

Measurement and Health Equity

An Introduction

Metrics That Matter For Population Health
Institute of Medicine Roundtable on Population
Health Improvement
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What If We Were Equal? A Comparison Of The Black-White Mortality Gap In 1960 And 2000

Closing this gap could eliminate more than 83,000 excess deaths per year among African Americans.

by David Satcher, George E. Fryer Jr., Jessica McCann, Adewale Troutman, Steven H. Woolf, and George Rust

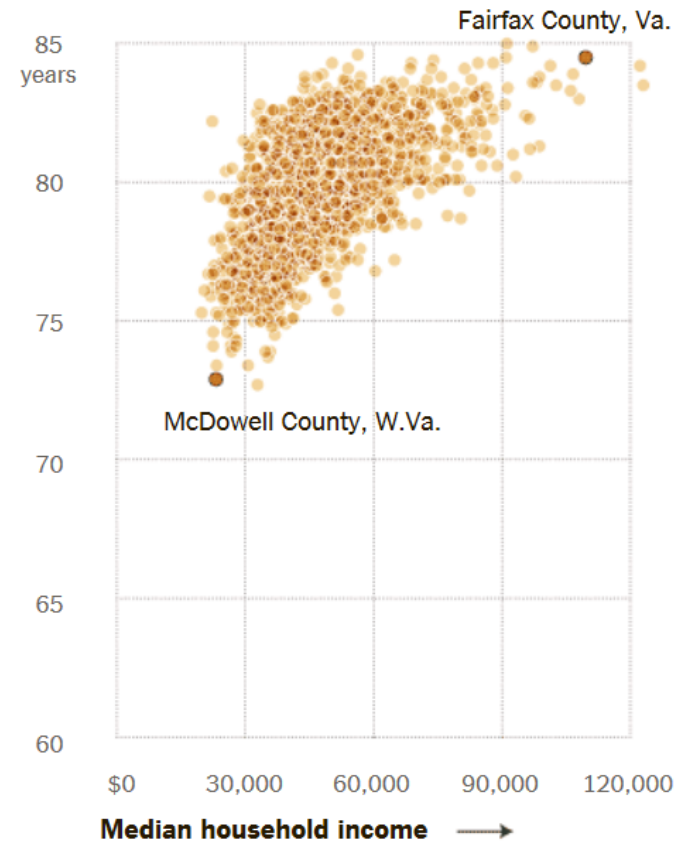
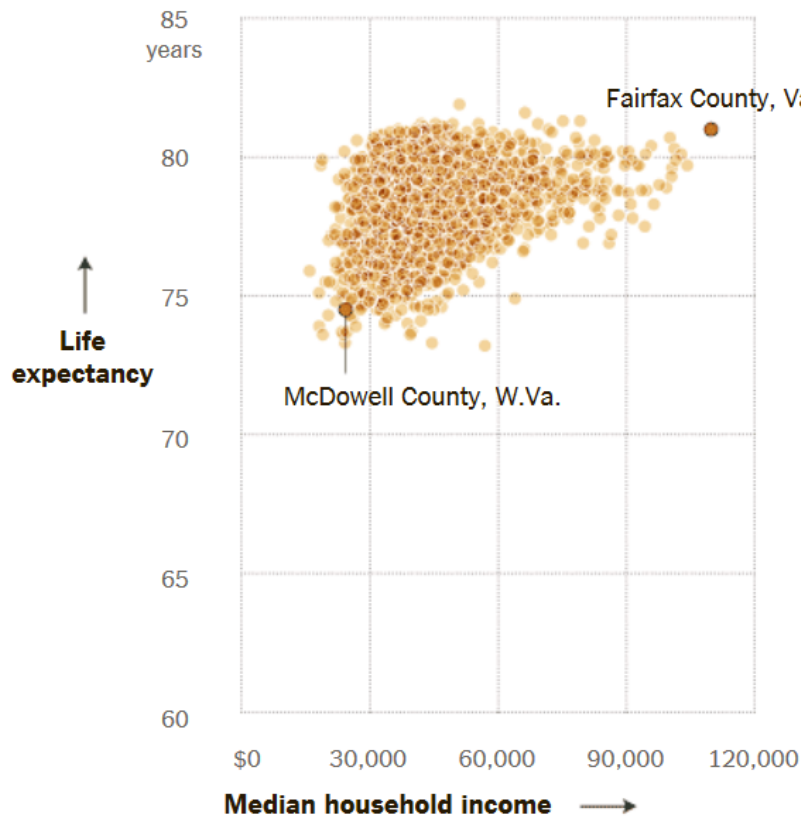
ABSTRACT: The United States has made progress in decreasing the black-white gap in civil rights, housing, education, and income since 1960, but health inequalities persist. We examined trends in black-white standardized mortality ratios (SMRs) for each age-sex group from 1960 to 2000. The black-white gap measured by SMR changed very little between 1960 and 2000 and actually worsened for infants and for African American men age thirty-five and older. In contrast, SMR improved in African American women. Using 2002 data, an estimated 83,570 excess deaths each year could be prevented in the United States if this black-white mortality gap could be eliminated.

Source: *Health Aff* 2005;24:459-64.

