC2219763
Published online 2007 Jun 27. doi: [10.1007/s11606-007-0258-5] PMID: 17594129

Implicit Bias among Physicians and its Prediction of Thrombolysis Decisions for Black and White Patients

Alexander R. Green, MD, MPH,[✉1] Dana R. Carney, PhD,[2] Daniel J. Pallin, MD, MPH,[3] Long H. Ngo, PhD,[4] Kristal L. Raymond, MPH,[5] Lisa I. Iezzoni, MD, MSc,[4] and Mahzarin R. Banaji, PhD[2]

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Green continued

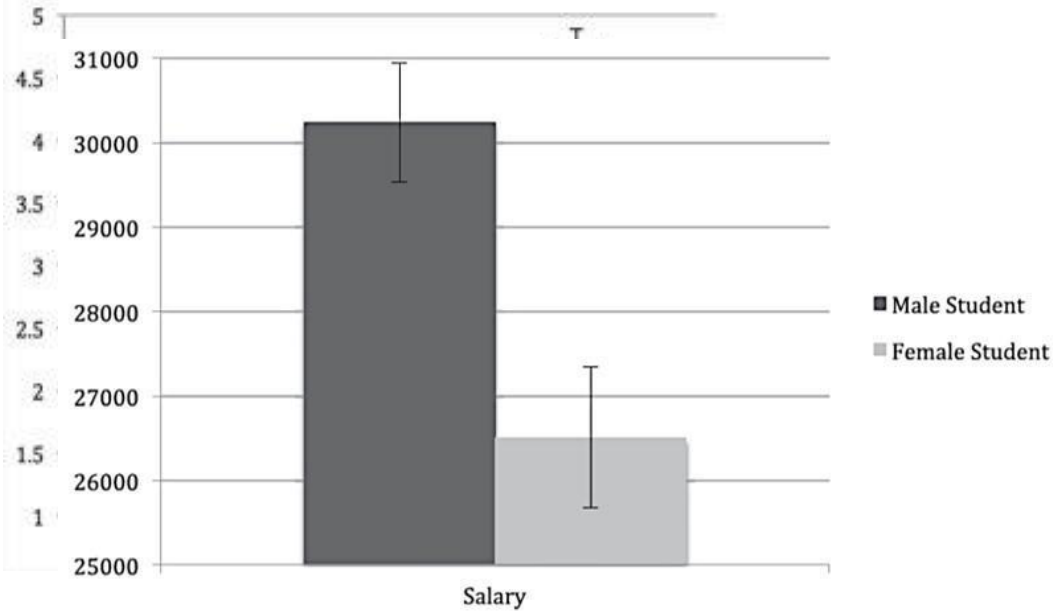
- Physicians reported no explicit preferences
- IAT's revealed implicit preference favoring whites (mean IAT score = 0.36, $P < .001$).

- As physicians' prowhite implicit bias increased, so did their likelihood of treating white patients and not treating black patients with thrombolysis ($P = .009$).


JOB

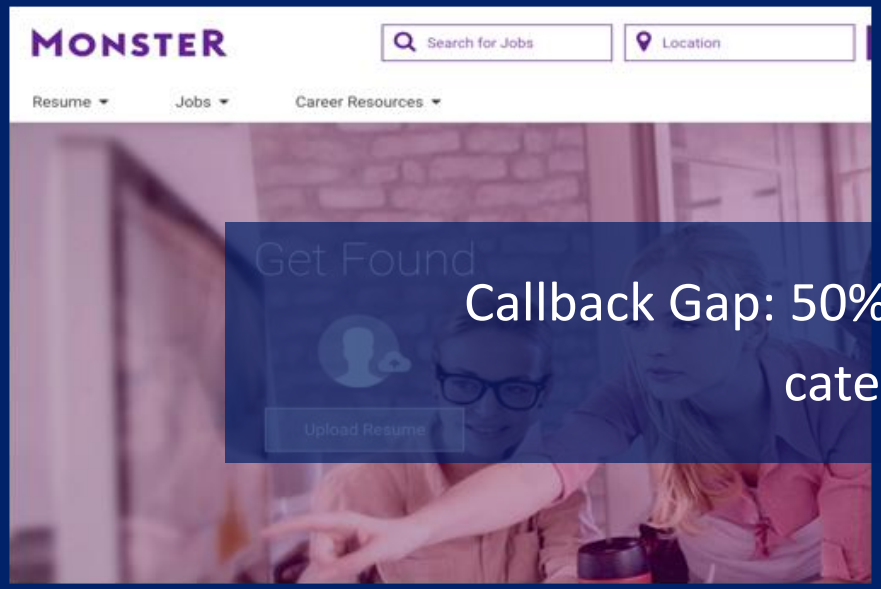
Implicit Bias & Workplace Decisions: Compensation, Resource Allocation

