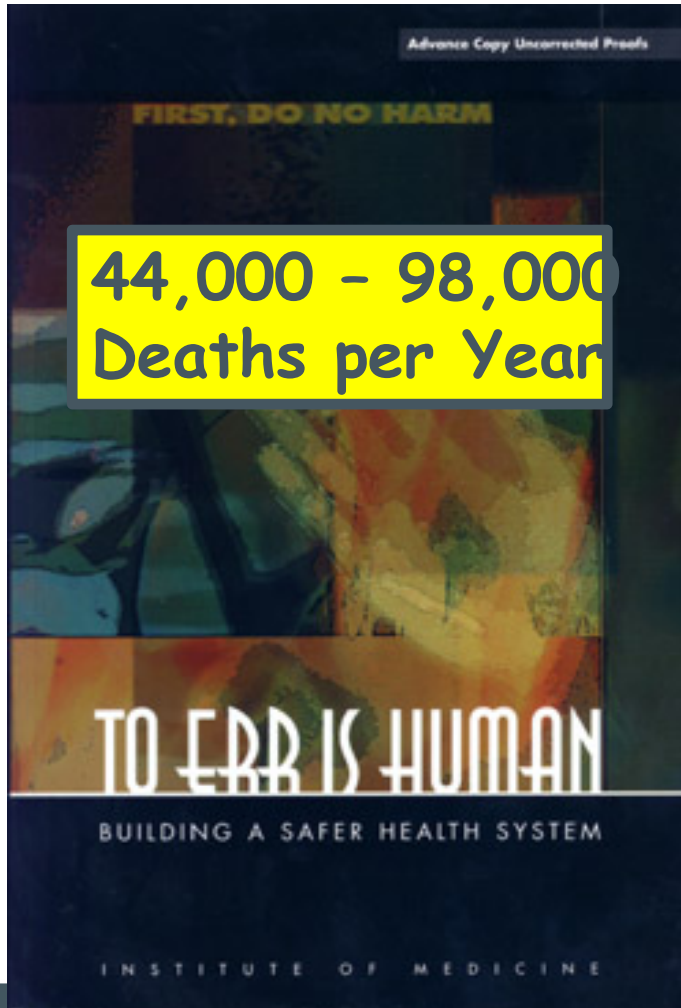


# The Transformation of Health Care: The Moral Determinants of Health

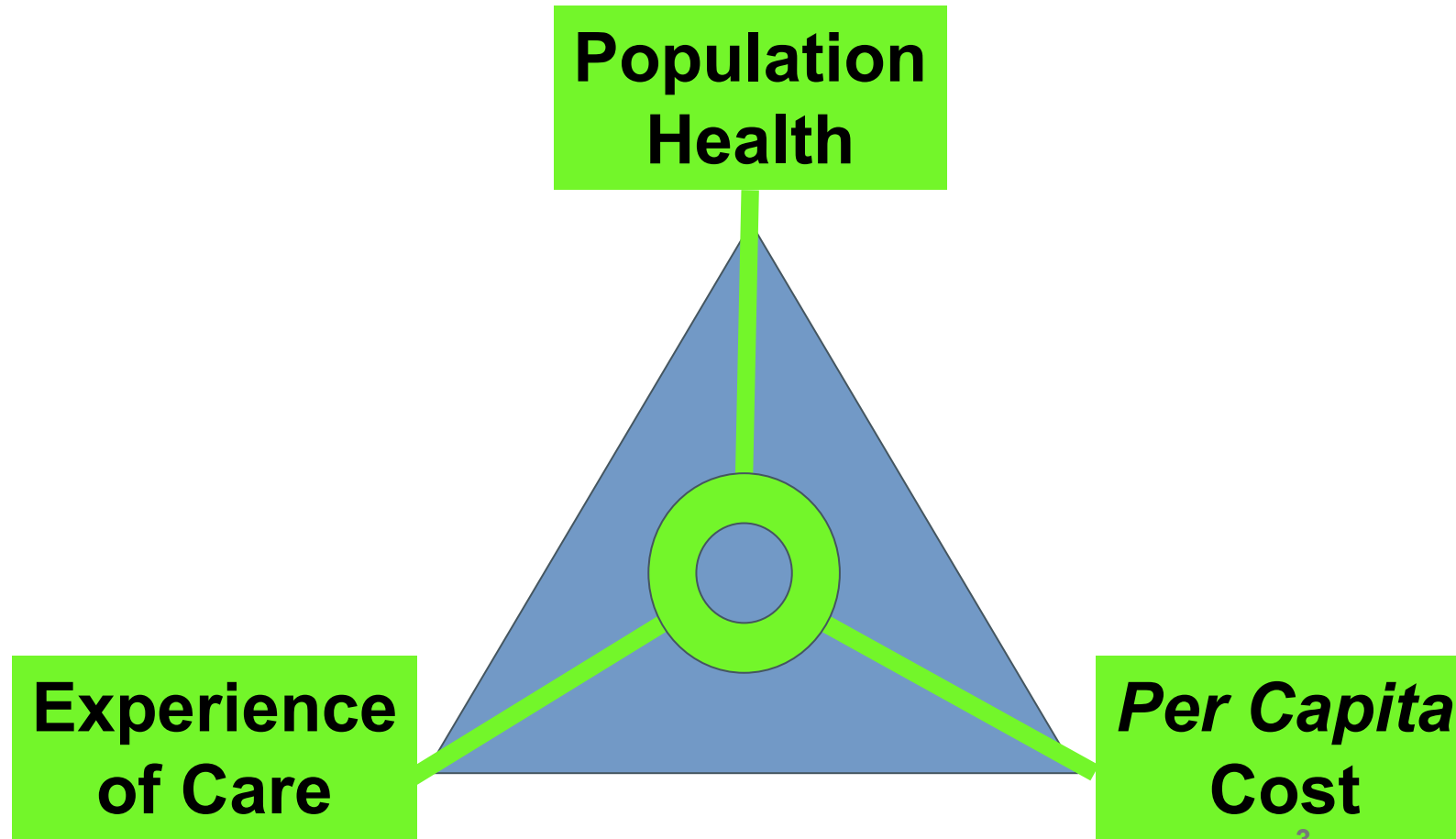
*Donald M. Berwick, MD  
President Emeritus and Senior Fellow  
Institute for Healthcare Improvement*



# Institute of Medicine – 1999 & 2001



# The Triple Aim



# How to Interrogate Health Care “Reform”

- Universal Coverage
- Improving Quality
- Improving Social Determinants of Health
- Reducing per Capita Costs

All now in the context of...

- COVID-19 and Future 21<sup>st</sup> Century Threats
- George Floyd, Structural Racism, and Mobilization



May 4, 2020

## Choices for the “New Normal”

Donald M. Berwick, MD, MPP<sup>1</sup>

[» Author Affiliations](#) | [Article Information](#)

*JAMA*. Published online May 4, 2020. doi:10.1001/jama.2020.6949



Editorial  
Comment



Interviews



Multimedia

**T**he severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has only 15 genes, compared with 30 000 in the human genome. But it is a stern teacher, indeed. Answers to the questions it has raised may reshape both health care and society as a whole.

No one can say with certainty what the consequences of this pandemic will be in 6 months, let alone 6 years or 60. Some “new normal” may emerge, in which novel systems and assumptions will replace many others long taken for granted. But at this early stage, it is more honest to frame the new, post-COVID-19 normal not as predictions, but as a series of choices. Specifically, the pandemic nominates at least 6 properties of care for durable change: tempo, standards, working conditions, proximity, preparedness, and equity.



