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Equity and Preterm Birth: A Context for Action

October 3, 2017

3 PM – 5 PM EST

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This *Continuing Professional Education Program* is generously supported by the March of Dimes in partnership with

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Paul Jarris, MD, MBA *(Moderator)*

Chief Medical Officer, Sr. Vice President Mission Impact, March of Dimes Foundation

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Today's Speakers

Paula Braveman, MD, MPH
Professor of Family and Community Medicine and Director of the Center on Social Disparities in Health, University of California San Francisco, School of Medicine

Arthur R. James, MD, FACOG
Interim Executive Director, Kirwan Institute for the Study of Race and Ethnicity, Associate Clinical Professor, Dept OB/GYN, Wexner Medical Center The Ohio State University

Donald K. Warne, MD, MPH
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Professor of Family and Community Medicine and Director of the Center on Social Disparities in Health, University of California San Francisco, School of Medicine

CENTER ON SOCIAL DISPARITIES IN HEALTH
University of California, San Francisco

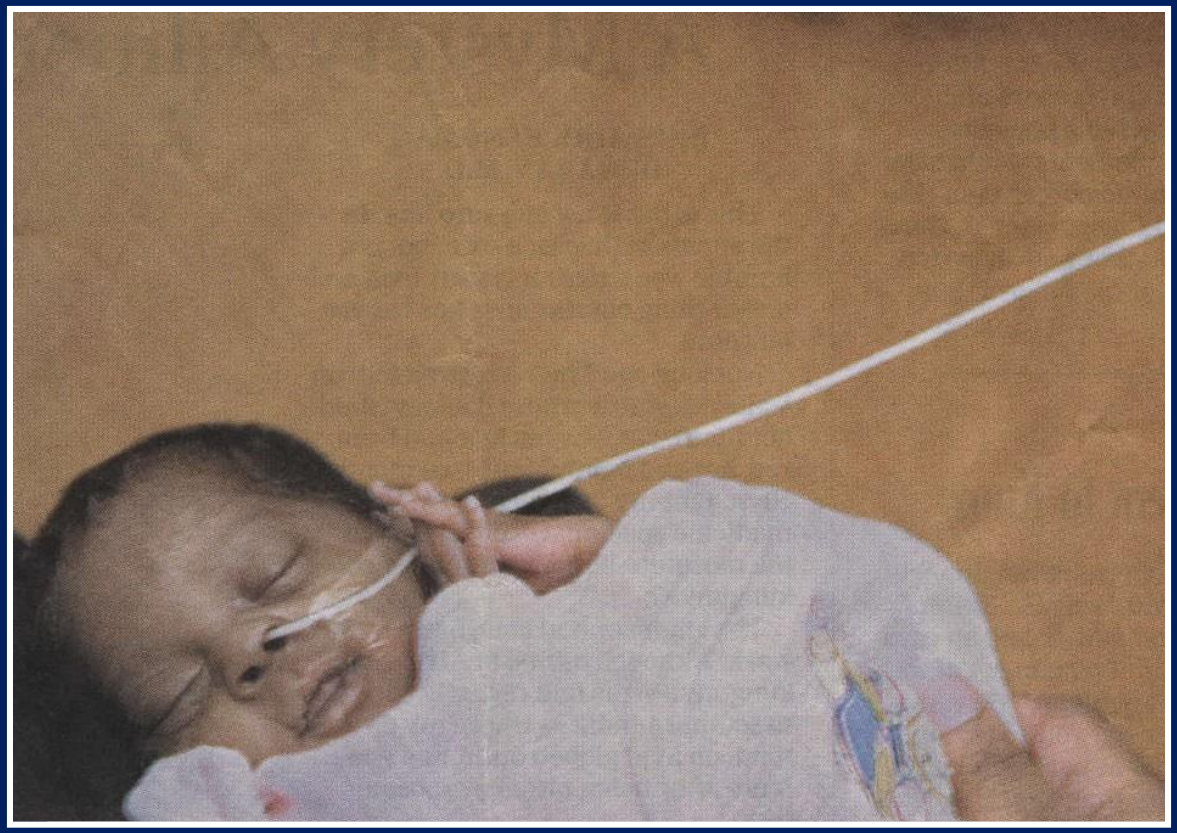
Black-White disparities in preterm birth: Do we know enough to act?

October 3. 2017
March of Dimes Webinar on PTB and Health Equity

Paula Braveman, MD, MPH
Professor of Family & Community Medicine
Director, Center on Social Disparities in Health
University of California, San Francisco
www.ucsf.edu/csdh

Persistent racial disparities in PTB: a key health equity issue

- Infant deaths
- Starting life unequal
  - Disability-- physical, mental, emotional
  - Adult heart disease, diabetes
- Burden on families
- Economic costs
  - Medical care
  - Special education
  - Social services
  - Productivity lost



(NY Times 2/27/07. With permission Photo : Dilip Vishwanat. Article: Nicholas Bakalar)

Causes unknown

Not explained by:

- Standard prenatal care
- Tobacco, alcohol, drugs
- Current income or education

Some researchers suspect:

- Infections
- Elective C-sections
- Environmental toxins
- Neighborhood/work conditions
- Genes or gene-environment interactions
- Stress, social support
- Lifelong experiences, especially in childhood

Evidence suggests social causes are important in the Black-White disparity in PTB

- Black immigrants from Africa/Caribbean have birthweight outcomes similar to Whites'
  - But their daughters' outcomes are worse
- No/little PTB disparity among poor women
- Neighborhood effects observed often (physical & social environments associated with SES and racial inequity)
- Often (but not 100%) linked with stress
- Lower PTB rates among Black women in RCT of *Centering Pregnancy*

Plausible explanations: Unmeasured factors

- Structural racism tracks Black women into lower SES, e.g. via segregation
- SES = education, occupation, income, wealth = Resources and opportunities to be healthy
  - Polluted neighborhoods
  - Substandard housing (lead, mold, mites, roaches)
  - Inferior schools
  - Poor access to jobs and services

Unmeasured factors, continued

- **Structural racism, continued**
  - Health-promoting vs -damaging exposures
  - Produces chronic stress associated with constantly facing challenges with inadequate resources
- **Added stress, regardless of SES**
  - Intended or unintended, overtly or subtly discriminatory incidents, re self or loved ones
  - Anxiety/vigilance could be stressful and, if persistent, harm health.

Neighborhood options vary by race & SES. How could a neighborhood affect health?

- Pollution, toxins, crime
- Safe places to exercise
- Access to healthy food
- Ads for harmful substances
- Social networks & support
- Norms, role models, peers
- Despair
- Access to (good) jobs
- Quality of schools

Image: http://www.seattlemet.com/news-and-profiles/publicola/articles/some-rich-architects-mansion.

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- Norms, role models, peers
- Despair
- Access to (good) jobs
- Quality of schools
- Racial segregation tracks Blacks into poorer neighborhoods than Whites of similar income

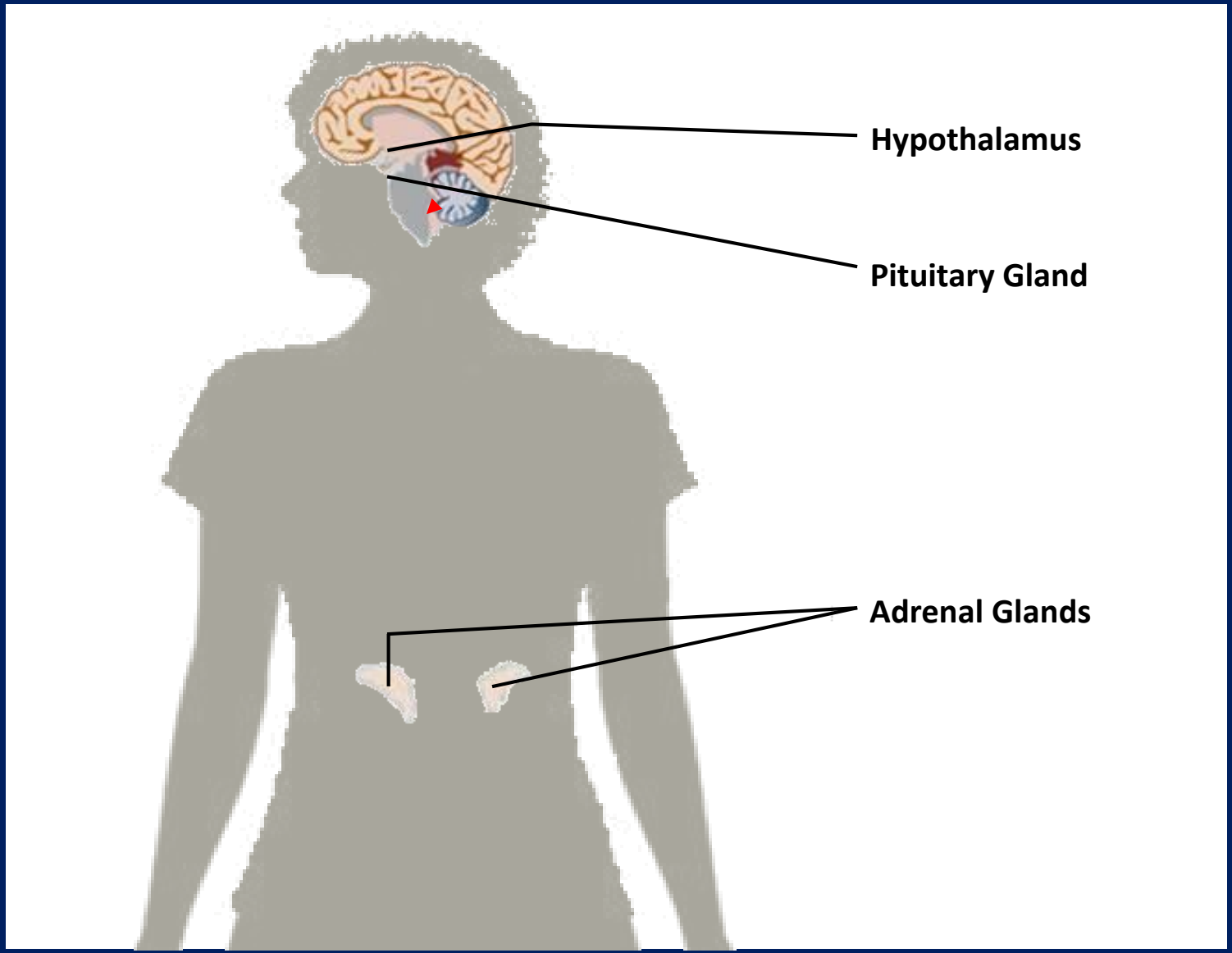
Image: http://www.seattlemet.com/news-and-profiles/publicola/articles/some-rich-architects-mansion.

Stress is a biologically plausible cause

- **Neuro-endocrine processes → immune/inflammatory mechanisms which could trigger labor**
  - HPA axis, CRH
  - Autonomic Nervous System
  - Telomere shortening
  - Epigenetic effects of stressful experiences

Image: http://news.vanderbilt.edu/2010/07/vanderbilt-university-study-to-be-most-comprehensive-look-at-link-between-stress-and-health-disparities/

The stress → PTB link: Biologically plausible?



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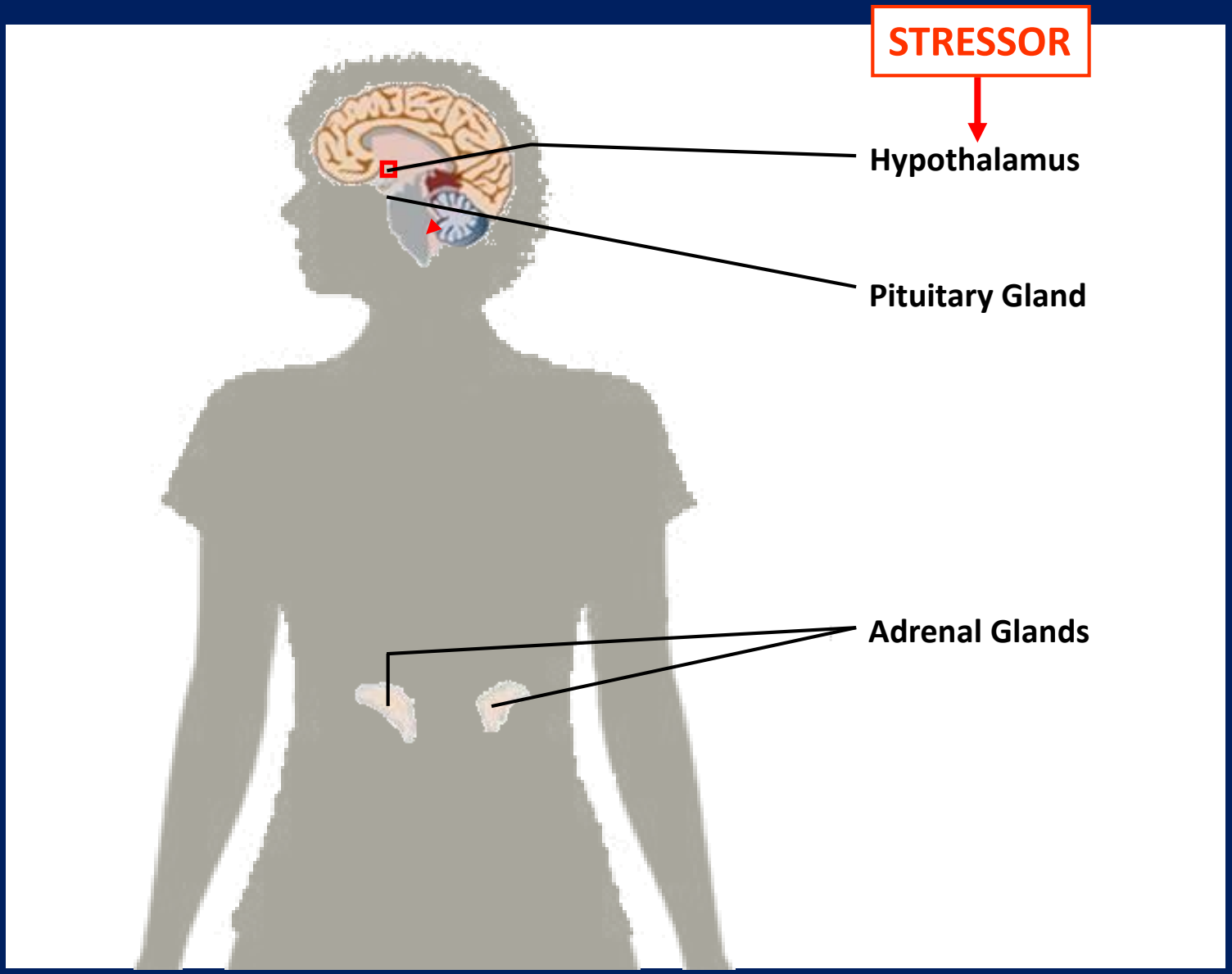

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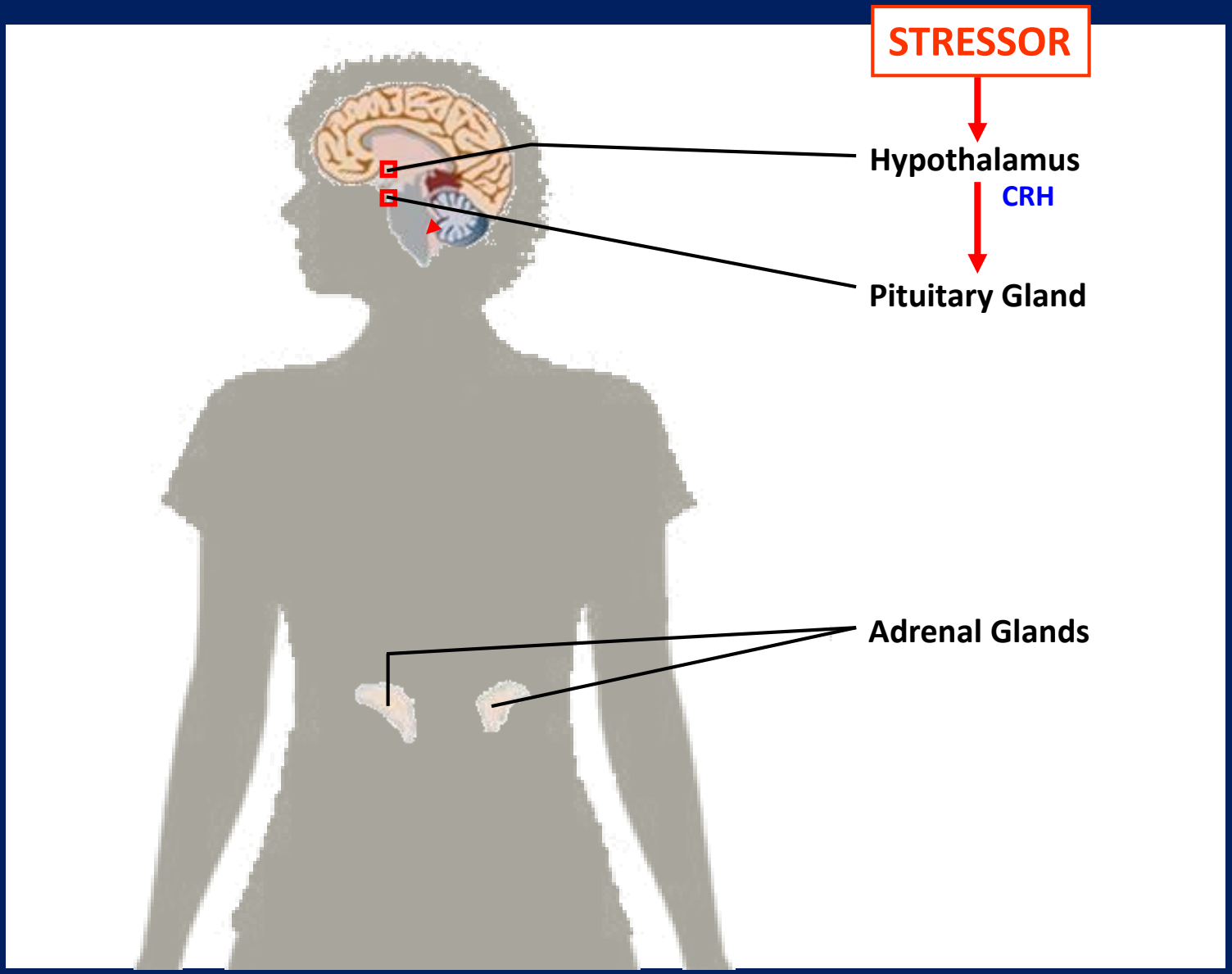

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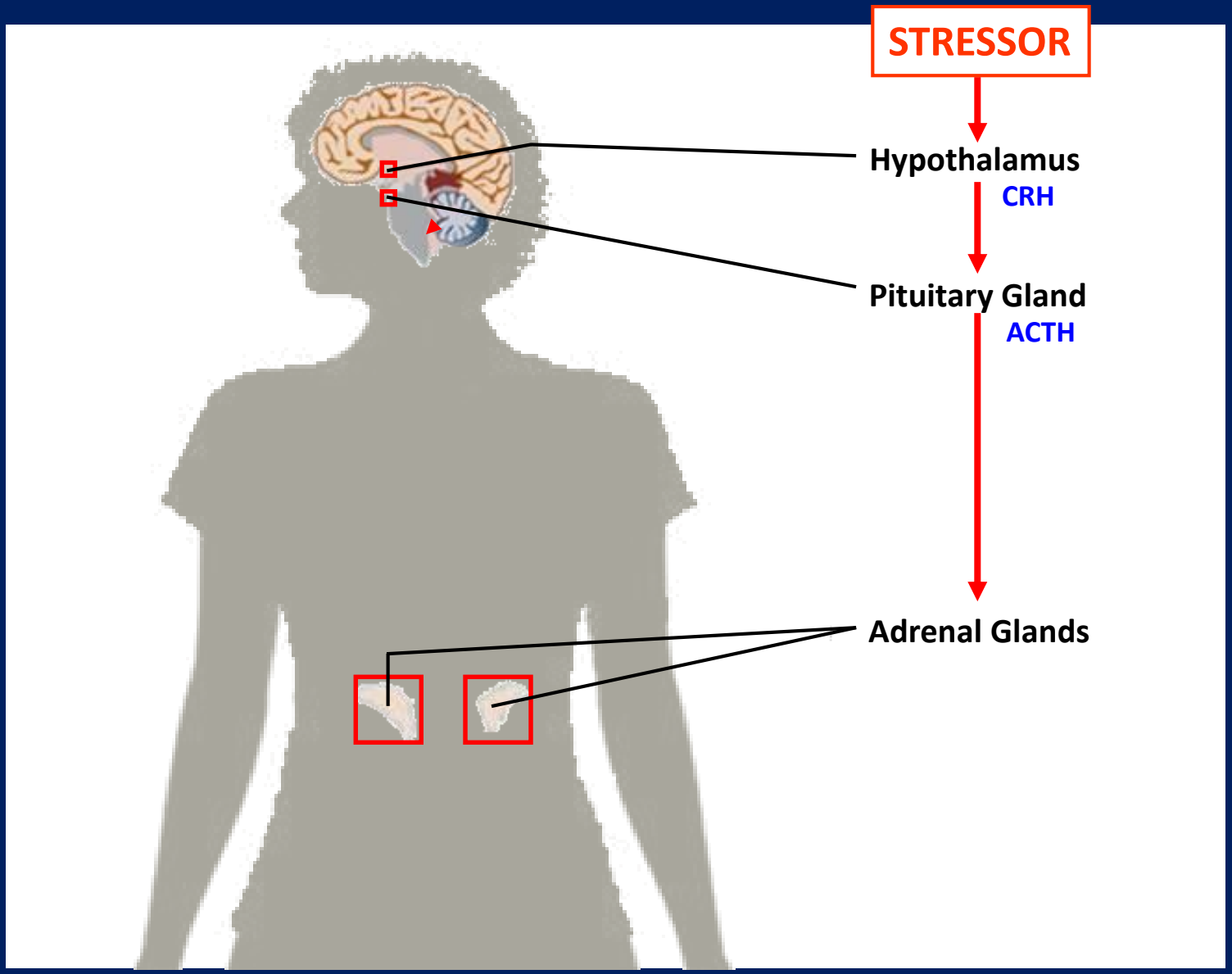

