

Middle East Forum on Quality & Safety in Healthcare **2023**

16-19 March, Doha

Healthcare Resilience in Extraordinary Times

Brought to you by:
Hamad Healthcare Quality Institute

Conflict of Interest

The speaker(s) or presenter(s) in this session has/have no conflict of interest or disclosure in relation to this presentation.

As part of our extensive program and with CPD hours awarded based on actual time spent learning, credit hours are offered based on attendance per session, requiring delegates to attend a **minimum of 80%** of a session to qualify for the allocated CPD hours.

- Less than 80% attendance per session = **0 CPD hours**
- 80% or higher attendance per session = **full allotted CPD hours**

Total CPD hours for the forum are awarded based on the sum of CPD hours earned from all individual sessions.

Please also note that delegates registered as students, trainees, interns and medical residents are eligible to receive an attendance certificate. CPD hours will not be awarded.



Learning Objectives

At the end of this session, participants will be able to:

1. Describe the limited role of health care in producing health.
2. Describe the major categories of "social determinants of health."
3. Explain the new skills and strategies of leadership for health improvement.



Redefining Leadership for Health: Leading in Extraordinary Times

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



Variation in Health

Why does variation in health exist among nations, within nations, and within communities?

Some “Inconvenient Truths”

- Variation in Health Status Is Enormous...
 - Among nations
 - Within nations
 - Within communities
- Health Care Cannot Create Health.... But We Know What Can!
- Suboptimizing Care Damages Health

How Big Is the Variation in Health?

- If we eliminated all heart disease in the world, life expectancy would rise by about four years.
- From wealthy Newton, Massachusetts, to poorer parts of New Bedford, Massachusetts, life expectancy falls from 94.2 years to 68.1 years – a difference of 26.1 years.... That is, 6.5 times as much as the effect of all heart disease combined.

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; 2.3 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,¹ Palle Mark Christensen¹

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:e006781. doi:10.1136/bmjopen-2015-006781

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.”



¹Department of Clinical Pharmacology, Aarhus University Hospital, Aarhus, Denmark