1990

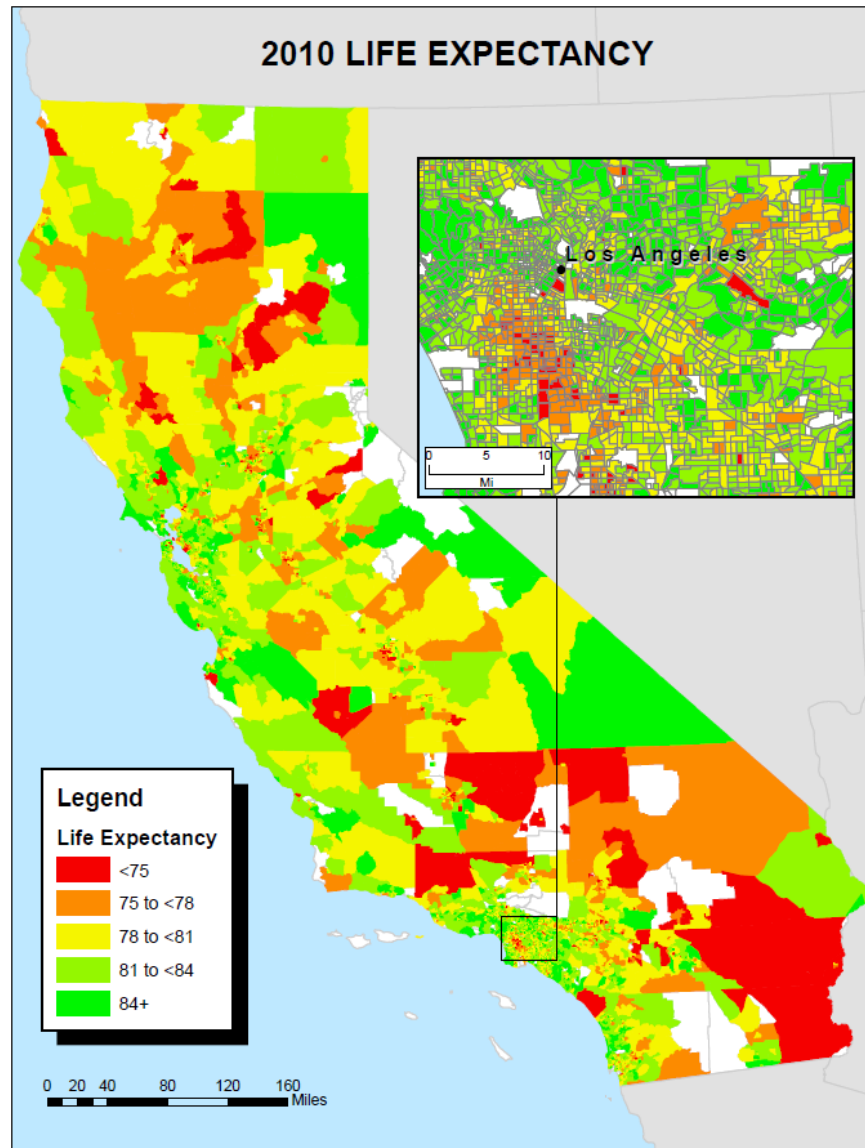
Women

Today



By ALICIA PARLAPIANO

Sources: Institute for Health Metrics and Evaluation (life expectancy); socialexplorer.com (income data from the 1990 decennial Census and 2008-2012 American Community Survey)

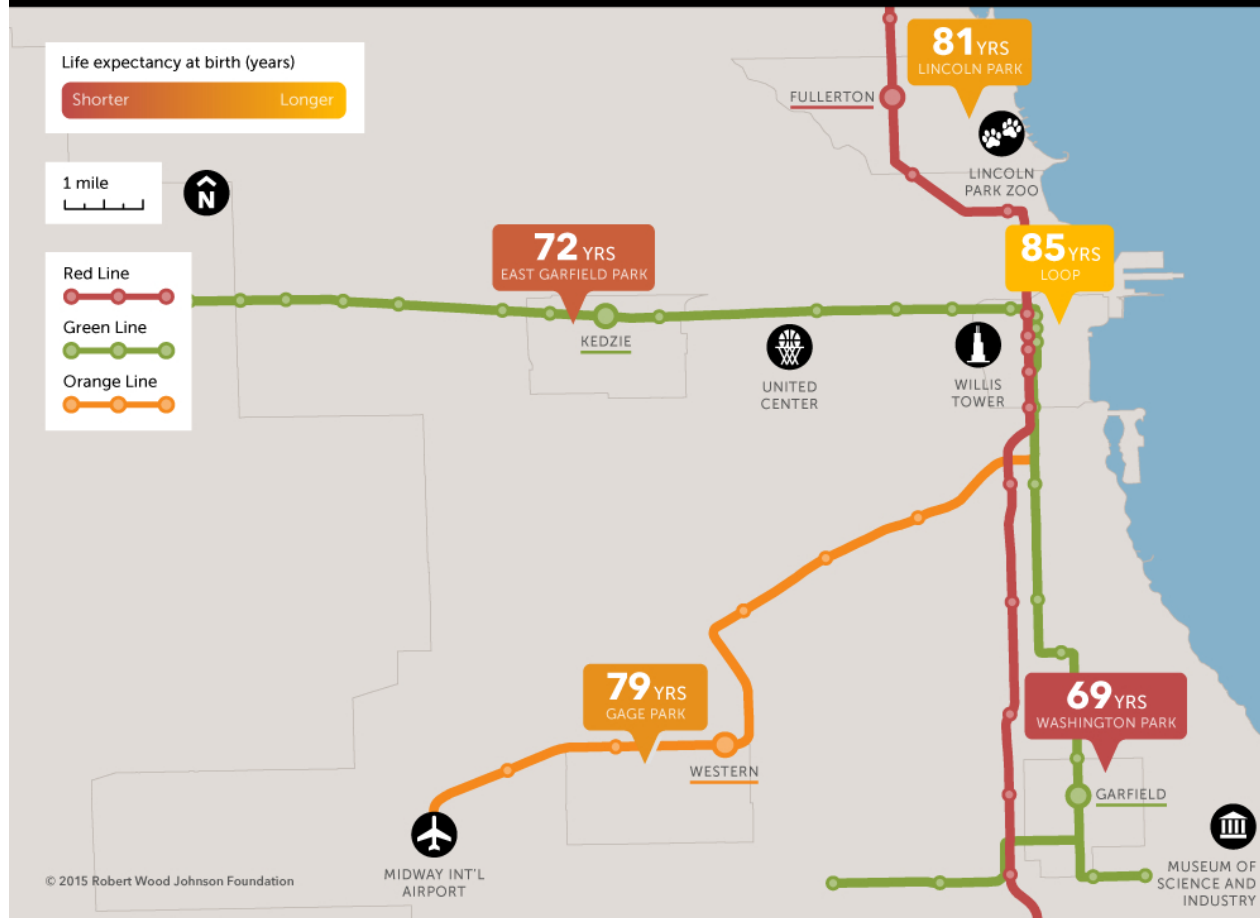


CHICAGO, ILLINOIS

Short Distances to Large Gaps in Health

Follow the discussion

#CloseHealthGaps



Same City, but Very Different Life Spans

By **SABRINA TAVERNISE** and **ALBERT SUN** APRIL 28, 2015

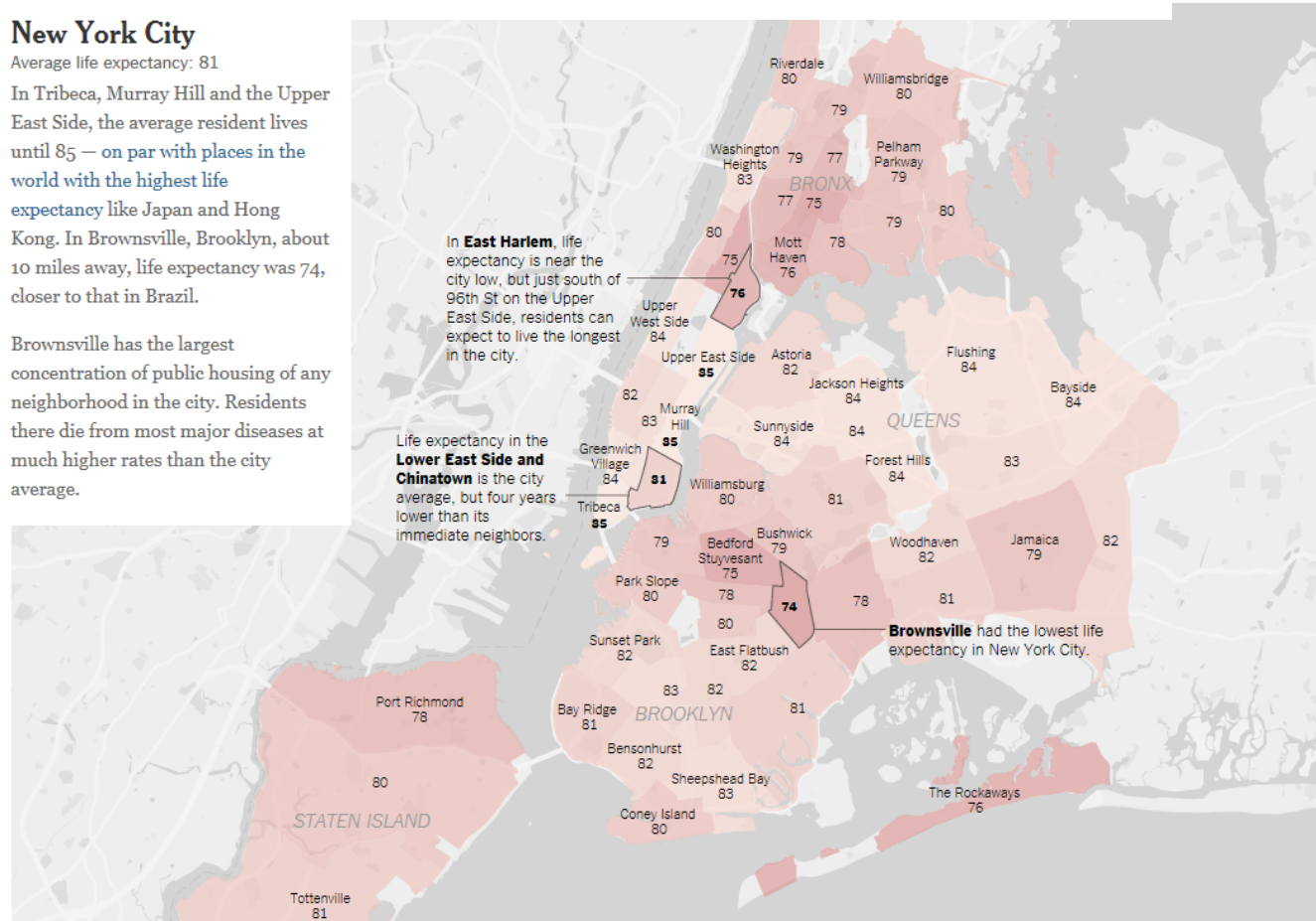
Life expectancy is a measure unlike any other, a sort of X-ray machine that can see through the geography of a city to the bones of a neighborhood's distress. This week, researchers from Virginia Commonwealth University and the Robert Wood Johnson Foundation released life expectancy calculations for four cities, part of a broader series whose aim is to influence social policy.