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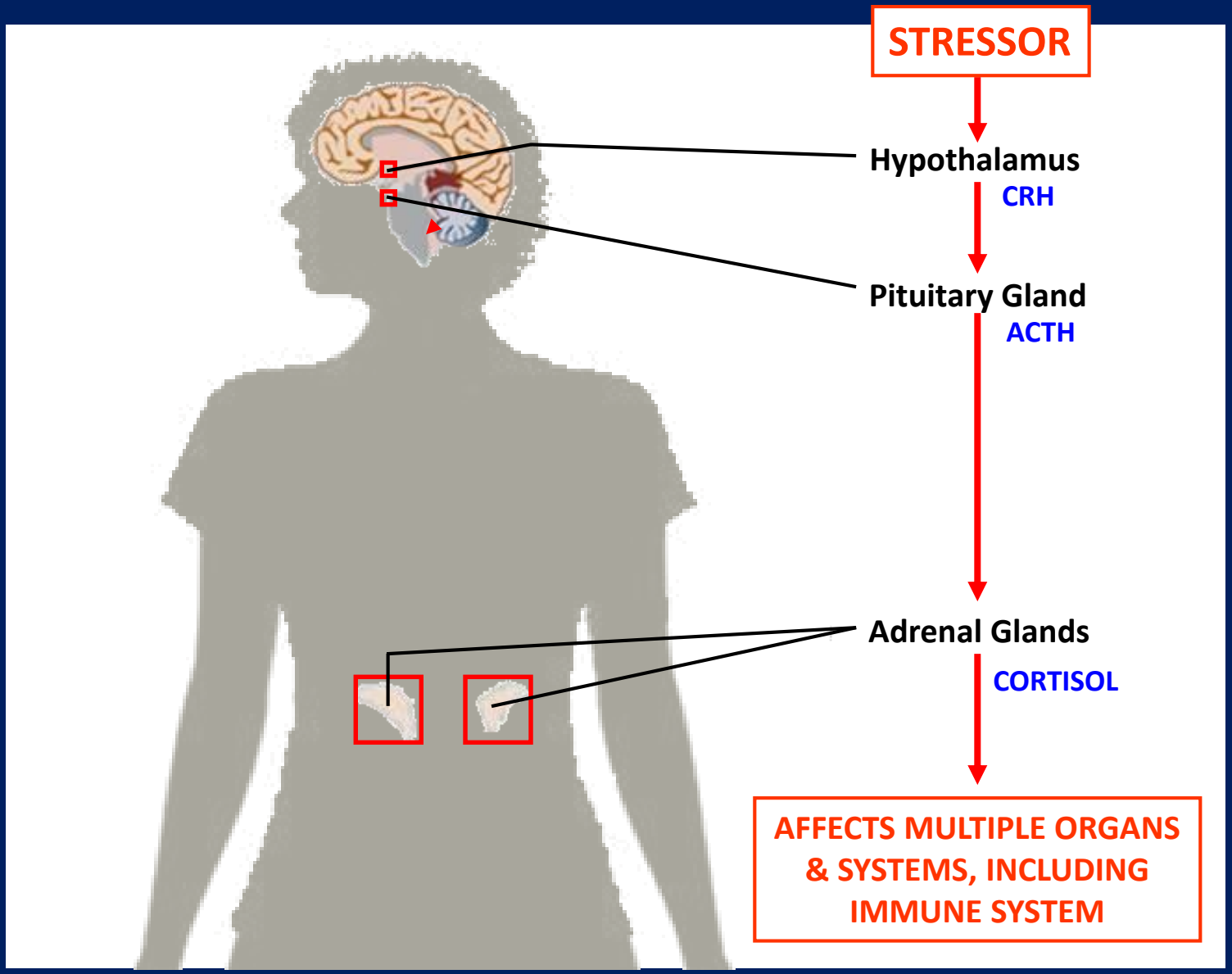


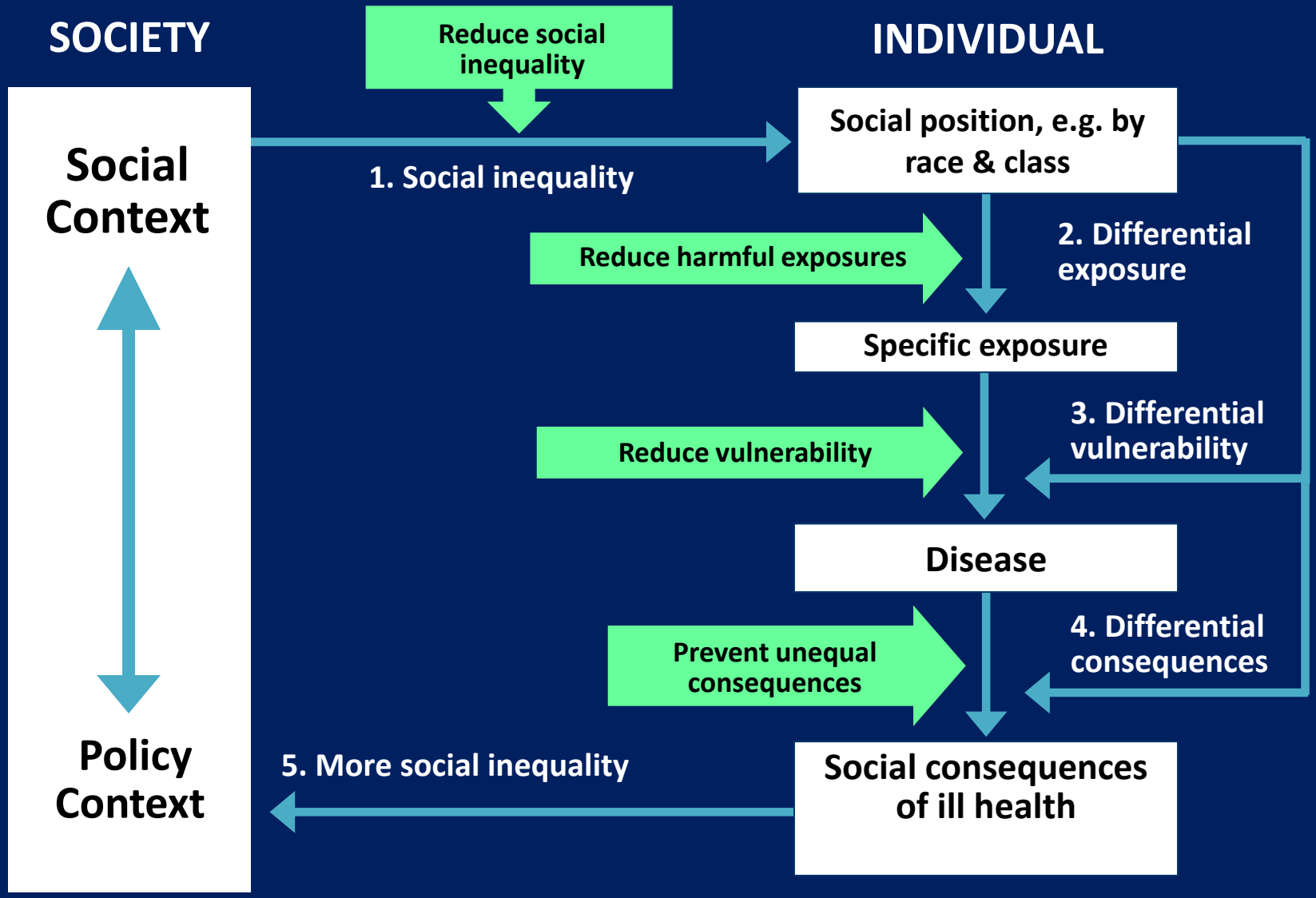
Does chronic worry about racism contribute to the racial disparity in PTB?

- **37% of Black women reported that they "very or somewhat often" worried they "might be treated or viewed unfairly because of their race…"**
- **Black women who chronically worried had twice the rate of PTB as those who did not**
  - Before and after adjustment for many social, demographic, behavioral, & medical factors
- **No racial disparity in PTB after adjusting for chronic worry & social/demographic factors**

More questions than answers

- But stress is a plausible contributor
- Many studies conclude a racial difference is due to underlying biological differences because it persists after "controlling for SES" without considering unmeasured experiences/exposures across the life course
  - Impossible to control fully for SES
- Unmeasured racism-related disadvantages could be key--including severe poverty, lack of wealth, & range of experiences of bias, from childhood on

What produces health disparities across the life course and across generations?



Adapted from Diderichsen, U. Copenhagen

What to do, in the face of uncertainty?

- **Paralysis?**
- **Await definitive research? (decades/generations?)**
- **Be guided by the best available information.**
  - Target plausible causes
  - Use approaches likely to have favorable effects on other important factors whose health effects are more established, e.g., poverty, empowerment (self-efficacy/self-esteem), health-related behaviors, healthier environments

Arthur R. James, MD, FACOG

Interim Executive Director, Kirwan Institute for the Study of Race and Ethnicity, Associate Clinical Professor, Dept OB/GYN, Wexner Medical Center
The Ohio State University

“EQUITY”…

“Vicissitudes” Artist, Jason DeCaires Taylor

Birth Outcomes and Health Equity: Creating the Healthiest Nation with Healthy Pregnancies

Arthur R. James MD, FACOG
Associate Professor
The Ohio State University Wexner Medical Center
Department of Ob/Gyn and Nationwide Children's Hospital

Interim Executive Director
The Kirwan Institute for the Study of Race and Ethnicity

October 03, 2017

THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER

Disclosures:

I am a member of the:

- March of Dimes/Centers of Disease Control's Health Equity Work Group
- Centering HealthCare Institute, Inc. Board of Directors
- GABE Advisory Board
- Center for Excellence, University of Illinois @ Chicago, School of Public Health

Conflict of Interest:

- I have no conflicts of interest

Objectives:

By the end of this lecture I hope attendees will…

1. Understand the significance of America's Black:White racial legacy regarding the attainment of infant mortality goals.
2. Appreciate how history and past discriminatory practices have contributed to racial disparities
3. Appreciate that the racial disparity in infant mortality is 'not natural", but man-made.
4. Appreciate the importance of taking a Social Determinants of Health approach to "undo" this disparity.

Infant Mortality

Definition: The death of any live born baby prior to his/her first birthday.

"The most sensitive index we possess of social welfare . . . "

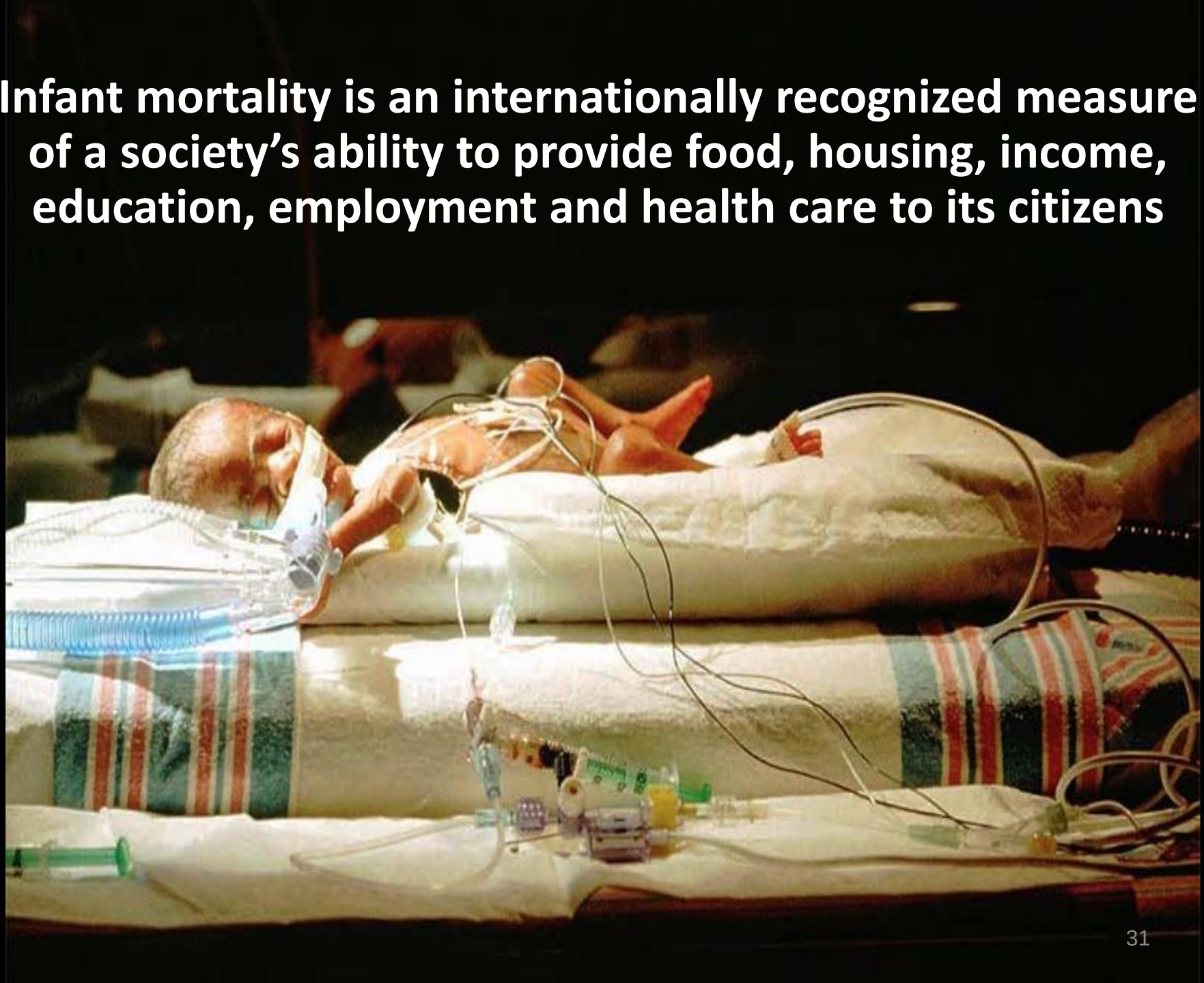
Julia Lathrop, Children's Bureau, 1913

Slide prepared by R. Fournier RN, BSN
State of Michigan FIMR Director

Infant Mortality:

"***Infant mortality*** *is a community mirror, reflecting our collective capacity to promote and protect the health and well-being of our very youngest and most vulnerable.*" (from City Lights, 9:2, p1)

Infant mortality is an internationally recognized measure of a society's ability to provide food, housing, income, education, employment and health care to its citizens



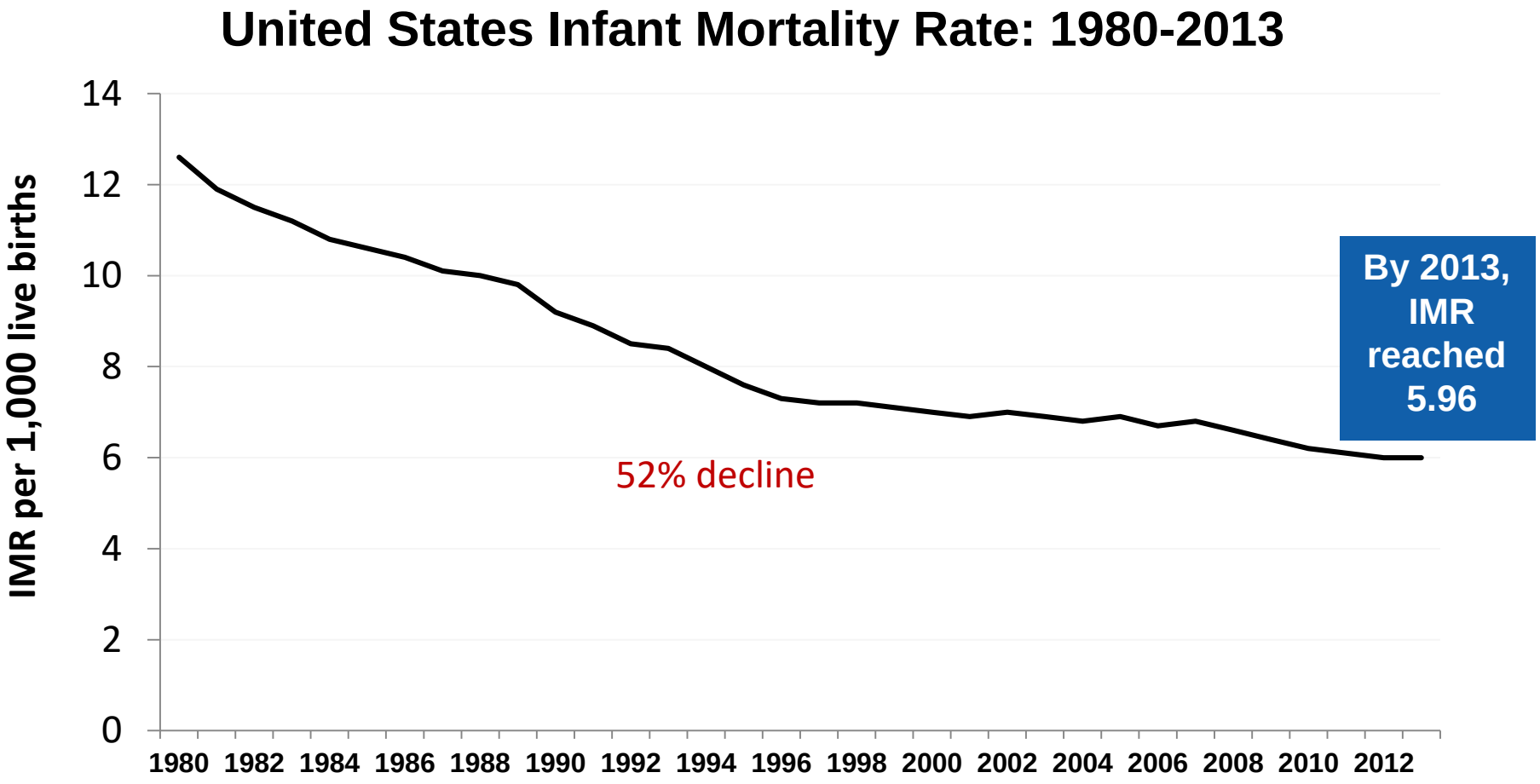
Infant Mortality is…

Multi-factorial. Rates reflect a *society's commitment* to the provision of:

1. High quality health care
2. Adequate food and good nutrition
3. Safe and stable housing
4. A healthy psychological and physical environment
5. Sufficient income to prevent impoverishment

"As such, our ability to prevent infant deaths and to address long-standing disparities in infant mortality rates between population groups is a *barometer* of our society's *commitment* to the health and well-being of all women, children and families."

