Health Disparity: Why should we care? What can be done?

Meta-lessons from 15 years in the field

Fixing the Social Determinants of Health: Emerging Lessons from Education, Practice, and Policy

> Jeroan Allison, MD MS February 27,2018

Presentation Objectives

- Present a current, high-level overview of health disparities
- Review the link between the social determinants and health equity
- Provide a framework for health equity intervention
- Present selected current examples of health equity intervention and health disparity research

Some personal information will provide important context for this presentation.

- Those who have gone before and those working along side of me who are more capable and dedicated that myself bestow a rich legacy.
- I am thankful for the high-caliber teaching programs within our Department of Quantitative Health Sciences
- I have a personal passion for health equity research and statistical methodology.
- I have engaged in health equity research as a physician scientist for more than 15 years, and I hope that some of my insights presented today will be of value to you, now and in the future.



A single encounter changed my life for the better.





Health Disparities/Inequities

- Process
 - Care not based on best available evidence
 - Care not based on shared decision making
 - Care not based on cultural humility and respect
- Outcomes
 - Failure to achieve highest health potential given age, biology, and state of science
 - Difficult to disentangle multiple determinants of health
- Access

Carter-Pokras O, Baquet C. 2002. What is a health disparity? *Public Health Reports.* 117:426.434.

Adler N. Health Disparities: An Overview. Examining the Health Disparities Research Plan of the National Institutes of Health: Unfinished Business.

Physicians talk to Black patients less than White patients.



Elements of Consent

Figure 1. Time of entire visit and time of topic of clinical trials

Figure 2. Time of subtopics of elements of consents

Eggly, S. A disparity of words. *Health Expectations* 18.5 (2015): 1316-1326.



http://www.aapcho.org/wp/wp-content/uploads/2015/08/Cancer-Facts-Asian-Americans-and-Cancer.pdf



American Indians and Alaska Natives born today have a life expectancy that is 4.4 years less than the U.S. all races population (73.7 years to 78.1 years, respectively).

Indian Health Services Fact Sheet on Disparities. <u>https://www.ihs.gov/newsroom/factsheets/disparities/</u>

INTRODUCTION

Promoting a New Research Agenda Health Disparities Research at the Intersection of Disability, *Race, and Ethnicity*

Willi Horner-Johnson, PhD,* Glenn T. Fujiura, PhD,† and Tawara D. Goode, MA‡

Med Care. 2014; 52: S1 – S2





Georgetown University

Cureus

Open Access Review Article

DOI: 10.7759/cureus.1184

Health Care Disparities Among Lesbian, Gay, Bisexual, and Transgender Youth: A Literature Review

Hudaisa Hafeez 1 , Muhammad Zeshan 2 , Muhammad A. Tahir 3 , Nusrat Jahan 4 , Sadiq Naveed $_5$

Sexual Victimization, Health Status, and VA Healthcare Utilization Among Lesbian and Bisexual OEF/OIF Veterans

Kristin M. Mattocks, PhD, MPH^{1,2}, Anne Sadler, PhD, RN^{3,4}, Elizabeth M. Yano, PhD, MSPH^{5,6}, Erin E. Krebs, MD, MPH^{7,8}, Laurie Zephyrin, MD, MPH, MBA⁹, Cynthia Brandt, MD, MPH^{10,11}, Rachel Kimerling, PhD¹², Theo Sandfort, PhD¹³, Melissa E. Dichter, PhD, MSW¹⁴, Jeffrey J. Weiss, PhD, MS¹⁵, Jeroan Allison, MD, MS², and Sally Haskell, MD^{10,11}

J Gen Intl Med. 2013. 28 (S2): S604-8.

Perceived Stigma, Discrimination, and Disclosure of Sexual Orientation Among a Sample of Lesbian Veterans Receiving Care in the Department of Veterans Affairs

Kristin M. Mattocks, PhD, MPH,^{1,2} J. Cherry Sullivan, MPH,¹ Christina Bertrand, BA,¹ Rebecca L. Kinney, MPH,¹ Michelle D. Sherman, PhD,³ and Carolyn Gustason, RN^{1,4}

LGBT Health. 2015; 2(2): 1-7.

