

# The social determinants of health

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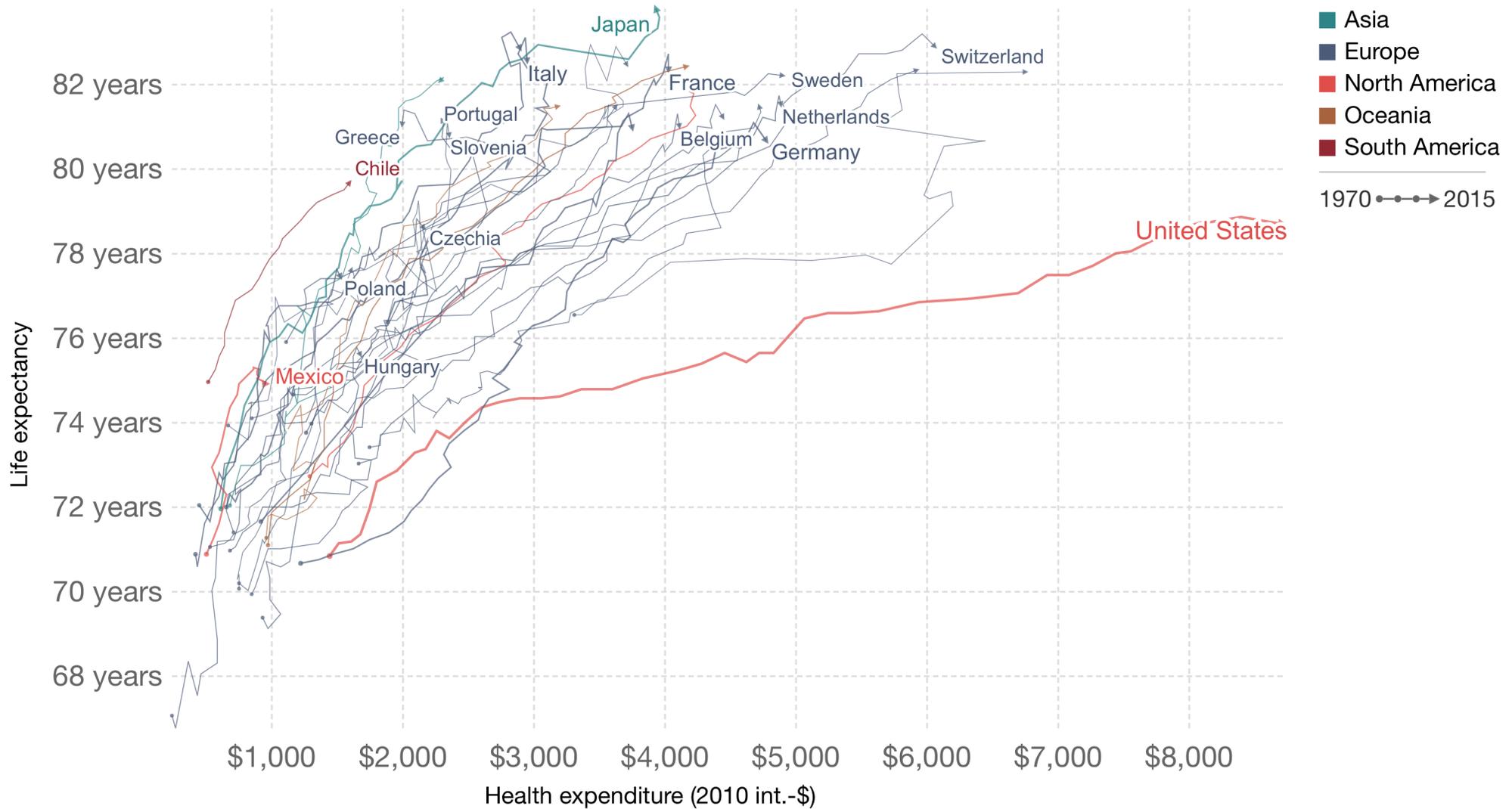
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1. The trouble with the population's health

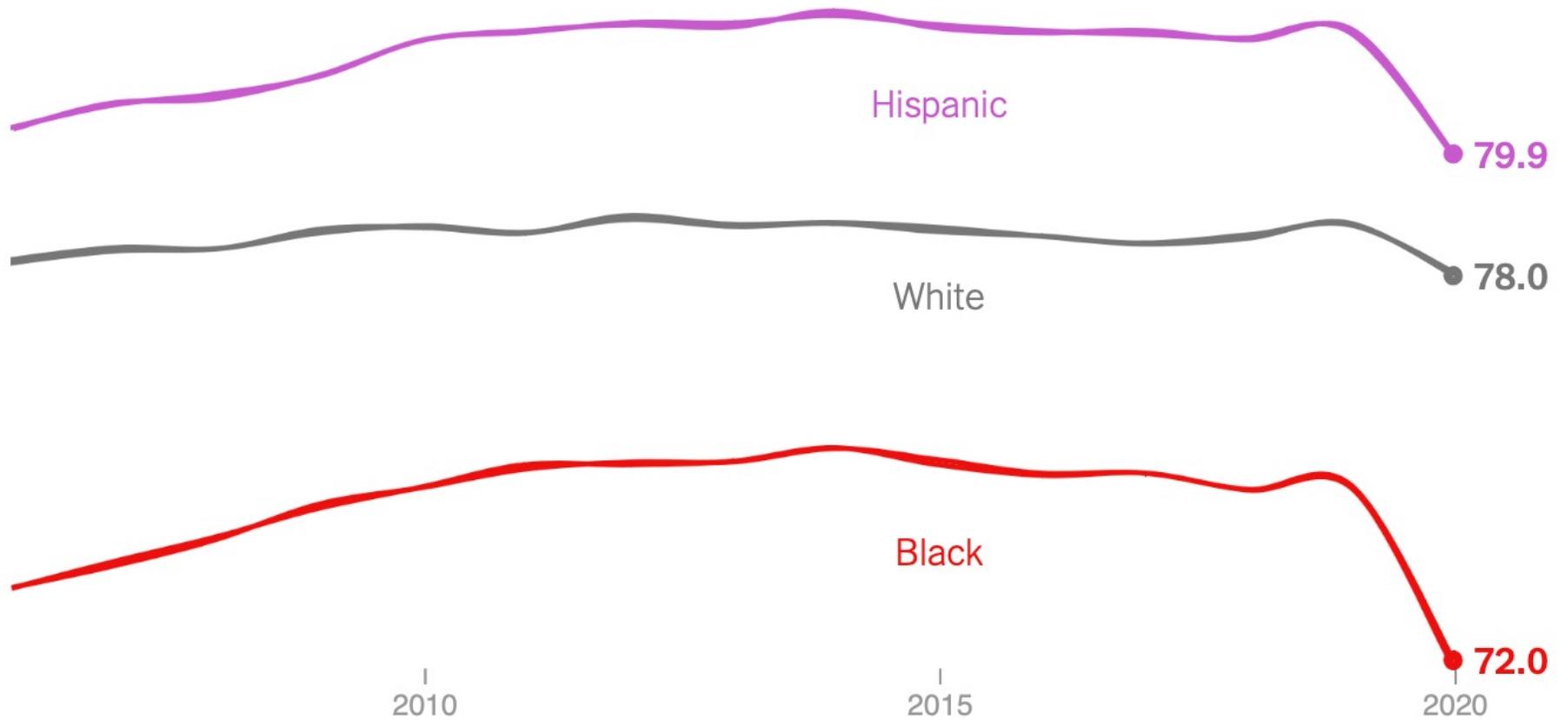
# Life expectancy vs. health expenditure, 1970 to 2015

Health financing is reported as the annual per capita health expenditure and is adjusted for inflation and price level differences between countries (measured in 2010 international dollars).

