

# Social Inequalities in Health: Challenges and Opportunities

David R. Williams, PhD, MPH

Florence & Laura Norman Professor of Public Health  
Professor of African & African American Studies and of  
Sociology

Harvard University

# Pattern

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There are Striking Racial Disparities in  
Health

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# Racial/Ethnic Disparities in Health

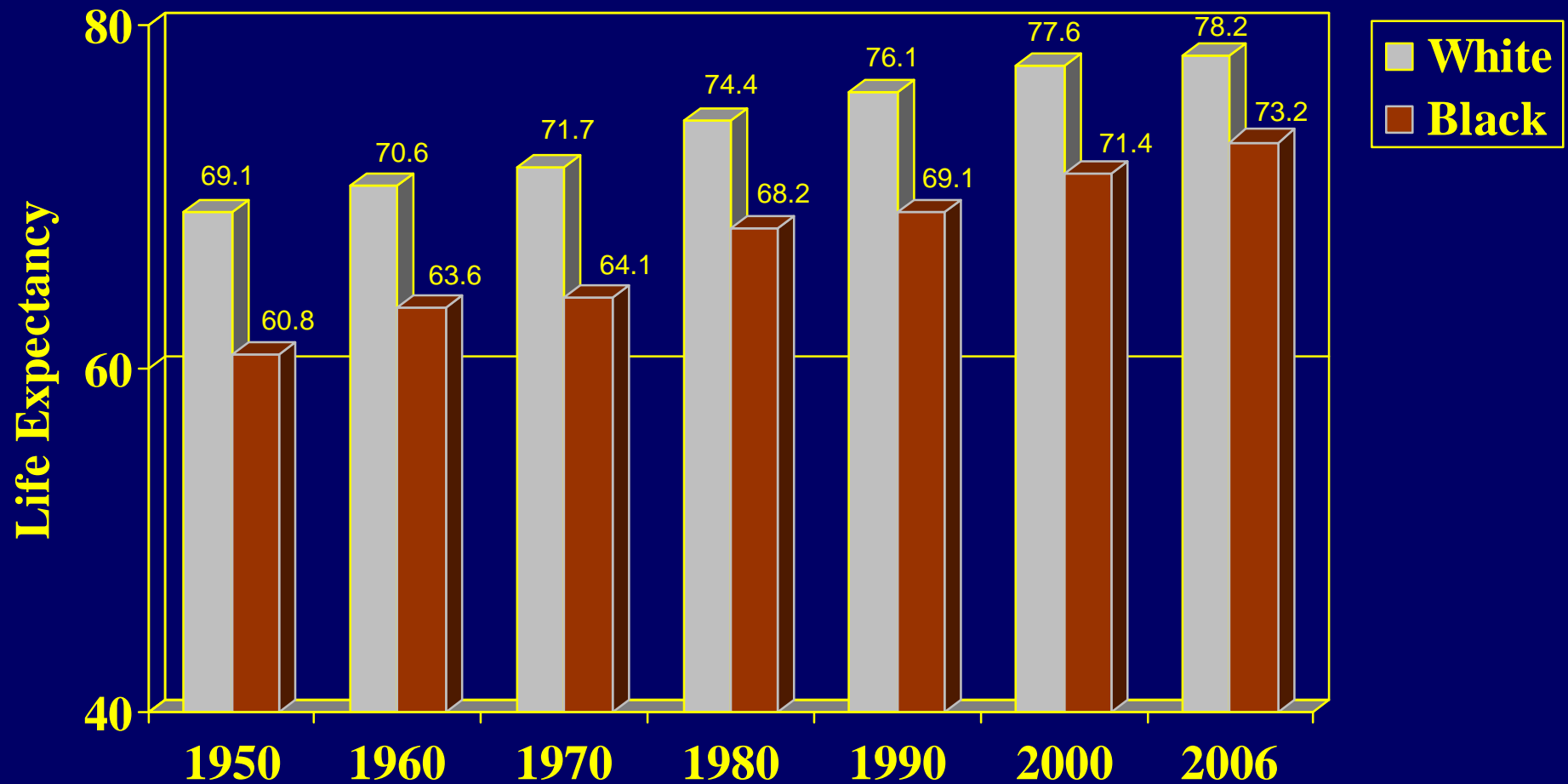
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- African Americans have higher death rates than Whites for 10 of the 15 leading causes of death.
  - Blacks and American Indians have higher age-specific death rates than Whites from birth through the retirement years.
  - Hispanics have higher death rates than whites for diabetes, hypertension, liver cirrhosis & homicide
  - Immigrants tend to have better health than the native-born but their health declines with increasing length of stay and generation status
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# Racial Disparities in Health Persist

