

# 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**  
 **$\Delta$  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,<sup>1</sup> Palle Mark Christensen,<sup>1</sup> J. 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:e006555. doi:10.1136/bmjopen-2015-006555

## 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

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

# 20 Days of Your Lifespan Equals:



**Taking Statins for  
20 Years**

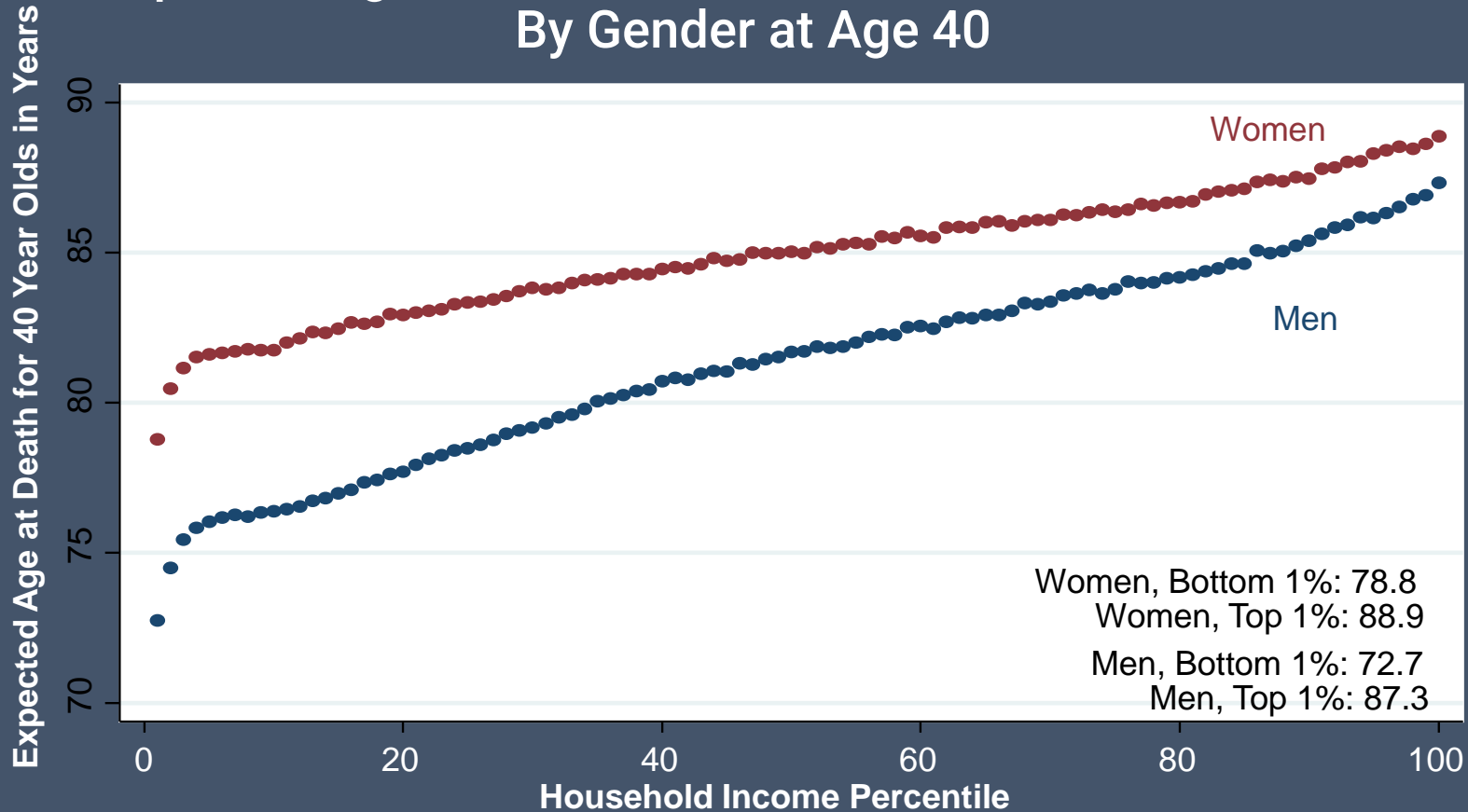


**Riding the D Train  
for 7 Seconds**



**Riding the Glasgow  
Bus for 43 Feet**

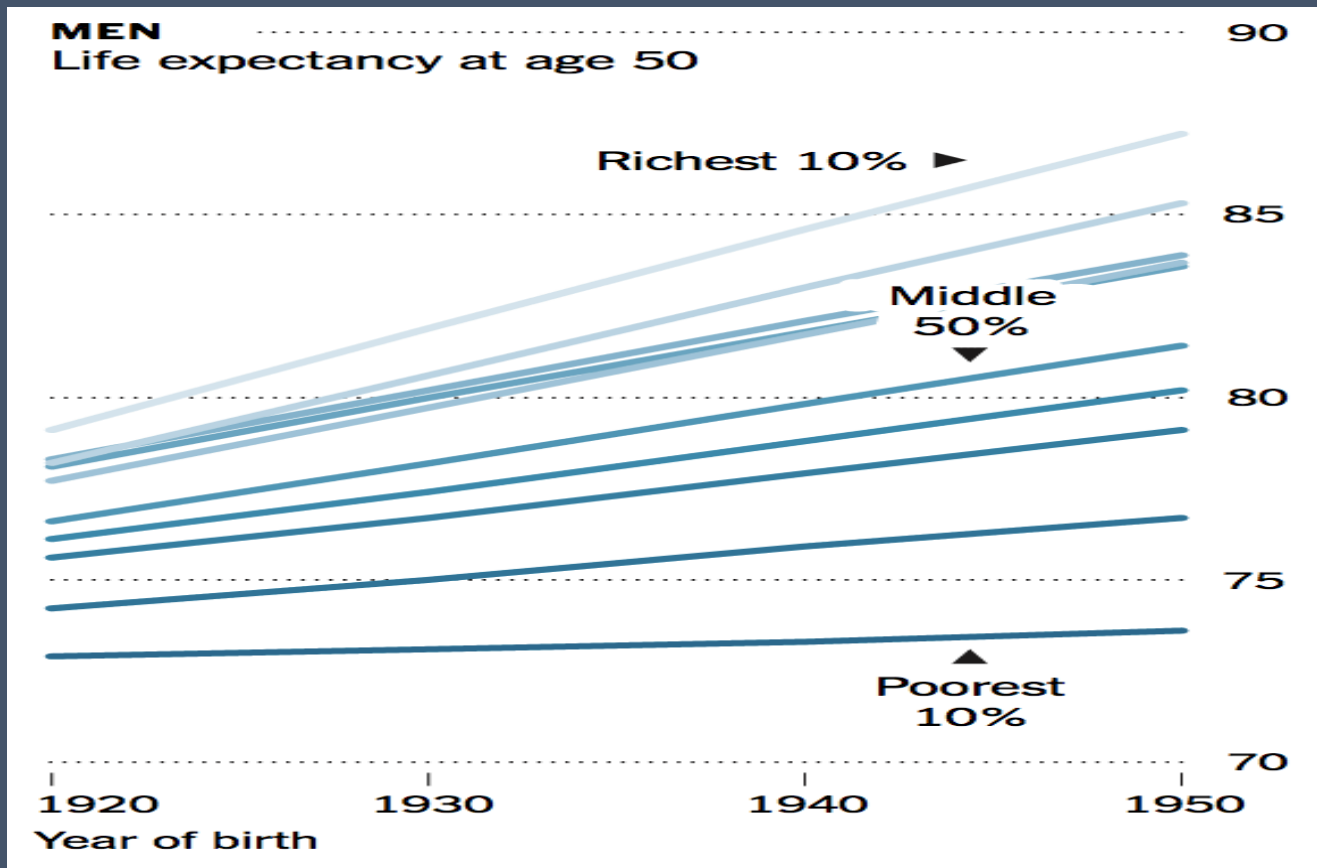
# Expected Age at Death vs. Household Income Percentile By Gender at Age 40



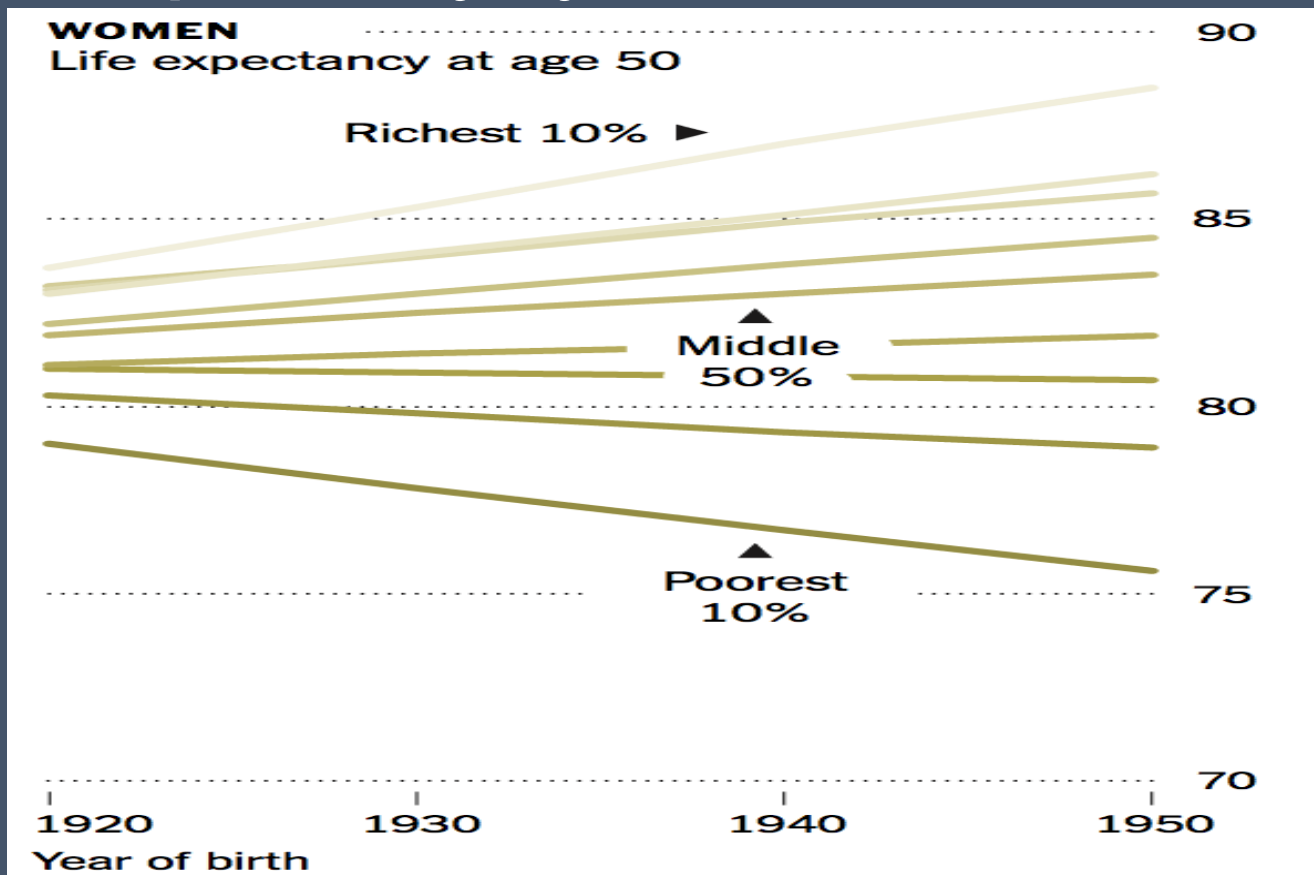
Chetty R, Stepner M, Abraham S, et al. The association between income and life expectancy in the United States, 2001-2014. JAMA 2016; 315: 1750-1766.