Deaths of Despair: Drug, Alcohol, and Suicide Mortality among men and women ages 50-54



Case A, Deaton A. Mortality and morbidity in the 21st century. Brookings Papers on Economic Activity. Conference Version. March 2017 <u>https://www.brookings.edu/bpea-articles/mortality-and-morbidity-in-the-21st-century/</u> Agency for Healthcare Research and Quality Advancing Excellence in Health Care

National Healthcare Quality and Disparities Reports

Your source for the Reports, State Snapshots, and QR/DRnet



https://nhqrnet.ahrq.gov/inhqrdr/

Summary of Health Disparities

- Disparities are pervasive across conditions and populations.
- Access has improved, but lack of access to health care remains important contributor.
- Access involves more than insurance.
- Many disparities are not decreasing over time.

Presentation Objectives

- Present a current, high-level overview of health disparities
- Review the link between the social determinants and health equity
- Provide a framework for health equity intervention
- Present selected current examples of health equity intervention and health disparity research





Income is Linked to Poor Health.



Braveman P, Egerter S. Overcoming Obstacles to Health: Report From the Robert Wood Johnson Foundation to the Commission to Build a Healthier America <u>http://www.commissiononhealth.org/PDF/ObstaclesToHealth-Report.pdf</u>, p. 26 Data from National Health Interview Survey.

Impact of Different Factors on Risk of Premature Death





The Social Determinants of Health

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment Income Expenses Debt Medical bills Support	Housing Transportation Safety Parks Playgrounds Walkability	Literacy Language Early childhood education Vocational training Higher education	Hunger Access to healthy options	Social integration Support systems Community engagement Discrimination	Health coverage Provider availability Provider linguistic and cultural competency Quality of care
Health Outcomes Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations					

Heiman HJ, Artiga A. Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity. The Kaiser Commission on Medicaid and the Uninsured. November 15 Issue Brief. <u>http://kff.org/disparities-policy</u>

Presentation Objectives

- Present a current, high-level overview of health disparities
- Review the link between the social determinants and health equity
- Provide a framework for health equity intervention
- Present selected current examples of health equity intervention and health disparity research





http://www.solvingdisparities.org/

Beyond the Classic Randomized Study Design for Health Equity Intervention Research: An Overview of Selected Approaches

All excellent health equity research is scientifically sound.

Not all scientifically sound health equity research is excellent.

It is possible to achieve high-quality study design while respecting the wishes and needs of partnering individual and communities.



FRAMING HEALTH MATTERS

Advancing Health Disparities Research Within the Health Care System: A Conceptual Framework

Amy M. Kilbourne, PhD, Galen Switzer, PhD, Kelly Hyman, PhD, Megan Crowley-Matok, ApD, and Michael J. Fine, MD, MSc



Note. In our framework, the health or prities research agenda progresses in 3 sequential phases of research. Phase 1 (detecting disparities) into a phase 2 studies (understanding disparities), which in turn informs phase 3 research (interventions to reduce or eliminate disparities).

FIGURE 1-The 3 phases of the disparities research agenda.

Am J Public Health. 2006; 96: 2113-2121

AJPH RESEARCH

Medical Debt and Related Financial Consequences Among Older African American and White Adults

Jacqueline C. Wiltshire, PhD, MPH, Keith Elder, PhD, MPH, Catarina Kiefe, MD, PhD, and Jeroan J. Allison, MD, MS

Am J Public Health. 2016 Jun;106(6):1086-91



STUDENT ARTICLE – DOCTORAL

RAHI–SATHI Indo-U.S. Collaboration: The Evolution of a Trainee-Led Twinning Model in Global Health Into a Multidisciplinary Collaborative Program

Apurv Soni,^a* Nisha Fahey,^{a,b}* Abraham Jaffe,^a Shyamsundar Raithatha,^c Nitin Raithatha,^c Anusha Prabhakaran,^c Tiffany A Moore Simas,^a Nancy Byatt,^a Jagdish Vankar,^c Michael Chin,^a Ajay G Phatak,^c Shirish Srivastava,^c David D McManus,^a Eileen O'Keefe,^d Harshil Patel,^c Niket Patel,^c Dharti Patel,^c Michaela Tracey,^a Jasmine A Khubchandani,^a Haley Newman,^a Allison Earon,^a Hannah Rosenfield,^a Anna Handorf,^a Brittany Novak,^a John Bostrom,^a Anindita Deb,^a Soaham Desai,^c Dipen Patel,^c Archana Nimbalkar,^c Kandarp Talati,^c Milagros Rosal,^a Patricia McQuilkin,^a Himanshu Pandya,^c Heena P Santry,^a Sunil Thanvi,^c Utpala Kharod,^c Melissa Fischer,^a Jeroan Allison,^a

Global Health: Science and Practice. 2017; 5(1): 152 – 163.