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



20 Days of Your Lifespan Equals:



**Taking Statins for
20 Years**



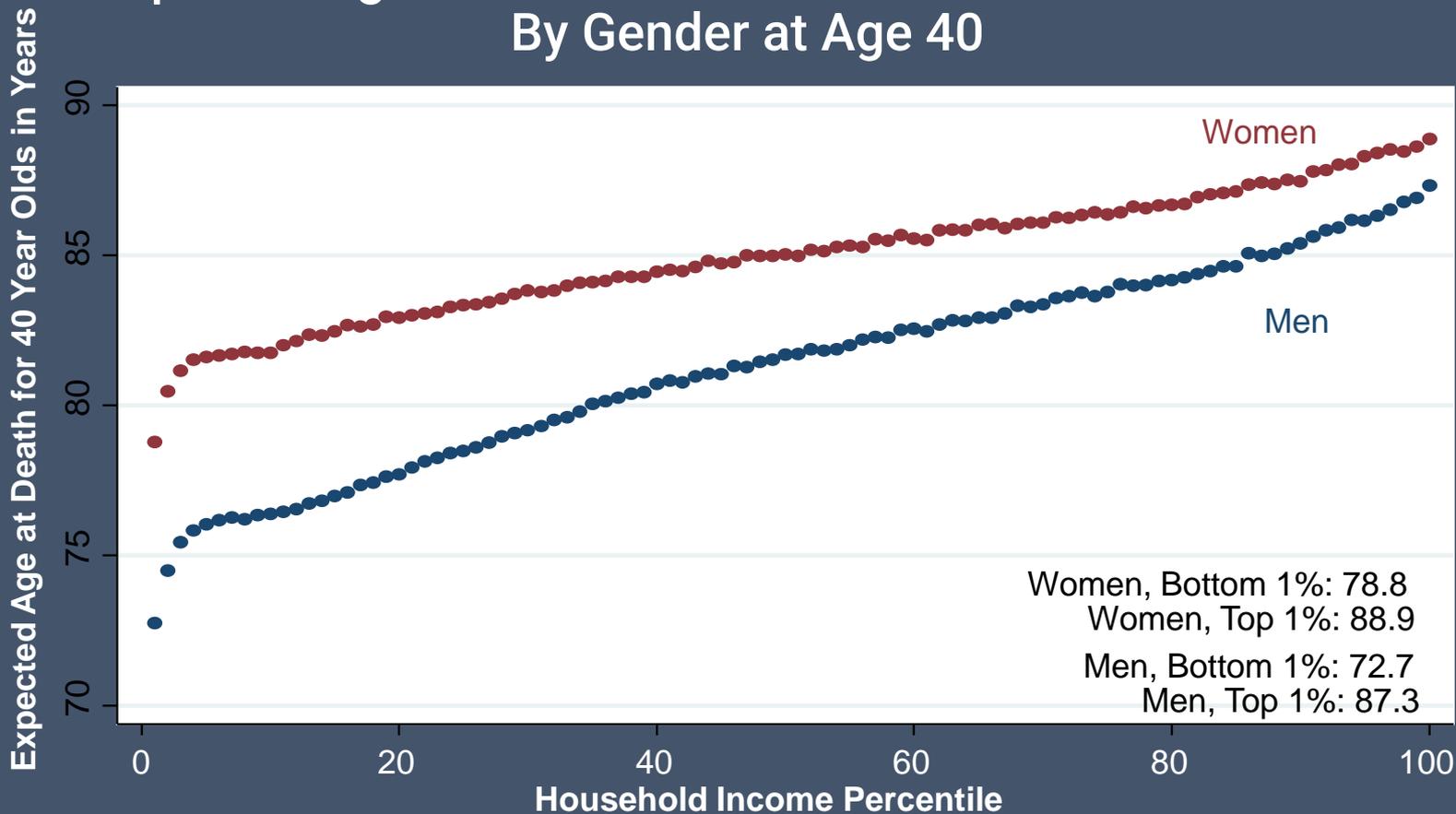
**Riding the D Train
for 7 Seconds**



**Riding the Glasgow
Bus for 43 Feet**

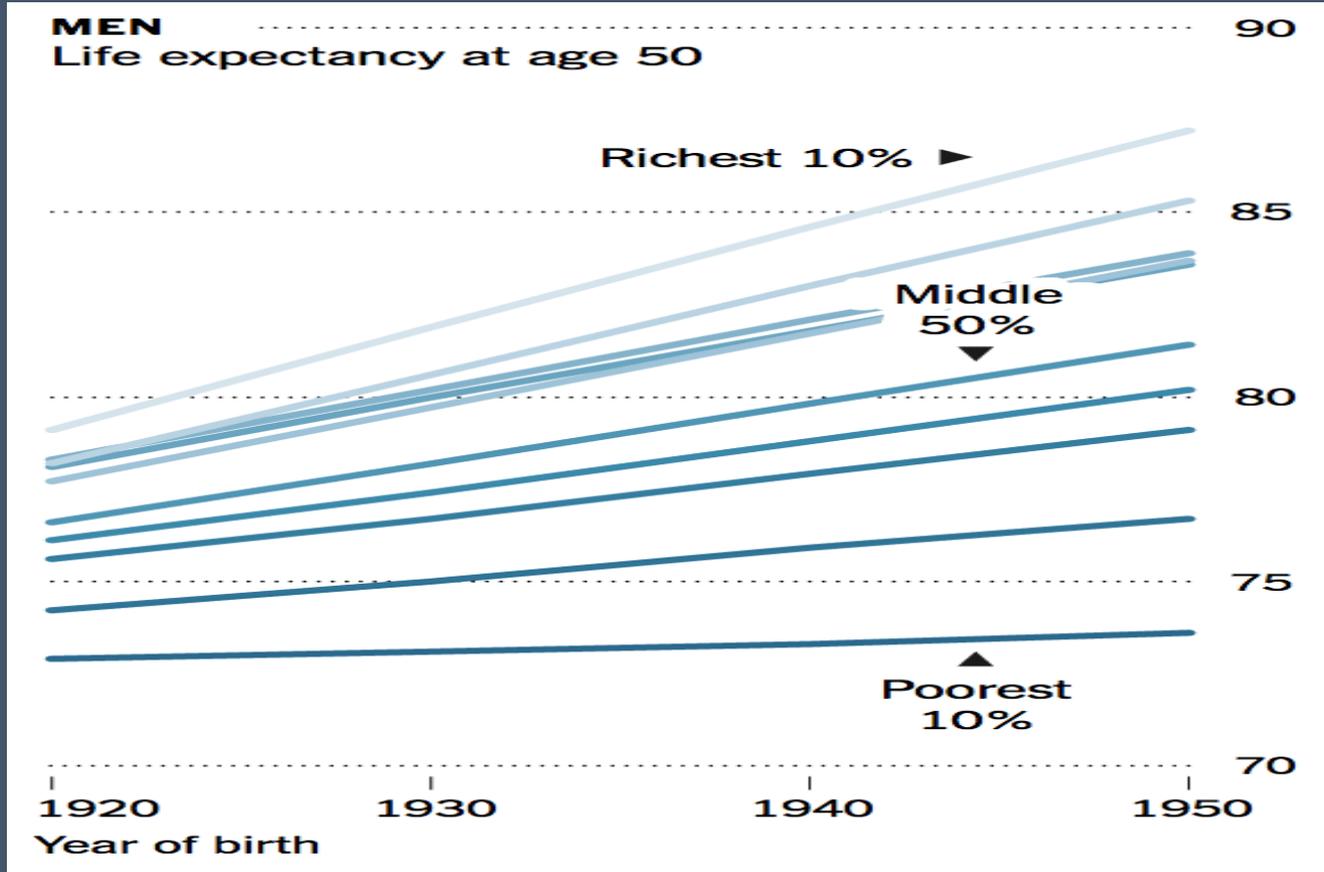


Expected Age at Death vs. Household Income Percentile By Gender at Age 40

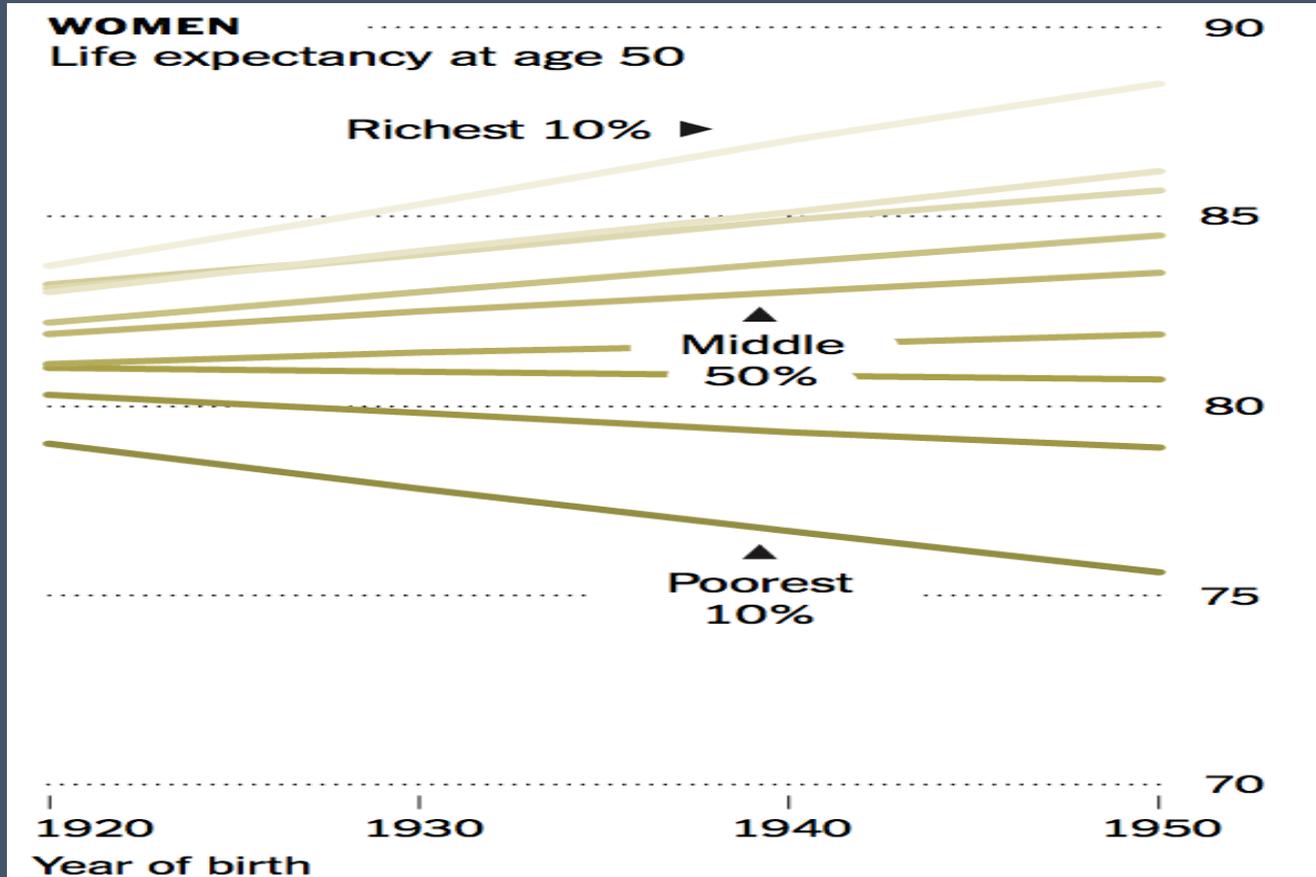


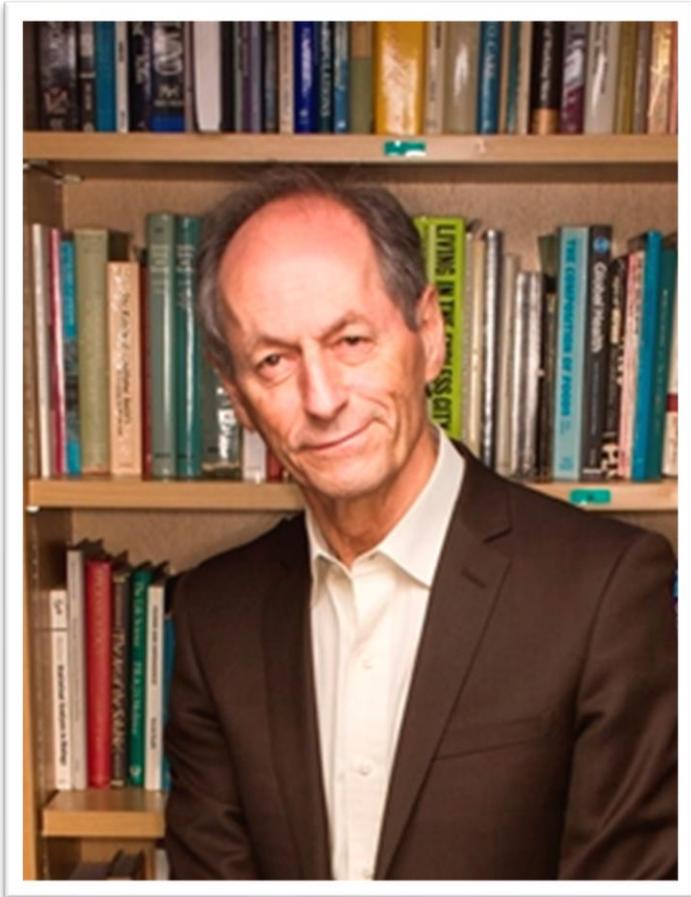
Chetty R, Stepner M, Abraham S, et al. The association between income and life expectancy in the United States, 2001-2014. JAMA 2016; 315: 1750-1766.

US Life Expectancy by Year of Birth



US Life Expectancy by Year of Birth





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

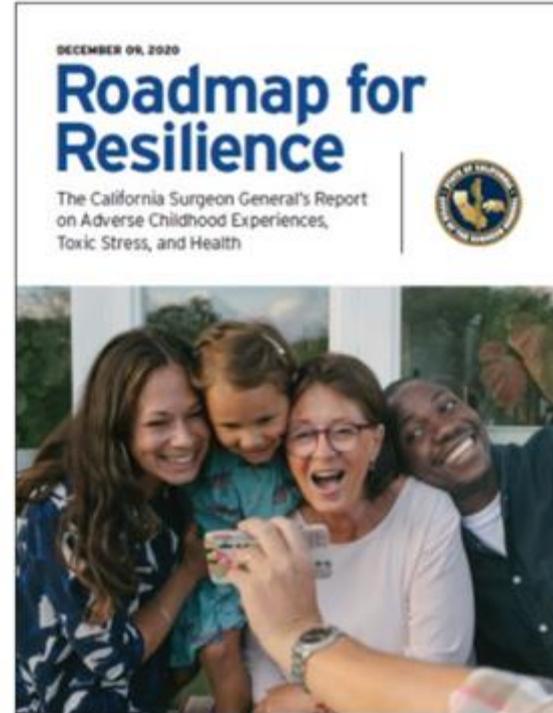


California Surgeon General's Report

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 ≥ 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, 2017¹⁴; Sources of **odds ratios**: Hughes *et al.*, 2017¹² for 1, 2, 4, 7, 10; Petrucelli *et al.*, 2019⁹ for 3 (injuries with fracture), 5; Center for Youth Wellness, 2014¹⁷ for 6 (Alzheimer's disease or dementia); Center for Youth Wellness, 2014¹⁷ and Merrick *et al.*, 2019²⁶ for 9



Child Opportunity Index 2.0



The image is a screenshot of a web page from Health Affairs. At the top left, the journal's name "HealthAffairs" is displayed in white on a red background. To the right of the name are three navigation links: "TOPICS", "JOURNAL", and "BLOG", each with a small colored bar above it. Below the journal name, there are two red boxes: "RESEARCH ARTICLE" and "CHILDREN'S HEALTH". Underneath these boxes, the text "HEALTH AFFAIRS > VOL. 39, NO. 10: CHILDREN'S HEALTH" is visible. The main title of the article is "Racial And Ethnic Inequities In Children's Neighborhoods: Evidence From The New Child Opportunity Index 2.0". Below the title, the authors are listed as "Dolores Acevedo-Garcia, Clemens Noelke, Nancy McArdle, Nomi Sofer, Erin F. Hardy... See all authors". There is also a section for "AFFILIATIONS" with a dropdown arrow. At the bottom left, it says "PUBLISHED: OCTOBER 2020" and "Free Access". At the bottom right, there is a DOI link: "https://doi.org/10.1377/hlthaff.2020.00735".