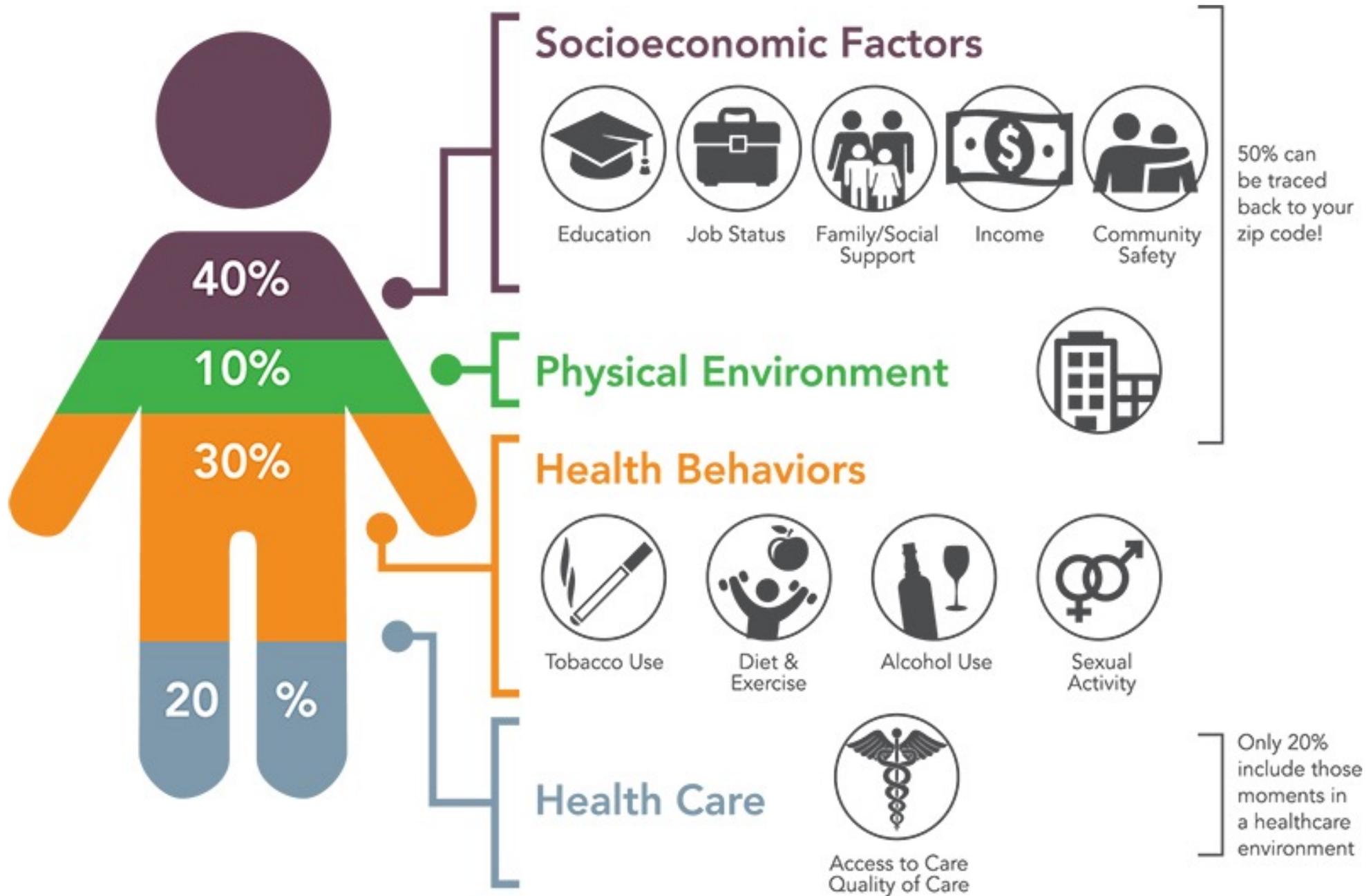


Source: Data compiled from multiple sources by World Bank, Health Expenditure and Financing - OECDstat (2017)  
OurWorldInData.org/the-link-between-life-expectancy-and-health-spending-us-focus • CC BY