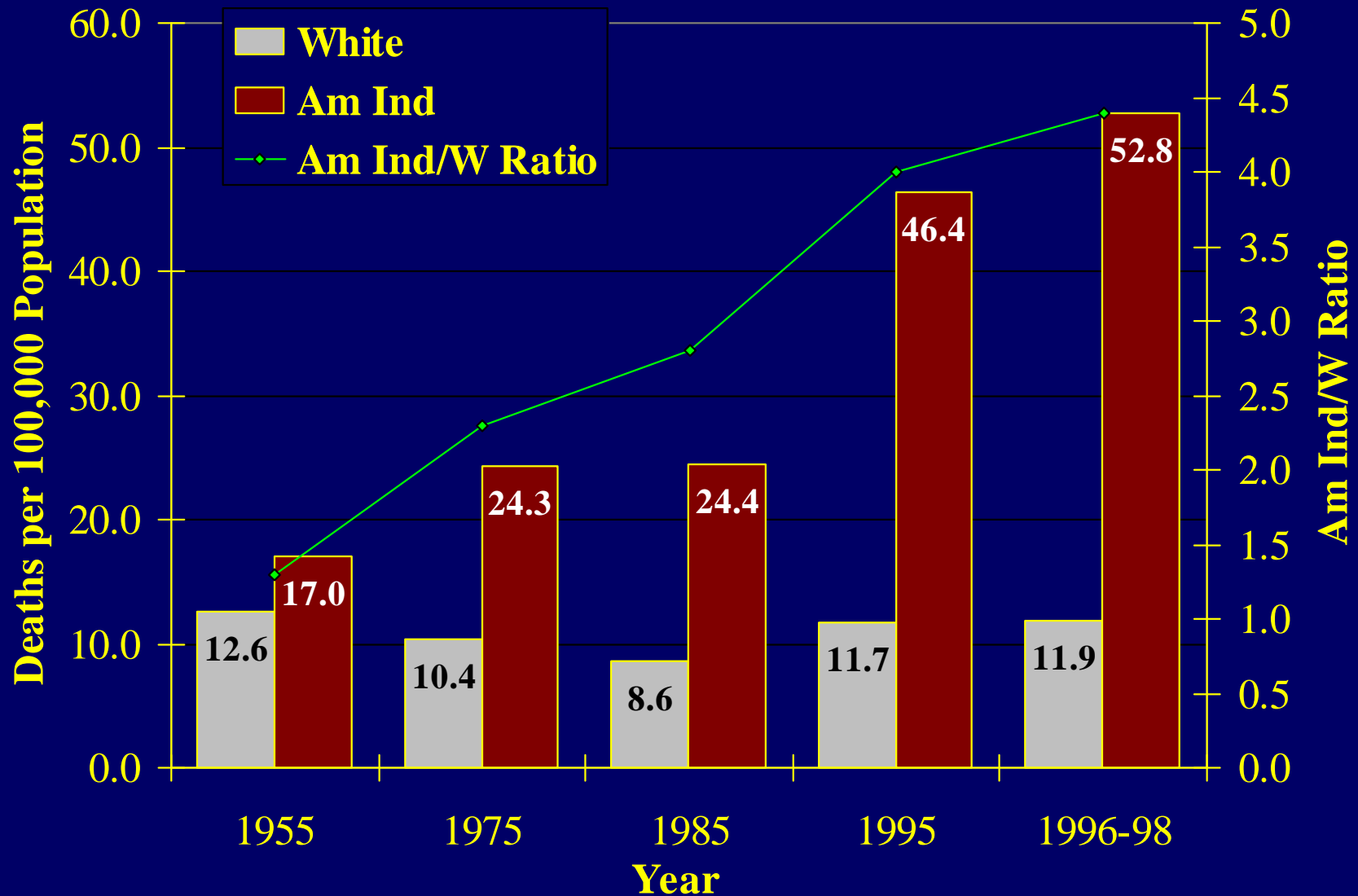
There are large gaps in health. In the last 60 years, we have had little success in narrowing them

# Life Expectancy Lags, 1950-2006



Murphy, NVSS 2000;

# Diabetes Death Rates 1955-1998



Source: Indian Health Service; Trends in Indian Health 2000-2001

# Multiple Jeopardy

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Minorities get sick younger, have more severe illness, and die sooner than Whites

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# Breast Cancer: Earlier Onset of Disease

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- White women have an overall incidence of breast cancer that is higher than that of blacks
- The opposite pattern exists under the age of 40, with African American women having a higher incidence of breast cancer compared to their white peers



