



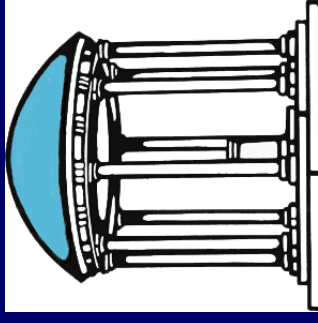
**Florida
Black Infant Health Practice Collaborative**

**Tallahassee, FL
January 9, 2008**

What Everyone Needs to Know About Eliminating Disparities in Infant Mortality

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Objective:

To provide the basic knowledge you need to develop strategies and an evidence base for eliminating disparities in infant mortality

Punchline:

Eliminating disparities is not simple and straightforward..... nor is it impossible. Don't be fooled into thinking disparities can be resolved simply by conducting infant mortality reviews and perinatal period of risks analyses; but do not be dismayed when eliminating disparities seems impossible to accomplish

Outline

1. What are disparities?
2. What do disparities look like?
3. What causes disparities in infant mortality?
4. What challenges do we face in eliminating disparities?
5. Promising Strategies

What are disparities?

Disparity

(definition)

When one group of people gets sick and/or dies sooner and at a higher rate than other groups of people

NIH definition

“differences in the incidence, prevalence, mortality and burden of diseases and other adverse health conditions that exist among specific population subgroups in the US” .
(NIH)

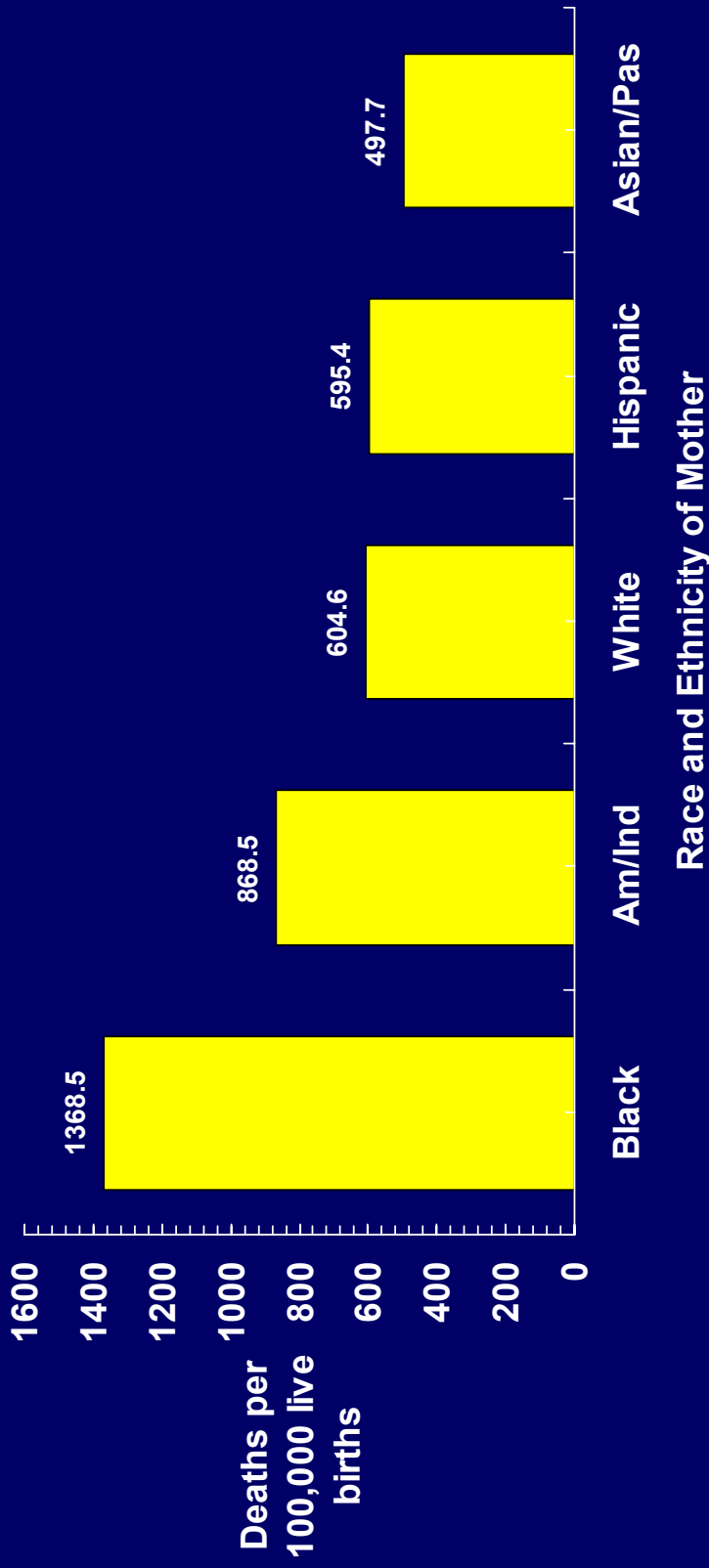
UNC-CH definition

Inequities in disease and well-being that come from discrimination and unequal access to society's benefits, such as quality education, good jobs, decent and affordable housing, safe neighborhoods and environments, nutritious foods, and adequate healthcare. These inequities result in disproportionately higher rates of death, disease, and disability and have adverse consequences on the physical, mental, spiritual, and social well-being of population groups who, historically and currently, do not experience equivalent social advantage. These groups include, for example, African Americans, American Indians, Hispanics/Latinos, Asian Americans, Hawaiians and Pacific Islanders, people with disabilities, Lesbian/Gay/Bisexual/Transgender/Queer persons, and people with lower incomes.

Workgroup on Engaged Institution for Eliminating Racial and Ethnic Health Disparities, 2007

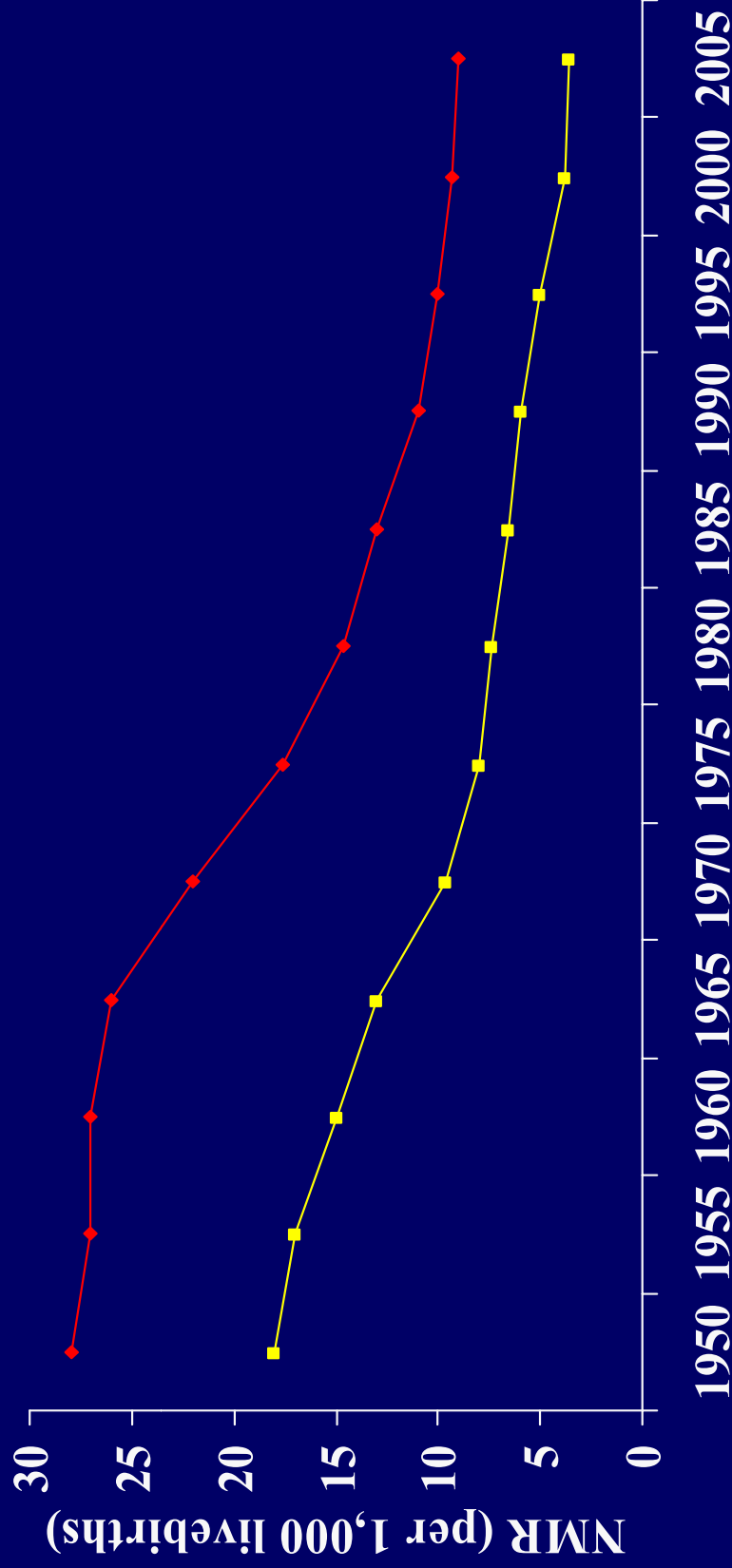
**What do disparities look
like?**

How likely it is that a baby will die before age 1 (Infant Mortality Rates) in the US



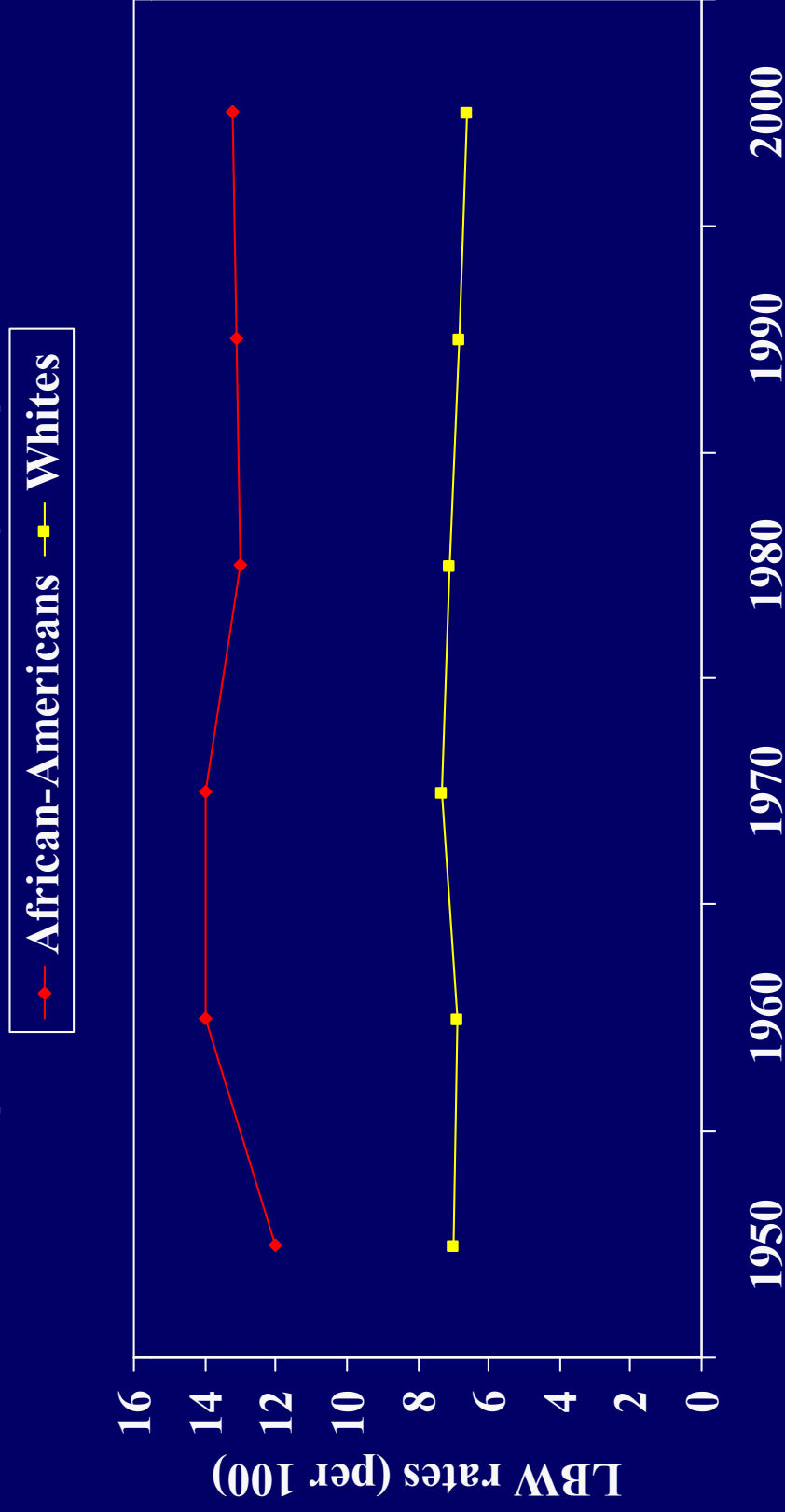
How likely a baby will die in the first month of life (neonatal mortality rates)

African-American White



Collins et al.