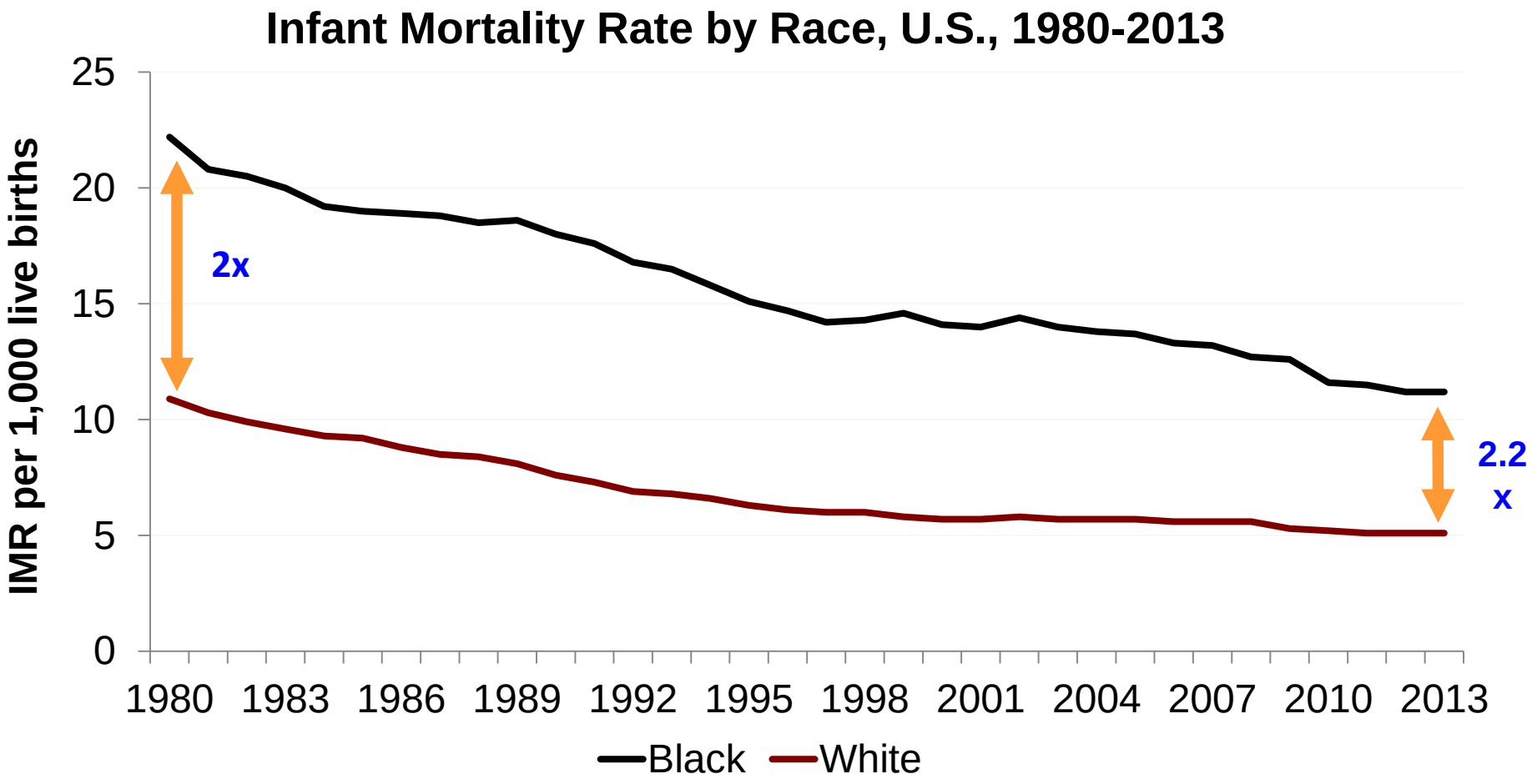
Overall U.S. Infant Mortality Rate (IMR) has improved



2014 IMR = 5.82

http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_02.pdf. Deaths: Final Data for 2013. TABLE 20

Black:White IMR Disparity Gap:



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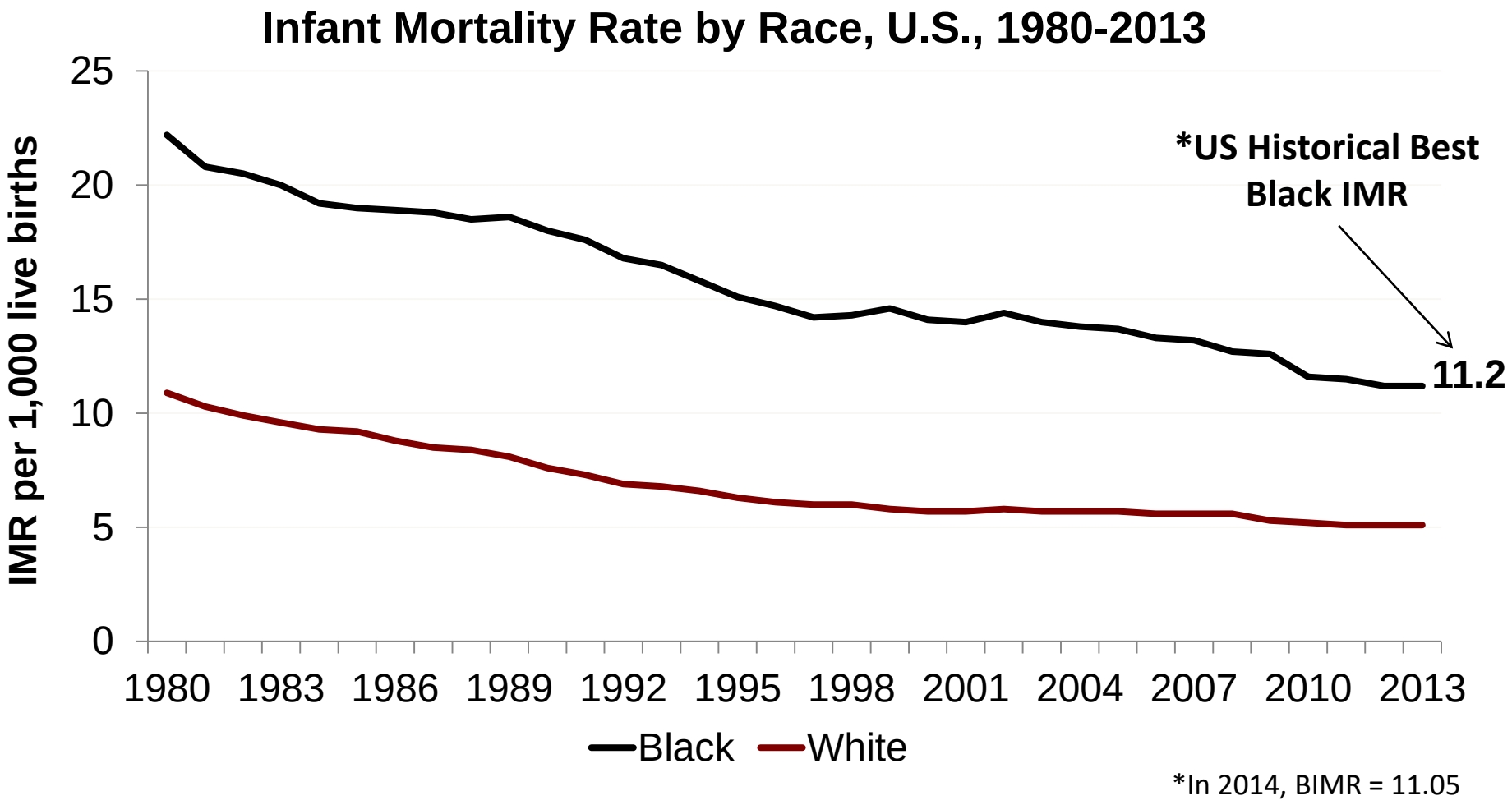
Note: Data are presented here by race only; data on Hispanic origin of mothers were not routinely collected until 1989

Survival Interval/Gap:

Black:White IMR Disparity Gap:



*In 2014, BIMR = 11.05

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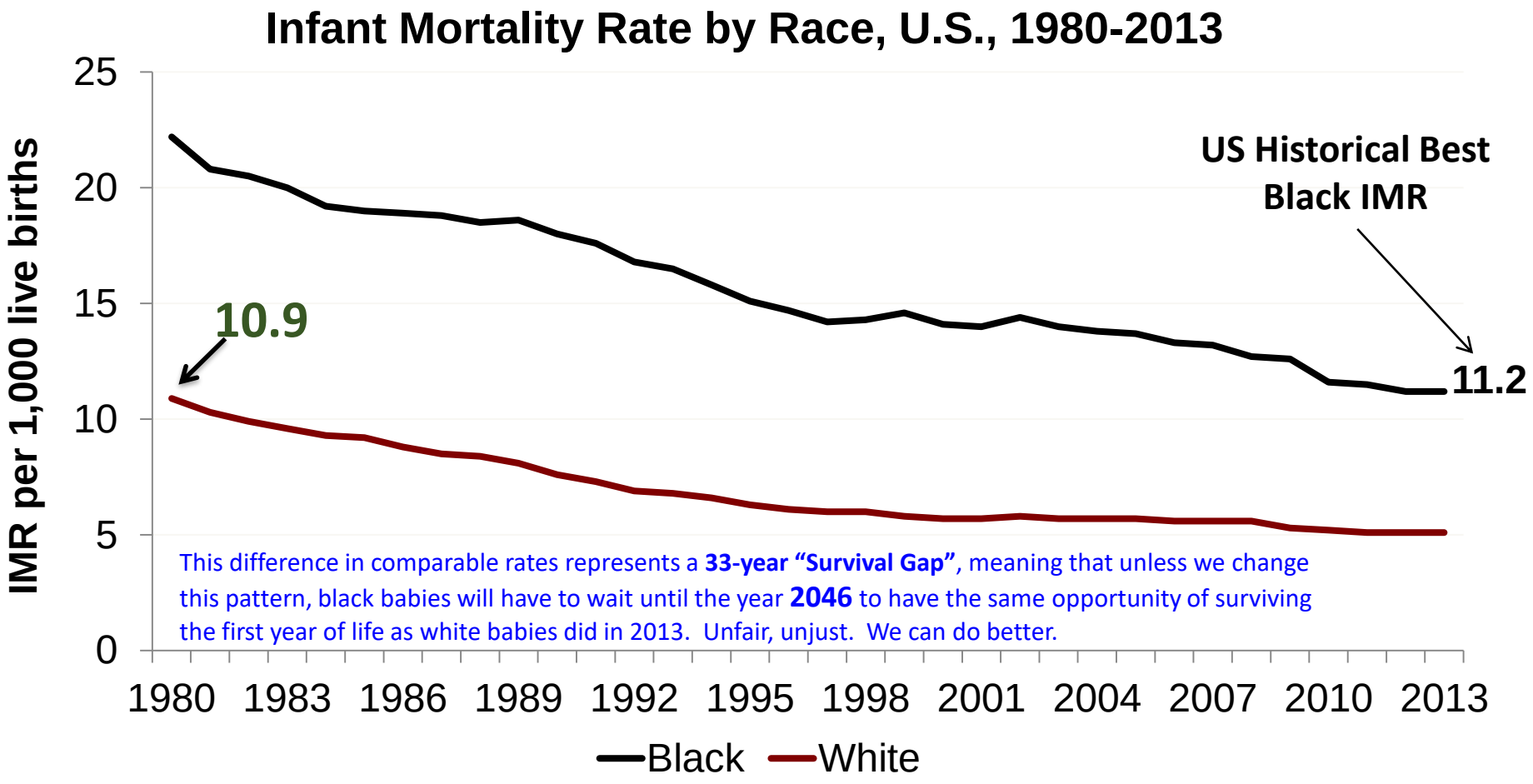

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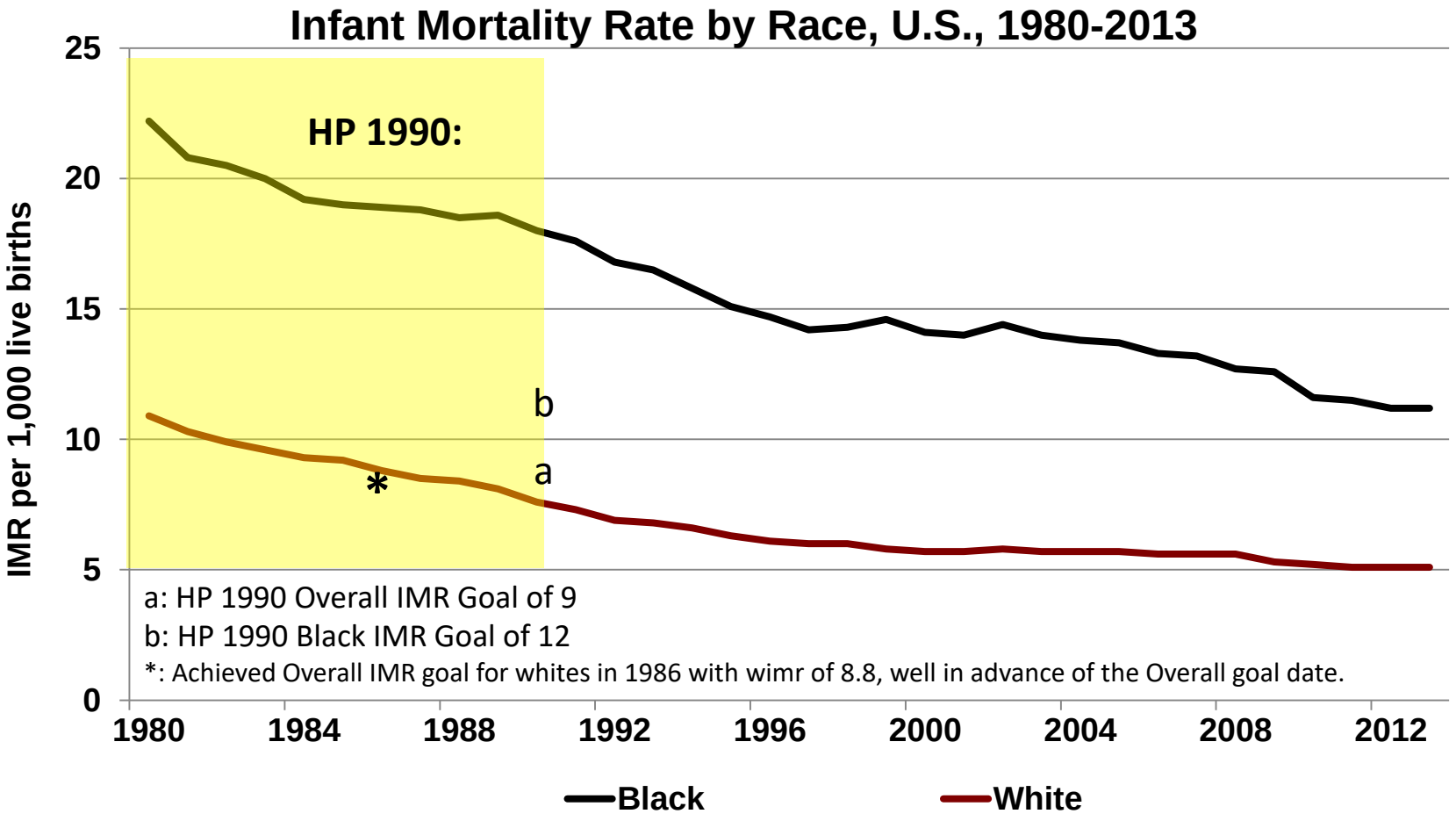
“Healthy People” History regarding IMR:

- **1990-*Healthy People***
- **2000-*Healthy People***
- ***2010-Healthy People***
- ***2020-Healthy People***

Healthy People IMR Goals:



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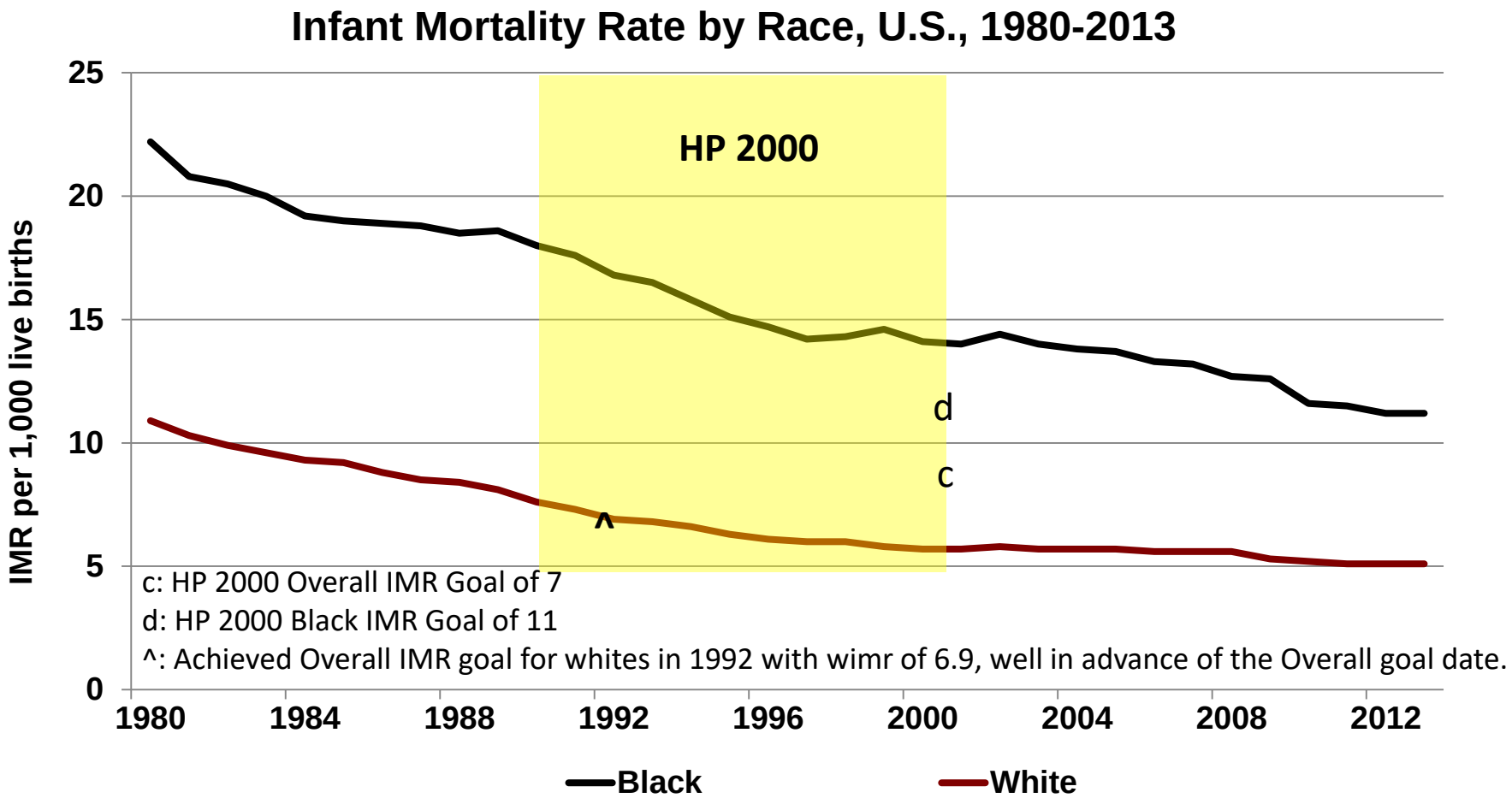

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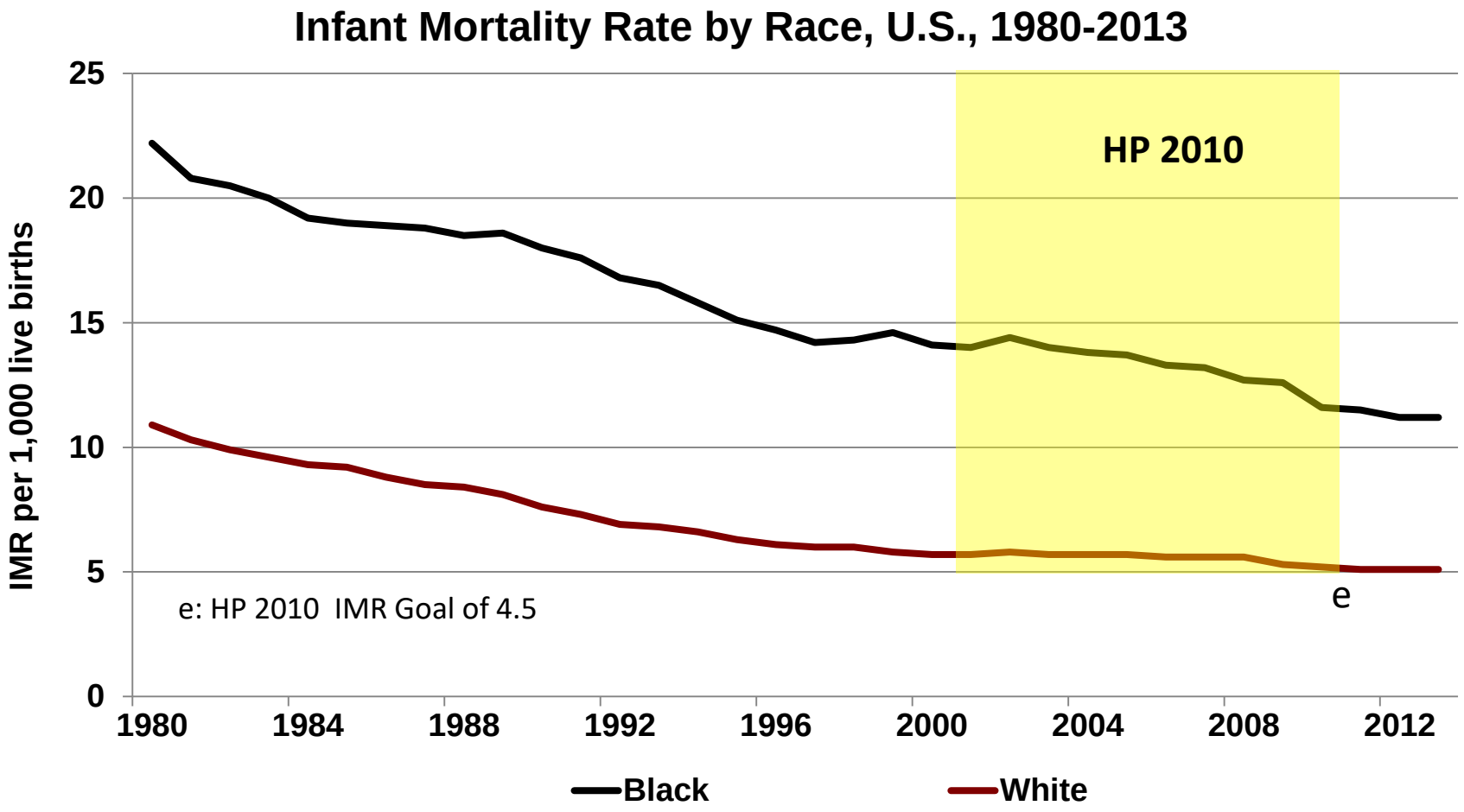

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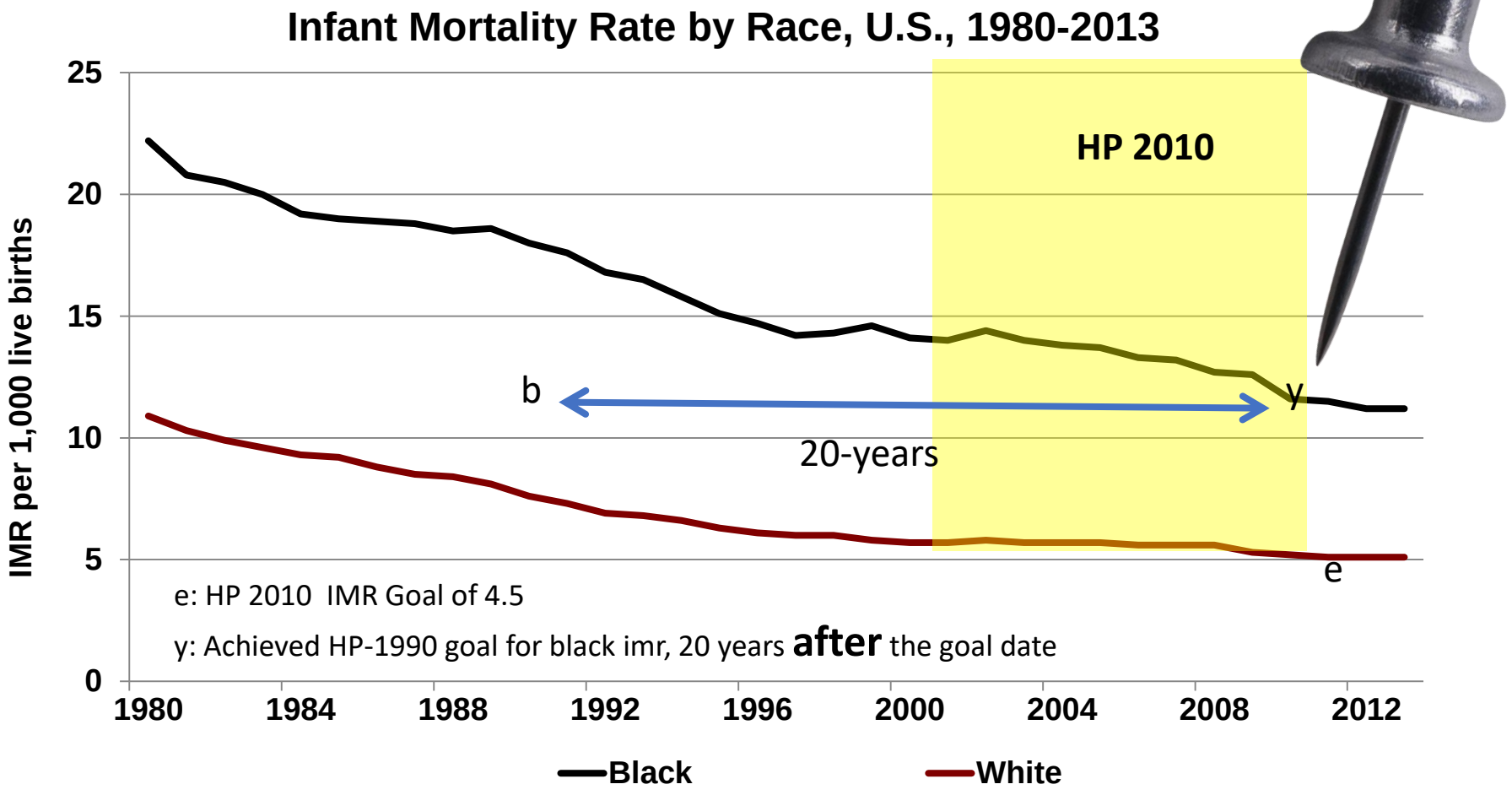