## Early Onset: Heart Failure

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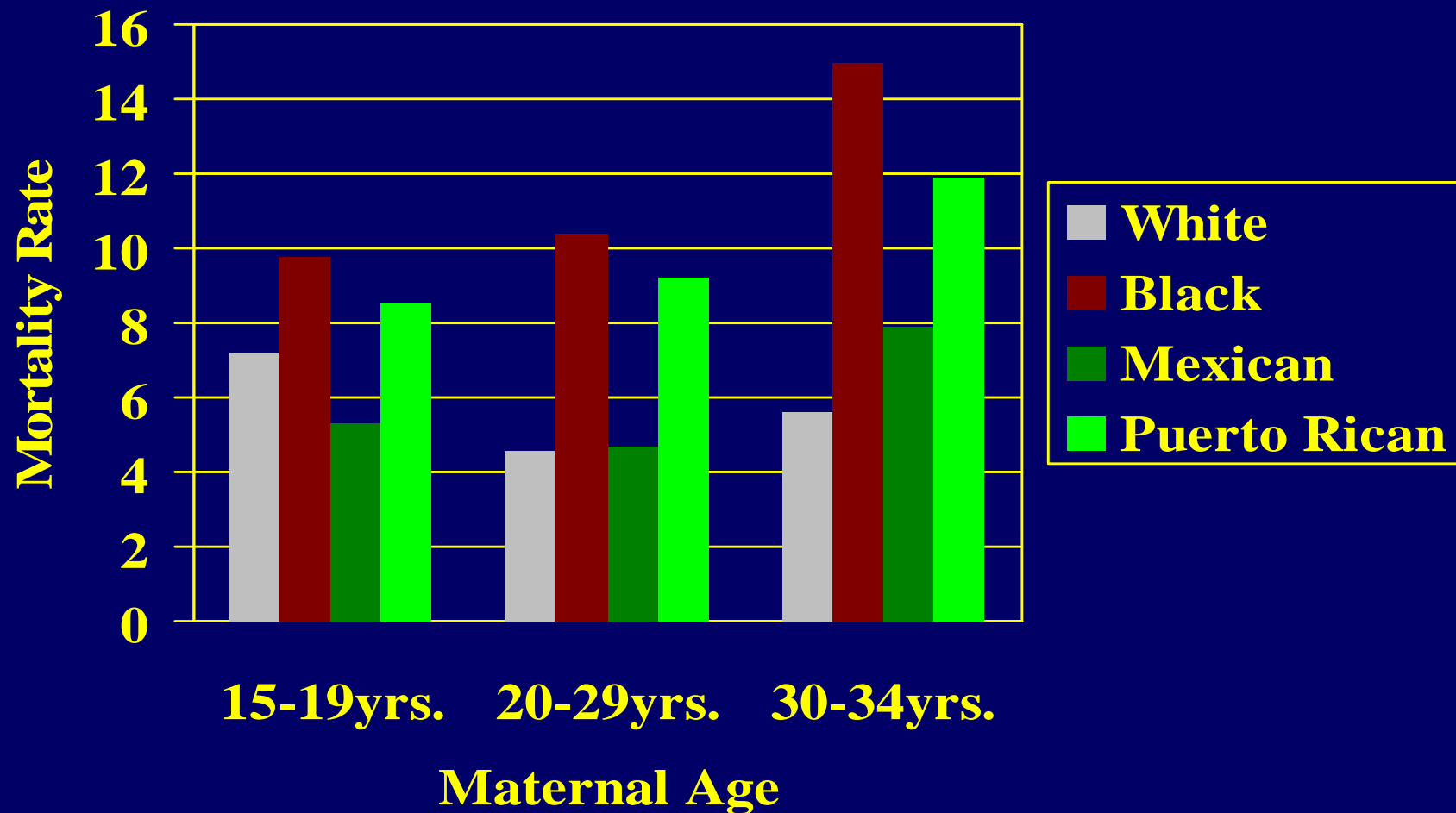
A 20-year follow-up of young adults in the CARDIA study found that incident heart failure before the age of 50 was 20 times more common in Blacks than Whites, with the average age of onset being 39 years old

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Bibbins-Domingo et al. 2009, NEJM;

# Neonatal Mortality Rates (1st Births), U.S.

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Geronimus & Bound, 1991; National Linked  
Birth/Death Files, 1983

*Racial/Ethnic Disparities in Health:*  
*More than just Socioeconomic Status*

# Life Expectancy At Age 25

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Group	White	Black	Difference
All	53.4	48.4	5.0

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# Life Expectancy At Age 25

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Group	White	Black	Difference
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All	53.4	48.4	5.0
Education			
a. 0-12 Years	50.1		
b. 12 Years	54.1		
c. Some College	55.2		
d. College Grad	56.5		
Difference	6.4		

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Murphy, NVSS 2000; Braveman et al. AJPH, 2010; NLMS 1988-1998

# Life Expectancy At Age 25

Group	White	Black	Difference
All	53.4	48.4	5.0
Education			
a. 0-12 Years	50.1	47.0	
b. 12 Years	54.1	49.9	
c. Some College	55.2	50.9	
d. College Grad	56.5	52.3	
Difference	6.4	5.3	

