

UNDERSTANDING THE SOCIAL DETERMINANTS OF HEALTH

Association of Schools of Allied Health Professions
St. Petersburg, Florida
October 10, 2018

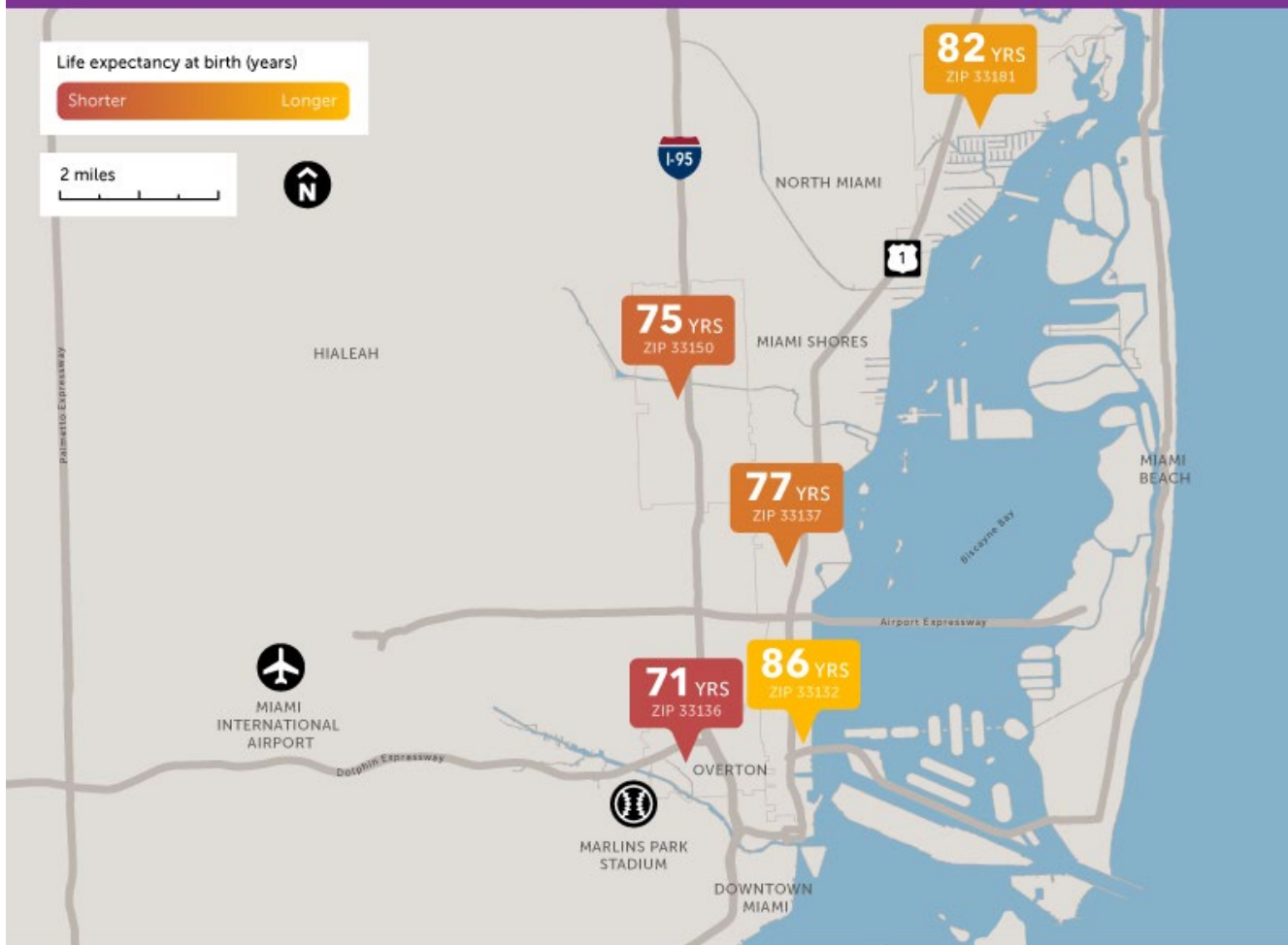
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Department of Family Medicine and Population Health
Center on Society and Health
Virginia Commonwealth University
swolf@vcu.edu

MIAMI, FLORIDA

Short Distances to Large Gaps in Health

Follow the discussion

#CloseHealthGaps



HEALTH CARE APRIL 6, 2016 2:00 AM

In Miami, babies born a few miles apart face 15-year gap in life expectancy

HIGHLIGHTS

Social, economic and environmental factors all play role in longevity

Researchers urge need for collaborative approach to public health

Longest life expectancy found in Key Biscayne, shortest in Overtown



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What was wrong with this ad?

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HEALTH CARE

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In Miami, babies born a few miles apart face 15-year gap in life expectancy

HIGHLIGHTS

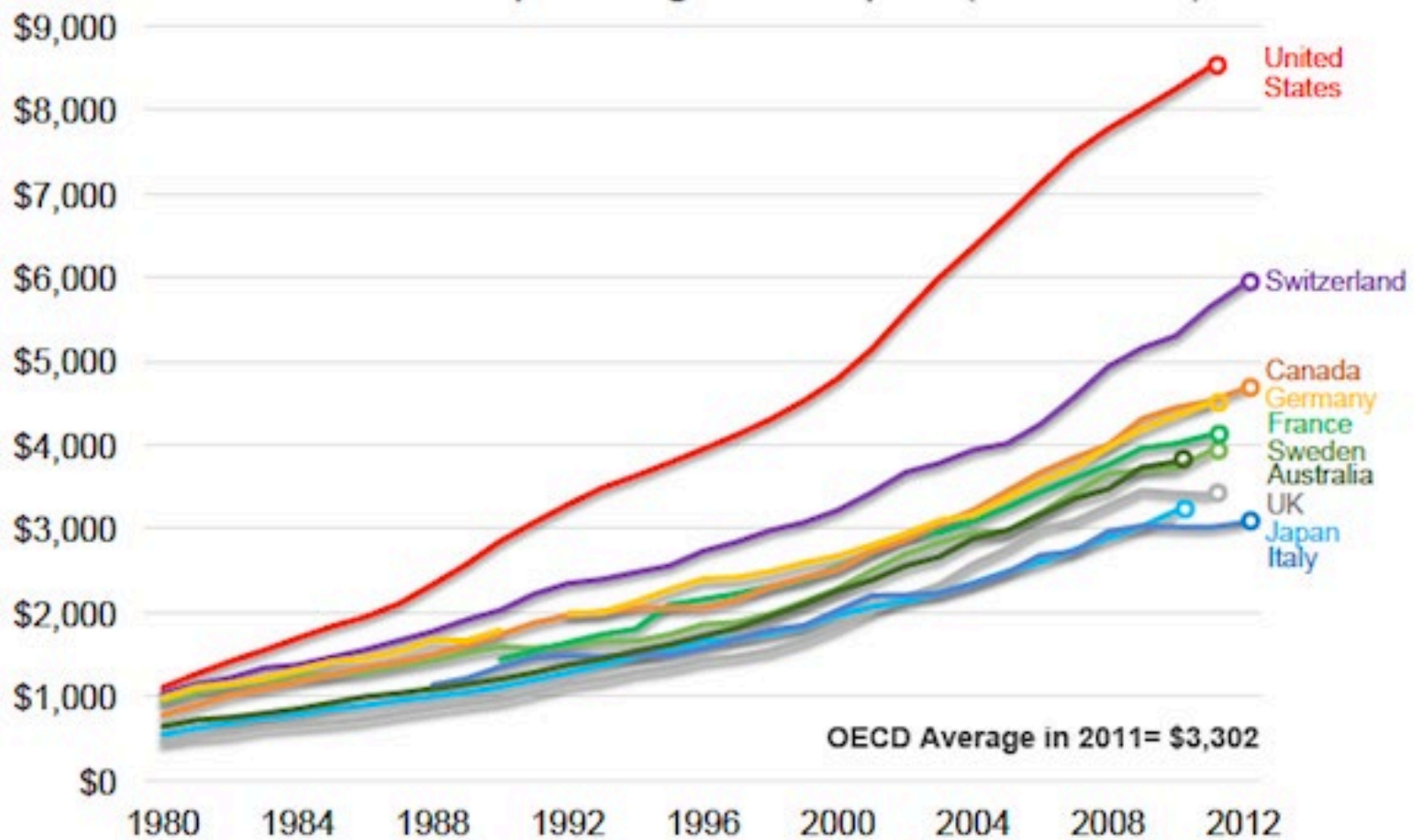
Social, economic and environmental factors all play role in longevity

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Health care spending, per capita

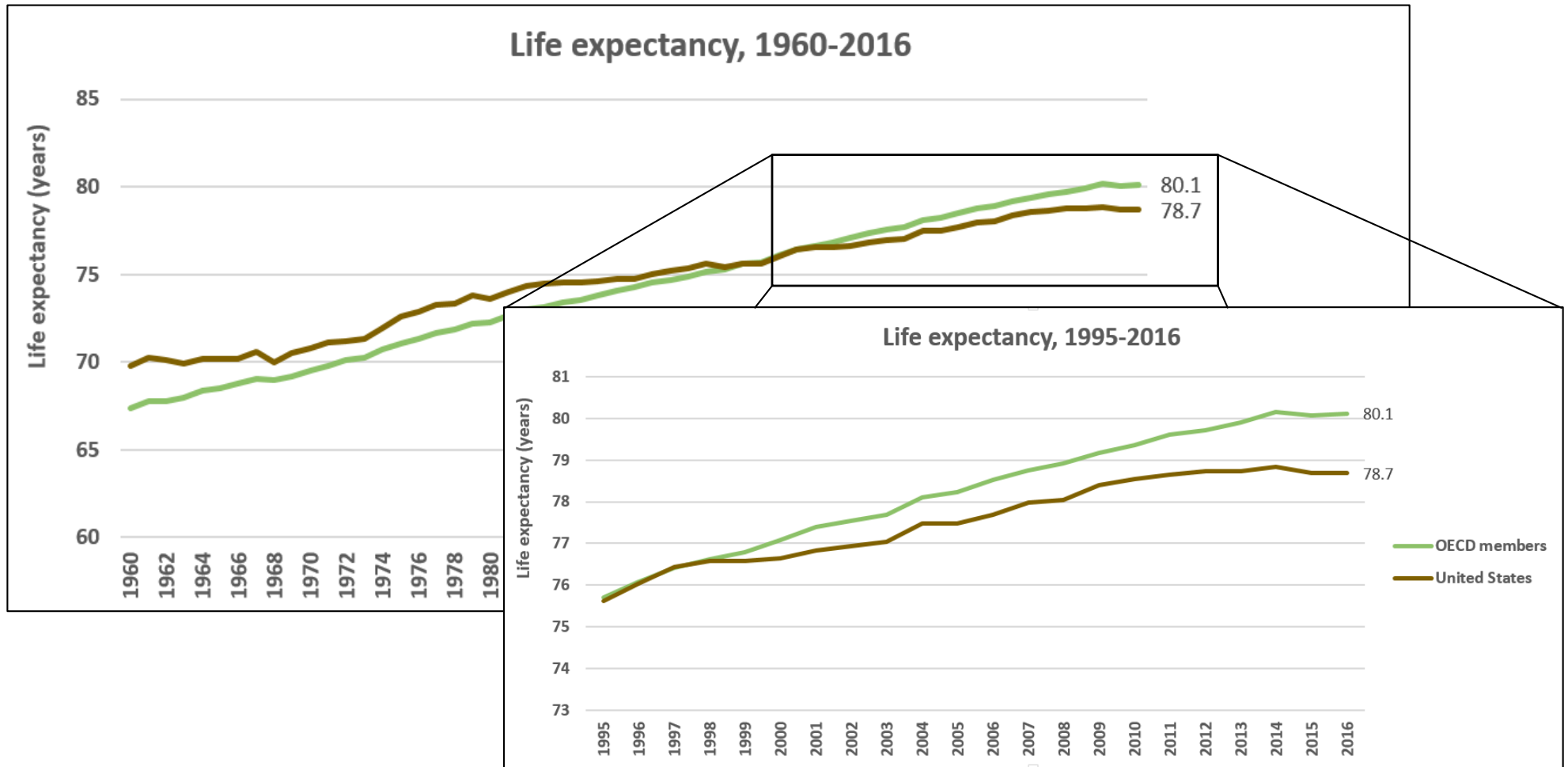


Source: OECD Health Data 2013.

Data note: PPP = purchasing power parity.

Produced by Veronique de Rugy, Mercatus Center at George Mason University.

The decline in US health



Source: The World Bank. <https://data.worldbank.org/indicator/sp.dyn.le00.in>

U.S. HEALTH
IN
INTERNATIONAL PERSPECTIVE

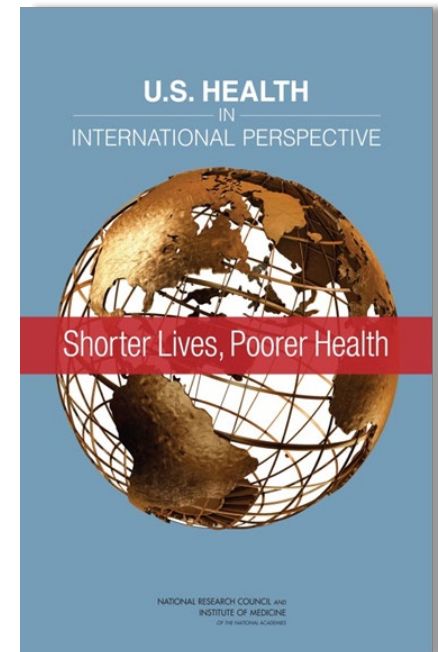
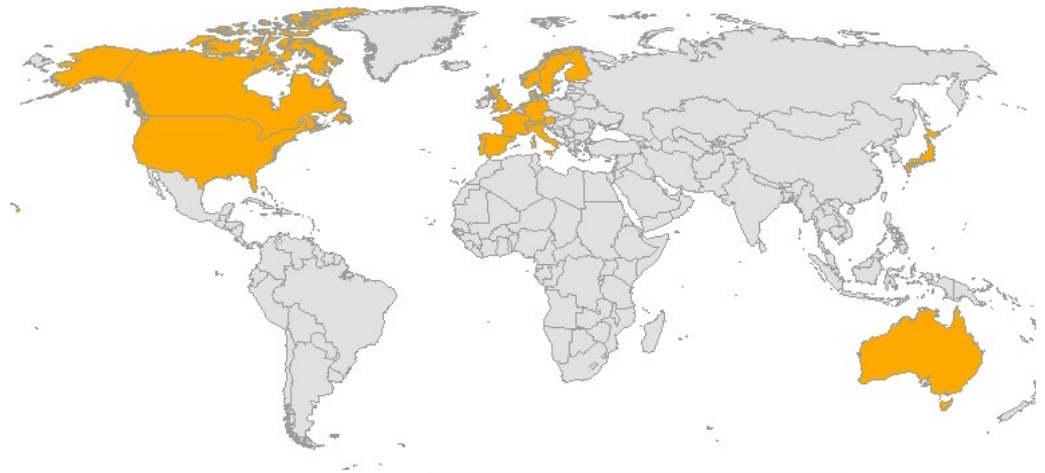


Shorter Lives, Poorer Health

NATIONAL RESEARCH COUNCIL AND
INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

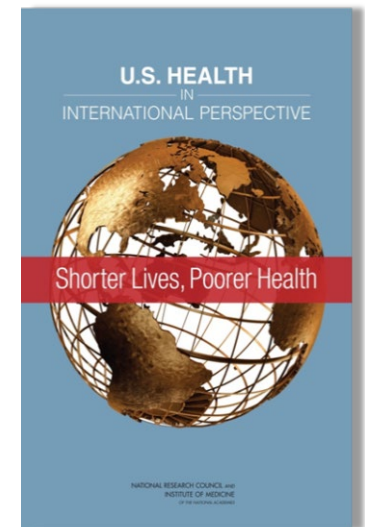
17 peer comparison countries

- Australia
- Austria
- Canada
- Denmark
- Finland
- France
- Germany
- Italy
- Japan
- Norway
- Portugal
- Spain
- Sweden
- Switzerland
- The Netherlands
- United Kingdom
- United States



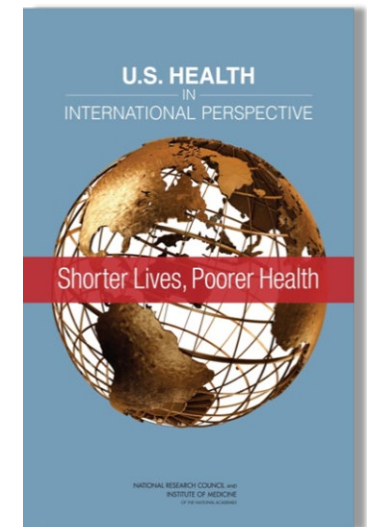
Life expectancy at birth, 2007

Males			Females		
Country	LE	Rank	Country	LE	Rank
Switzerland	79.33	1	Japan	85.98	1
Australia	79.27	2	France	84.43	2
Japan	79.20	3	Switzerland	84.09	3
Sweden	78.92	4	Italy	84.09	3
Italy	78.82	5	Spain	84.03	5
Canada	78.35	6	Australia	83.78	6
Norway	78.25	7	Canada	82.95	7
Netherlands	78.01	8	Sweden	82.95	7
Spain	77.62	9	Austria	82.86	9
United Kingdom	77.43	10	Finland	82.86	9
France	77.41	11	Norway	82.68	11
Austria	77.33	12	Germany	82.44	12
Germany	77.11	13	Netherlands	82.31	13
Denmark	76.13	14	Portugal	82.19	14
Portugal	75.87	15	United Kingdom	81.68	15
Finland	75.86	16	United States	80.78	16
United States	75.64	17	Denmark	80.53	17