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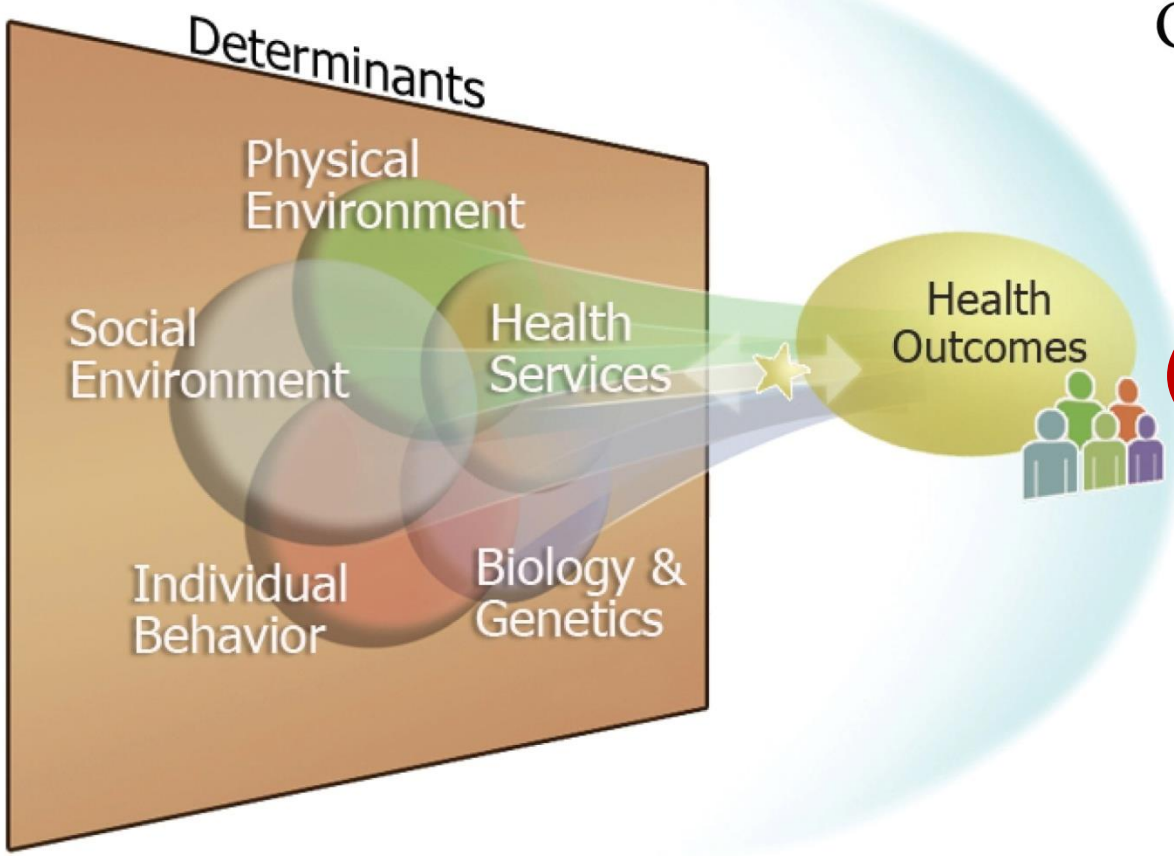
Healthy People 2020

A society in which all people live long, healthy lives



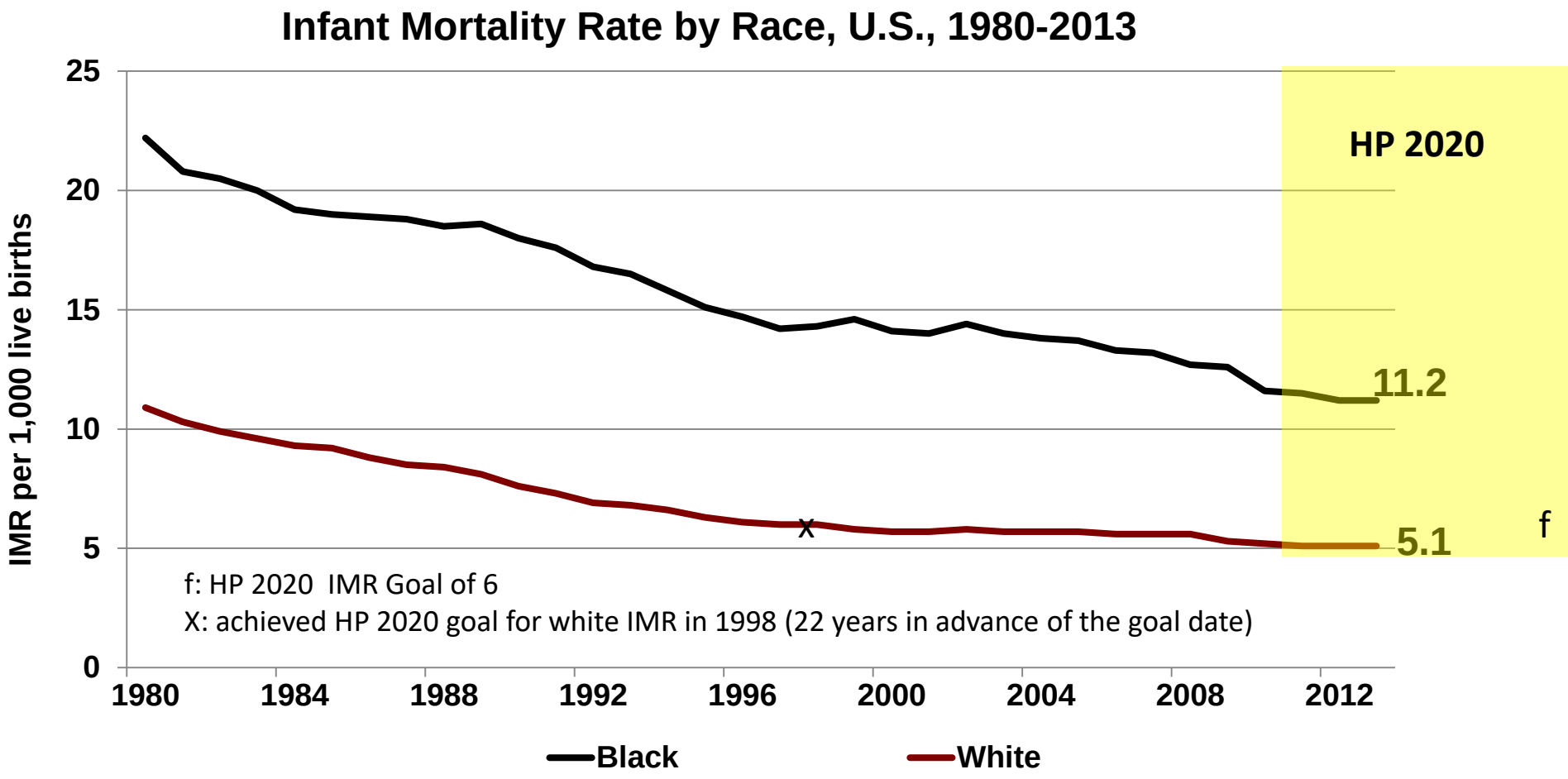
Overarching Goals:

- Attain high quality, longer lives free of preventable disease, disability, injury, and premature death.
- Achieve health equity, eliminate disparities, and improve the health of all groups
- Create social and physical environments that promote good health for all.
- Promote quality of life, healthy development and healthy behaviors across all life stages.

Developing Healthy People 2020

www.cdc.gov/nchs/healthy_people/hp2020.html

Healthy People IMR Goals:



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Patterns/Trends:

As a nation, we have established a pattern of…

- Achieving White IMR Goals well in advance of the goal dates…**AND**
- Simultaneously, achieving Black IMR Goals long after the goal dates

2, 4, 6, 8,…

5, 10, 15, 20…


Do Black babies matter?
Do they matter as much as White babies?


Everyone says “yes”….
But, our action doesn’t support this response?

School drop outs

Genetics

Drug addicts

Despite the data, there are many who still believe that the Black IMR cannot improve…that the Black IMR is as high/bad as it is because of **group level flaws** amongst those of us who are Black.

Black people don't love their babies as much

Teen-aged pregnancies

Welfare Queens

IPV

Dead-beat dads

But…there is no science to support that "group level flaws" amongst Black people are responsible for the disparity.

2011-2013 USA Infant Mortality Rates, by State and by Race, from Worse to Best:

Overall:		White:		Black:		Hispanic:	
USA	6.01		5.06		11.25		5.09
MS	9.25	WV	6.99	KS	14.18	RI	7.22
AL	8.57	AL	6.92	WI	14	PN	6.99
LA	8.35	ME	6.77	OH	13.57	OH	6.92
DE	7.64	MS	6.76	MI	13.13	KS	6.84
OH	7.6	AR	6.7	IL	12.93	KY	6.75
AR	7.41	OK	6.51	AL	12.9	ID	6.68
SC	7.23	IN	6.46	UT	12.89	OK	6.54
NC	7.2	KY	6.4	IN	12.87	MS	6.35
IN	7.19	OH	6.31	DE	12.82	AR	6.15
OK	7.17	LA	6.15	PN	12.66	IN	6.09
TN	7.16	TN	6.09	NC	12.57	MO	6.08
***MA**	**4.21**	***NJ**	**3.20**	***MA**	**6.90**	***IA**	**2.65**

***Best Rates in Green**

NCHS: 8/6/2015

HEALTHY START

For the past 26 years…

"2015 Preliminary (100-site) Cumulative HS IMR = 4.8"

- In different neighborhoods
  - To be a HS site IMRs at least 1.5x the national average
- Different demographics
- Different Races: Ghettoes/Inner City, Barrios, Indian Reservations
- Despite inadequate funding
- No matter how high risk the population
- No matter how under-resourced the community

HS has REPEATEDLY produced IMRs better than the national average…


Why the
disparity?


Infant Mortality:
Premature Births
Congenital Anomalies
SUID
Maternal pregnancy Complications
Placental or cord anomalies
Arthur R. James

Arthur R. James


Medical Problems:
Disparities in Birth Outcomes:
Social Determinants of Health:
Weathering
Racism
Housing
Incarceration rates
Unemployment
Fatherless households
Neighborhoods
Hopelessness
Policies
No Insurance
Stress
Poverty
"Medical baggage"
Language
Limited Access to Care
Smoking
Substance Use
Under-Education
Lower graduation rates
Family Support
Poor Working Conditions
Teen Births
Nutrition
A. R. James

Place Matters:

Most HS sites reside in historically REDLINED (or otherwise marginalized) communities…

where **“conditions”** have been created that have had deleterious **“consequences”** on our health

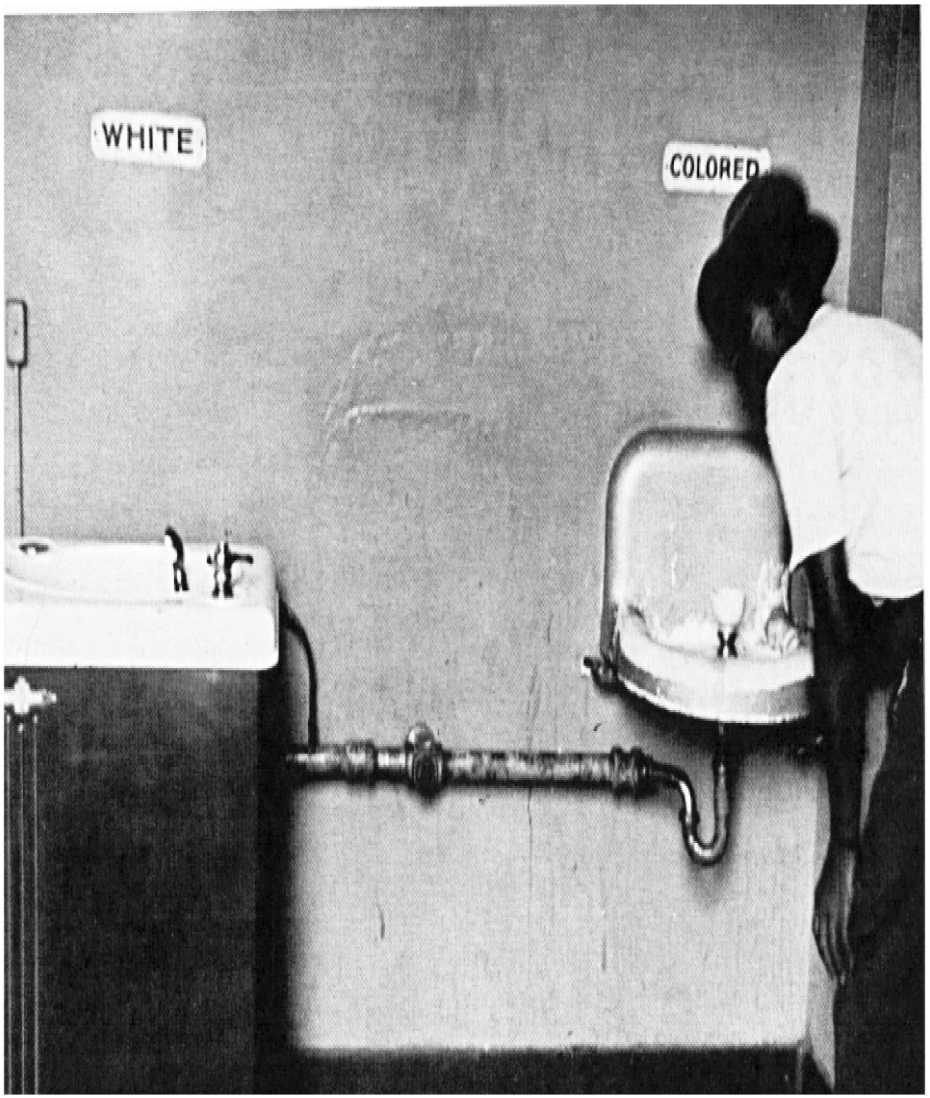

Disparities are
Natural

Racial Disparities: **we made it this way?**

We often perceive racial health disparities as consequences of "nature". As such, we convince ourselves that these differences are "fixed" or "hardwired"; a part of what is different about us as people and therefore cannot be changed.

Similarly, we also often see America as it is instead of an America as it should be…and we accept the difference between the two as "normal".

However, these disparities are differences that we created, differences that occur as a consequence of systems that we put into place. Therefore, we know they can be changed and would suggest that their persistence is in part because of our unwillingness to "undo" what we have done.



The Real Narrative About What Creates Health Inequities

- Disparities are not just because of lack of access to health care or to poor individual choices.
- Disparities are mostly the result of policy decisions that systematically disadvantage some populations over others.
  - Especially, populations of color and low income
  - Structural Racism

STRUCTURAL Determinants
(policies/systems/"isms")

↓

CONDITIONS (Social Determinants)

↓

CONSEQUENCES ("marginalization", increased risk for infant mortality)

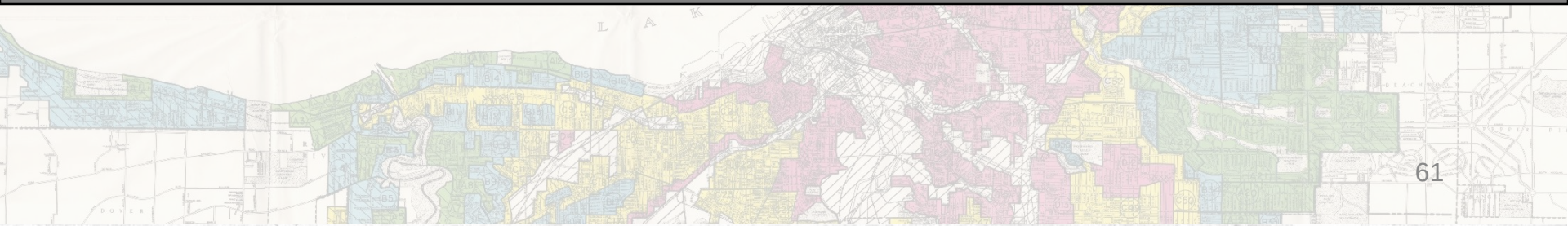
CAUSES

↓

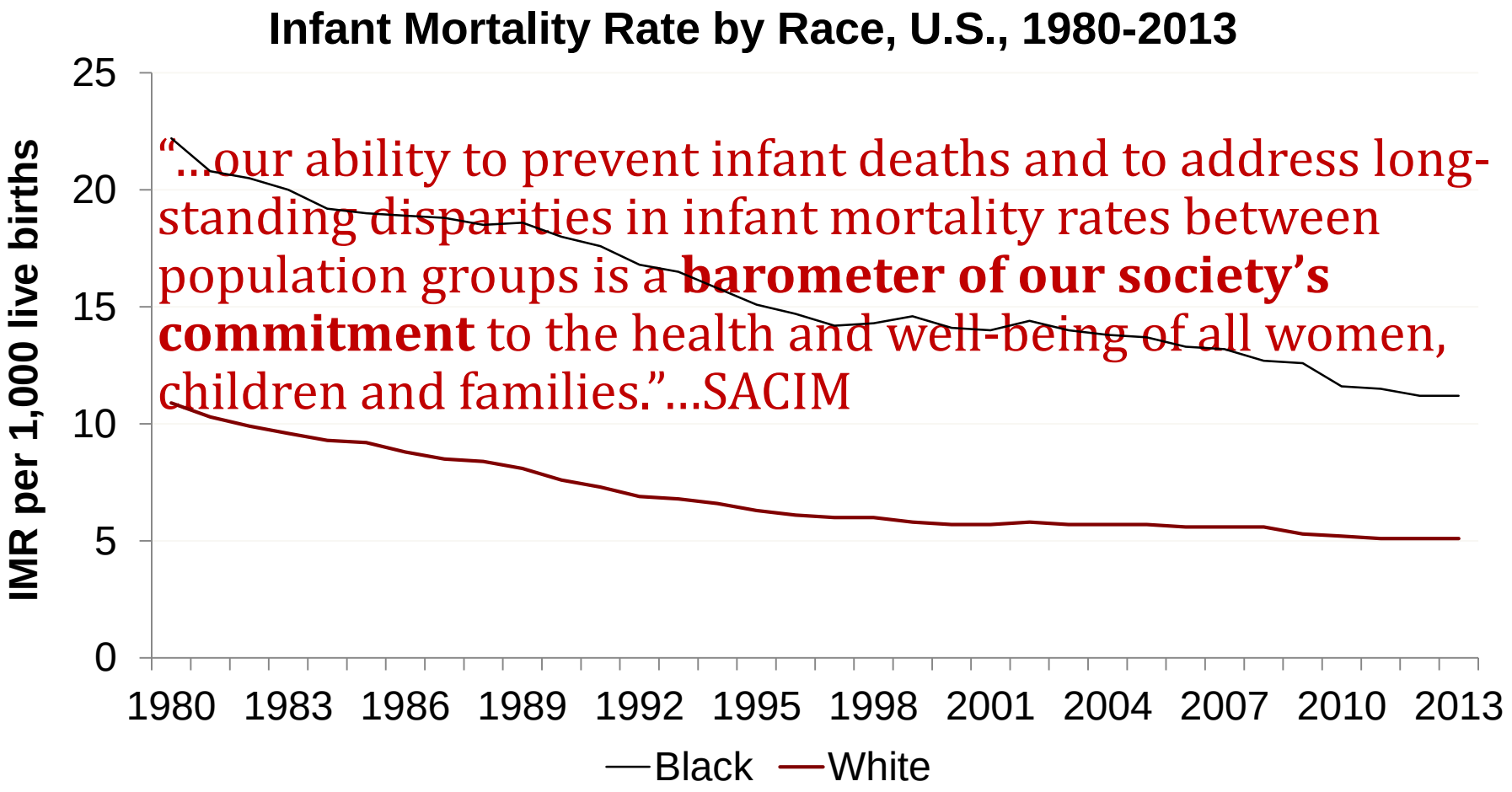
CONDITIONS

↓

CONSEQUENCES



The persistence of this "gap" says something about us!