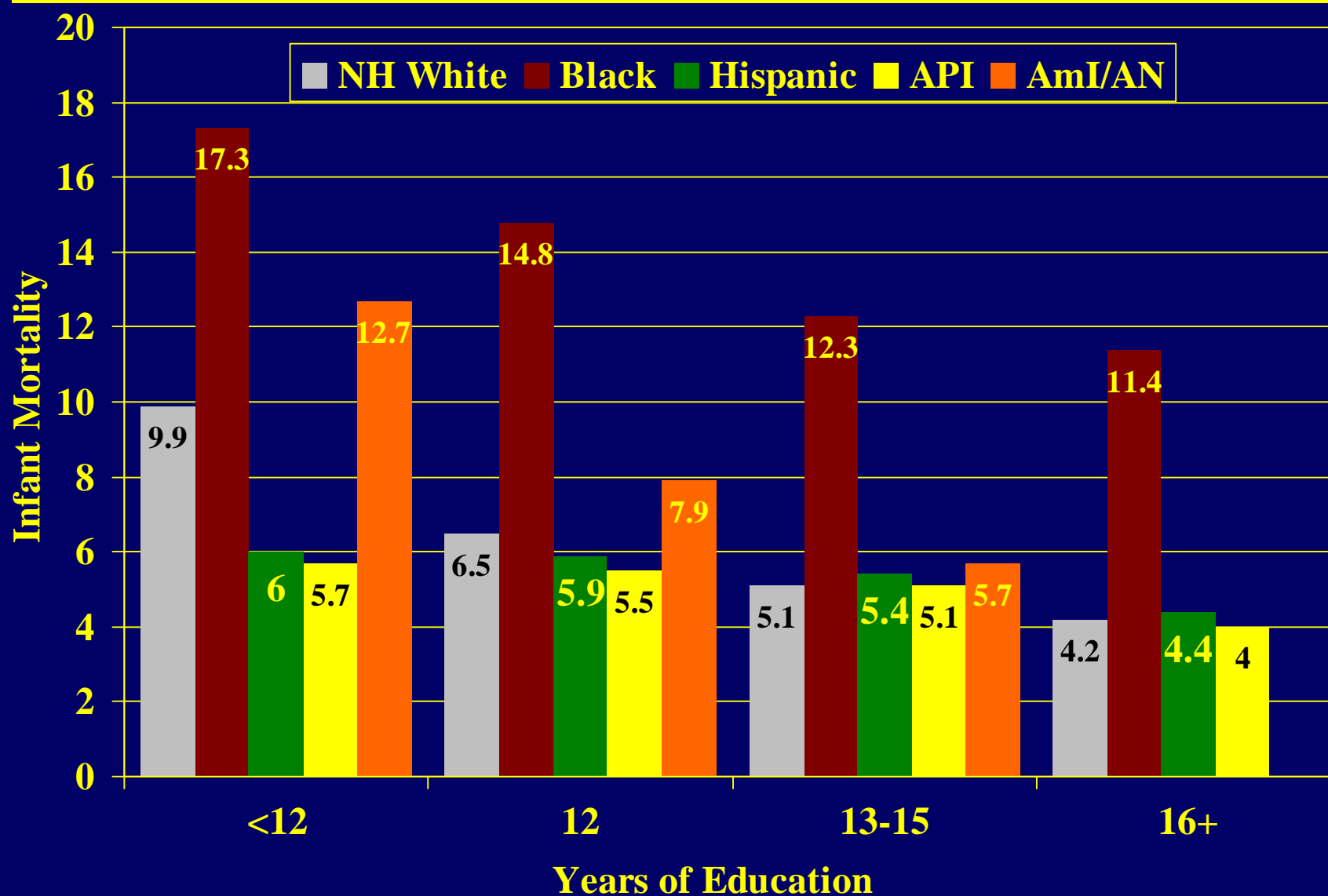
Murphy, NVSS 2000; Braveman et al. AJPH, 2010; NLMS 1988-1998

# Life Expectancy At Age 25

Group	White	Black	Difference
All	53.4	48.4	5.0
Education			
a. 0-12 Years	50.1	47.0	3.1
b. 12 Years	54.1	49.9	4.2
c. Some College	55.2	50.9	4.3
d. College Grad	56.5	52.3	4.2
Difference	6.4	5.3	

Murphy, NVSS 2000; Braveman et al. AJPH, 2010; NLMS 1988-1998

# Infant Mortality by Mother's Education



NCHS, 1998



# Meharry vs Johns Hopkins

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A 1958- 65, all Black, cohort of Meharry Medical College MDs was compared with a 1957- 64, all White, cohort of Johns Hopkins MDs. 23-25 years later, the Black MDs had:

- § higher risk of CVD (RR=1.65)
- § earlier onset of disease
- § incidence rates of diabetes & hypertension that were twice as high
- § higher incidence of coronary artery disease (1.4 times)
- § higher case fatality (52% vs 9%)

# Specific Race-Related Risk Factors

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1. Health is affected not only by current SES but by exposure to social and economic adversity over the life course.
  2. All indicators of SES are non-equivalent across race.
  3. Personal experiences of discrimination and institutional racism are added pathogenic factors that can affect the health of minority group members in multiple ways.
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# Early Life Adversity