How likely a baby will be born weighing too little (low birth weight)



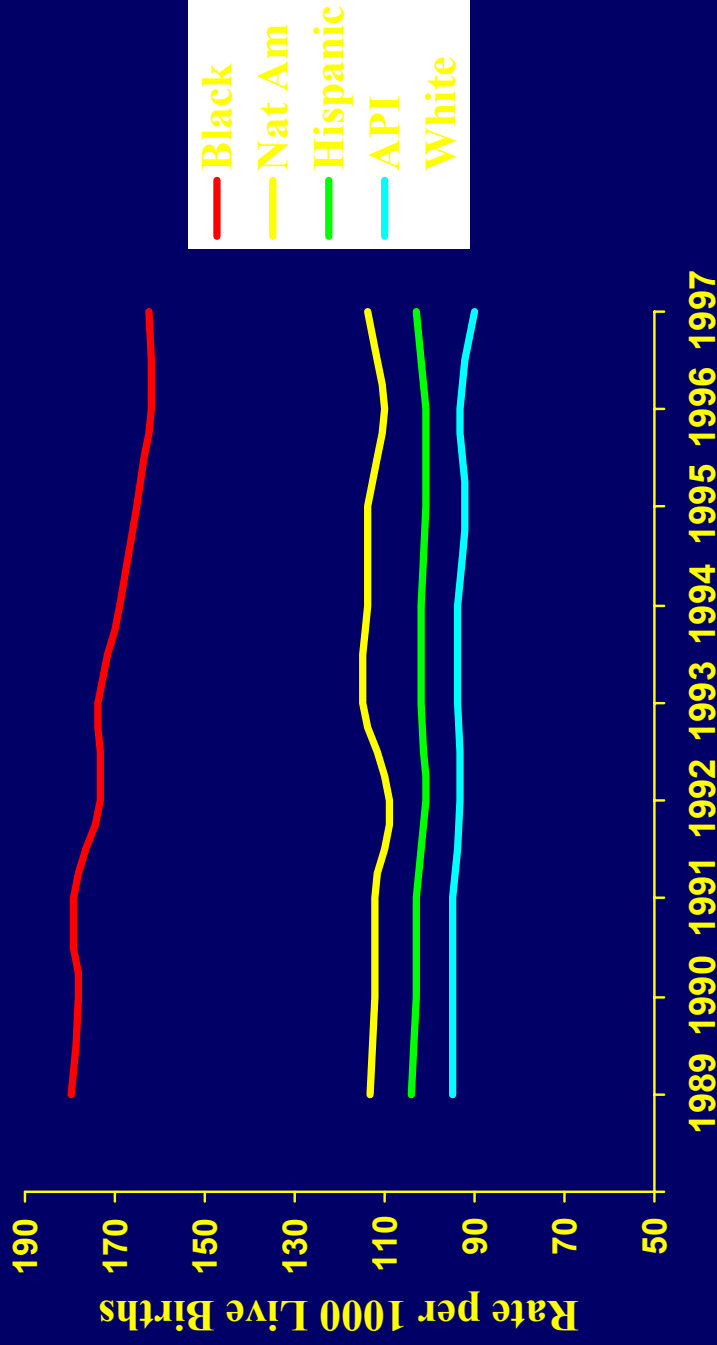
Collins et al.

- **Low birth weight infants account for 7.9% of births but 66% of deaths.**

(A baby is low birthweight if born at less than 5.5 pounds)

Collins et al.

How likely it is that a baby will be born too soon (Preterm Birth)



Disparities exist.

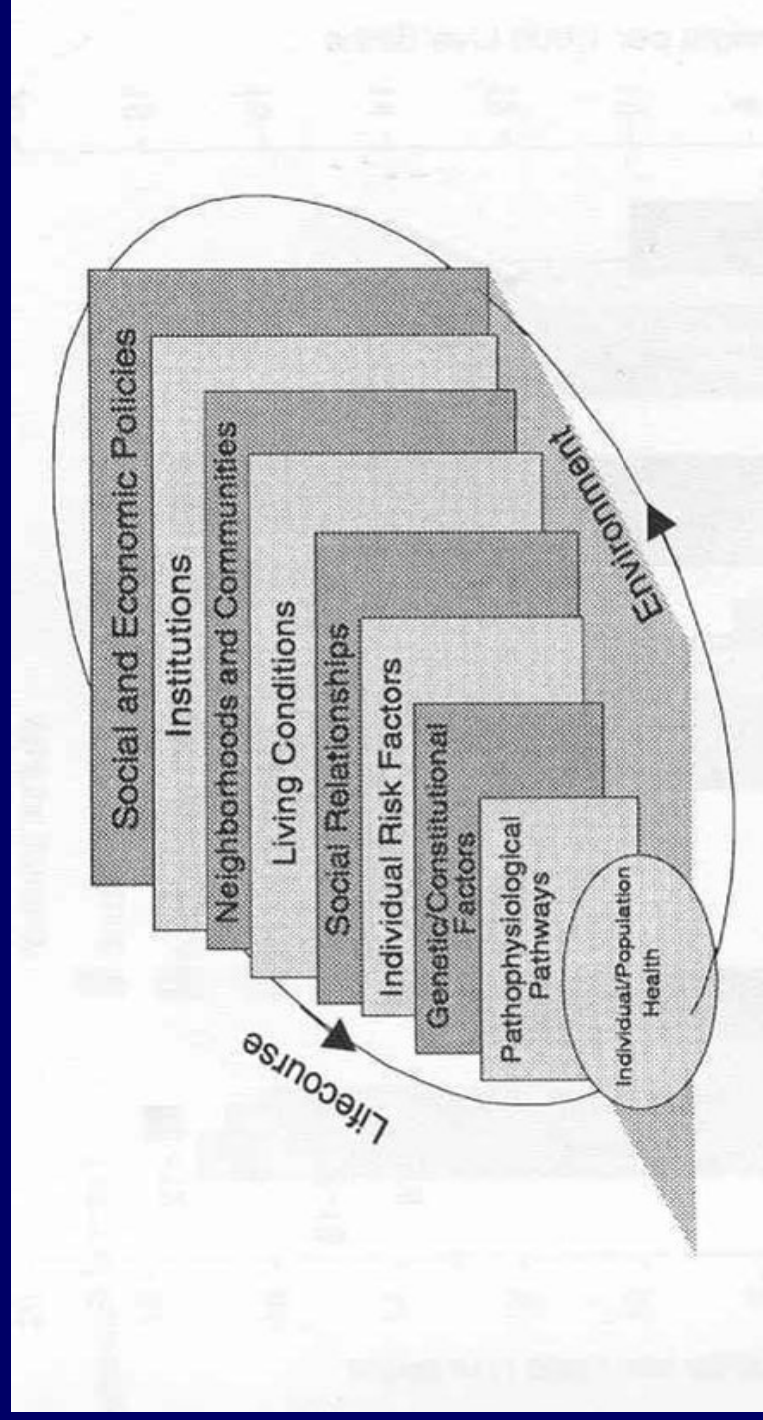
Okay, we get that.

***Now what do we do to get rid
of them?***

All knowledge production in the area of health disparities should be aimed toward understanding *why* they exist and most importantly, what can we do to eliminate them.

**What causes
disparities?**

The Circles of Influence on Health

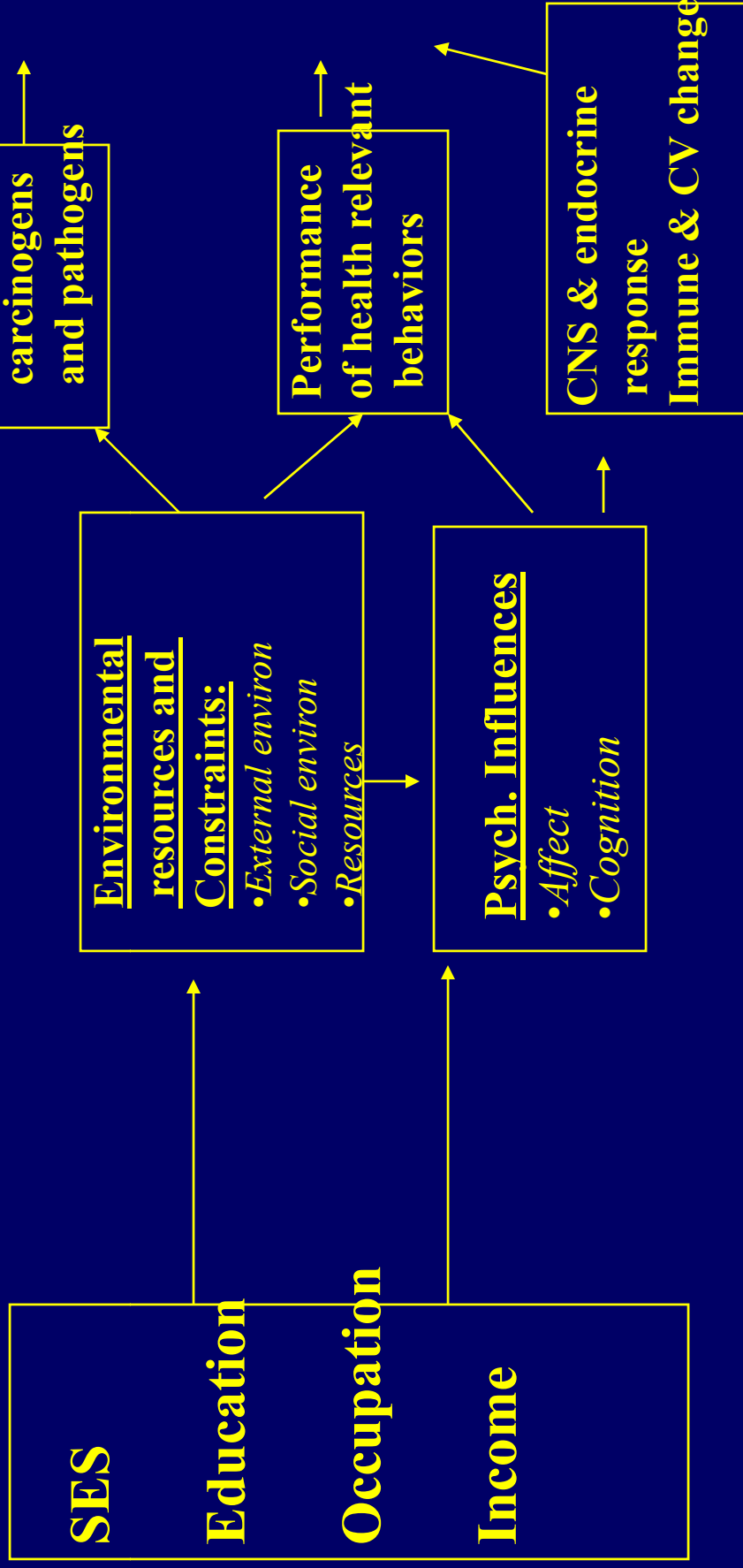


Kaplan, et al. (2000). A Multilevel Framework for Health in :Promoting Health. Washington, DC: National Academy Press

Model: SES and Health Pathway

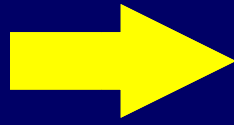
Adler and Ostrove, 1999

I L L N E S S



Race-Health Gradient Theoretic Framework

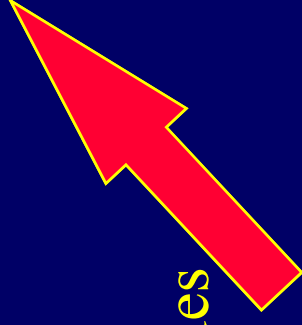
Demographic
Factors



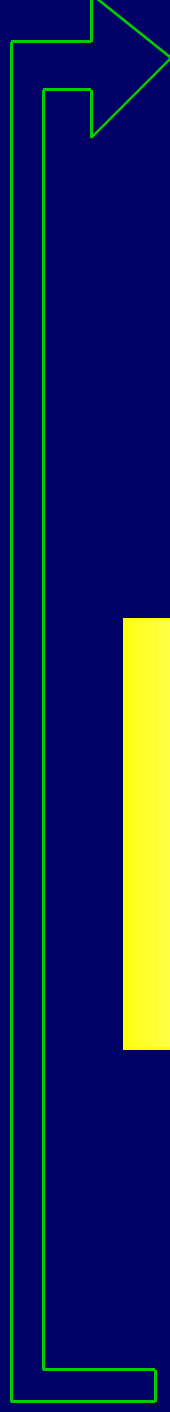
Socioeconomic
Position



Health
Outcomes



- Health Behaviors/norms & values
- Social Support
- Mastery and Control
- Environmental exposures
- Stressors
- Occupational Opportunities



(Williams, 1990)

Disparity: Contributing factors

- Health care
- Behavior*
- Culture
- Social factors
- Environmental factors
- “Weathering”
- Racism

- Economic factors
- Neighborhood factors
- National, state or local Policies
- Stress

** Not shown to be consistent contributor across all diseases*

(Kington and Nickens)