New York City

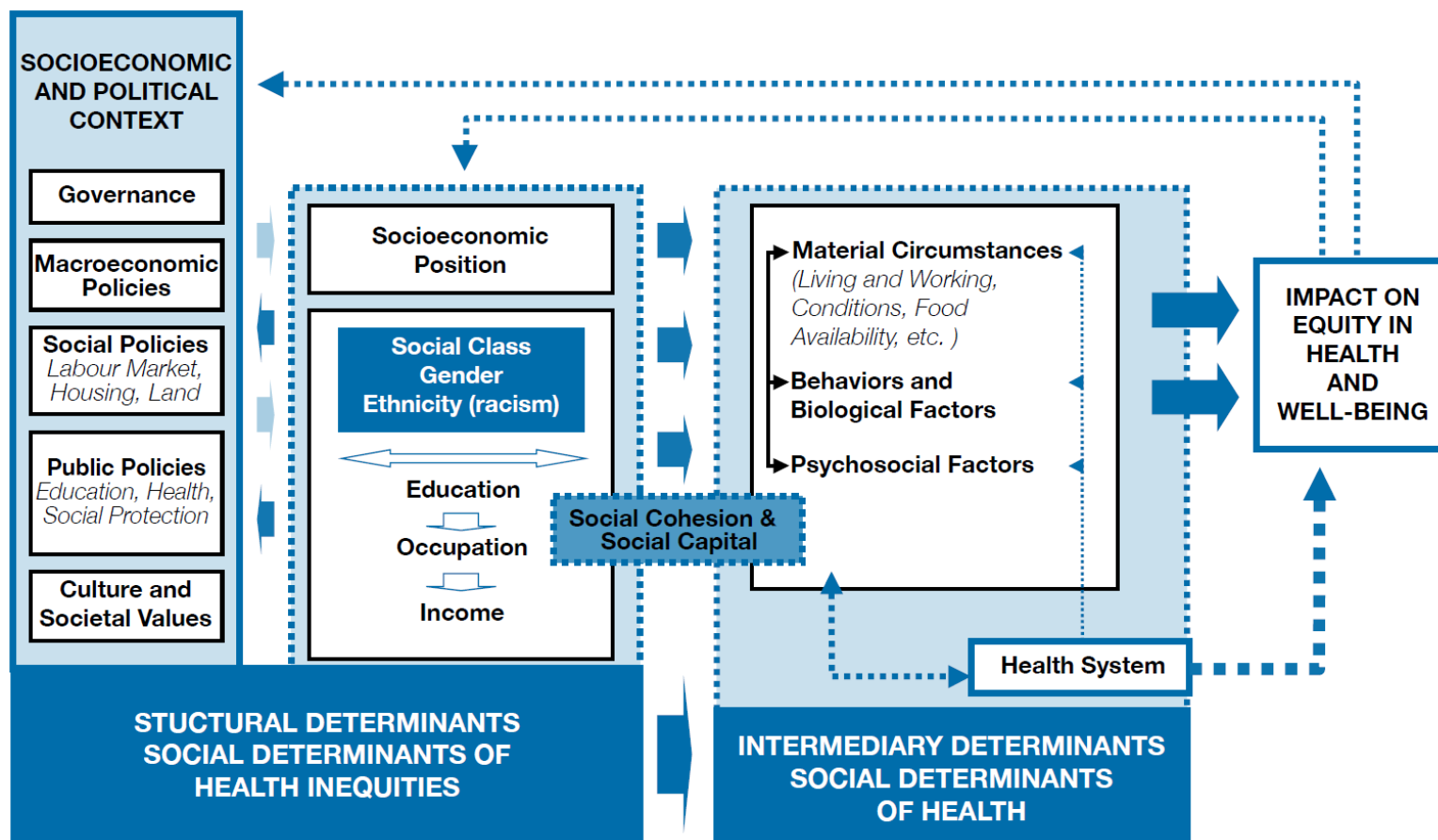
Average life expectancy: 81

In Tribeca, Murray Hill and the Upper East Side, the average resident lives until 85 — on par with places in the world with the highest life expectancy like Japan and Hong Kong. In Brownsville, Brooklyn, about 10 miles away, life expectancy was 74, closer to that in Brazil.

Brownsville has the largest concentration of public housing of any neighborhood in the city. Residents there die from most major diseases at much higher rates than the city average.