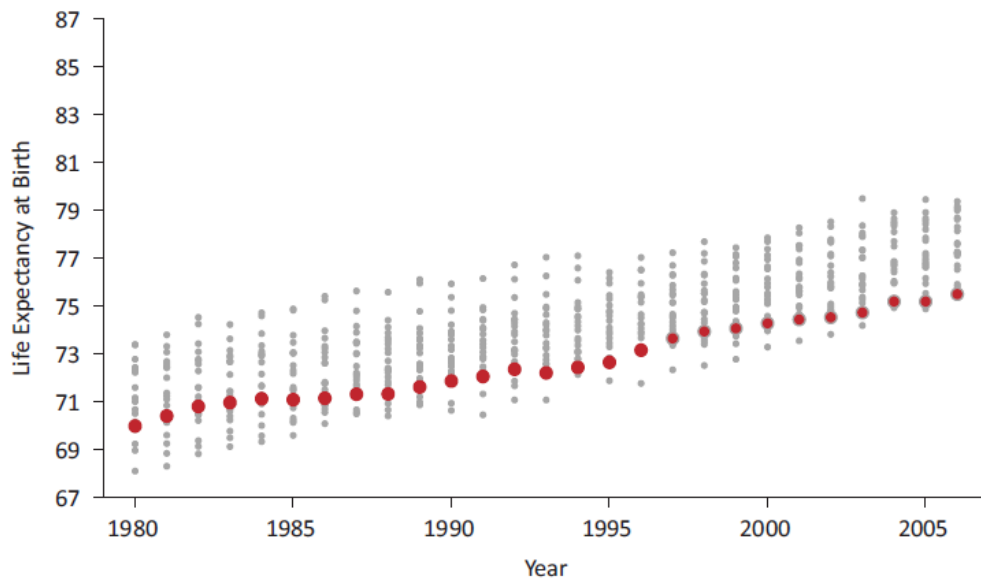
U.S. death rates relative to 16 peer countries

Cause of Death	Mortality Rate (per 100,000)		
	United States	Peer Countries (N = 16) Unweighted Mean	Range
	U.S. Death Rates Above Average		
Cardiovascular diseases ^a	155.7	133.6	97.4-174.9
Neuropsychiatric conditions ^b	39.2	28.1	7.2-48.4
Respiratory disease	34.3	21.0	12.7-34.4
Infectious and parasitic diseases	15.4	7.7	4.4-17.5
Diabetes mellitus	15.2	10.2	4.5-19.3
Genitourinary diseases ^c	12.3	7.2	3.0-12.2
Endocrine disorders	7.1	4.2	1.6-8.1
Congenital anomalies	4.3	3.3	2.6-4.0
Musculoskeletal diseases ^d	2.9	2.4	1.2-3.5
Nutritional deficiencies	1.0	0.7	0.1-2.0
Skin diseases	0.8	0.6	0.1-1.5
Maternal conditions	0.4	0.1	0.0-0.2
Perinatal conditions	7.1	3.7	1.3-5.9
Unintentional injuries ^e	35.5	20.4	13.7-38.6
Intentional injuries	17.3	11.4	5.6-20.2
	U.S. Death Rates at or Below Average		
Malignant neoplasms ^f	123.8	127.3	106.5-157.7
Digestive diseases ^g	19.8	19.8	13.0-29.5
Respiratory infections	9.7	12.3	4.0-29.7
Other neoplasms	2.9	3.3	2.1-5.3
Oral conditions ^b	0.0	0.0	0.0-0.1
Sense organ diseases ^b	0.0	0.0	0.0

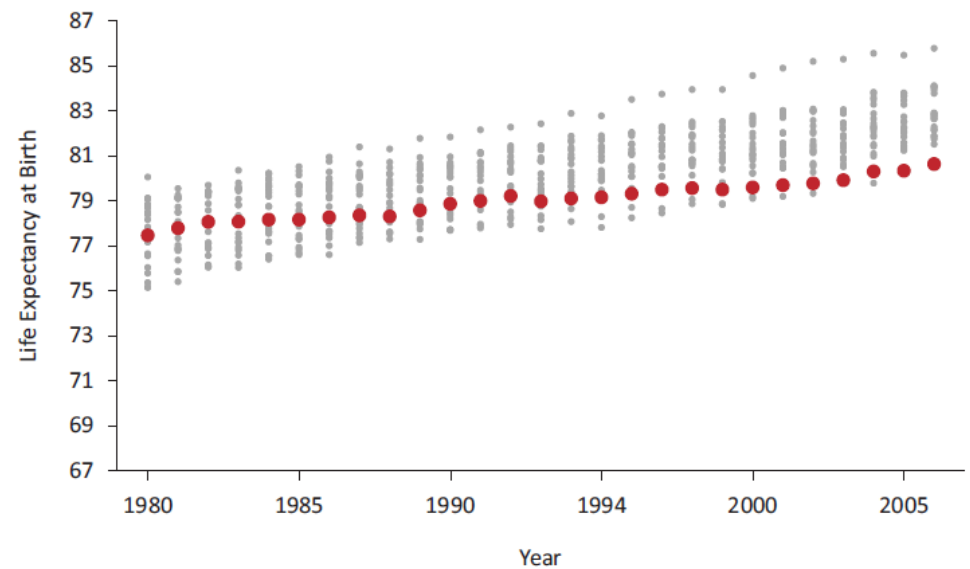


Life expectancy at birth in 21 high-income countries, 1980-2006

Males

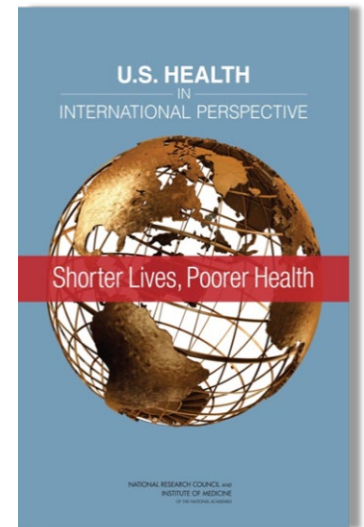
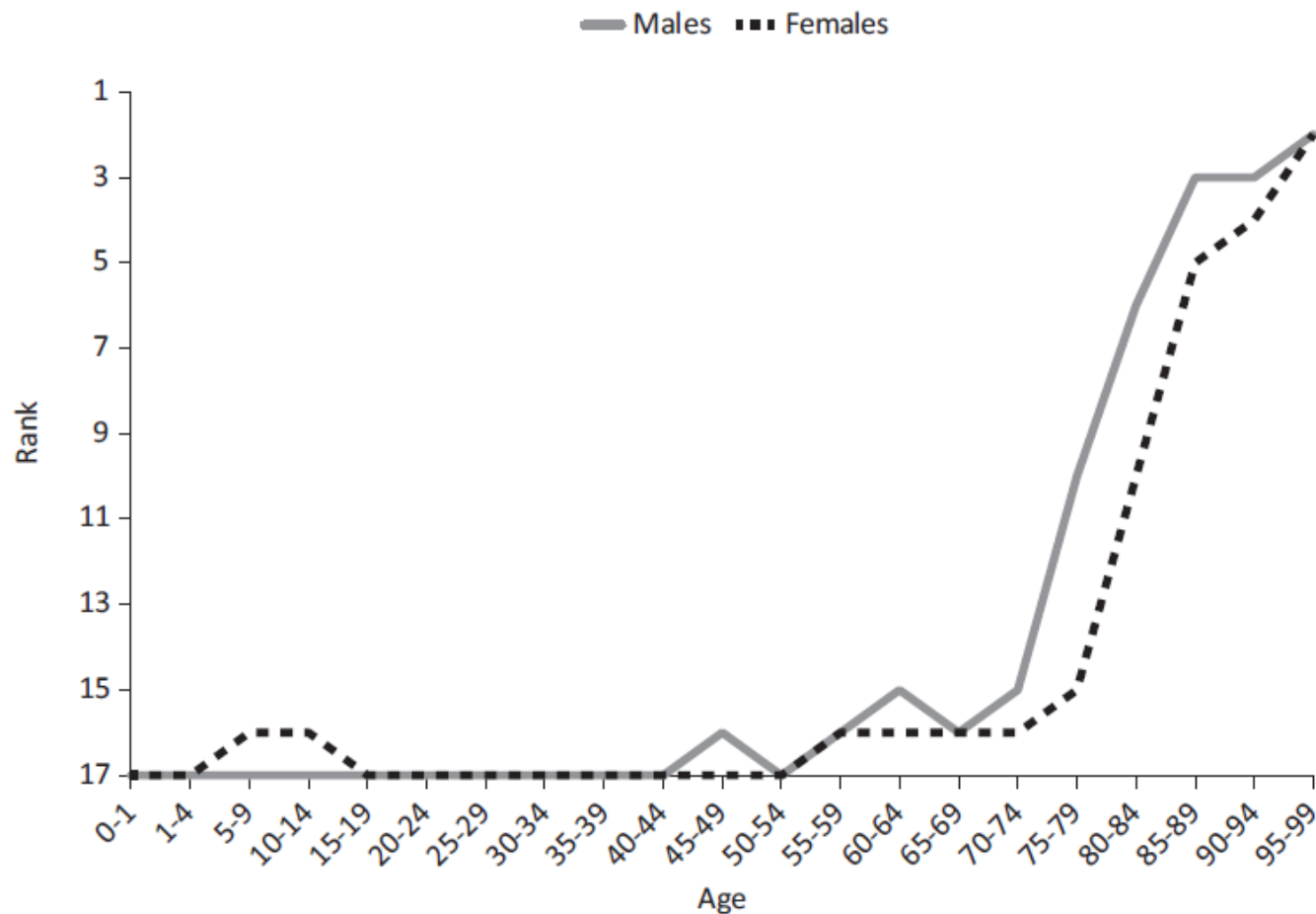


Females



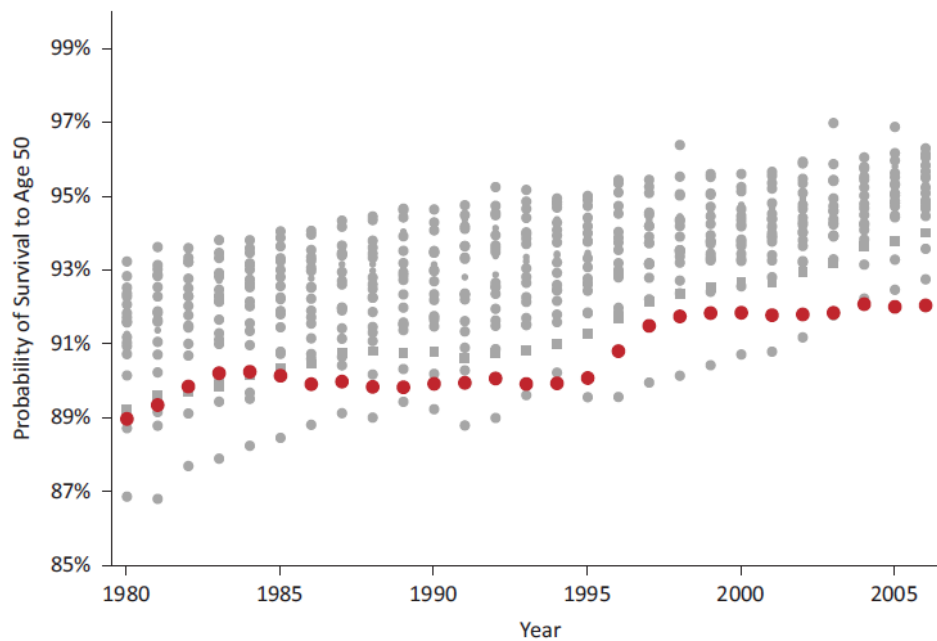
Explaining Divergent Levels of Longevity in High-Income Countries

Ranking of US mortality rates by age group in 17 peer countries, 2006-2008

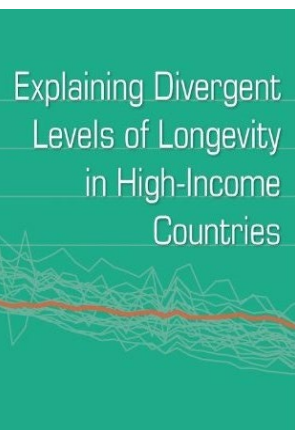
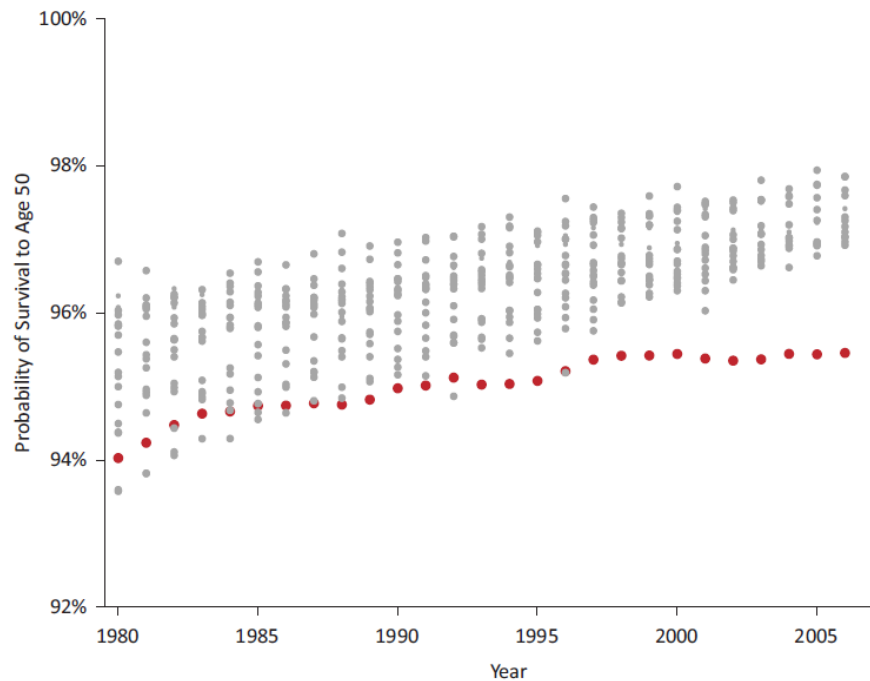


