The Role of Work in Health Disparities in the US

NIMHD Scientific Workshop

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Populations with Health Disparities

- Racial/ethnic minorities defined by OMB
- Less privileged socio-economic status
- Underserved rural residents
- Sexual gender minorities
- A health outcome that is worse in these populations compared to a reference group defines a health disparity
- Social disadvantage that results in part from being subject to discrimination or racism, and being underserved in health care

Race and Socioeconomic Status are Fundamental in Determining Health

- **Race/ethnicity predict life expectancy and mortality that are not fully explained**
- **African Americans have more strokes when compared to Whites**
- **Black persons with hypertension have less heart attacks and more cardiomyopathy**
- **Among persons with diabetes, all race/ethnic minorities have less heart disease compared to Whites**

Life Expectancy in the U.S., 2014

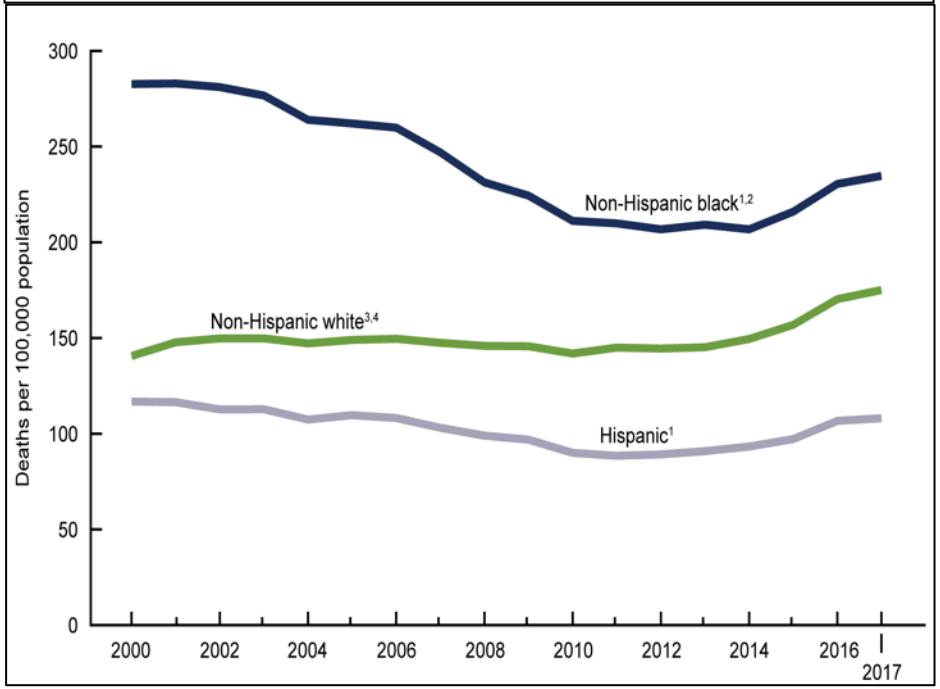
	Men	Women
Whites	76.5	81.1
Blacks	72.0	78.1
Latinos	79.2	84.0
Total in 2017	76.1	81.1

Arias E., NCHS data brief, CDC, (2016), no 244
Murphy SL, et al., NCHS data brief, CDC (2018), no 328