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

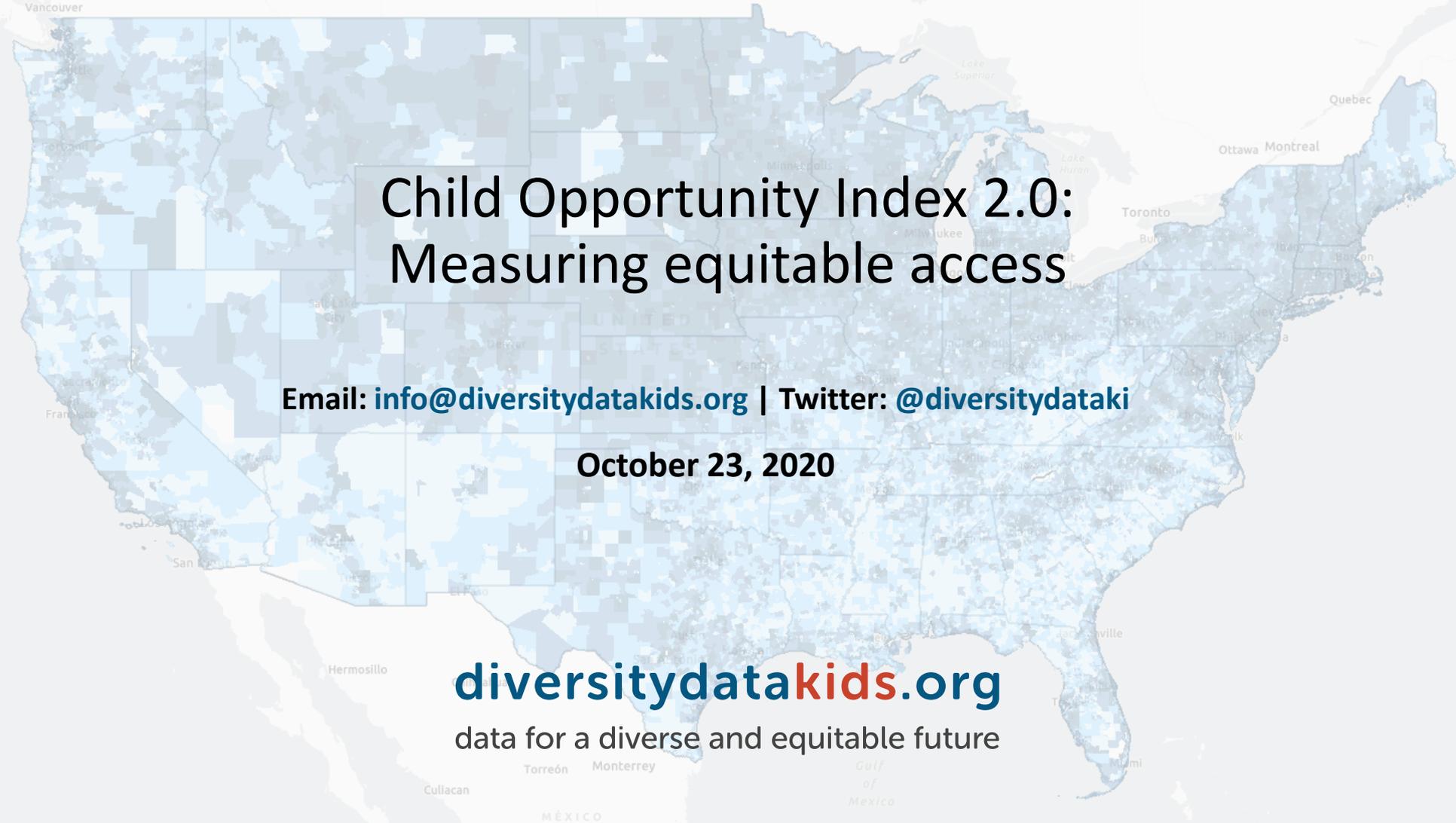
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AFFILIATIONS

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 | 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

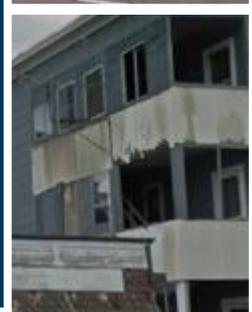
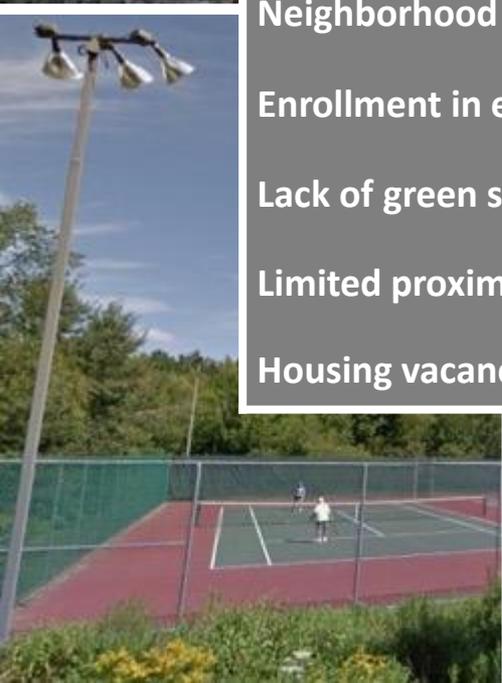
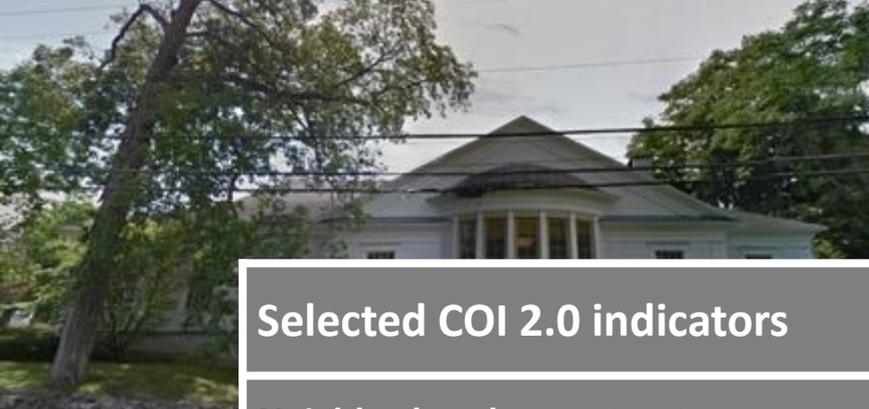
Economic resource index