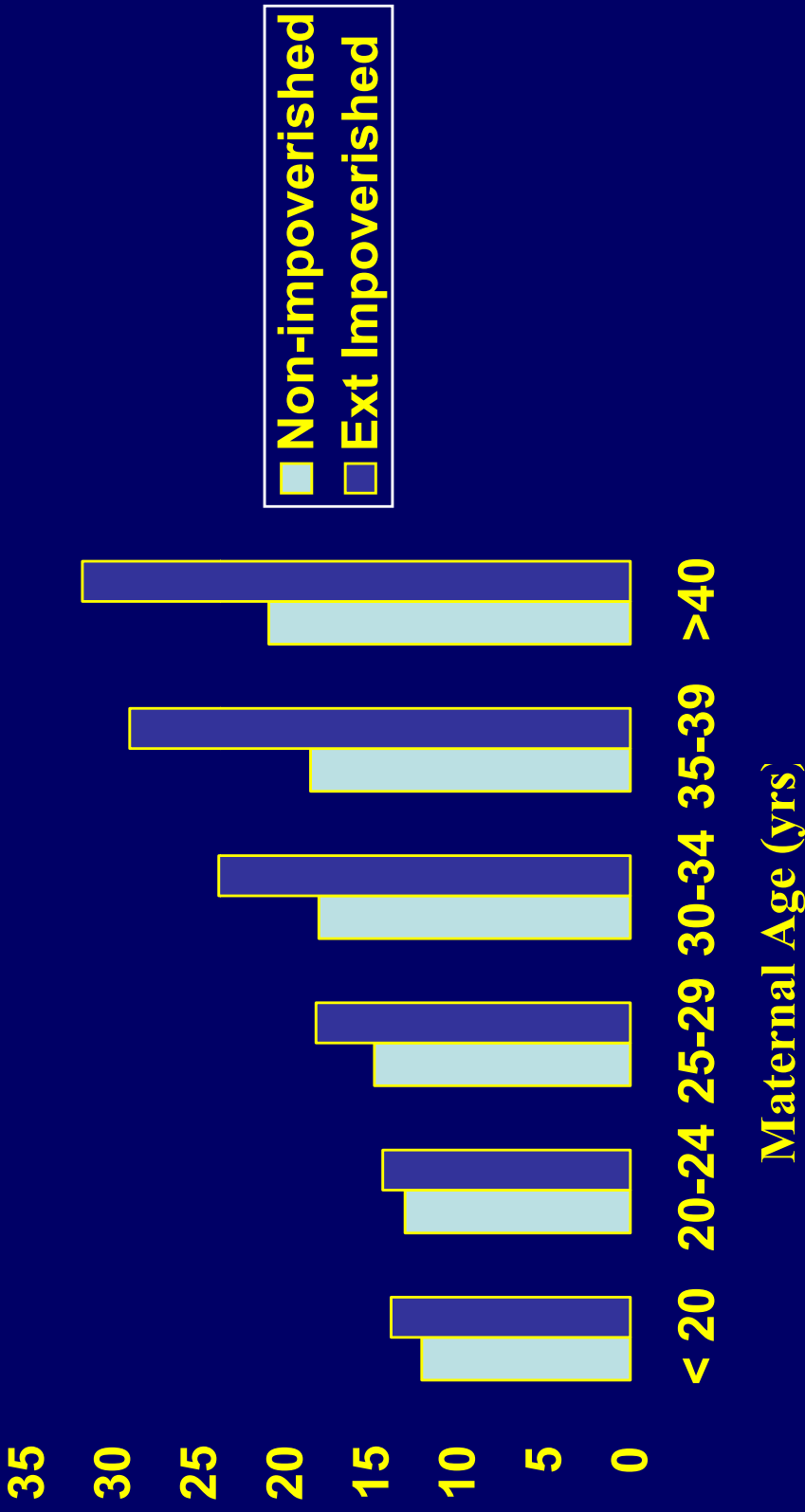
in: America Becoming: Racial Trends and their Consequences.

National Academy Press, 2000

LBW RATES BY MATERNAL AGE AND NEIGHBORHOOD POVERTY:

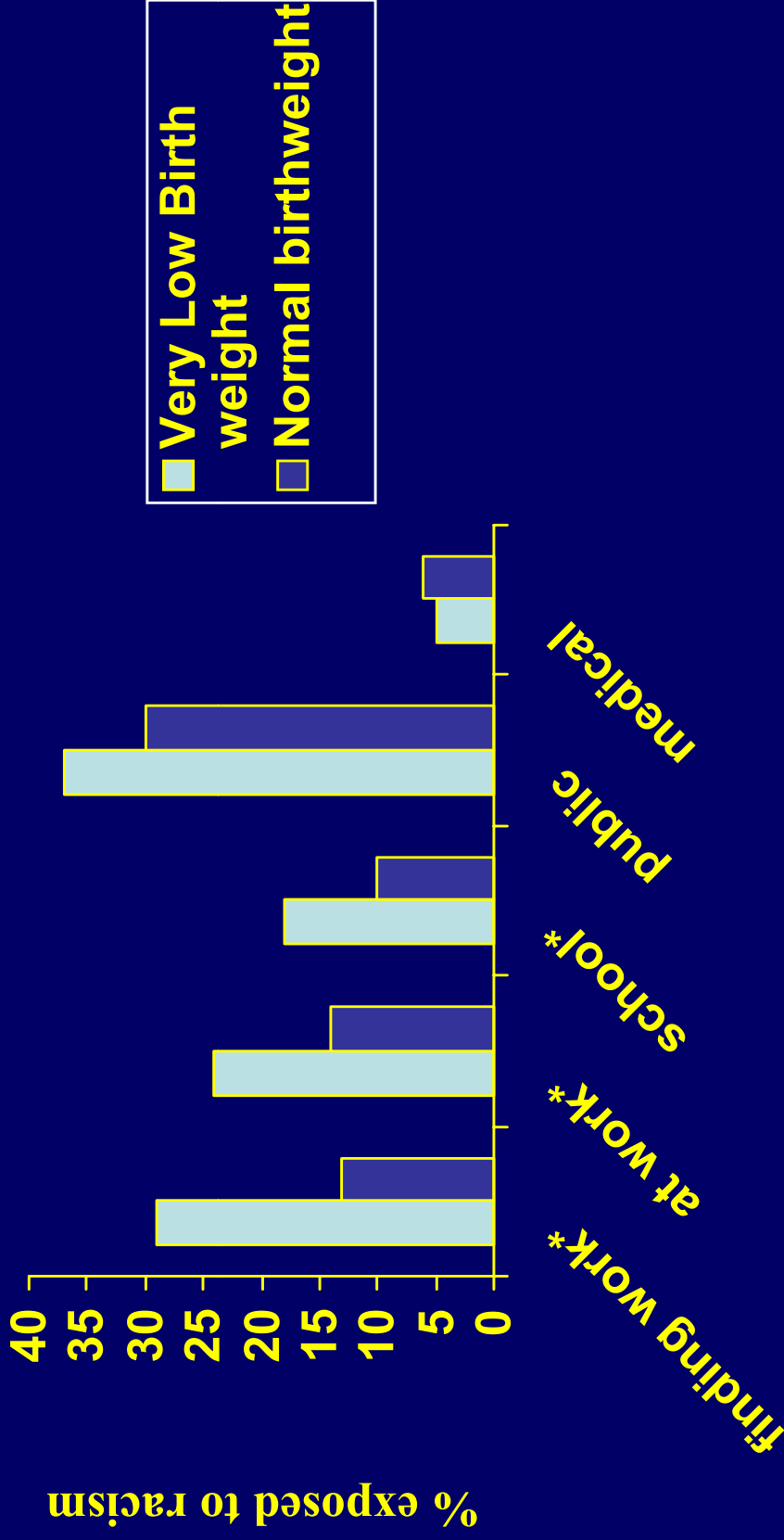
African-Americans

(Collins et al, *Ethn Dis*, 2006)



Example of weathering and effects of poverty

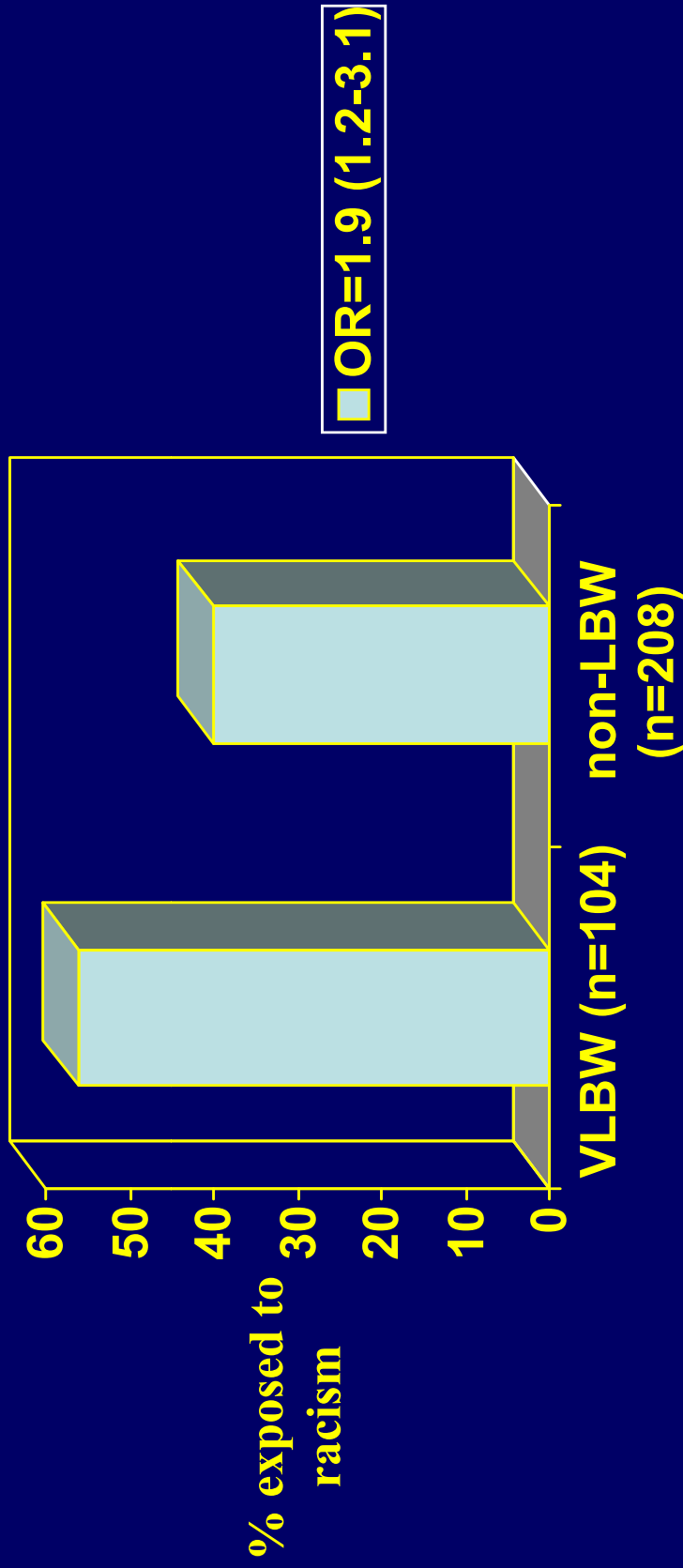
MATERNAL LIFETIME EXPOSURE TO INTERPERSONAL RACISM AND INFANT BIRTH WEIGHT



Example of the effects of racism

MATERNAL LIFETIME EXPOSURE TO INTERPERSONAL RACISM IN 1 OR MORE DOMAINS AND INFANT BIRTH WEIGHT

(Collins et al, AJP, 2004)



Example of the effects of racism

**What challenges do we
face in eliminating
disparities?**

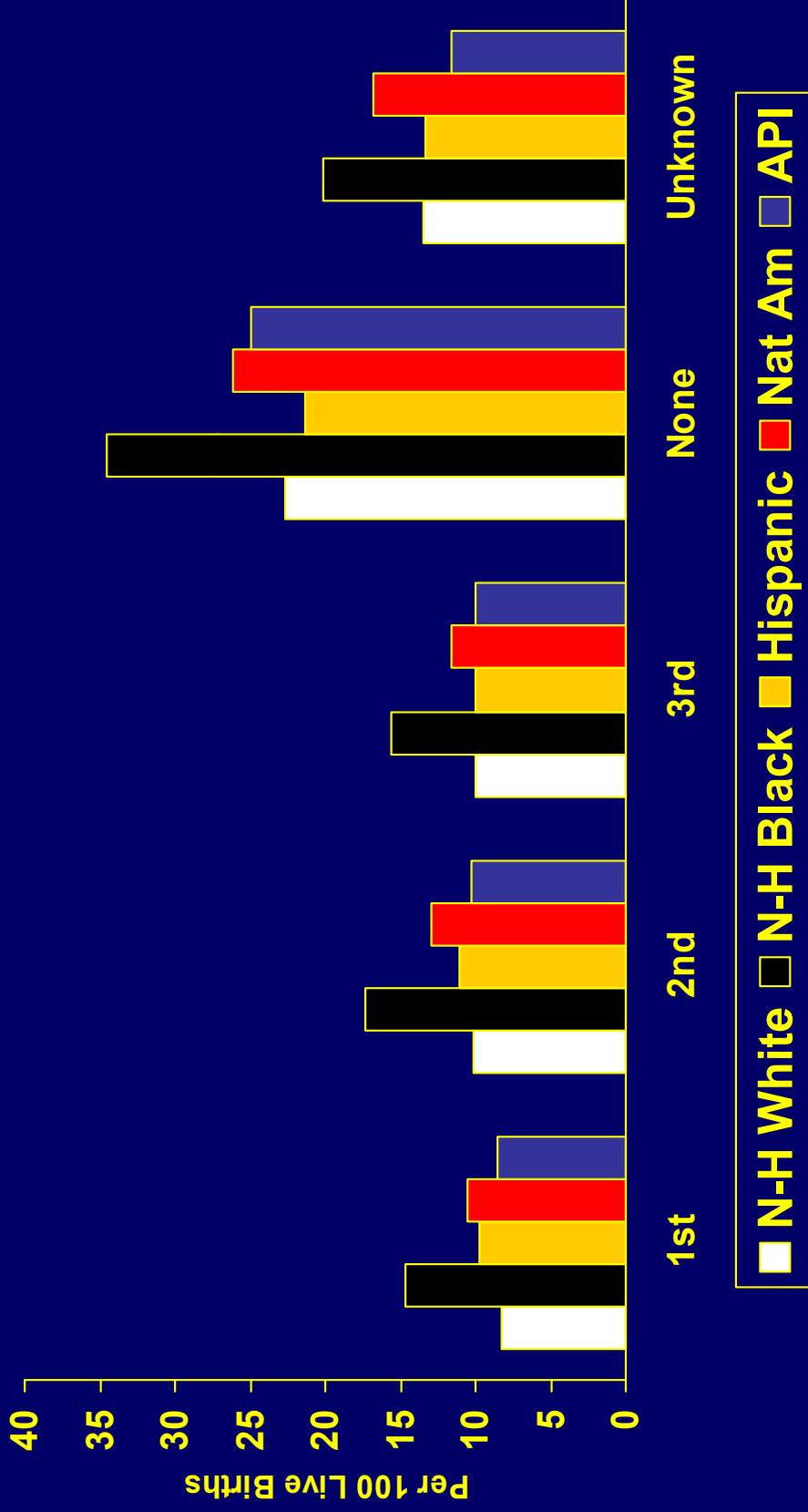
Challenge # 1

If we do not know how to prevent the disease, it is unlikely we will be able to eliminate the disparity

