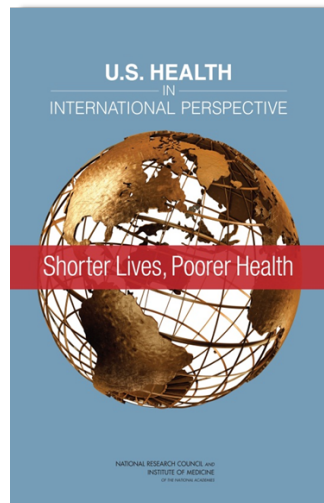
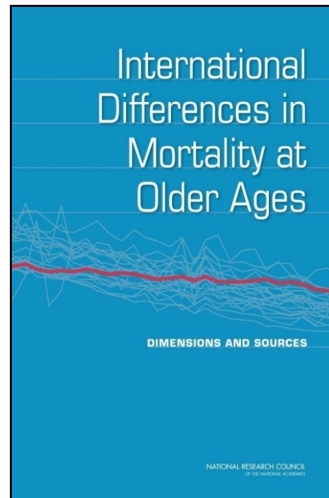
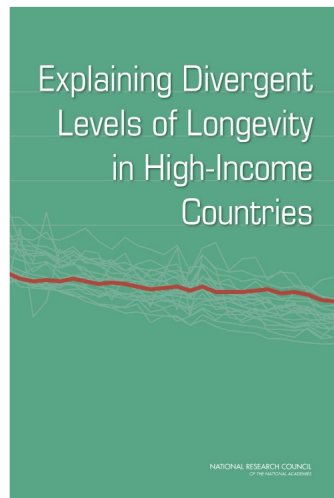


Recent Trends in Health and Mortality in the US Relative to other high-income countries

Eileen M. Crimmins

University of Southern California

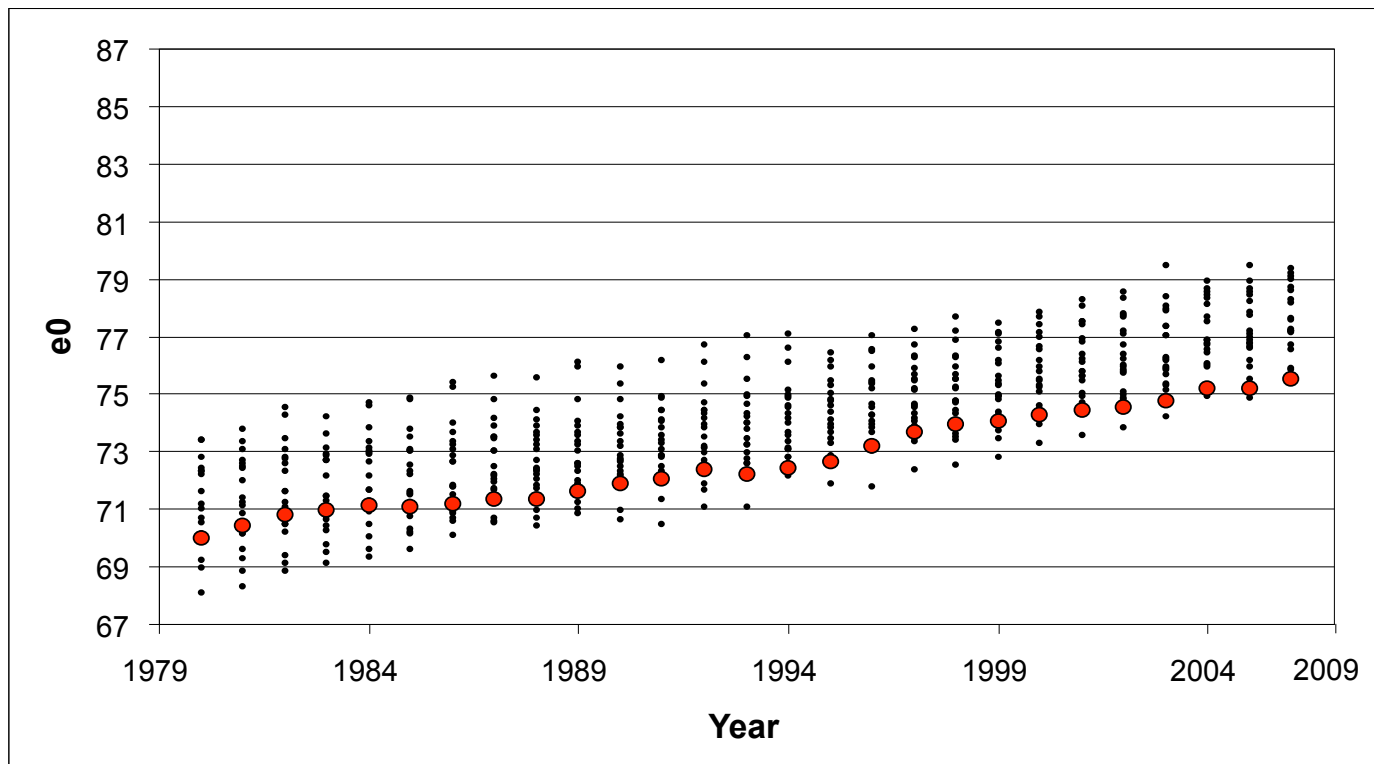


Population Health Science in the United States: Trends, Evidence, and Effective Policy

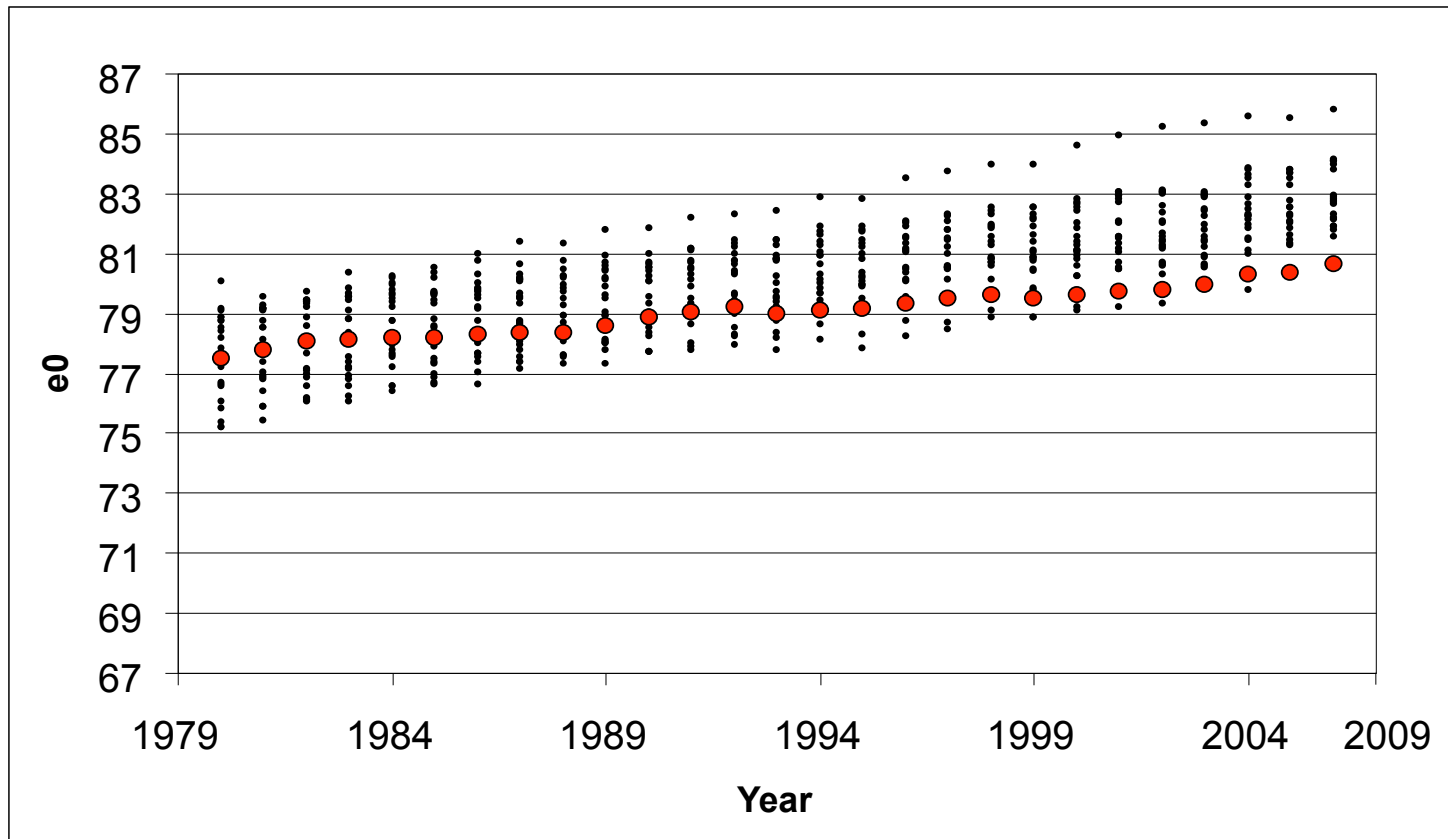
A Joint Symposium of the Roundtable on Population Health Improvement and the Interdisciplinary Association for Population Health Science