NEIGHBORHOOD SOCIO-ECONOMIC STATUS PREDICTS HEALTH-RELATED QUALITY OF LIFE TRAJECTORIES AFTER ACUTE CORONARY SYNDROME

Lisa Nobel, MS MD/PhD Candidate, University Of Massachusetts Medical School

William Jesdale, PhD, University Of Massachusetts Medical School Jennifer Tjia, MD MS, University Of Massachusetts Medical School Molly E. Waring, PhD, University Of Massachusetts Medical School David C. Parish, MD MPH, Mercer University Arlene S. Ash, PhD, University Of Massachusetts Medical School Catarina I. Kiefe, MD PhD, University Of Massachusetts Medical School Jeroan J. Allison, MD MS, University Of Massachusetts Medical School

Results – Trajectories of **MCS** at 6 Months Post Discharge



Levels of Health Equity Intervention

- Patient
- Provider
- System
- Policy



Frieden, T. Am J Public Health; 2010; 104(4): 590 – 595.

A rising tide does not float all boats.

The Joint Commission Journal on Quality and Patient Safety

Performance Improvement

Leveraging Quality Improvement to Achieve Equity in Health Care

Alexander R. Green, M.D., M.P.H.; Aswita Tan-McGrory, M.P.H.; Marina C. Cervantes; Joseph R. Betancourt, M.D., M.P.H.

Jt Comm J Qual Patient Saf. 2010; 36(10): 435-42.

The Alabama Collaborative for Cardiovascular Equality

Jeroan J. Allison, MD, MS.



Funded by the National Heart Lung and Blood Institute

RESEARCH AND PRACTICE

Reported Racial Discrimination, Trust in Physicians, and Medication Adherence Among Inner-City African Americans With Hypertension

Yendelela L. Cuffee, PhD, MPH, J. Lee Hargraves, PhD, Milagros Rosal, PhD, Becky A. Briesacher, PhD, Antoinette Schoenthaler, EdD, MA, Sharina Person, PhD, Sandral Hullett, MD, MPH, and Jeroan Allison, MD, MS

Cuffee, YL. Am J Public Health. 2013; 103(11):e55-62. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3828720/

CSI: Birmingham A Culturally Sensitive Intervention for Blood Pressure Control with Storytelling DVDs



TIME The New York Times

Ann Intern Med. 2011;154:77-84.





BIRMINGHAM BUSINESS JOURNAL

BBJ Businessperson of the Year: Dr. Sandral Hullett

Sandral Hullett turned JeffCo's public hospital into a national model

Dec 27, 2009, 11:00pm CST

When a problem exists in a community, the solution exists there also.



Storytelling has a strong conceptual basis.



Slater M. *Communication Theory. 2002; 12 (1): 173-191.* Gerrig, RJ. Psychological Science. 1991; 2: 3367-340.


Annals of Internal Medicine

Original Research

Culturally Appropriate Storytelling to Improve Blood Pressure A Randomized Trial

Thomas K. Houston, MD, MPH; Jeroan J. Allison, MD, MSc; Marc Sussman, MHA; Wendy Horn, PhD; Cheryl L. Holt, PhD; John Trobaugh, MFA; Maribel Salas, MD, PhD; Maria Pisu, PhD; Yendelela L. Cuffee, MPH; Damien Larkin, MA; Sharina D. Person, PhD; Bruce Barton, PhD; Catarina I. Kiefe, PhD, MD; and Sandral Hullett, MD, MPH

Houston. Ann Intern Med; 2011; 154: 77-84

http://annals.org/aim/article/746718/culturally-appropriate-storytellingimprove-blood-pressure-randomized-trial