- Prenatal care has not been effective in preventing low birth weight and prematurity**

Preterm Delivery Rates by Maternal Race/Ethnicity and Trimester of Initial Prenatal Care

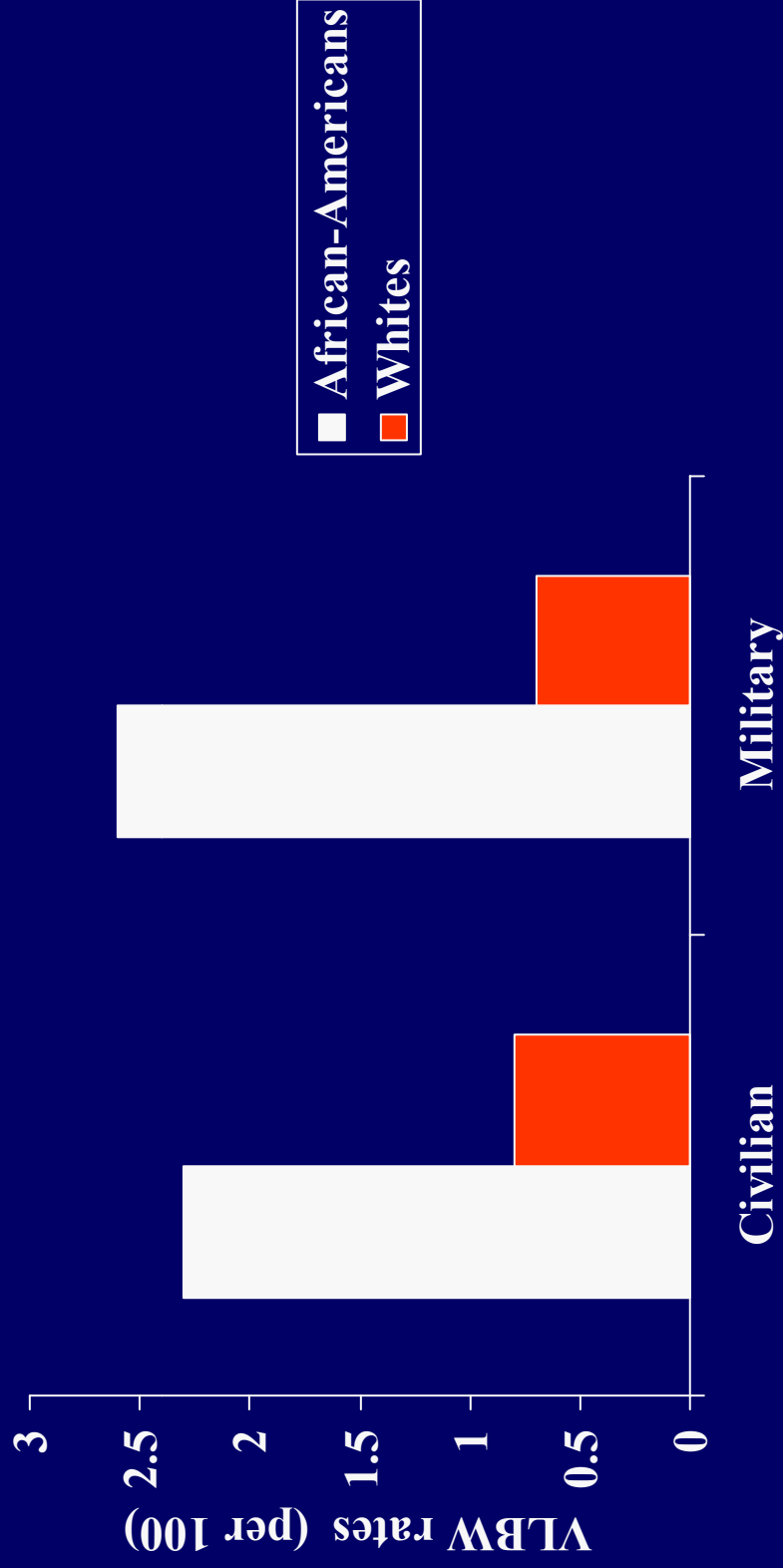
Singletons, United States, 2000



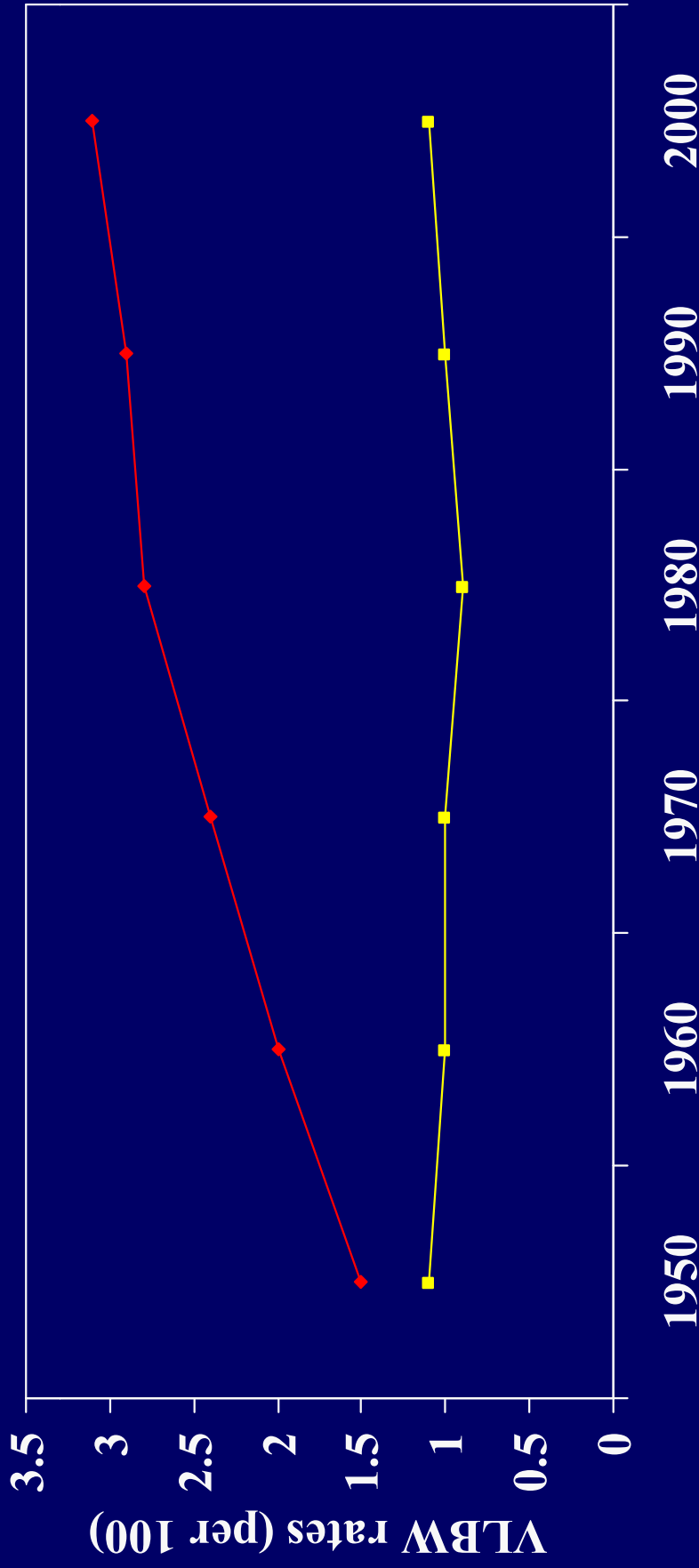
Racial Disparities in Outcomes of Military and Civilian Births in California

Wanda D. Barfield, MD, MPH; Paul H. Wise, MD, MPH; Frank P. Rust, PhD; Kam J. Rust, PhD; Jeffrey B. Gould, MD, MPH; Steven L. Gortmaker, PhD

RACE-SPECIFIC VLBW RATES AMONG CIVILIAN AND MILITARY BIRTHS IN CALIFORNIA



Six Decade Trend in Very Low Birth Weight Rates in the United States



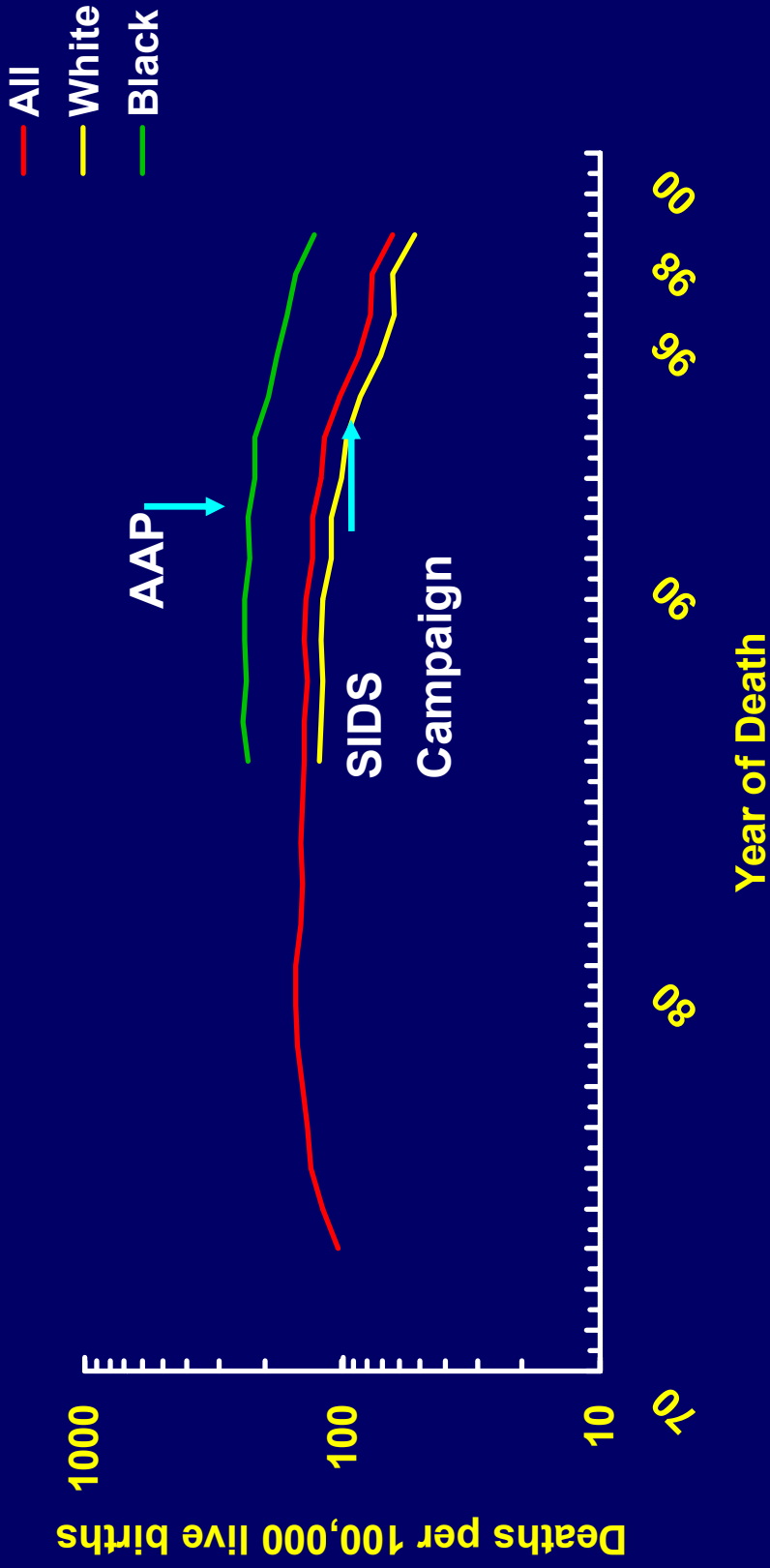
Collins et al.