October 3, 2018

US Life Expectancy at Birth for Men Falls 1980- 2008 compared to 22 OECD Countries



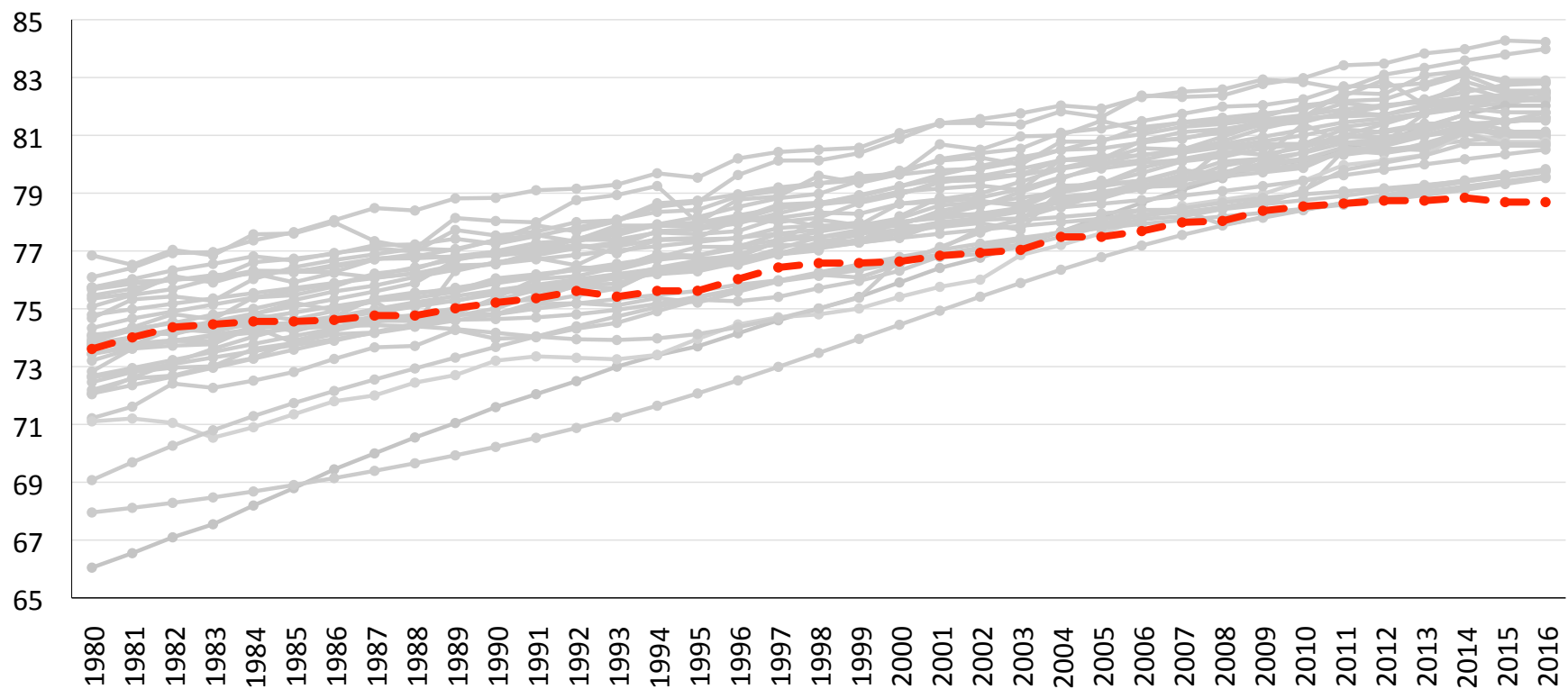
Relative US Life Expectancy at Birth for Women Falls even more -1980- 2008



Current Update:

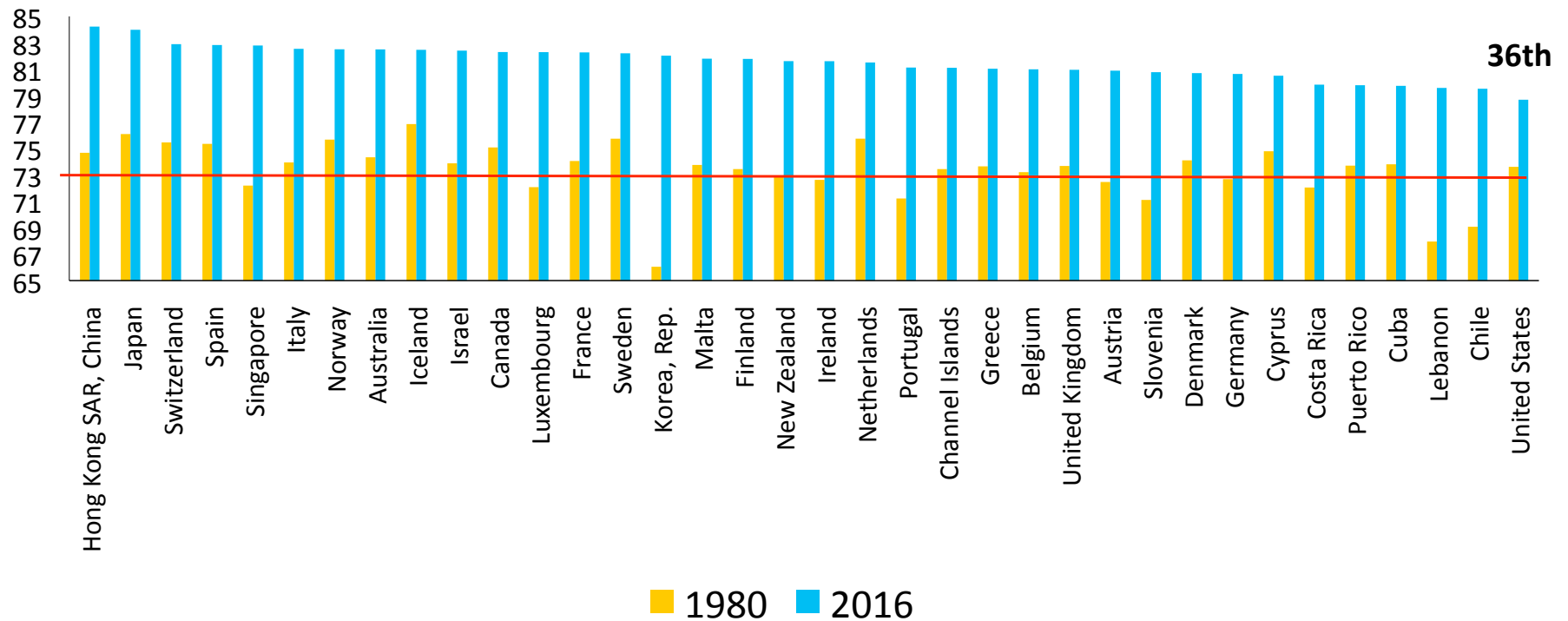
US continues to **get worse relative to other countries**

Life Expectancy between 1980 and 2016 by Country: US ranked 21st in 1980 and 36th in 2016



Source: The World Bank

The US has Fallen Behind Many More Countries: Life Expectancy in 2016 and 1980 for US and 35 countries higher than the US in 2016



Source: The World Bank

Last two years - Absolute Decreases in Life Expectancy in the United States

[US life expectancy drops for second year in a row - CNN - CNN.com](https://www.cnn.com/2017/12/21/health/us-life-expectancy-study/index.html)
[https://www.cnn.com/2017/12/21/health/us-life-expectancy-study/
index.html](https://www.cnn.com/2017/12/21/health/us-life-expectancy-study/index.html)

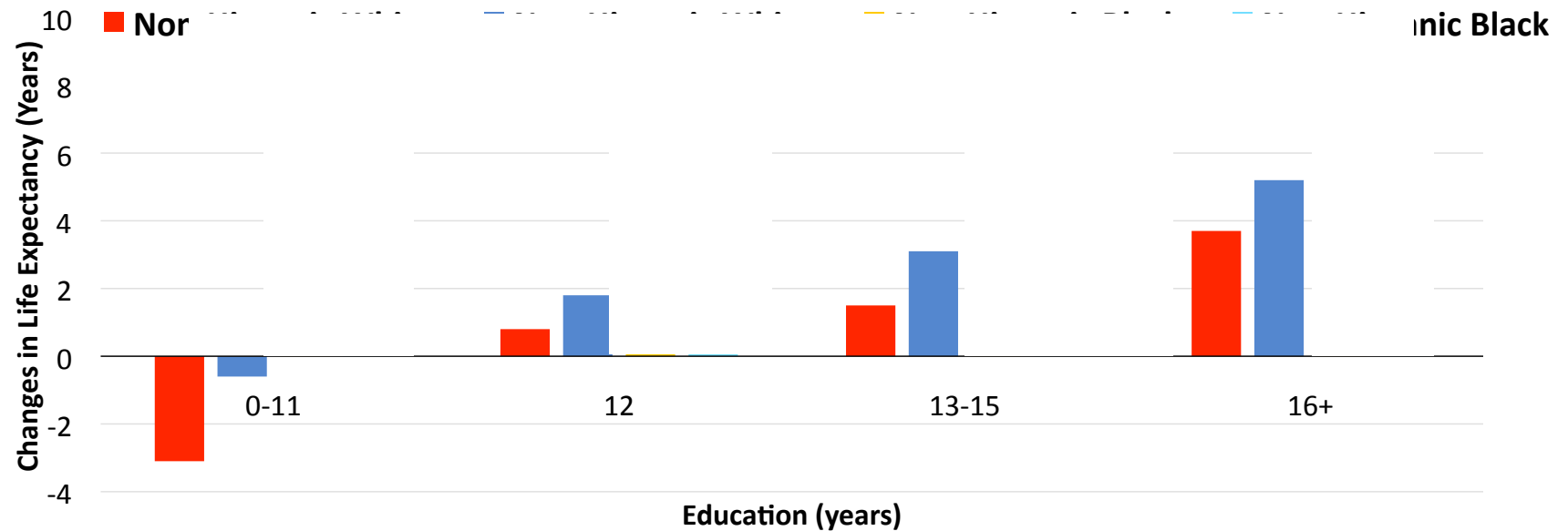
Trends for some demographic groups within the US are worse than for others:

- **Women worse than men**
- **Low education worse than high education**
- **White worse than black**
- **South and middle of the country worse than coasts**



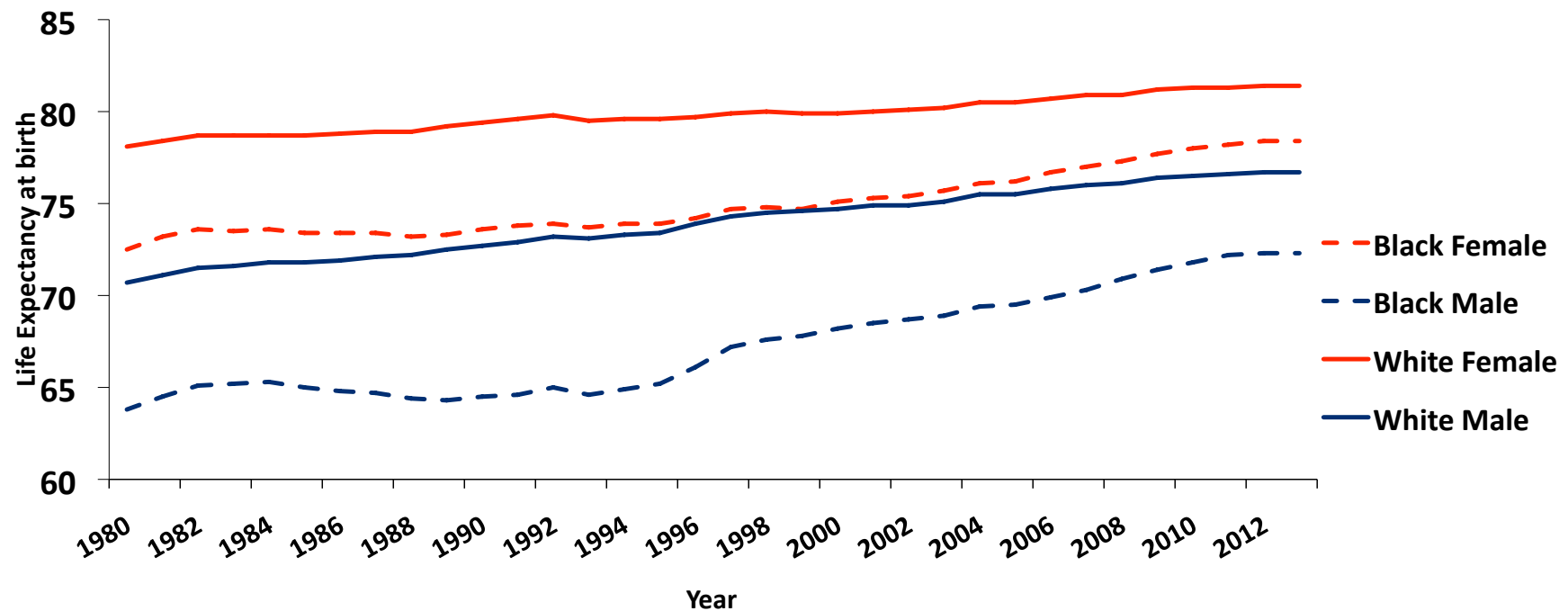
Men Increase in Life Expectancy more than Women: Higher Education more Increase than Lower Education

Change in Life Expectancy at Age 25 By Education: 1990 to 2010

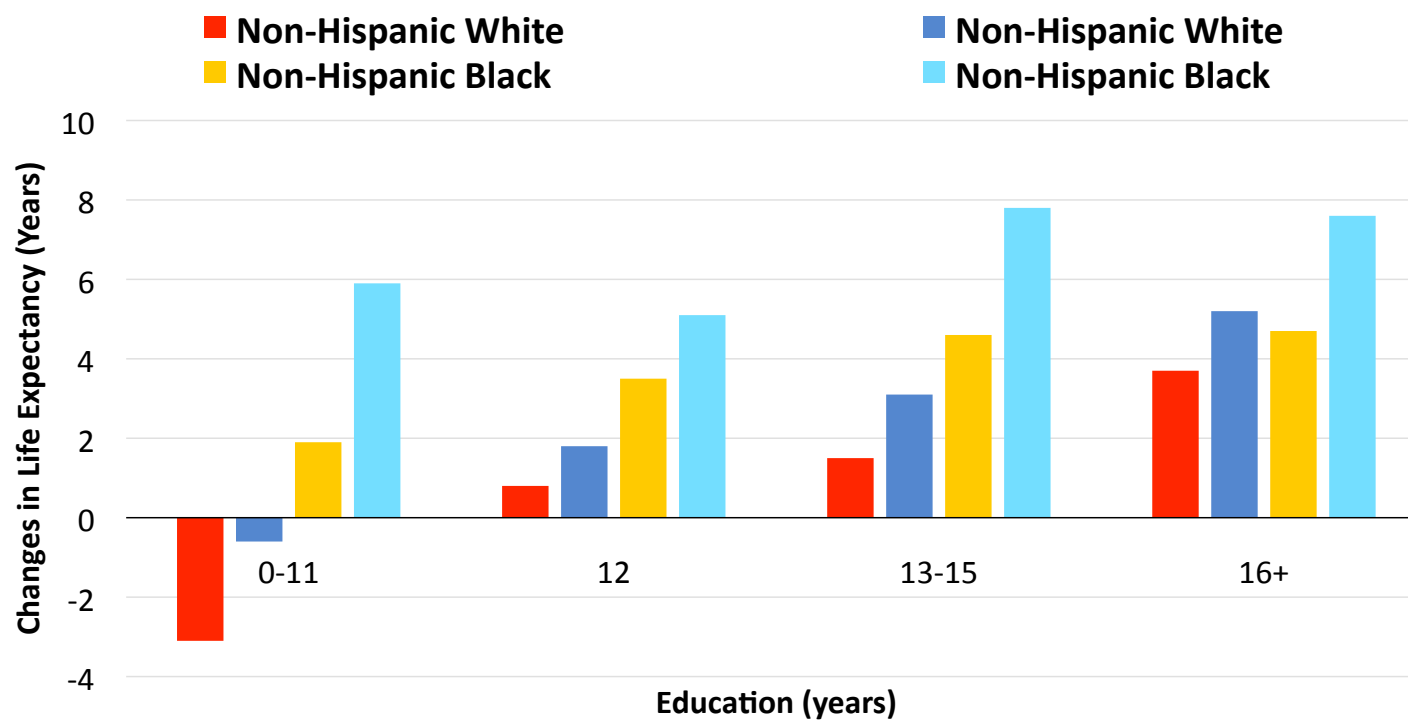


Source: Sasson (2016). Trends in life expectancy and lifespan variation by educational attainment: United States, 1990-2010. Demography. 53:269-293.

Black Life Expectancy Increases Relative to Whites: US Life Expectancy at Birth: 1980-2013