WHO Conceptual Model

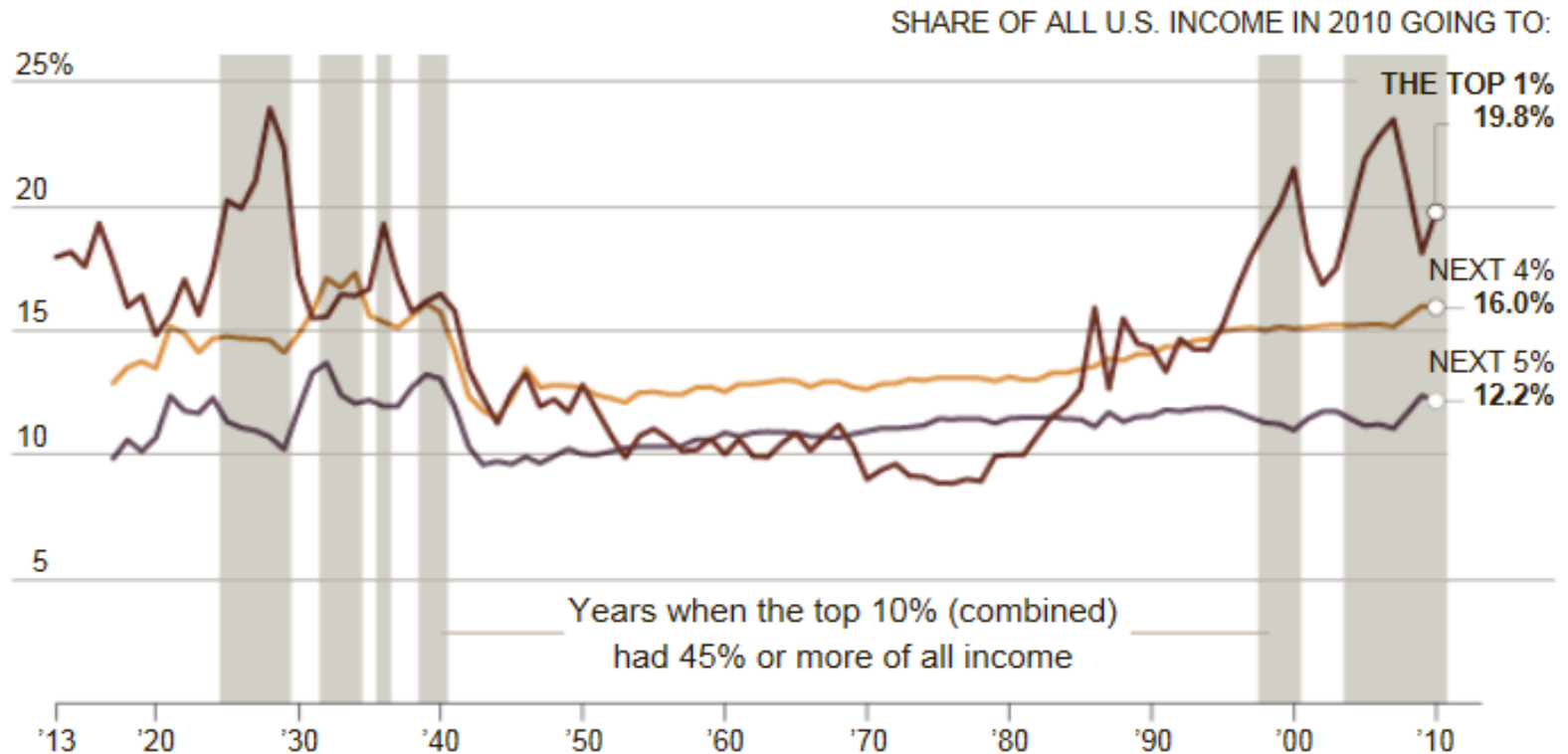


From: *A Conceptual Model for Taking Action on the Social Determinants of Health*.
Geneva: World Health Organization, 2010

Why the Differences?

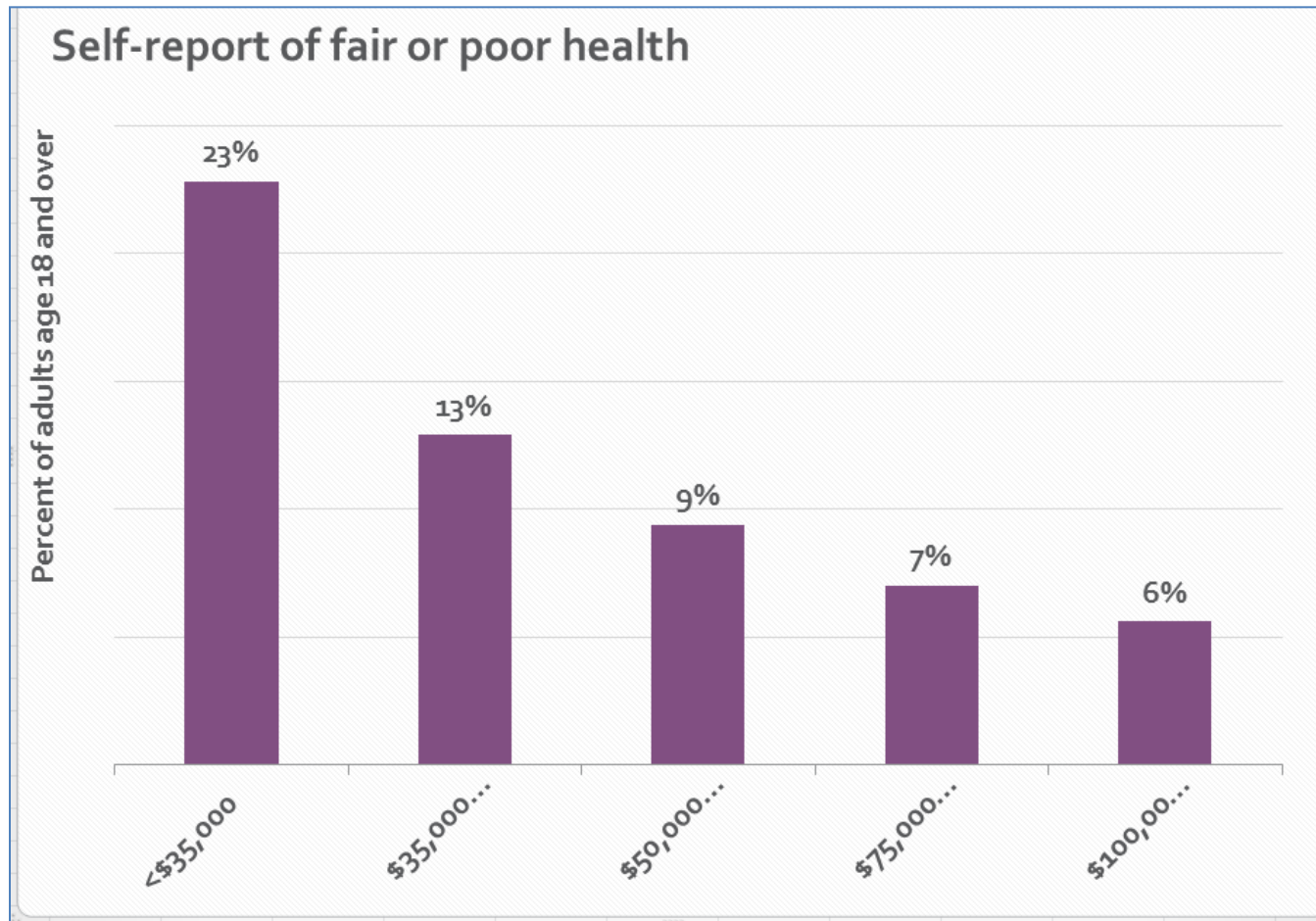
- **Education and income** are directly linked to health: Communities with weak tax bases cannot support high-quality schools and jobs are often scarce in neighborhoods with struggling economies.
- **Unsafe or unhealthy housing** exposes residents to allergens and other hazards like overcrowding.
- **Stores and restaurants selling unhealthy food** may outnumber markets with fresh produce or restaurants with nutritious food.
- **Opportunities for residents to exercise, walk, or cycle** may be limited and some neighborhoods are unsafe for children to play outside.
- **Proximity to highways, factories, or other sources of toxic agents** expose residents to pollutants.
- **Access to primary care doctors and good hospitals** may be limited.
- **Unreliable or expensive public transit** can isolate residents from good jobs, health and child care, and social services.
- **Residential segregation and features that isolate communities** (e.g., highways) can limit social cohesion, stifle economic growth, and perpetuate cycles of poverty.