Challenge #2

Even if we know how to reduce the disease with an evidence-based intervention, it is not assured that we can reduce the disparity

Reducing disparity requires different actions above and beyond evidence-based risk/prevention interventions

Infant Mortality Rates Due to SIDS, United States by race, 1973-1998



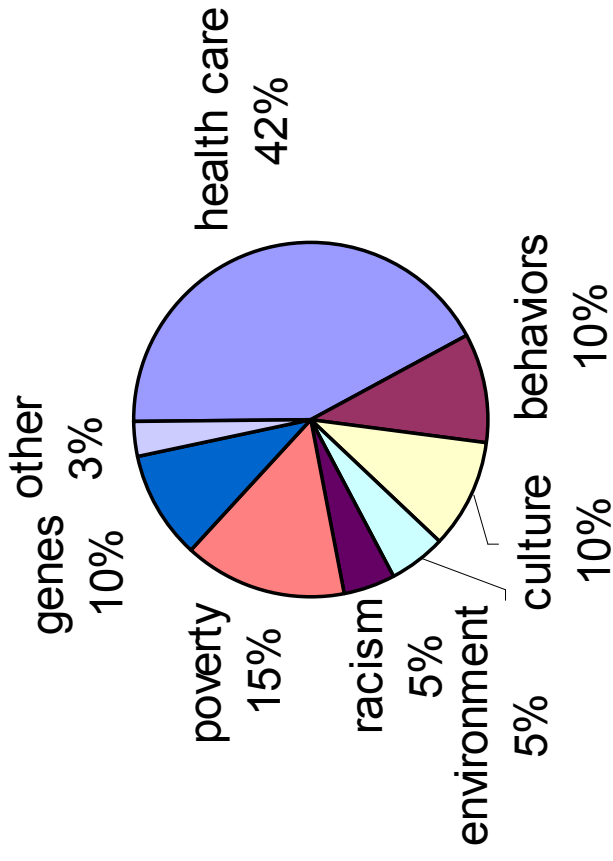
Challenge #3

We do not consistently distinguish between health care disparity and health disparity

Differences in medical care is only one of many contributors to overall health disparities

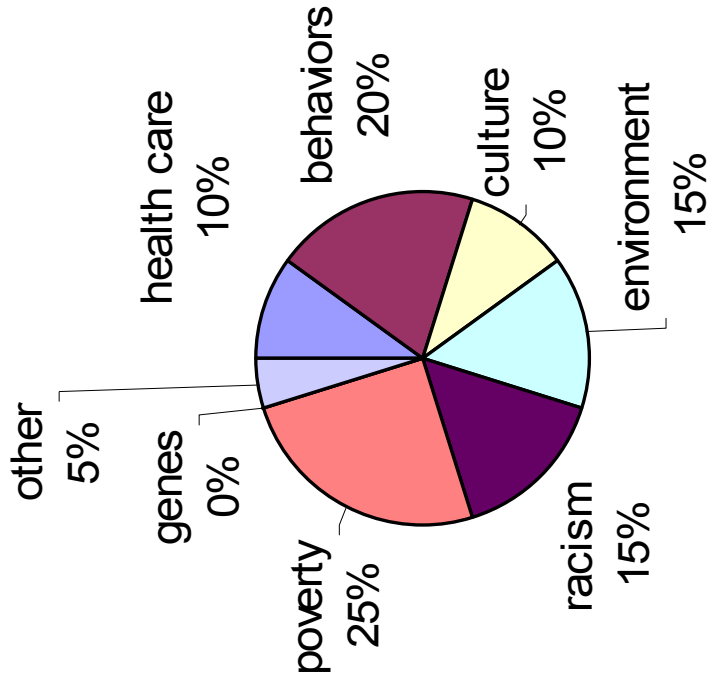
Not this.....

Simulation 1: % Contribution to health disparity



More like this

Simulation :Estimated % Contribution to Health Disparity



Challenge #4

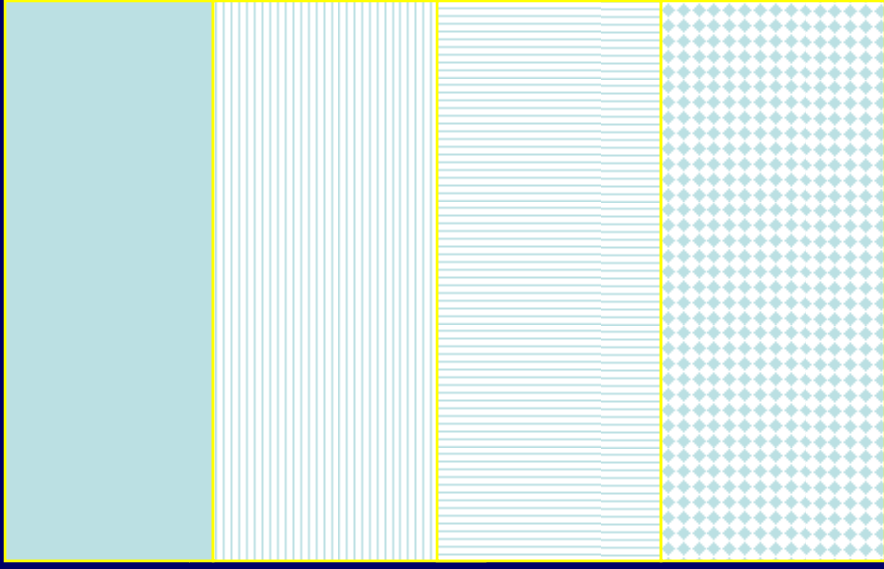
Causality is more complex than we acknowledge: risk factors overlap and enhance each other's effects (interaction)

What makes African American populations different and at higher risk?

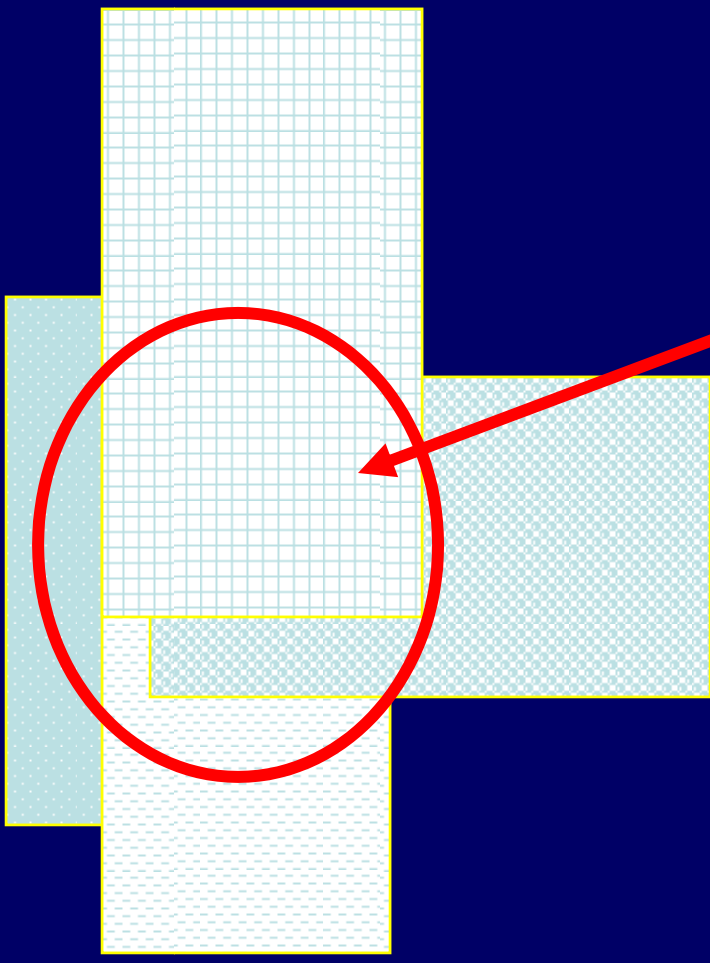
Complexity of causality: Overlapping of risk

<u>Risk Factor</u>	<u>Pop A</u>	<u>Pop B</u>
A	20%	19%
B	20%	18%
C	20%	22%
D	10%	10%
Any 3	5%	45%

**Similar population risk prevalence;
different configurations between
populations: *multiple interacting risks***



Population A



**Subpopulation of B
with multiple overlapping risks
Population B**

Qualitative Evidence

The Question:

What is unique about the social experiences of African American women that puts them at higher risk for death and disease?

Harlem BirthRight Project

- Identified unique stressors for African American women (*race X class X gender interactions*)
- Documented existence of stress in all aspects of African American women's lives
- Documented multiple concurrent stressors among African American women
- The stress of *constantly dealing with multiple burdens*
 - “Sojourner Truth Syndrome”
- Racism exacerbates other risks, limits resources to “unstress”

Mullings and Wali, 2001:
Stress and Resilience-the Social Context of Pregnancy in Central Harlem

Economic and Social Hardships during pregnancy, by ethnicity MIHA, 2002-2003

	<u>African American</u>	<u>Anglo</u>
< Poverty	44.7	14.9
Hard to make ends meet	22.4	10.7
Food insecurity	19.3	10.4
Food insecurity and hunger	7.3	3.3
No practical support	10.2	6.2
No emotional support	7.2	3.9
Separated or divorced	16.4	4.6
Homeless	7.2	2.3
Involuntary job loss	14.2	6.8
Partner job loss	16.9	11.0
Incarceration of partner	10.5	2.5
Domestic Violence	5.8	1.8
1-5 hardships	70.0	39.0

Source: Braverman P. (Center on Social Disparities in Health, UC-SF)
Presented at Jacobs Institute of Woman's Health Conference, May 2005

Braverman Analysis

Summary Findings:

California Maternal and Infant Health Assessment (MIHA)

- All ethnic age and income groups experience hardships.
 - Major economic and social hardships are not rare during pregnancy
- Black, Latina, and Native American women suffer more hardships than white women
- Poor and near poor women suffered more hardship than women >200% poverty
- 53% births in California were to women who were poor or near poor

Challenge # 5

Social factors are largest contributor to disparities; but often ignored. Medical factors get most focus and funding

“The causes of health disparities are multiple. They include poverty, level of education, inadequate access to medical care, lack of health insurance, societal discrimination and lack of complete knowledge of the causes, treatment and prevention of serious diseases affecting different populations. The causes {of health disparities} are not genetic, except in rare diseases like sickle cell.....Eliminating health disparities will require a cross-cutting effort, involving not only various components of the Federal government, but the private sector as well...”

Ruth Kirstein, Acting Director of NIH. 2001

“...racial and ethnic disparities in health status largely reflect differences in social, socioeconomic, behavioral risk factors and environmental living conditions. Health care is therefore necessary but insufficient in and of itself to redress racial and ethnic disparities in health status. A broad and intensive strategy to address social-economic inequality, concentrated poverty, inequitable and segregated housing and education...individual risk behaviors as well as disparate access to medical care is needed to seriously address racial and ethnic disparities in health status”

Social Determinants of Health

- Income
- Wealth
- Racism
- Stressful experiences (chronic)
- Resource limitations
- Social capital
- Housing quality and availability
- Employment security
- Food security
- Social exclusion
- Language barriers
- Working conditions
- Education
- Early childhood care
- Legislation, regulations

Social Environment

- The organization of the home we live in
- The connections we have to other people
- The neighborhood in which we live
- Organization of our workplace (or school)
- Our level of access to goods, services and resources of society
- The built environment that surrounds us
- Socioeconomic status
- The way others in society treat us; the amount of power and/or control others have over us
- The dominant political ethos/environment

Challenge # 6

Historical insults contribute to current disparities

- Until the effects of past historical ills are undone, disparities will not be eliminated

American Slavery: 1619-1865

“The bound labor of at least twelve generations of black people” .

- Slavery created wealth for slaveholders, wealth that was translated into extraordinary political power. The slave trade and the products created by slaves’ labor, particularly cotton, provided the basis for America’s wealth as a nation, underwriting the country’s industrial revolution and enabling it to project its power into the rest of the world.

[Slavery and the Making of America \(PBS\)](#)

AFRICAN AMERICAN CITIZENSHIP STATUS & HEALTH EXPERIENCE

FROM 1619 TO 2006

TIME SPAN	CITIZENSHIP STATUS - YRS	Experience accounts for this proportion of time in US	STATUS	HEALTH & HEALTH SYSTEM EXPERIENCE
1619-1865	246 years	64%	Chattel slavery	Disparate/inequitable treatment poor health status & outcomes. "Slave health deficit" & "Slave health sub-system" in effect
1865-1965	100 years	26%	Virtually no citizenship rights	Absent or inferior treatment and facilities. <i>De jure</i> segregation/ discrimination in South, <i>de facto</i> throughout most of health system. "Slave health deficit" uncorrected
1965-2006	41 years	10%	Most citizenship rights: <i>USA struggles to transition from segregation & discrimination to integration of AA</i>	So. med school desegregation 1948. Imhotep Hospital Integration Conf 1957-1964, hospital desegregation in federal courts 1964. Disparate health status, outcomes, and services with apartheid, discrimination, institutional racism and bias in effect.
TOTAL	387 years	100%	"Struggle"	HEALTH DISPARITIES/ INEQUITIES

Source: Byrd, WM, Clayton, LA. An American Health Dilemma, Volume 1, A Medical History of African Americans and the Problem of Race: Beginnings to 1900, New York, NY: Routledge. 2000.