THE BOSTON GLOBE . MONDAY . MARCH 21, 2011

WOMEN WARY OF HORMONE USE

EALTH

DEATH' GOES SOUL-SEARCHING

GARDNER NAMES NEW CURATOR BE GOOD MEDICINE FOR ALL KINDS OF ILLS Patient Education and Counseling 99 (2016) 1482-1488



Contents lists available at ScienceDirect

Patient Education and Counseling

journal homepage: www.elsevier.com/locate/pateducou

Can stories influence African-American patients' intentions to change hypertension management behaviors? A randomized control trial



Barbara G. Bokhour^{a,b,*}, Gemmae M. Fix^{a,b}, Howard S. Gordon^{c,d}, Judith A. Long^{e,f}, Kathryn DeLaughter^a, Michelle B. Orner^a, Charlene Pope^{g,h}, Thomas K. Houston^{a,i}

Chúng ta nói về bệnh Tăng huyết áp









INSTITUTE OF POPULATION, HEALTH AN DEVELOPMENT Working for communitys health

Conclusions about Storytelling

- Understanding the root causes of health disparities leads to effective interventions
- Story telling holds important potential
 - Taps into wellspring of community wisdom
 - Understanding common and particular root causes
 - Applicable to a many populations, settings, and conditions

Journal of Reproductive and Infant Psychology Vol. 30, No. 5, November 2012, 436–449



Patient, provider, and system-level barriers and facilitators to addressing perinatal depression

Nancy Byatt*, Kathleen Biebel, Rebecca S. Lundquist, Tiffany A. Moore Simas, Gifty Debordes-Jackson, Jeroan Allison and Douglas Ziedonis

University of Massachusetts Medical School, Worcester, Massachusetts, USA

PRogram In Support of Moms (PRISM): Stepped Care Approach for Ob/Gyn Settings

Nancy Byatt, DO, MS, MBA, FAPM Psychiatry and Ob/Gyn

Tiffany A. Moore Simas, MD, MPH, MEd, FACOG Ob/Gyn, Psychiatry and Pediatrics

Jeroan Allison, MD, MS Quantitative Health Sciences



1 U01 DP006093-01

Implementation Science

Dio Med Central

Debate

Open Access

Implementation research design: integrating participatory action research into randomized controlled trials

Luci K Leykum^{*1,2}, Jacqueline A Pugh^{1,2}, Holly J Lanham⁴, Joel Harmon³ and Reuben R McDaniel Jr⁴

Address: ¹VERDICT, a VA HSR&D REAP at the South Texas Veterans Health Care System, San Antonio, Texas, USA, ²Department of Medicine, School of Medicine, University of Texas Health Science Center at San Antonio, San Antonio, Texas, USA, ²School of Business, Fairleigh Dickinson University, Madison, New Jersey, USA and ⁴Department of Information, Risk and Operations Management, McCombs School of Business, The University of Texas at Austin, Austin, Texas, USA

Email: Luci K Leykum* - Leykum@uthscsa.edu; Jacqueline A Pugh - jacque.pugh@gmail.com; Holly J Lanham - Holly.Lanham@phd.mccombs.utexas.edu; Joel Harmon - harmon@fdu.edu; Reuben R McDaniel - reuben.mcdaniel@mccombs.utexas.edu

* Corresponding author

Published: 23 October 2009

Received: 10 July 2007 Accepted: 23 October 2009

Implementation Science 2009, 4:69 doi:10.1186/1748-5908-4-69



http://www.communitylegal.org/

Going Upstream with Numbers & Stories that Measure a Primary Care Payment Reform Model's Impact on the Social Determinants of Health

> Germán Chiriboga, MPH Beverly Nazarian, MD Valerie Zolezzi-Wyndham, JD

Medical-Legal Partnership Summit

Integrating Health and Legal Services to Transform Care Delivery April 5-7, 2017 • National Harbor, Maryland The Gaylord National Resort & Convention Center

On April 5-7, 2017, more than 400 leaders from the allied health, health, law, and public health fields gathered in National Harbor, Maryland to for the Medical-Legal Partnership Summit. There they shared research, insights, and best practices about where and how to most effectively integrate civil legal



University of Massachusetts Center for Health Equity Intervention Research



Funded by NIMHD grant 1P60MD006912



The overarching aims of CHEIR is to eliminate health disparities by:

- Developing interventions, such as storytelling, that are tailored to deep cultural structure and literacy
- Promoting, energizing, and training the next generation of scientists interested in health equity research
- Infusing education and bi-directional academic-community learning throughout

Empowering Community Health Workers with Tools and Storytelling

- Two community health clinics with > 90% of patients below federal poverty line
- Embedded community health workers
- Intervention
 - Motivational interviewing
 - Storytelling
- Patients
 - 171 Randomized to intermediate or delayed intervention
 - 93% follow up for immediate intervention
 - 69% follow up for delayed intervention



Empowering Community Health Workers with Tools and Storytelling



Immediate Intervention

Delayed Intervention

Lo que dicen las madres sobre sexo







NIMD Grant # P60MD006912



Format: Abstract -

J Racial Ethn Health Disparities. 2017 May 19. doi: 10.1007/s40615-017-0376-7. [Epub ahead of print]

The Health Equity Scholars Program: Innovation in the Leaky Pipeline.

Upshur CC¹, Wrighting DM², Bacigalupe G³, Becker J², Hayman L⁴, Lewis B⁵, Mignon S⁶, Rokop ME⁷, Sweet E⁸, Torres MI⁹









Reporter Home

Reporter Archive

Beyond Hospital Walls: Teaching Students About Social Determinants of Health

AAMC Reporter: September 2012

-By Barbara A. Gabriel, special to the Reporter

"In medical school, it's very easy to think that what we do in medicine is what matters the most in health care, that the action is in the clinic and hospital," said Jeroan Allison, M.D., professor and vice chair of quantitative health sciences and associate vice provost for health disparities research at the University of Massachusetts Medical School. "But that's not true. The context of patients' lives is the most powerful determinant of health."



https://www.aamc.org/initiatives/research/healthequity/397524/vsvumass.html

FM101: Determinants of Health Course

- Course content
 - Pervasive nature of health disparities
 - Multiple and complex health determinants
 - Relationship of communities, culture, and the medical care system with health
 - Role of epidemiologic and biostatistical principles
- Clinician's role as
 - Advocate
 - Inter-professional team member
- Reflections on bias at personal, physician, and institutional levels
- Population health clerkship
 - Community immersion
 - Service-learning projects

There Are No Accidents: Preventing Youth Gun Violence Raghu K. Appasani, Jonathan Durgin, Jordan Piazza, Jerome Rogich, Robert Slamin, Roger Yang, Esther Borer, Michael Hirsh MD



Injury Free Coalition for Kids of Worcester works with community leaders on:

- A bi-weekly car seat safety check
- A playground safety improvement/renovation project
- A gun buyback/violence prevention program called "Goods For Guns"
- "Safe at Home" home childproofing kits

	The 2013 general audience book that fully explains the IAT
PROJECT IMPLICIT SOCIAL ATTITUDES Log in or register to find out your implicit associations about race, gender, sexual orientation, and other topics! Image: Sexual Address LOGIN REGISTER	PROJECT IMPLICIT MENTAL HEALTH Find out your implicit associations about self-esteem, anxiety, alcohol, other topics!
Or, continue as a guest by selecting from our available language/nation demonstration sites: United States (English)	PROJECT IMPLICIT FEATURED TASK Test your preference for President Obama compared to other political figures. GO!



Pre-clinical Student Reflections on Implicit Bias in Medical Education

Christine Motzkus, Racquel J Wells, Xingyue Wang, Sonia Chimienti, Deborah Plummer, Jeroan Allison, Suzanne Cashman As a Hispanic male, I was distressed to learn I harbored unconscious bias against those like me. At first I was disturbed, but then I was thankful for the opportunity to prevent this from affecting my future work as a doctor. ---UMass MS II, Reflective Essay "I believe that as a medical student, it is essential to realize that even students can take steps that can have larger consequences." ----UMass MS II, Reflective Essay

CULTURAL HUMILITY VERSUS CULTURAL COMPETENCE: A CRITICAL DISTINCTION IN DEFINING PHYSICIAN TRAINING OUTCOMES IN MULTICULTURAL EDUCATION

MELANIE TERVALON, MD, MPH Children's Hospital Oakland JANN MURRAY-GARCÍA, MD, MPH University of California, San Francisco