# Choices for “The New Normal”

- Speed of Learning and Change
- Standardization and Commitment to Science
- Virtual Care and Reconsidering “Proximity”
- Protecting the Workforce
- Preparedness
- Inequity



# Justice and the Health Care Workforce

CORONAVIRUS

## They're Working In Healthcare During A Pandemic. They Don't Get Health Insurance.

"As a nurse or a doctor, at least you're getting paid a decent amount of money to risk your life," one hospital clerical worker earning \$15 an hour told BuzzFeed News.



**Emmanuel Felton**  
BuzzFeed News Reporter

Posted on May 13, 2020, at 3:10 p.m. ET



*“More than 800,000 healthcare workers and almost 1.1 million of their children live in poverty across the US, according to a 2019 study published in the American Journal of Public Health. The researchers found that roughly 18.5 million people are employed in the US health industry. And nearly 10% of them — 1.7 million — earn so little that they get healthcare through Medicaid. Another 1.4 million have no health insurance at all.”*





**Sir Michael Marmot**





# The Social Determinants of Health

1. Early Childhood Experiences
2. Education
3. Work and the Workplace
4. Experiences of Elders
5. Community Resilience
6. Fairness



*“Inequities in power, money, and resources give rise to inequities in the conditions of daily life, which in turn lead to inequities in health.”*

- Sir Michael Marmot

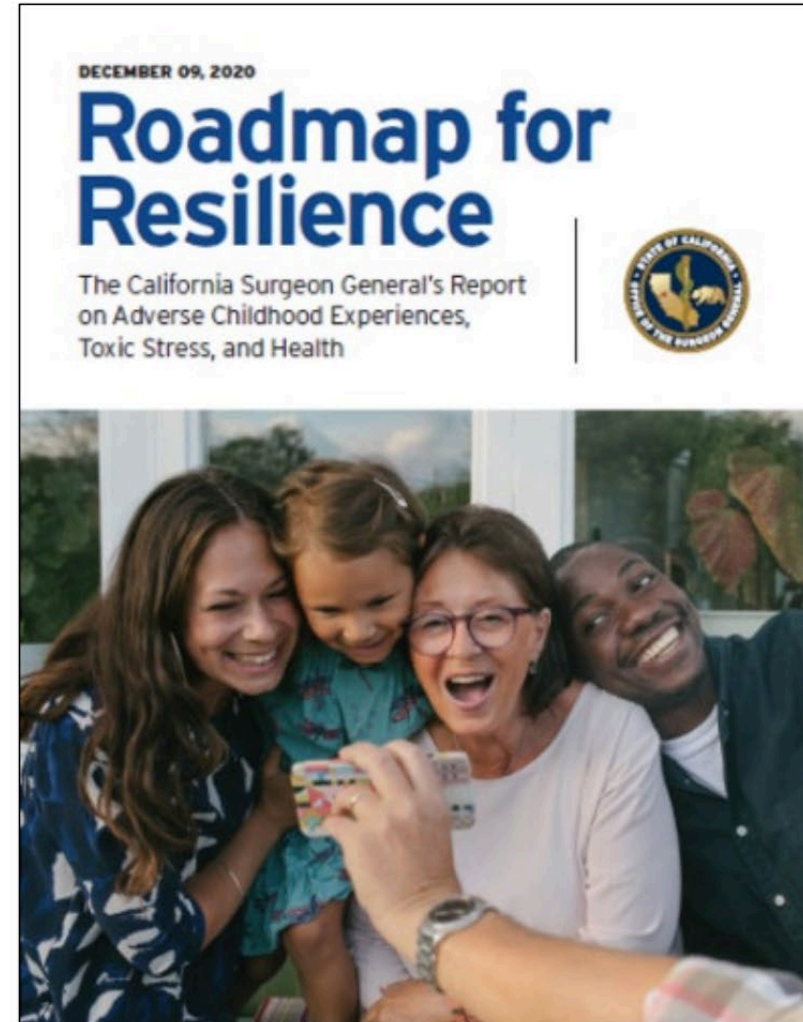


# California Surgeon General's Report

December 9, 2020

## Available Now: First California Surgeon General's Report

- Materials available at <https://osg.ca.gov/sg-report/>
  - Full 438-page report
  - Executive Summary
  - 12 briefs summarizing key themes
  - Social Media Toolkit
  - Public webinar



# Effects of “Adverse Childhood Experiences”

## ACEs Dramatically Increase Risk for 9 out of 10 Leading Causes of Death in US

	Leading Causes of Death in US, 2017	Odds Ratio Associated with $\geq 4$ ACEs
1	Heart Disease	2.1
2	Cancer	2.3
3	Accidents	2.6
4	Chronic Lower Respiratory Disease	3.1
5	Stroke	2.0
6	Alzheimer's	11.2
7	Diabetes	1.4
8	Influenza and Pneumonia	Unknown
9	Kidney Disease	1.7
10	Suicide (Attempts)	37.5

Source of **causes of death**: CDC, 2017<sup>16</sup>; Sources of **odds ratios**: Hughes *et al.*, 2017<sup>12</sup> for 1, 2, 4, 7, 10; Petrucelli *et al.*, 2019<sup>9</sup> for 3 (injuries with fracture), 5; Center for Youth Wellness, 2014<sup>17</sup> for 6 (Alzheimer's disease or dementia); Center for Youth Wellness, 2014<sup>17</sup> and Merrick *et al.*, 2019<sup>26</sup> for 9

# Child Opportunity Index 2.0

HealthAffairs

TOPICS

JOURNAL

BLOG

RESEARCH ARTICLE

CHILDREN'S HEALTH

HEALTH AFFAIRS > VOL. 39, NO. 10: CHILDREN'S HEALTH

## Racial And Ethnic Inequities In Children's Neighborhoods: Evidence From The New Child Opportunity Index 2.0

Dolores Acevedo-Garcia, Clemens Noelke, Nancy McArdle, Nomi Sofer, Erin F. Hardy... [See all authors](#) ▾

AFFILIATIONS ▾

PUBLISHED: **OCTOBER 2020**  **Free Access**

<https://doi.org/10.1377/hlthaff.2020.00735>





# Child Opportunity Index 2.0: Measuring equitable access

Email: [info@diversitydatakids.org](mailto:info@diversitydatakids.org) | Twitter: [@diversitydataki](https://twitter.com/diversitydataki)

October 23, 2020

**diversitydatakids.org**

data for a diverse and equitable future

## Education

### **Early childhood education (ECE)**

ECE centers within five miles  
High quality ECE centers within five miles  
ECE enrollment

### **Primary school**

Third grade reading proficiency  
Third grade math proficiency

### **Secondary and post-secondary**

High school graduation rates  
AP enrollment  
College access/enrollment

### **Resources**

School poverty  
Teacher experience  
Adult educational attainment

## Health & Environment

### **Healthy environments**

Access to healthy food  
Access to green space  
Walkability  
Housing vacancy rates

### **Toxic exposures**

Superfund sites  
Industrial pollutants  
Microparticles  
Ozone  
Heat

### **Health care access**

Health insurance coverage

## Social and Economic

### **Economic opportunities**

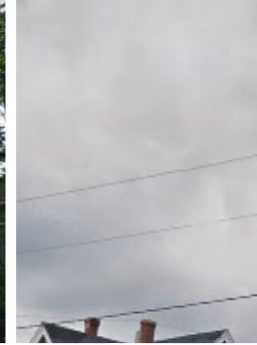
Employment rate  
Commute duration

### **Economic resource index**

Poverty rate, public assistance rate, high skill employment, median household income, home ownership