Income Inequality

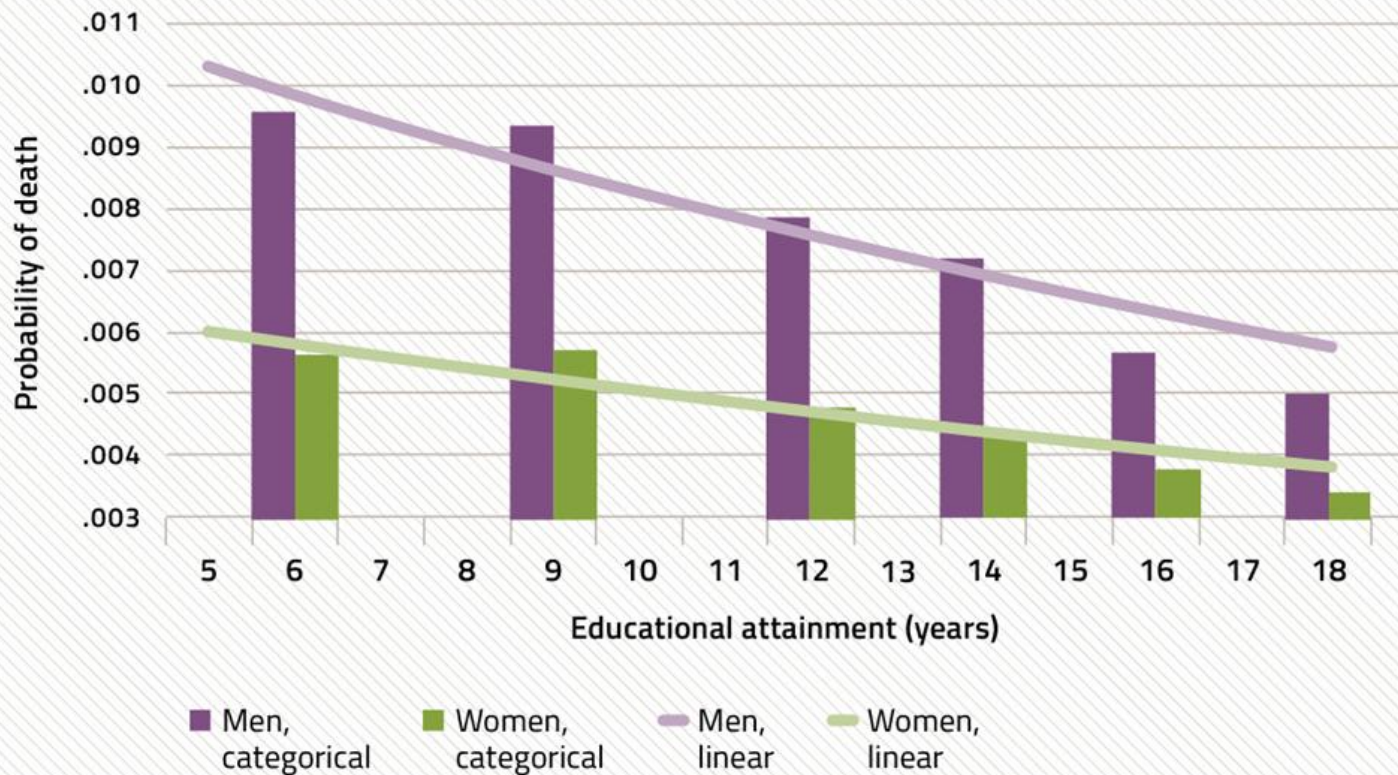


Source: New York Times, April 16, 2012

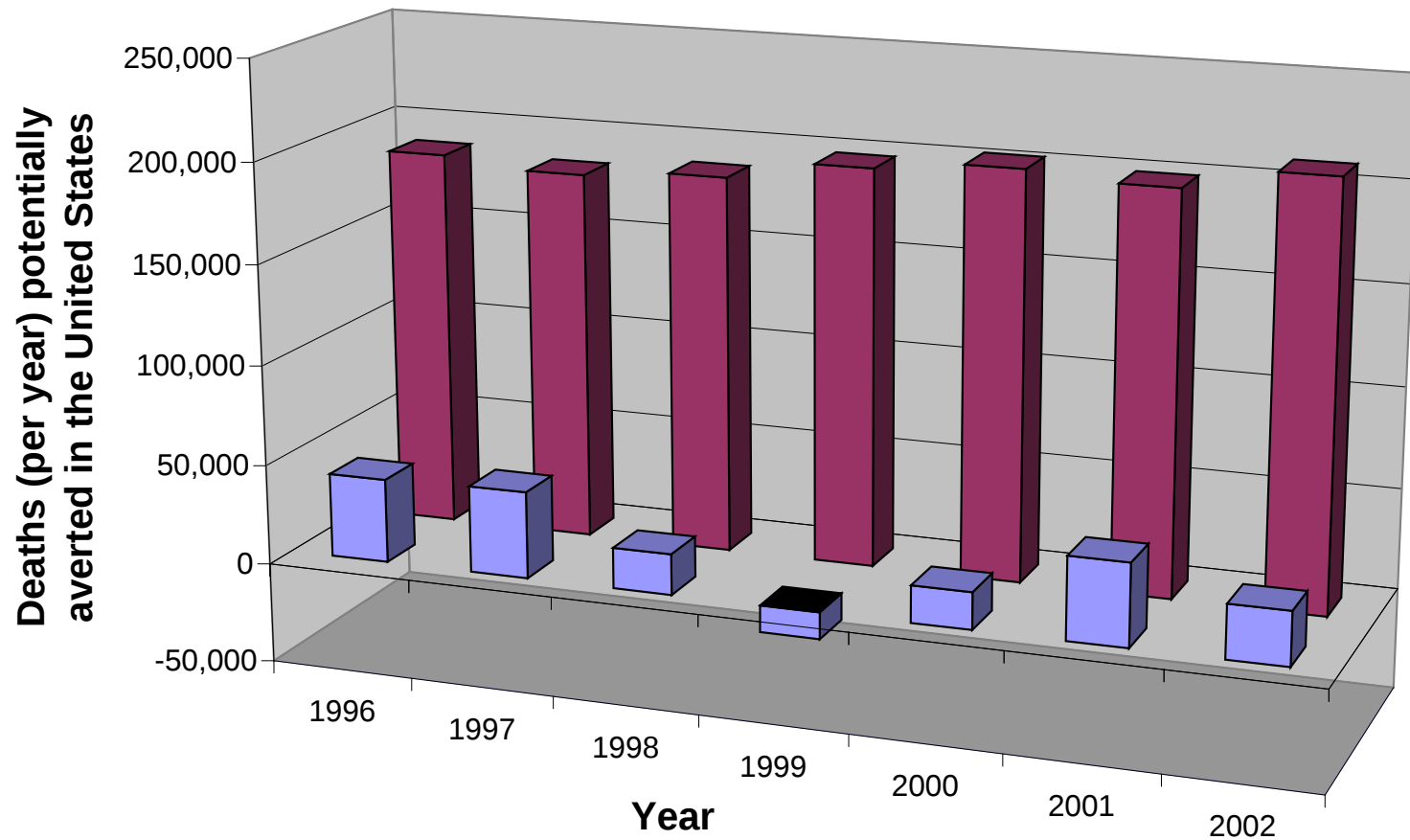
Income and Disease Burden



All-cause mortality risk for men and women by years of education



Data derived from regression modeling. Reprinted from Ross et al. *Demography*. 2012;49:1157-83.