Probability of survival to age 50 in 21 high-income countries, 1980-2006

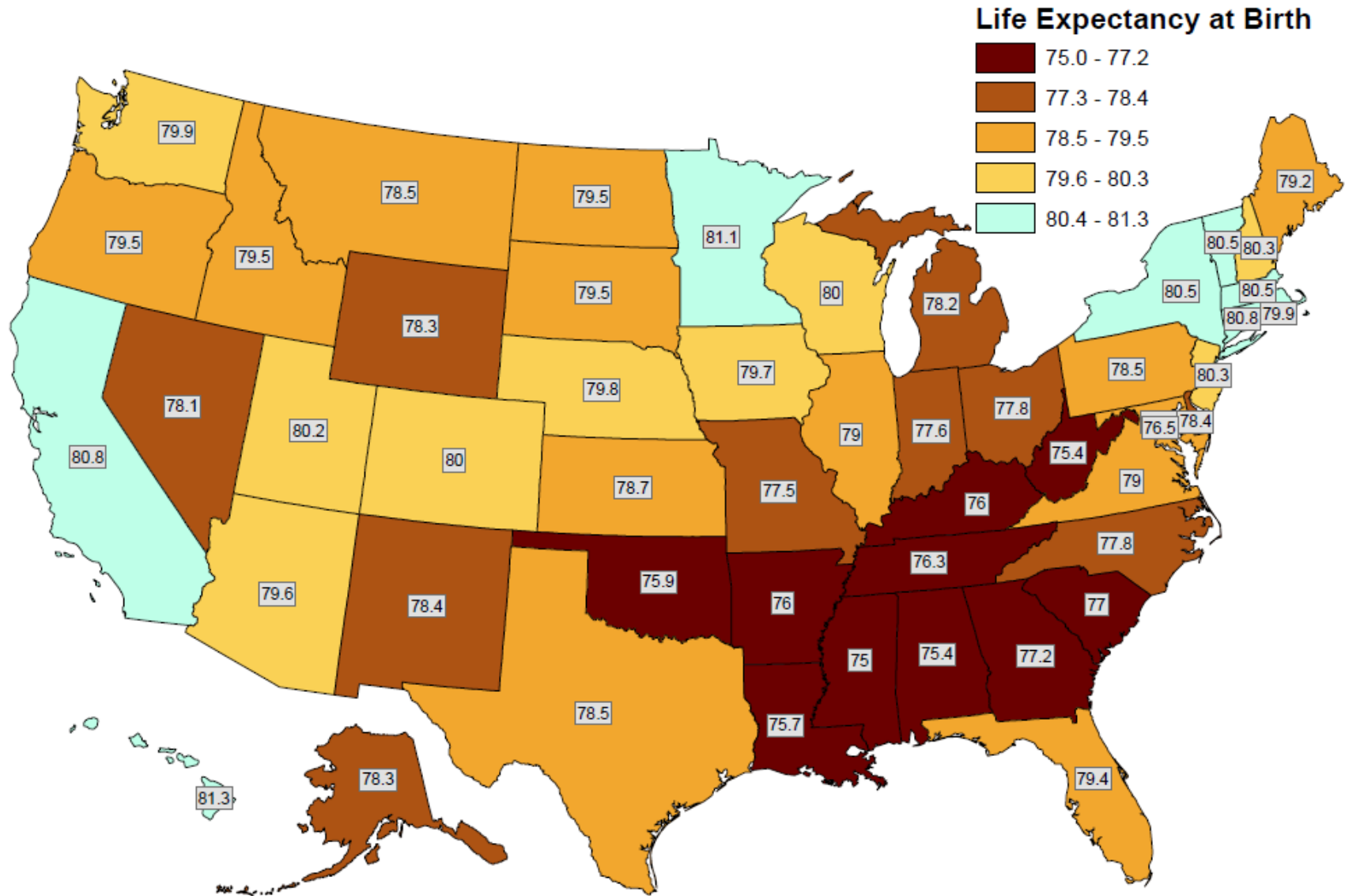
Males



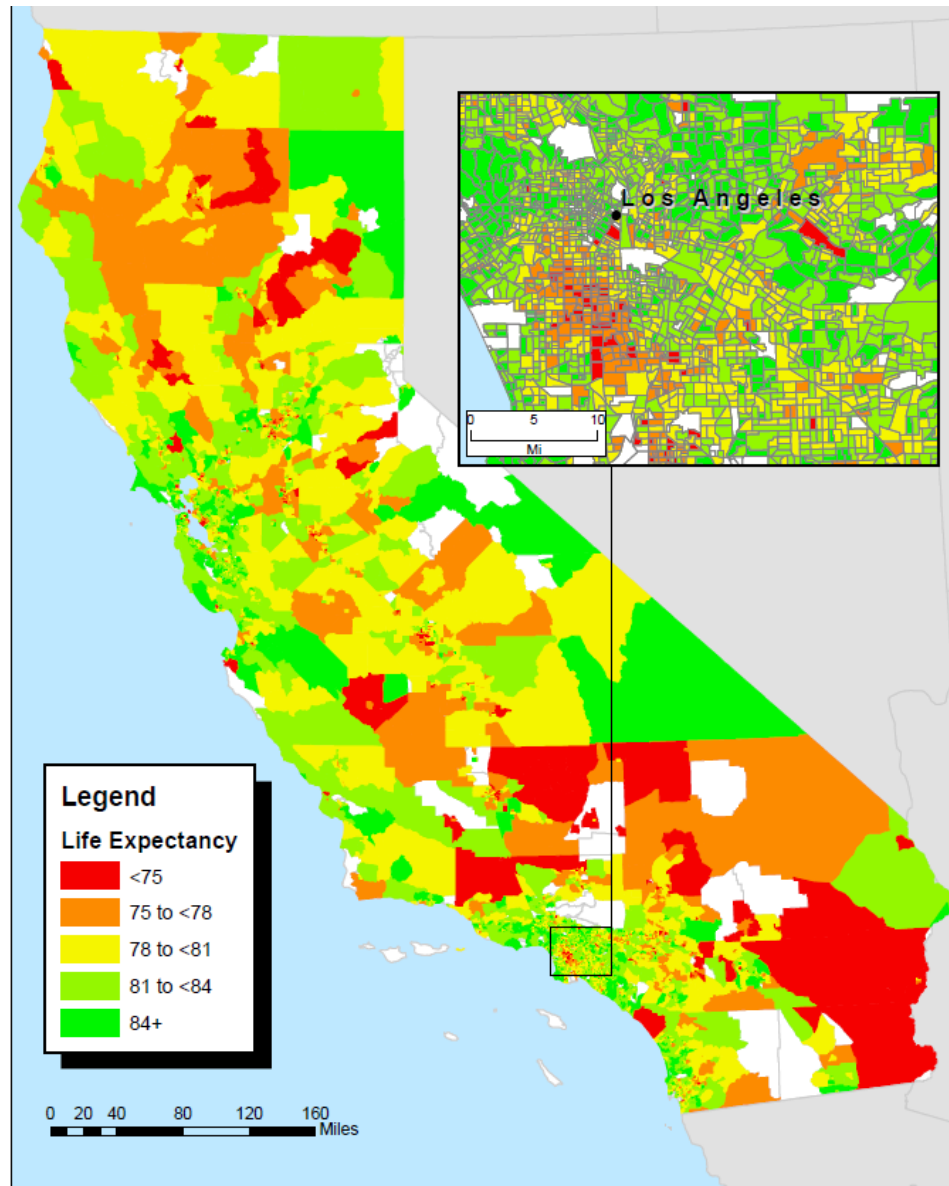
Females



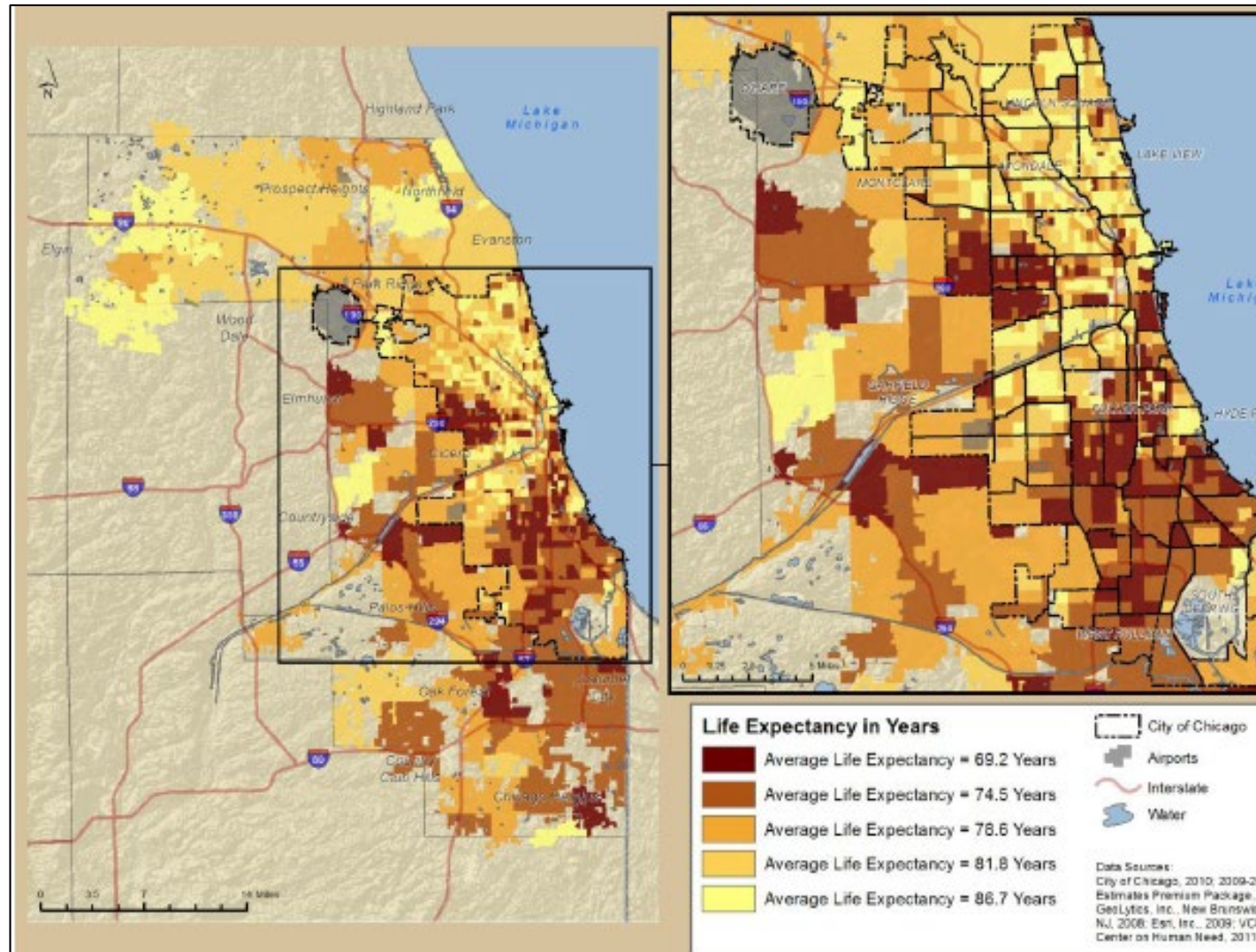
Life expectancy, by state



Life expectancy by census tract, California

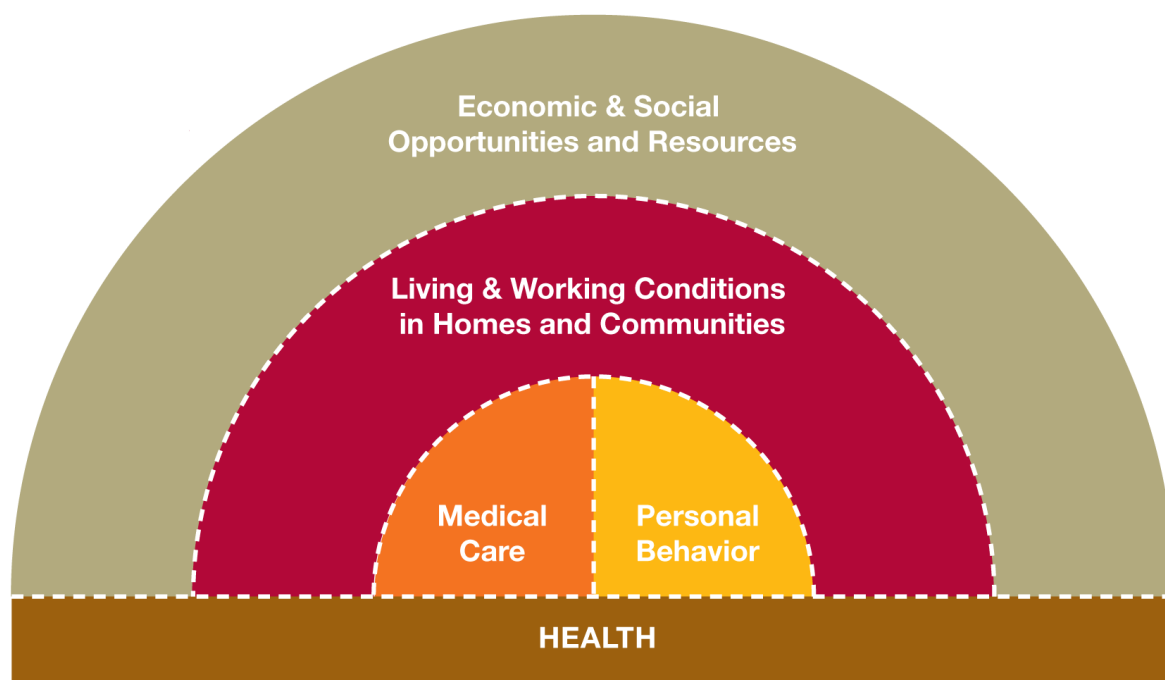


Life expectancy by census tract, Chicago



Influences on Health: Broadening the Focus

Health is shaped by many influences, including age, sex, genetic make-up, medical care, individual behaviors and other factors not shown in this diagram. Behaviors, as well as receipt of medical care, are shaped by living and working conditions, which in turn are shaped by economic and social opportunities and resources.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.

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.

Beyond the clinical setting

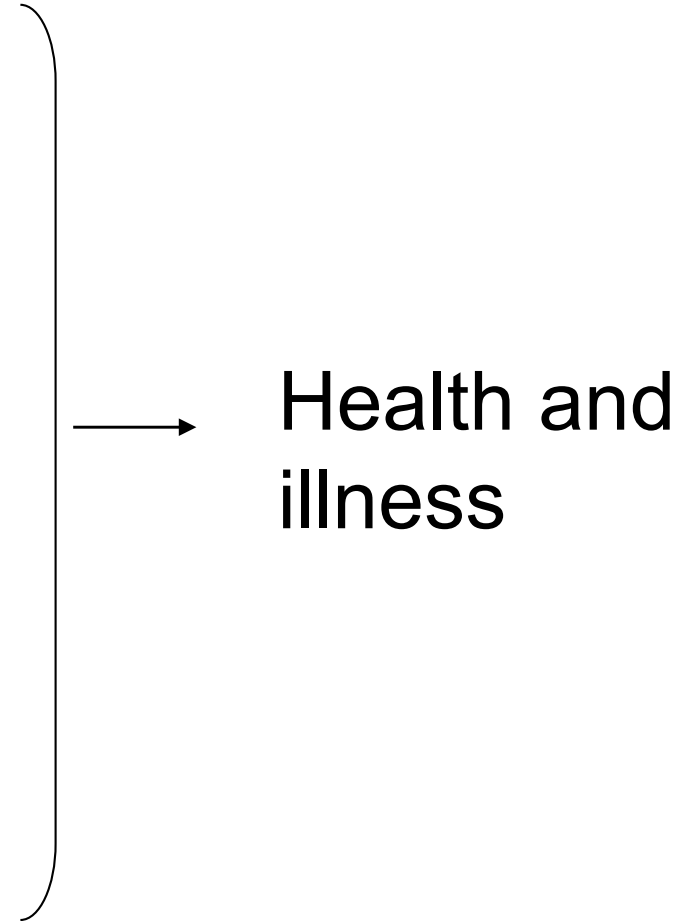


The built environment



“Health in All” policies

- Transportation
- Land use
- Built environment
- Taxes
- Housing
- Agriculture
- Environmental justice
- Etc.



The problem of silos



Connecting the dots

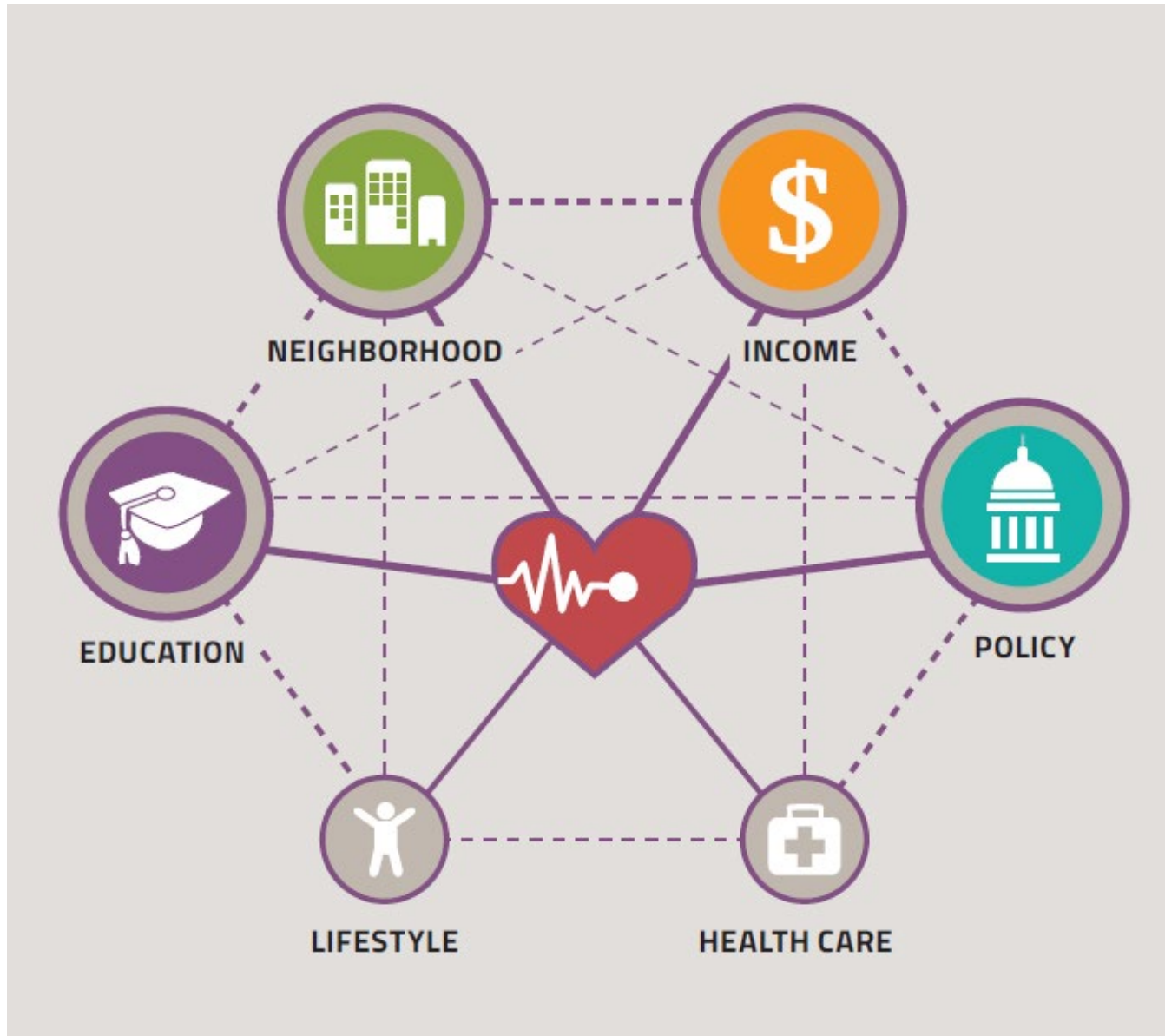
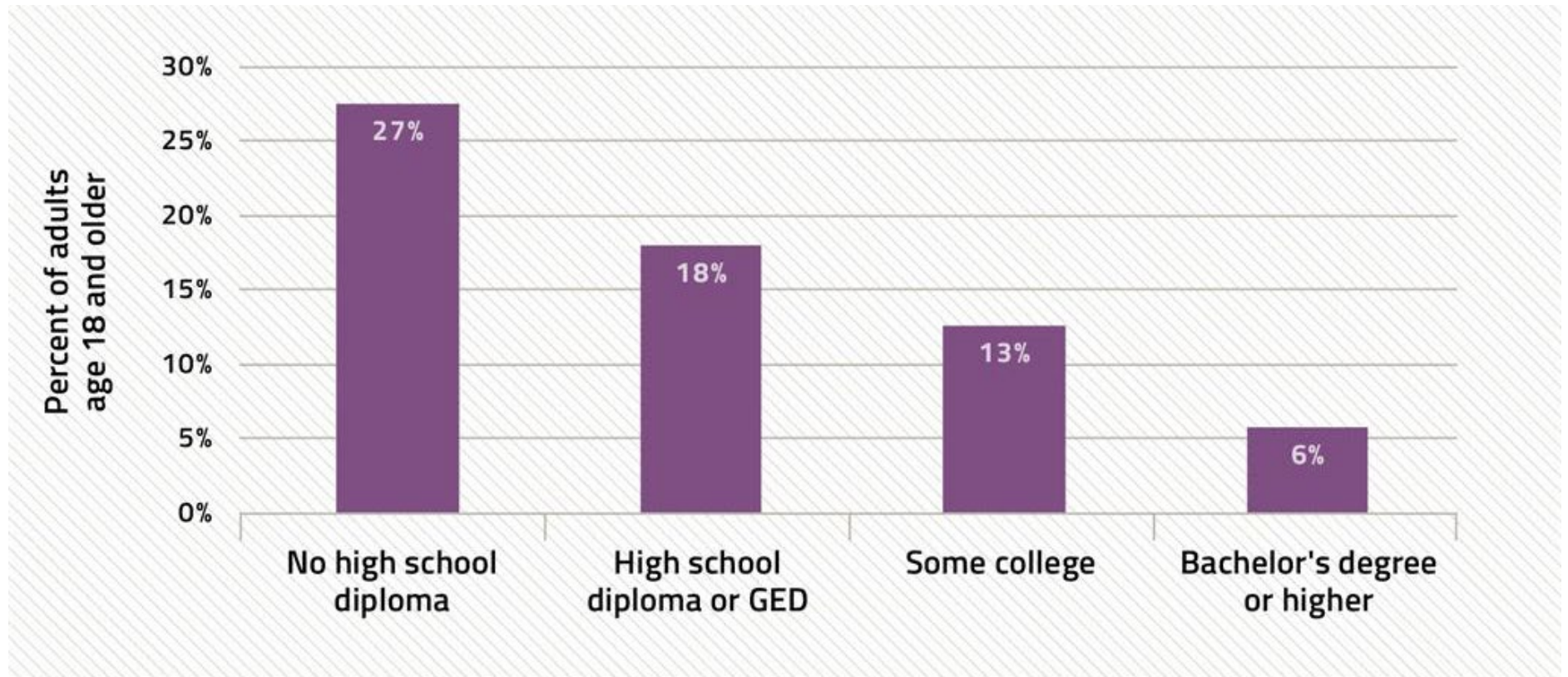