Historical experiences of slavery, segregation, discrimination created economic and environmental disparities

– Median family income for Blacks and Hispanics <\$28K, Whites and Asians \$>45K
(Census, 1990)

– Net wealth: Blacks \$4,418, Whites \$45,740
(Eller and Fraser 1995)

– Blacks more likely to live in low-income, segregated areas-”concentration of risk”; residential segregation implies restriction in options for mobility

Home ownership, 2000

<u>White</u>	<u>Black</u>
--------------	--------------

73%

48%



Home ownership is how most Americans generate wealth

- 17% African Americans (in metro areas) live in extreme poverty
- 1.4% Whites (in metro areas) live in extreme poverty

Census, 1990

Environment and Racism

- Morland K, Wing S, Diez Roux A, Poole C. (2002) **Neighborhood characteristics associated with the location of food stores and food service places.** American Journal of Preventive Medicine. 22(1):23-9.
- Morrison RS, Wallenstein S, Natale DK, Senzel RS Huang L (2000) “We don’t carry that” – Failure of pharmacies in predominantly non-white neighborhoods to stock opioid analgesics. New England Journal of Medicine 342:1023-1026
- Bullard, R.D. (1983) **Solid waste sites and the black Houston community.** Sociological Inquiry 53(2/3) 273-288
- LaVeist TA, Wallace JM Jr. (2000) **Health risk and inequitable distribution of liquor stores in African American neighborhood.** Social Science and Medicine Aug;51(4):613-7.

Challenge #7

There does not yet exist an evidence base for how to eliminate disparities

And there is limited support for the development of one

Why is the Evidence Base slow to Develop?

- Not enough funding
- The funding is not always targeted toward the development of an evidence base specific to disparity elimination
- Too few researchers of color and/or researchers knowledgeable and skilled in health disparity science

We cannot rely on research funding that only looks for application of evidence base when none really exists

Finding Answers: Disparities Research for Change

“Through the *Finding Answers: Disparities Research for Change* program, researchers at the University of Chicago will award and manage research grants totaling \$5 million to organizations implementing and evaluating interventions aimed at reducing disparities. With this pool of funds, project leaders hope that health plans, hospitals, and community clinics will be encouraged to focus on racial and ethnic disparities as a priority in their quality improvement agendas. Led by Marshall H. Chin, M.D., M.P.H.,¹ associate professor of medicine, the team will also seek to inform the field about best practices going on with respect to quality improvement strategies specifically targeted at reducing racial and ethnic disparities. *Finding Answers* is likely to focus on evaluating interventions in treatment areas where the evidence of racial and ethnic disparities is strong and the recommended standard of care is clear. Therefore, innovations in the treatment of cardiovascular disease, depression, and diabetes are strong possibilities for research funds.”

Challenge # 8

Our way of doing business in health precludes the development of an evidence base.

We consistently and systematically eliminate any possibility of addressing social contributors (e.g. *the largest contributors*)

“Feasibility” as a criteria for choosing intervention strategies limits progress toward eliminating disparities

Feasibility Assessments

What we say about social factors:

- Too hard to change
- Not realistic to expect factors to ever change
- Out of the realm of public health or medical providers
- Too expensive

Change the question

**How do we make it more feasible
to address social contributors
to health and health
disparities?**

On the Notion of “Feasibility”

Limits action by Health and Human
Services agencies, public health and
medicine to only that which is easy

Summary of Challenges

1. **We need more and better science to address today's complex health issues, including disparities**
2. **Having an evidence based intervention for eliminating the disease does not necessarily eliminate the disparity**
3. **Health care disparity is only one of MANY contributors to health status disparities. Social factors, not just medical care factors contribute to adverse perinatal outcomes**
4. **Causality is more complex than we acknowledge: risks overlapping risk is one characteristic of populations vulnerability**
5. **Historical insults create current vulnerability; contribute to current disparities**

Summary, cont

6. **Social factors are the LARGEST contributors to health disparities. Medical factors and behaviors get most focus and funding**
7. **Evidence base for eliminating disparities does not exist; no dedicated funding source to support its development**
8. **“*Feasibility*” as criteria for choosing intervention strategies limits progress toward eliminating disparities**

Conclusion

Developing strategies for the elimination of disparities in perinatal health is complex:

Entails ALL of the following:

- Undoing historical inequities
- Undoing current social inequities
- Addressing health system factors
 - *Including Minority representation in practice and research*
- Addressing provider practices
 - *Inequities in care*
 - *Non-action and accumulation of risk*
 - *Clinical practice standards*
 - *Timing of intervention*
- Improving health education for women
 - Improving the conditions under which woman can practice healthy behaviors
- Improving relevance and quality of research
 - Developing an evidence base
 - Adopting authentic Community partnered processes for planning research and interventions

Promising Strategies

- **Lifecourse health Care, not just during pregnancy**
 - *(pre- and inter-conceptual care, women's preventive health care)*
- **New ways of providing health care that fit into women's complex lives**
- **Community partnership in planning and problem solving**
- **Undoing Racism interventions (all institutions)**
 - *How is racism operating in my institution?*
 - *What can we do to change the unequal systematic process?*
- **Community health vs. Individual behavioral strategies**
 - *San Francisco Dept of Health projects as example*
- **Social policy**
 - *Reparations to undo historic inequities*
 - *Education funding/quality of schools*
 - *Built environment*
 - *Health impact assessment*
- **Community resources**
 - *e.g. Accessible and affordable healthy food alternatives*

- To be successful at addressing many of today's public health challenges, Public health specialists and clinicians will have to develop and implement strategies to address all of these simultaneously.
- Strategies for eliminating disparities cannot always be limited to clinical practice alone



Disparities

Weathering

Unemployment

Hopelessness

Stress

Bad Housing

Bad Neighborhoods

Adverse Environmental conditions

Smoking

Family Support

Poor Working Conditions

Lack of access to good Nutrition

Social policy

Poverty

Limited Access to Care

Under-Education

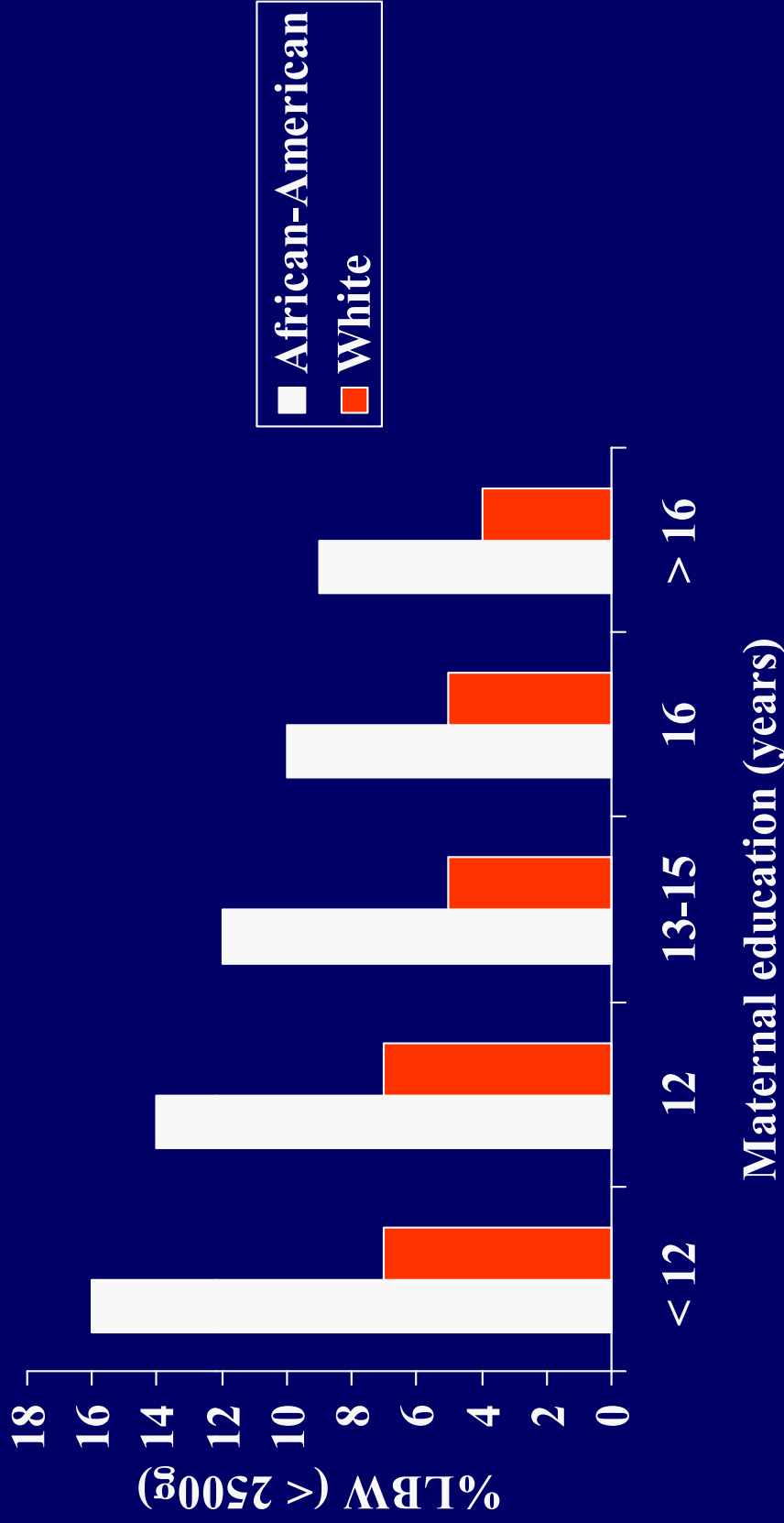
Racism

Contact

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Extra Slides

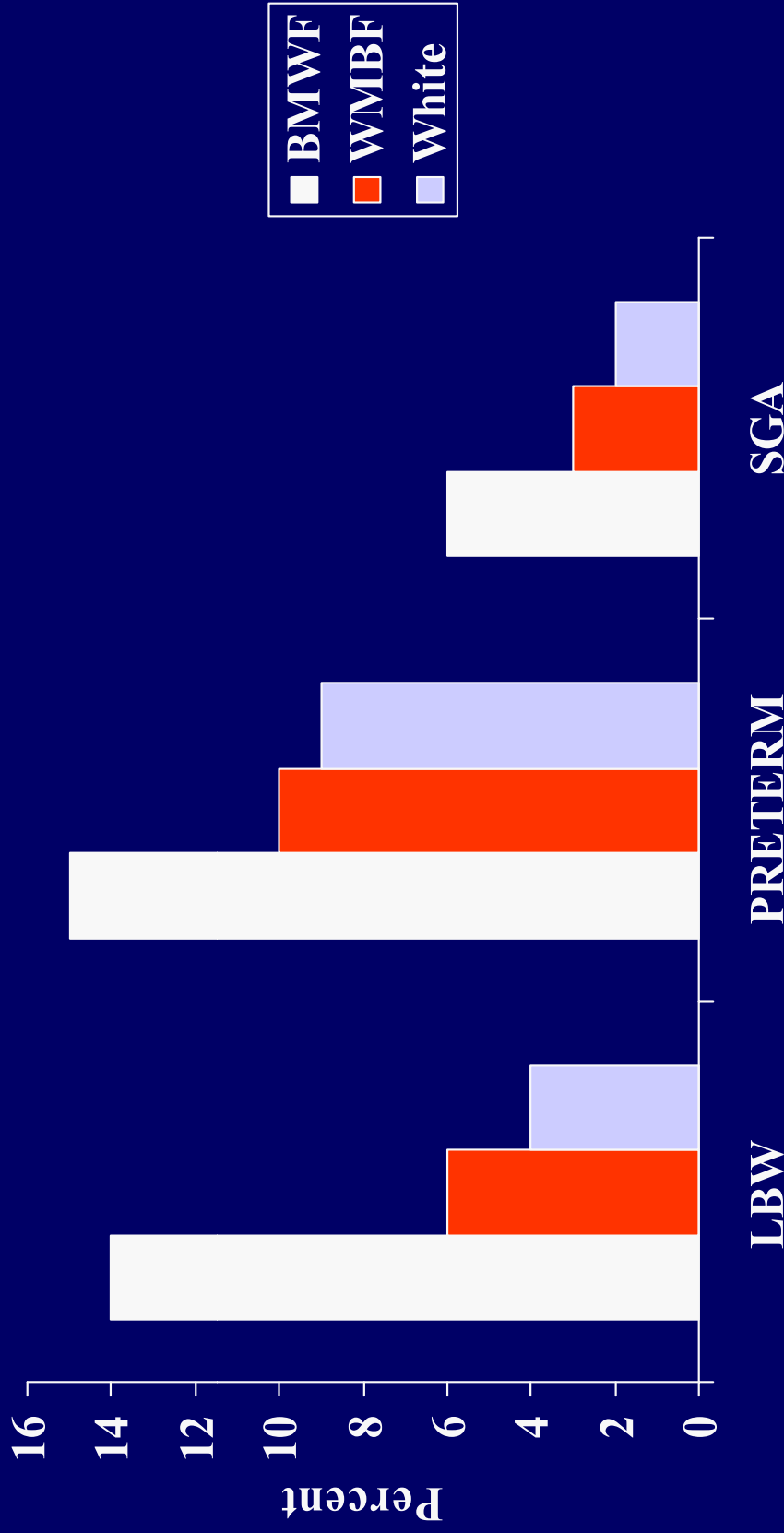
Low Birth Weight Rates by Maternal Education and Race (Chicago, IL)



Collins et al.