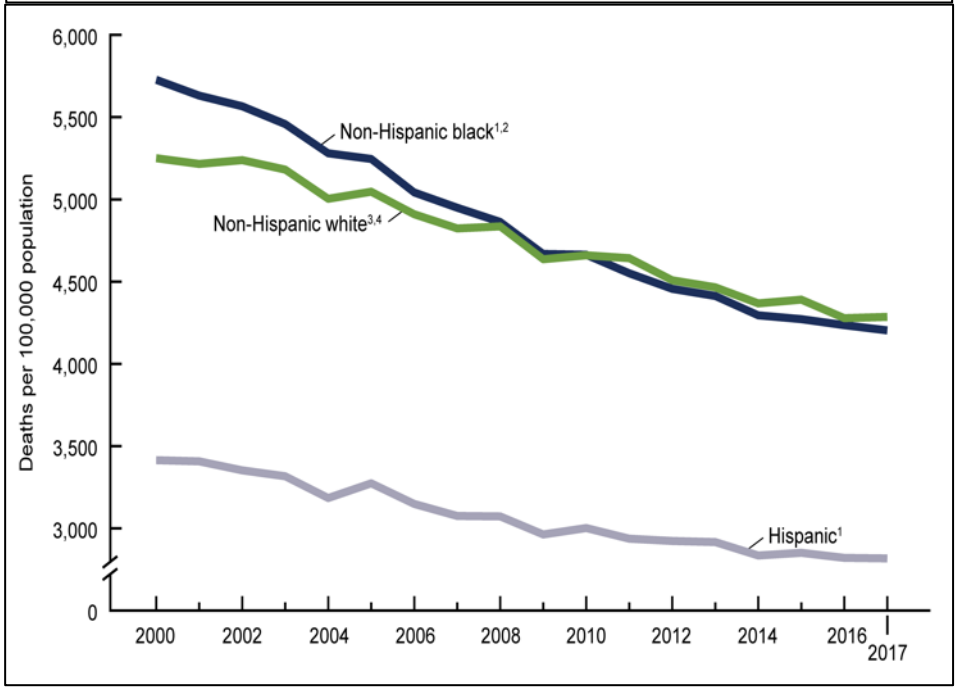
Mortality Rates Increased for All Persons, age 25 to 44, from 2012-2017

NCHS Data Brief No. 342, July 2019

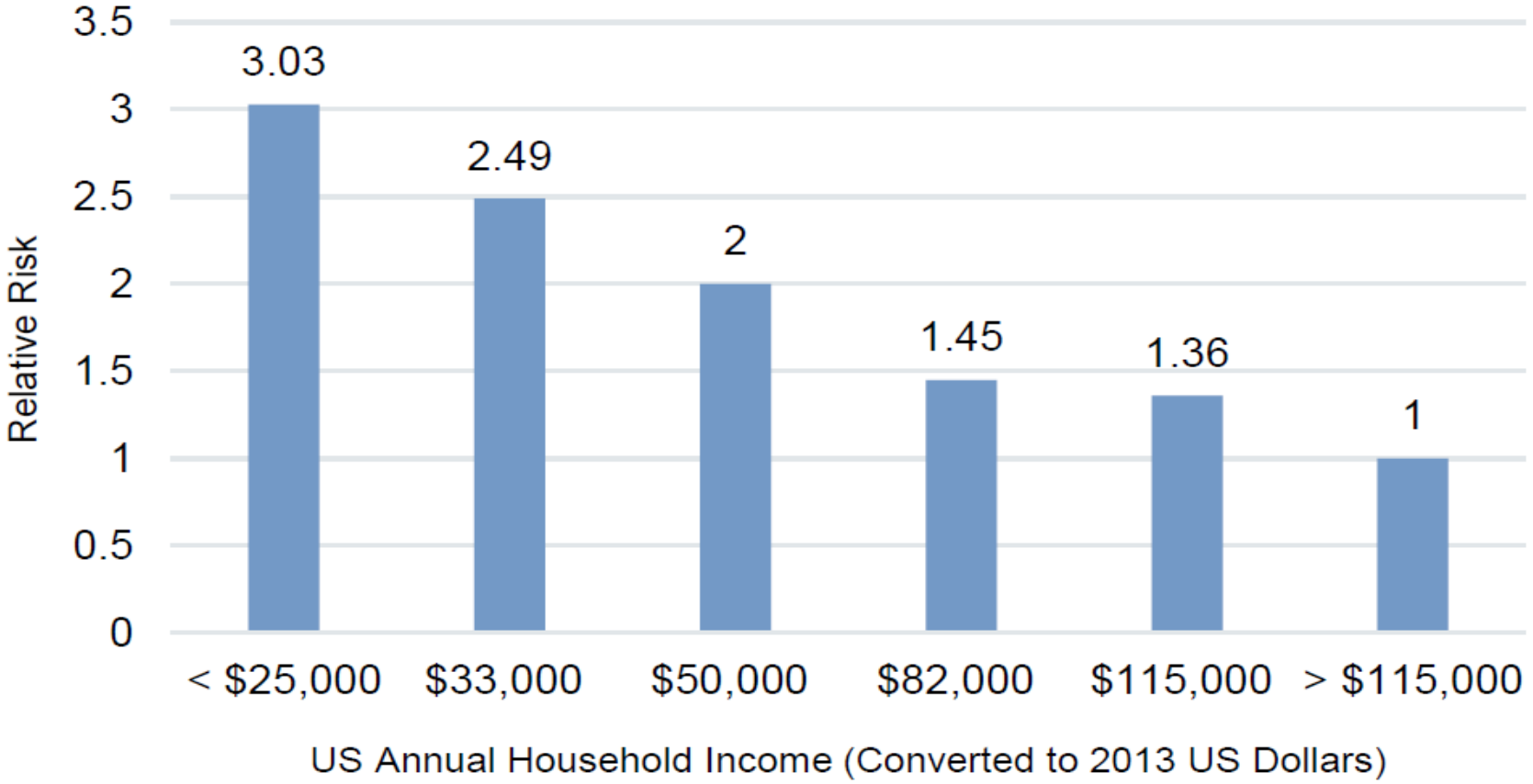
Age-specific death rates for persons aged 25–44, by Hispanic origin and race: United States, 2000–2017