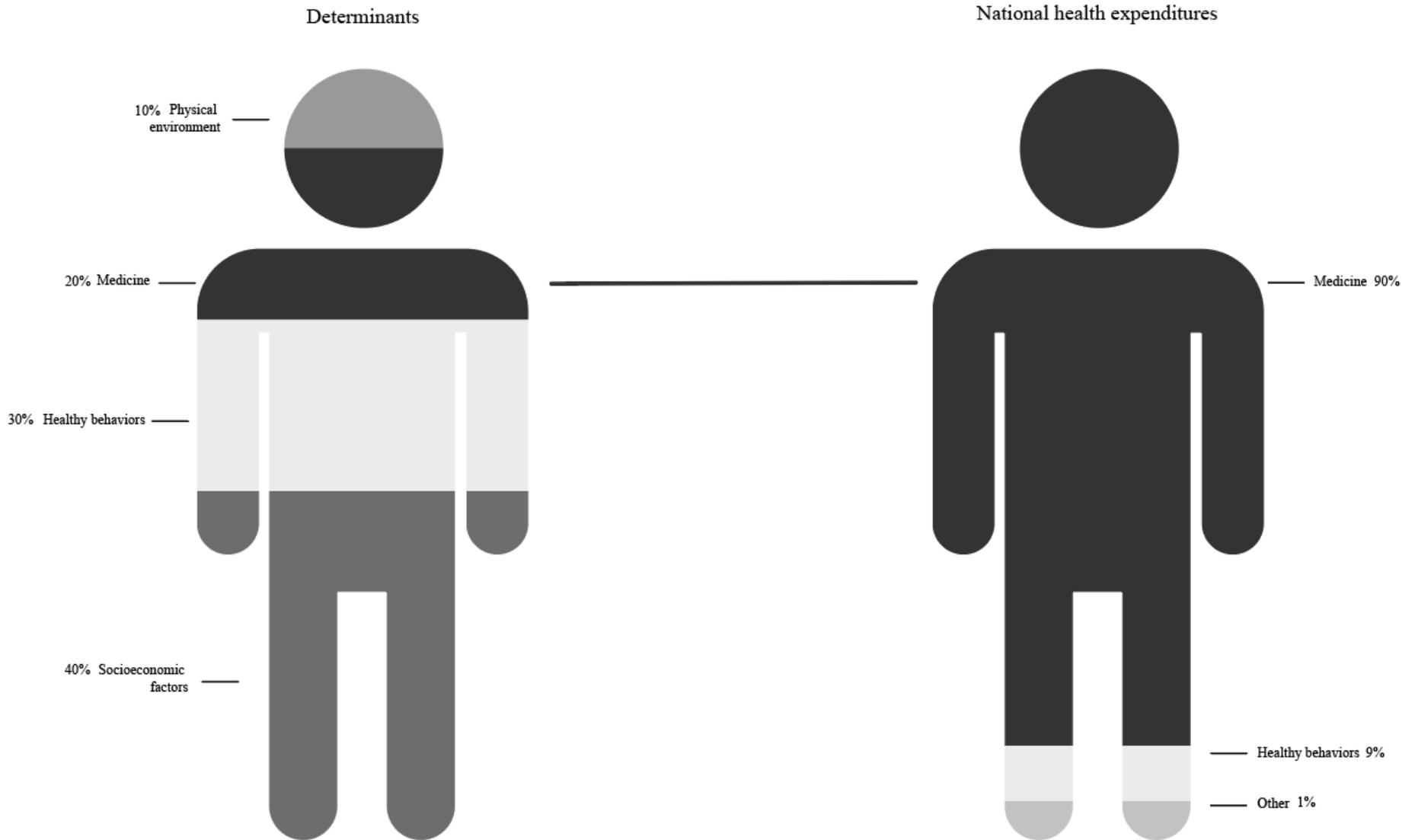
## Life expectancy at birth, by race

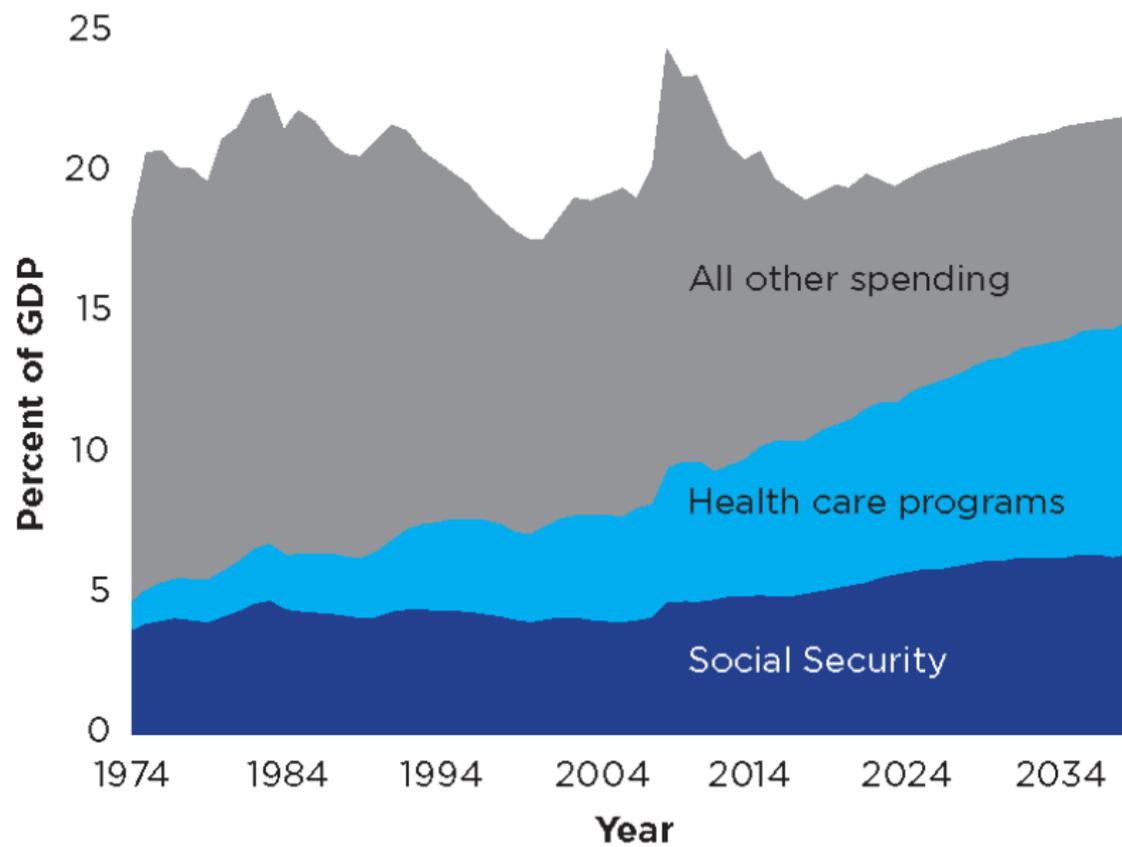


2. Why?



The spending mismatch: health determinants vs. health expenditures

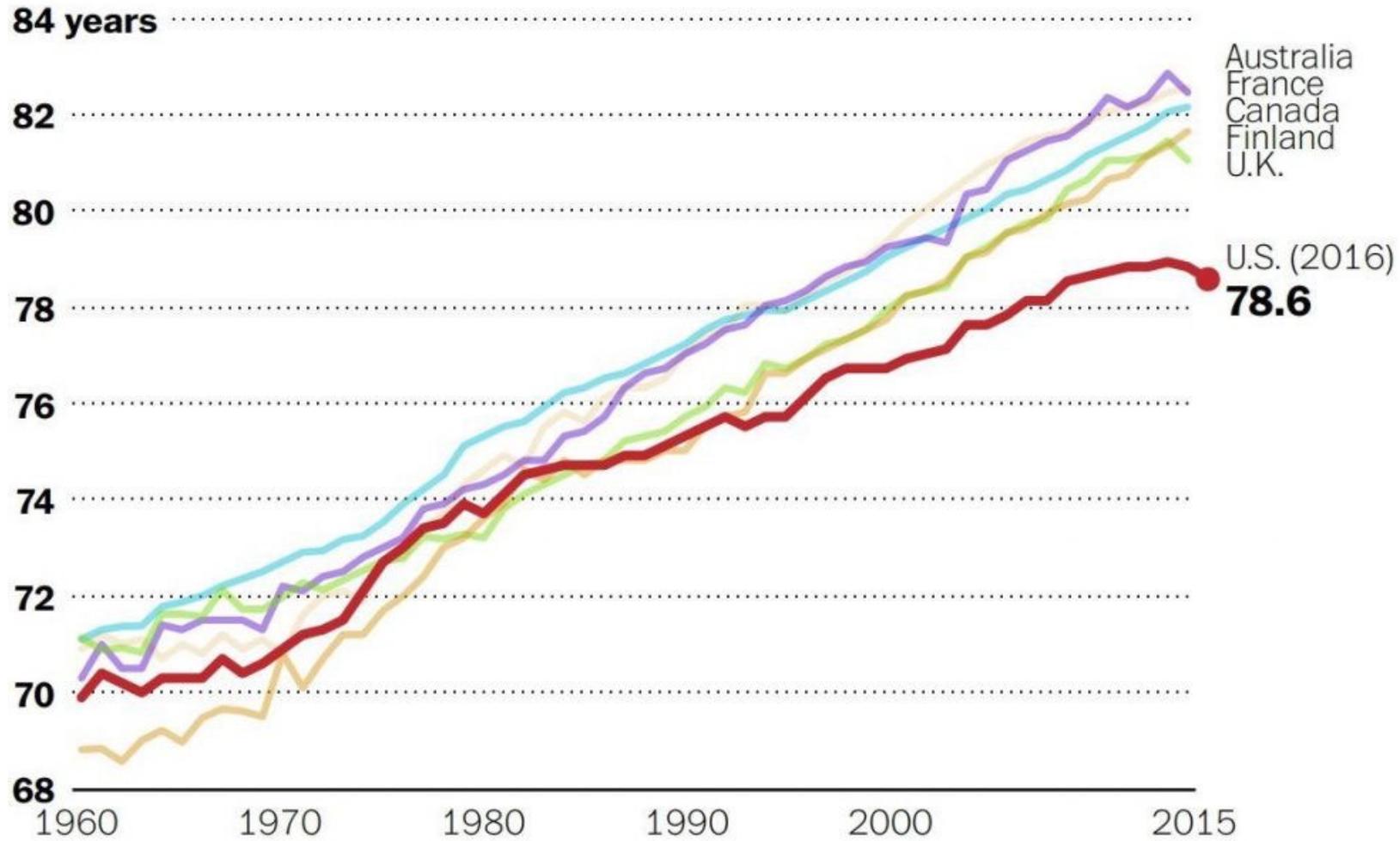




**Figure 3 |** Historical and projected federal spending: health care and other programs.  
 