### **Family structure**

Single parenthood



## Selected COI 2.0 indicators

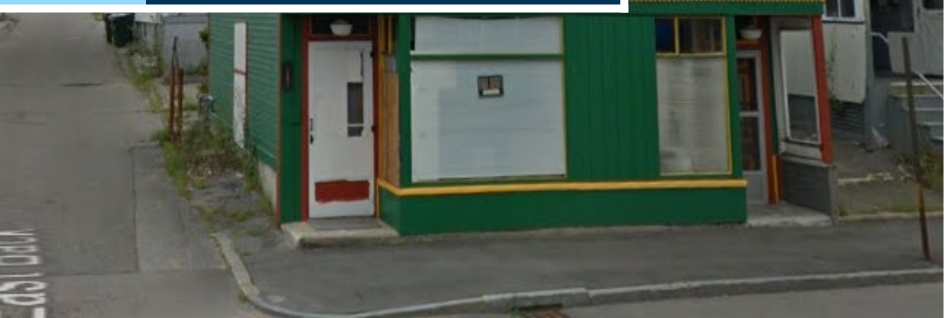
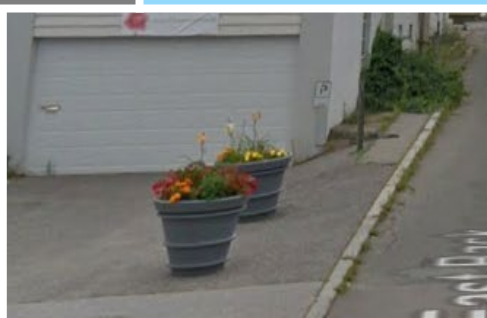
## Neighborhood A

## Neighborhood B

Neighborhood poverty rate	52%	5%
Enrollment in early childhood education	30%	52%
Lack of green space	60%	39%
Limited proximity to healthy food	11%	0.2%
Housing vacancy rate	28%	0.3%