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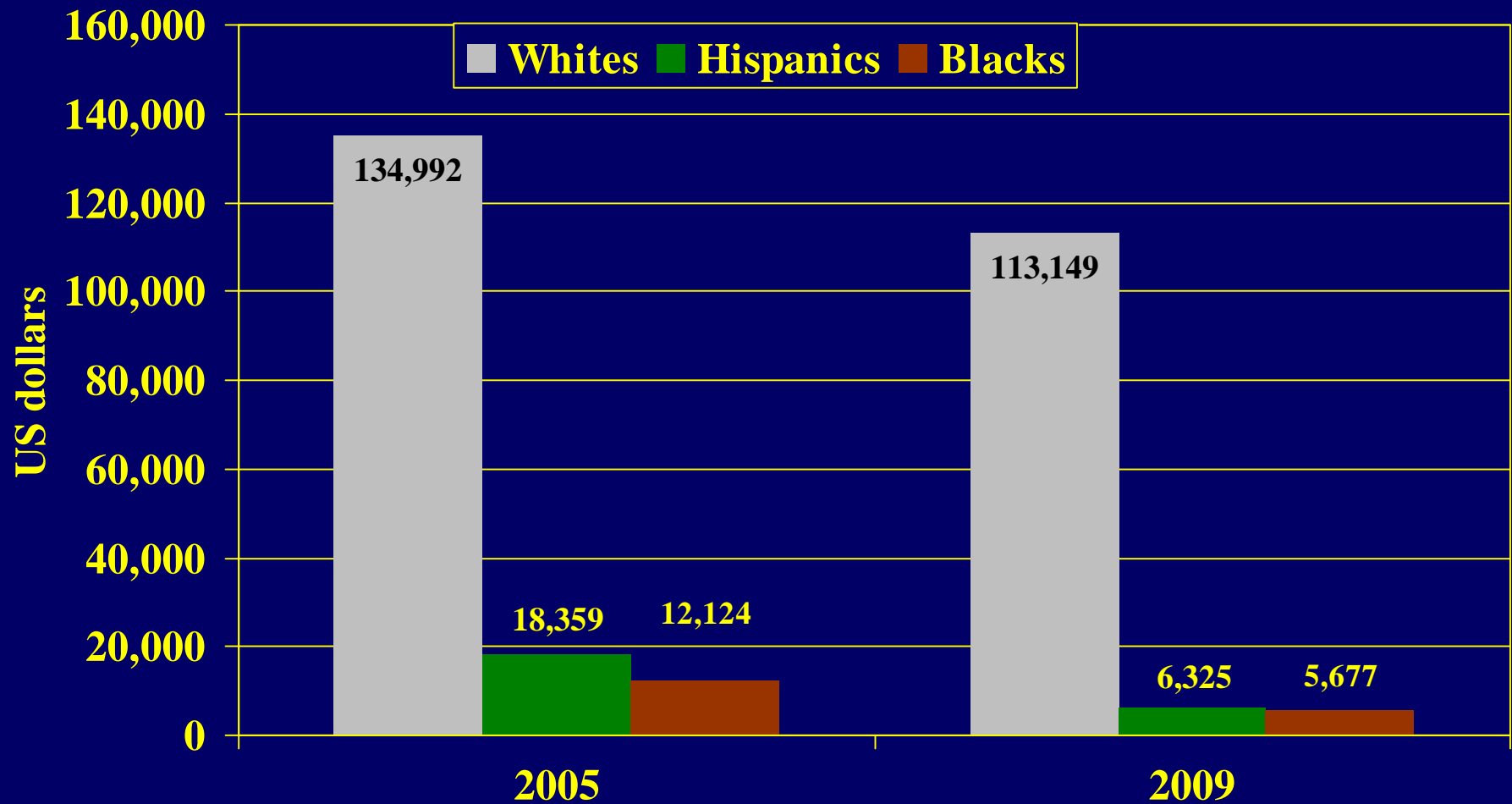
- How are early life stressors linked to adult inflammation (CRP, IL6, Interleukin-6, Fibrinogen, E-selectin, sICAM-1)?
- In the MIDUS study, a measure of early life adversity (stressful events during childhood, relationship with parents, and verbal or physical abuse by parents) was significantly associated with 4 of 5 markers of inflammation for African Americans
- No association among Whites

# **Non Equivalence of SES across Race**

Compared to whites, blacks and Hispanics

- Receive less income at the same levels of education,
- have less wealth at the equivalent income levels, and
- have less purchasing power (at a given level of income) because of higher costs of goods and services.