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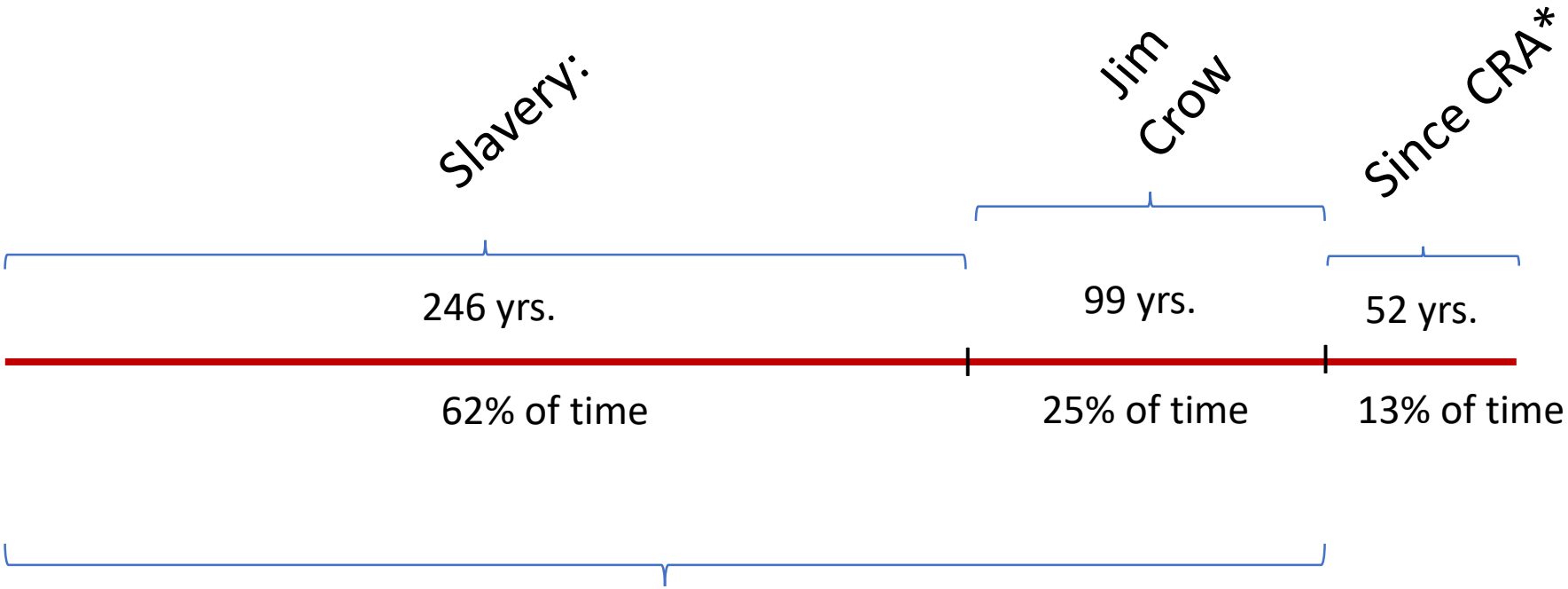
African American Citizenship Status: 1619-2017

Time Span:	Status:	Years:	% U.S. Experience:
1619-1865	Slaves: "Chattel"	246	62%
1865-1964	Jim Crow: virtually no Citizenship rights	99	25.0%
1964-2017*	"Equal"	52	13%
1619-2017	"Struggle" "Unfairness"	398	100%

* USA struggles to transition from segregation & discrimination to integration of AA's

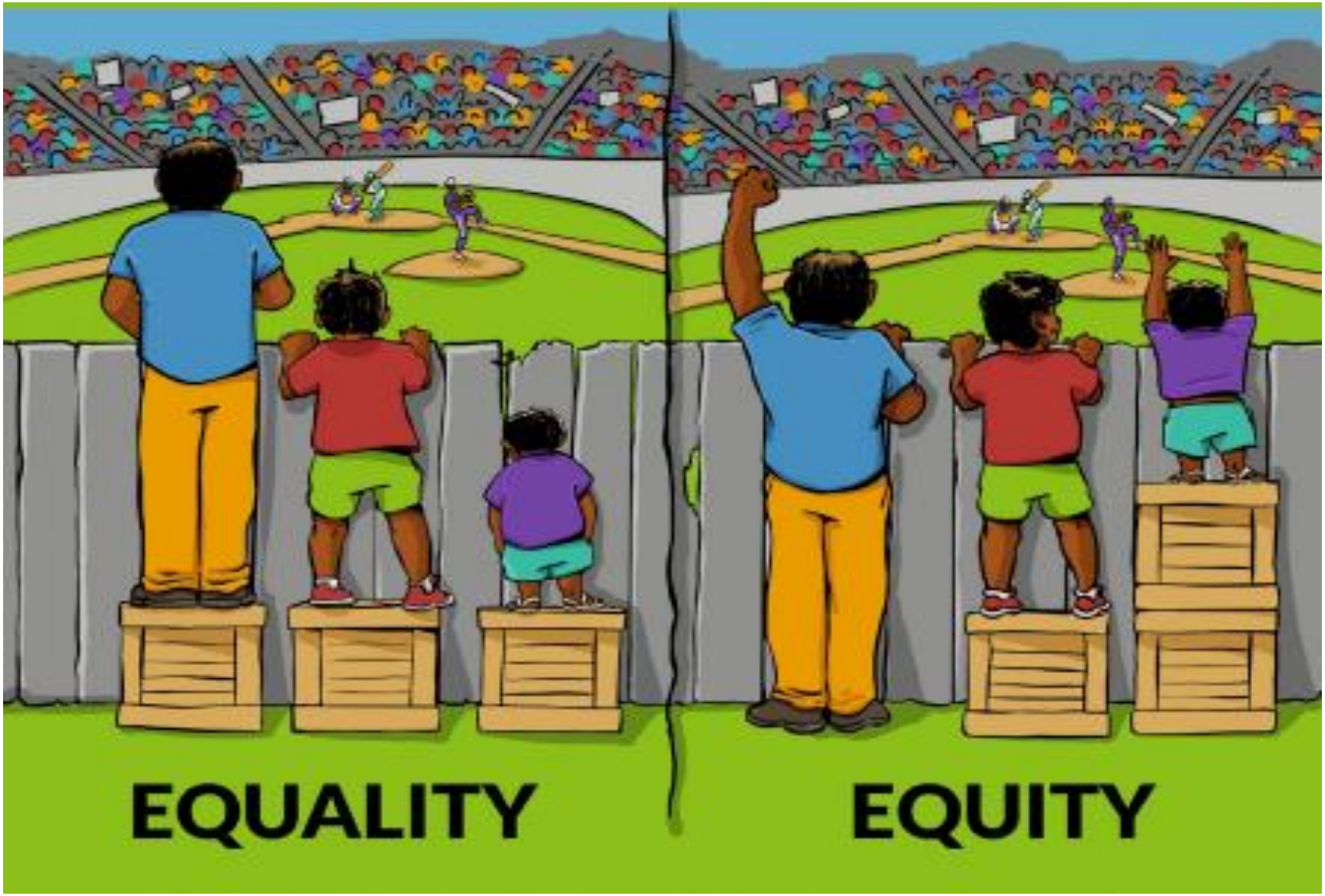
Time-line of African American Experience:



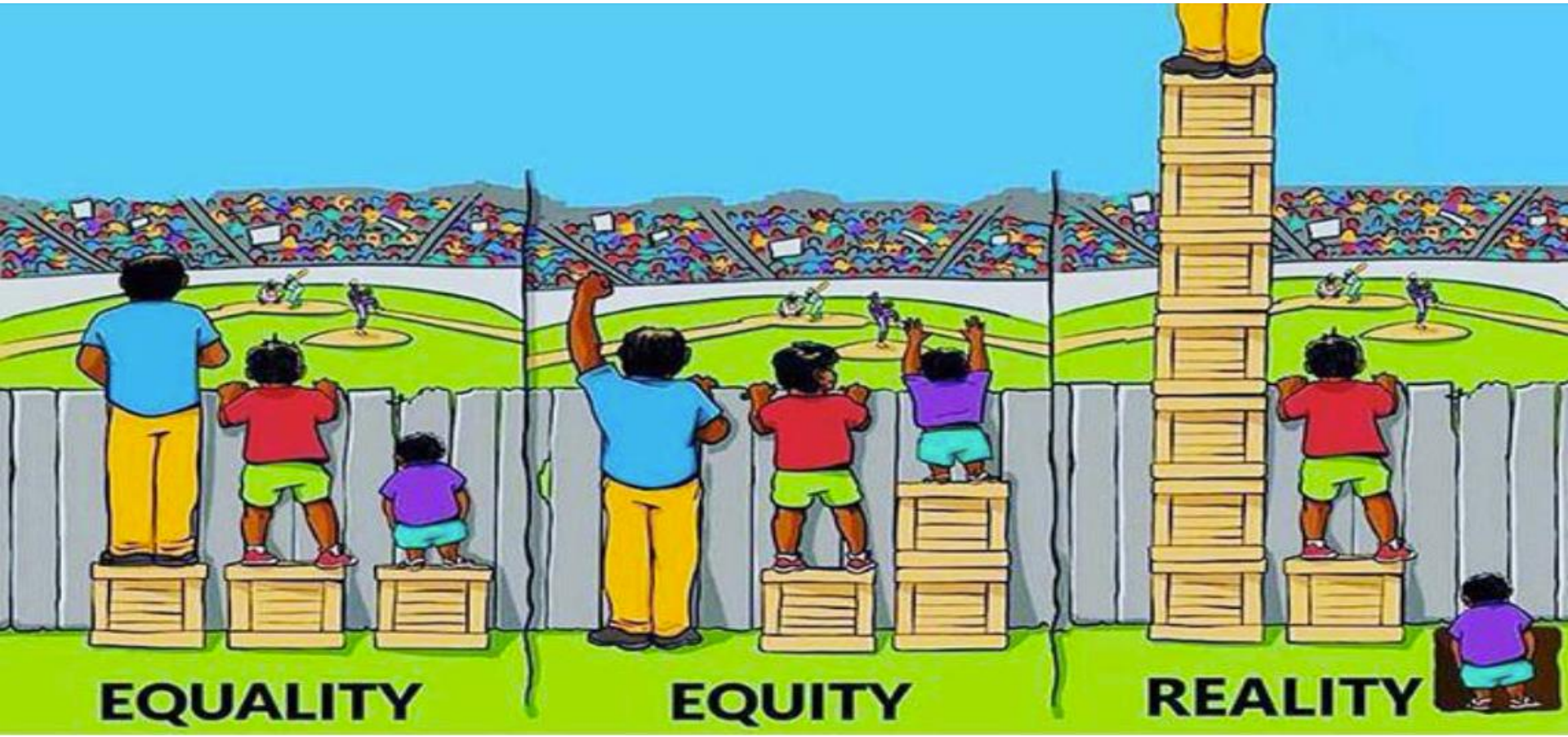
87% of the AA experience either as Slaves or under Jim Crow

*CRA: Civil Rights Act

Strive for EQUITY…



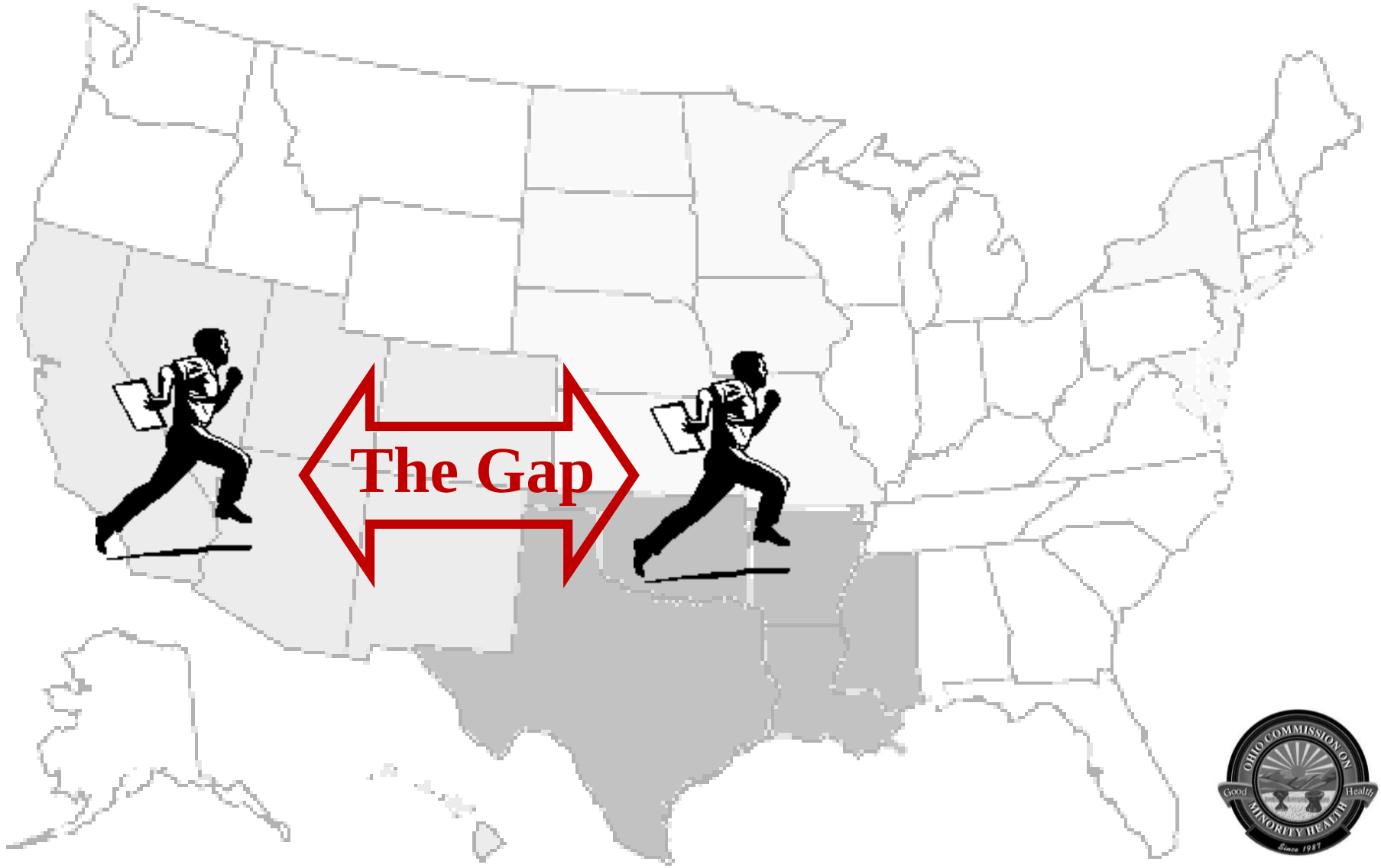
We must strive for EQUITY…**because this is our reality:**



According to many researchers, the situation to the right is our current reality and helps to understand why this work is so difficult. Nevertheless, we have to persevere…because **Black Babies Should Matter too.**

Slide borrowed from Dr. Renee Canady

Erasing the Gap(s):



Slide shared by Mrs. Cheryl Boyce

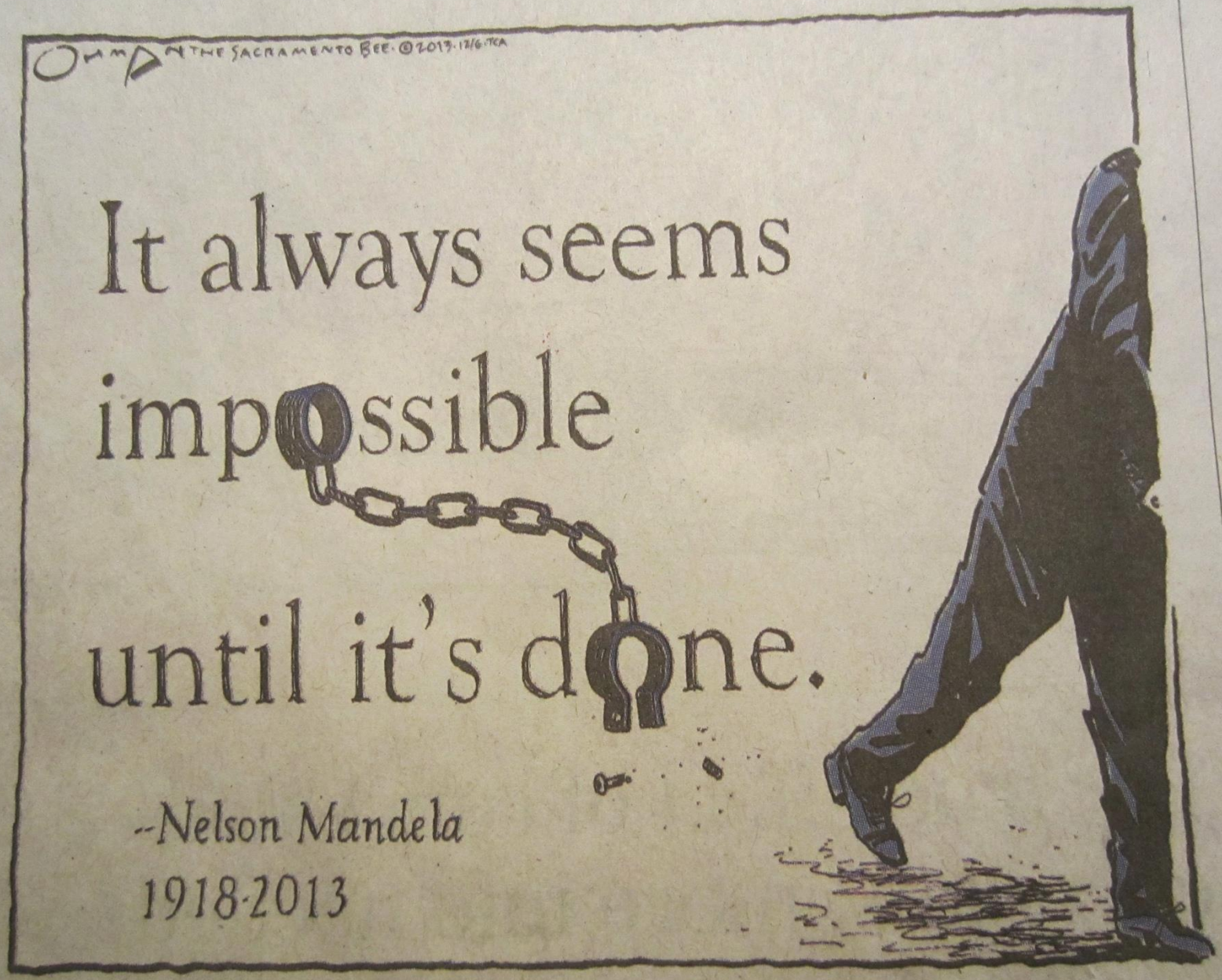
Advocacy:

By themselves are not good enough…

we must advocate AND mobilize to save our babies.

Advocacy can be challenging because some of us work for organizations that prohibit advocacy or the organization might insist that you can only say what they approve of…even if it is not in the best interest of improving infant mortality or improving the racial disparity in birth outcomes. You have to follow your own personal "moral compass."

…because 400 years is enough!