52%
30%
60%
11%
28%

5%
52%
39%
0.2%
0.3%



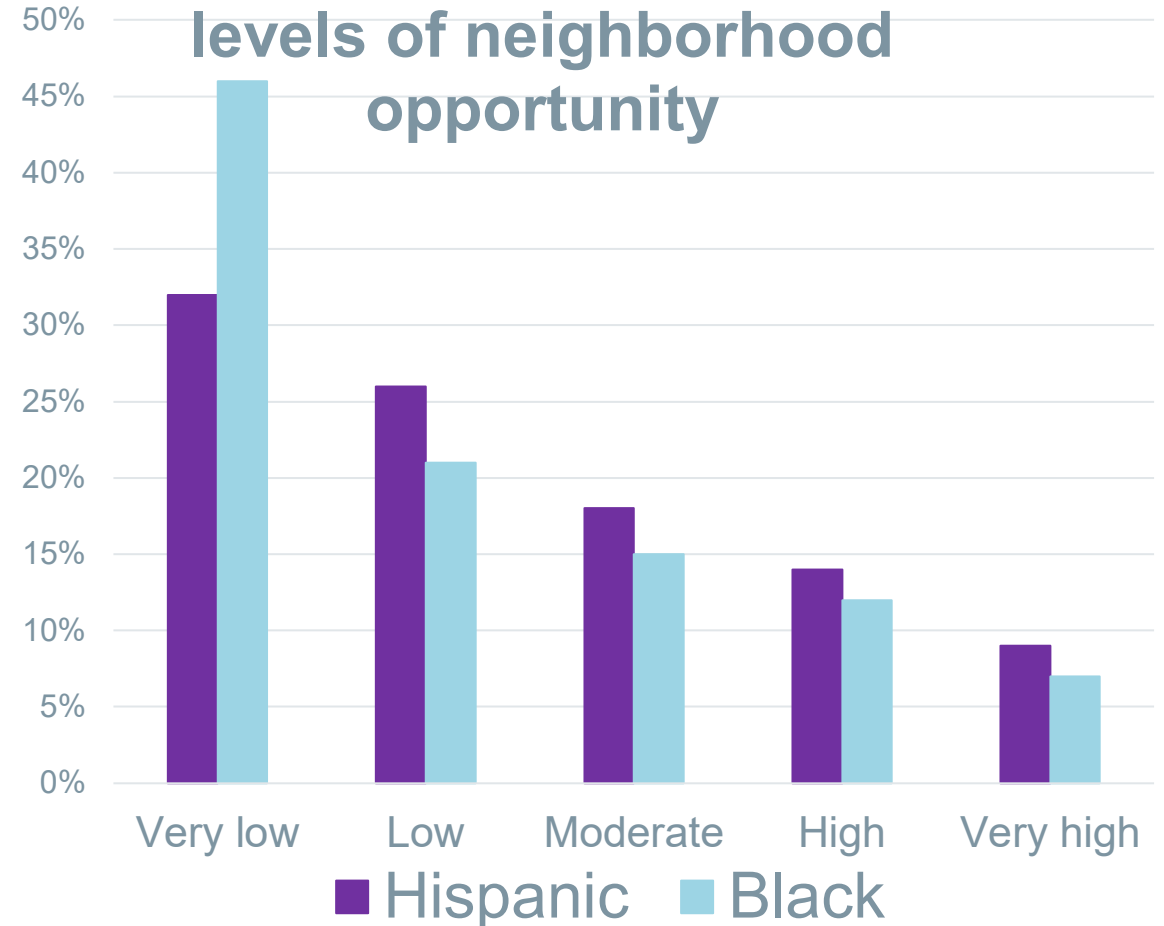


# The majority of Black and Hispanic children live in very low- or low-opportunity neighborhoods

### Child population across levels of neighborhood opportunity



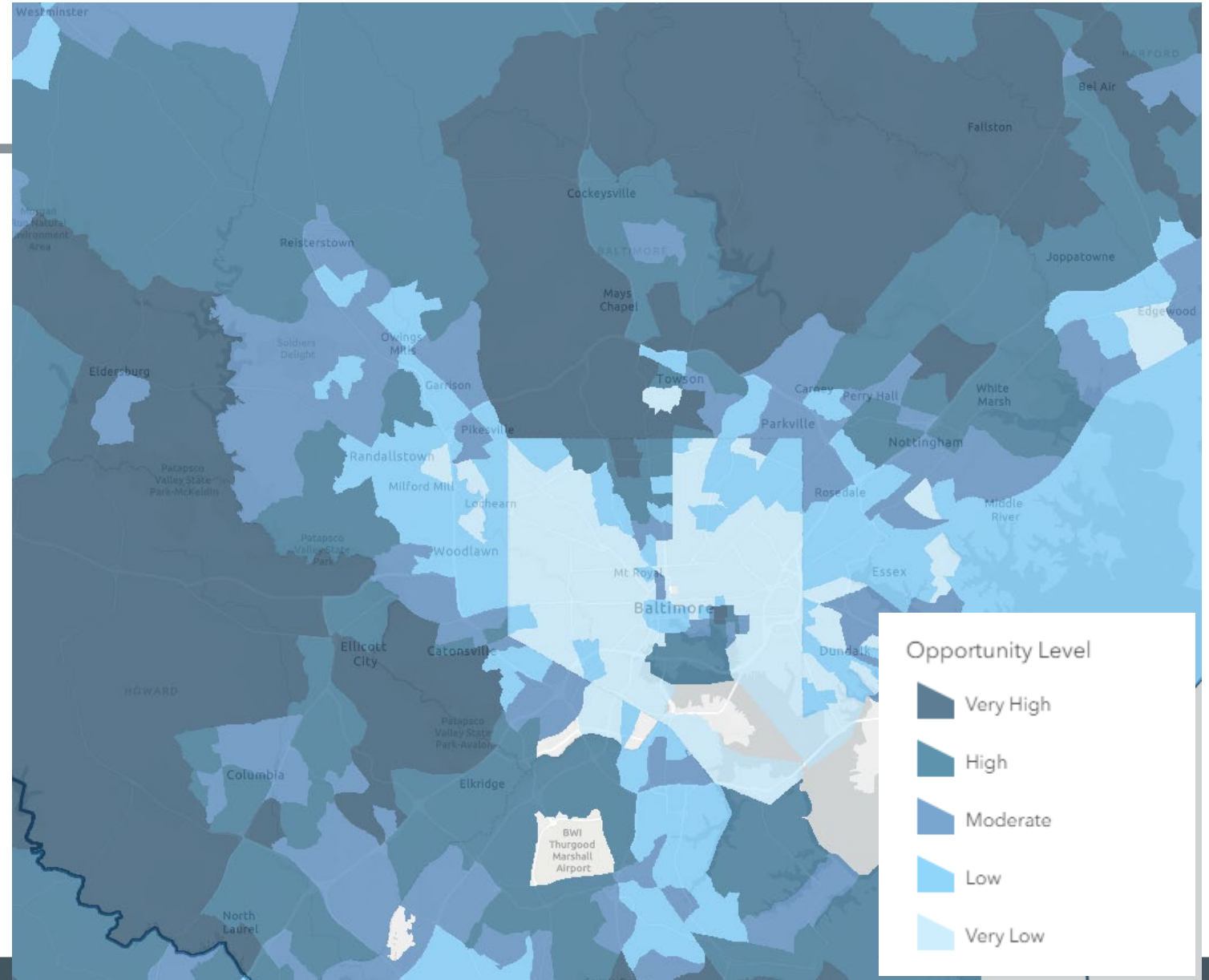
### Child population across levels of neighborhood opportunity



## BALTIMORE-COLUMBIA-TOWSON METRO AREA

# Child Opportunity Levels

Child Opportunity Levels group neighborhoods into five levels from very low to very high opportunity, containing 20% of the metro child population each.



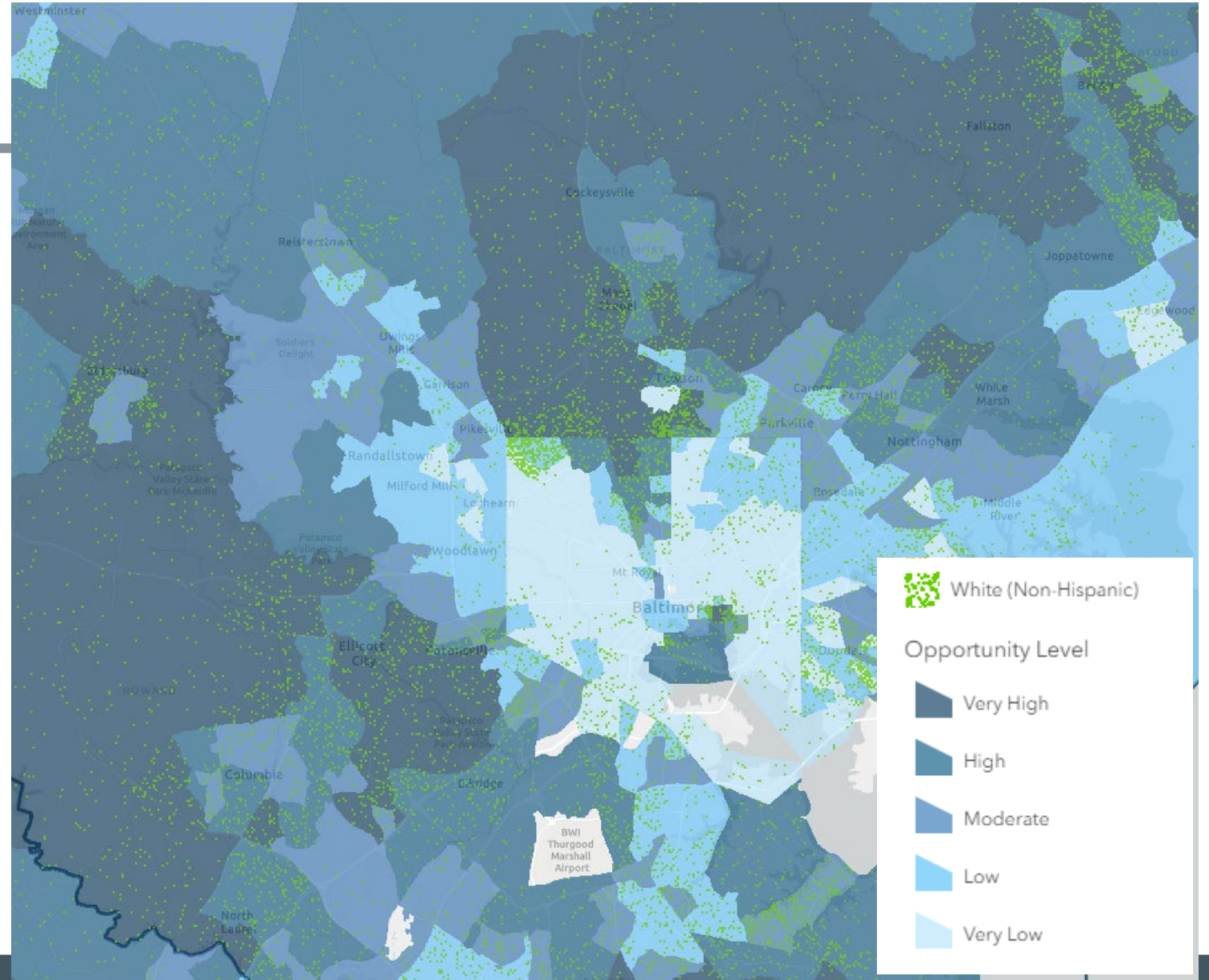
Source: diversitydatakids.org. Child Opportunity Index 2.0 Database. 2015 metro normed Child Opportunity Levels.