SOURCE: Data from Congressional Budget Office.

# American exceptionalism

Life expectancy at birth, selected OECD countries



Source: OECD, U.S. Census Bureau

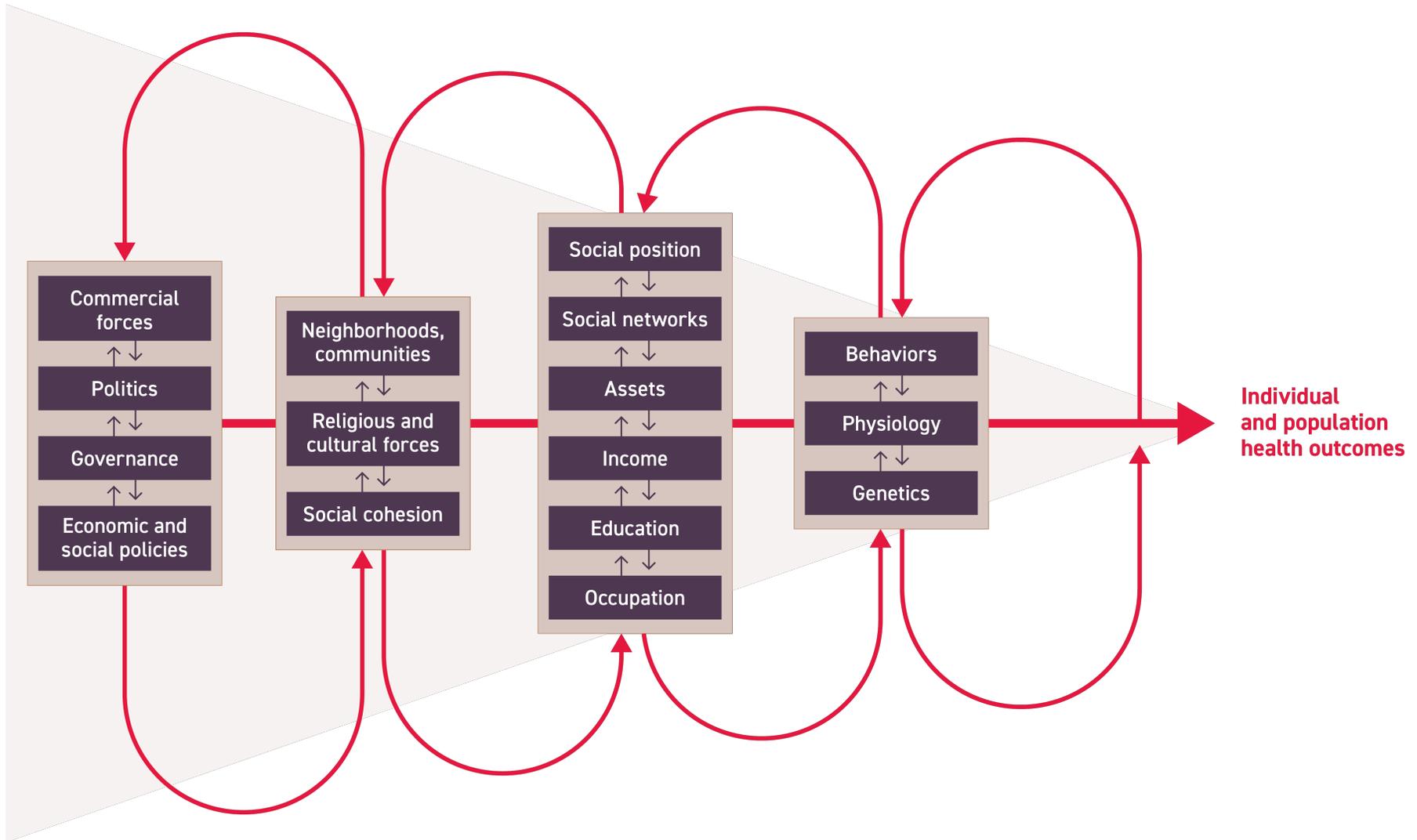
3. What are the social determinants of health?