Journal of Health Care for the Poor and Underserved • Vol. 9, No. 2 • 1998



It's more important to know what sort of person has a disease than to know what sort of disease a person has. ---Hippocrates

COmmuNity-engaged SimULation Training for Blood Pressure Control (CONSULT-BP)

Participants	Early-stage clinicians (resident physicians and doctor of nursing practice students)
Intervention	Experiential learning to increase bias awareness, improve cultural competency, promote better clinical management and patient engagement
Outcome	Improved blood pressure control for patients of color
Design	Stepped wedge

Mayo Clinic & First Institutional Baptist Church cordially invite you to attend its Discussion of Black Health & Research Tuesday, February 16, 2016 630pm - 830pm

- screening & prevention
- Discussion of perceptions & myths regarding clinical research and minority populations
- Open floor for questions & answers
 First Institutional Baptist Church
 1141 East Jefferson Street
 Phoenix, AZ 85034
 RSVP for this event at (602) 385-3900







http://www.mayoclinic.org/ Appointment Information:

Phone: (480) 301-8087

Fax: (480) 301-4208

Lauren Powell, PhD Candidate

Visiting Research Fellow

Mayo Clinic Arizona

Lauren Powell is a PhD candidate in the Clinical and Population Health Research program at the University of Massachusetts Medical School. Her research focuses on the effects of



racism on health, and increasing the participation of minorities in clinical research studies. Lauren graduated from Xavier University of Louisiana with a B.S. in Biochemistry. She is active in the Worcester community and is a member of the Worcester Partnership for Racial & Ethnic Health Equity.





ORIGINAL ARTICLE

Psychometric Development of the Research and Knowledge Scale (RaKS)

Lauren R. Powell, BS,* Elizabeth Ojukwu, BS,† Sharina D. Person, PhD,† Jeroan Allison, MD, MSc,† Milagros C. Rosal, PhD,‡ and Stephenie C. Lemon, PhD‡

STRIDE (Strengthening Translational Research in Diverse Enrollment)

- Culturally tailored e-consent
- Simulation-based training in cultural humility
- Storytelling to advance research literacy









National Center for Advancing Translational Sciences

1U01TR001812-01

ORIGINAL ARTICLE

Meaningful Engagement of ACOs With Communities The New Population Health Management

Jennifer L Hefner, PhD, MPH,* Brian Hilligoss, PhD, MSIS,† Cynthia Sieck, PhD, MPH,* Daniel M. Walker, PhD, MPH,* Lindsey Sova, MPH,* Paula H. Song, PhD,‡ and Ann Scheck McAlearney, ScD, MS*†



In the last decade, the term "population health" being used so widely that it risks becoming another *mot du jour*.

We need to:

- Develop systems that focus on health rather than on medical care
- Integrate public health and social services as part of the community

---Dr. Suzanne Cashman

New UMMS study shows how to account for social disparities in health care costs

Arleen Ash: 'Ignoring social risk leads to underpayment when treating vulnerable populations'

By Jim Fessenden UMass Medical School Communications

http://www.umassmed.edu/news/news -archives/2017/08/new-umms-studyshows-how-to-account-for-socialdisparities-in-health-care-costs/

http://jamanetwork.com/journals/jamai nternalmedicine/fullarticle/2647322



Paying for social-determinants-of-health supports innovative care for vulnerable. Innovative way of addressing SDOH in MA Medicaid. Helping eliminate neighborhood based underpayment.

August 07, 2017

Presentation Objectives

- Present a current, high-level overview of health disparities
- Review the link between the social determinants and health equity
- Provide a framework for health equity intervention
- Present selected current examples of health equity intervention and health disparity research

To achieve health equity, we need to:

- Achieve with a deep understanding of root causes
- Tap into community wisdom
- Conduct high-quality scientific studies that are respectful of our communities
- Move beyond the individual to focus on the base of the impact pyramid
- Develop effective educational programming that instills proper cultural attitudes in the medical workforce and nurtures all who are deserving
- Engage diverse communities in biomedical research



Such problems require far more profound commitments---in time, in redirection of resources, and in reallocation of power---than is possible for individuals.



"A race, like an individual, lifts itself up by lifting others up." ----Booker T. Washington