Photo by Chip Somodevilla/Getty Images

Self-report of fair or poor health, by education

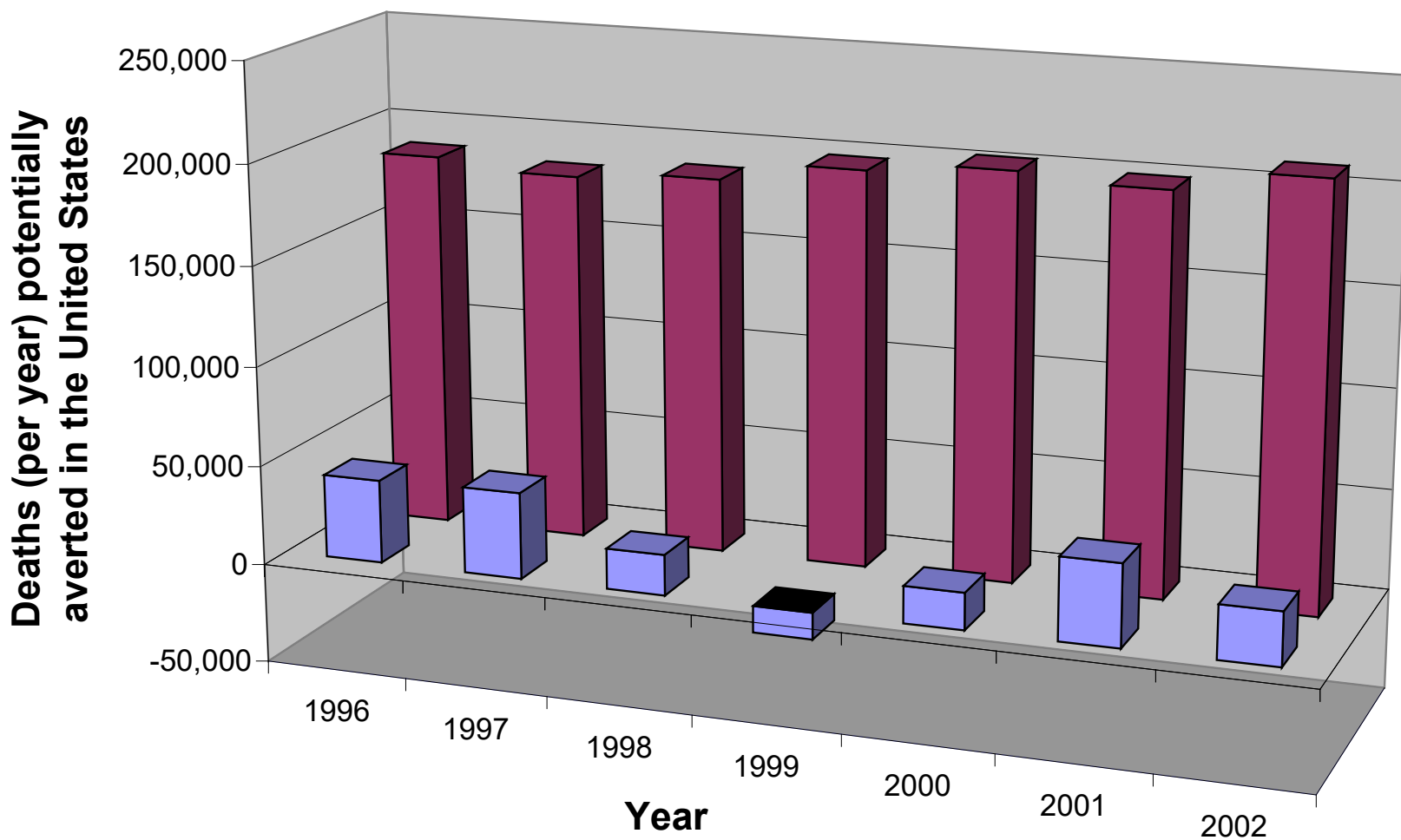


Data from Schiller et al. Summary health statistics for U.S. adults: National Health Interview Survey, 2011. Table 21. National Center for Health Statistics. Vital Health Stat 10(256). 2012.

Prevalence of diseases among US adults, by education

	Less than a high school diploma	High school diploma or GED	Some college	Bachelor's degree or higher
Coronary heart disease	10.2%	7.5%	7.4%	5.4%
Stroke	4.7%	3.4%	2.7%	1.7%
Emphysema	3.3%	2.5%	1.9%	0.7%
Asthma (current)	8.1%	8.3%	8.6%	7.1%
Chronic bronchitis	5.1%	5.2%	5.0%	2.3%
Diabetes	15.1%	10.5%	9.6%	6.5%
Ulcers	9.8%	7.4%	8.0%	5.0%
Kidney disease	3.8%	2.2%	2.1%	0.7%
Liver disease	2.4%	1.4%	1.5%	0.8%
Chronic joint symptoms	35.0%	33.3%	34.6%	25.2%
Hearing trouble	18.8%	19.3%	18.1%	13.5%
Vision trouble	14.0%	10.4%	9.5%	6.3%
No teeth	16.2%	9.6%	7.1%	3.6%

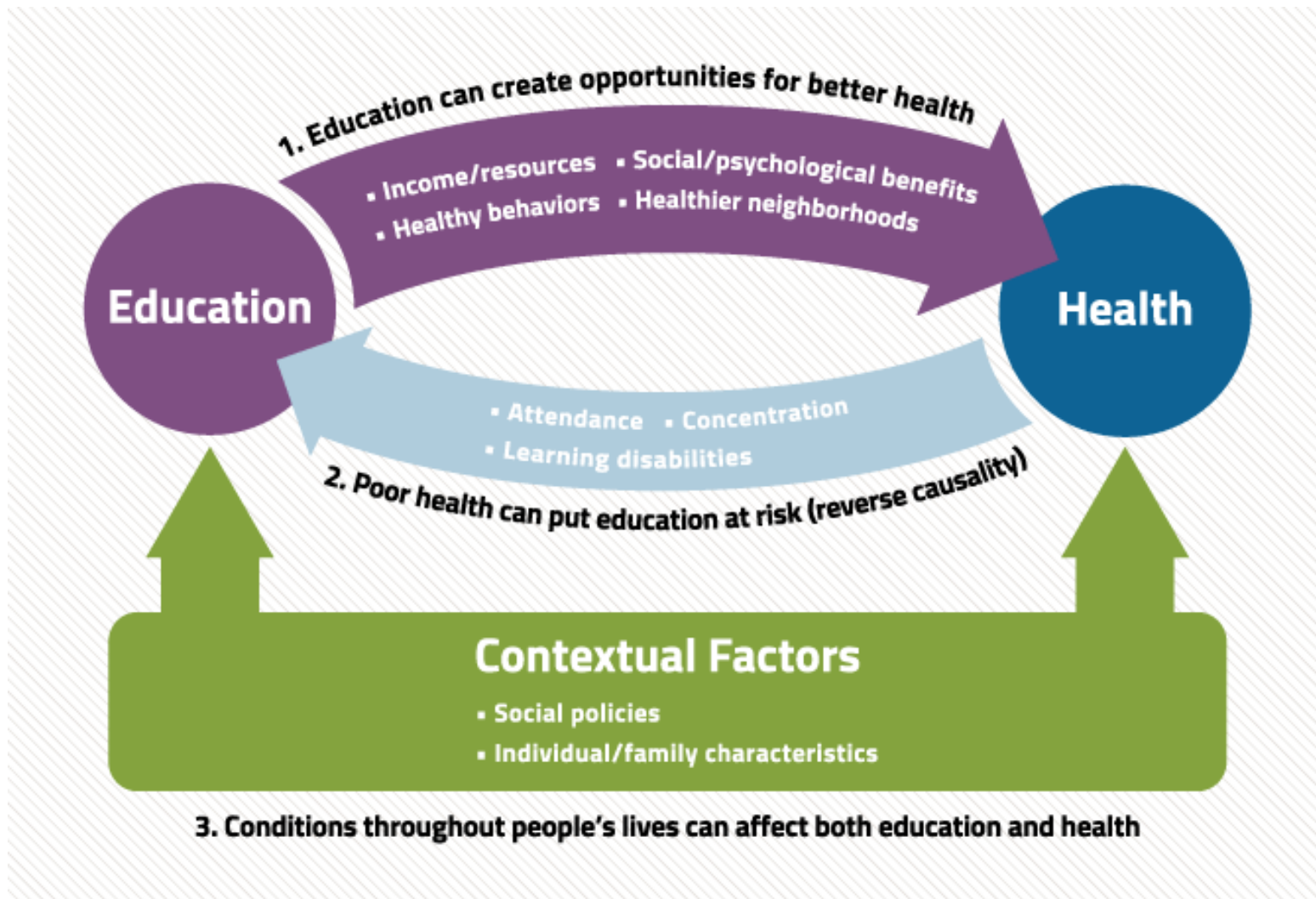
Data from Schiller et al. Summary health statistics for U.S. adults: National Health Interview Survey, 2011. National Center for Health Statistics. Vital Health Stat 10(256). 2012.



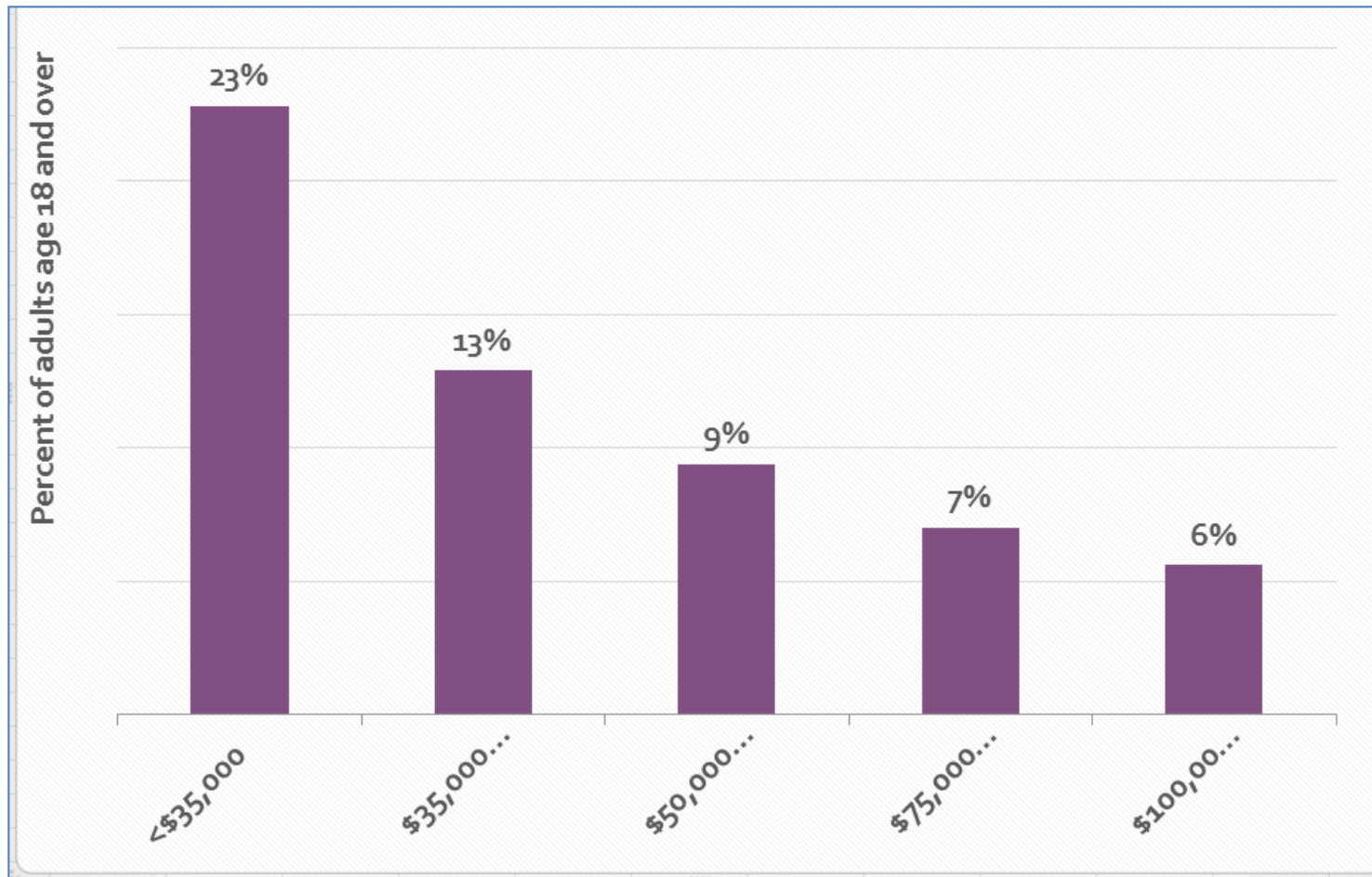
- Deaths potentially averted by medical advances (see footnotes)
- Deaths potentially averted by eliminating education-associated excess mortality (see footnotes)