# Social determinants, life course, and health

Accumulation of risks and benefits across life course

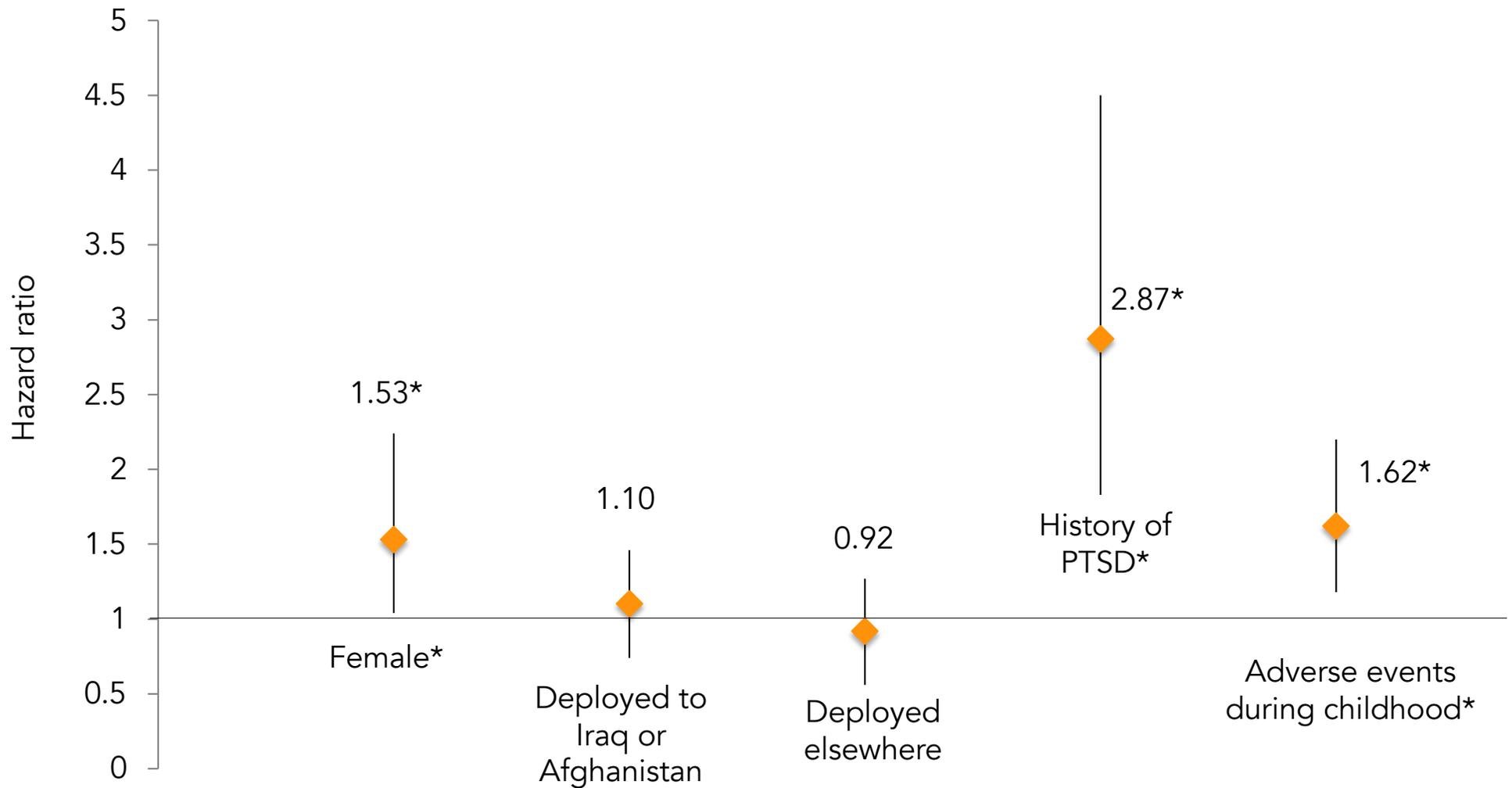


Emotions, values, luck, historical legacies

4. At the intersection of social determinants, veterans, suicide

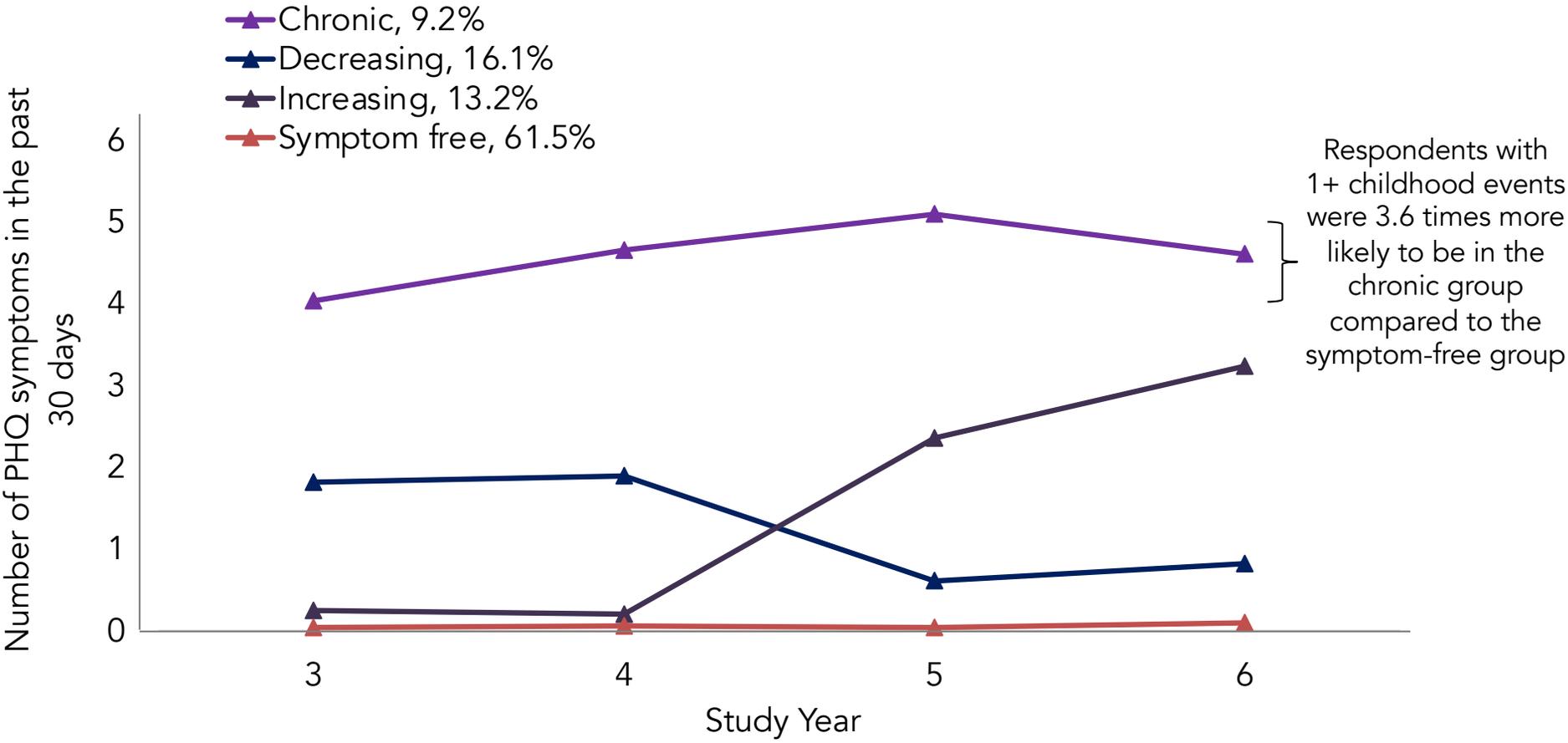
a. Social determinants over the lifecourse