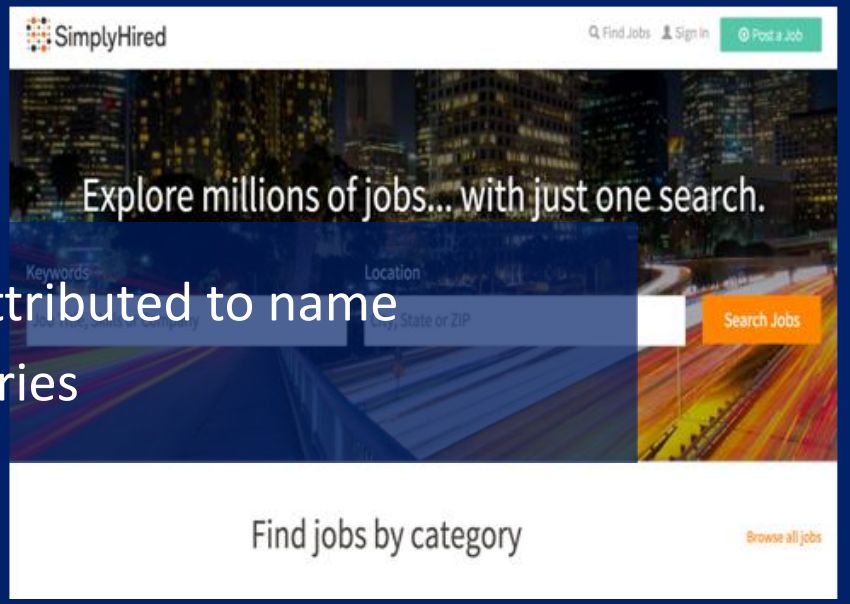
- Science faculty (n=127) at research-intensive universities rated applications for students applying for lab manager positions
- Applications randomly assigned male or female names
- Faculty asked to judge student competency, hireability, interest in mentoring, and assign salary



Emory Bias Training: Moss-Racusin CA et al. PNAS 2012;109:16474-16479

Implicit Bias and Workplace Decisions





Callback Gap: 50% attributed to name categories

"White" names:
Emily, Anne, Allison, Neil, Todd

"Black" names:
Aisha, Keisha, Tamika, Tyrone, Tremayne

Bertrand M & Mullainathan S, NBER Working Paper no. 9873, July 2003"

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Letters of Recommendation Reflect Gender Bias

- 1224 letters for highly competitive STEM postdoctoral positions - categorized as Excellent, Good, Doubtful
- Letter tone rated Excellent among: 24% of Men applicants, 15% Women applicants

Men Applicants

- Longer
- Excellent Letters
- Strong Language
  - "Brilliant Scientist"
  - "Trailblazer"
  - One of the Best"
- "Confident"
- "Assertive" / "Intellectual

Women Applicants

- Shorter
- Solid Letters - did not set them apart from other applicants
- "Knowledgeable"
- "Highly Intelligent"
- Relationship Building characteristics such as "Nurturing" and "Caring"

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Emory Bias Training slides Dutt, K., Pfaff, D., Bernstein, A. *et al.* Gender differences in recommendation letters for postdoctoral fellowships in geoscience. *Nature Geosci* **9,** 805–808 (2016).