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

Family structure

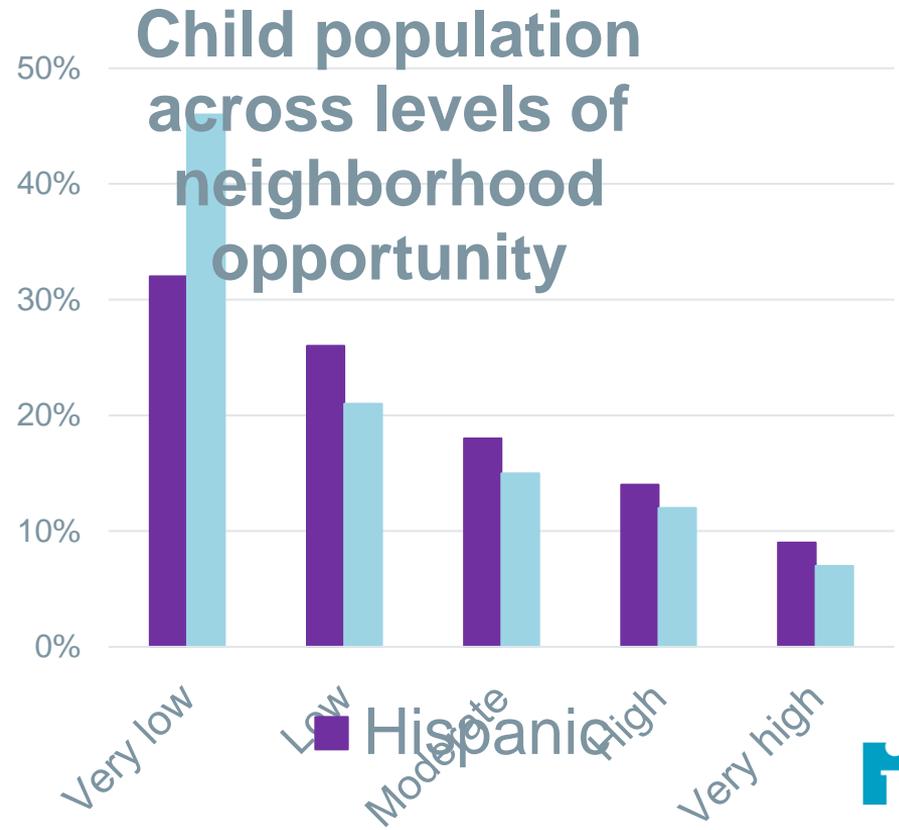
- Single parenthood





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%

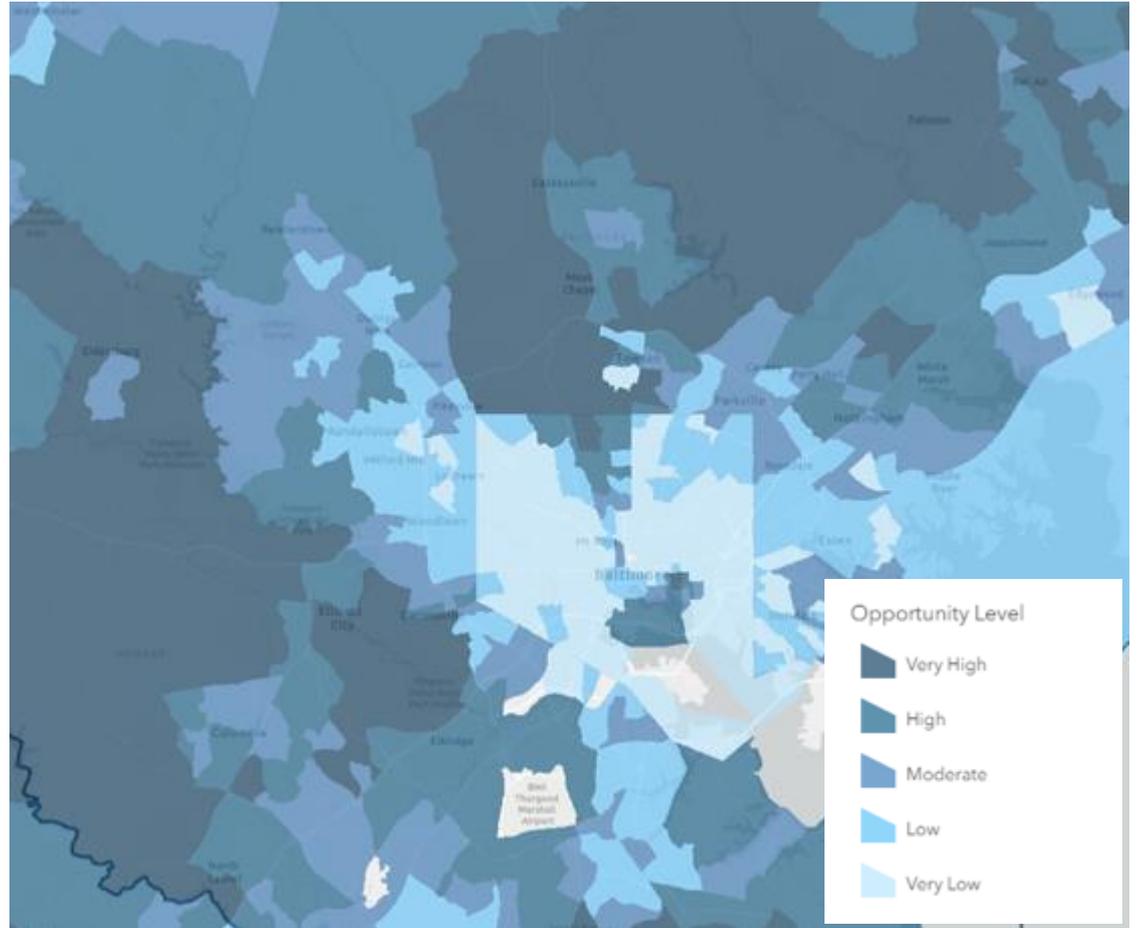
The majority of Black and Hispanic children live in very low- or low-opportunity neighborhoods



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.