# Median Net Worth of Households 2005 and 2009



Pew Research Center, 2011

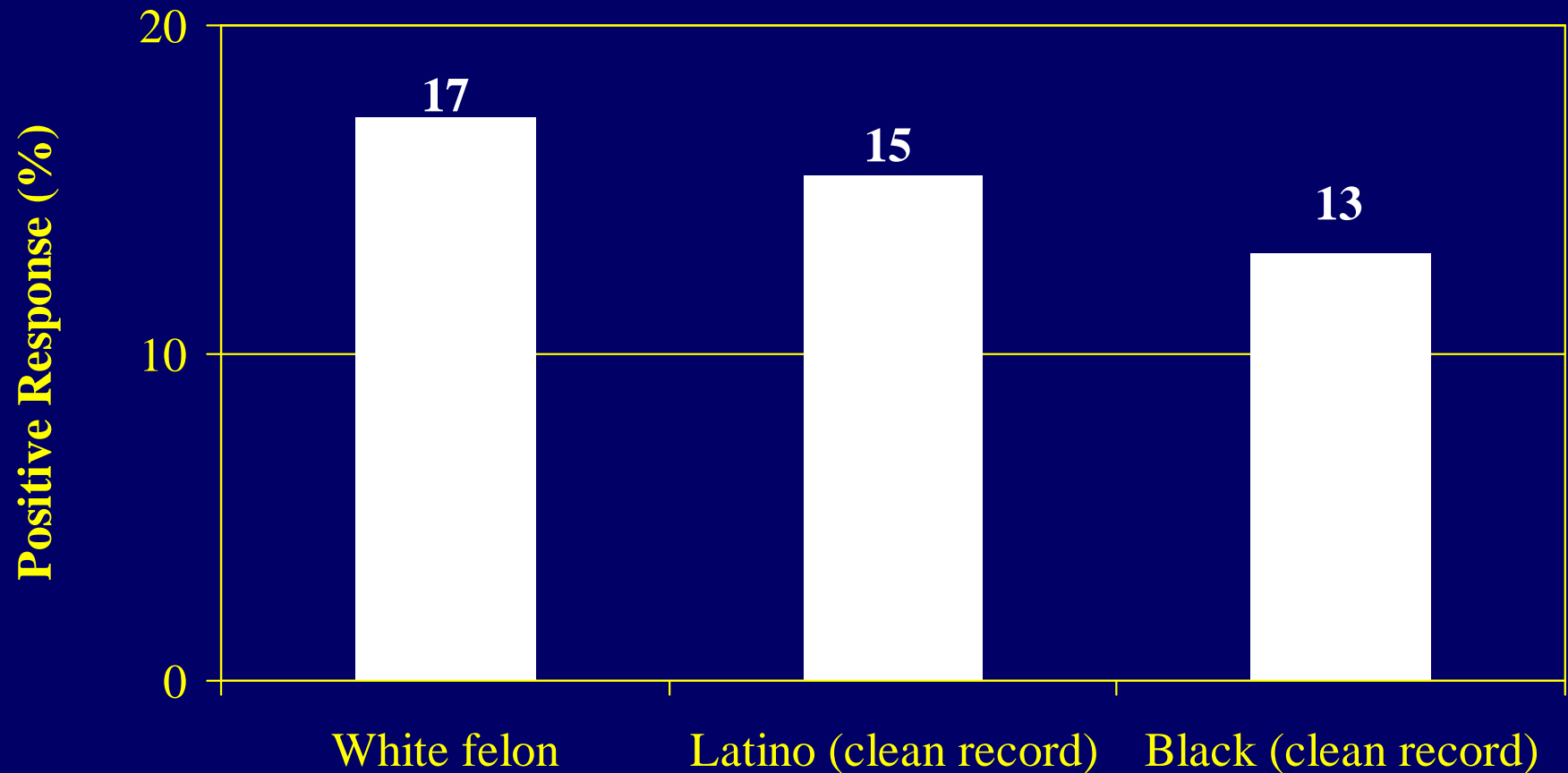
# Racism and Health: Mechanisms

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- Institutional discrimination can restrict socioeconomic attainment and group differences in SES and health.
  - Segregation can create pathogenic residential conditions.
  - Discrimination can lead to reduced access to desirable goods and services.
  - Internalized racism (acceptance of society's negative characterization) can adversely affect health.
  - Racism can create conditions that increase exposure to traditional stressors (e.g. unemployment).
  - Experiences of discrimination may be a neglected psychosocial stressor.
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*There is Striking Scientific Evidence that  
Racial/Ethnic Discrimination Persists in  
Multiple Sectors of Society*

# Race, Criminal Record, and Entry-level Jobs in NY, 2004



Devah Pager et al Am Soc Review, 2009; 169 employers



*Perceived Discrimination:*

*Experiences of discrimination are a  
neglected psychosocial stressor*

# Perceived Discrimination and Health

- Discrimination is associated with elevated risk of
  - diabetes (Hemoglobin A1c)
  - substance use (smoking, alcohol, other drugs)
  - breast cancer incidence
  - uterine myomas (fibroids)
  - subclinical carotid artery disease (IMT; intima-media thickness)
  - Delays in seeking treatment, lower adherence to treatment regimes, lower rates of follow-up
- Discrimination accounts, in part, for racial/ethnic disparities in health, in U.S., and elsewhere

## Every Day Discrimination

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In your day-to-day life how often have any of the following things happened to you?