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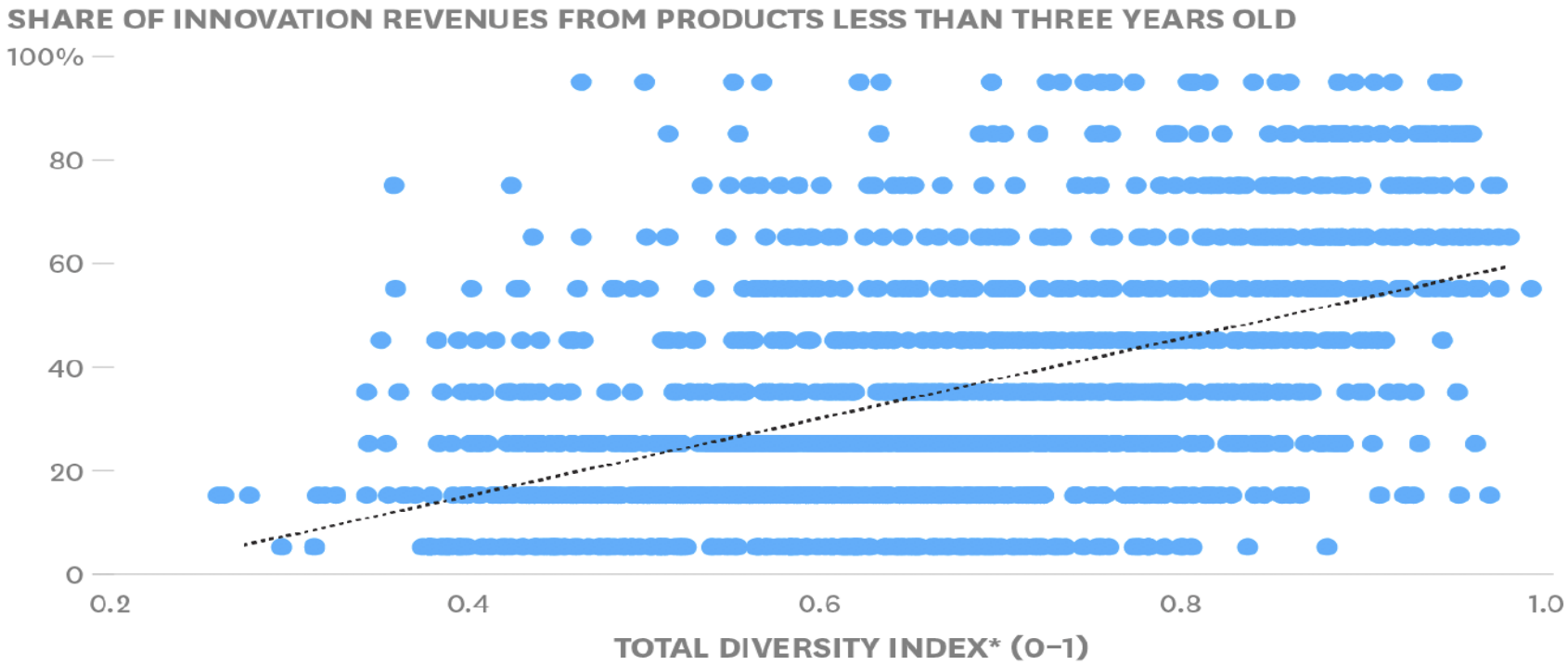
Diversity can be mitigating

Talent Management
Competitive Advantage
Financially Advantageous
Best Place to Work

Financial Gains

More innovation…

Companies with Above-Average Diversity Also Have Higher Innovation Revenues



NOTE N=1,606, R^2=0.257 (SIGNIFICANT AT P=0.001 LEVEL); *TOTAL DIVERSITY INDEX IS THE AVERAGE OF THE BLAU INDICES FOR SIX DIMENSIONS OF DIVERSITY: MIGRATION, INDUSTRY, CAREER PATH, GENDER, EDUCATION, AND AGE.
SOURCE BCG ANALYSIS OF MORE THAN 1,600 COMPANIES ACROSS EIGHT COUNTRIES

Clinical care: Diversity can be mitigating factor

- Black pts get more preventive services w/ black MDs;
- Female pts less likely to die after MI when treated by female MDs
- URM MDs more likely to serve minority, poor, and Medicaid populations.
- Race and language concordance associated w/ improved satisfaction, adherence, trust, infant mortality

Alsan M, Garrick O, Graziani GC. National Bureau of Economic Research, 2018

Greenwood BN, Carnahan S, Huang L. Proc Natl Acad Sci U S A 2018;115:8569-8574.