Age-specific death rates for persons aged 65 and over, by Hispanic origin and race: United States, 2000–2017



Relative Risk of All-Cause Mortality by US Annual Household Income Level in 2016



Wyatt R, et al., Achieving health equity: A guide for health care organizations. IHI White Paper. Institute for Healthcare Improvement, 2016

Place, Income and Life Expectancy

- **Income categories defined life expectancy with top 1% living 10-14 y longer than bottom 1% – inequality gap growing (Chetty, JAMA, 2016)**
- **Bottom quintile in income in some areas lived an average of 3 to 4.5 years longer than in other areas — why?**
- **Housing voucher experiment improved A1C and BMI in mothers moving to to higher SES community**
- **Low income persons have higher mortality in high-SES community (Yen, AJE, 1999)**

Assessment of Socioeconomic Status or Social Class in Research

- Education – years of formal, usually translated into categories
- Income – defined in terms of annual household $$$ by number of dependents; poverty level
- Occupation – laborer, technical, professional, business, information
- Life course SES — effects understudied
- Parental education (children)
- Impute based on census tract from address

Whitehall Study British Civil Servants

Marmot MG, The Lancet 1991; 337: 1387-93

- 1967 — steep inverse relationship between grade of employment and mortality
- 1985-1988: new cohort of 10,314 civil servants showed similar relationships with morbidity
- Employment grade differences in risk behaviors and self-perceived health status
- Work with low control, less satisfaction, monotonous, and with less income
- Administrative, executive, clerical

National Institute on Minority Health and Health Disparities Research Framework

		Levels of Influence*			
		Individual	**Interpersonal**	**Community**	**Societal**
Domains of Influence *(Over the Lifecourse)*	**Biological**	Biological Vulnerability and Mechanisms	Caregiver–Child Interaction Family Microbiome	Community Illness Exposure Herd Immunity	Sanitation Immunization Pathogen Exposure
	Behavioral	Health Behaviors Coping Strategies	Family Functioning School/Work Functioning	Community Functioning	Policies and Laws
	Physical/Built Environment	Personal Environment	Household Environment School/Work Environment	Community Environment Community Resources	Societal Structure
	Sociocultural Environment	Sociodemographics Limited English Cultural Identity Response to Discrimination	Social Networks Family/Peer Norms Interpersonal Discrimination	Community Norms Local Structural Discrimination	Social Norms Societal Structural Discrimination
	Health Care System	Insurance Coverage Health Literacy Treatment Preferences	Patient–Clinician Relationship Medical Decision-Making	Availability of Services Safety Net Services	Quality of Care Health Care Policies
Health Outcomes		**Individual Health**	**Family/ Organizational Health**	**Community Health**	**Population Health**

National Institute on Minority Health and Health Disparities, 2018
*Health Disparity Populations: Race/Ethnicity, Low SES, Rural, Sexual/Gender Minority
Other Fundamental Characteristics: Sex/Gender, Disability, Geographic Region

Social Determinants of Health

- **Demographics including family background**
- **Urban or rural residence or geographic region**
- **Cultural identity, religiosity, spirituality**
- **Language proficiency, Literacy, numeracy**
- **Structural determinants: housing, green space, broadband, economic opportunity, transportation, schools, healthy food access, public safety**
- **PhenX Toolkit on Social Determinants of Health**: https://www.phenxtoolkit.org/collections/view/6