OLIPHANT THE SACRAMENTO BEE ©2013 12/6 TCA
It always seems
impossible
until it's done.
--Nelson Mandela
1918-2013


Thank you

Contact Information:

arthur.james2@osumc.edu
614.293.4929

Donald K. Warne, MD, MPH

Chair of the Department of Public Health, North Dakota State University, Department of Public Health

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A FIGHTING CHANCE FOR EVERY BABY™

Impact of Unresolved Trauma on American Indian Health Equity and Preterm Birth

March of Dimes Webcast
October 3, 2017

Donald Warne, MD, MPH

Oglala Lakota

Professor and Chair, Department of Public Health

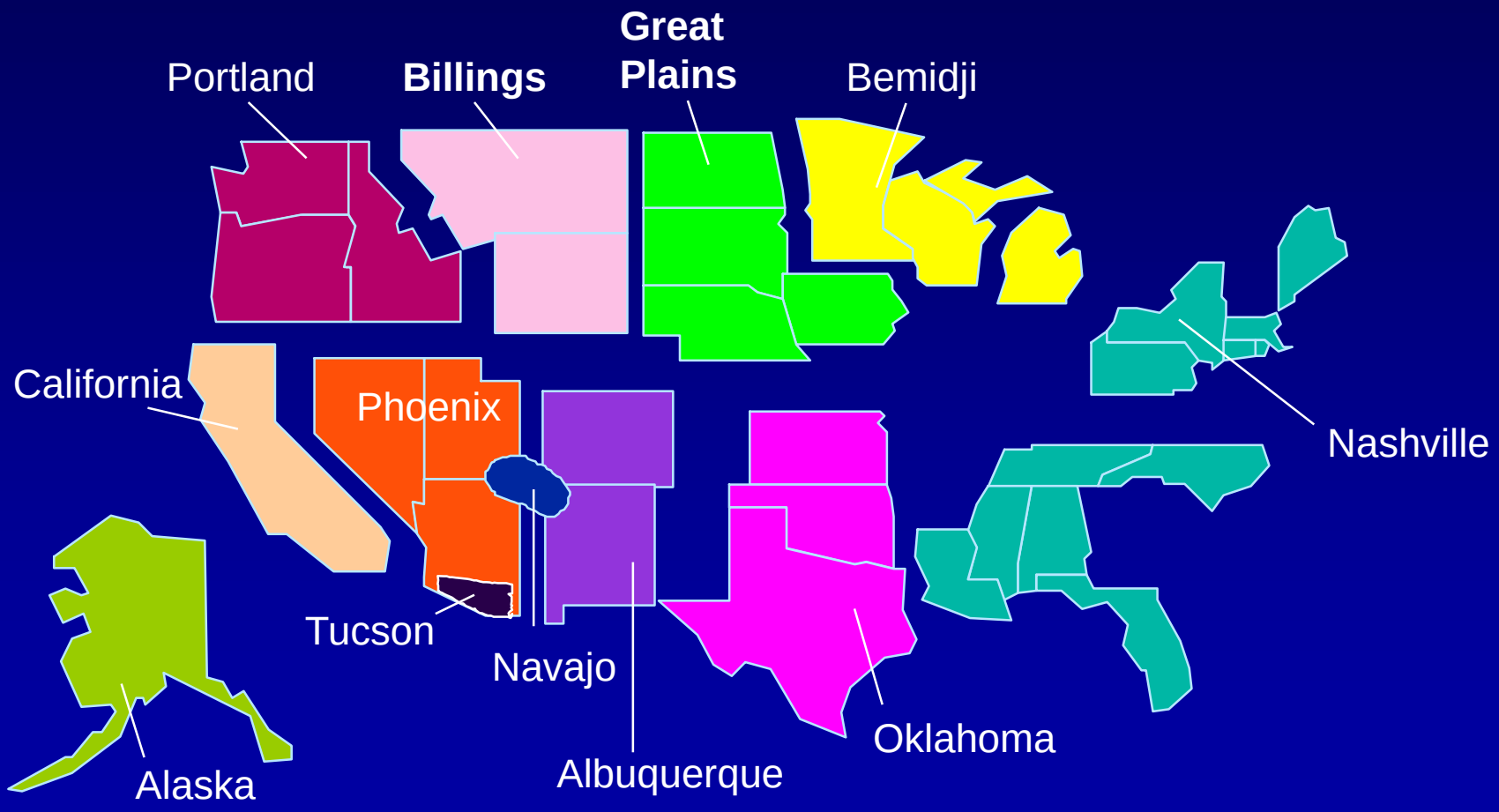
North Dakota State University

Overview

Learning Objectives:
1. Describe American Indian Health Disparities in Historical Context
2. Explain the role of epigenetics in unresolved trauma
3. Assess potential solutions to preterm birth disparities in tribal communities

Traditional View of Public Health

IHS Areas


Portland
Billings
Great Plains
Bemidji
California
Phoenix
Nashville
Tucson
Navajo
Oklahoma
Alaska
Albuquerque

AI Health Disparities

Average age at death in ND (2010 – 2014):

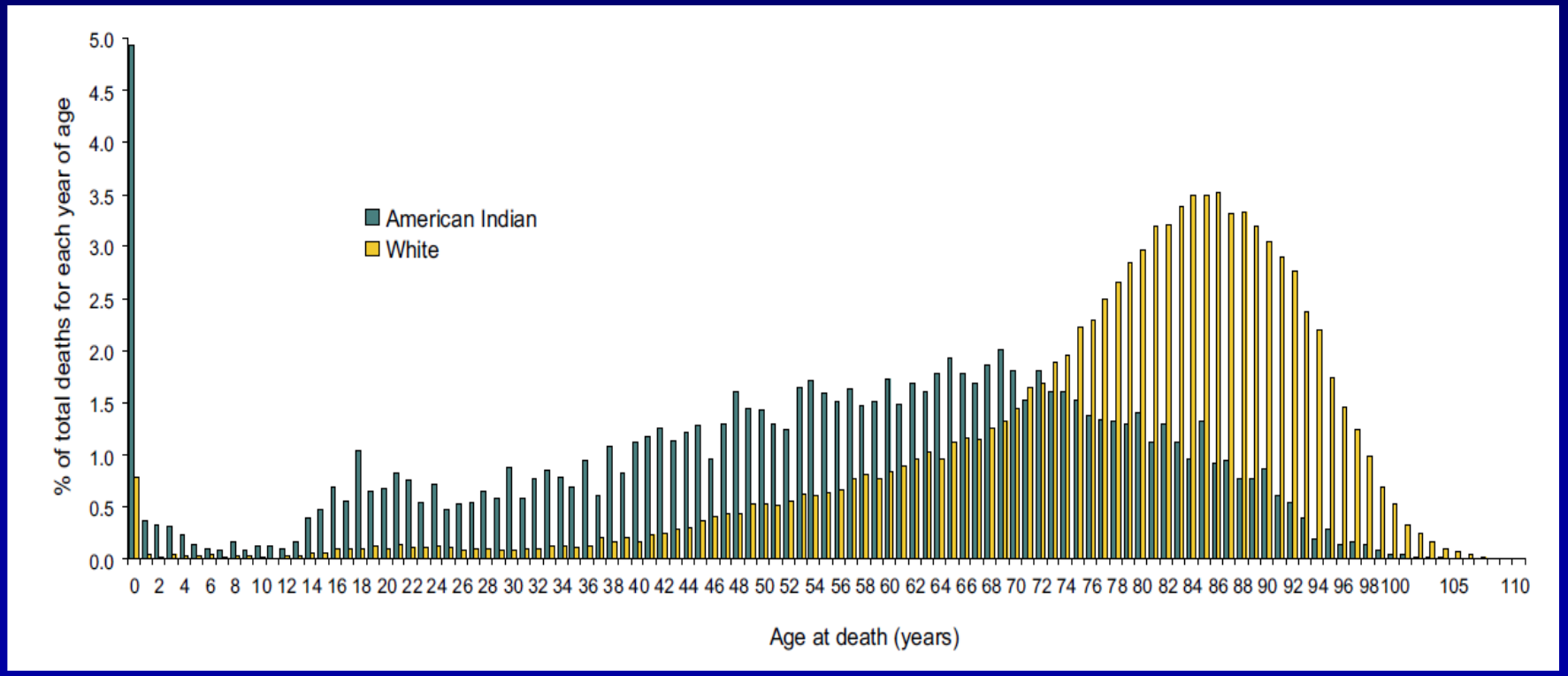
77.4 Years in the White Population

56.6 Years in the AI Population

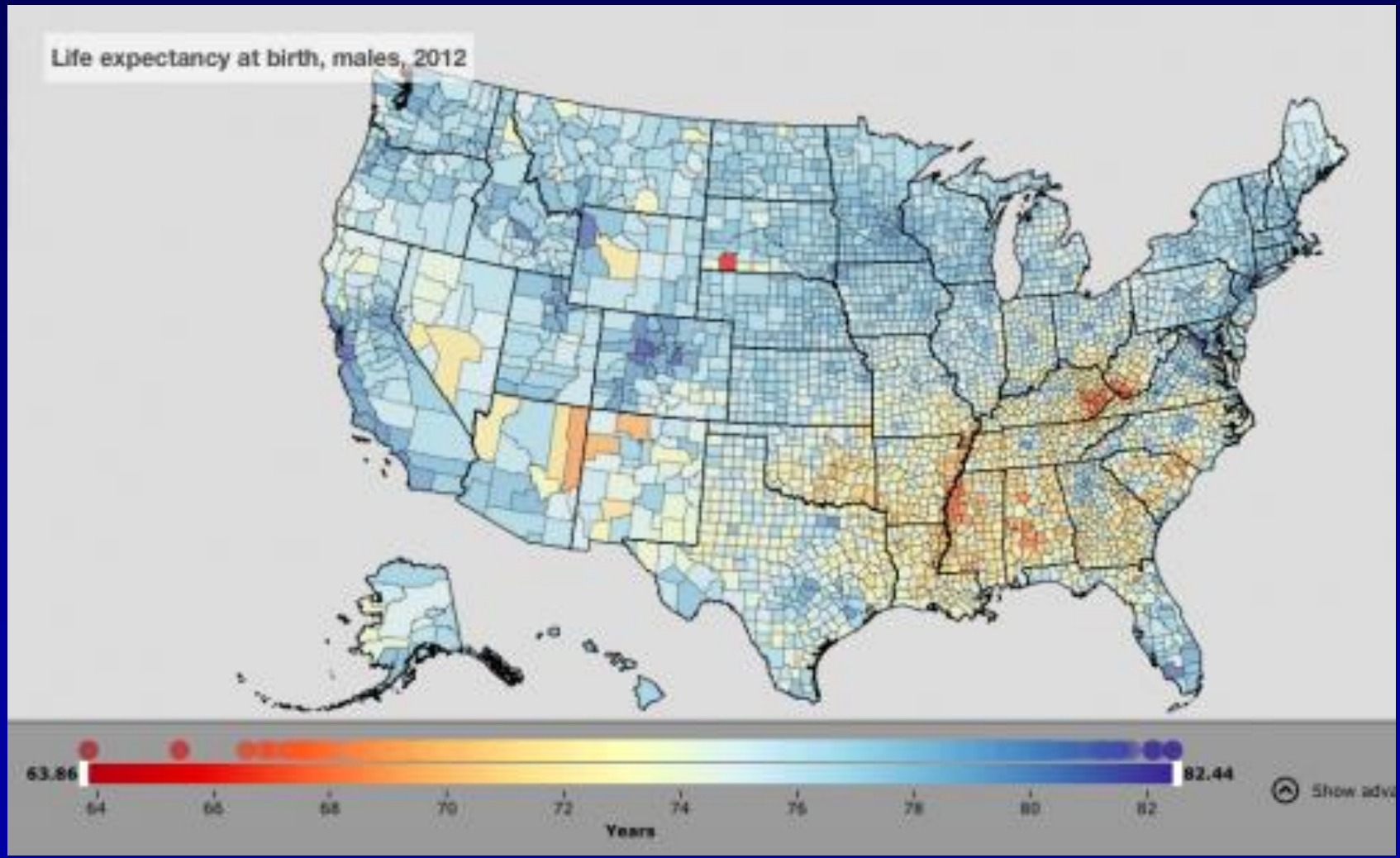
North Dakota Department of Health, Vital Statistics, 2015

AI/AN Health Disparities

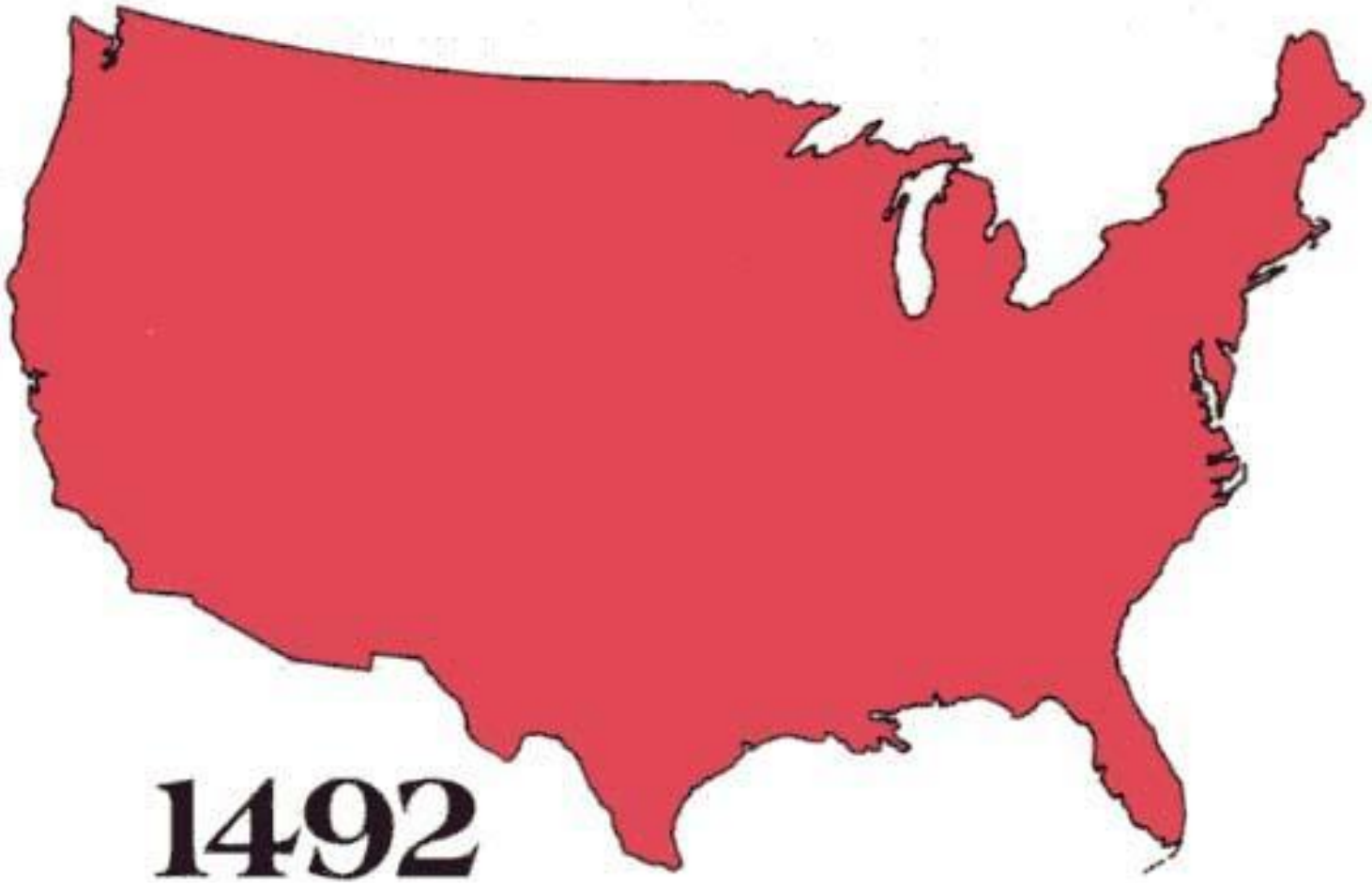
Average age at death in SD: ***81 v 54***