RACE AND PERINATAL OUTCOME AMONG BIRACIAL INFANTS

(Chicago, IL)



Transgenerational Factors

Factors, conditions, and environments experienced by one generation that relate to the pregnancy outcome of the next generation

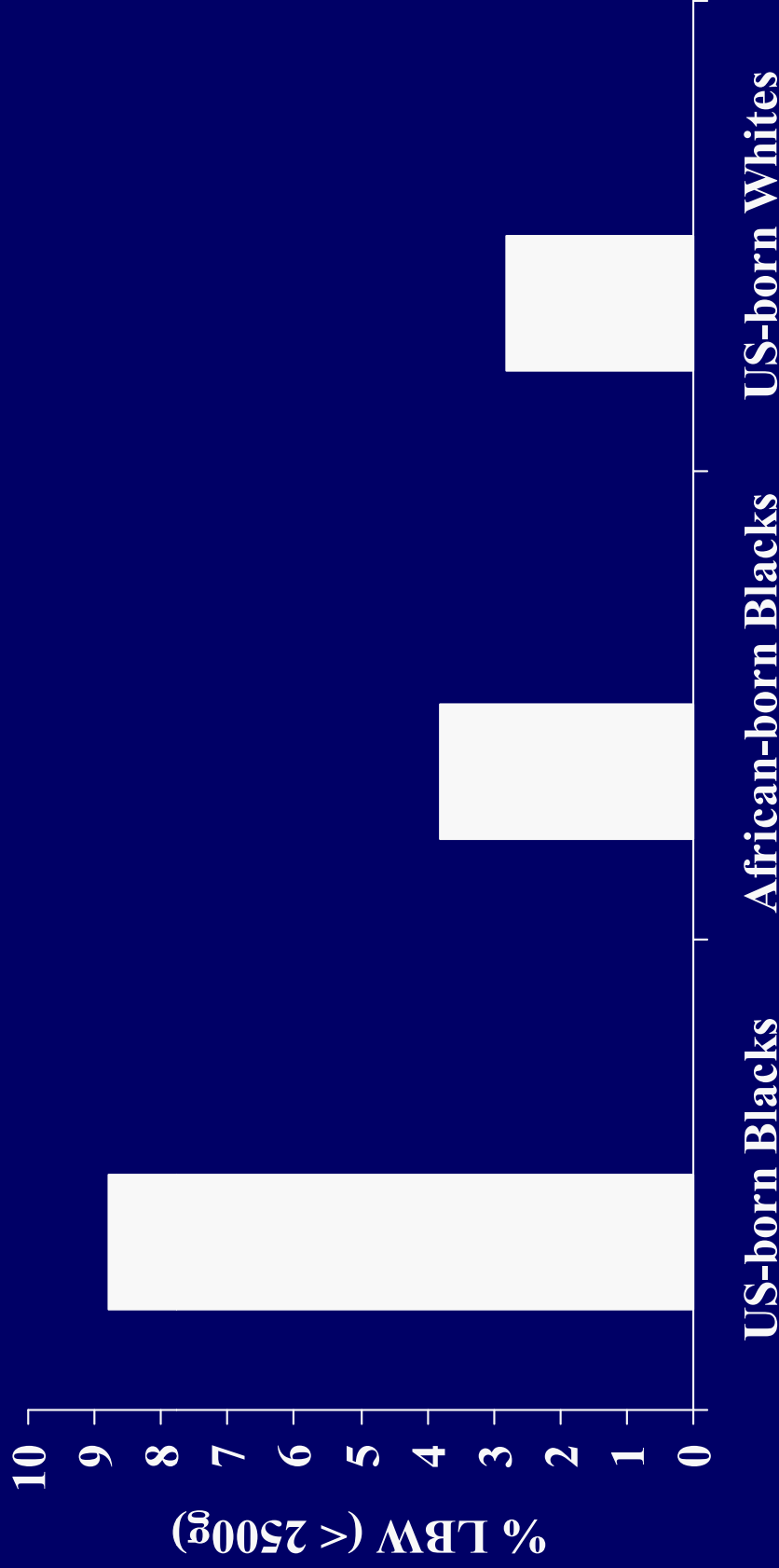
Special Article

**DIFFERING BIRTH WEIGHT AMONG INFANTS OF U.S.-BORN BLACKS,
AFRICAN-BORN BLACKS, AND U.S.-BORN WHITES**

RICHARD J. DAVID, M.D., AND JAMES W. COLLINS, JR., M.D., M.P.H.

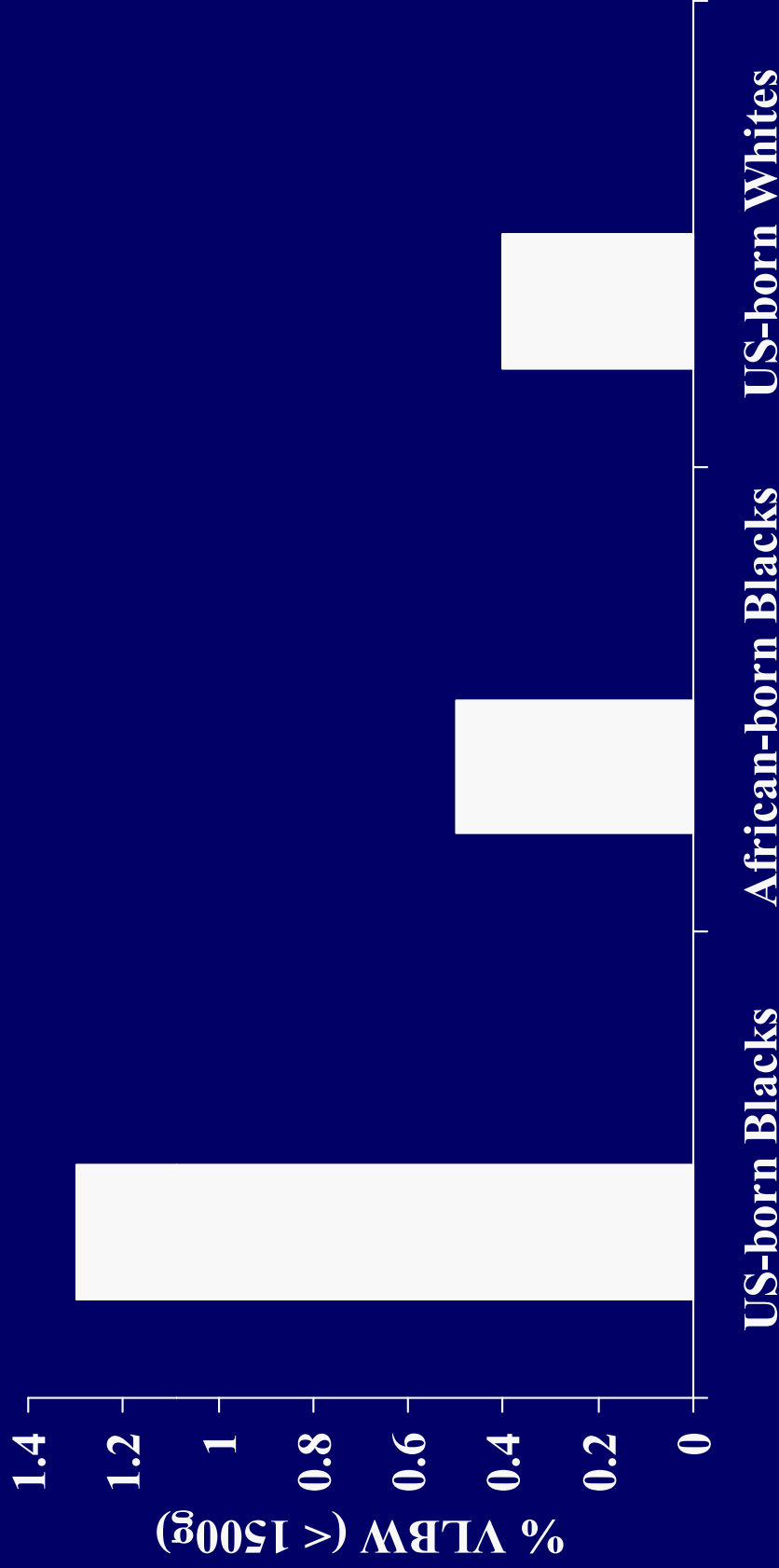
Differing Birth Weight among Low-risk women in Illinois

(David and Collins, NEJM, 1997)



Differing VLBW Rates Among Low-risk Women in Illinois

(David and Collins, NEJM, 1997)





American Journal of Epidemiology

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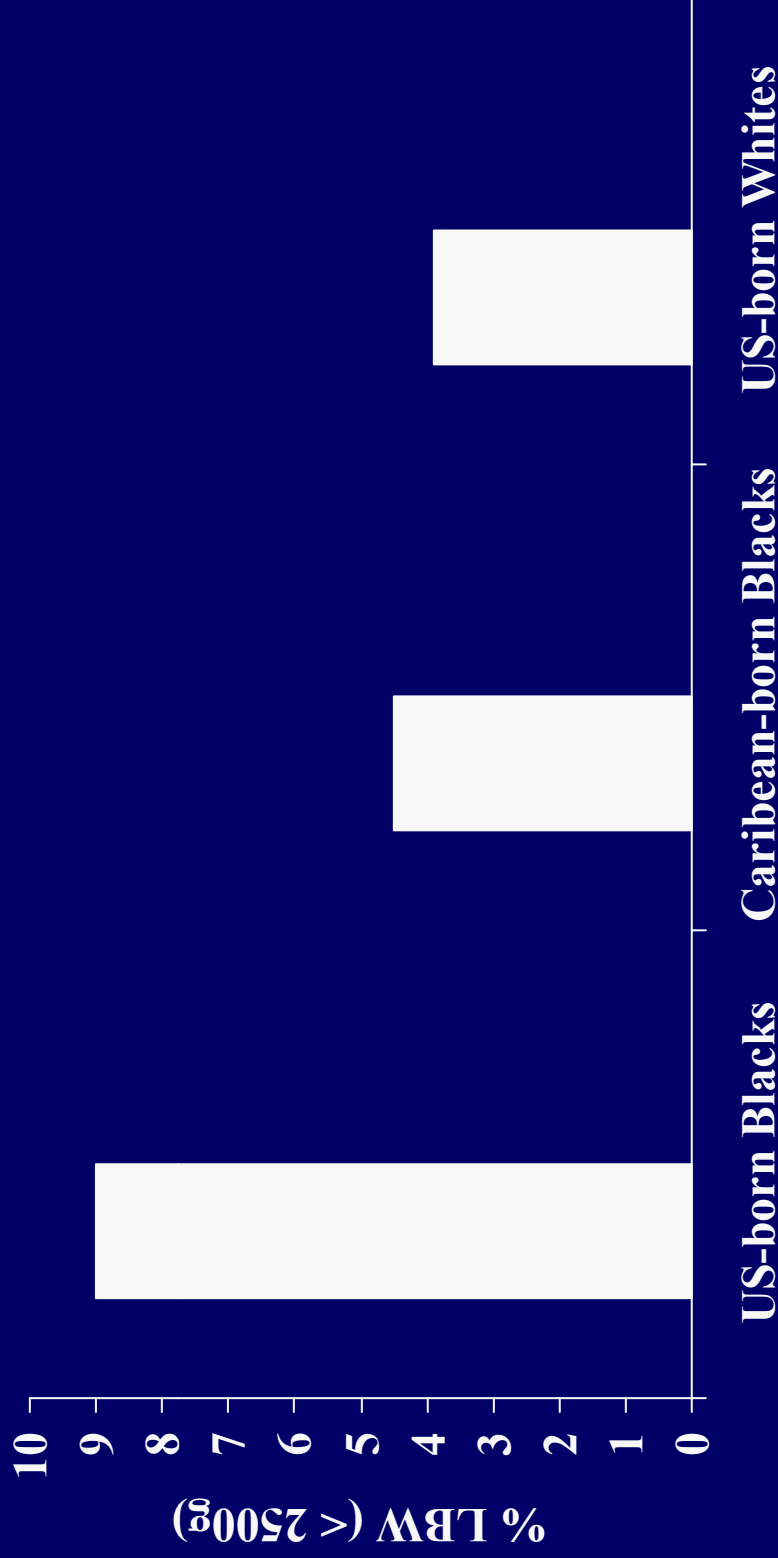
Vol. 151, No. 11
Printed in U.S.A.