Cantor JC, Miles EL, Baker LC, Barker DC. Inquiry 1996;33:167-180.

Cooper-Patrick, L. JAMA. 1999; 282: 583–589

Examples: Structural change

Strategies for supporting an inclusive environment

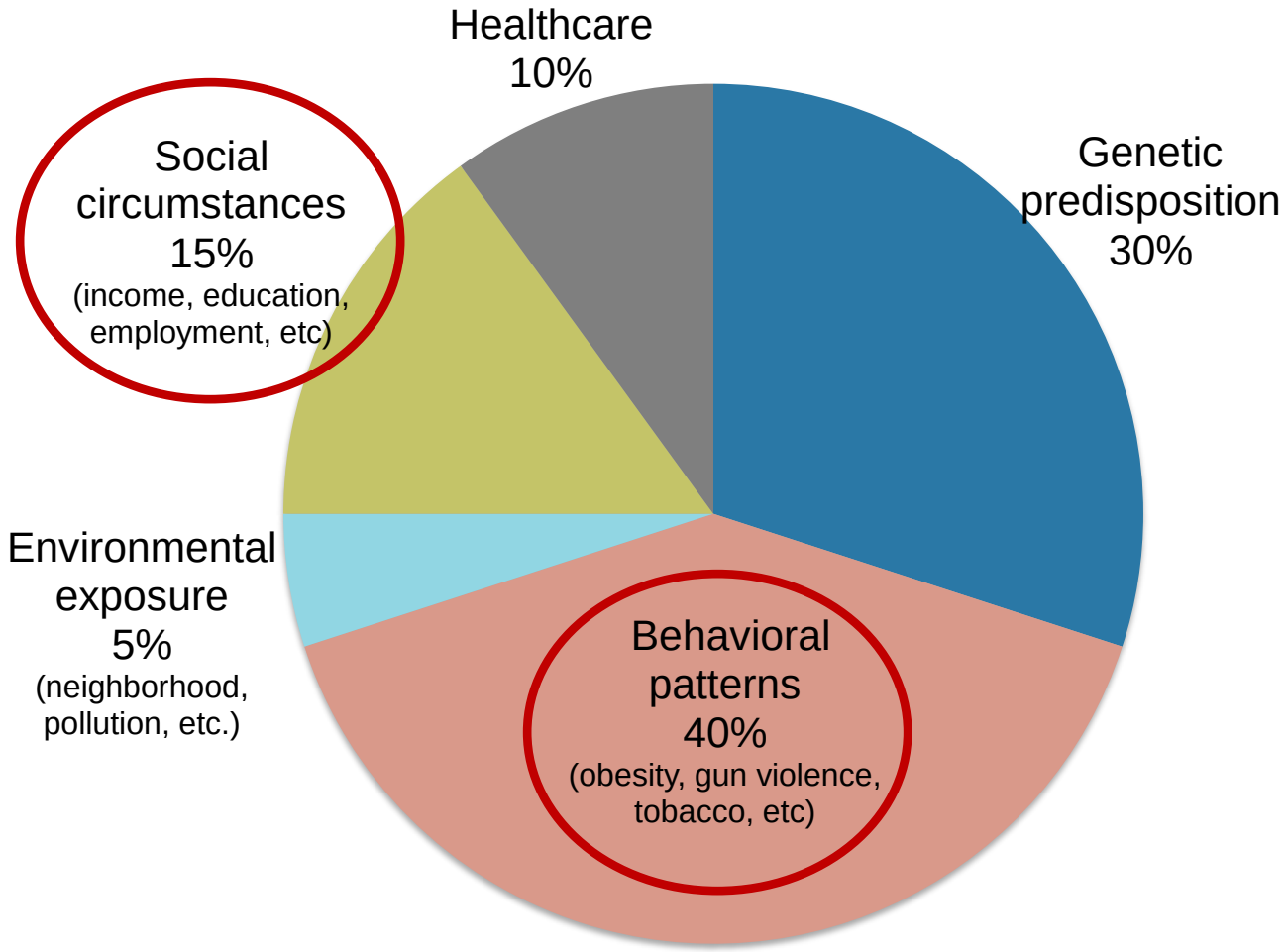
Food as Medicine Program

When physicians think of health…

- Diagnosing and treating “a disease”
- Related to great diagnostic and therapeutic skills!