# 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

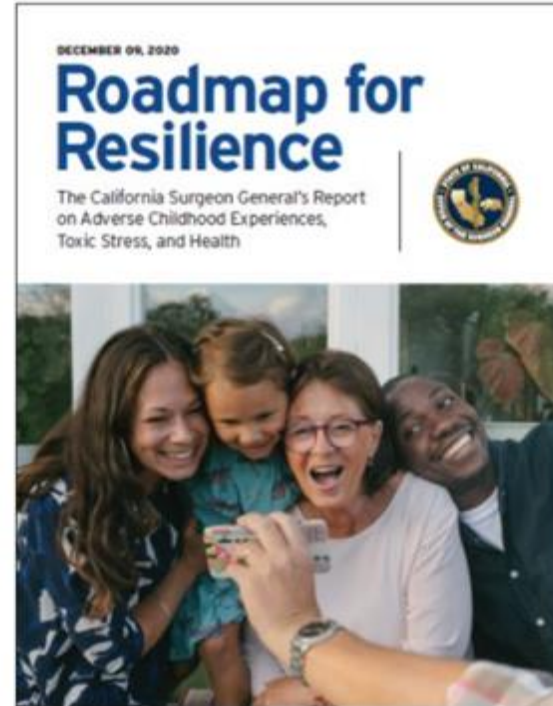


# California Surgeon General's Report

## December 9, 2020

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

- Materials available at <https://osg.ca.gov/sgr-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, 2017<sup>14</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

The screenshot shows the top portion of a research article page on the Health Affairs website. The header features the 'HealthAffairs' logo in white on a red background, with navigation links for 'TOPICS', 'JOURNAL', and 'BLOG' in white on a dark grey background. Below the header, a red banner indicates the article is a 'RESEARCH ARTICLE' in the 'CHILDREN'S HEALTH' section. The breadcrumb trail reads 'HEALTH AFFAIRS > VOL. 39, NO. 10: CHILDREN'S HEALTH'. The main title of the article is 'Racial And Ethnic Inequities In Children's Neighborhoods: Evidence From The New Child Opportunity Index 2.0'. The authors listed are Dolores Acevedo-Garcia, Clemens Noelke, Nancy McArdle, Nomi Sofer, and Erin F. Hardy, with a link to 'See all authors'. There is a section for 'AFFILIATIONS' with a dropdown arrow. At the bottom, it states 'PUBLISHED: OCTOBER 2020' and 'Free Access' with a lock icon. A DOI link is provided at the bottom right.

**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

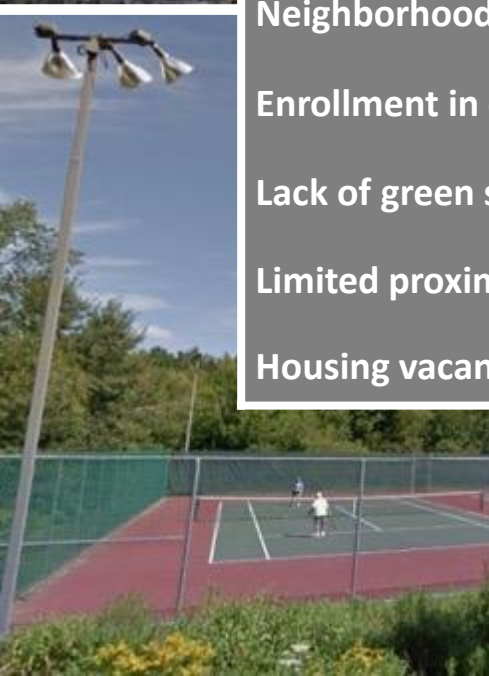
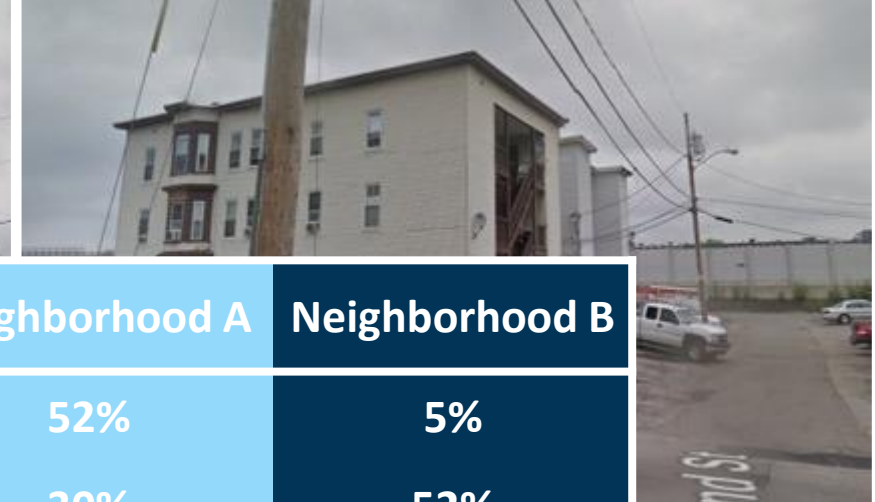
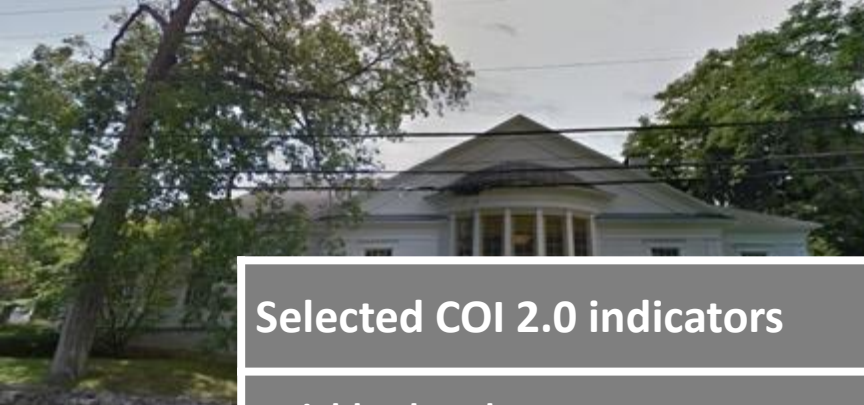
### Economic resource index