- Deaths potentially averted by medical advances (see footnotes)
- Deaths potentially averted by eliminating education-associated excess mortality (see footnotes)

The role of place

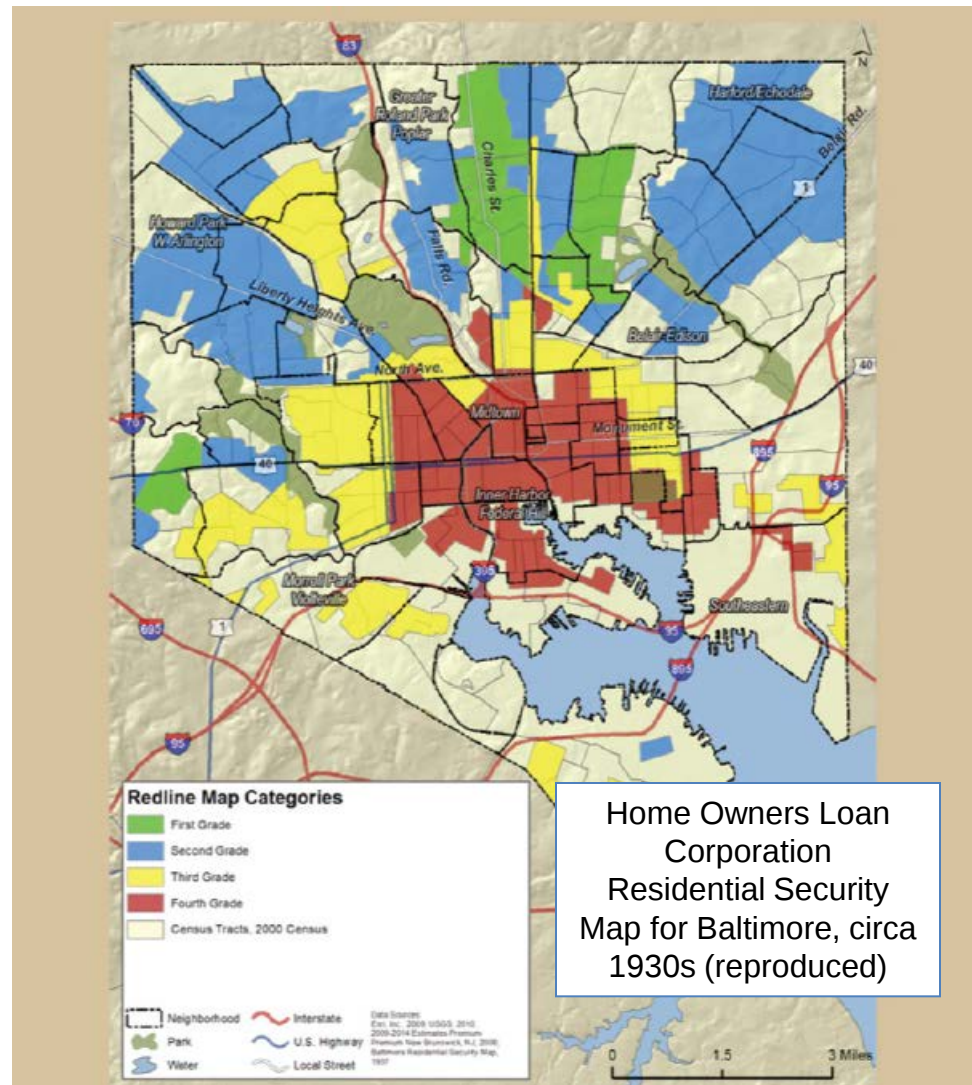


The role of policy

Neighborhood Characteristics and Health in Baltimore, Maryland

TECHNICAL REPORT
Center on Human Needs
Virginia Commonwealth University
Richmond, Virginia