Am J Public Health. 2007;97:679–683

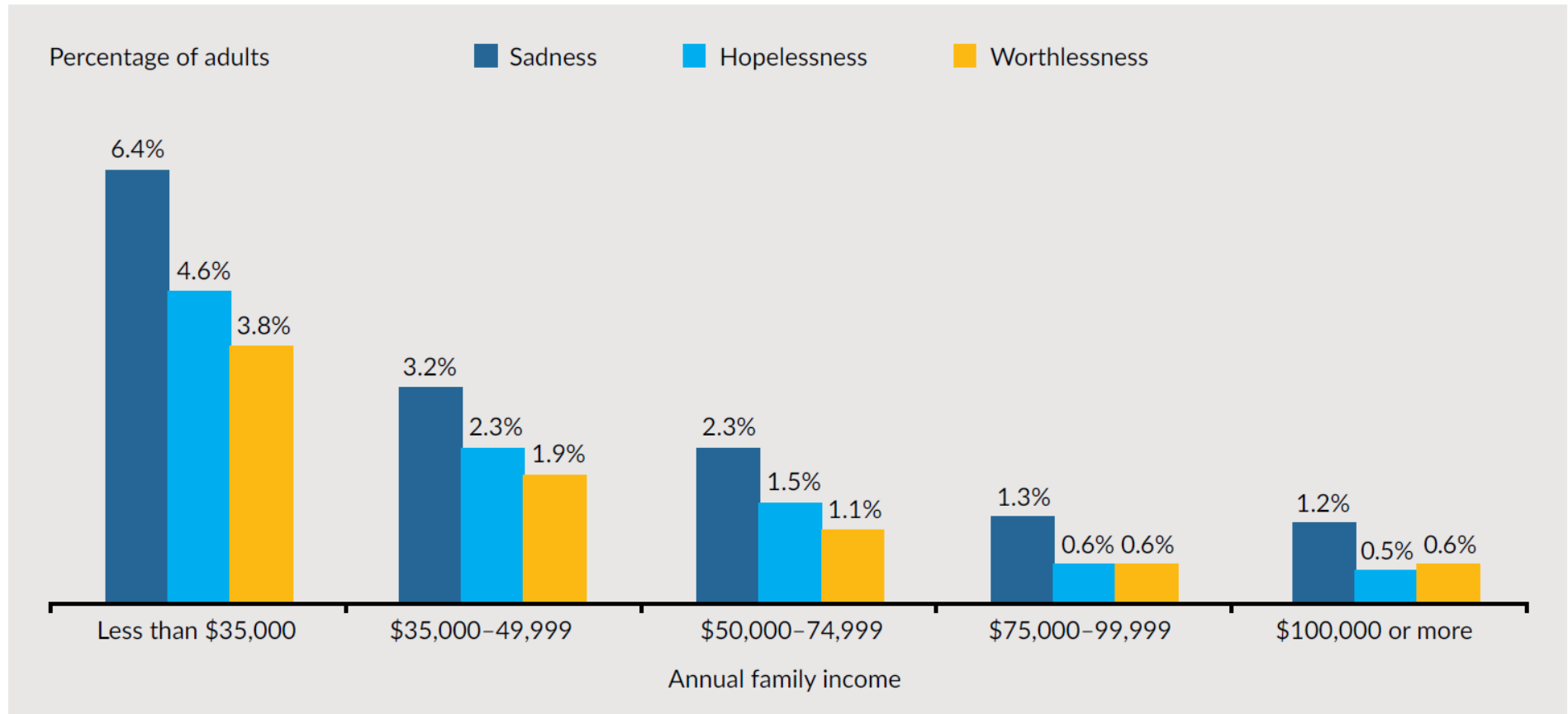
Why education matters to health: exploring the causes



Self-report of fair or poor health, by income



Income and psychological wellbeing



Source: J. S., Schiller, J. W. Lucas, and J. A. Peregoy, "Summary Health Statistics for U.S. Adults: National Health Interview Survey, 2011." Vital and Health Statistics 10, no. 256 (2012): 1–207, table 14. http://www.cdc.gov/nchs/data/series/sr_10/sr10_256.pdf.

The role of place





**“WE ARE NOT
MAKERS OF
HISTORY.**

**WE ARE MADE
BY HISTORY.”**

-MARTIN LUTHER KING, JR.

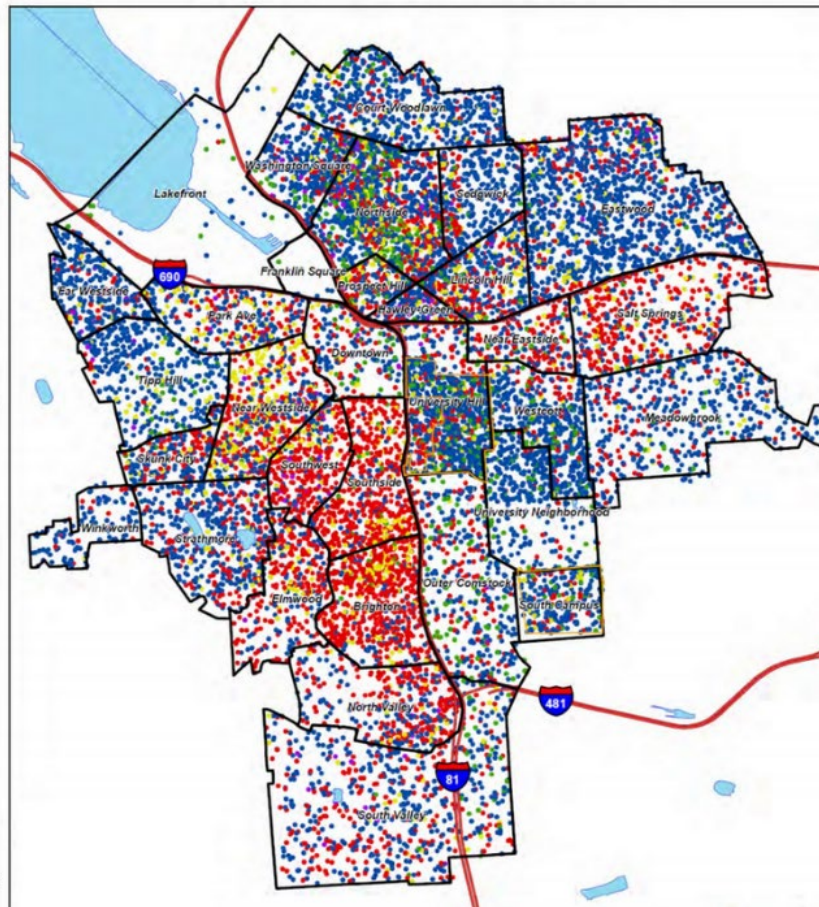
Population by race Syracuse, New York, 2012

2012 population by race in Syracuse

Ethnic minorities in Syracuse are concentrated mainly in the Southside and Eastside city areas.

1 Dot = 10 People

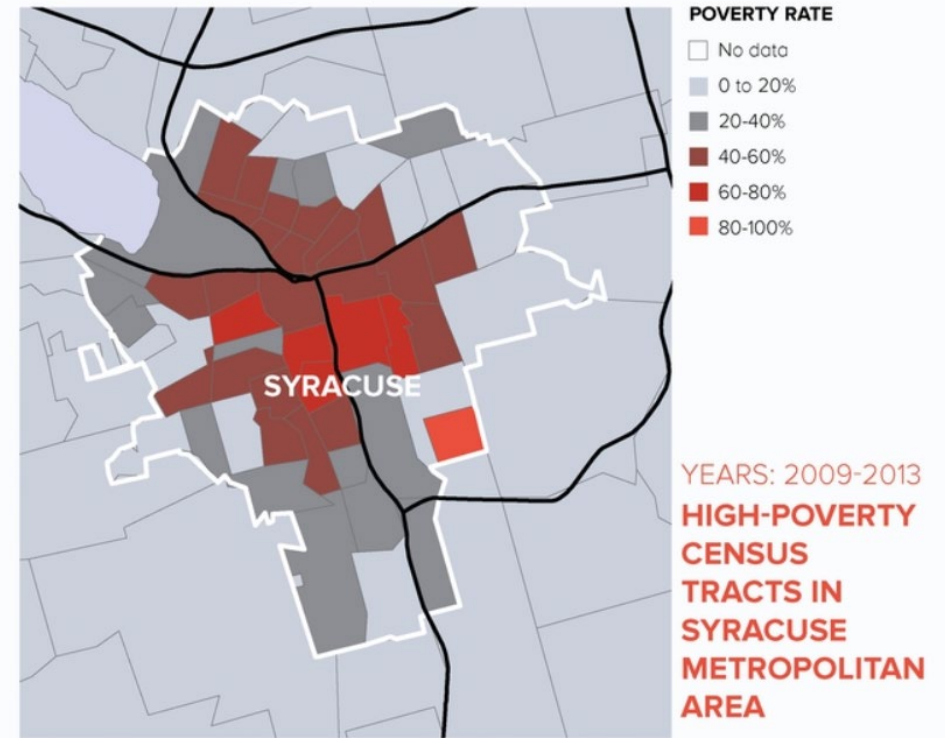
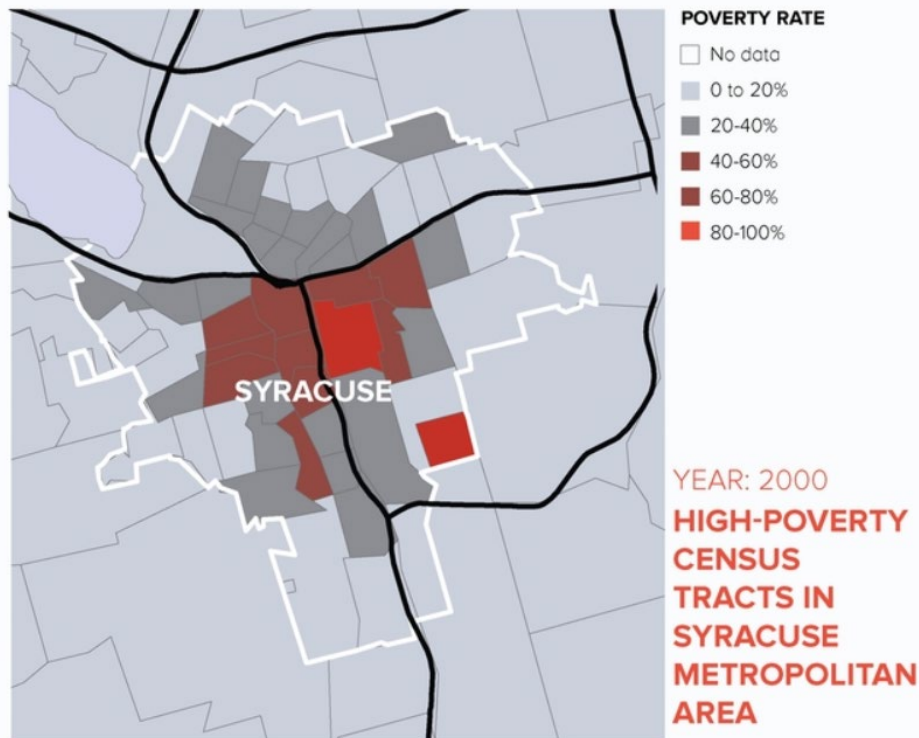
- White
- Black
- Asian
- Native American
- Hispanic



Source: 2008-2012 ACS
5-year estimates
CNY Fair Housing Report
MyHousingMatters.com

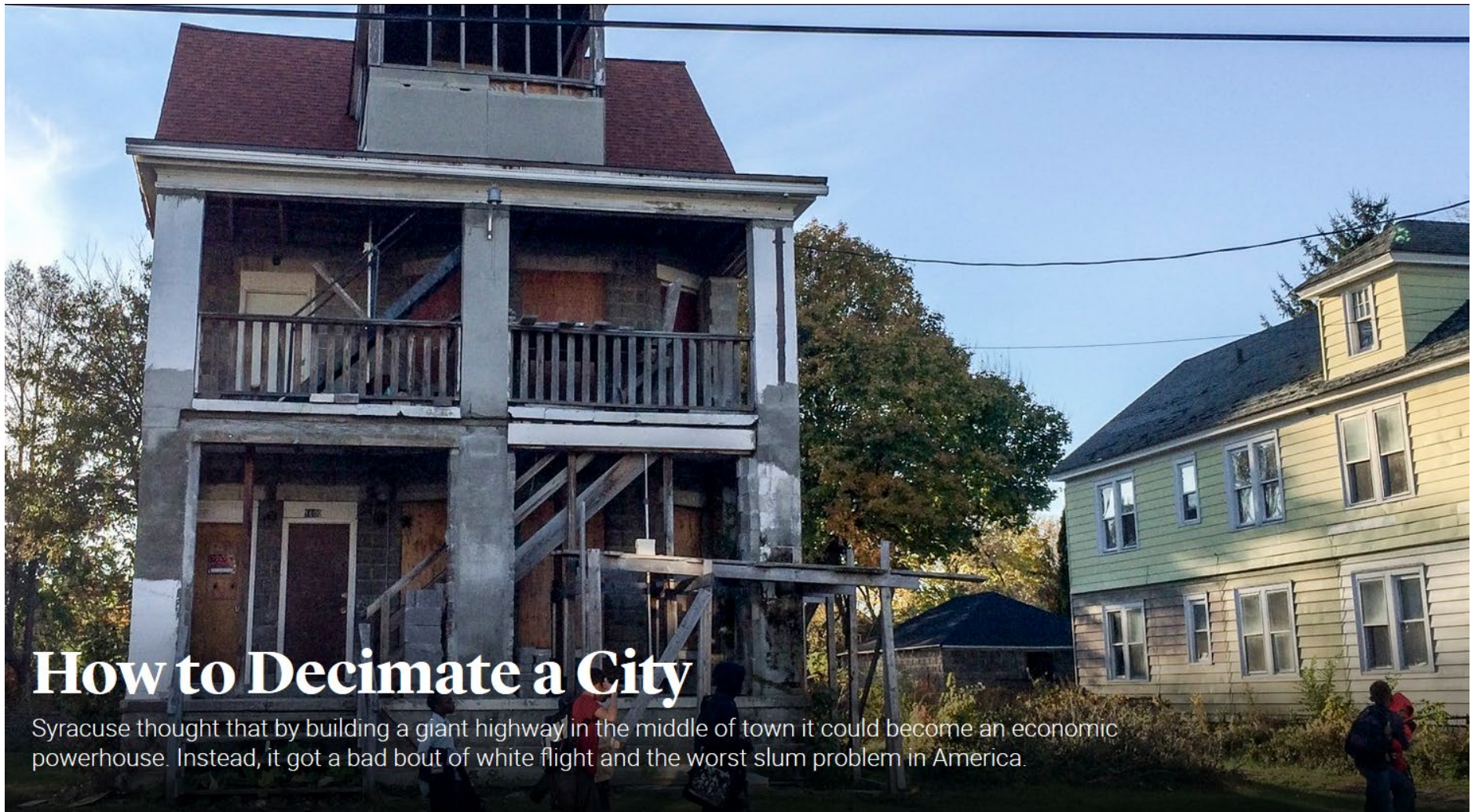
Concentrated poverty

“Syracuse now has the highest level of poverty concentration among blacks and Hispanics of the 100 largest metropolitan areas.”



High poverty census tracts: increased from 12 to 30 between 2000 and 2013

From: Jargowsky P. *Architecture of Segregation*, The Century Foundation, 2015



How to Decimate a City

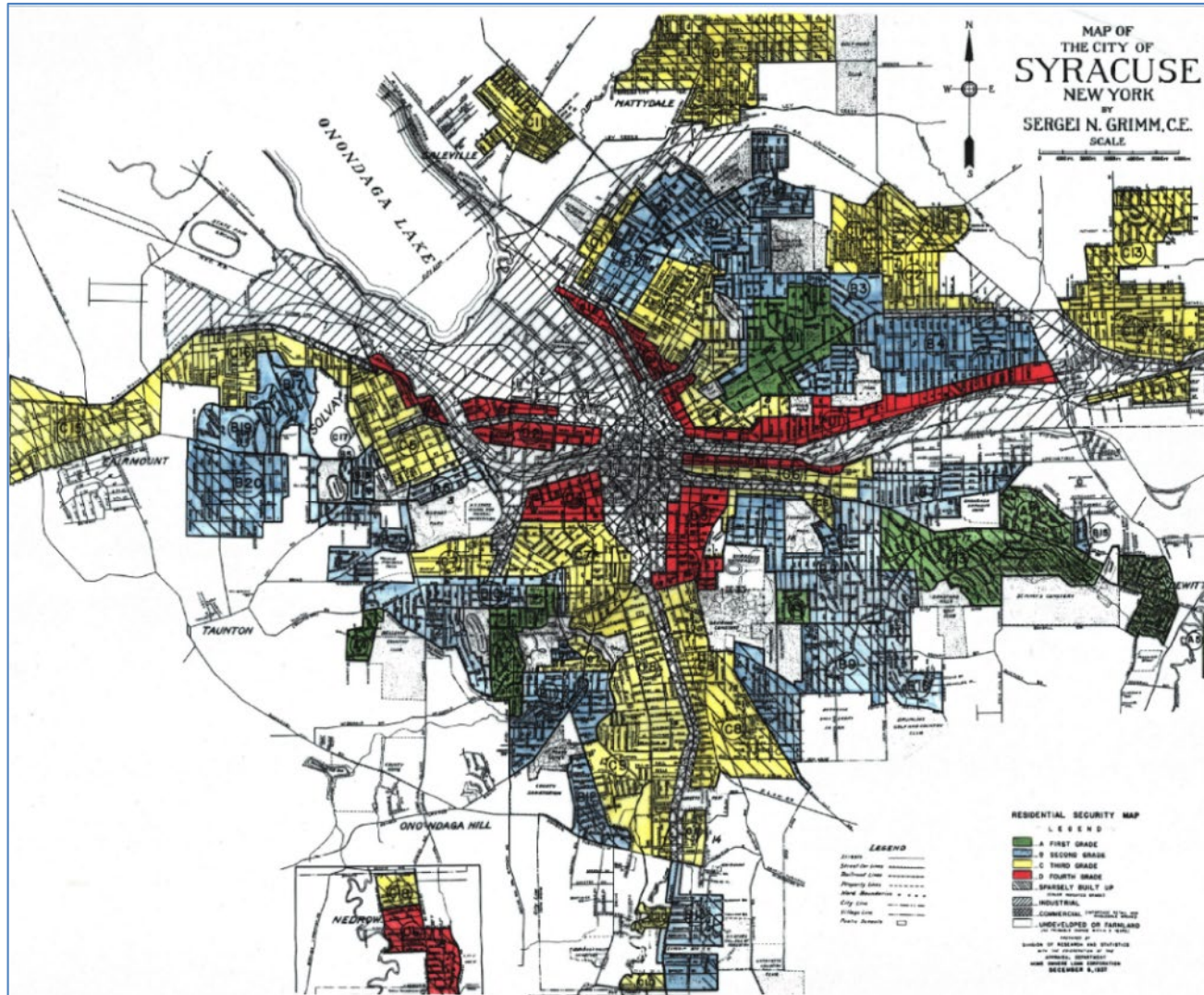
Syracuse thought that by building a giant highway in the middle of town it could become an economic powerhouse. Instead, it got a bad bout of white flight and the worst slum problem in America.