- You are treated with less courtesy than other people.
- You are treated with less respect than other people.
- You receive poorer service than other people at restaurants or stores.
- People act as if they think you are not smart.
- People act as if they are afraid of you.
- People act as if they think you are dishonest.
- People act as if they're better than you are.
- You are called names or insulted.
- You are threatened or harassed.

What do you think was the main reason for these experiences?

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# Discrimination & Health: Tene Lewis et al

- Everyday Discrimination: positively associated with:
    - coronary artery calcification (Lewis et al., Psy Med, 2006)
    - C-reactive protein (Lewis et al., Brain Beh Immunity, 2010)
    - blood pressure (Lewis et al., J Gerontology: Bio Sci & Med Sci 2009)
    - lower birth weight (Earnshaw et al., Ann Beh Med, 2013)
    - cognitive impairment (Barnes et al., 2012)
    - poor sleep [object. & subject.] (Lewis et al, Hlth Psy, 2012)
    - mortality (Barnes et al., J Gerontology: Bio Sci & Med Sci, 2008).
    - visceral fat (Lewis et al., Am J Epidemiology, 2011)
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# How Segregation Can Affect Health

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1. Segregation determines SES by affecting quality of education and employment opportunities.
2. Segregation can create pathogenic neighborhood and housing conditions.
3. Conditions linked to segregation can constrain the practice of health behaviors and encourage unhealthy ones.
4. Segregation can adversely affect access to medical care and to high-quality care.

## Segregation in the 2000 Census

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- Dissimilarity index declined from .70 in 1990 to .66 in 2000
- Decline in segregation due to blacks moving to formerly all white census tracts
- Segregation declined most in small growing cities where the percentage of blacks is small
- Between 1990 and 2000, number of census tracts that were over 80% black remained constant
- The decline in segregation has had no impact on a) very high percentage black census tracts, b) the residential isolation of most African Americans, and c) the concentration of urban poverty.

# Residential Segregation and SES

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A study of the effects of segregation on young African American adults found that the elimination of segregation would erase black-white differences in

- § Earnings

- § High School Graduation Rate

- § Unemployment

And reduce racial differences in single motherhood by two-thirds

# Our Neighborhood Affects Our Health

## Unhealthy Community

vs

## Healthy Community

Unsafe even in daylight



Exposure to toxic air,  
hazardous waste



No parks/areas for physical  
activity



Limited affordable housing is  
run-down; linked to crime  
ridden neighborhoods



Convenience/liquor stores,  
cigarettes and liquor  
billboards, no grocery store



Safe neighborhoods, safe  
schools, safe walking routes



Clean air and environment



Well-equipped parks and  
open/spaces/organized  
community recreation



High-quality mixed income  
housing, both owned and  
rental



Well-stocked grocery stores  
offering nutritious foods





# Our Neighborhood Affects Our Health

## Unhealthy Community

vs

## Healthy Community

Streets and sidewalks in disrepair



Clean streets that are easy to navigate



Burned-out homes, littered streets



Well-kept homes and tree-lined streets



No culturally sensitive community centers, social services or opportunities to engage with neighbors in community life



Organized multicultural community programs, social services, neighborhood councils or other opportunities for participation in community life



No local health care services



Primary care through physicians' offices or health center; school-based health



Lack of public transportation, walking or biking paths



Accessible, safe public transportation, walking and bike paths



# Racial Differences in Residential Environment

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- In the 171 largest cities in the U.S., there is not even one city where whites live in ecological equality to blacks in terms of poverty rates or rates of single-parent households.
- “The worst urban context in which whites reside is considerably better than the average context of black communities.”  
p.41

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**Sampson & Wilson 1995**

# Addressing Upstream Social Factors and Undoing Racism to Affect Health

Growing evidence that policies and interventions that improve the quality of life and address the legacies of racism may have positive effects on physical and mental health

# Structural Interventions

We can improve health through interventions that improve living conditions and reduce institutional racism:

- Improving housing and neighborhood conditions
- Increasing educational quality
- Enhancing access to additional income, employment opportunities and other desirable resources
- Reducing violence and incarceration

# Health Effects of Civil Rights Policy

- Civil Rights policies narrowed black-white economic gap
- Gains greater for women than men
- Black women had larger gains in life expectancy during 1965 - 74 than other groups (3 times as large as those in the decade before)
- Between 1968 and 1978, black males and females, aged 35-74, had larger absolute and relative declines in mortality than whites

## Moving to Opportunity

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- The Moving to Opportunity Program randomized families with children in high poverty neighborhoods to move to less poor neighborhoods.
- Three years later, there were improvements in the mental health of both parents and sons who moved to the low-poverty neighborhoods
- 10 to 15 years later, movers had lower levels of obesity, severe obesity & diabetes risk (HbA<sub>1c</sub>)