# Risk factors for depression onset



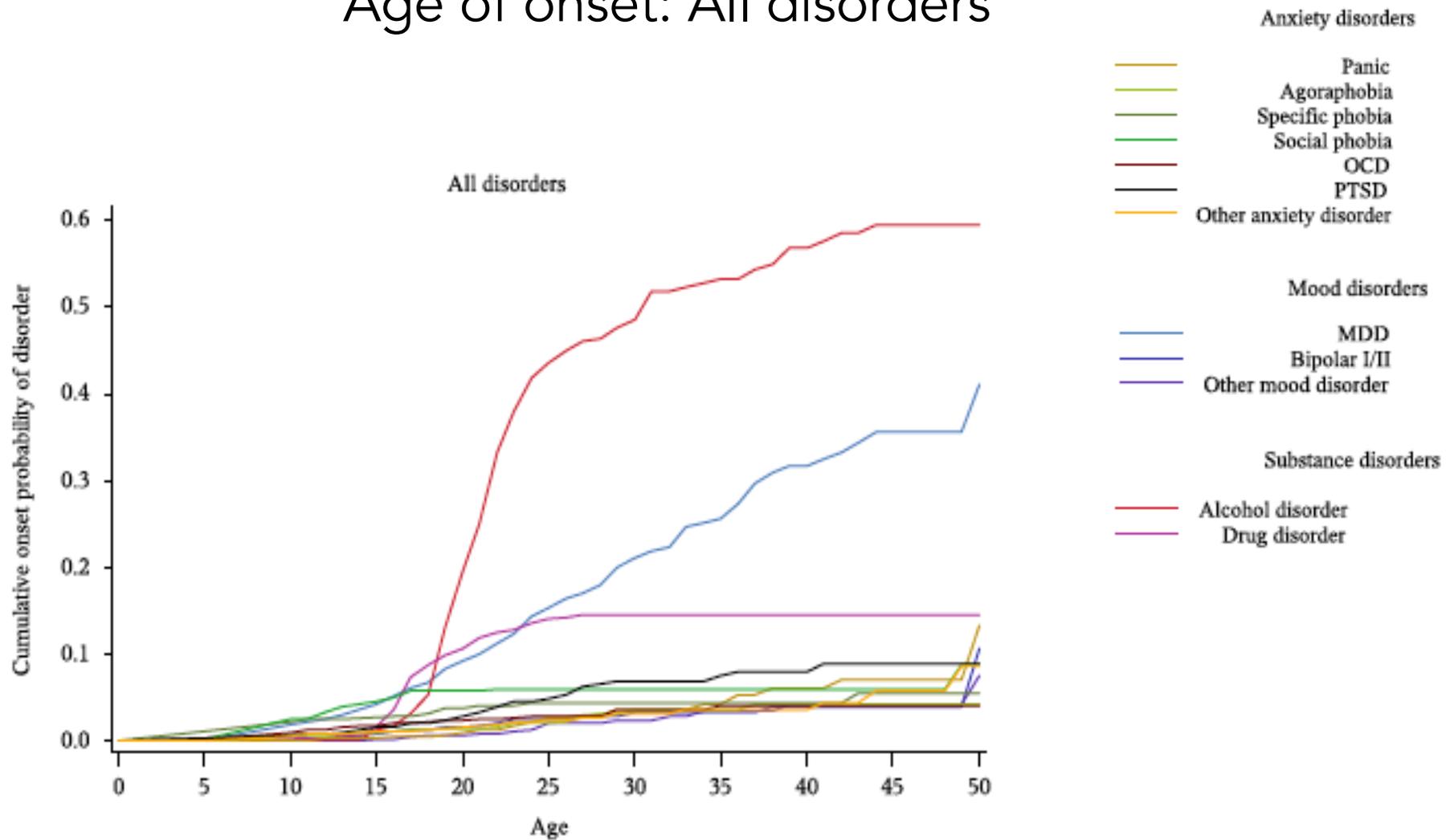
n=1,393; \* p < 0.05; + p < 0.10

# Trajectories of depression symptoms over four years



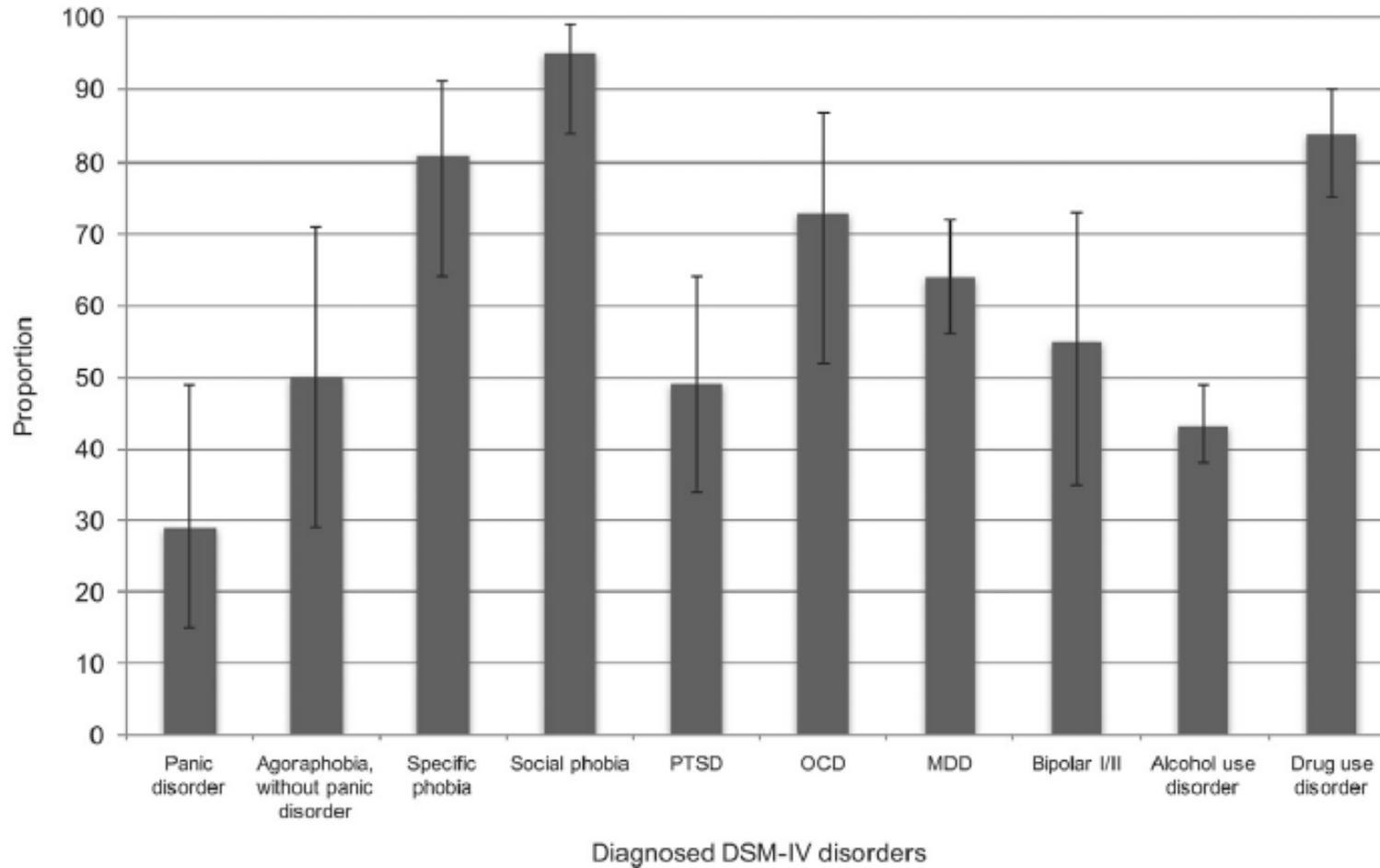
PHQ = Patient Health Questionnaire

# Age of onset: All disorders



Fink DS, Calabrese JR, Liberzon I, Tamburrino MB, Chan P, Cohen GH, Sampson L, Reed PL, Shirley E, Goto T, D'Arcangelo N, Fine T, Galea S. Retrospective age-of-onset and projected lifetime prevalence of psychiatric disorders among US Army National Guard soldiers. *Journal of Affective Disorders* 2016;202:171-7.