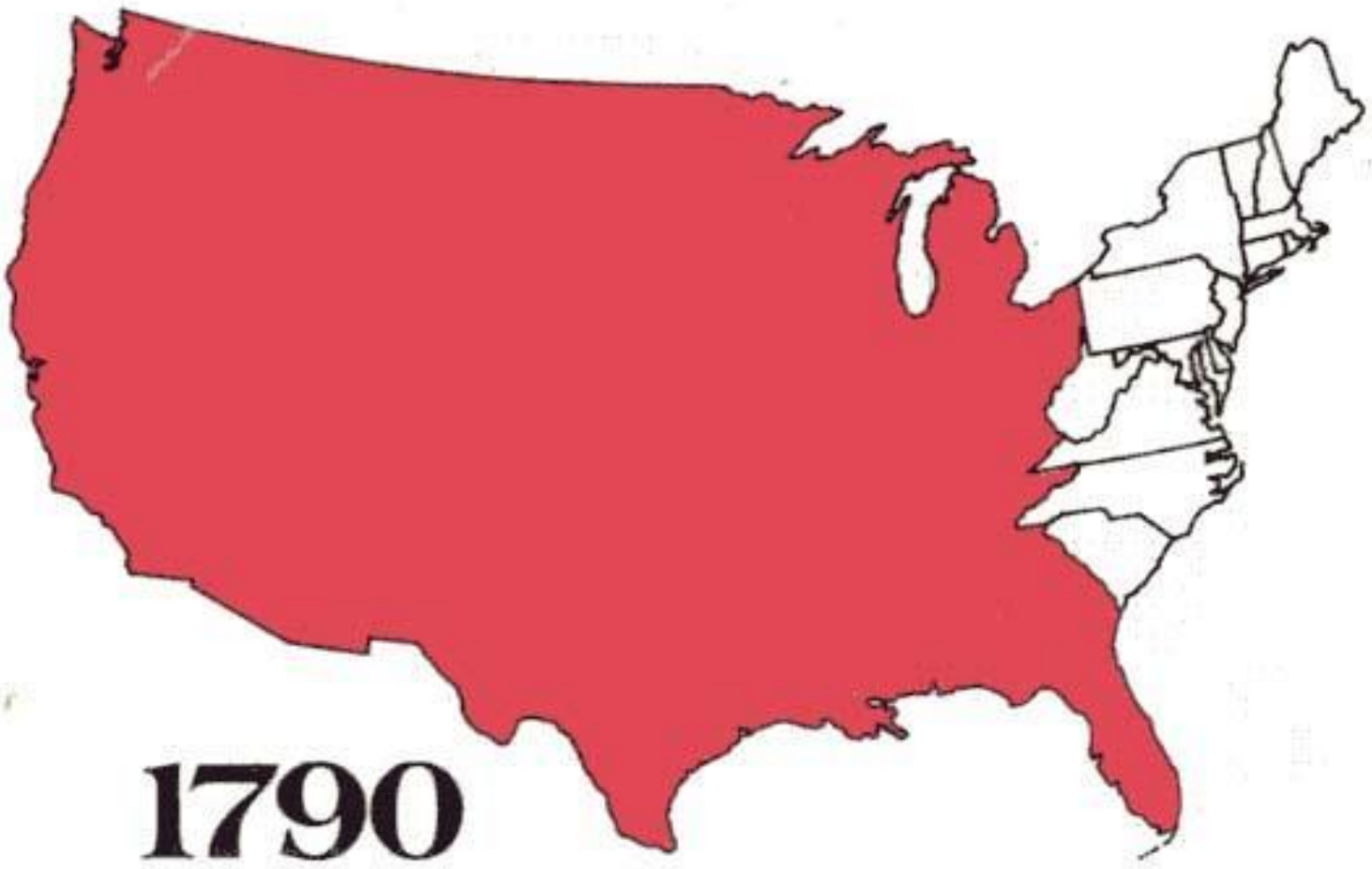
AI/AN Health Disparities



Historical Context

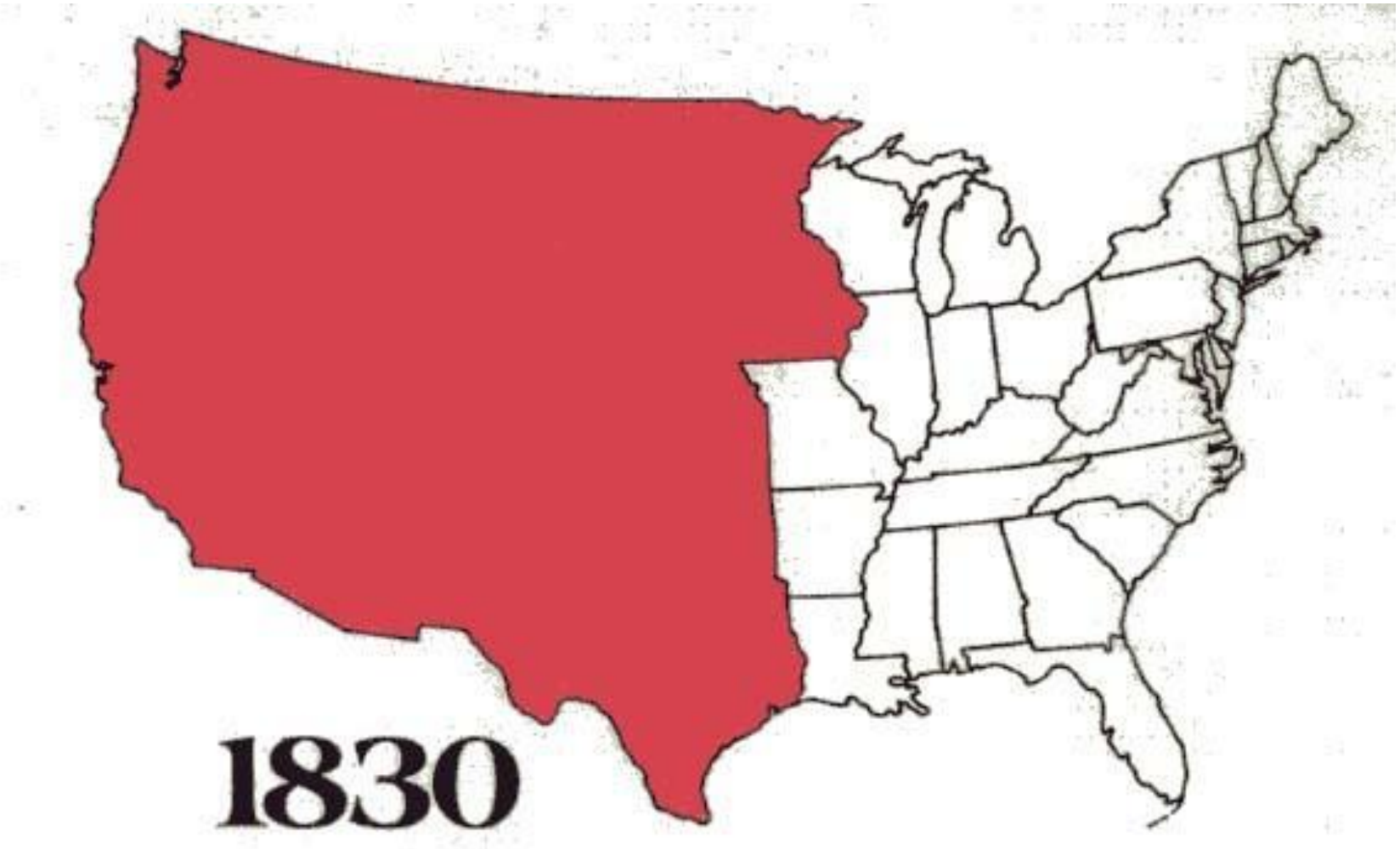


Historical Context



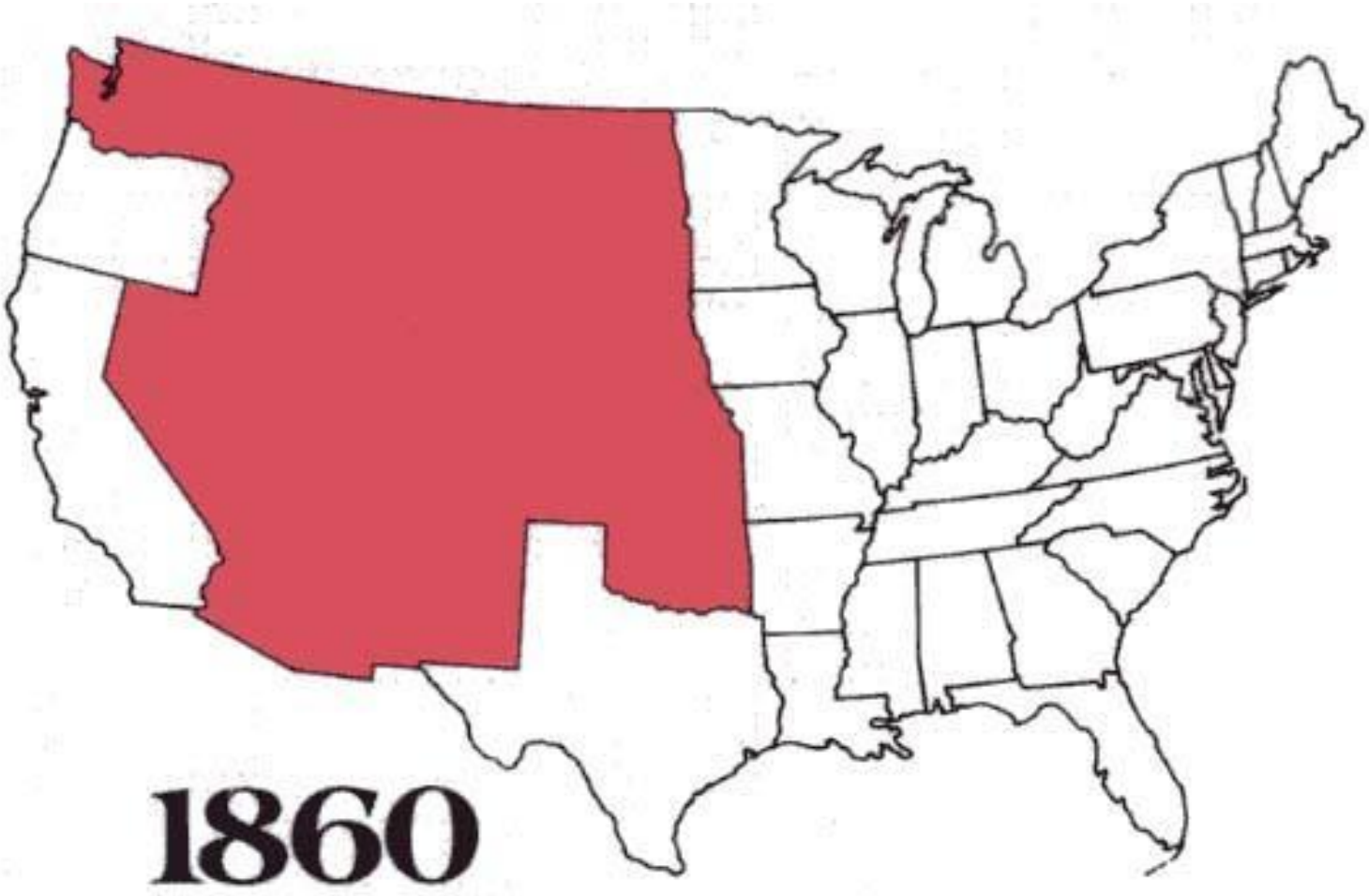

T. PETERS '01

Historical Context

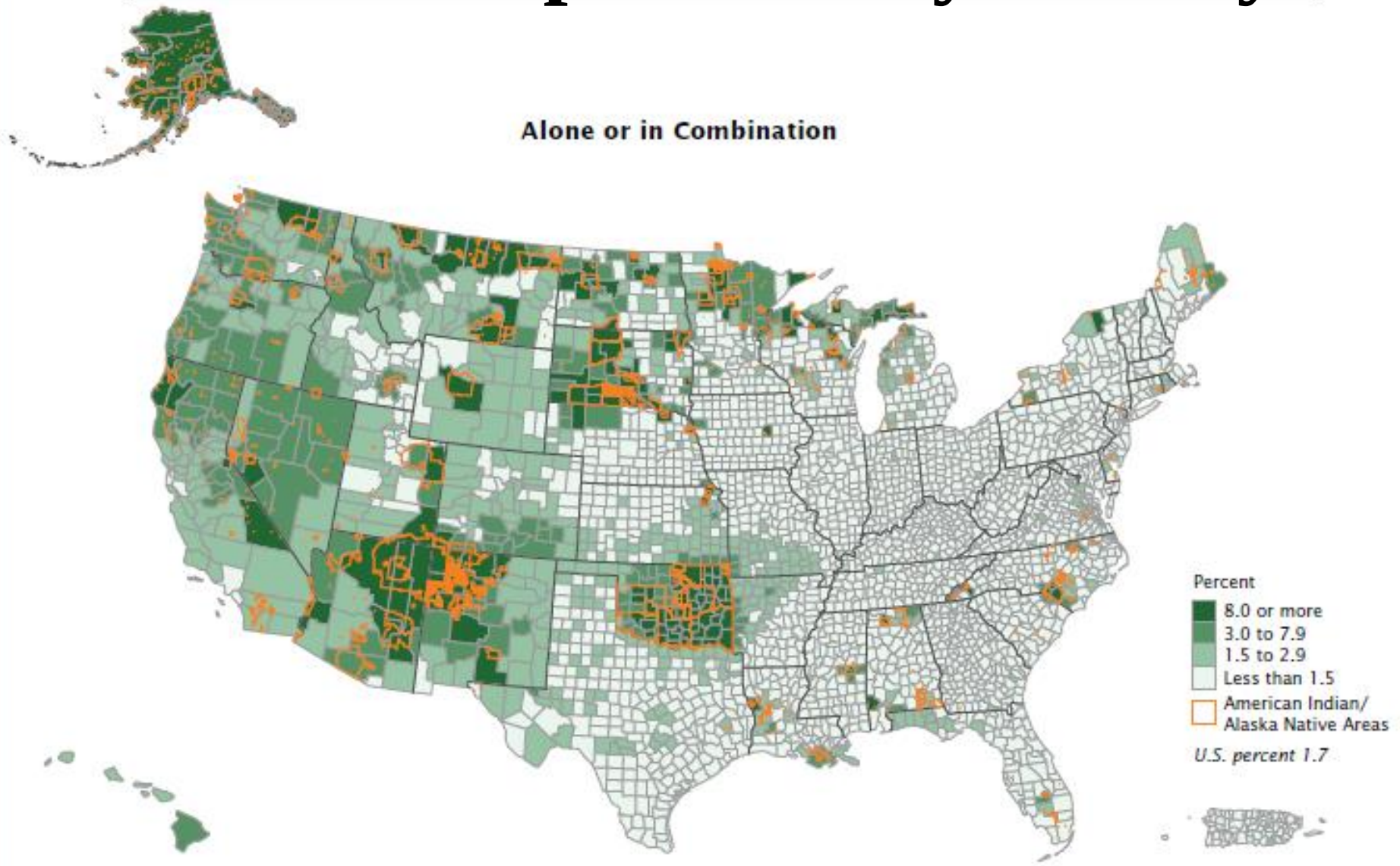



MISSOURI
ILLINOIS
INDIANA
OHIO
MD.
VIRGINIA
KENTUCKY
Cherokee "Trail of Tears"
Springfield
CHEROKEE
Nashville
NORTH CAROLINA
CHEROKEE RES.
CHEROKEE
SEMINOLE
CREEK
Fort Gibson
CHEROKEE
TENNESSEE
Memphis
Fort Smith
Fort Coffee
Little Rock
CHICKASAW
CHOCTAW
CREEK
CHICKASAW 1832
ALABAMA
New Echota
CHEROKEE 1835
SOUTH CAROLINA
Fort Towson
ARKANSAS
CREEK
CHOCTAW 1830
CREEK 1832
GEORGIA
ATLANTIC OCEAN
CHOCTAW
Montgomery
Fort Mitchell
MISSISSIPPI
FLORIDA TERRITORY
LOUISIANA
New Orleans
SEMINOLE
SEMINOLE 1832-1833
Tribal lands (date ceded)
Reservations
Removal routes
0
100
200 Miles
0
100
200 Kilometers
GULF OF MEXICO

Historical Context

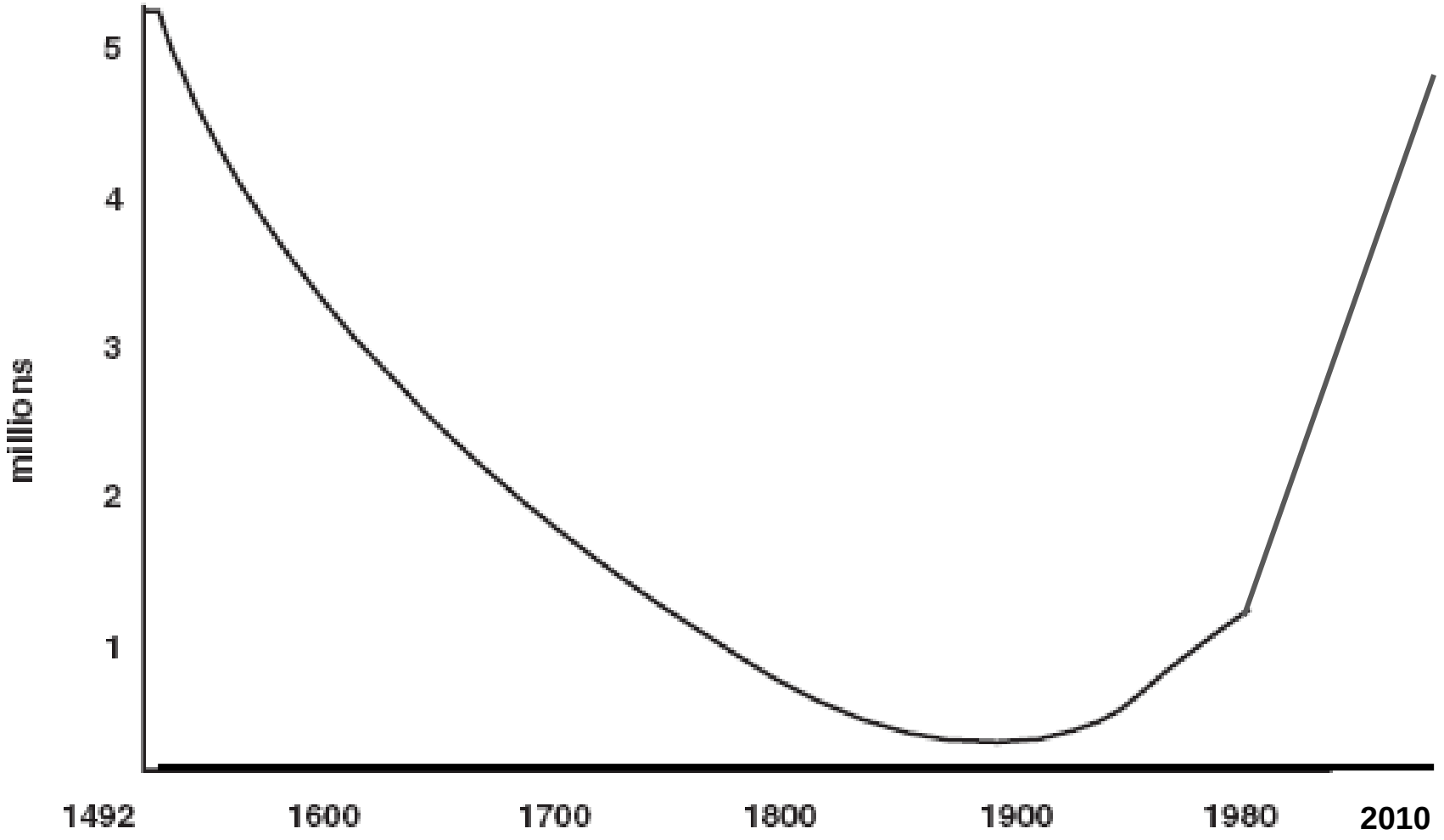


AI/AN Population by County

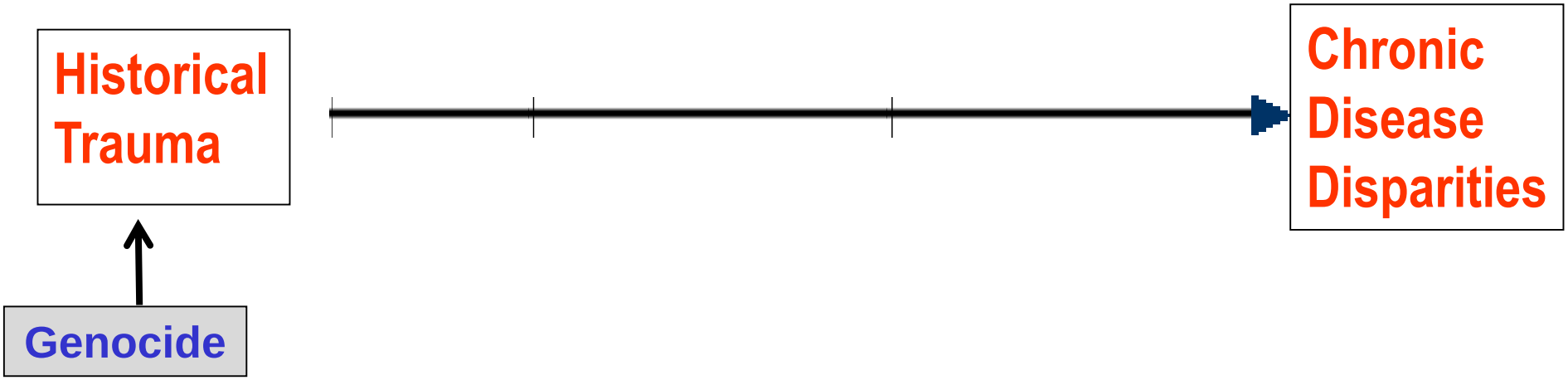


Source: U.S. Census Bureau, *2010 Census Redistricting Data (Public Law 94-171) Summary File*, Table P1.

AI/AN Population Decline and Recovery, 1492 – 2010

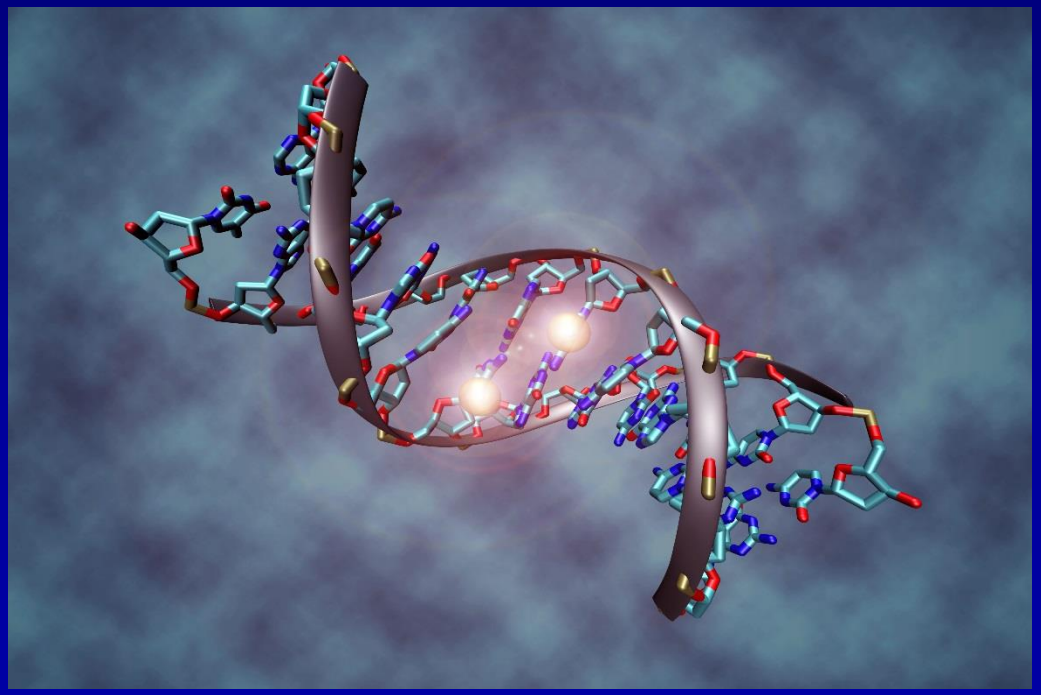


Inter-Generational Basis for Chronic Disease Disparities Among American Indians and Alaska Natives



Epigenetics

- Epigenetics refers to the study of changes in the regulation of gene activity and expression that are not dependent on DNA sequence.



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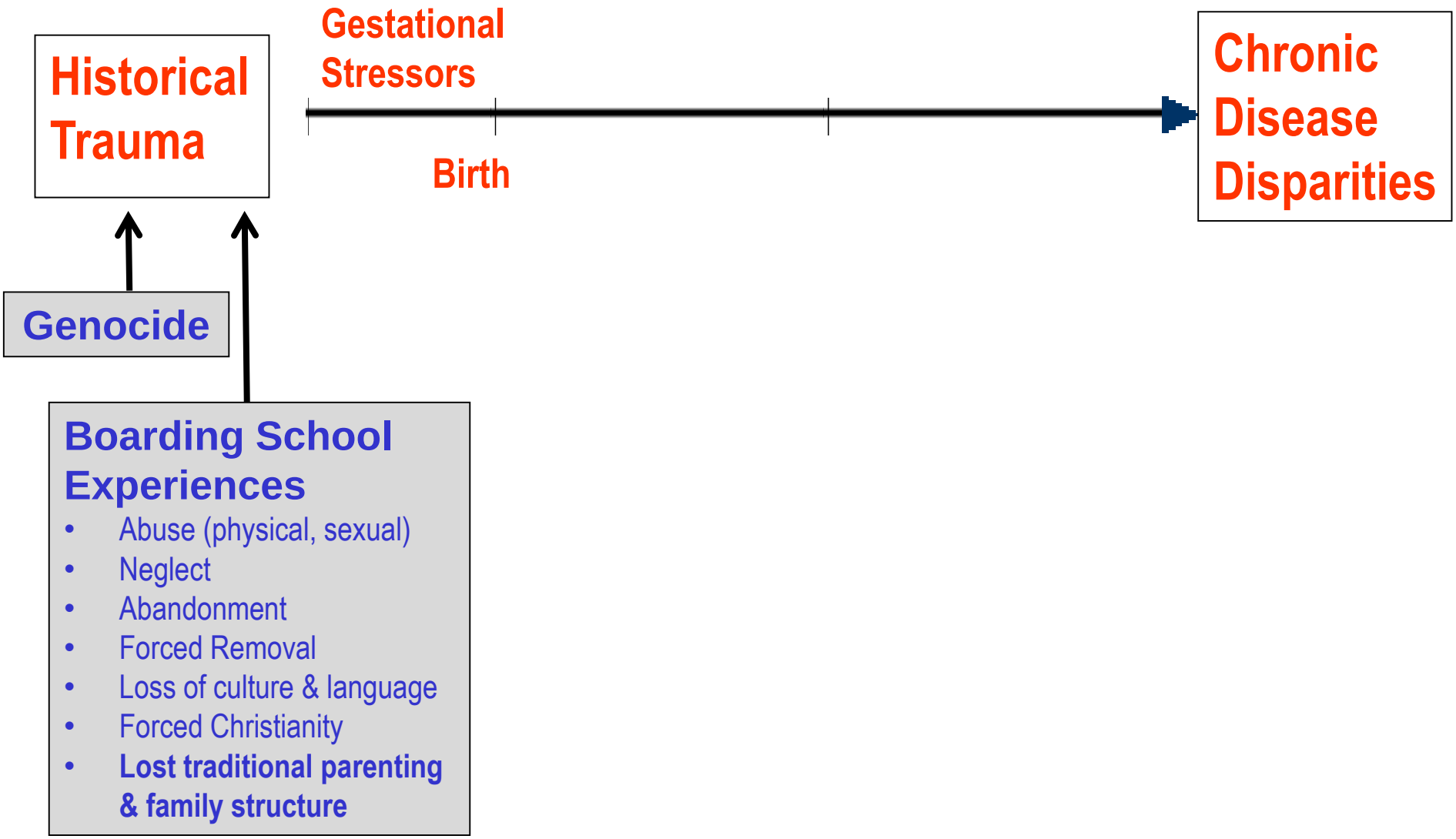
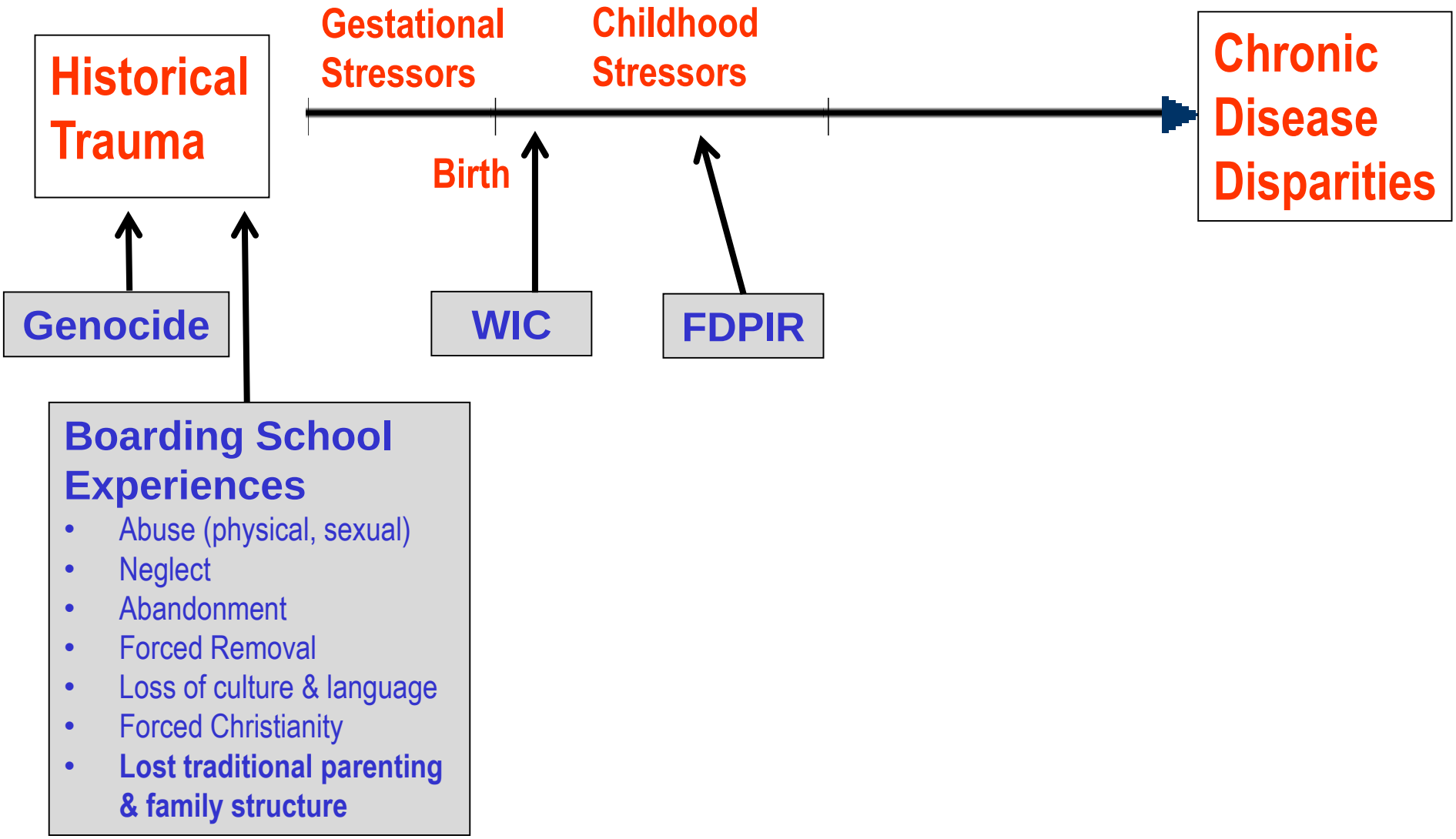