Yes but…

Proportional Contribution to Premature Death



Adapted from: Schroeder S. "We Can Do Better — Improving the Health of the American People" *N Engl J Med* 2007; 357:1221-1228.

Food Insecurity & disease management

- Higher in Georgia (about 20%)
- Grady prim care study >300 pts – 51% food insecure, 62% in DM
- Food insecure adults less likely to:
  - Purchase costly medication
  - Adhere to recommended prescription guidelines

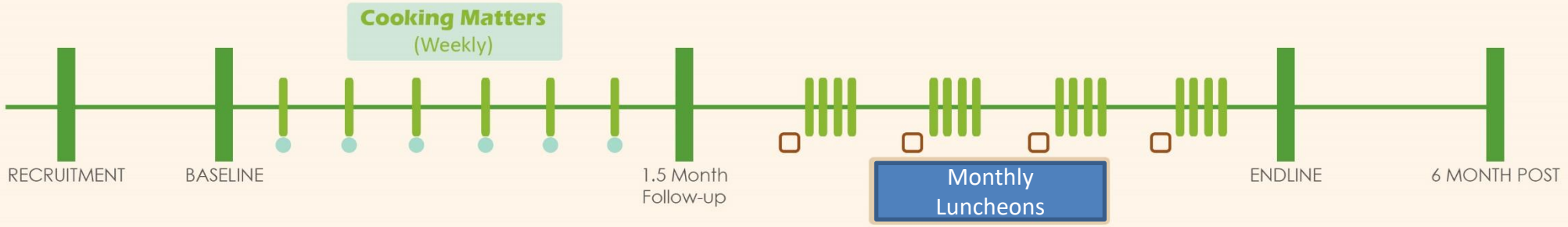
Knight, C.K., et al., *Household food insecurity and medication "scrimping" among US adults with diabetes.* Preventive medicine, 2016. **83**: p. 41-45.

Sattler, E.L.P., J.S. Lee, and V. Bhargava, *Food insecurity and medication adherence in low-income older Medicare beneficiaries with type 2 diabetes.* Journal of nutrition in gerontology and geriatrics, 2014. **33**(4): p. 401-417.

Imagine….

- Health professionals screening for SDH (housing, food, transport)
- Instead of prescribing pills and procedures…
- Health care supported apples and oranges…
- Makes intuitive sense but does it work?

6-month PR-X program structure



Intervention Design & Recruitment

- Proactive and targeted recruitment
- Screening for food insecurity
- Understanding of program requirements