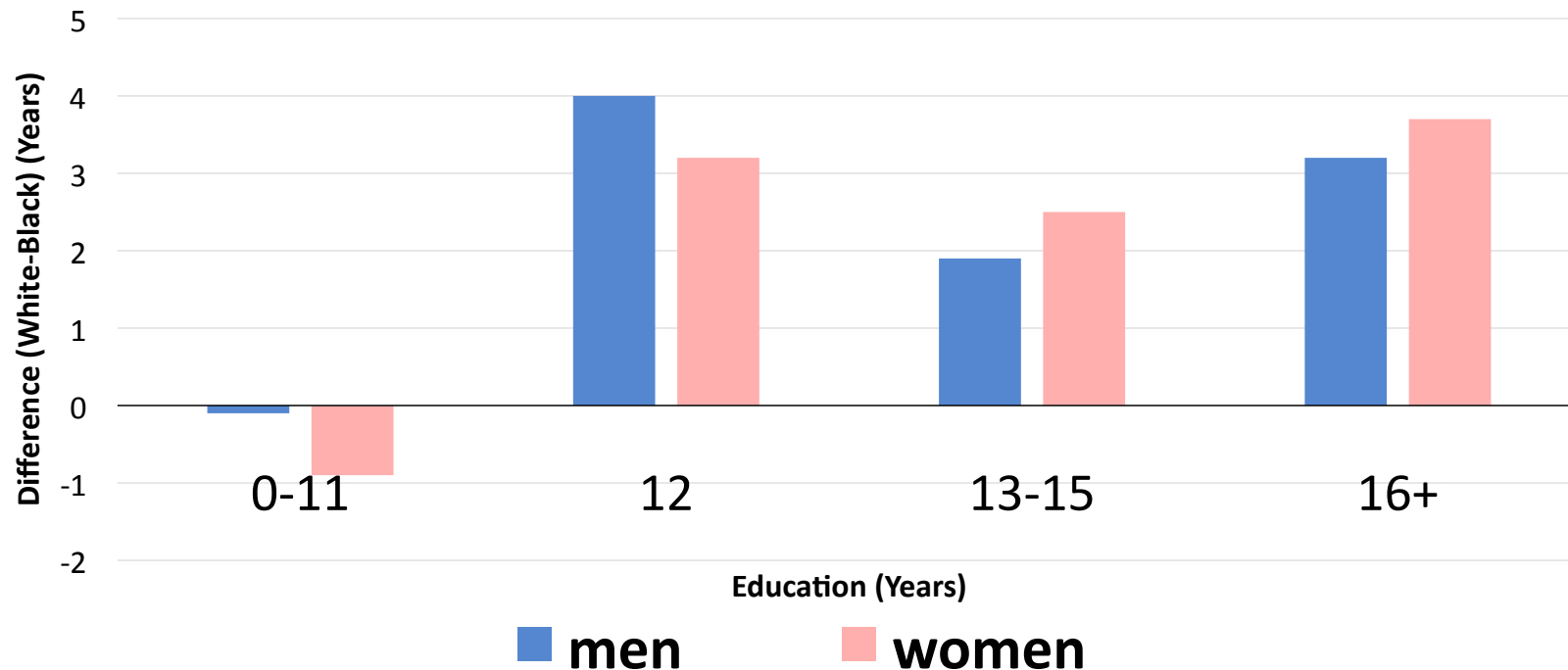


Black Increase in Life Expectancy Greater than NH Whites: Change in Life Expectancy at Age 25 By Education: 1990 to 2010



Source: Sasson (2016). Trends in life expectancy and lifespan variation by educational attainment: United States, 1990-2010. *Demography*. 53:269-293.

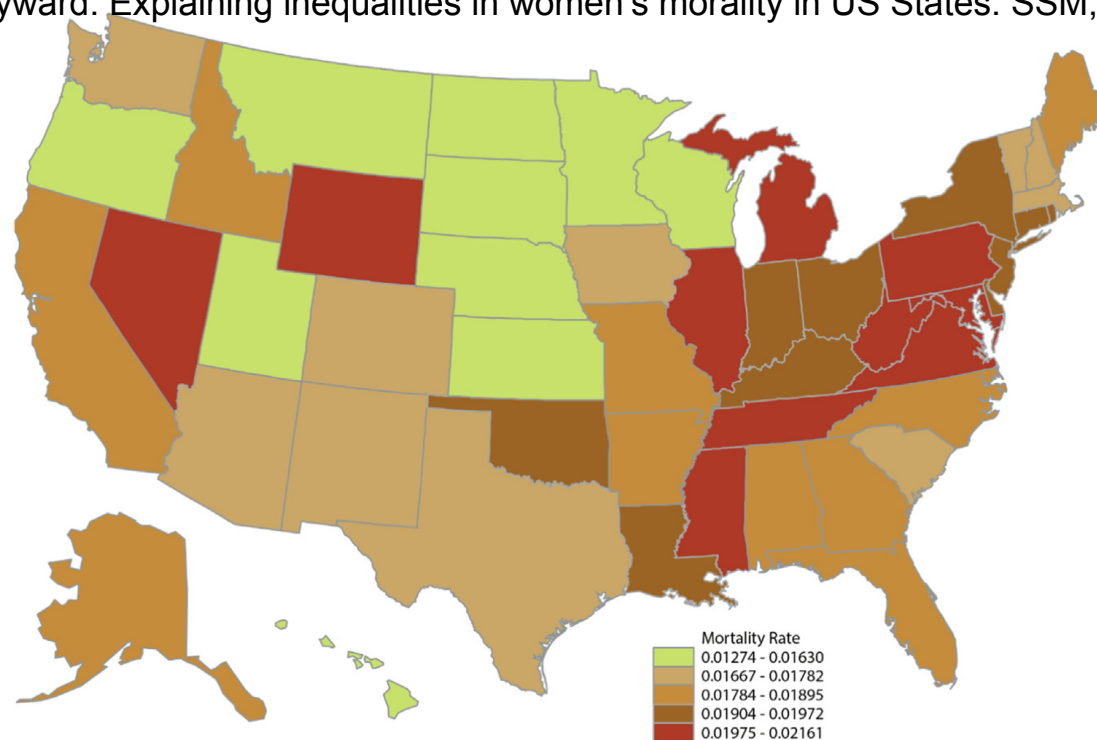
Black-White Differences in Life Expectancy Occur within Socioeconomic groups: Difference in LE at Age 25 between Non-Hispanic Whites and Blacks by Education for Men and Women: 2010



Source: Sasson (2016). Trends in life expectancy and lifespan variation by educational attainment: United States, 1990-2010. Demography. 53:269-293.

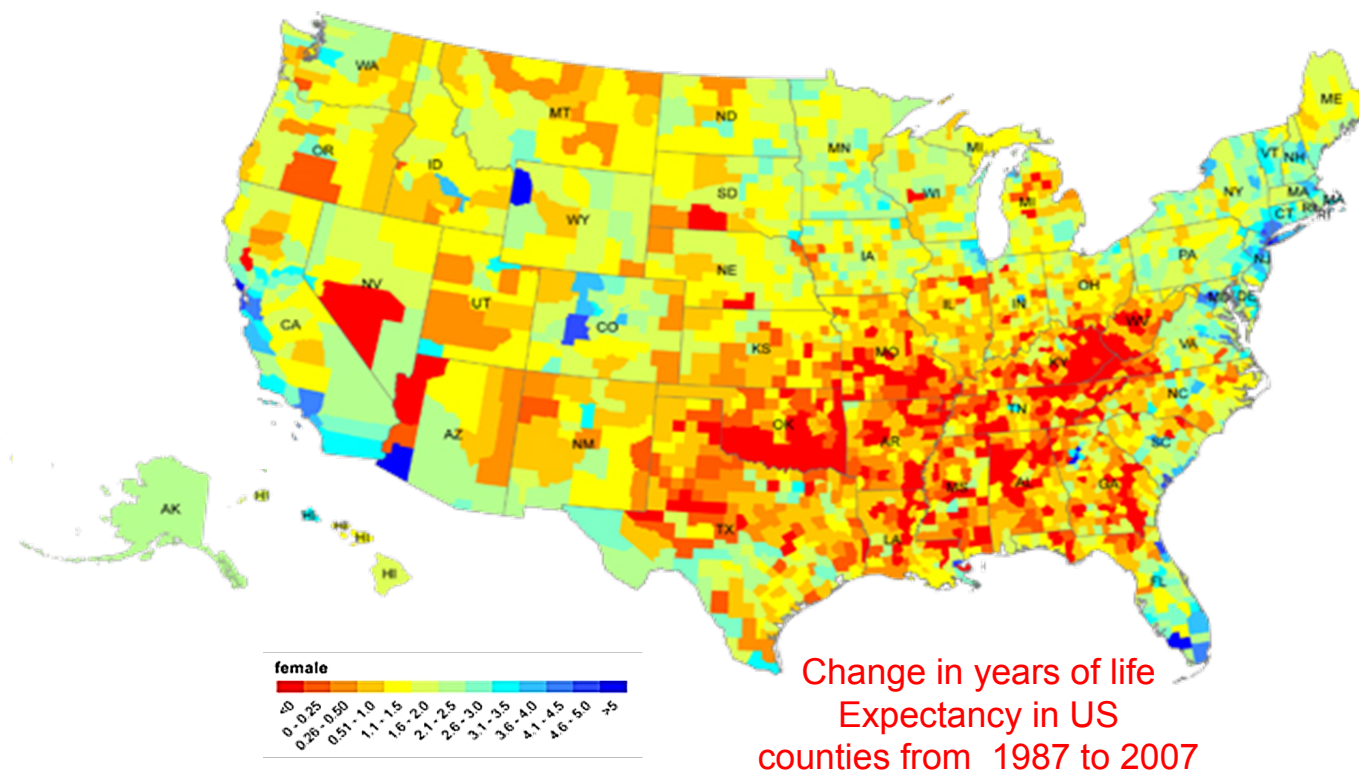
Place matters as well as individual characteristics: Risk of dying varies by State – and is linked to social cohesion and economic conditions

Montez, Zajacova, Hayward. Explaining inequalities in women's mortality in US States: SSM, 2016.