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

### Family structure

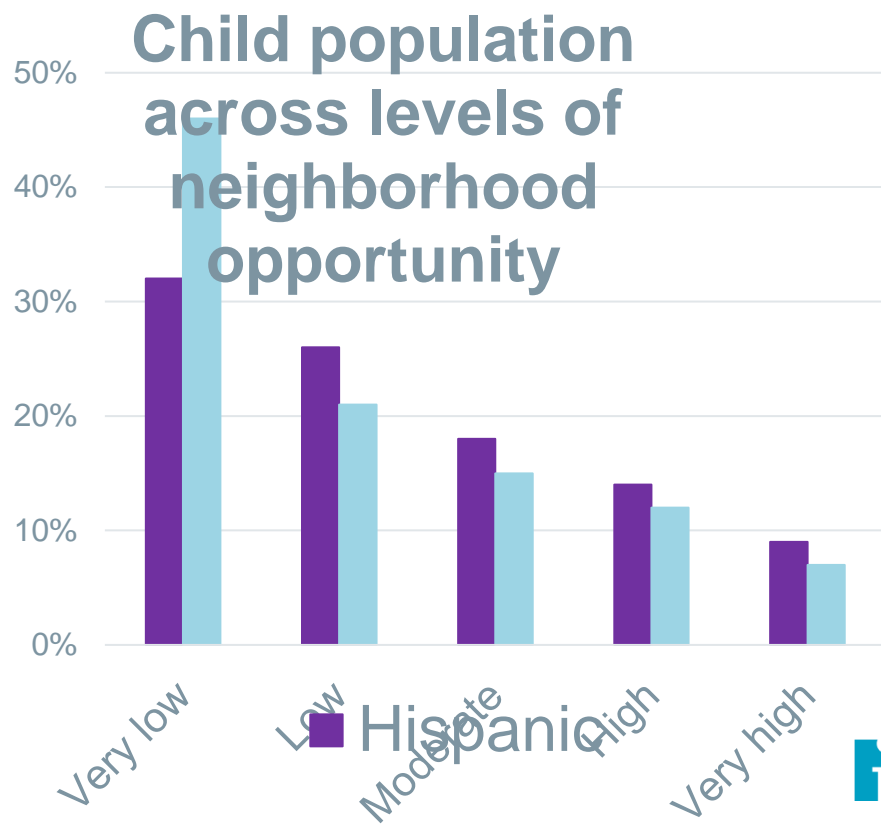
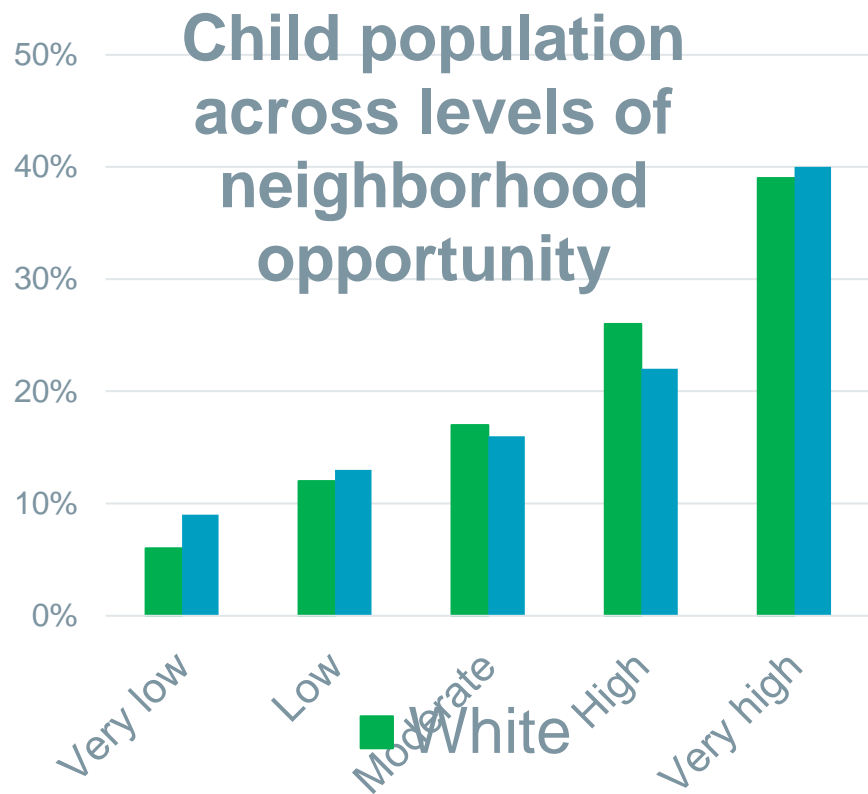
- Single parenthood