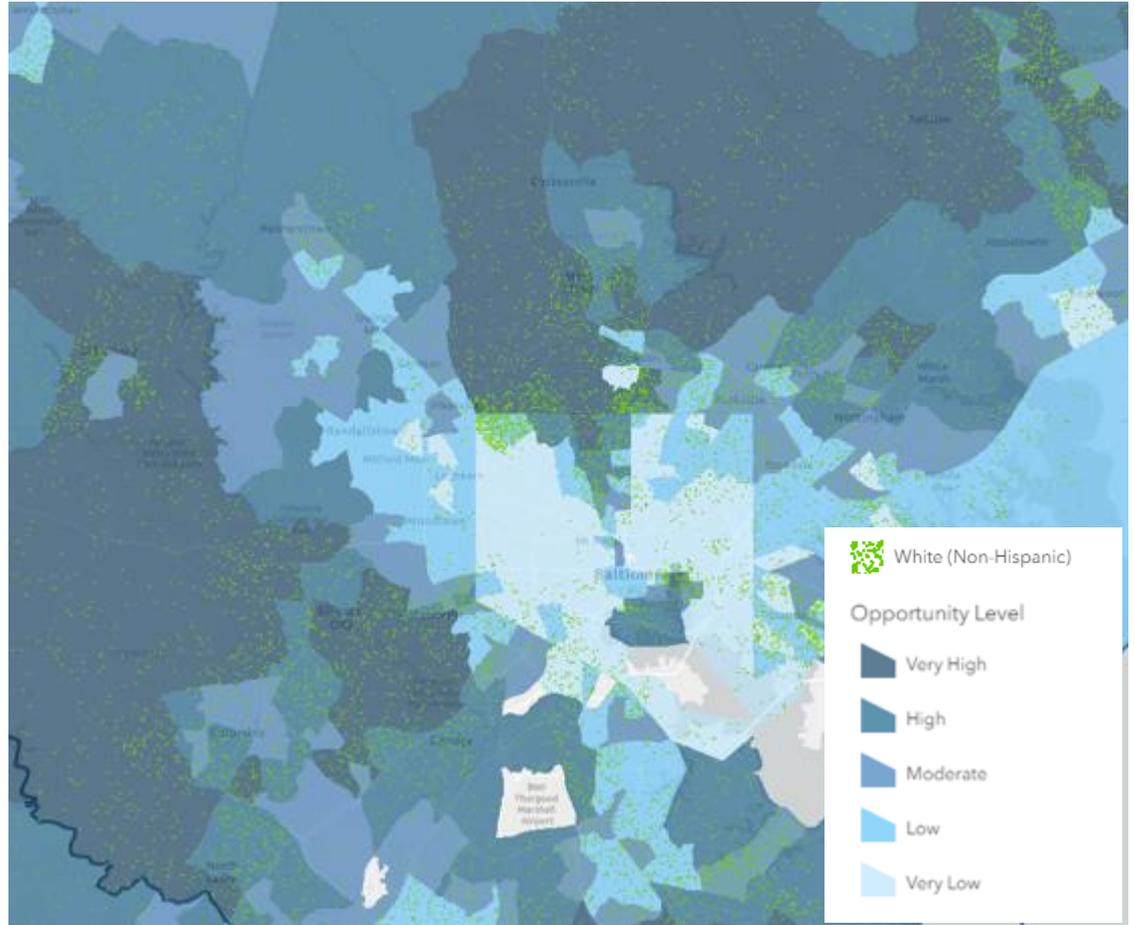
BALTIMORE-COLUMBIA-TOWSON METRO AREA

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.



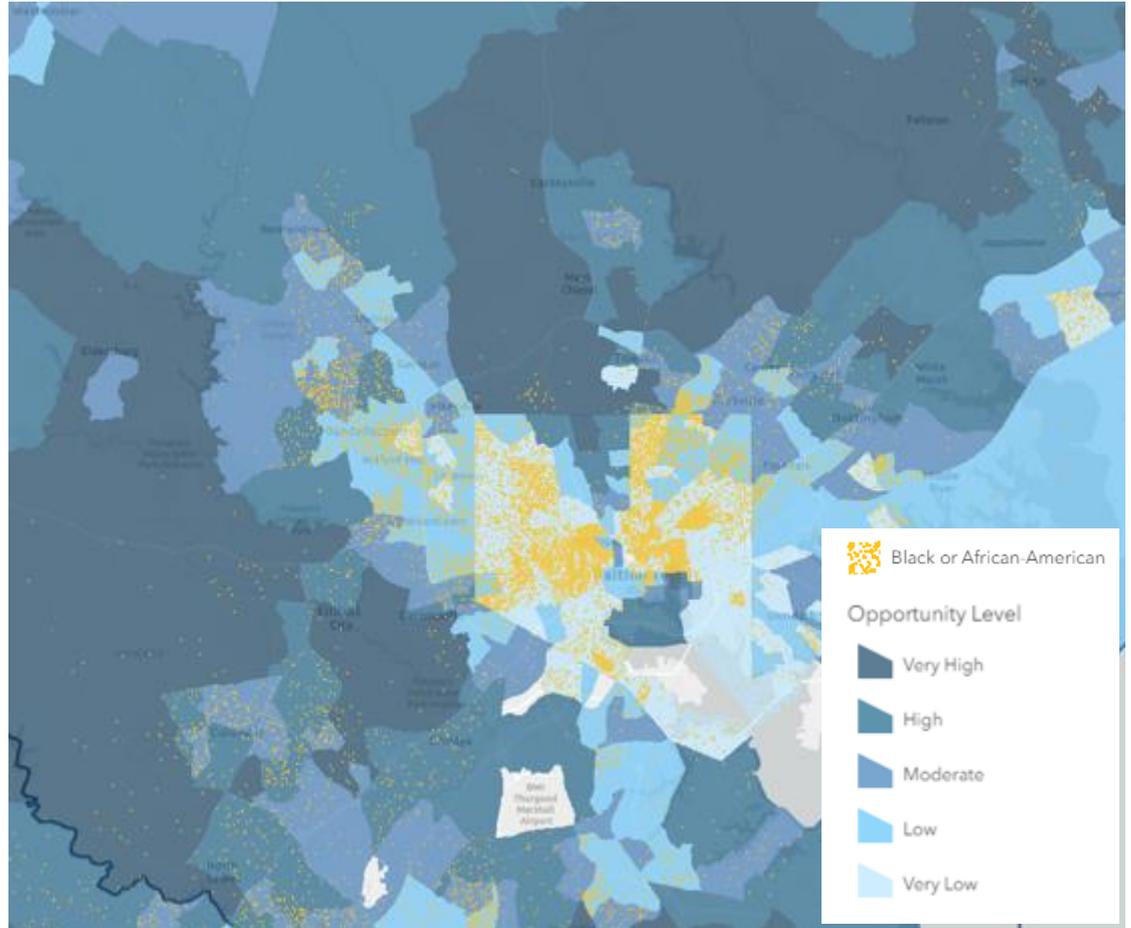
BALTIMORE-COLUMBIA-TOWSON METRO AREA

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.