# High/Scope Perry Preschool

Program: Black children, living in poverty & at risk of school failure

- Random assignment
- Daily classes and weekly home visits



At age 40, those who received the program:

- Were more likely to graduated from high school
- Had higher employment, income, savings, home ownership
- Had fewer arrests for violent, property and drug crimes
- Cost-benefit: \$17 return to society for every dollar invested

# Psychological Interventions

We can improve health through interventions that improve educational performance:

- Self-Affirmation Interventions
- Social Belonging Interventions
- Utilizing dramatic, salient counter-narratives



# Reducing the Health Effects of Social Disadvantage and Racism

We can minimize the health effects of social disadvantage and racism by:

- Maximizing the health benefits of medical care
- Enhancing capacity to cope with discrimination
- Making healthy choices easier through structural interventions
- Enhancing protective resources (e.g., stress-management skills, depression interventions)
- Empowering individuals and communities

# Care that Addresses the Social context

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*Why treat illness  
and send people  
back to live in the  
same conditions  
that made them sick  
in the first place?*

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# Medical Legal Partnership

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- Enables MDs to refer to unique specialists: on-site attorneys
- Most low-income persons face legal issues that affect the quality of life and their management of disease
- Adding lawyers to medical team can screen and assist families for social problems that affect effective care and illness management
- Areas addressed: unhealthy housing, immigration, food, income support, education access, disability, family law
- A child with asthma in a moldy apartment will not breathe symptom free, regardless of meds, without improved living conditions

## Empowering Patients

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- Addressing social & economic barriers to access to care, adherence to medical regimens and to living healthy lifestyles can lead to improvements in health.
- For homeless and unstably housed persons living with HIV, an RCT providing stable housing was effective in reducing risk behavior, increasing access to care, and increasing adherence to medication regimen
- An RCT with black women in DC found that building a cognitive behavioral intervention addressing cigarette smoking, environmental tobacco exposure, depression and intimate partner violence reduced very preterm birth compared to the usual care group

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Wolitski et al., 2010, Aids & Behavior; El-Mohandes et al., 2010, Pediatrics

## Empowering Communities

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- A study of suicide among native youth in Canada documented the central role that cultural empowerment can play in health
- This group has one of the highest rates of global youth suicide but examination of youth suicide rates between 1987 and 1992 in 196 First Nation communities found that more than half of the communities had no youth suicides during study period
- The researchers developed a measure of cultural empowerment and continuity to identify the determinants of variation in youth suicide

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Chandler, M. J., & Lalonde, C. (1998). *Transcultural Psychiatry*.

## Empowering Communities II

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- The six markers captured challenging the government for titles to land and the right to self-governance, control over the provision of services (education, healthcare, police and fire) and the presence of a building for cultural activities
- The study found a strong inverse relationship between each indicator of continuity and empowerment and youth suicide and a strong dose-response relationship between the number of markers and the prevalence of suicide

# Reducing Cultural Racism

We need to identify the most effective strategies to reduce stereotypes, prejudice and discrimination by:

- Using the media and other cultural institutions
- Diversity Training to reduce implicit bias
- Reducing individual level prejudice
- Meaningful intergroup contact
- Enhancing capacity to confront racism by building resilience and protective factors
- Dismantling Racism: Positive Events

## Creating the Conditions for Change

*“The most difficult social problem in the matter of Negro health is the peculiar attitude of the nation toward the well-being of the race. There have... been few other cases in the history of civilized peoples where human suffering has been viewed with such peculiar indifference”*

**W.E. B. Du Bois (1899 [1967], p.163).**

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# Building the Science of Interventions

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- Rigorously evaluate interventions for potential to improve health AND reduce social inequalities
  - How do we design interventions to improve health of disadvantaged more rapidly than rest of population?
  - What is optimal timing, needed patterning and sequencing of interventions to get maximal benefits?
  - Identify narratives to communicate about disparities and trigger emotional engagement and policy support
  - Infrastructure: entity focused on reducing disparities, with economic resources and political authority to convene various government units, research and advocacy groups to leverage available resources
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Williams & Mohammed, in press

# Keys to Improving America's Health

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- Health care system reform is critical, but insufficient
  - Social factors like education, housing, transportation the environment can have decisive impacts
  - There are promising approaches from around the country that are making a difference now
  - We need to bring resources together in a concerted focus to modify where and how we live, learn, work and play
  - We need to attend to those who are farthest behind
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## Conclusions

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- Inequalities in health are created by larger inequalities in society.
  - SES and racial/ethnic disparities in health reflect the successful implementation of social policies.
  - Eliminating them requires political will for and a commitment to new strategies to improve living and working conditions.
  - Our great need is to begin in a systematic and comprehensive manner, to use all of the current knowledge that we have.
  - We need to better understand the levers of change
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