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%

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



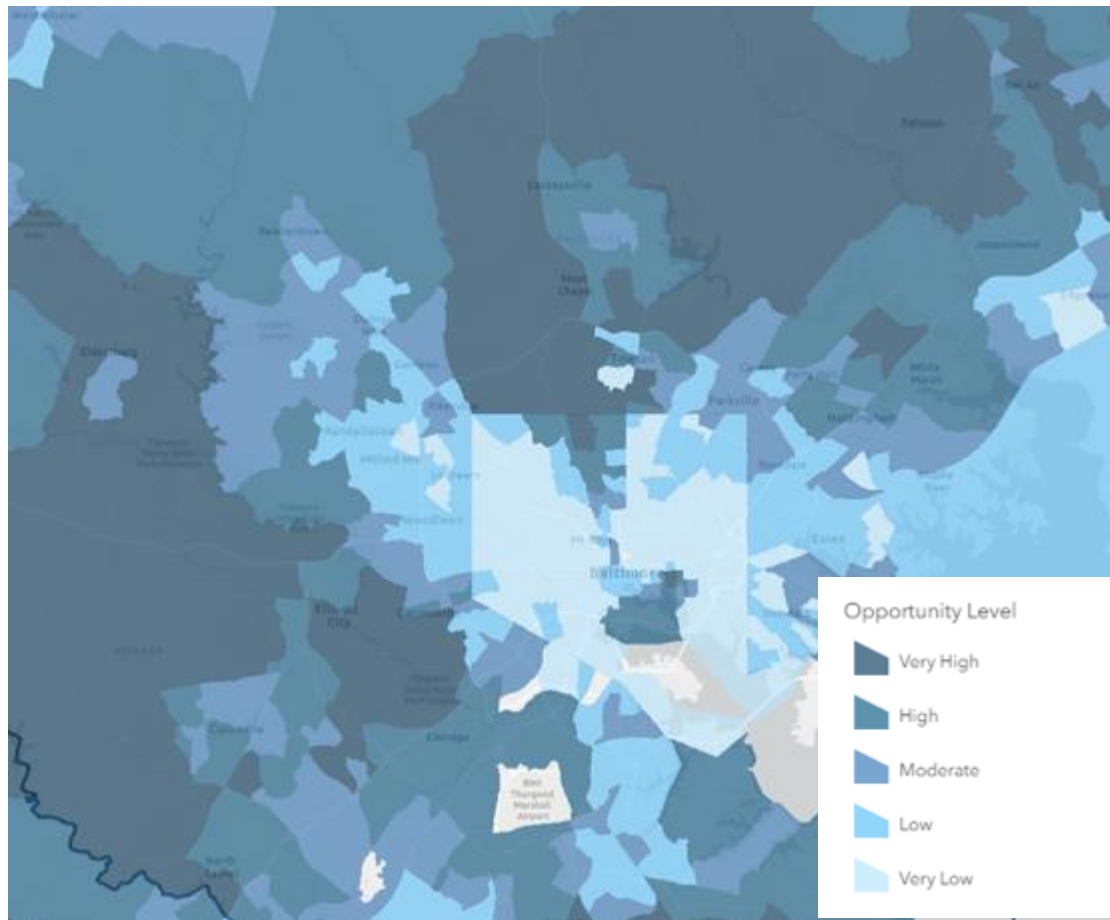


## BALTIMORE-COLUMBIA-TOWSON METRO AREA

# 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](https://diversitydatakids.org). Child Opportunity Index 2.0 Database. 2015 metro normed Child Opportunity Levels.