# The majority of participants reported pre-enlistment onset of their mental health disorder



Fink DS, Calabrese JR, Liberzon I, Tamburrino MB, Chan P, Cohen GH, Sampson L, Reed PL, Shirley E, Goto T, D'Arcangelo N, Fine T, Galea S. Retrospective age-of-onset and projected lifetime prevalence of psychiatric disorders among US Army National Guard soldiers. *Journal of Affective Disorders* 2016;202:171-7.

b. The central role of social support

# Each deployment condition is independently associated with deployment-PTSD

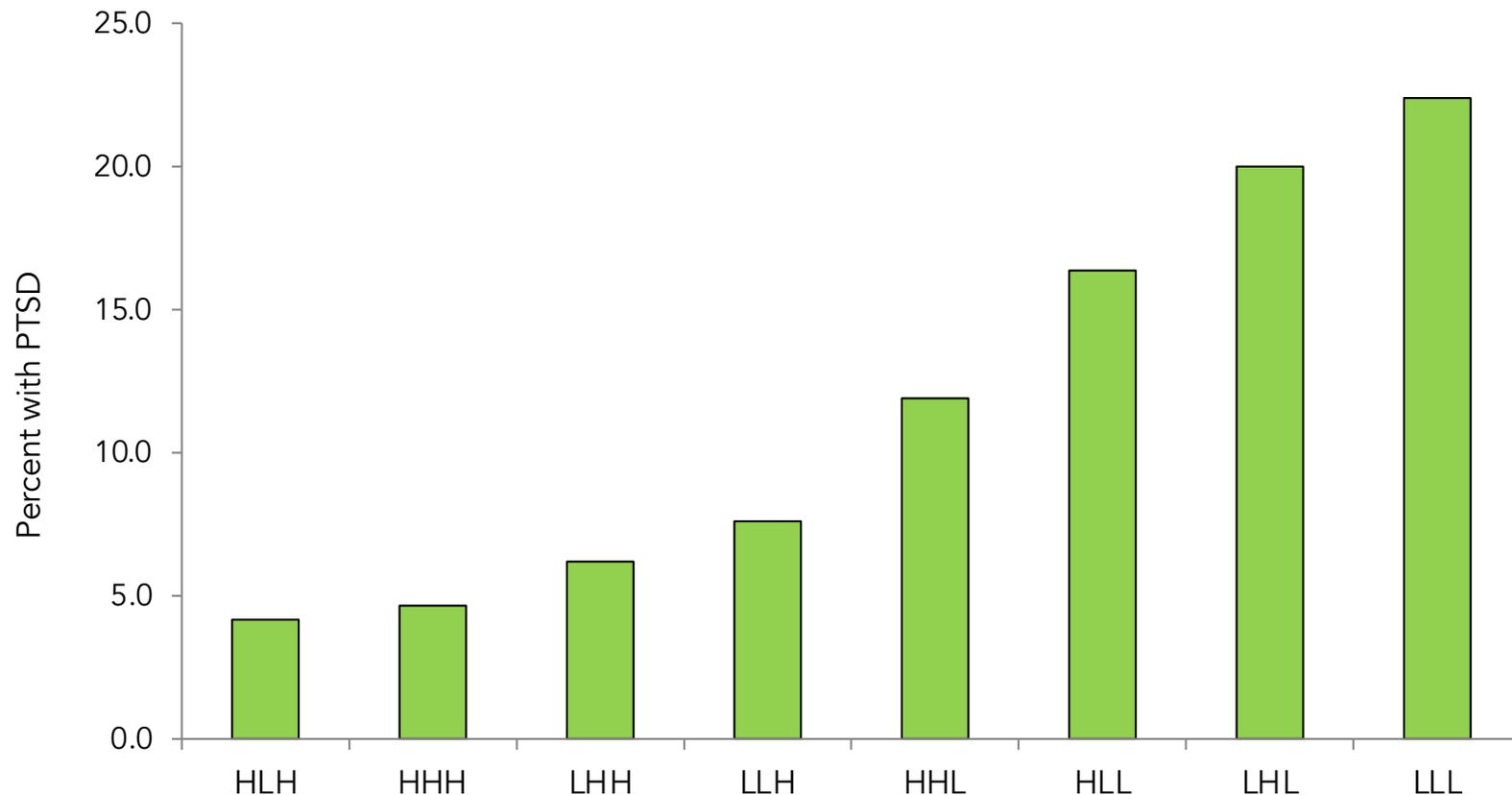


Low levels of each factor are reference groups.