Common Data Elements for Social Determinants of Health

Launched May 11, 2020

Toolbox of Measures on SDOH

Adoption of CDEs will promote and facilitate:

- Data harmonization
- Domestic and international cross-study analysis
- Accelerated translational research
- Greater understanding of the causes of health disparities
- Effective interventions to reduce disparities

The Harvard Gazette

NATIONAL & WORLD AFFAIRS

For Native Americans, COVID-19 is 'the worst of both worlds at the same time'

he Skywalk over the Grand Canyon
vas closed by the Hualapai tribe to
crease social distancing measures
uring the pandemic.

itan Lawrimore/Unsplash

The Striking Racial Divide in How Covid-19 Has Hit Nursing Homes

Homes with a significant number of black and Latino residents have been twice as likely to be hit by the coronavirus as those where the population is overwhelmingly white.

Rural America Could Be the Region Hardest Hit by the COVID-19 Outbreak

Black Americans Face Alarming Rates of Coronavirus Infection in Some States

Data on race and the coronavirus is too limited to draw sweeping conclusions, experts say, but disparate rates of sickness — and death — have emerged in some places.

Many Who Need Testing For COVID-19 Fail To Get Access

April 3, 2020 · 5:00 AM ET

COVID-19 in Prisons and Jails in the United States

Laura Hawks, MD[1,2]; Steffie Woolhandler, MD, MPH[2,3]; Danny McCormick, MD, MPH[1,2]

» Author Affiliations | Article Information

JAMA Intern Med. Published online April 28, 2020. doi:10.1001/jamainternmed.2020.1856

COVID-19 and Racial/Ethnic Disparities

Webb Hooper M, Nápoles AM, Pérez-Stable EJ, JAMA Viewpoint, May 11, 2020

- Disproportionate burden of COVID-19 on racial and ethnic minority populations
- >50% of cases and 45% of mortality in Latinos, AI/AN and African Americans; represent about 33% of population
- Underlying causes of this burden related to long-standing disparities and disadvantage, higher rates of co-morbid conditions, higher proportions of **public facing jobs**, and crowding in housing and communities
- Imperative need for implementing prevention and healthcare strategies aligned with the needs of these communities to address effects of pandemic and mitigation efforts as well as underlying inequities

Perception of Unfair Treatment: 2015

In past 30 days were you treated unfairly because of racial or ethnic background in store, work, entertainment place, dealing with police, or getting healthcare?

	Percent Agree	
	All	**Health**
Latinos	**36%**	**14%**
African Americans	**53%**	**12%**
Whites	**15%**	**5%**

Trust in clinician/institution? Role of Unconscious Bias?

Kaiser Family Foundation Survey of Americans on Race, November 2015.

Racism as Research Construct

- *Interpersonal*: Most work done, good measures developed, associations established, most common
- ***Structural*: History, culture, institutions, policies and codified practices that perpetuate inequity; imperative to research**
- *Internalized*: How discrimination (as above) effects individuals who are not aware or sublimate; accept cultural or biological inferiority
- Perceived societal and second-hand effects

Community Engaged Research to Reduce Health Disparities: What is Needed?

- **Shift models of care to population health with standardized social determinants of health**
- **Enhance access to health care services: portal for patients, e-referrals, tele-medicine, proxies, visuals**
- **Address access to real food and safe places**
- **Engage community resources in promoting health: nutrition, physical space, tobacco**
- **Recognize and manage discrimination**

Challenges for this Workshop

- **Work and occupation are primary SDOH**
- **What is the contribution to health outcomes independent of SES?**
- **Does race/ethnicity matter? Gender?**
- **Exposure to environmental toxins, physical injury, emotional stress, discrimination, economic instability**
- **What about occupational prestige?**

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Supplement 1, 2019, Vol 109, No S1

- **Editor's choice by NIMHD Director Dr. Eliseo J. Pérez-Stable and NIH Director Dr. Francis S. Collins**
- **Definitions for minority health, health disparities, and NIMHD Research Framework**
- **30 research strategies in methods, measurement, etiology, and interventions**
- **Multi-year process with more than 100 authors, including NIH program officers and academic scientists**

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