# BALTIMORE-COLUMBIA-TOWSON METRO AREA

## White children's access to neighborhood opportunity

### Child Opportunity Levels

1 Dot = 20 children aged 0-17 years



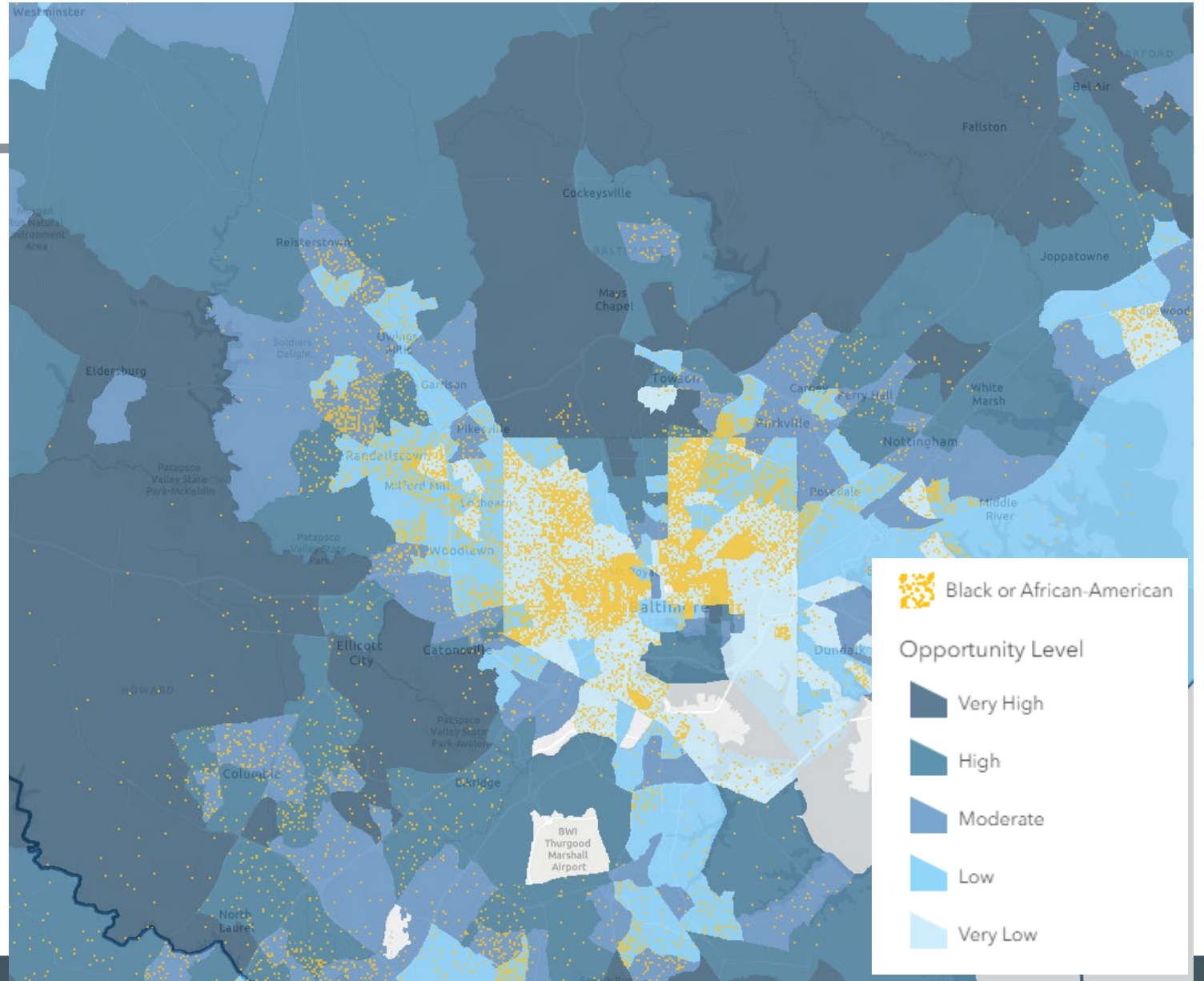
Source: diversitydatakids.org. Child Opportunity Index 2.0 Database. 2015 metro normed Child Opportunity Levels. Population data from American Community Survey 5-Year Summary Files.