Life expectancy by neighborhood opportunity level

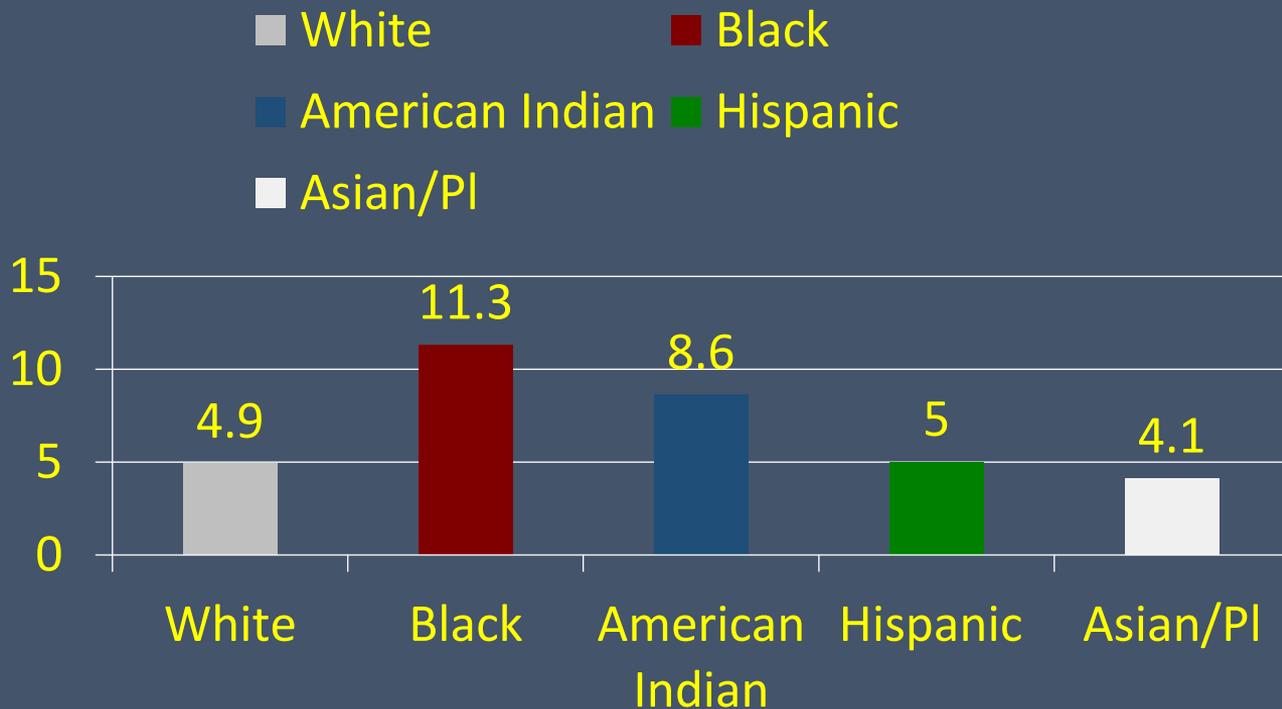


Child Opportunity Index
correlates strongly with
Life Expectancy

“On average, there is a difference of seven years in life expectancy between residents in very low-opportunity neighborhoods (life expectancy of 75) and residents in very high-opportunity neighborhoods (life expectancy of 82).”

This is the same difference in life expectancy that exists between Mexico (75) and Sweden (82).”

Infant Mortality in the U.S., 2015



Improving Health and Health Care in the New Era

A Key Question:

What are the duties, capabilities, and actions of health care leaders necessary for the pursuit of health and well-being for the entire population?



“The Big Six”

- Social Determinants of Health
- Equity
- Climate Change
- Workforce Burnout and Vitality
- Patient Safety and Quality Improvement
- Integrated Health Care

WHO Findings Regarding Climate Change

- Climate change affects the social and environmental determinants of health – clean air, safe drinking water, sufficient food and secure shelter.
- Between 2030 and 2050, climate change is expected to cause approximately 250 000 additional deaths per year, from malnutrition, malaria, diarrhoea and heat stress.
- The direct damage costs to health (i.e. excluding costs in health-determining sectors such as agriculture and water and sanitation), is estimated to be between USD 2-4 billion/year by 2030.
- Areas with weak health infrastructure – mostly in developing countries – will be the least able to cope without assistance to prepare and respond.
- Reducing emissions of greenhouse gases through better transport, food and energy-use choices can result in improved health, particularly through reduced air pollution.

Climate Change and Health

- WHO: “Climate change is the single biggest health threat facing humanity, and health professionals worldwide are already responding to the health harms caused by this unfolding crisis”
 - NHS England
 - US National Academies of Sciences Engineering and Medicine
 - Qatar



Qatar National Environment and Climate Change Strategy

We have defined environmental targets and goals to be prioritised in the following areas:

- GHG Emissions and Air Quality
- Biodiversity
- Water
- Circular Economy and Waste Management
- Land Use

Workforce Burnout and Well-Being

ORIGINAL ARTICLE



Impact of Organizational Leadership on Physician Burnout and Satisfaction

Tait D. Shanafelt, MD; Grace Goringe, MS; Ronald Menaker, EdD;
Kristin A. Storz, MA; David Reeves, PhD; Steven J. Buskirk, MD; Jeff A. Sloan, PhD;
and Stephen J. Swensen, MD

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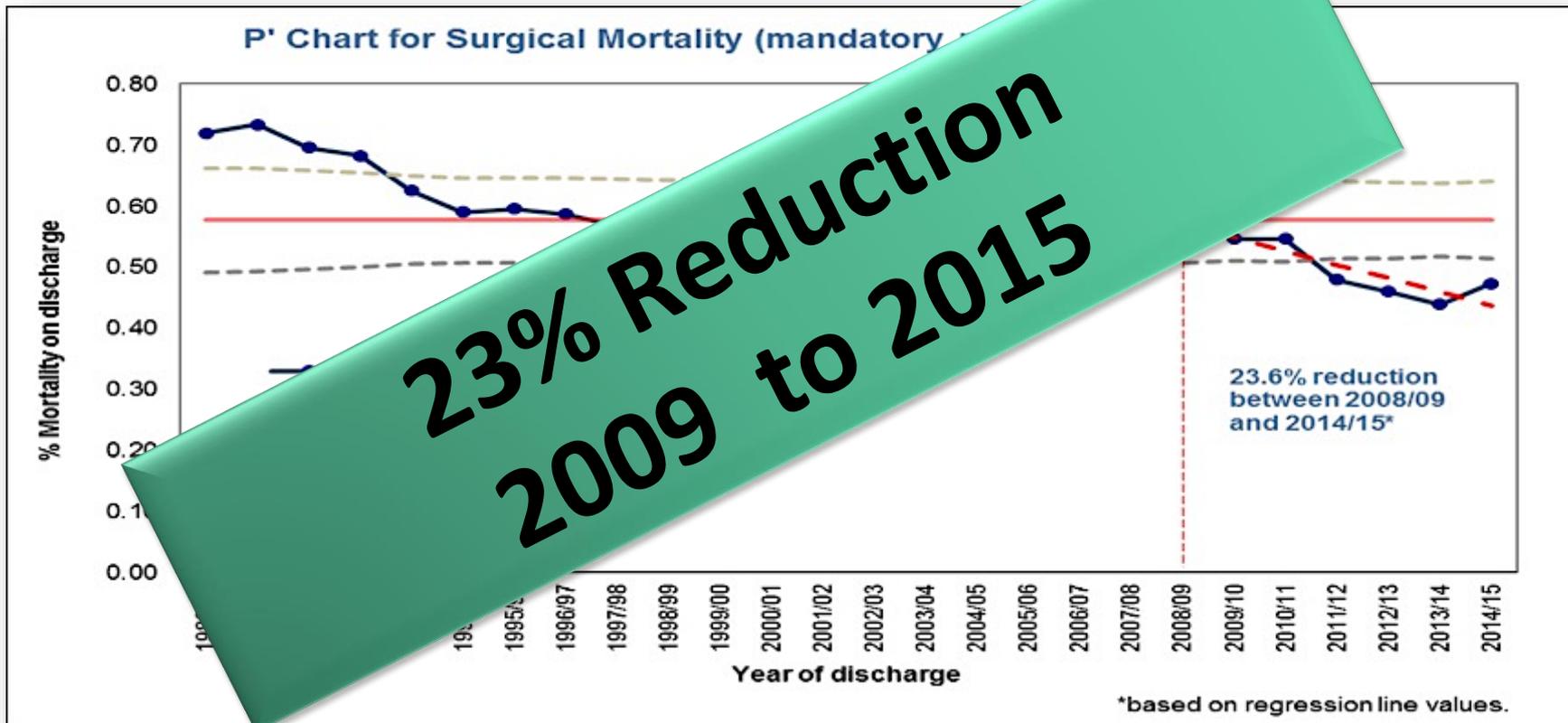
Burnout Across Healthcare Disciplines Pre-Pandemic