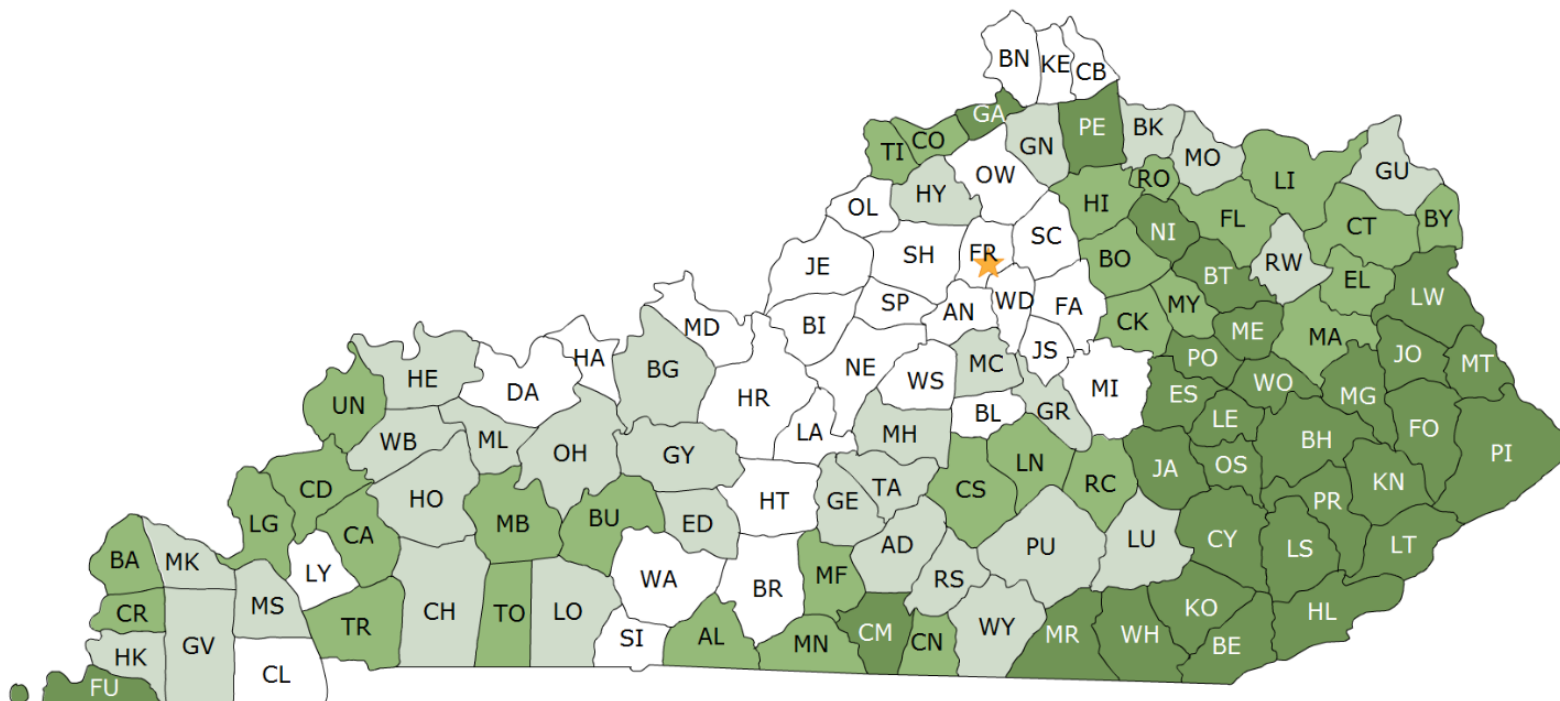
September 2012





County Health Rankings

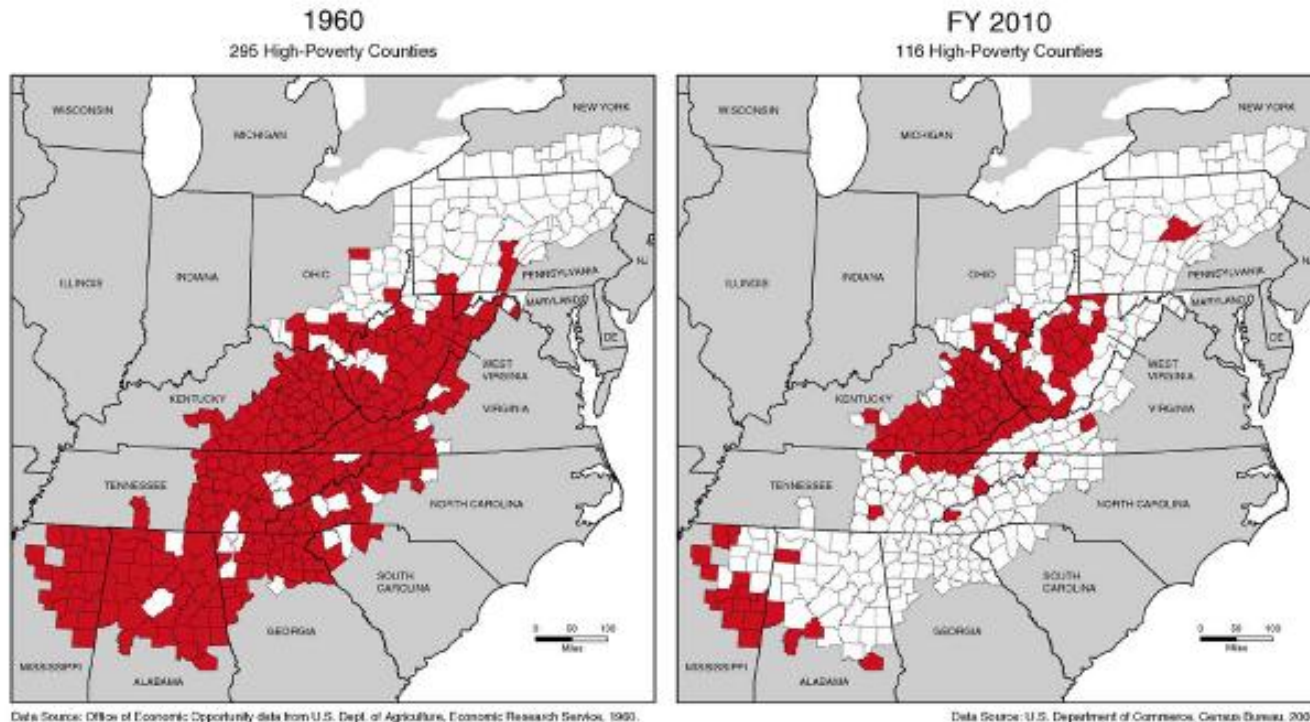
2014 Health Outcomes - Kentucky



Rank 1-30 Rank 31-60 Rank 61-90 Rank 91-120

Persistent Poverty

High-Poverty Counties in the Appalachian Region (Counties with Rates At Least 1.5 Times the U.S. Average)