# BALTIMORE-COLUMBIA-TOWSON METRO AREA

## Black children's access to neighborhood opportunity

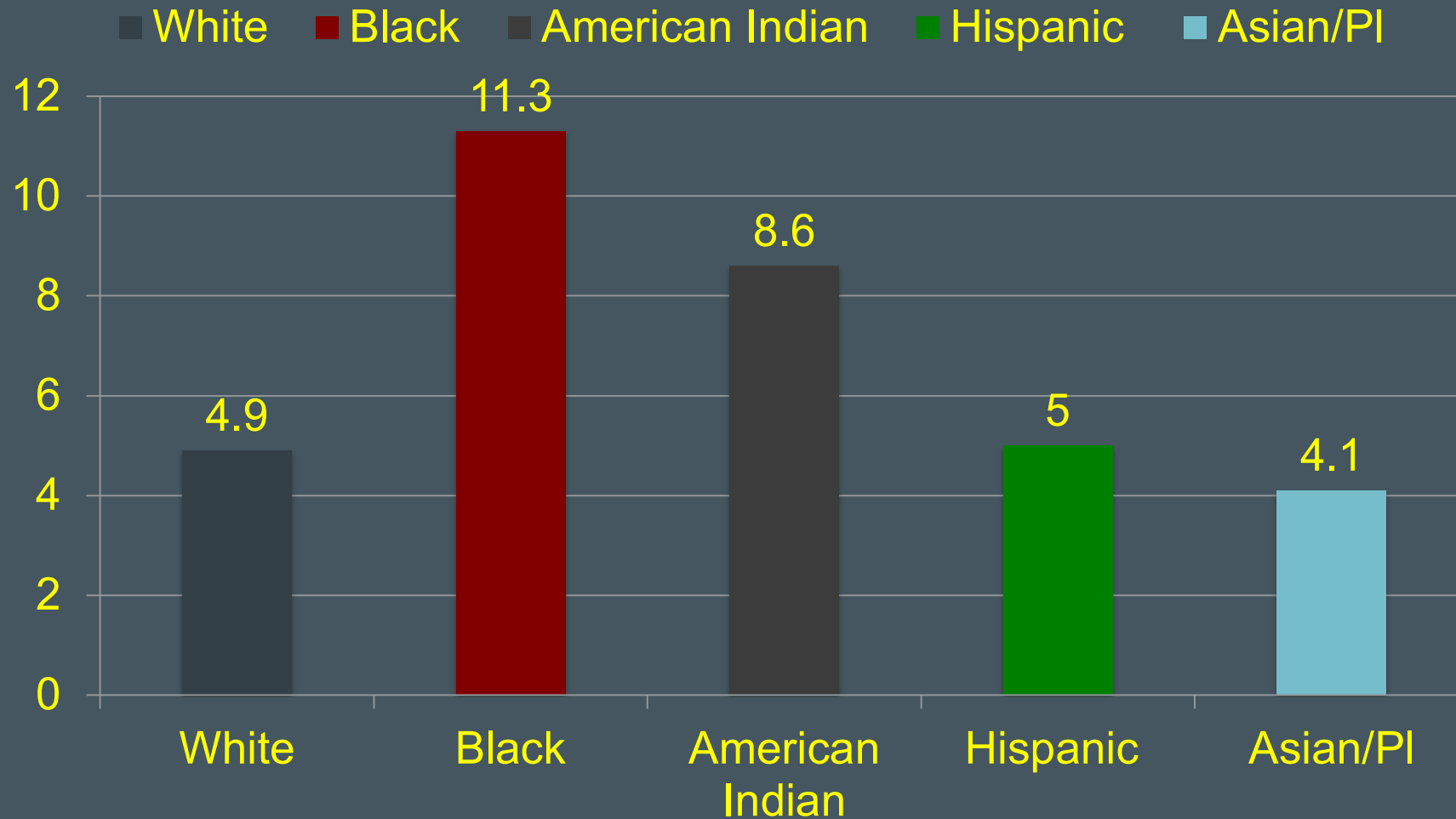
### Child Opportunity Levels

1 Dot = 20 children aged 0-17 years

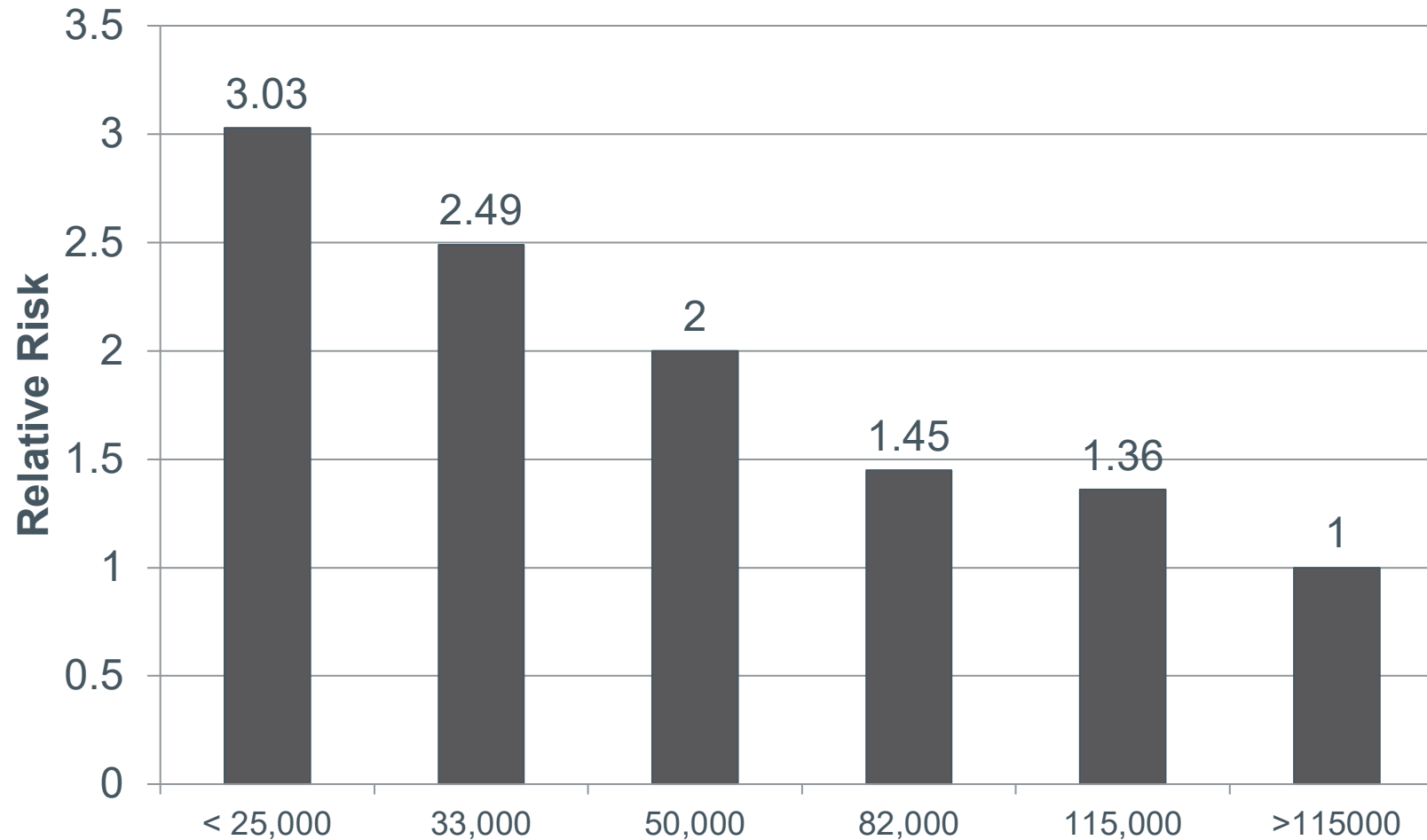


Source: diversitydatakids.org. Child Opportunity Index 2.0 Database. 2015 metro normed Child Opportunity Levels. Population data from American Community Survey 5-Year Summary Files.

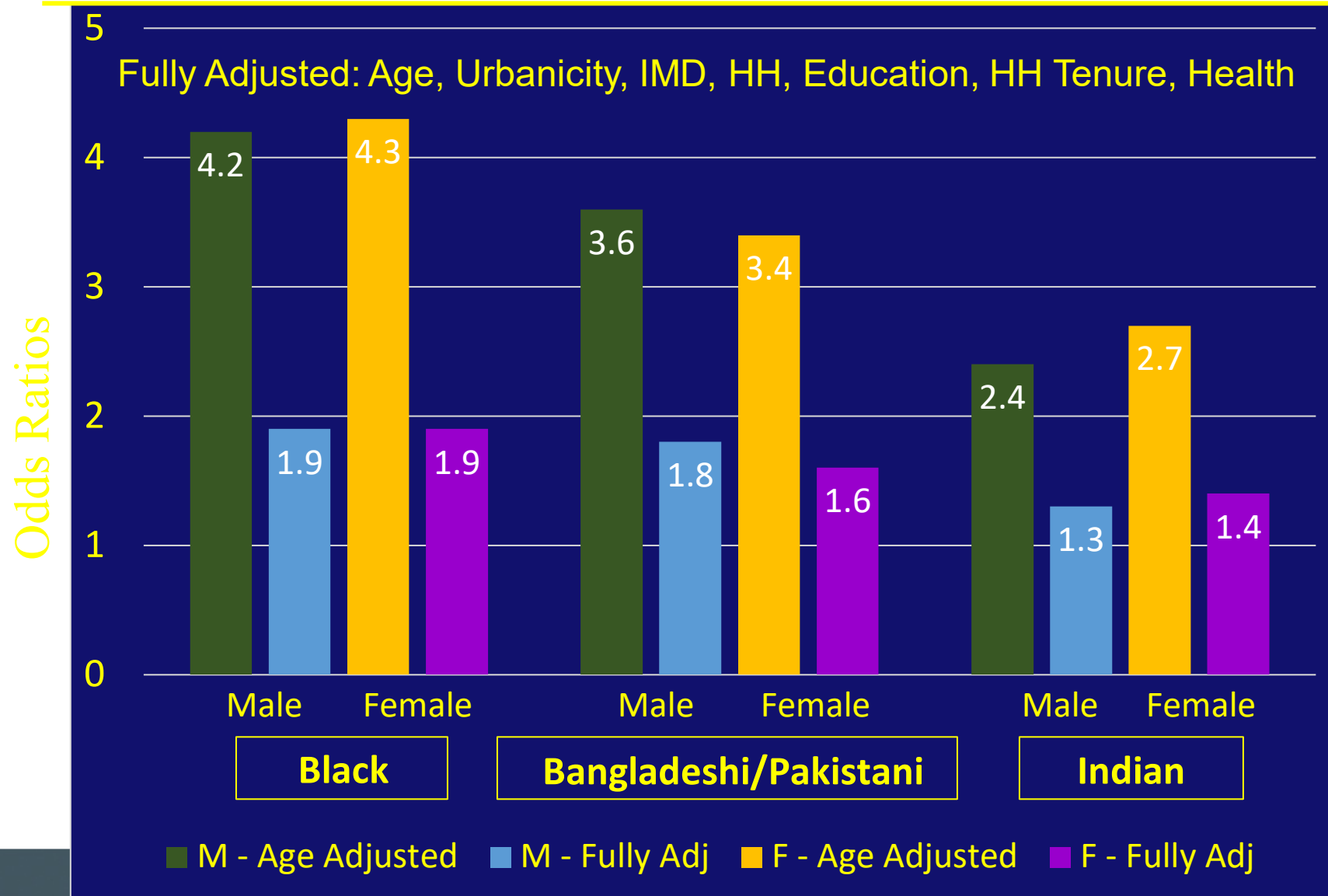
# Infant Mortality in the U.S., 2015



# Relative Risks of All-Cause Mortality by Household Income Level: U.S. Panel Study of Income Dynamics



# Covid-19 Deaths, Relative to Whites



# Life Expectancy and the London Tube





# Life Span and Life Circumstances

**Life Expectancy**  
**Δ 10 years**



**Loss of Life:**  
**6 Months/Minute**  
**2.3 Years/Mile**



*“6 months for every minute on the subway;  
3.2 years for every mile travelled.”*



# BMJ Open The effect of statins on average survival in randomised trials, an analysis of end point postponement

Malene Lopez Kristensen,<sup>1</sup> Palle Mark Christensen,<sup>1</sup> Jesper Hallas

To cite: Kristensen ML, Christensen PM, Hallas J. The effect of statins on average survival in randomised trials, an analysis of end point postponement. *BMJ Open* 2015;5:e006881.