Age standardized Probability of Death: US-Born Women, 45-89

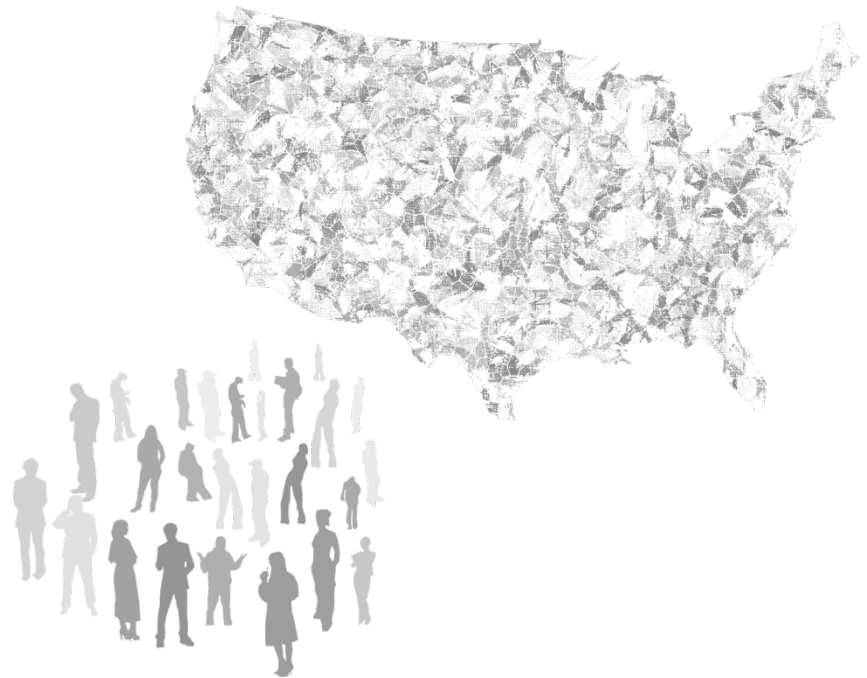
Geographic differences: Life Expectancy is declining in some places
Lower than 30 years ago for women in Red Counties



Source: Institute for Health Metrics, 2011. John Goodman's Health Policy Blog

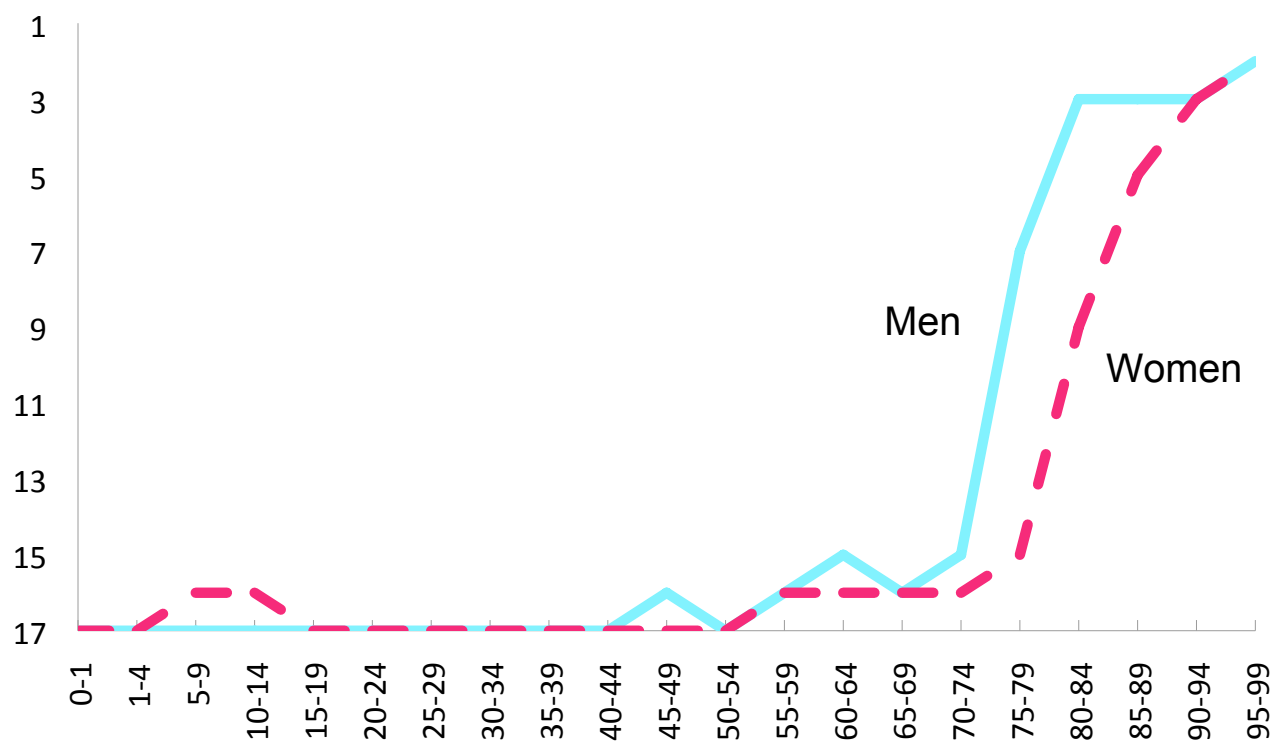
Explanations for Differences between the US and Other countries:

- **Much due to ages before 50 – Not old age**
- **Smoking history**
- **Obesity**
- **Access to Medical Care**
- **Policies**
- **Social Safety Net**



Among peer countries US Ranks as worst or second to worst in mortality at most ages up to older age

17 Peer Countries, 2006-2008



Source: National Research Council: US Health in International Perspective: Shorter Lives, Poorer Health, 2013

New Recent Trends:

The New York Times | <http://nyti.ms/1KUrGdg>

HEALTH

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

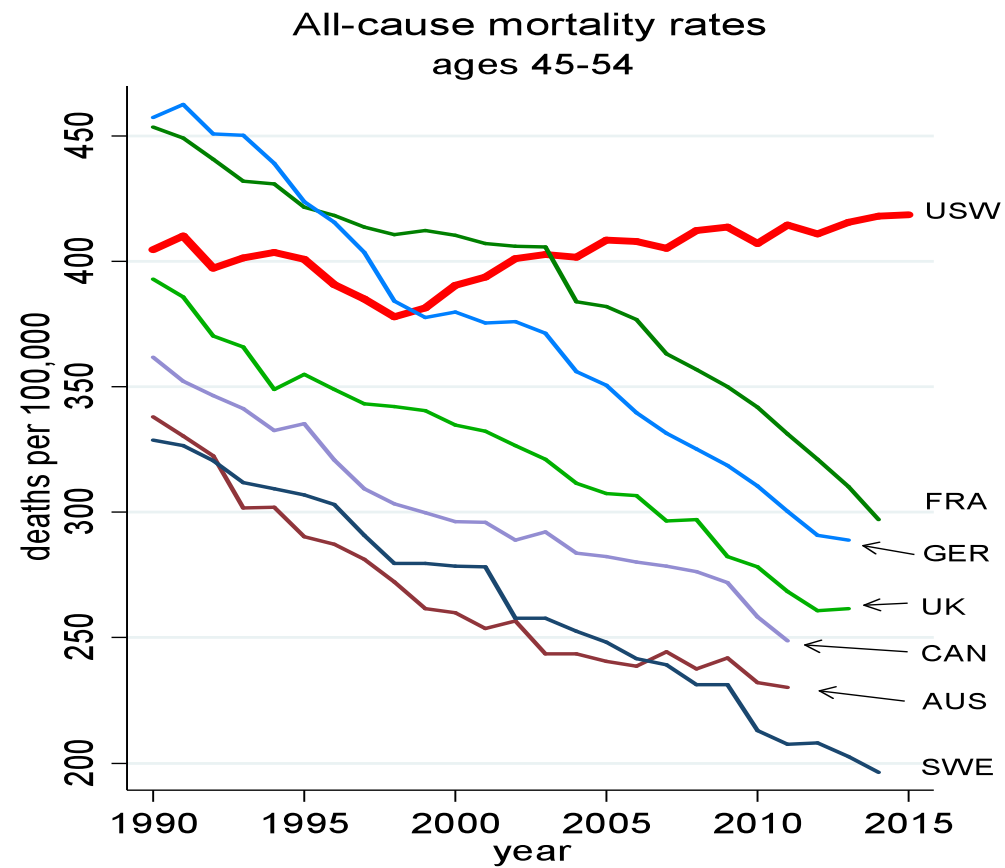
By GINA KOLATA NOV. 2, 2015

Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century

Anne Case¹ and Angus Deaton¹

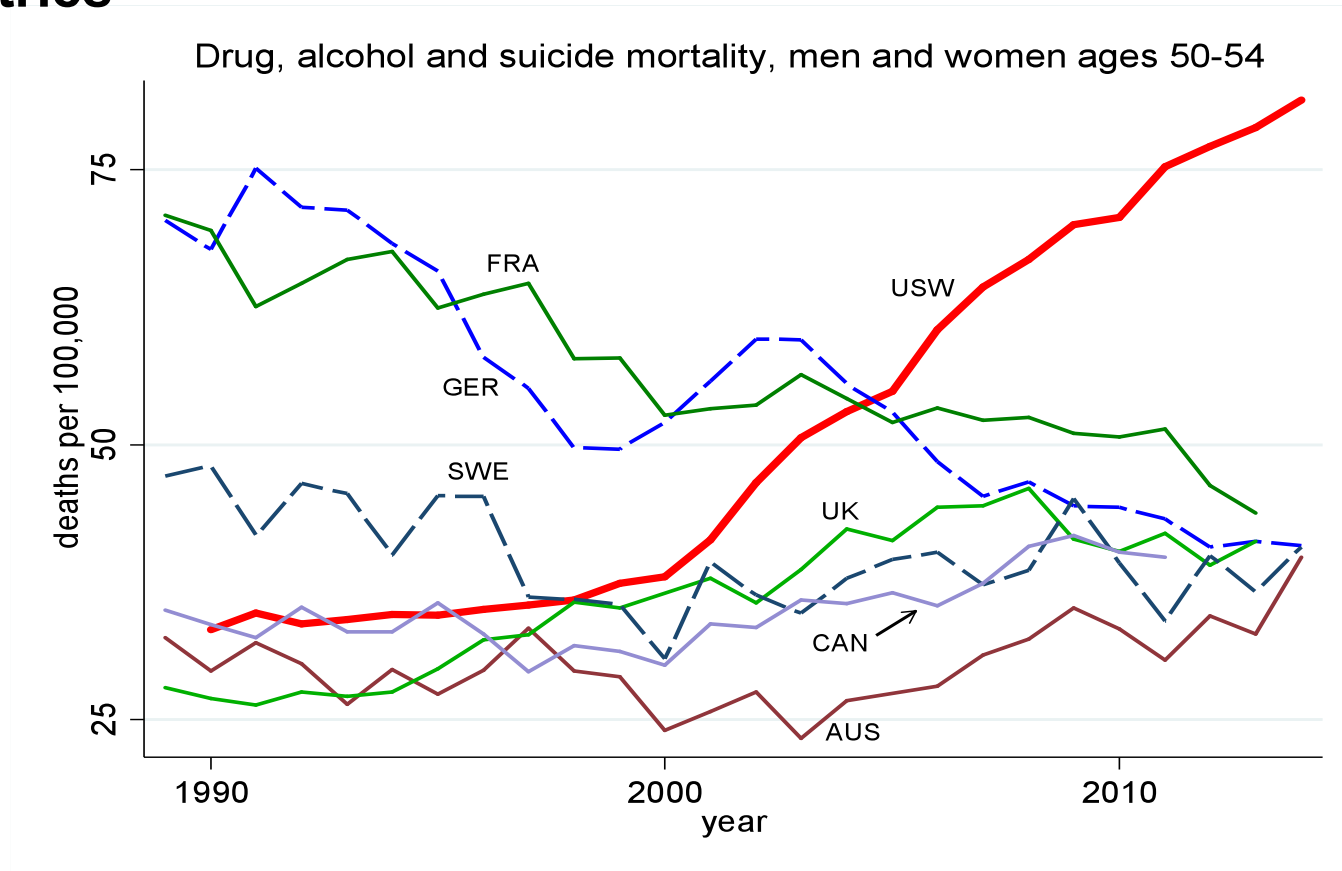
15078–15083 | PNAS | December 8, 2015 | vol. 112 | no. 49

Mortality Rates for Whites in the US have been increasing and Peer countries are decreasing



Case and Deaton (2015)

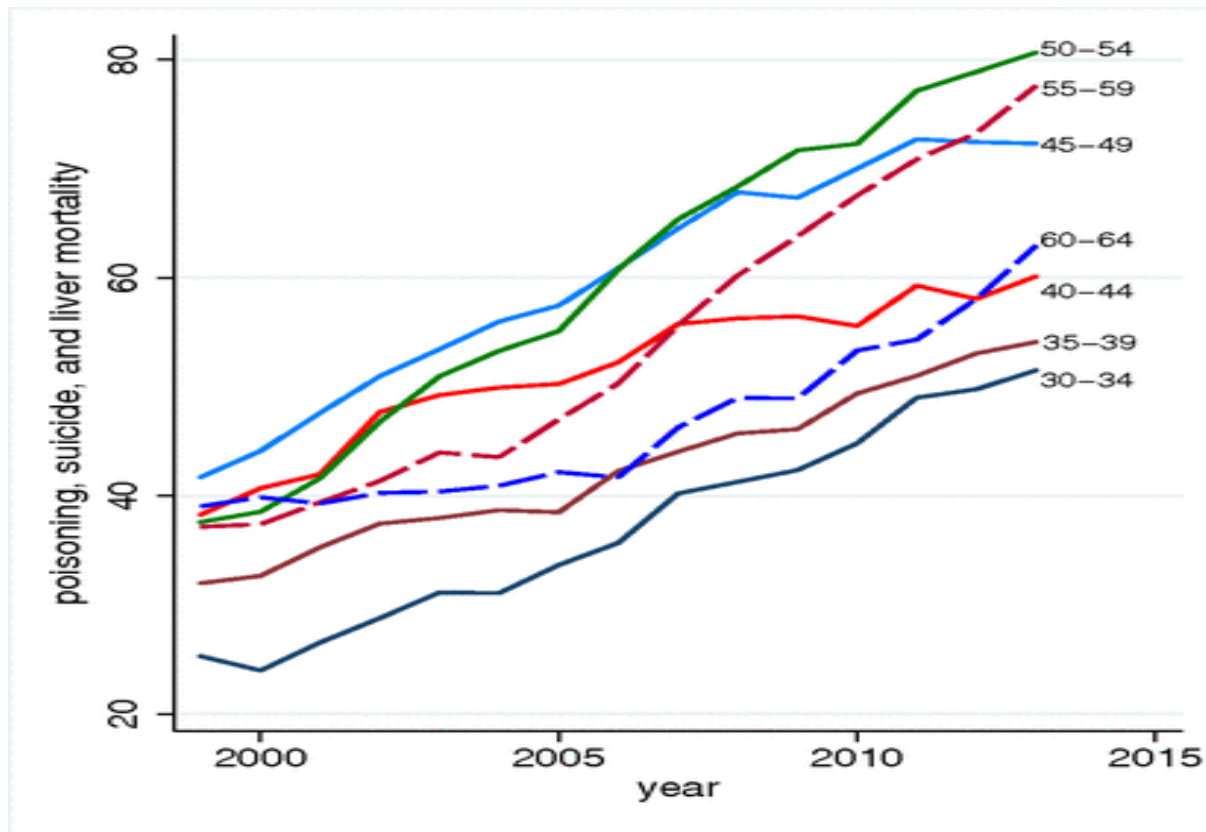
Deaths of Despair Rise Rapidly in the US Relative to Other Countries



Source: Case and Deaton 2015

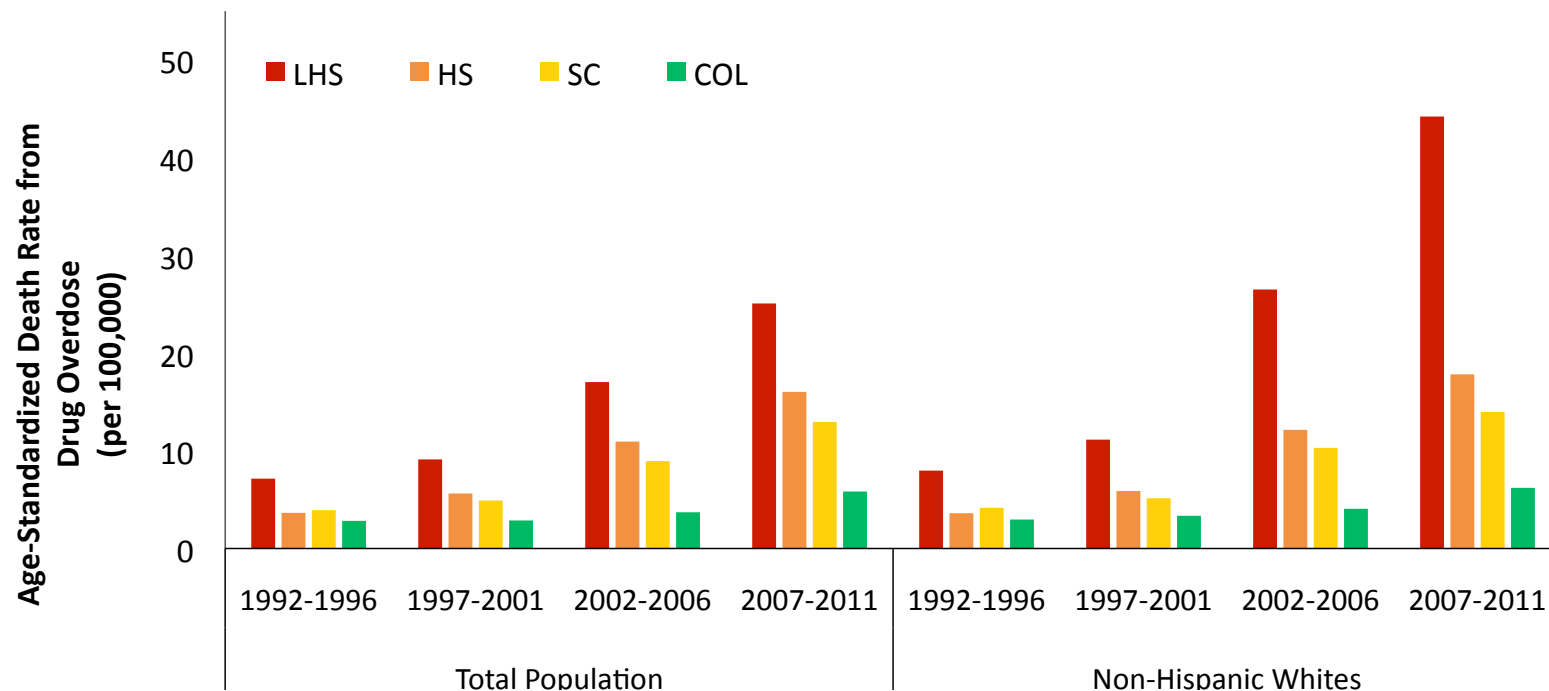
Increasing Deaths of Despair Extend Across Middle Ages:

Mortality by poisoning, suicide, chronic liver disease, and cirrhosis, white non-Hispanics



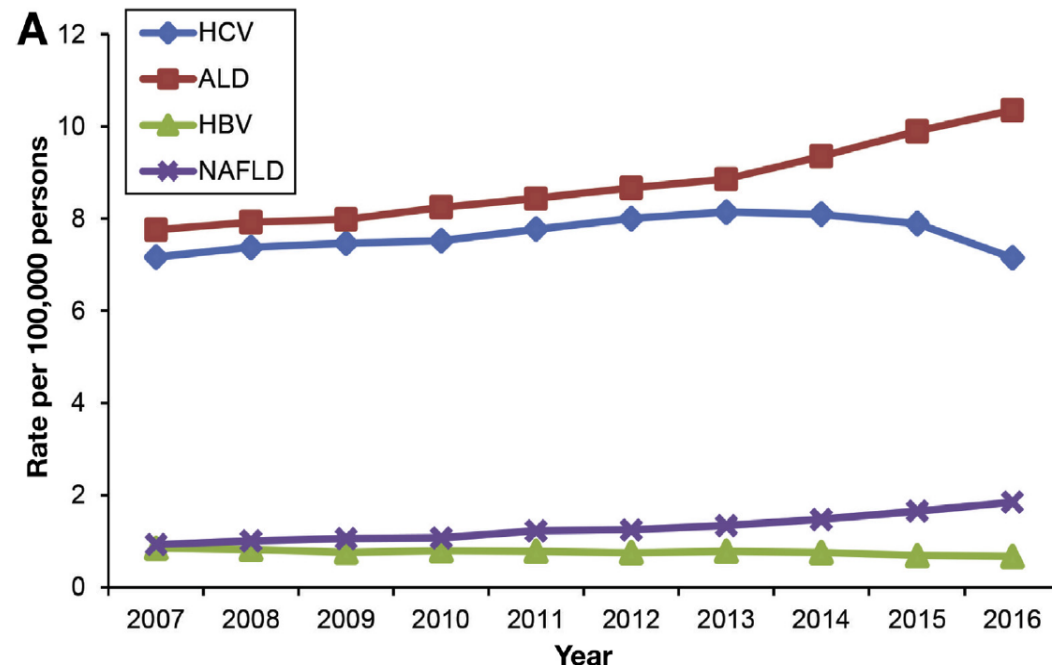
Source: Case and Deaton, 2015. Proc Natl Acad Sci U S A.; 112(49): 15078–15083, Fig. 4.

Mortality Increases for Women from 1997 to 2011 from Drug Overdoses: more for those with low education and more for non-Hispanic Whites



Source: Ho JY. 2017. The contribution of drug overdose to educational gradients in life expectancy in the United States, 1992–2011. *Demography*. 54 :1175-202. Figure 1

Increases in Mortality from Liver Disease



Changing Trends in Etiology-Based Annual Mortality From Chronic Liver Disease, from 2007 Through 2016. [Kim D et al. *Gastroenterology*. 2018 Aug 31. pii: S0016-5085\(18\)34762-0.](#)
hepatitis C virus (HCV) alcoholic liver disease(ALD), nonalcoholic fatty liver disease, or hepatitis B virus

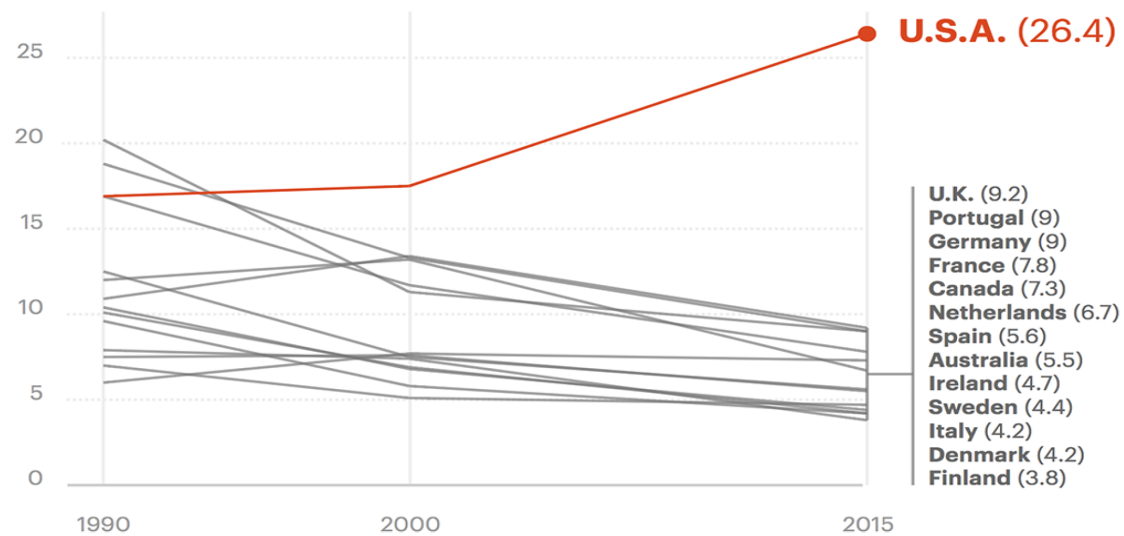
U.S. Has The Worst Rate Of Maternal Deaths In The Developed World

May 12, 2017 · 10:28 AM ET

NINA MARTIN, PROPUBLICA

Maternal Mortality Is Rising in the U.S. As It Declines Elsewhere

Deaths per 100,000 live births



Notes

<https://www.npr.org/2017/05/12/528098789/u-s-has-the-worst-rate-of-maternal-deaths-in-the-developed-world>

2/9

"Global, regional, and national levels of maternal mortality, 1990–2015: a systematic analysis for the Global Burden of Disease Study 2015," *The Lancet*. Only data for 1990, 2000 and 2015 was made available in the journal.

Declines in cardiovascular mortality have decelerated

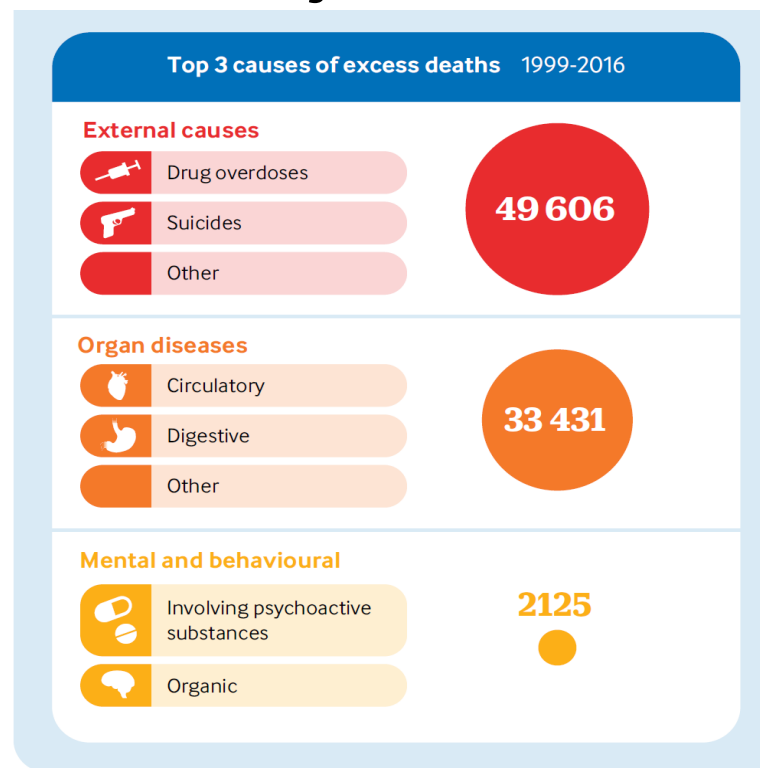
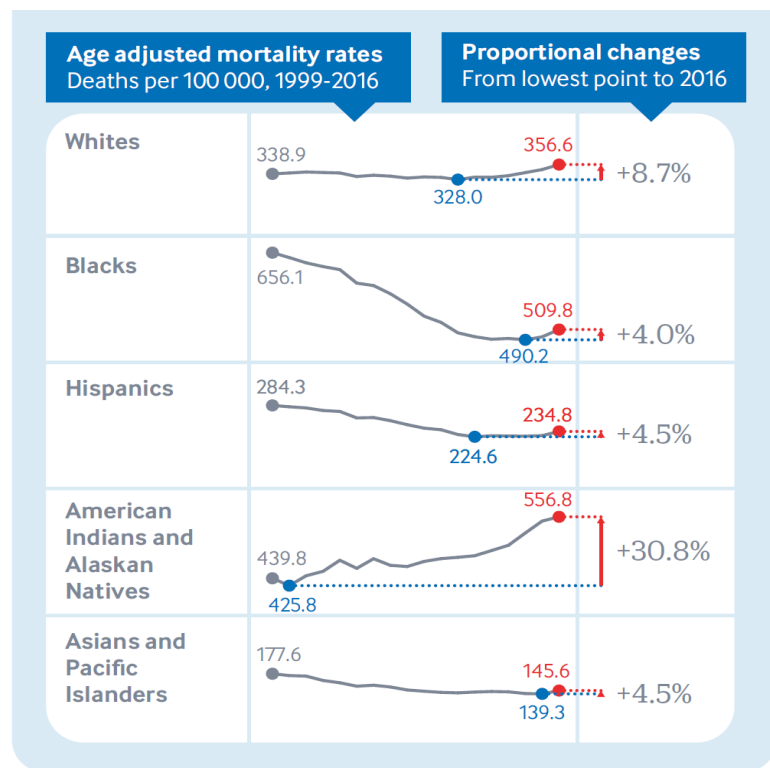
Annual reduction in heart disease mortality