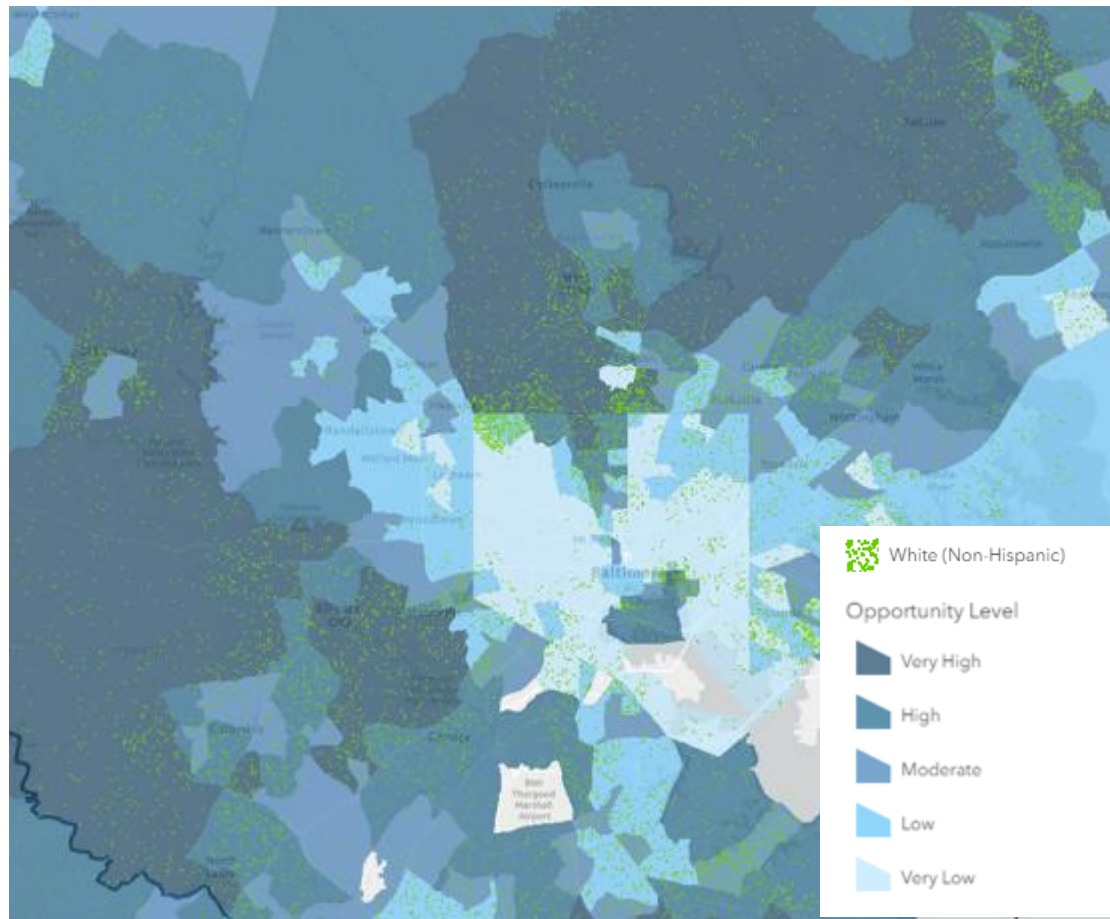
## BALTIMORE-COLUMBIA-TOWSON METRO AREA

# White children's access to neighbor- hood 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.



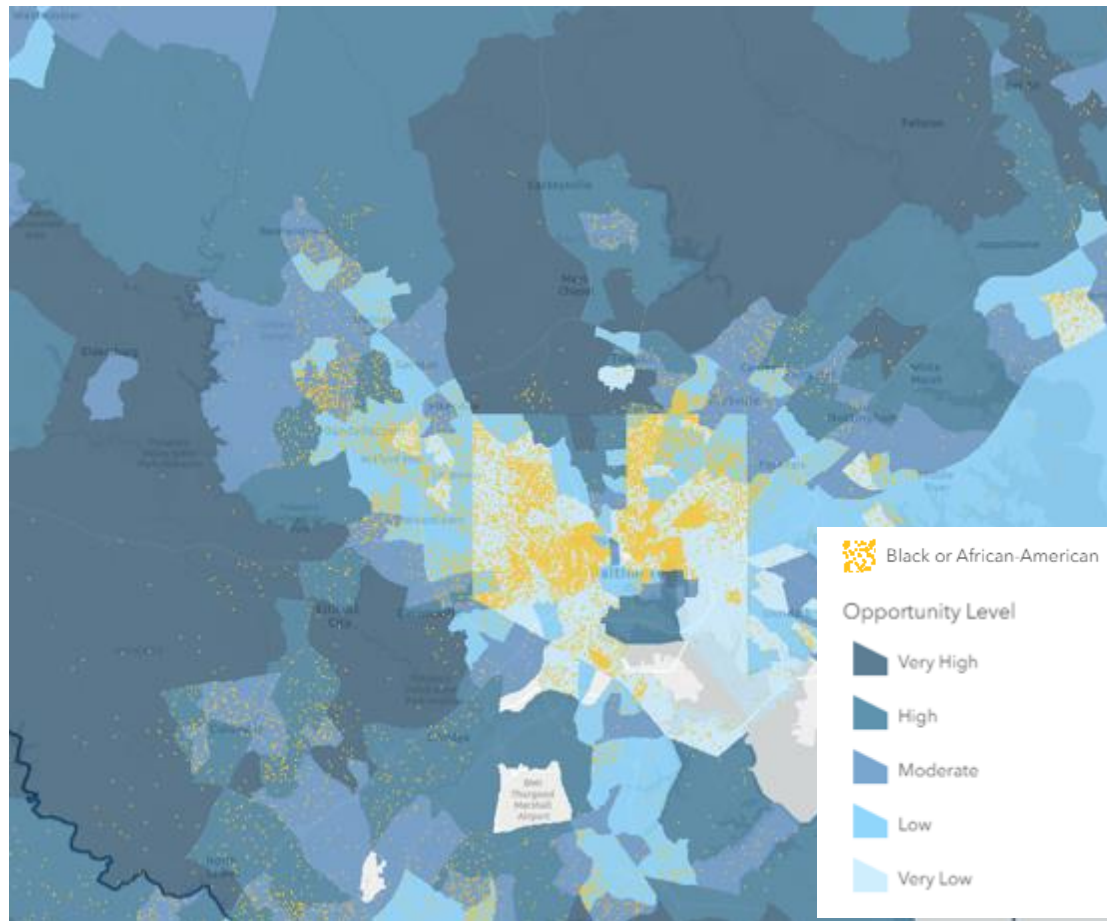
## BALTIMORE-COLUMBIA-TOWSON METRO AREA

# Black children's access to neighbor-hood opportunity

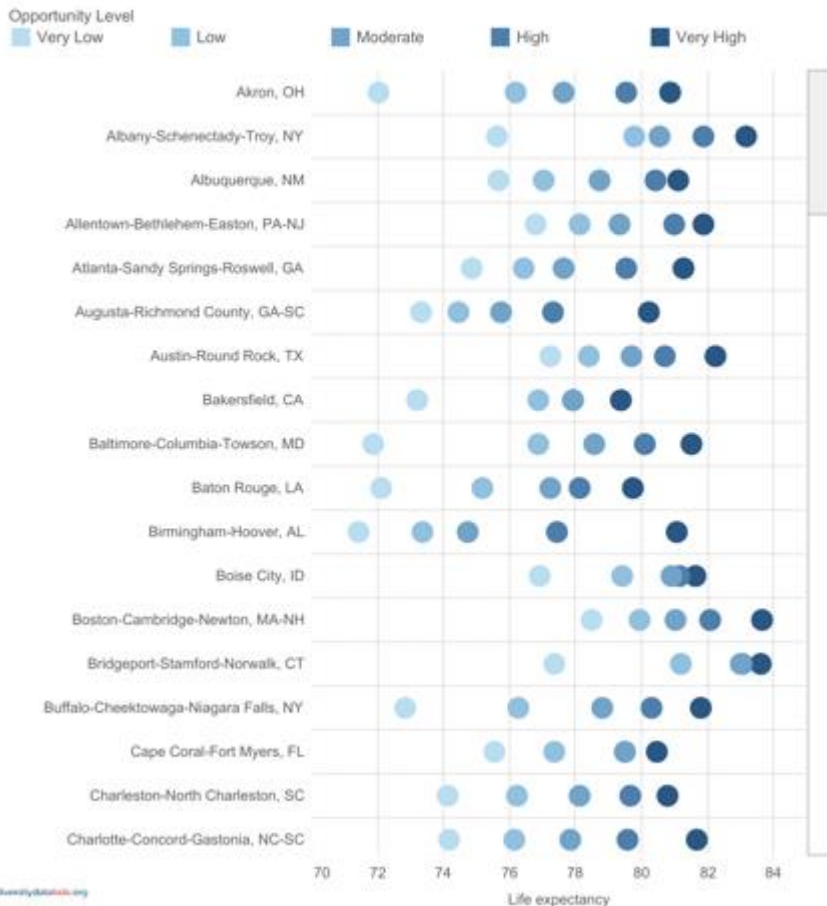
## Child Opportunity Levels

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

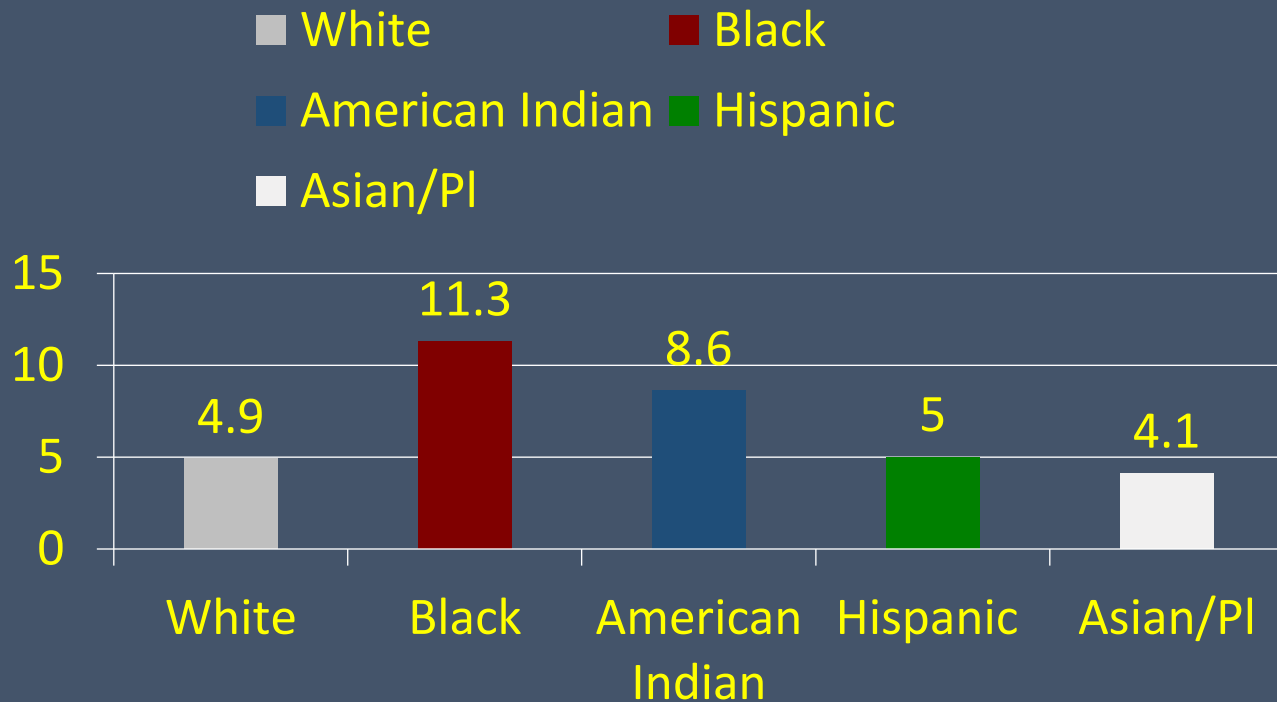


Child Opportunity Index  
correlates strongly with  
Life Expectancy

*"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



In Collaboration with

# 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

Brought to you by  