Samuels A. *The Atlantic*, November 20, 2015.

The 15th ward



Syracuse redlining map, 1937



Construction of I-81



The interstate was placed in the 15th ward, the center of Syracuse's black population. (Onondaga Historical Association)

Evolution of the City



1938

Adapted from Syracuse 1938 Hopkins Atlas



2014

I-81 Viaduct Project



U.S. Department Of Transportation
Federal Highway Administration



New York State
Department Of Transportation

15

Social isolation by urban design



The I-81 divides Syracuse and creates car, rather than foot, traffic (Alana Semuels/The Atlantic)

The lost social capital of the 15th ward



Courtesy of Marjory Wilkins

A Marjory Wilkins photo: Doris Dunham, Gloria Rhodafox and Evelyn Branch on Harrison Street in the old 15th Ward, 1949.



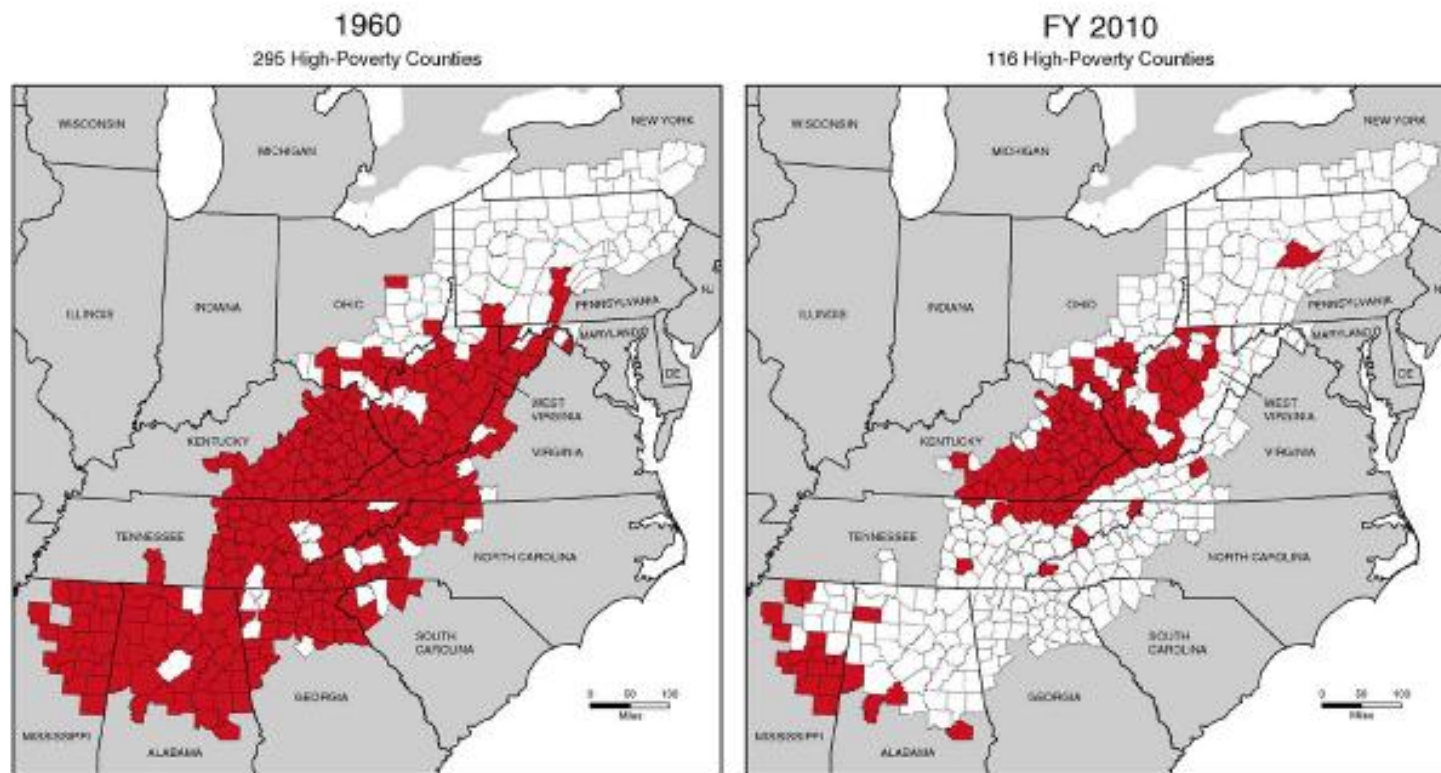
th's Luncheonette in the 15th Ward (Richard Breland/Onondaga County Public Library)

Race in America



Persistent Poverty

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



Data Source: Office of Economic Opportunity data from U.S. Dept. of Agriculture, Economic Research Service, 1960.

Data Source: U.S. Department of Commerce, Census Bureau, 2000.

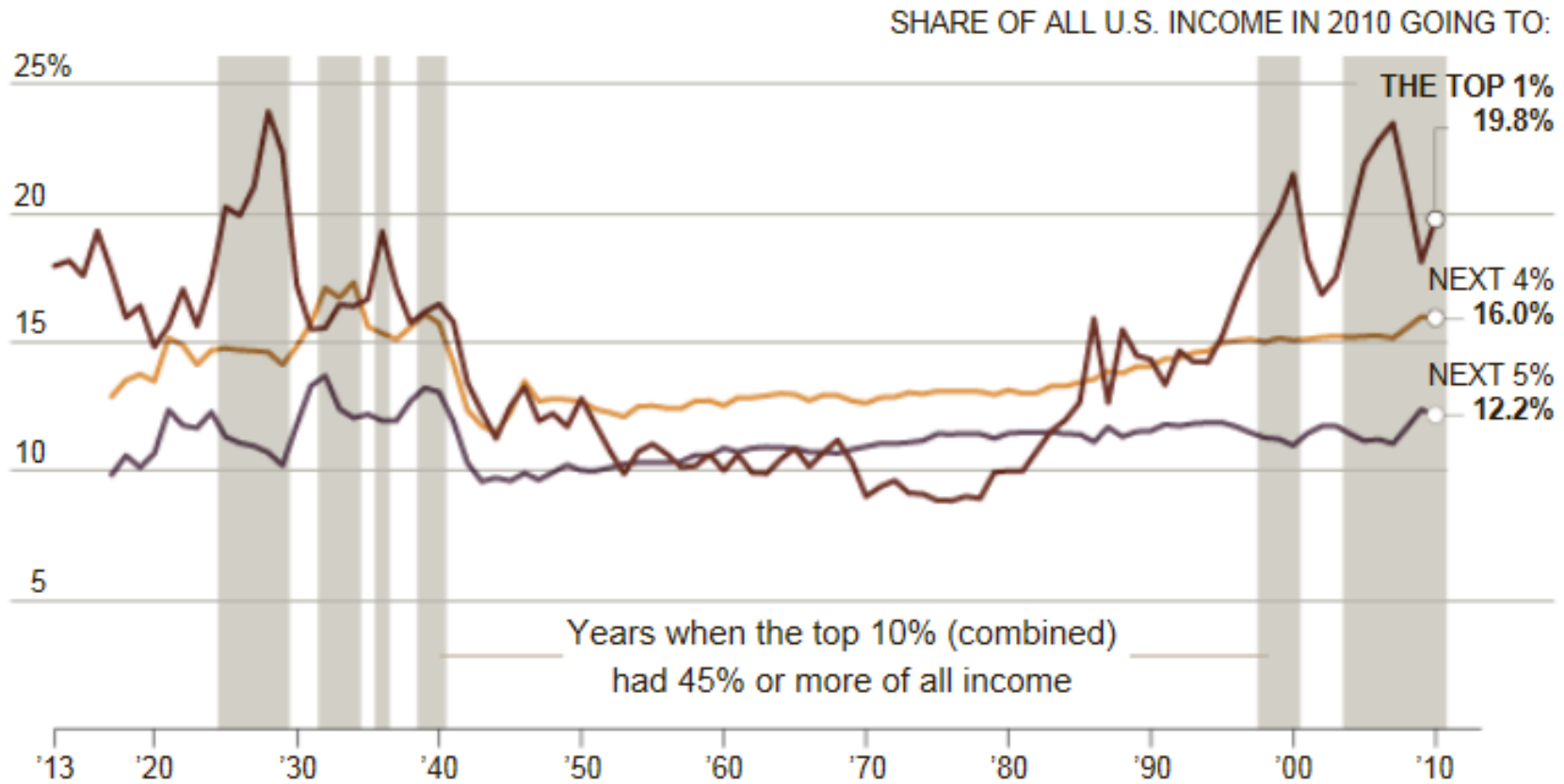


John Dominis—Time & Life Pictures/Getty Images

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

Growing Income Inequality



Source: <http://www.nytimes.com/interactive/2012/04/17/business/income-earned-by-the-wealthiest.html?ref=business>

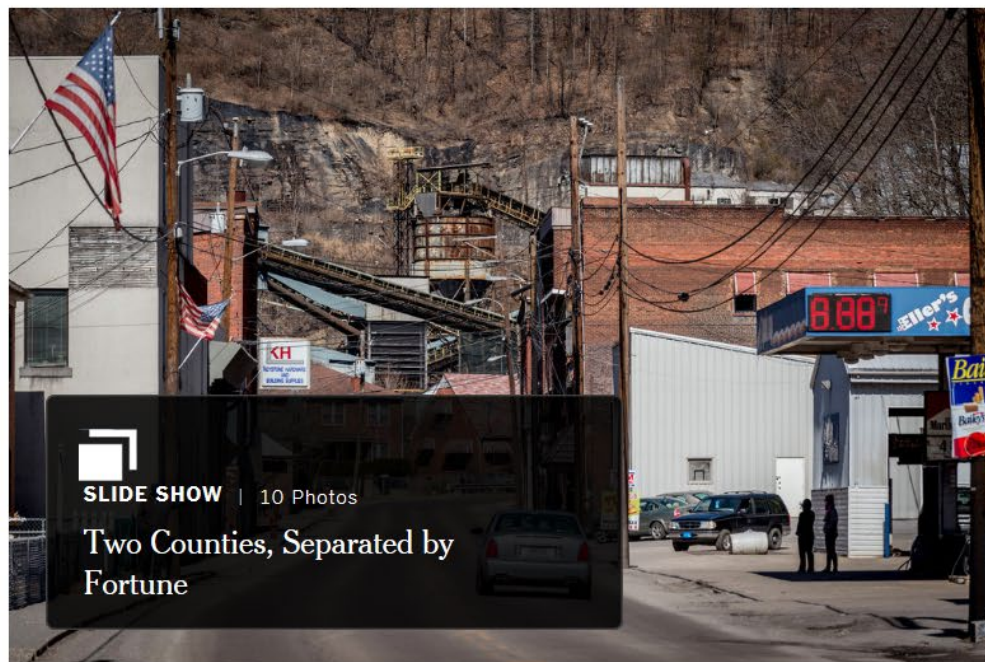
Income Gap, Meet the Longevity Gap

By ANNIE LOWREY MARCH 15, 2014

- EMAIL
- FACEBOOK
- TWITTER
- SAVE
- MORE



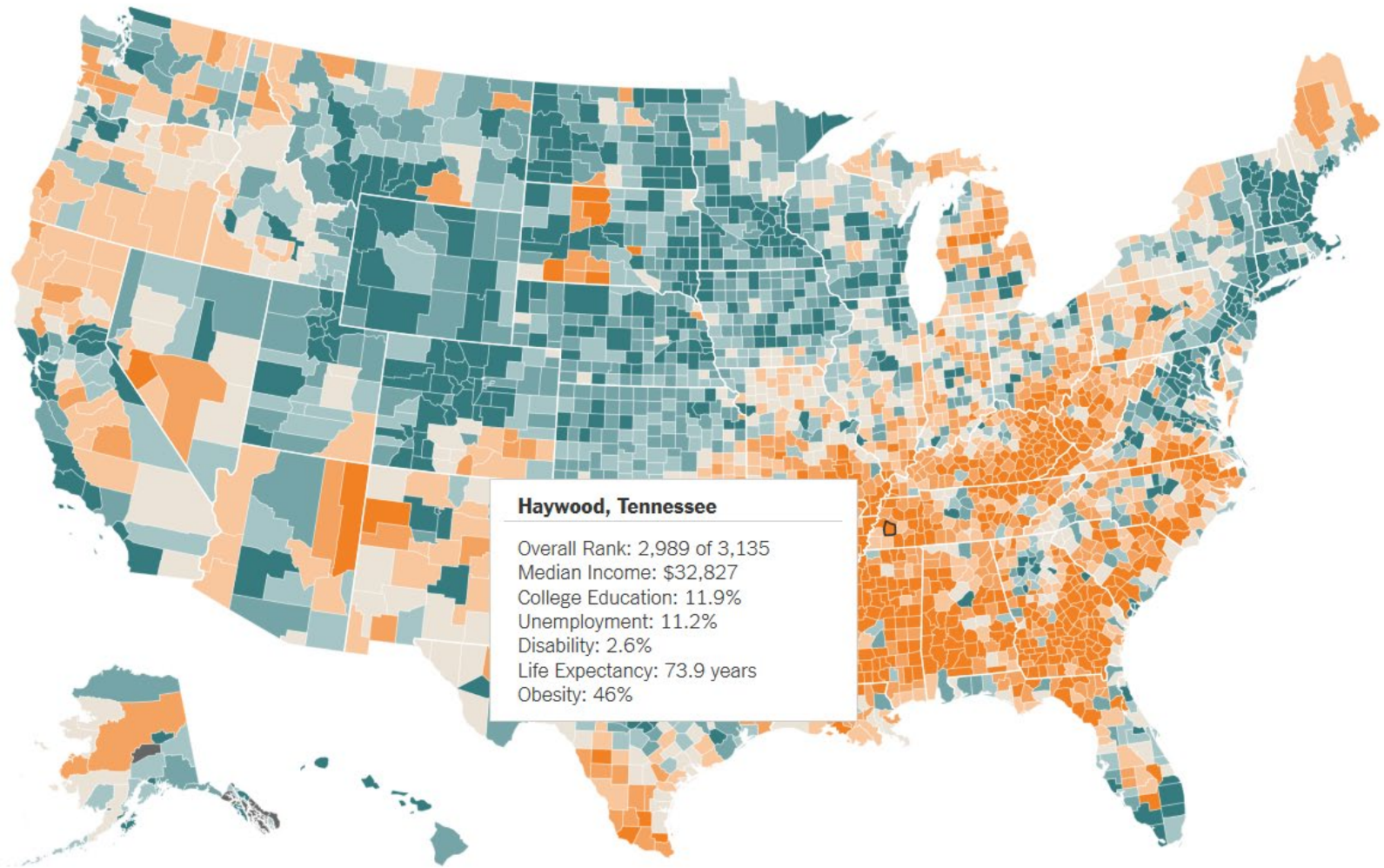
Fairfax County, Va., and McDowell County, W.Va., are separated by 350 miles, about a half-day's drive. Traveling west from Fairfax County, the gated communities and bland architecture of military contractors give way to exurbs, then to farmland and eventually to McDowell's coal mines and the forested slopes of the Appalachians. Perhaps the greatest distance between the two counties is this: Fairfax is a place of the haves, and McDowell of the have-nots. Just outside of Washington, fat government contracts and a growing technology sector buoy the median household income in Fairfax County up to \$107,000, one of the highest in the nation. McDowell, with the decline of coal, has little in the way of industry. Unemployment is high. [Drug abuse](#) is rampant. Median household income is about one-fifth that of Fairfax.



J.M. Eddins Jr. for The New York Times

Where Are the Hardest Places to Live in the U.S.?