3.9% from 2000-2010

1.4% from 2010-2013

Source: Ma et al. Temporal Trends in Mortality in the United States, 1969-2013. *JAMA*. 2015;314(16):1731–1739.

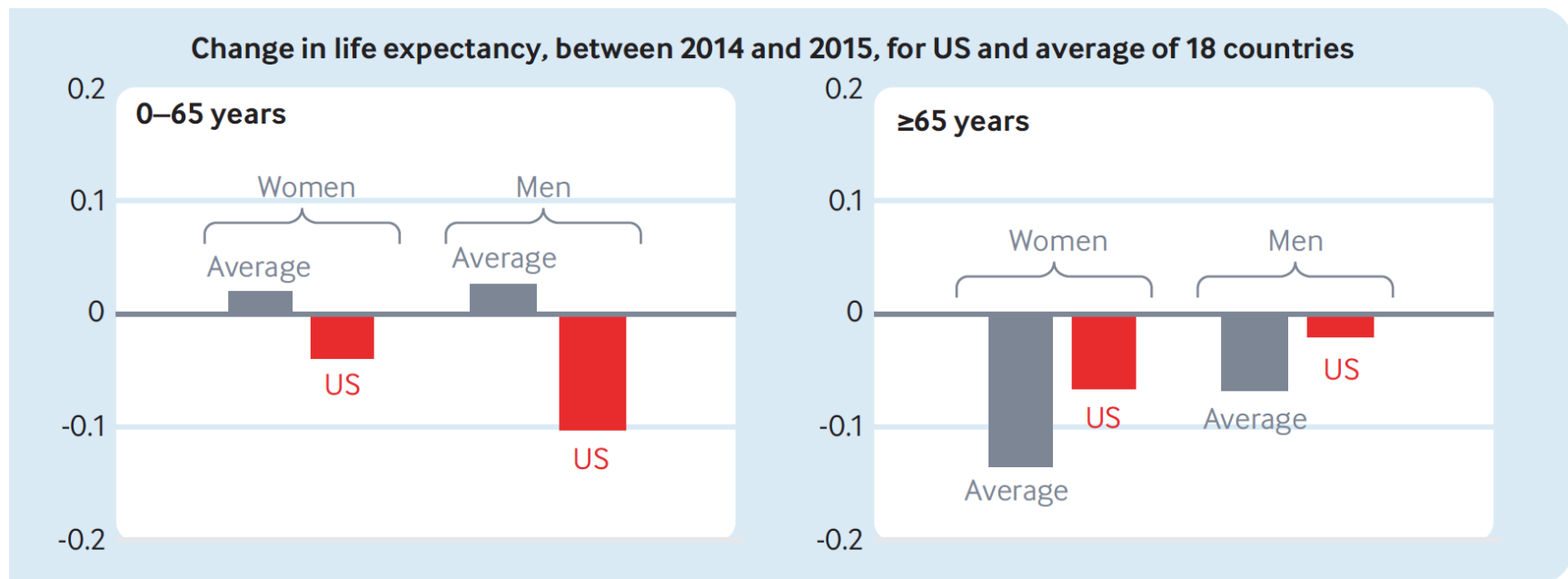
It is not just Non Hispanic Whites and it is not just Deaths of Despair



Source: BMJ Visual – Woolf, S et al. 2018. Changes across midlife death rates.... BMJ, 2018;362:k3096
<http://dx.doi.org/10.1136/bmj.k3096>

**What were the Trends in Peer
Countries?**

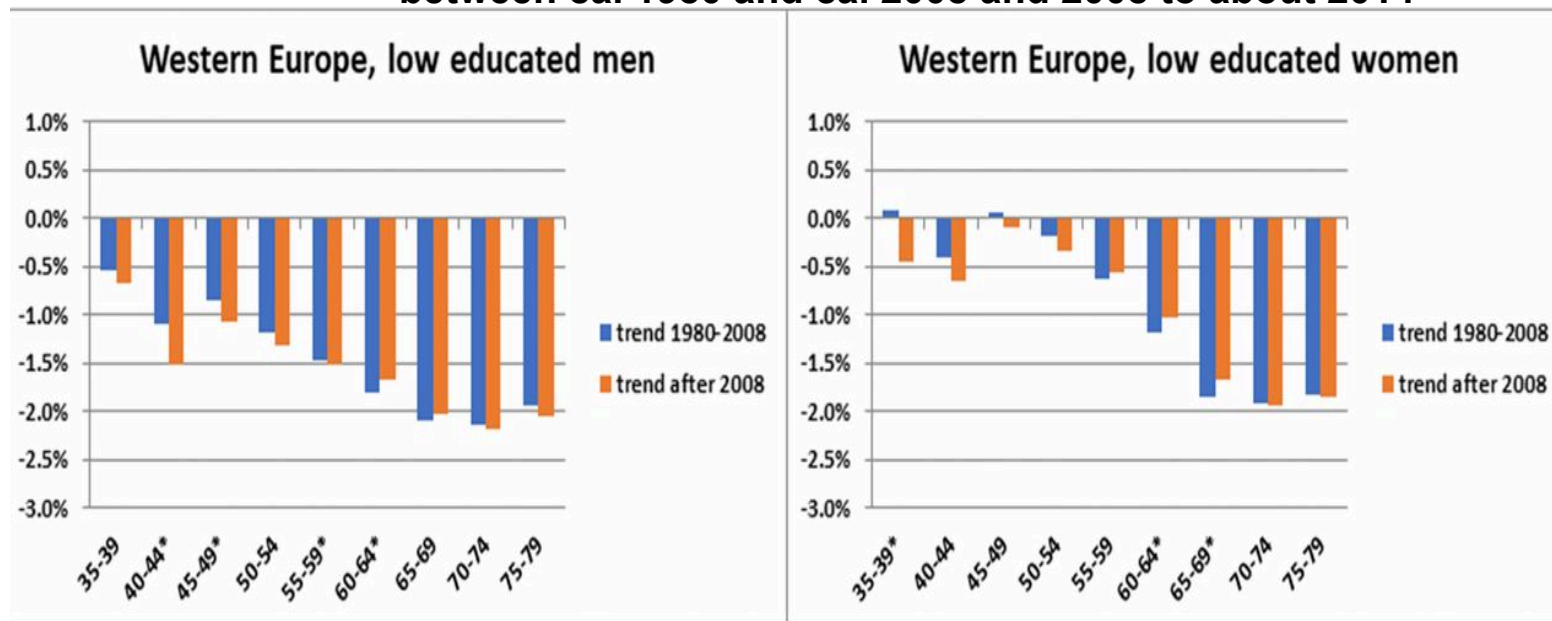
1. **Majority of 18 countries experienced declines in life expectancy during 2014-15;** but they more than recovered lost life expectancy in 2015-2016.
2. European declines were from increased mortality from chronic conditions and respiratory disease at older ages.
3. United States declines concentrated at younger ages and from drug overdose and other external causes of death.



Source: BMJ Visual. Ho and Hendi. 2018. British Medical Journal, 2018;362:k2562, <http://dx.doi.org/10.1136/bmj.k2562>

In Western Europe the Rate of Mortality Decline among those with Low Education did not deteriorate after the Economic Crisis:

Trends in age-specific mortality among lowly educated men and women between ca. 1980 and ca. 2008 and 2008 to about 2014



Johan P. Mackenbach et al. PNAS 2018;115:25:6440-6445
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PNAS

In Sum: Current Situation in United States:

- Worsening relative to peer nations
- Many inequalities within the country are increasing
- There is deterioration in multiple aspects of health among some groups

Proximate Causes

- Some evidence of increasing despair
- Opioid epidemic has unusual characteristics related to drug distribution and sudden unexpected death
- Lack of and inappropriate care for some conditions



Root Causes of Adverse Trends:

- Macro Economic Change
- Job Losses in some sectors
- Income stagnation
- Family stresses
- Lack of Supportive Social Policies



National Strategy to Increase Life Expectancy