Enigma of Maternal Race and Infant Birth Weight: A Population-based Study of US-born Black and Caribbean-born Black Women

Eugenia K. Pallotto,¹ James W. Collins, Jr.,¹ and Richard J. David²

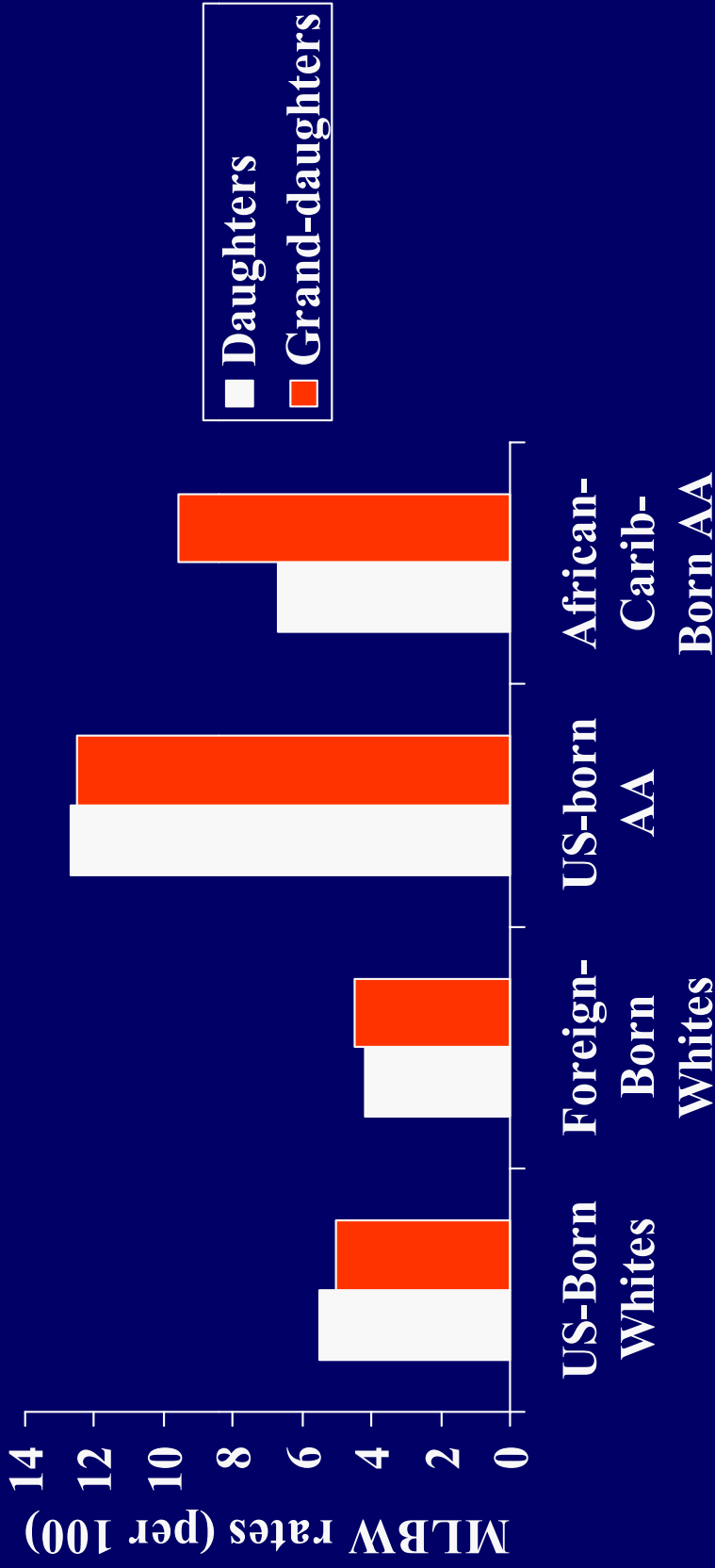
Maternal Race and Infant Birth Weight Among Low-Risk Women in Illinois

(Pallotto et al, AJE, 2000)



MLBW Rates Across a Generation

(Collins et al, AJE, 2002)

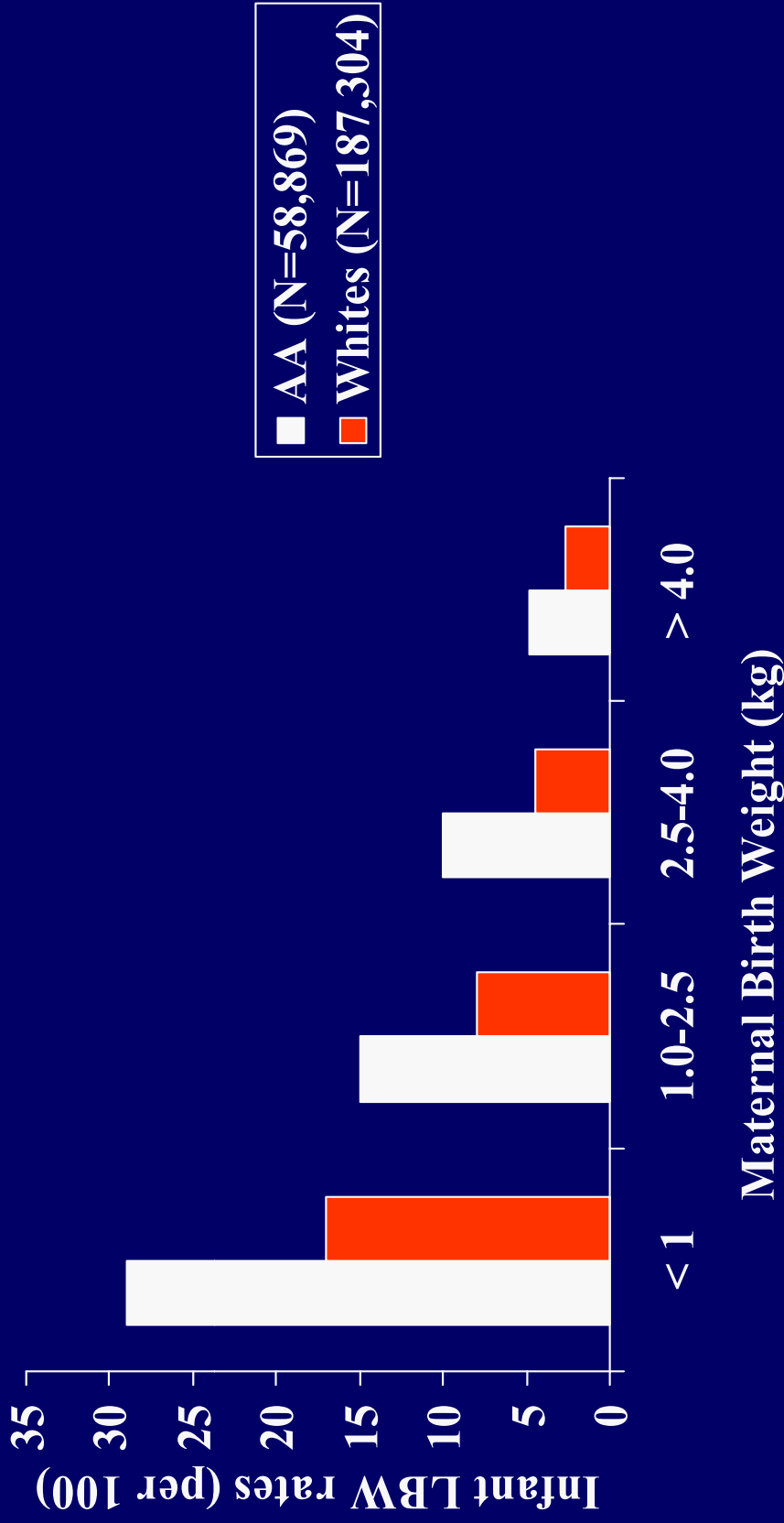


Women's Race and Nativity



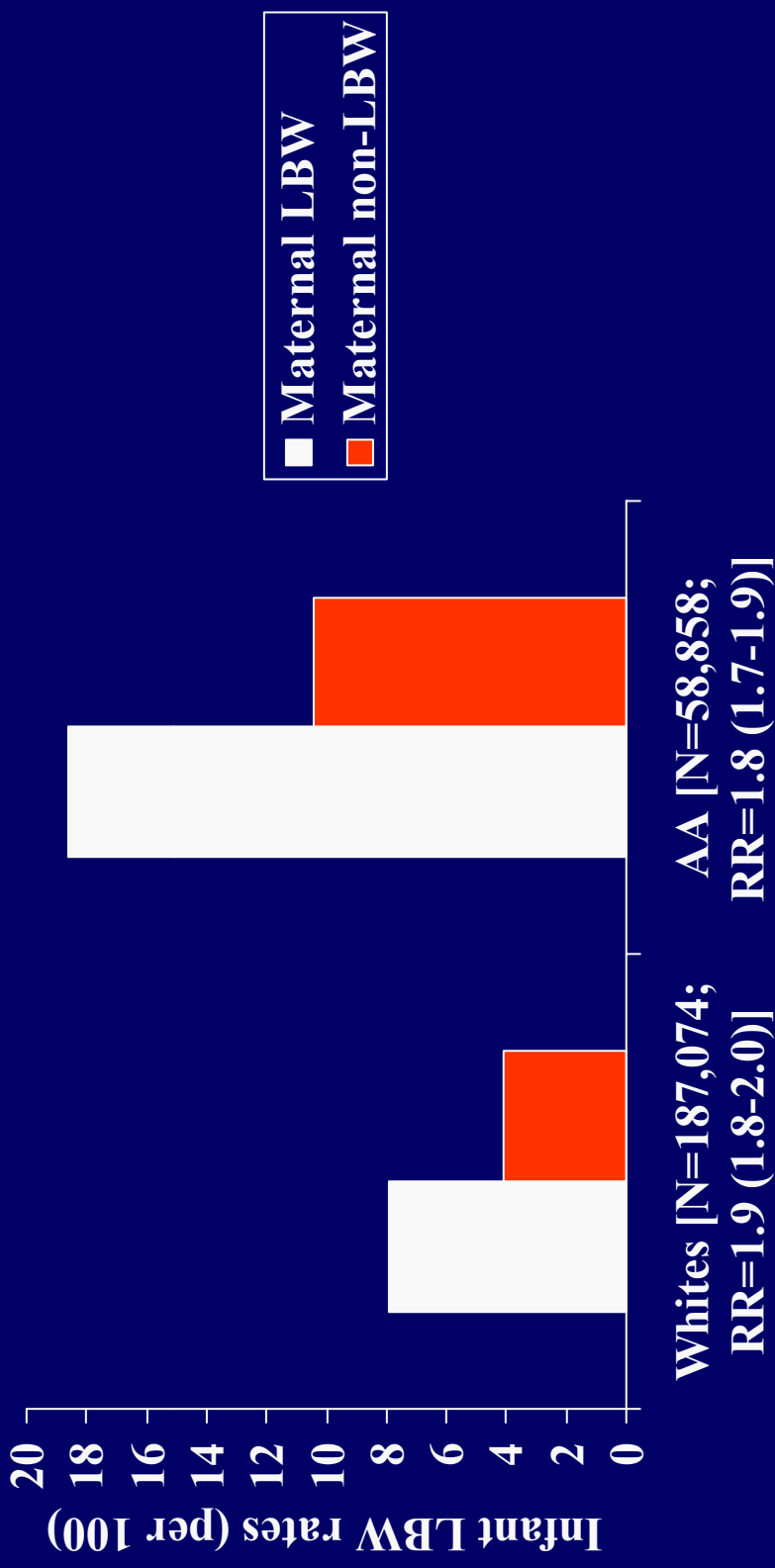
INFANT LBW RATES BY MATERNAL BIRTH WEIGHT AND RACE

(Illinois Transgenerational Dataset)



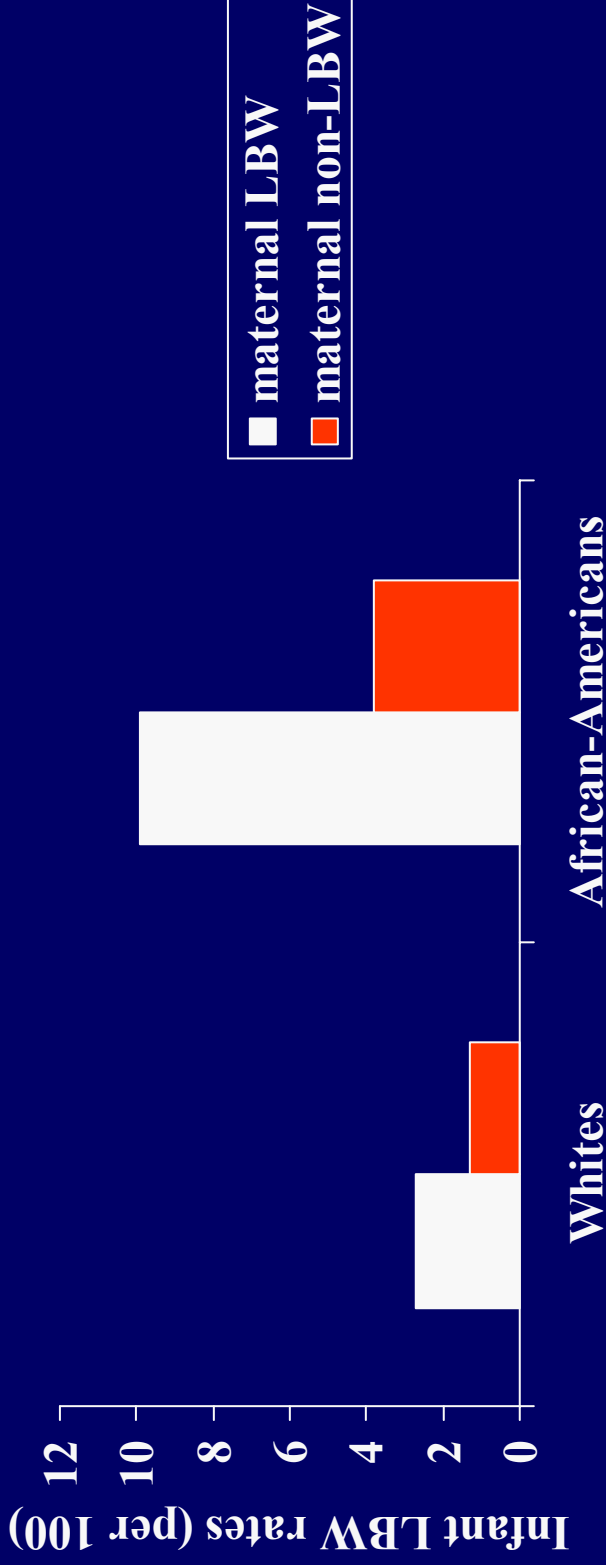
INFANT LBW RATES BY MATERNAL BIRTH WEIGHT AND RACE

(Collins et al, MCHJ, 2003)



INFANT LBW RATES BY MATERNAL BIRTH WEIGHT AND RACE (LOW-RISK ADULTS)

College-educated, married mothers who received adequate PC



Self-Reported Experiences of Racial Discrimination and the Racial Disparity in Preterm Delivery: the CARDIA Study

(Mustillo et al, AJP, 2004)