JUNE 26, 2014

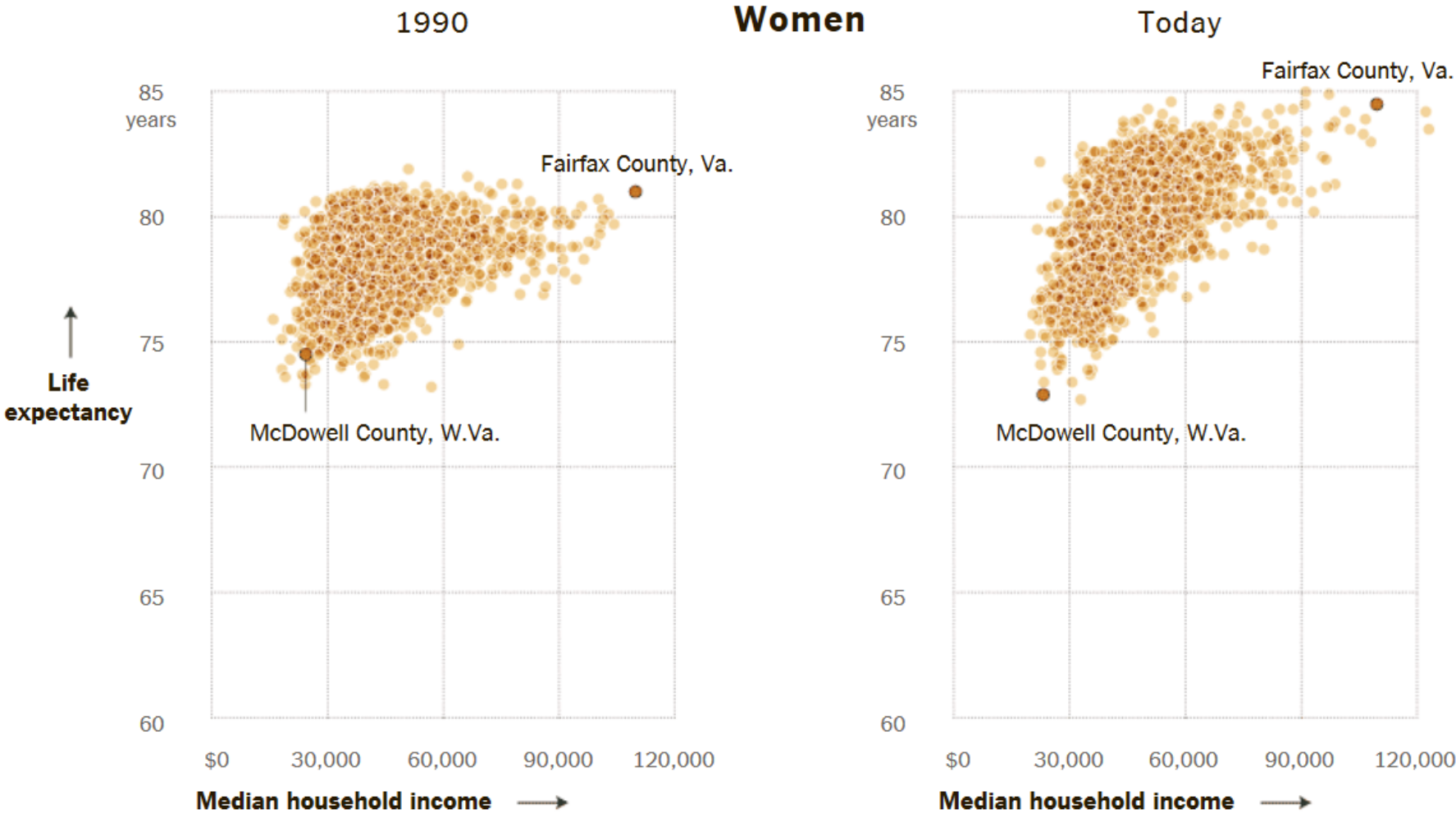


A composite ranking of where Americans are healthy and wealthy, or struggling.



New York Times, June 26, 2014

Women



By ALICIA PARLAPIANO

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

HEALTH

Death Rates Rising for Middle-Aged White Americans, Study Finds

By GINA KOLATA NOV. 2, 2015



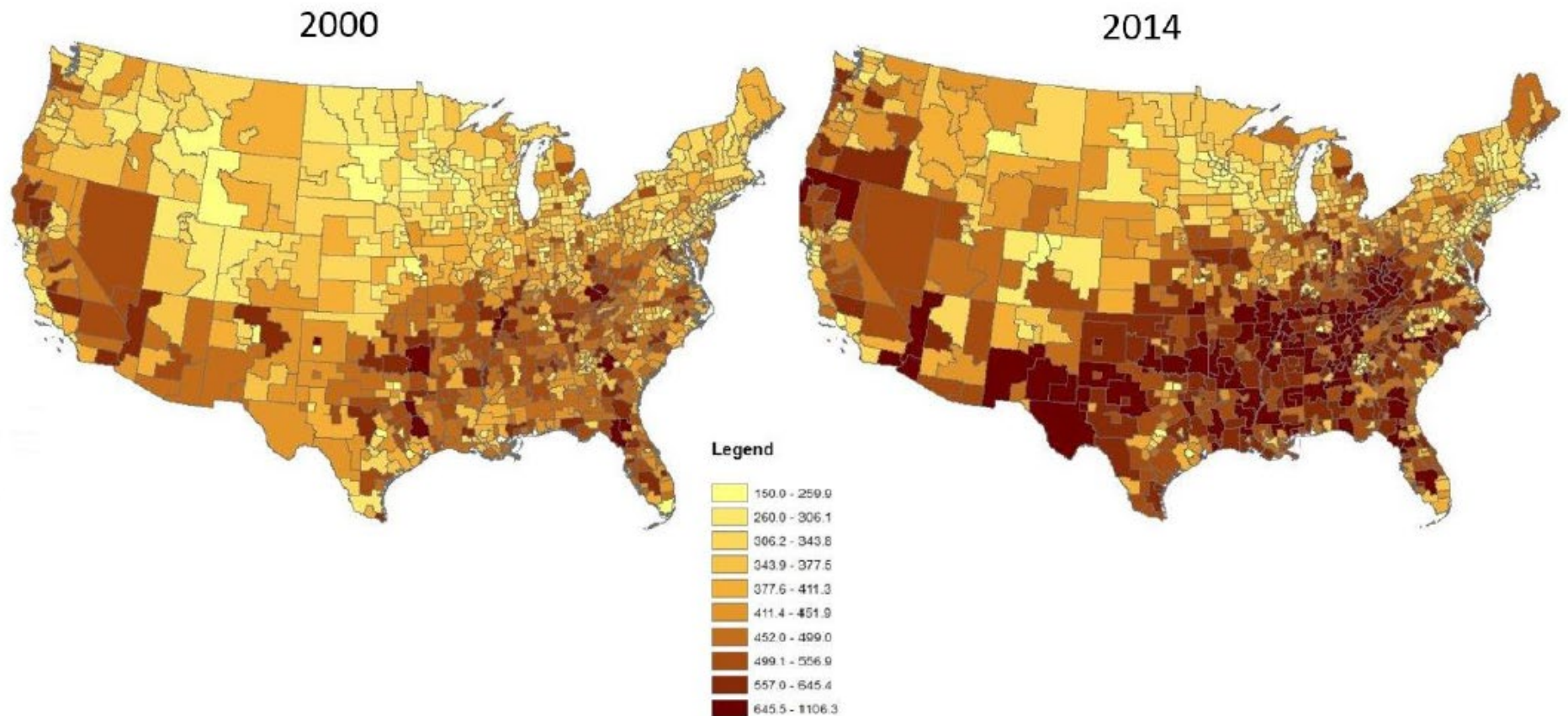
Angus Deaton with his wife, Anne Case, right, last month after he won the 2015 Nobel Memorial Prize in Economic Science. Together, they wrote a study analyzing mortality rates.

Ben Solomon for The New York Times

Something startling is happening to middle-aged white Americans. Unlike every other age group, unlike every other racial and ethnic group, unlike their counterparts in other rich countries, death rates in this group have been rising, not falling.

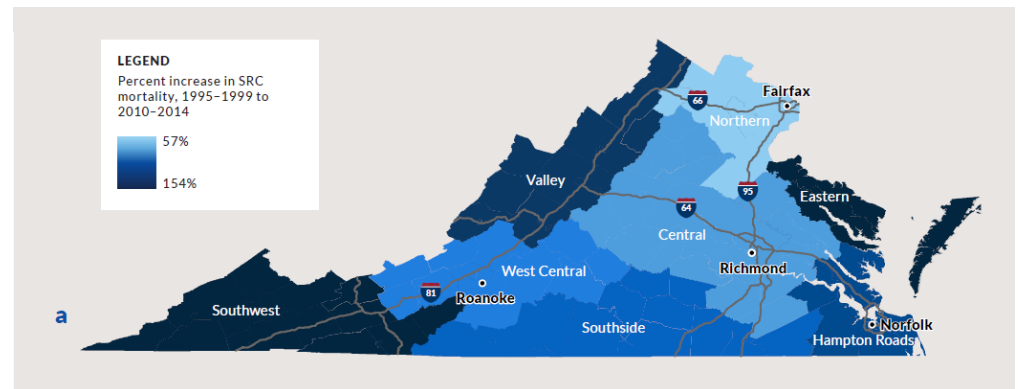
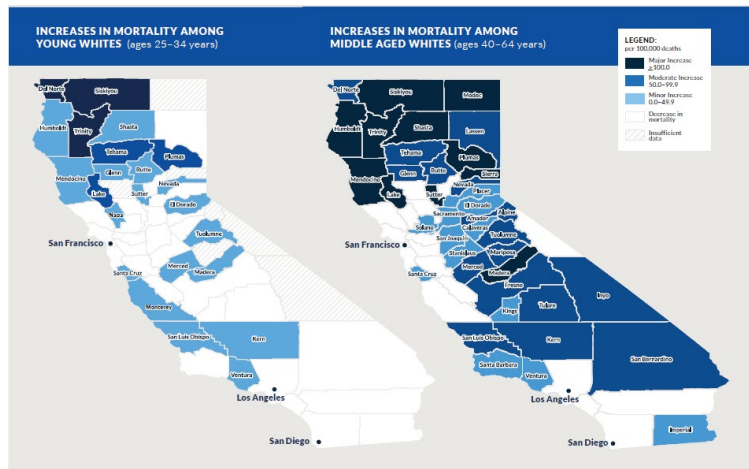
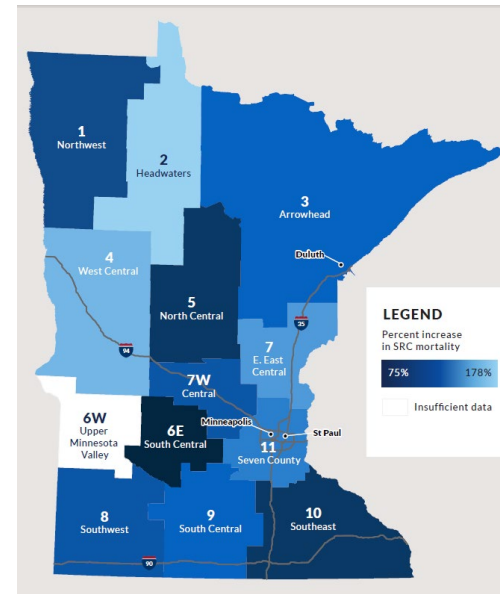
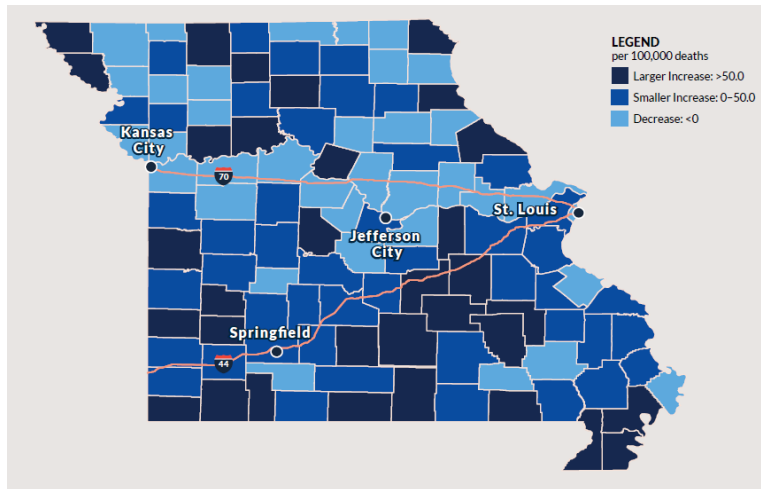
That finding was reported Monday by two Princeton economists, Angus Deaton, who last month [won the 2015 Nobel Memorial Prize in Economic Science](#), and Anne Case. Analyzing health and mortality data from the Centers for Disease Control and Prevention and from other sources, they concluded that rising

Mortality among non-Hispanic whites, per Case and Deaton



Case A, Deaton A. Brookings Institution, 2017

Where white death rates are increasing





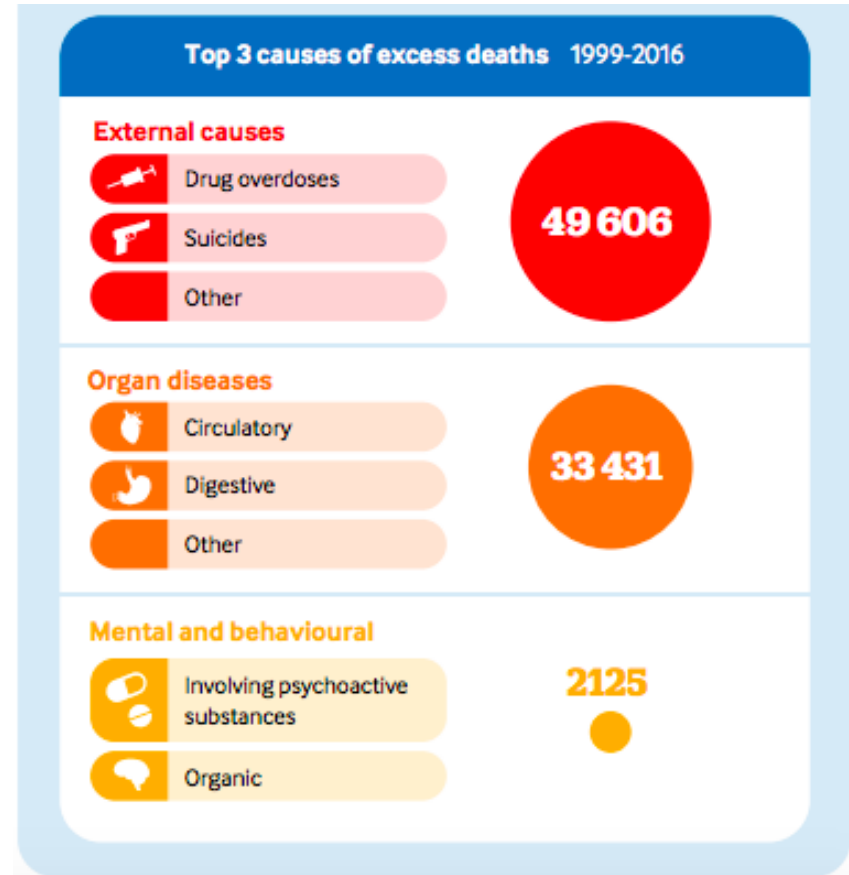
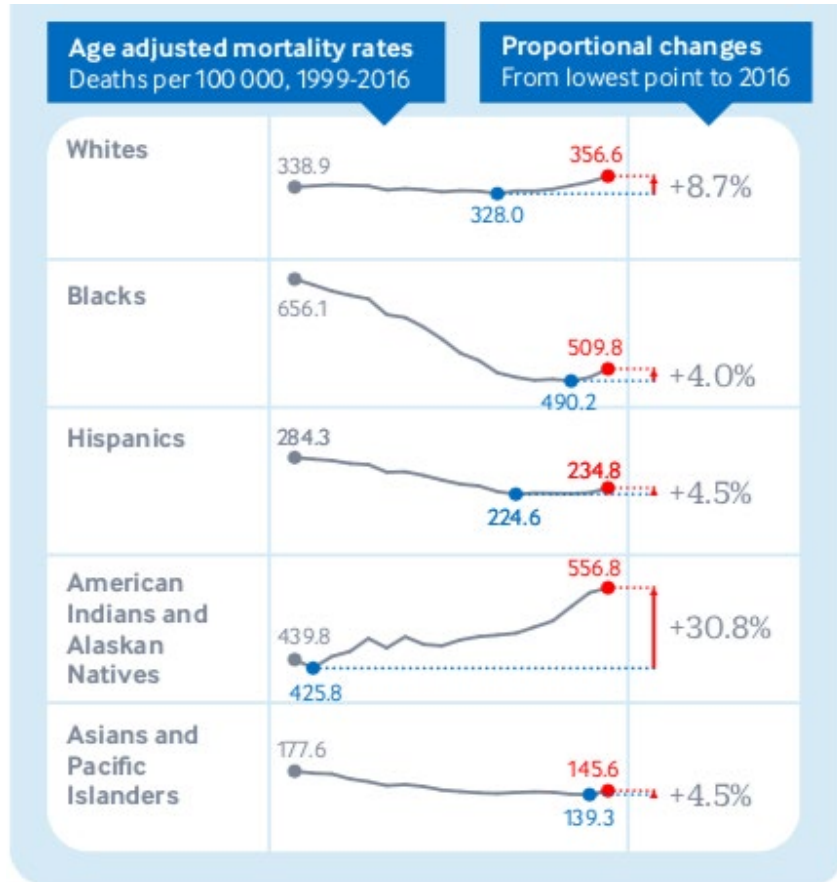
WHY ARE DEATH RATES RISING AMONG WHITES IN MISSOURI?