Data Collected

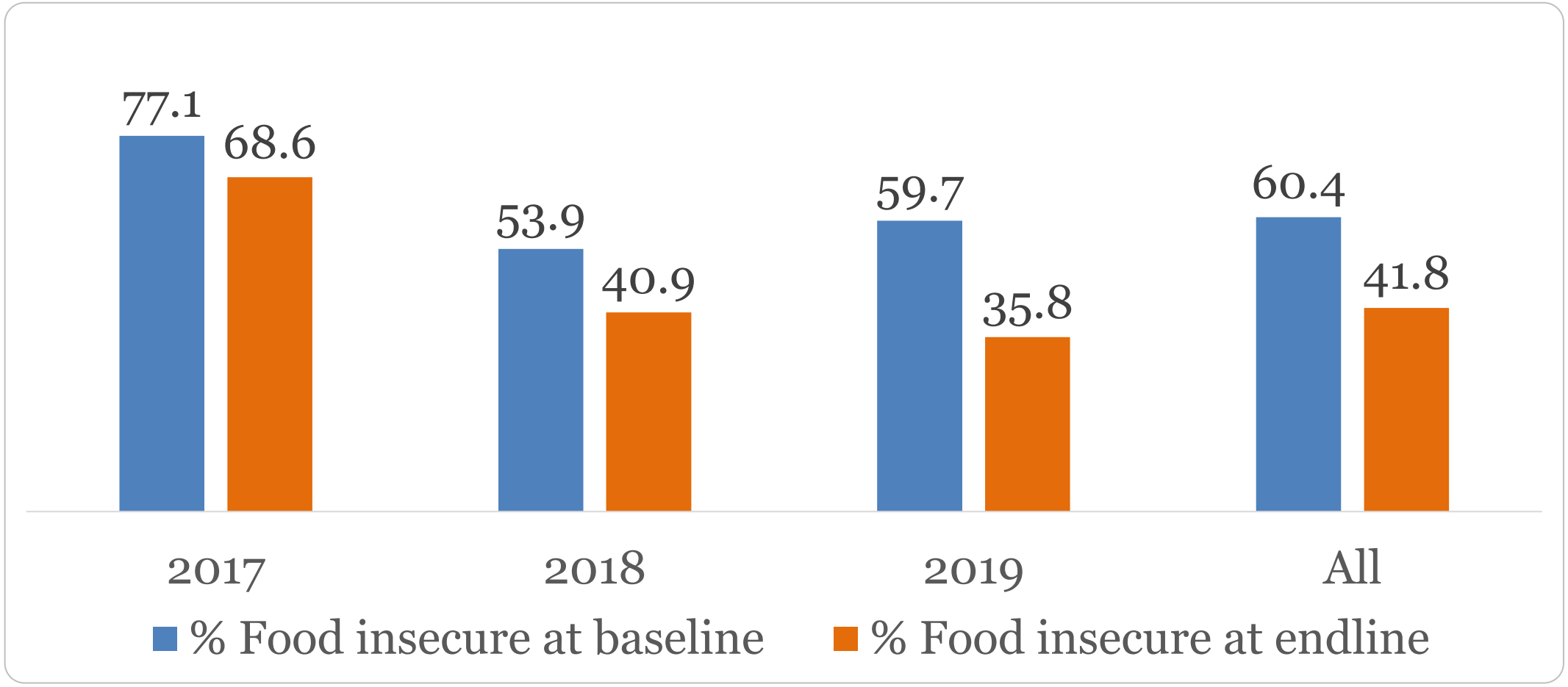
Surveys

- Baseline survey
- 6-week follow-up survey (at the end of Cooking Matters)
- Endline survey (6 months)

Biometrics

- Collected monthly:
  - Height
  - Weight
  - Blood pressure
  - A1C- South Georgia

Results: Food insecurity decreased significantly over the 6 months program



*Data from Grady Health System cohorts 2017-2019, n=271 participants

Results: Diet & nutrition practices improved significantly over the 6 months program

Dietary Variable	Baseline Mean ± SD	End line Mean± SD	Adjusted change from baseline to end line β [95% CI]
Daily unique fruit count	1.39 ±1.47	2.39 ±1.45	0.13*** [0.07,0.19]
Daily unique vegetable count	1.99±1.77	2.77±1.69	0.10*** [0.04,0.14]
Healthy food consumption score	3.86±1.29	4.38±1.27	0.38*** [0.23,0.51]
Healthy Beverage consumption score	5.14 ±1.70	4.98±1.44	0.27*** [0.11,0.36]
Healthy Purchase score	5.64 ±1.86	6.70±1.74	0.59*** [0.44,0.67]
Resource management score	6.30±1.95	7.10±1.74	0.61*** [0.44,0.65]

*Data from Grady Health System cohorts 2017-2019, n=271 participants

Results - Health Metrics Improvements

Clinical Variable	Obs.	N	Unconditional Means (95% CI)	Unadjusted Change Over Time (95% CI)	Adjusted for Clinic, Cohort, Sex, Age
BMI (kg/m2)	1,464	273	36.54 (35.53, 37.56)	-0.2 (-0.1, 0.0)	-0.1 (-0.1, 0.0)
Weight (lbs)	1,464	273	226.7 (220.0, 233.4)	*-0.4 (-0., 6-0.2)*	*-0.49 (-0.6, -0.2)*
Waist circumference (in)	1,461	273	45.3 (44., 46.1)	*-0.4 (-0.4, -0.3)*	*-0.4 (-0.5, -0.3)*
Diastolic blood pressure	1,460	273	81.8 (80.4, 83.2)	*-0.4 (-0.7, -0.2)*	*-0.4 (-0.7-0.2)*
Systolic blood pressure	1,460	273	140.4 (138.1, 142.6)	*-1.0 (-1.4, -0.5)*	*-1.0 (-1.5, -0.6)*