	n	Burnout	Satisfied WLI
MD	5197	44%	43%
RN	8638	38%	56%
NP/PA	1506	39%	63%

Leaders Can Address Burnout Effectively



NHS Scotland Surgical Mortality



Patient Safety and Quality Improvement

- 1999: “To Err Is Human” – US National Academy of Medicine
 - 44,000 to 98,000 deaths a year in US hospitals due to errors in care
 - Not due to careless or incompetent individuals
 - Safety is a system property and needs to be addressed through redesigns

But... Patient Safety Progress Has Stalled – NEJM January 12, 2023

SPECIAL ARTICLE [FREE PREVIEW](#)

The Safety of Inpatient Health Care

David W. Bates, M.D., David M. Levine, M.D., M.P.H., Hojjat Salmasian, M.D., Ph.D., M.P.H., Ania Syrowatka, Ph.D., David M. Shahian, M.D., Stuart Lipsitz, Sc.D., Jonathan P. Zebrowski, M.D., M.H.Q.S., Laura C. Myers, M.D., M.P.H., Merranda S. Logan, M.D., M.P.H., Christopher G. Roy, M.D., M.P.H., Christine Iannaccone, M.P.H., Michelle L. Frits, B.A., [et al.](#)

“At least one adverse event in
23.6% of 2809 admissions.”

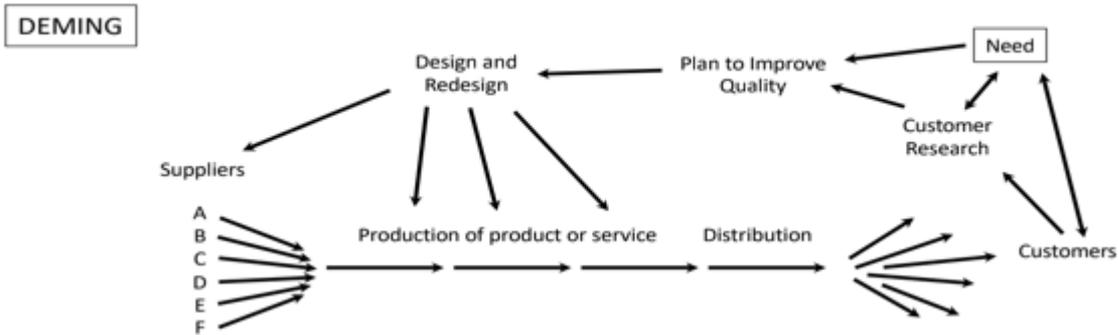
A Possible Pathway: Integrated Care Systems

- The US: “Value-Based Payment” and related delivery structures.
- Scotland: Community improvement leadership by NHS Scotland
- England: “Integrated Care Systems” as the core delivery framework.
- Singapore: “Healthy Singapore” and reorientation of hospital clusters.
- Qatar: National Health Strategy

“The Big Six”

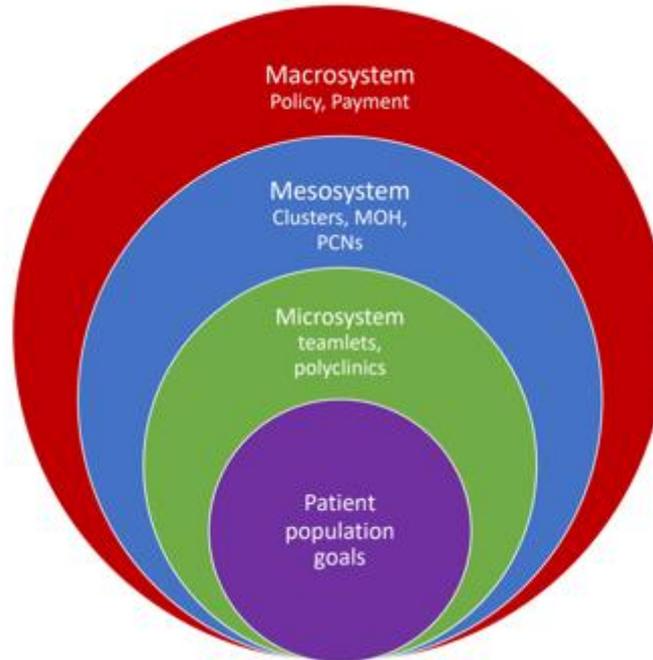
- Social Determinants of Health
- Equity
- Climate Change
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A System of Production and Improvement



- This feedback loop shows “the system for improvement”.
- The need in society is the primary focus and provides the aim for efforts.
- Suppliers and customers are closely connected to the system.
- Customer research and planning are prerequisites for improvement.
- Improvement results from design or redesign of some aspect of the system.
- Everyone in the organization should participate in improvement.

So... Find Yourself Here... and Cooperate as Never Before



Infrastructure

- Information
- Funds Flow
- Consolidated leadership
- National Goals
- Learning system
- Governance
- Workforce
- Regulation

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So What Does This Require of Leaders?

- Accepting (?Welcoming?) the Broader Portfolio as “My Job”
- Setting Aims for Improvement – e.g., Decarbonizing Health Care, Closing Disparities in Outcomes, Redesigning the Workplace, etc.
- Embracing Unprecedented Cooperation
- Tearing Down Walls among Organizations, Disciplines, Hierarchies
- Integrating Finance – Global Budgets, Flexibility, Local Autonomy
- Coproducing with Patients, Communities, and Workforce
- Systems Thinking and Citizenship in the Whole

Thank you!

Healthcare Resilience in Extraordinary Times