Hamad Healthcare Quality Institute



# 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

brought to you by  
Hamad Healthcare Quality Institute

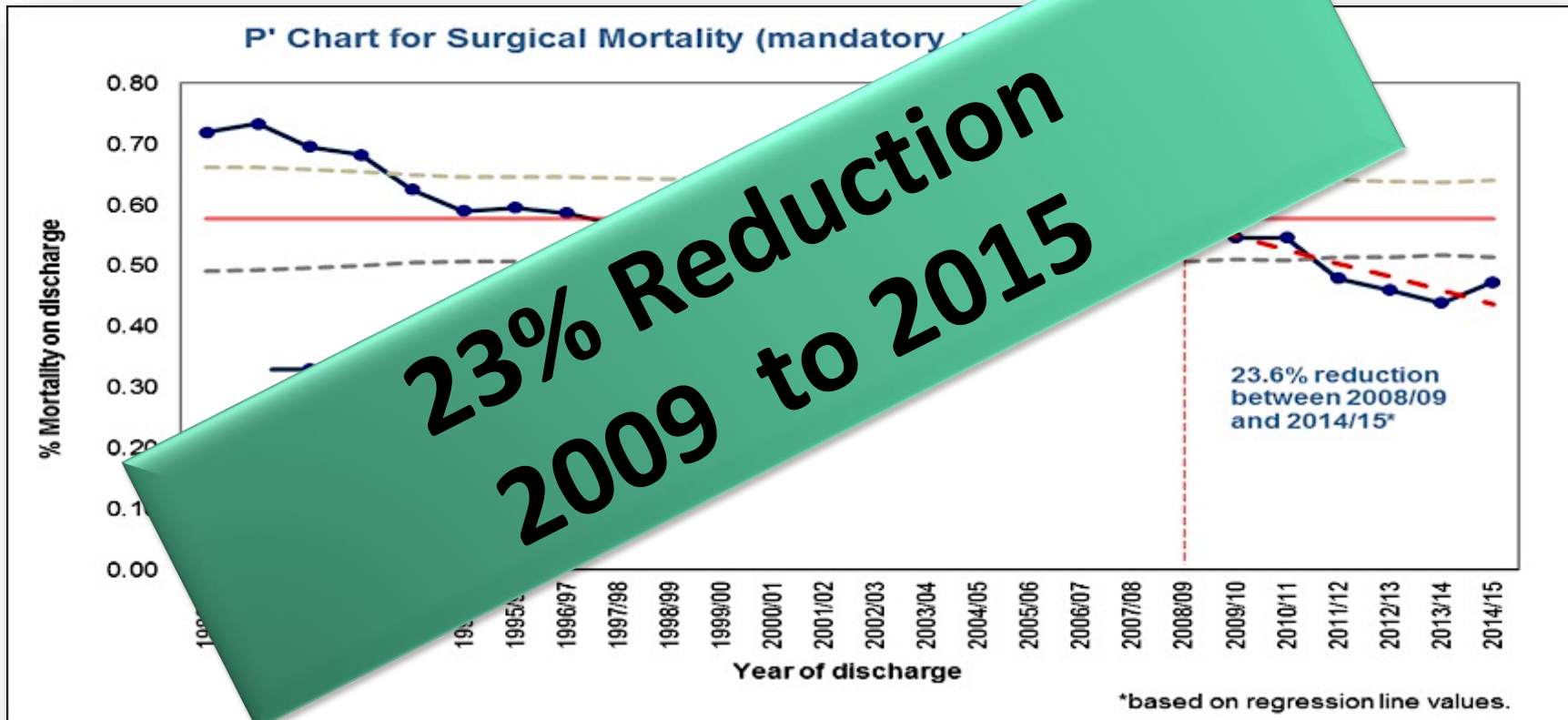


# Leaders Can Address Burnout Effectively





# 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.”

Brought to you by  
Hamad Healthcare Quality Institute

# A Possible Pathway: Integrated Care Systems

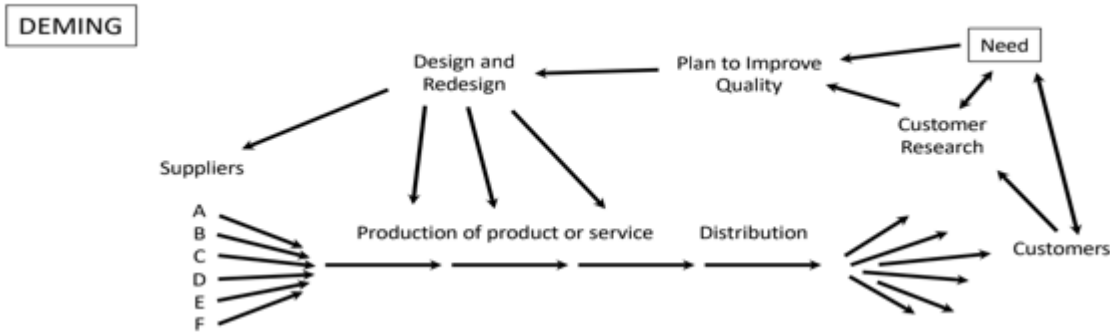
- The US: “Value-Based Payment” and related delivery structures.
- Scotland: Community improvement leadership by NHS Scotland
- England: “Integrated Care Systems” as the core delivery framework.
- Singapore: “Healthy Singapore” and reorientation of hospital clusters.