Strategy: Structural Change / Support

- Programs to support promotion in my division, institution
- Curricular transformation
- Structural change

The Problem: Barriers for women & URiM Faculty

- **Barriers for Success**
  - Less Mentorship
  - Bias experiences
  - Disproportionate share of non-career advancing activities
- **Consequently:**
  - Less likely to achieve senior promotion
  - Remain in rank longer
  - Lower levels of job satisfaction
  - More likely to leave academia

Nickens 2000, Palepu 1998, Diggs 2009, Liu 2010, Thomas 2000, Helm 2000, Diggs 2009

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There's this feeling that, I don't understand why I'm always outside of this club. Some people are put on this leadership launch pad on Day 1. People have come and waited for five, ten years [to get promoted] and have been completely left out.

FACULTY MEMBER

The Plan: Objectives

- Design systematic structure to support faculty advancement

- Develop a standard review of faculty to identify opportunities for faculty development, positions, & recognition

Faculty Review Committee: Process

• Meetings quarterly

• Review all faculty unless “opt out” prioritized based on time in rank

• T-2 years before earliest possible promotion

• Study section style review with a primary and secondary reviewer

•Review focus: Ways to support and recognize faculty
- Development opportunities
  - Award opportunities
  - Other opportunities (important committees, editorial boards, speaking)

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Sample faculty letter

I feel that we will be able to present you for promotion to Associate Professor the summer of 2016 on the basis of **excellent** teaching, **very good** service, and **participation** in scholarship based on definitions from the SOM (attached along with some additional promotion info).

1. Statement of plans for promotion, likely criteria

Recommendations of the committee:

- Use your educational initiatives and curricular advances (EKG instruction, technology, etc…) as sources of publications as you will need more publication
- There is limited service at region/ na[illegible]al society/organization for which you h[illegible] interest- possibly AAMC, ACP, or SHM and CDIM and join a committee(s).

2. Summary/ recommendation

- You have won several Institutional Awards and could be nominated for regional and national teaching awards. Membership and activity discussed above will help. We feel you would be a good candidate for J Willis Hurst GA-ACP as you have attended this meeting and presented in the past. **We will assist with this nomination.**
- Update international lectures (India) and other ones missing on CV
- For development opportunities, we are aware that you are con[illegible] suggest that you consider the Harvard Macy Program in 2016

3. Instructions for packet prep help

Importantly, in preparation for a potential submission, please update your CV to Emory's format and begin to prepare your personal statement, teaching, and service portfolio (keeping evaluations, letters, documents from learners and colleagues). Leigh and Danielle will assist w/ this

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nes	2013			2020		
	Grady GIM	SOM	AAMC	Grady GIM	SOM	AAMC
Total						
Faculty	46	2,210	159,943	50	2,883	184,682
URiM	10 (22%)	246 (11%)	13,825 (9%)	12 (24%)	393 (14%)	17,484 (9%)
Women	24 (52%)	839 (38%)	61,121 (38%)	31 (62%)	1,283 (45%)	79,174 (43%)
Assistant						
All	31 (67%)	1,208 (55%)	71,903 (45%)	23 (46%)	1,642 (57%)	86,485 (47%)
URiM	6 (60%)	162 (66%)	7,732 (56%)	6 (50%)	289 (74%)	9,777 (56%)
Women	17 (71%)	534 (64%)	31,457 (51%)	12 (39%)	612 (48%)	41,243 (52%)
Associate						
All	10 (22%)	353 (16%)	32,231 (20%)	17 (34%)	551 (19%)	37,781(20%)
URiM	4 (40%)	37 (15%)	2,489 (18%)	3 (25%)	48 (12%)	3,271 (19%)
Women	7 (29%)	102 (12%)	11,027 (18%)	13 (42%)	172 (13%)	15,006 (19%)
Professor						
All	5 (11%)	370 (17%)	35,789 (22%)	10 (20%)	461 (16%)	39,001 (21%)
URiM	0 (0%)	14 (6%)	1,880 (14%)	3 (25%)	30 (8%)	2522 (14%)
Women	0 (0%)	65 (8%)	7,669 (13%)	6 (19%)	93 (7%)	10,421 (13%)