***Historical trauma** is the collective emotional wounding across generations that results from massive cataclysmic events – Historically Traumatic Events (HTE)**

- The trauma is held personally and transmitted over generations. Thus, even family members who have not directly experienced the trauma can feel the effects of the event generations later

Inter-Generational Basis for Chronic Disease Disparities Among American Indians and Alaska Natives



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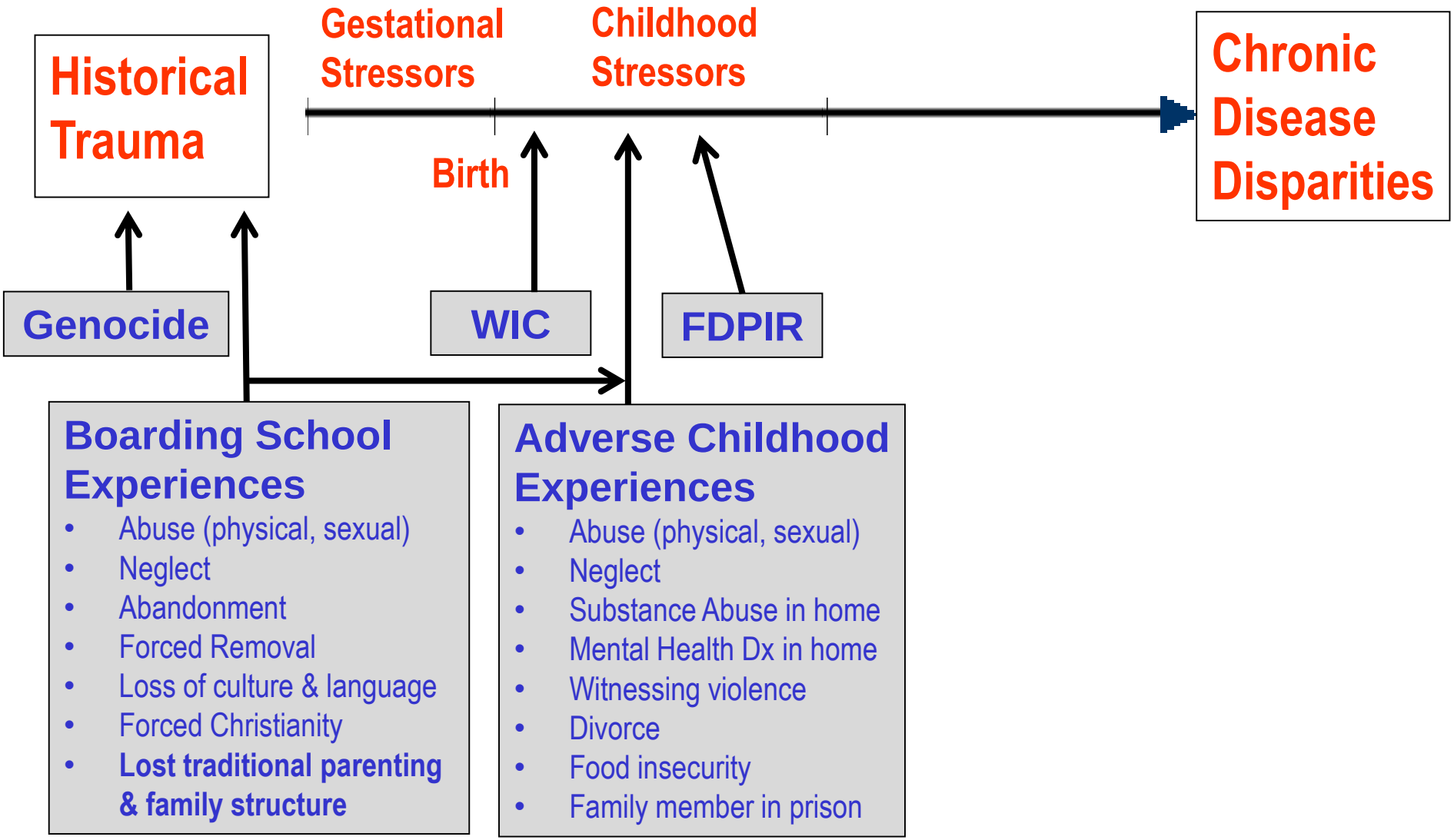
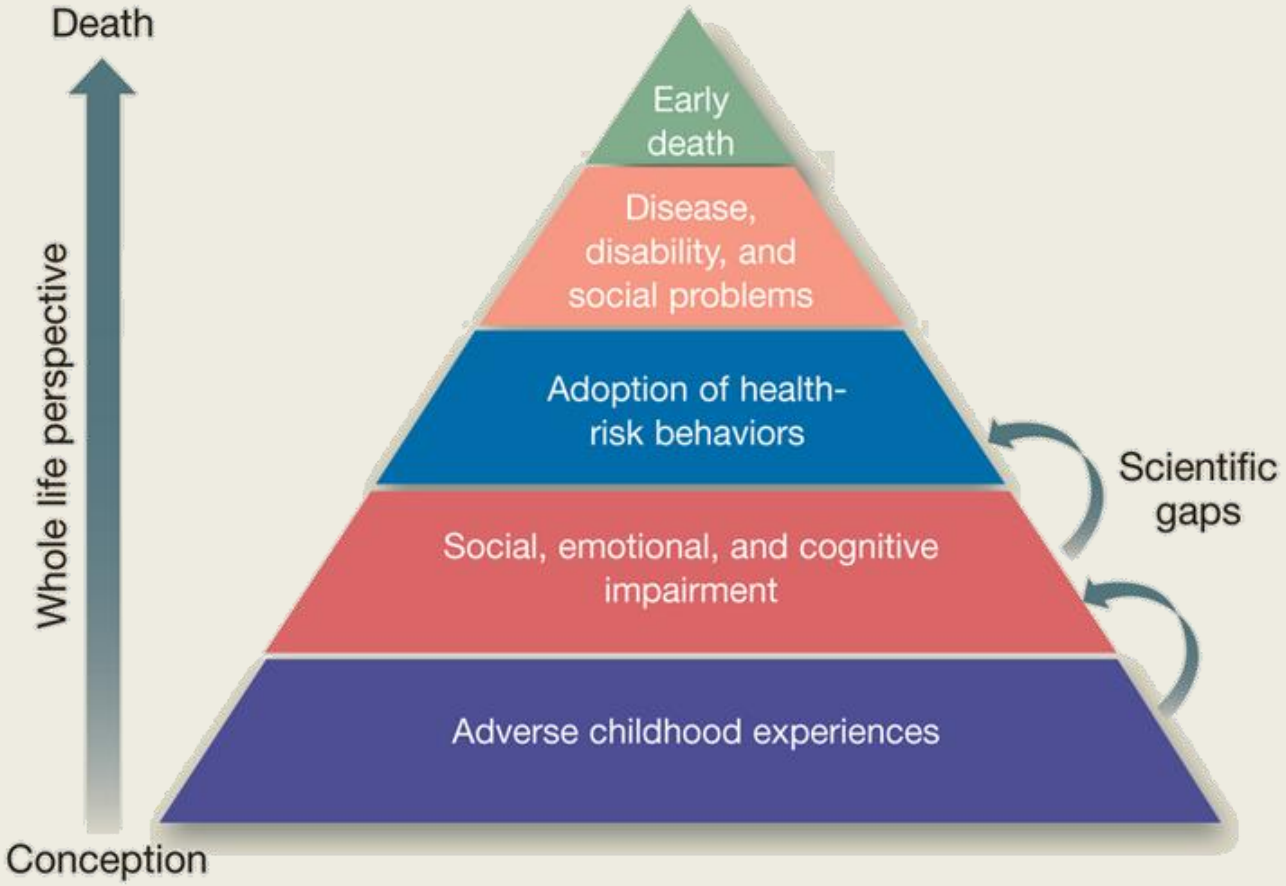


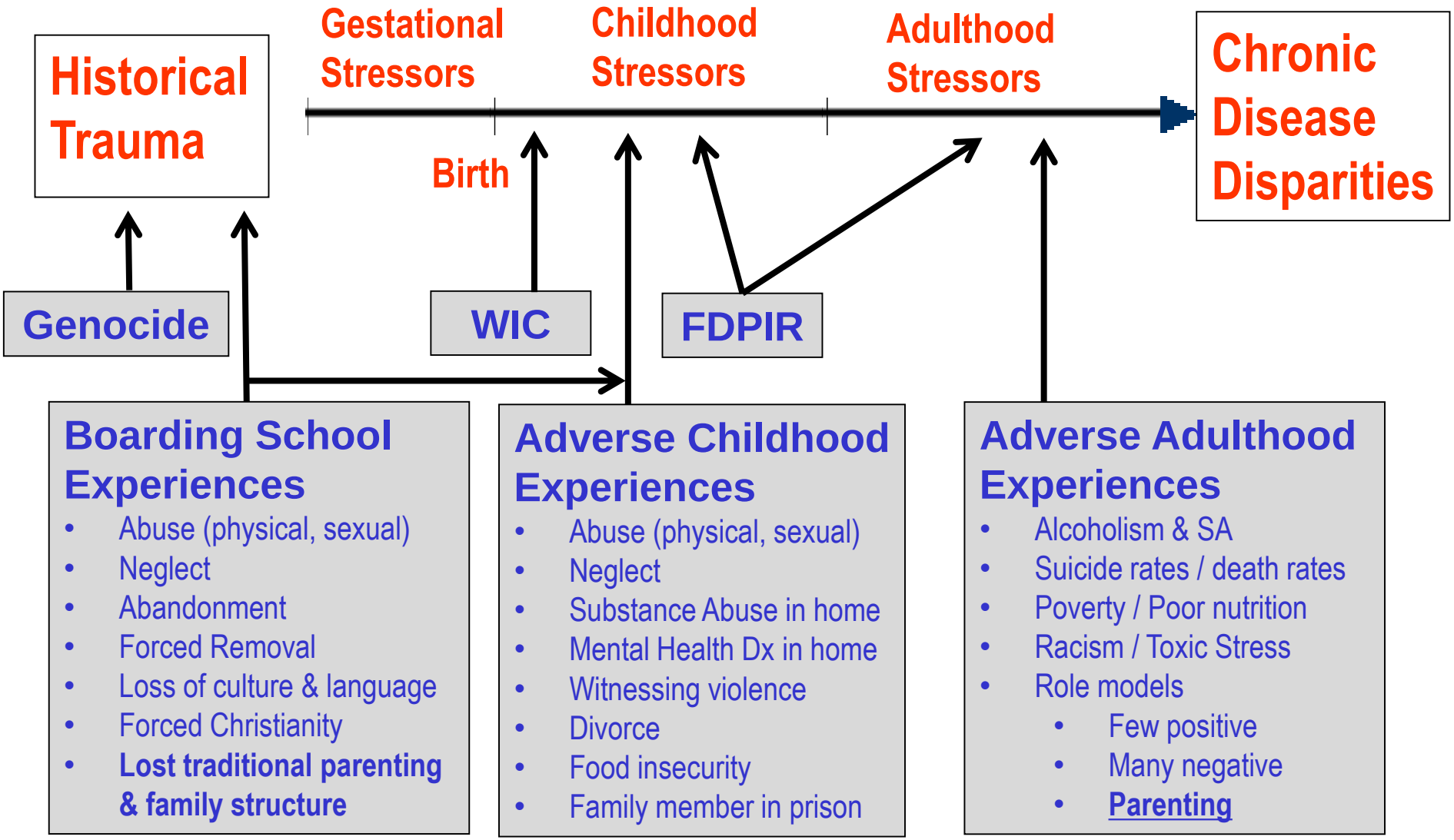
ACE Study Pyramid



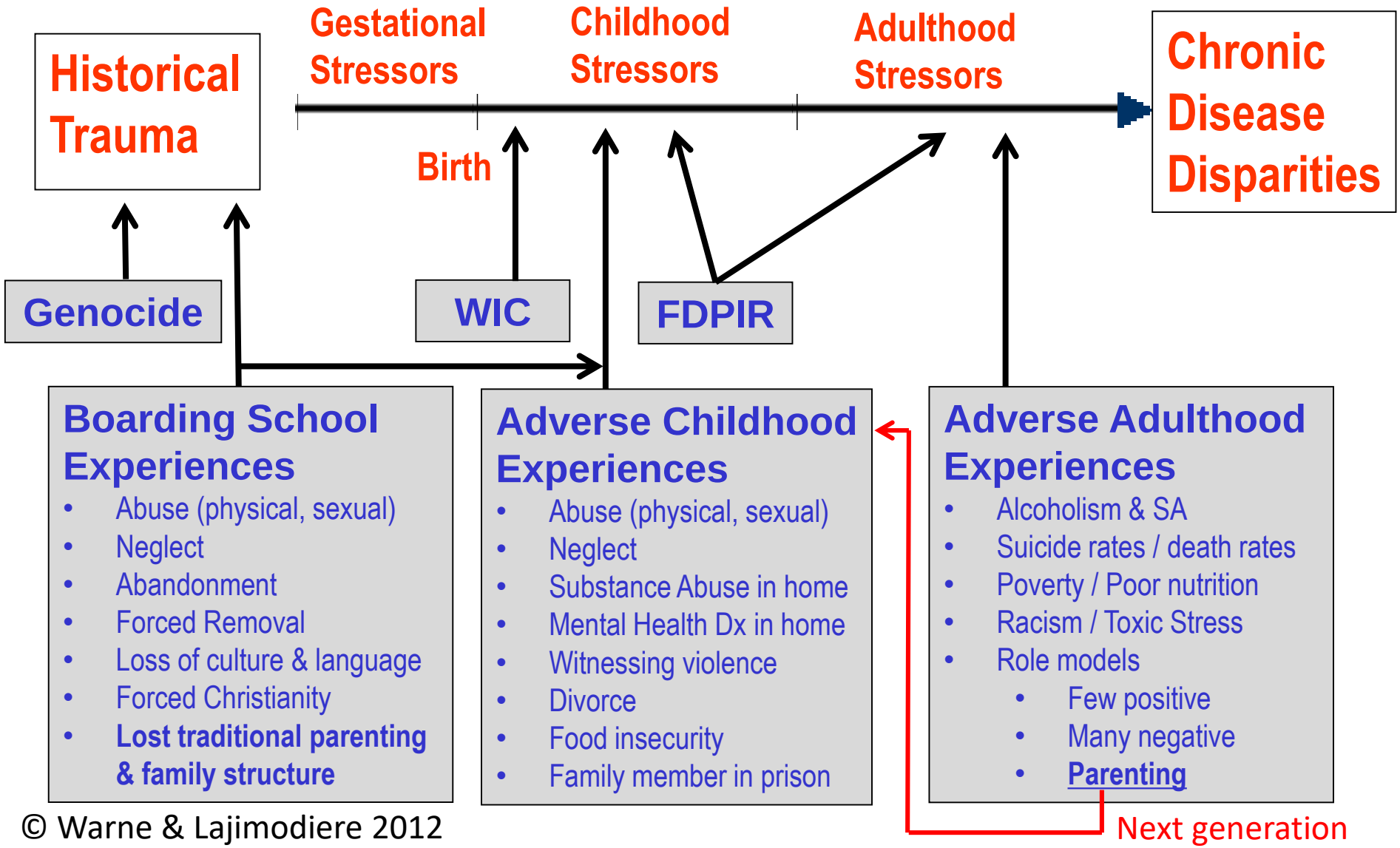
Long Term Health Effects of ACEs

- 103% more likely to smoke.
- 43% more likely to become suicidal
- 103% more likely to become addicted to alcohol
- 192% more likely to develop a drug addiction
- Increased risk for diabetes, heart disease, cancer
- **Strong correlation to poverty and risk factors for preterm birth**

Inter-Generational Basis for Chronic Disease Disparities Among American Indians and Alaska Natives



Inter-Generational Basis for Chronic Disease Disparities Among American Indians and Alaska Natives



Significant Challenges

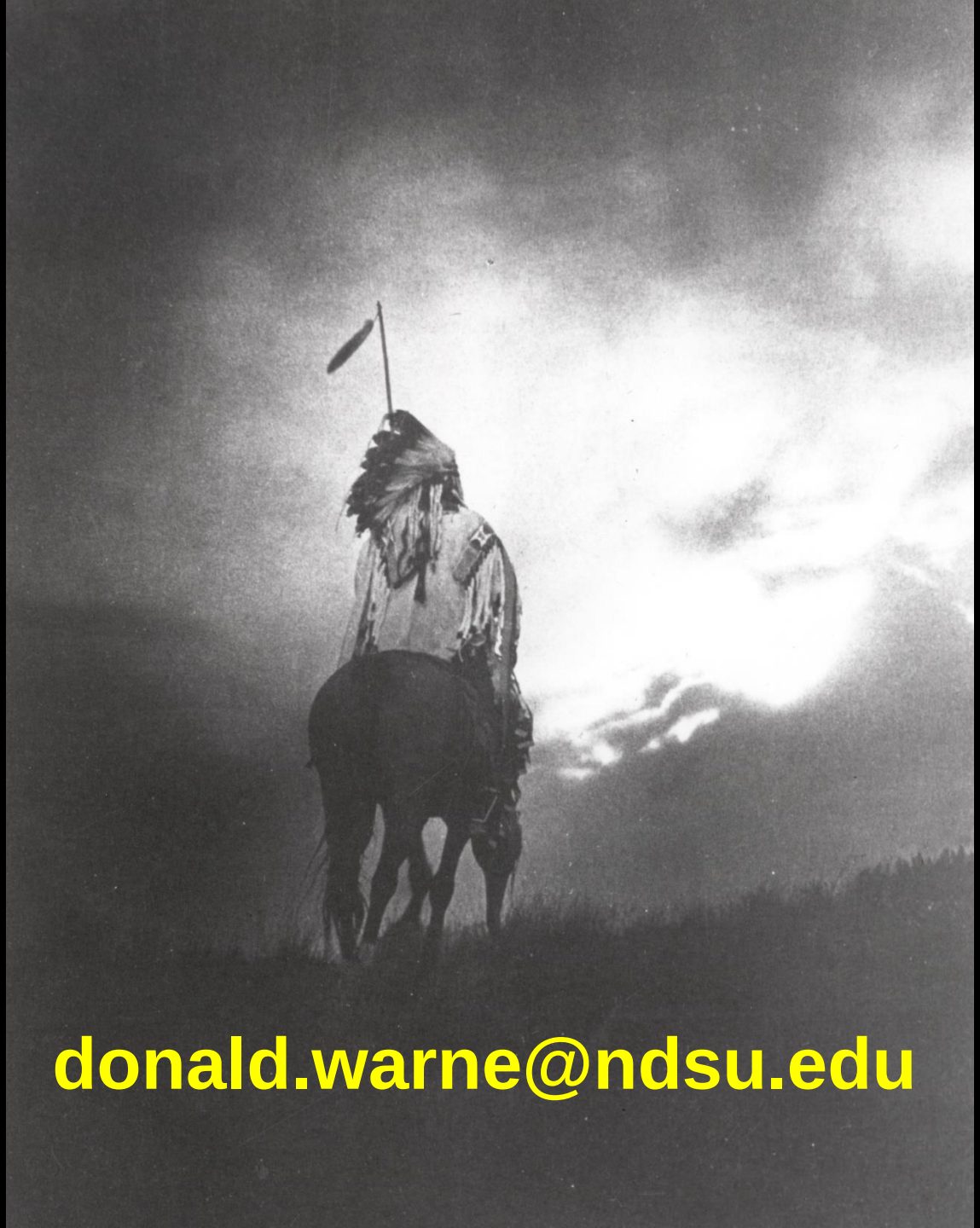
Social Determinants
- Poverty
- Trauma
- Politics
- Inattention/Neglect
- Racism
- Inequity

Outcomes
- Health Disparities
- Education Inequality
- Generational Poverty
- Ongoing Racism
- Worsening Inequity
- Suffering and Death

Need to address issues in a comprehensive manner—medical, behavioral, public health…

Promising Practices

- **ACE Prevention**
  - Home Visiting Program (also decreases IMR)
  - Parenting Skills Programs
  - Culturally Relevance
- **ACE Mitigation**
  - SMART Protocol and related programming
  - Engage traditional healers



donald.warne@ndsu.edu

Building a movement

Invitation to participate in Prematurity Campaign Collaborative

Achieve Demonstrated Improvements in Equity and Preterm Birth

Purpose: To engage a wide array of organizations, drawing on their collective expertise to identify issues and new ideas, as well as opportunities for outreach, alignment, and implementation.

You are invited to do the following as a Collaborative participant:

- ✓ Join quarterly virtual meetings of full Collaborative
- ✓ Suggest ideas or topics for consideration by the Steering Committees or workgroups
- ✓ Sign up for a workgroup and participate in their virtual meetings – each workgroup meets once every two months.

Use one of two ways to sign up for a workgroup:

1. Complete the sign-up form on marchofdimes.org/collaborative
2. Email collaborative@marchofdimes.org

Website: marchofdimes.org/collaborative

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Prematurity Campaign Collaborative Steering Committee

Full Collaborative Participants

Questions?

Thank You

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