- Qatar: National Health Strategy



# “The Big Six”

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

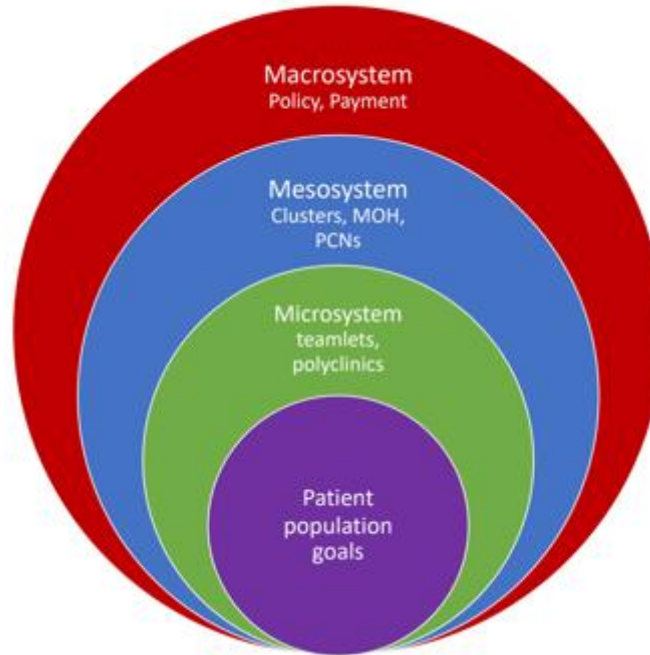
# A System of Production and Improvement



- 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.

Adapted from: Langley, Nolan, Nolan, Norman, & Provost. The Improvement Guide: A Practical Approach to Enhancing Organizational Performance. San Francisco, CA: Jossey-Bass Publishers, 1996; pg.265.

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



#### Infrastructure

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

Brought to you by  
Quality Institute



# 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**