COMMUNITIES FACING NEW SOCIAL & ECONOMIC REALITIES



University of Pittsburgh
Graduate School of Public Health

Midlife mortality rates rising across racial and ethnic groups, 1999-2016



Source: Woolf et al. *BMJ* 2018;362:k3096.

An American phenomenon



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Financial despair, addiction and the rise of suicide in white America

The death rate for white Americans aged 45 to 54 has risen sharply since 1999, but Montana officials wrestle to explain why the state has the highest rate of suicide in the US at nearly twice the national average - and it's rising

The Guardian view on American mortality: the price of a ruthless economy
Editorial



What is the role of allied health professions in addressing the social determinants of health?

✓ One on one

Understanding the life context of the patient and the family
(clinical)

✓ Community involvement

Advocating services and programs in their communities to foster healthier lifestyles
(local activism)

✓ Engaging policymakers

Promoting the message that social policy (e.g., education, jobs) is health policy
(policy reform)



What is the role of the health care system in addressing the social determinants of health?

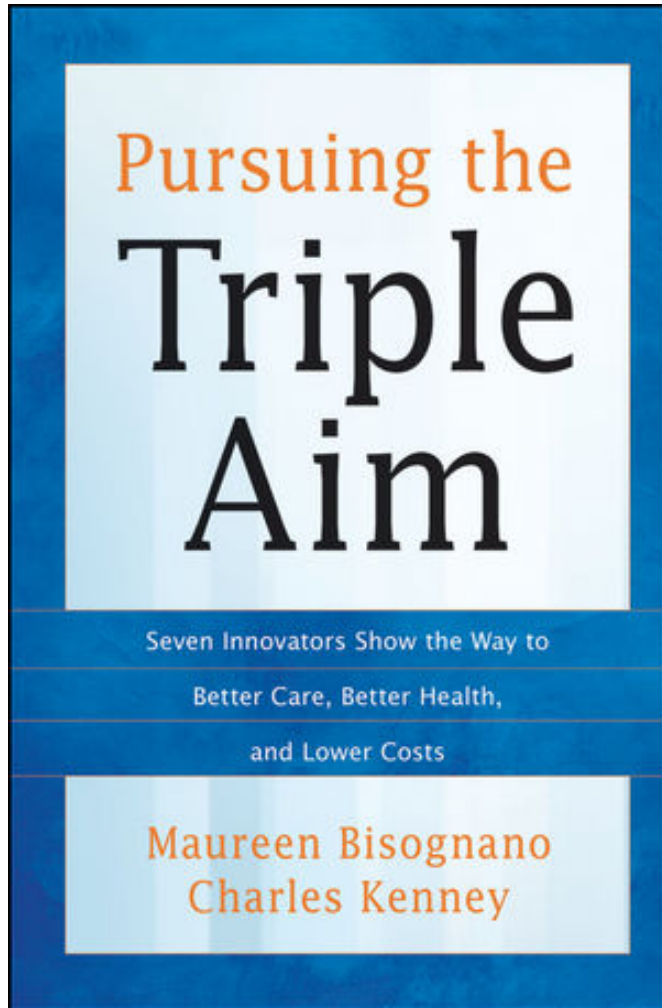




How “Hot Spotting” Cut Health Care Costs by 50%

One doctor in Camden, New Jersey, Jeffrey Brenner, used data to map “hot spots” of health care high-utilizers—one patient had gone to the hospital 113 times in a year—and found a better, cheaper way to treat these costly patients through collaborative care. Brenner’s team was able to reduce hospital visits and costs by 40 to 50 percent.





Can Hospitals Heal America's Communities?

"All in for Mission" is the
Emerging Model for Impact

Tyler Norris

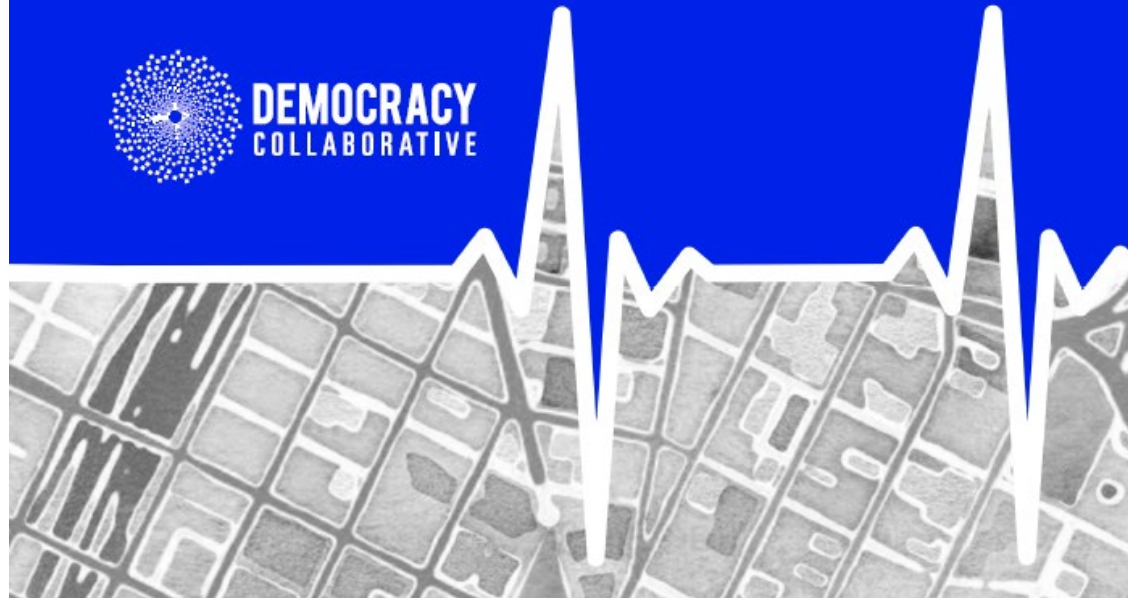
Vice President of Total Health Partnerships, Kaiser Permanente

Ted Howard

President, The Democracy Collaborative



DEMOCRACY
COLLABORATIVE



Three levels of engagement

LEVEL 1: Assessing social determinants systematically

--e.g., systematic collection of race, ethnicity, etc.

LEVEL 2: Helping connect patients with assistance

--e.g., referring patients to social service agencies

LEVEL 3: Supporting community initiatives

--e.g., joining community collective-impact initiatives

Collective impact

The Five Conditions of Collective Impact

Common Agenda	All participants have a shared vision for change including a common understanding of the problem and a joint approach to solving it through agreed upon actions.
Shared Measurement	Collecting data and measuring results consistently across all participants ensures efforts remain aligned and participants hold each other accountable.
Mutually Reinforcing Activities	Participant activities must be differentiated while still being coordinated through a mutually reinforcing plan of action.
Continuous Communication	Consistent and open communication is needed across the many players to build trust, assure mutual objectives, and create common motivation.
Backbone Support	Creating and managing collective impact requires a separate organization(s) with staff and a specific set of skills to serve as the backbone for the entire initiative and coordinate participating organizations and agencies.

Kania and Kramer, *Stanford Social Innovation Review*, Jan 21, 2013

“Community benefit” on new terms

Accountable Health Communities Model

[+](#) Share

To sign up for updates about this model, please subscribe to the [Accountable Health Communities Model listserv](#).

The Accountable Health Communities Model addresses a critical gap between clinical care and community services in the current health care delivery system by testing whether systematically identifying and addressing the health-related social needs of Medicare and Medicaid beneficiaries' through screening, referral, and community navigation services will impact health care costs and reduce health care utilization.

Select anywhere on the map below to view the interactive version



Source: Centers for Medicare & Medicaid Services



HOW
HOUSING
MATTERS



UnitedHealthcare®

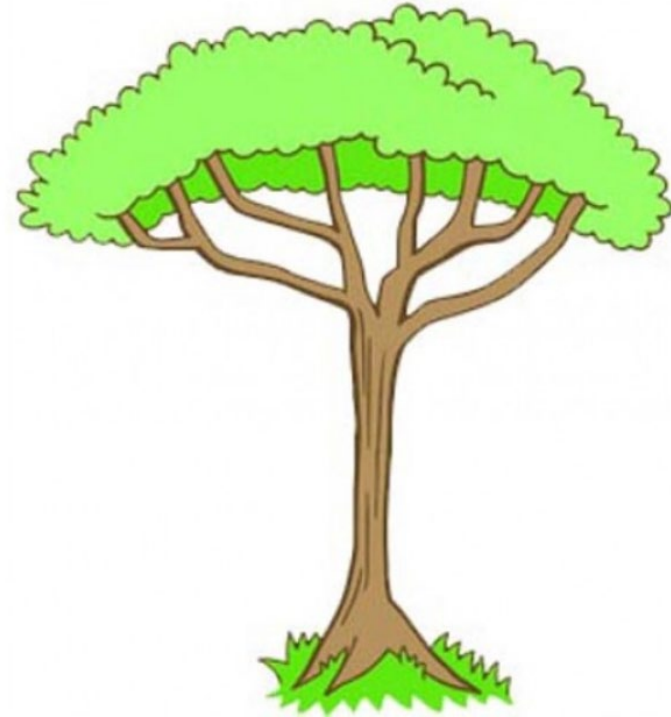


Trinity Health “people-centered” framework



Shared interests in wellbeing and equity

- Education
- Employment
- Living wage
- Affordable housing
- Transportation
- Environmental justice
- Criminal justice
- Public safety



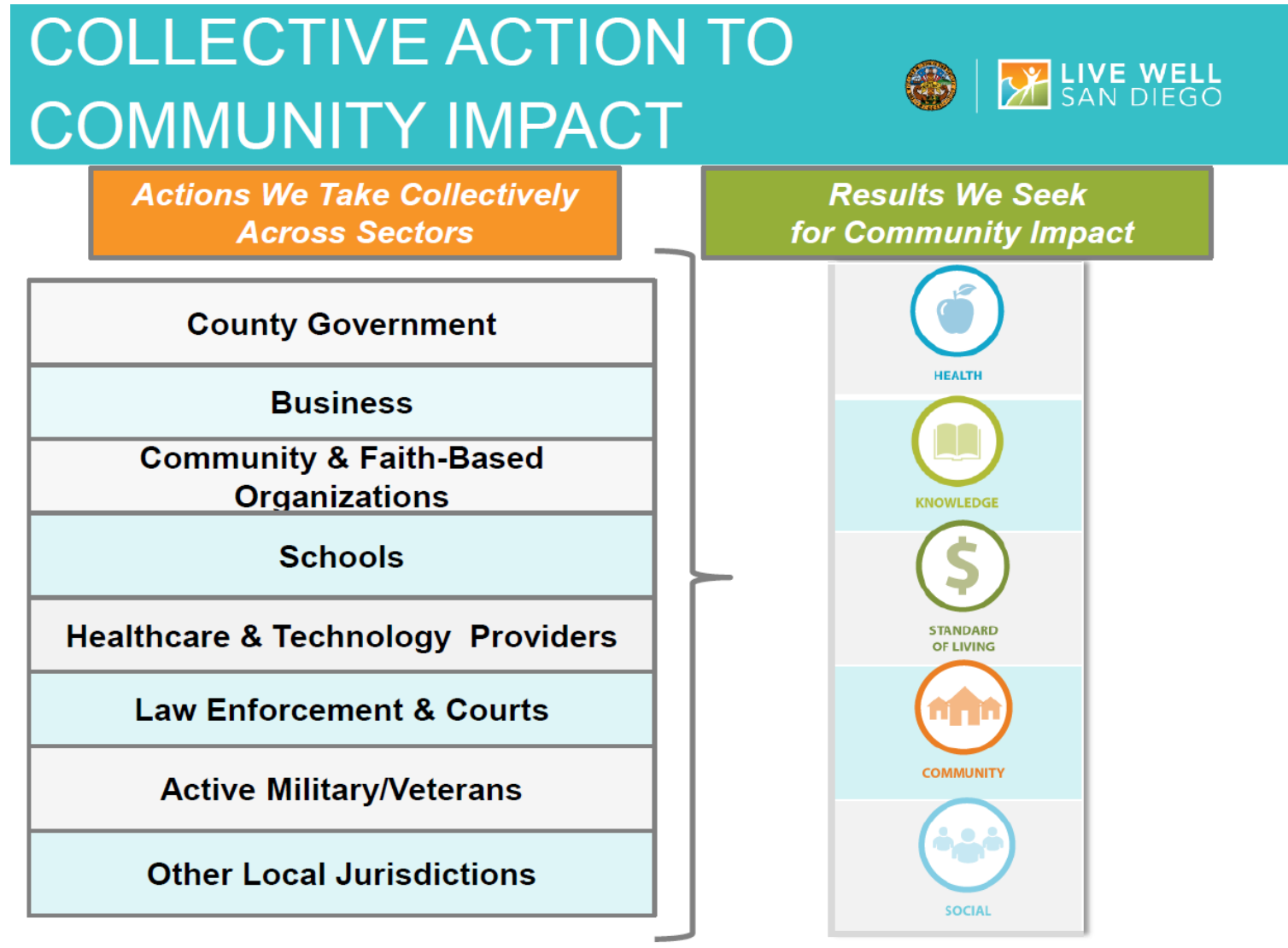
The central role of opportunity

Shared interests in opportunity

The return on investment



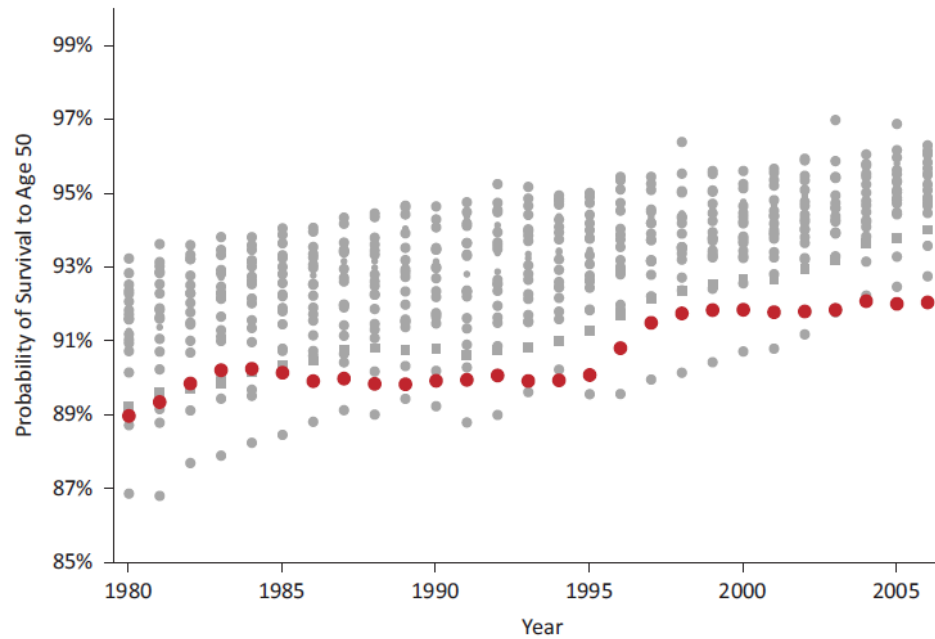
“Live Well San Diego”



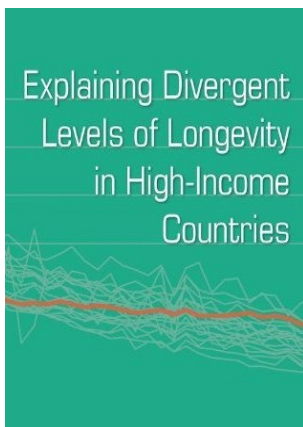
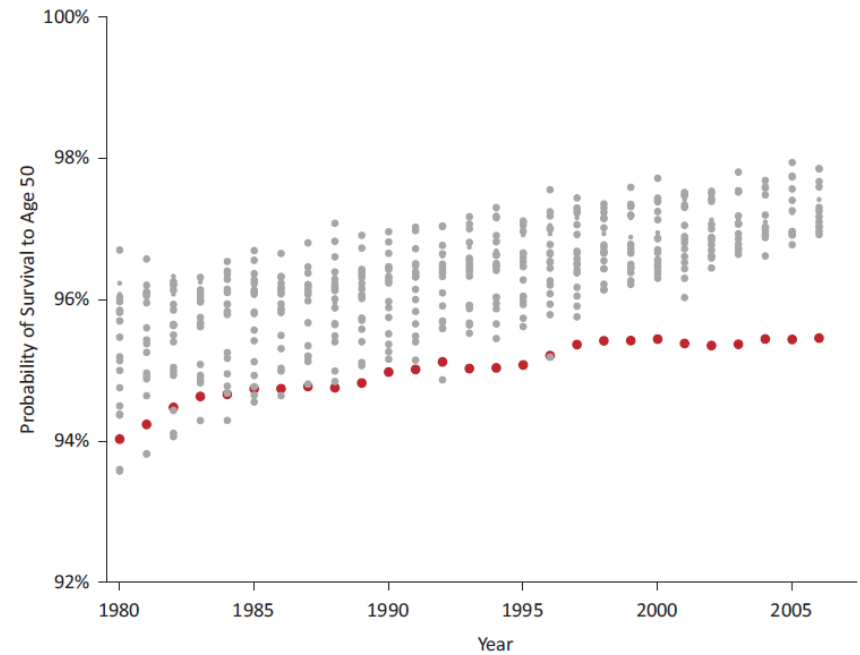


Probability of Survival to Age 50 in 21 High-Income Countries, 1980-2006

Males



Females



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