## ABSTRACT

**The effects of statins on average survival....**  
**“Death was postponed between -5 and 19 days in primary prevention trials and between -10 and 27 days in secondary prevention trials.”**



CrossMark

<sup>1</sup>Department of Clinical Pharmacology, University of Copenhagen, Copenhagen, Denmark

The magnitude of their preventive effect is controversial; also controversial is how such effects should be compared to the patients' baseline risk of cardiovascular conditions such as myocardial infarction or limb ischaemia.<sup>1</sup> Current guidelines indicate that statins should be prescribed to all patients manifesting ischaemia and to other patients at high risk,<sup>1, 2</sup> and that statins are among the most widely prescribed drugs overall.<sup>3</sup>

Correspondence to: Malene Lopez Kristensen, Department of Clinical Pharmacology, University of Copenhagen, Copenhagen, Denmark; Email: malene.kristensen@pharm.ku.dk

those who do not have their end point postponed until after the outcome is measured. The remaining 39 patients will also have their end points postponed, but none to an extent where they cross this timeline. As an alternative to the NNT, it has been suggested that the drug benefit may be conveyed by an estimate of the average postponement in the occurrence of the end point for all treated.<sup>4</sup> It has been shown that patients are more responsive to values of postponement than to values of NNT.<sup>7</sup> Technically, the average postponement can be calculated as the area between the survival curves for the