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Outcomes

- *Majority* Grady GIM faculty at senior rank (54% associate or full professor)
- 100% success of subm… …kets through 201…
- …men w/ senior promotion
- 42% URiM w/ senior promotion

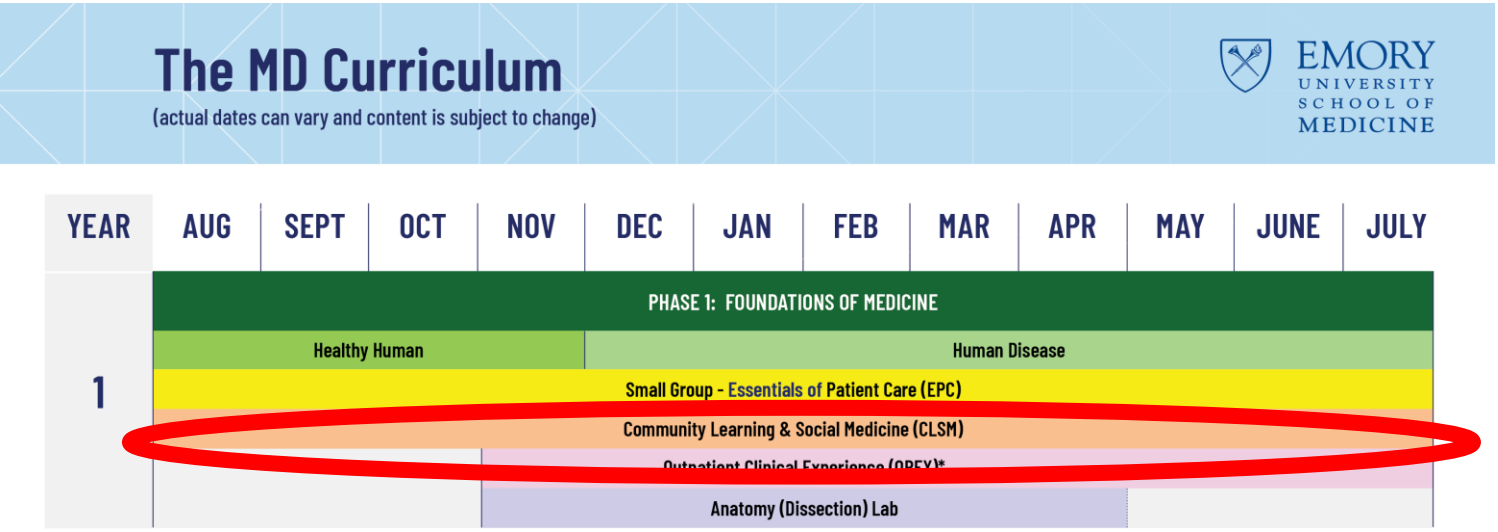
Context: 0% of all professors are black women…

SOM wide URIM FACULTY DEVELOPMENT PROGRAM

- DOM, SOM collaboration, HRSA supported
- 5-month longitudinal program
- WLA inspired match w/ leaders as mentors
- Experiential seminars
- Meaningful discussions about navigating academic health sciences as a URM faculty member (peer support)

Emory SOM Community Learning and Social Medicine (CLSM course)

Voluntary Elective → Required Course → Graded course → Featured course



Sample SM Content/Experiences in SOM Curriculum

M1	CLSM, other foundations lectures	Social determinants of health, race as a social construct, bias, poverty, disparities, privilege
M2		Health literacy, addressing SDH, population health, language barriers, LGBTQ health
M3	IS	Understanding Grady, community resources, advocacy, health policy
M4	EL	*SM elective (optional)*

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Jason Cobb led CPC Presentation

Emory wide eGFR SYSTEM CHANGE

The New York Times

- **Many Medical Decision Tools Disadvantage Black Patients**
- Gina Kolata, New York Times, June 17, 2020

In Summary

- Bias pervasive
- Impact clinical care
- Structural change in organizations to support a diverse/ inclusive work force AND patients directly needed
- We must be proactive & intentional

Structural and individual change needed…

QUESTIONS