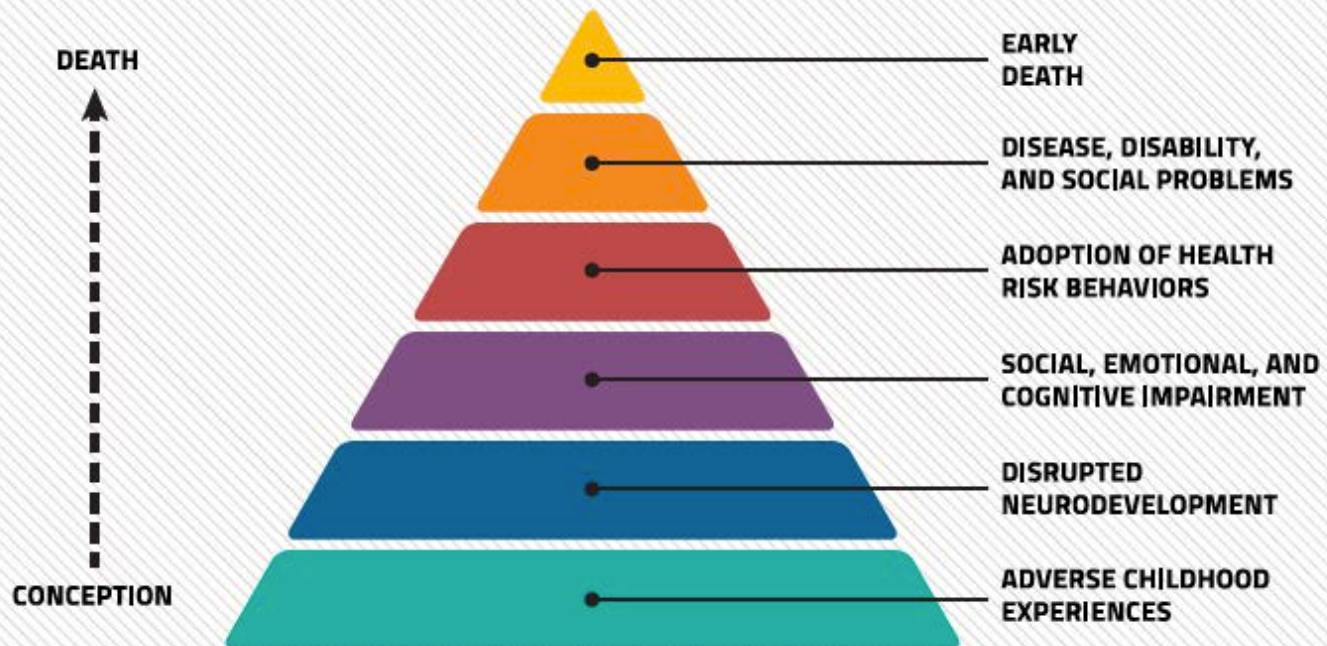


John Dominis—Time & Life Pictures/Getty Images

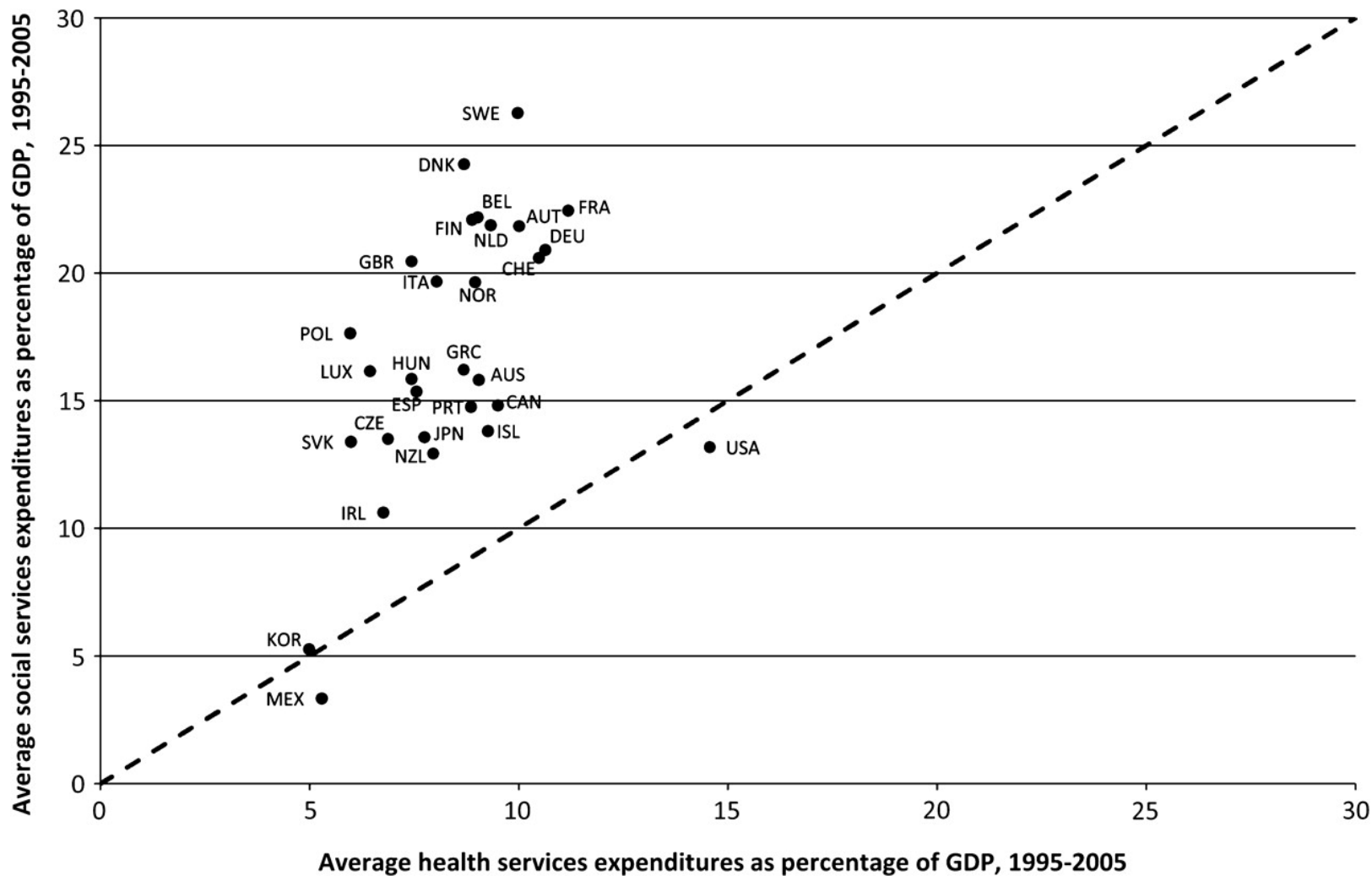
Caption from LIFE. "All over Appalachia the ruins of trestles jut from deserted hillside coal mines. This mine, once owned by Thornton Mining Co., was making big money 20 years ago. It paid miners \$8.50 a day -- good pay in those days -- and wealth flowed through the valley. The mine closed in 1945."

 FULL SCREEN

How Adverse Childhood Experiences Can Influence Health Throughout Life



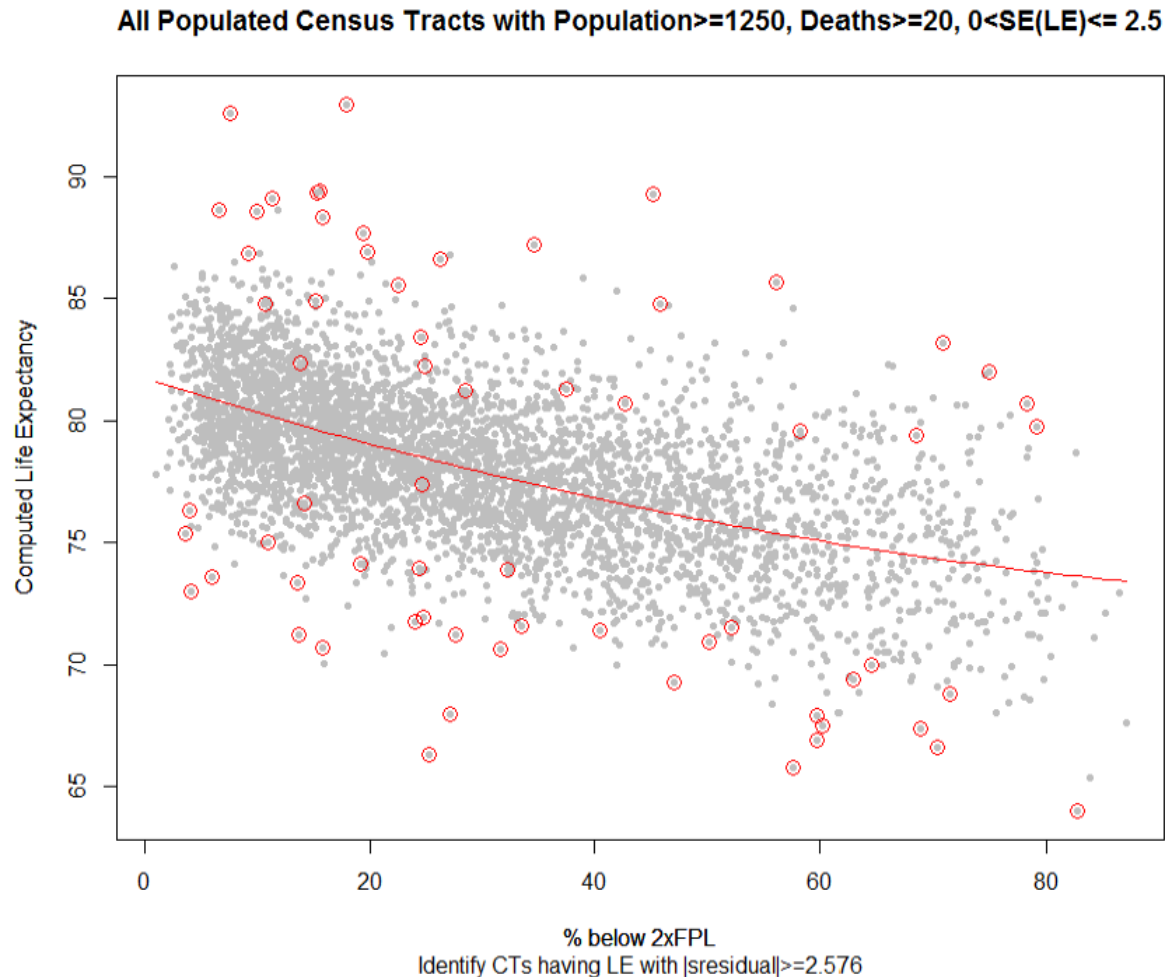
Adapted from Felitti et al., 1998 and Whitfield CL at <http://www.cbwhit.com/ACEstudy.htm>.



Bradley E H et al. BMJ Qual Saf 2011;20:826-831

Census tract life expectancy by income

(% of population living with incomes below twice the poverty threshold)



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