BMJ Open: first published as 10.1136/bmjopen-2015-006881 on 30 November 2015

**M. Kristensen, P. Christensen, J. Hallas;  
BMJ 2015; 5:**



# 20 Days of Your Lifespan Equals:



**Taking Statins for  
20 Years**



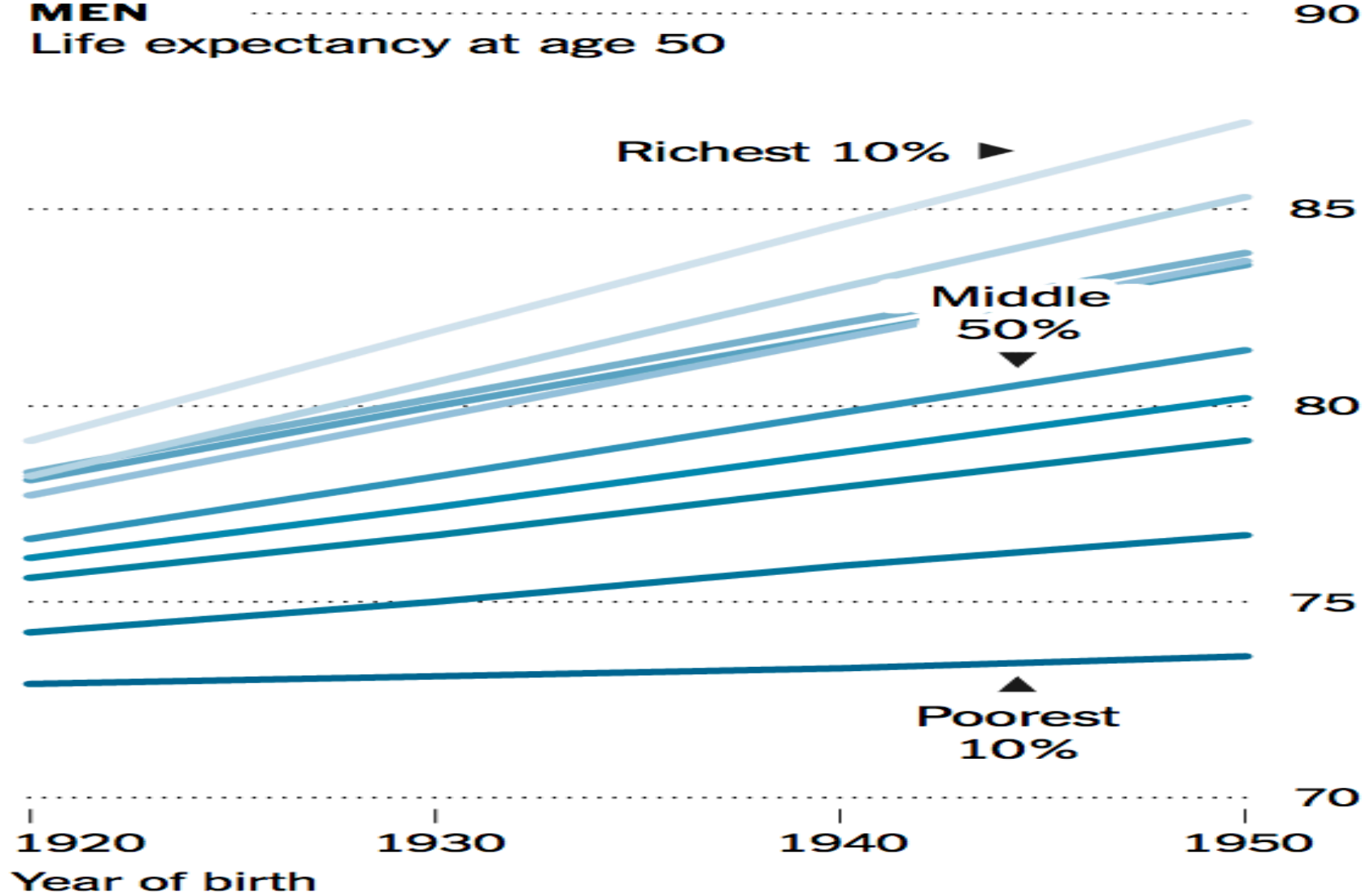
**Riding the D Train  
for 7 Seconds**



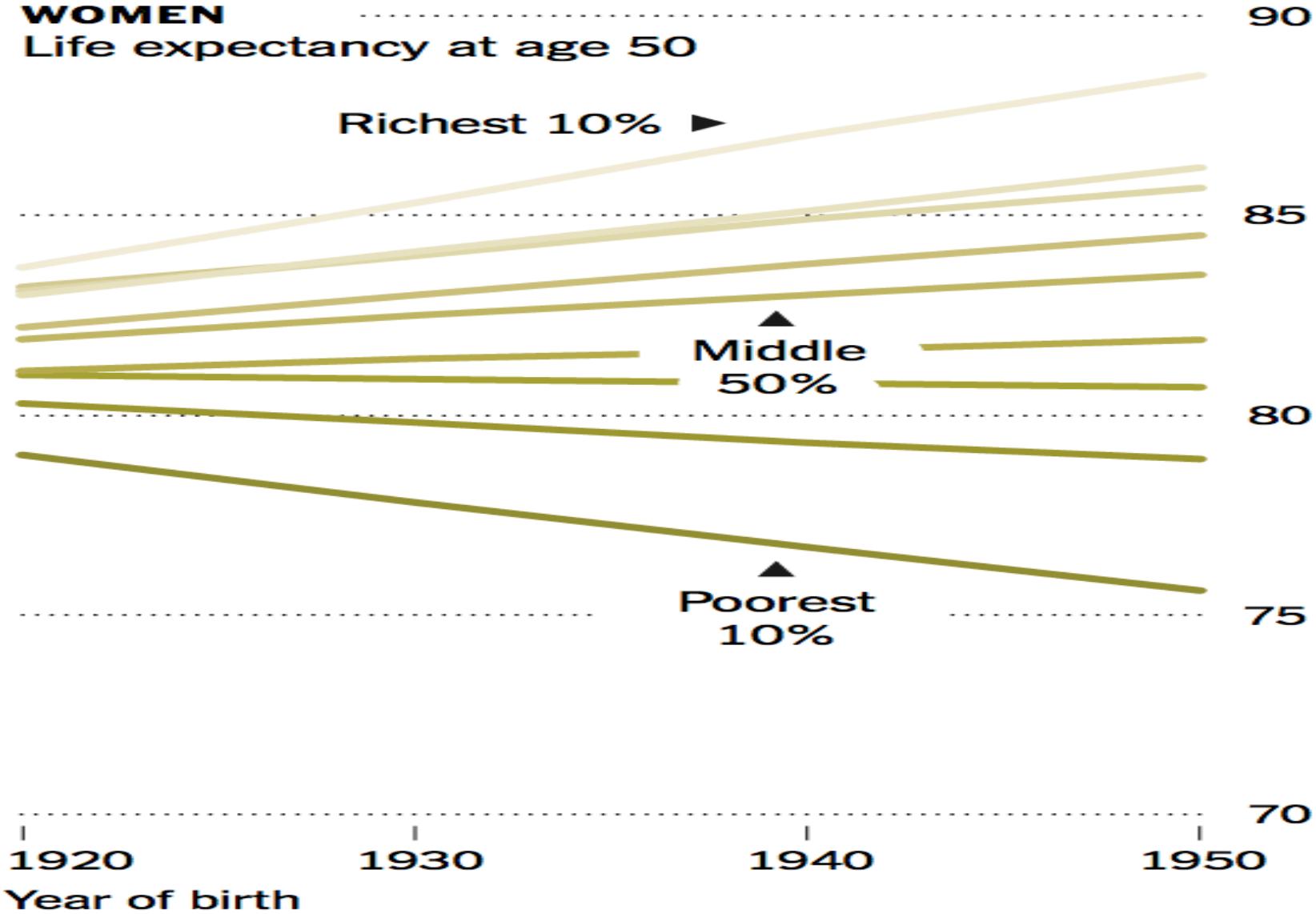
**Riding the Glasgow  
Bus for 43 Feet**



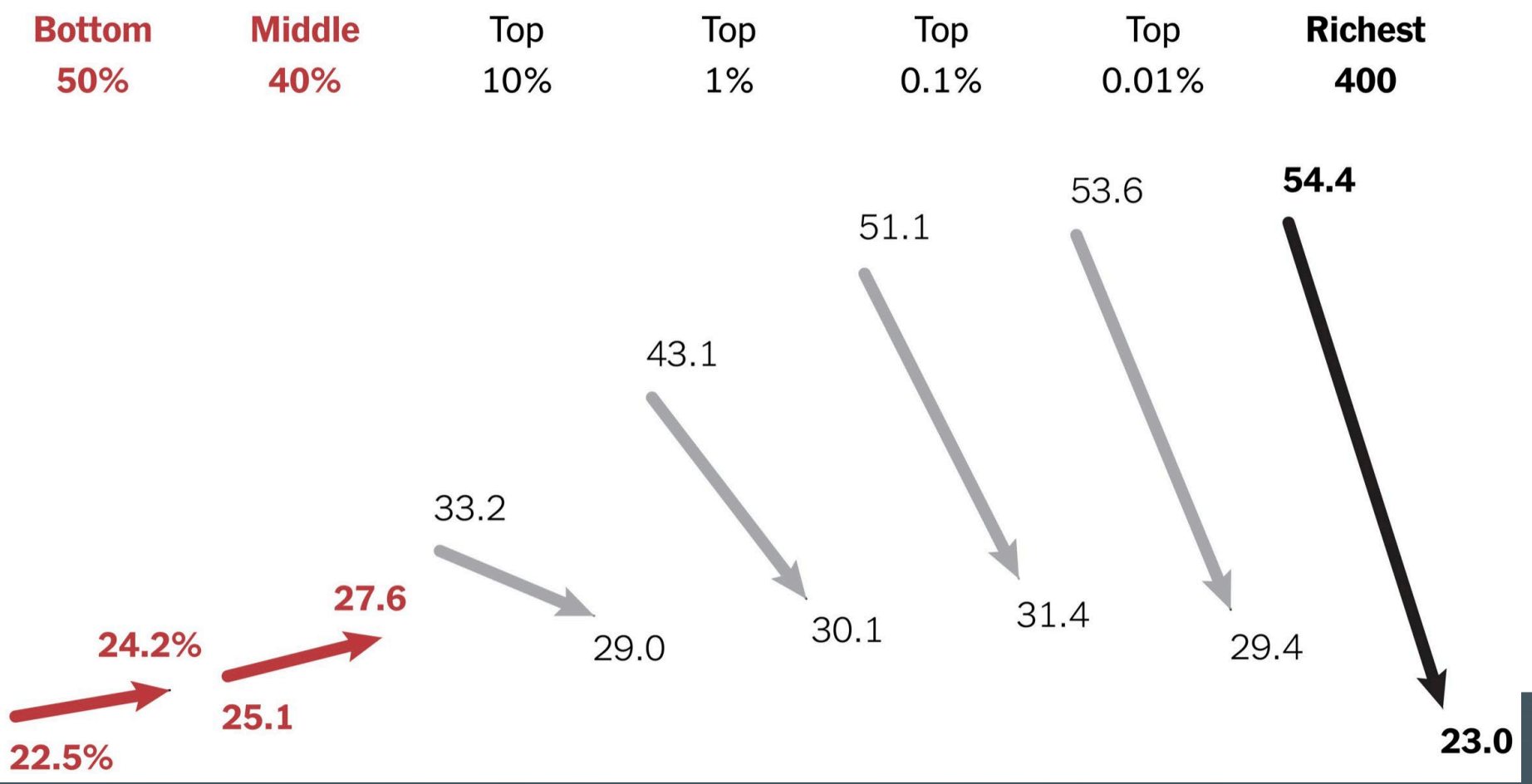
# US Life Expectancy by Year of Birth



# US Life Expectancy by Year of Birth



# Change in Effective Tax Rates 1962-2018 USA



# Institutional Racism and the “Moral Law”





# A Campaign for Moral Determinants of Health

1. Achieve US ratification of major human rights treaties.
2. Make health care unequivocally a human right in our nation.
3. Restore American leadership to reverse climate change.
4. Achieve radical reform of our nation's criminal justice system.
5. End policies of exclusion and achieve compassionate immigration reform.
6. End hunger and homelessness in our nation.
7. Restore order, dignity, and equity to our democratic institutions, and assure the right of every single person's vote to count equally.



# Improving Population Health Security in the New Era<sup>34</sup>

A Key Question:

What can employers do to help set and achieve aims in the social and moral determinants of health?



*Thank you!*