Models are adjusted for gender, age, race, income, educational attainment, marital status, rank (officer vs. enlisted, cadets, and civilian employees), most recent deployment location (to non-conflict area vs. conflict area), and total number of deployment-related traumatic events experienced

# Those with low levels of preparedness, unit support and post-deployment support have the highest prevalence of PTSD

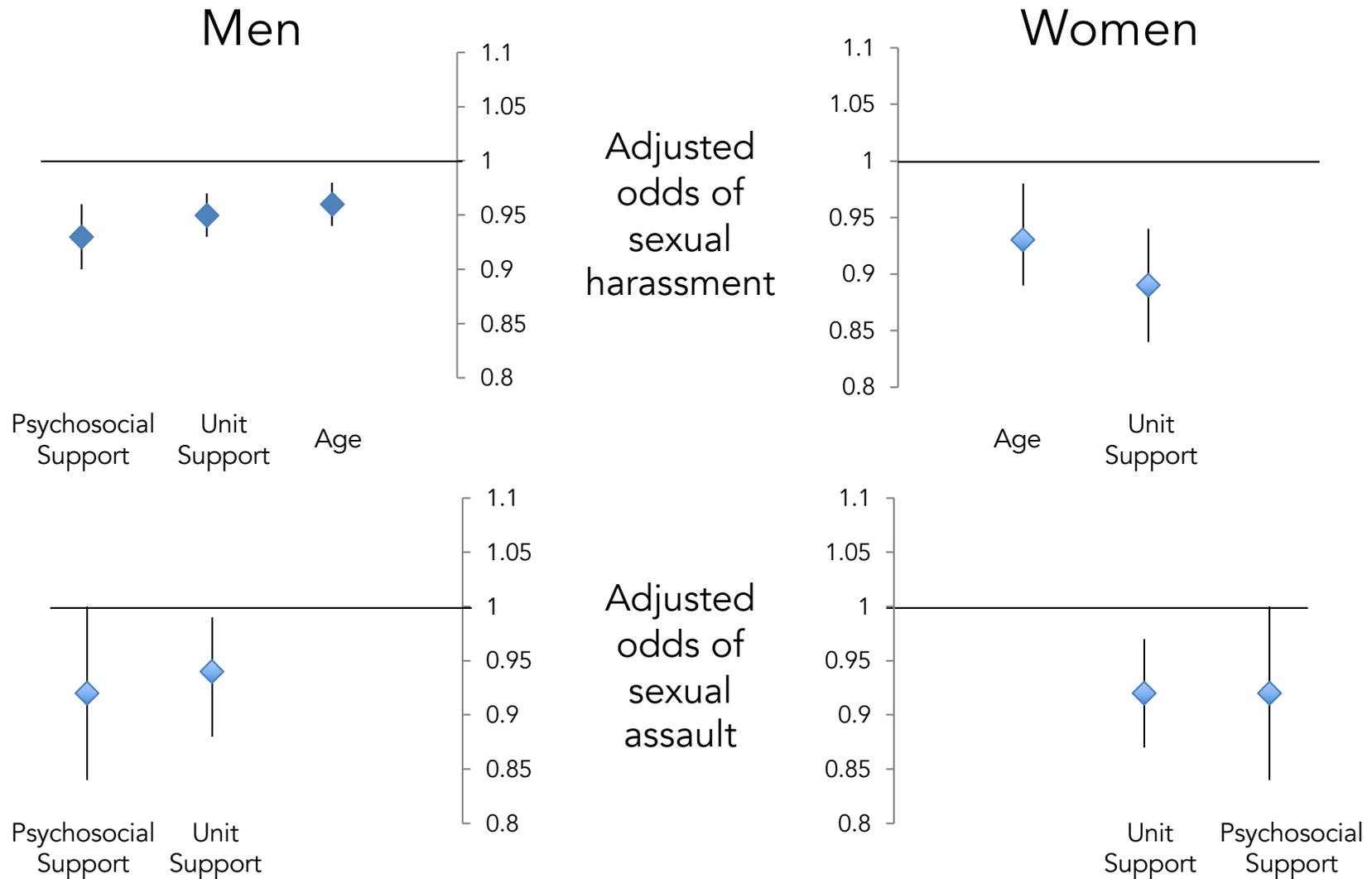
Among those who have been deployed and experienced a traumatic event during their most recent deployment (n=1294)



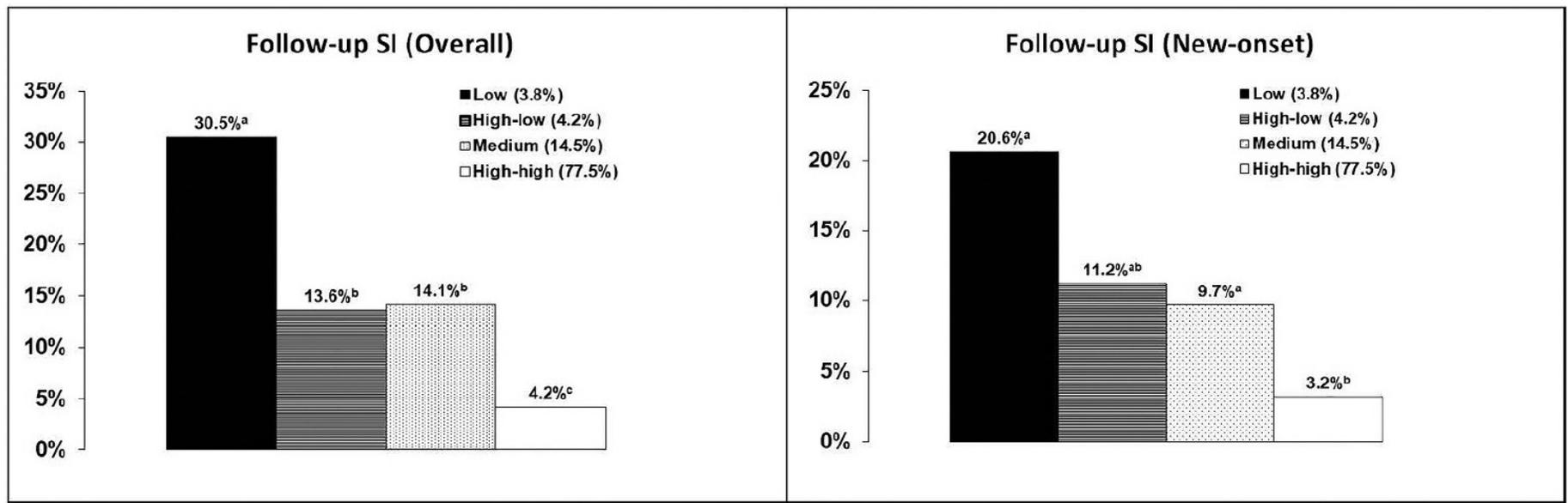
e.g. HLH = high preparedness, low unit support, high post-deployment support

\*Scores above 21, 29, and 24 indicated high preparedness, high unit support, and high post-deployment support, respectively.

# Higher unit support predicted lower adjusted odds of sexual harassment and assault for both men and women



N=1674 (Men: n=1504; Women: n=170); Timing of reported events was during most recent deployment

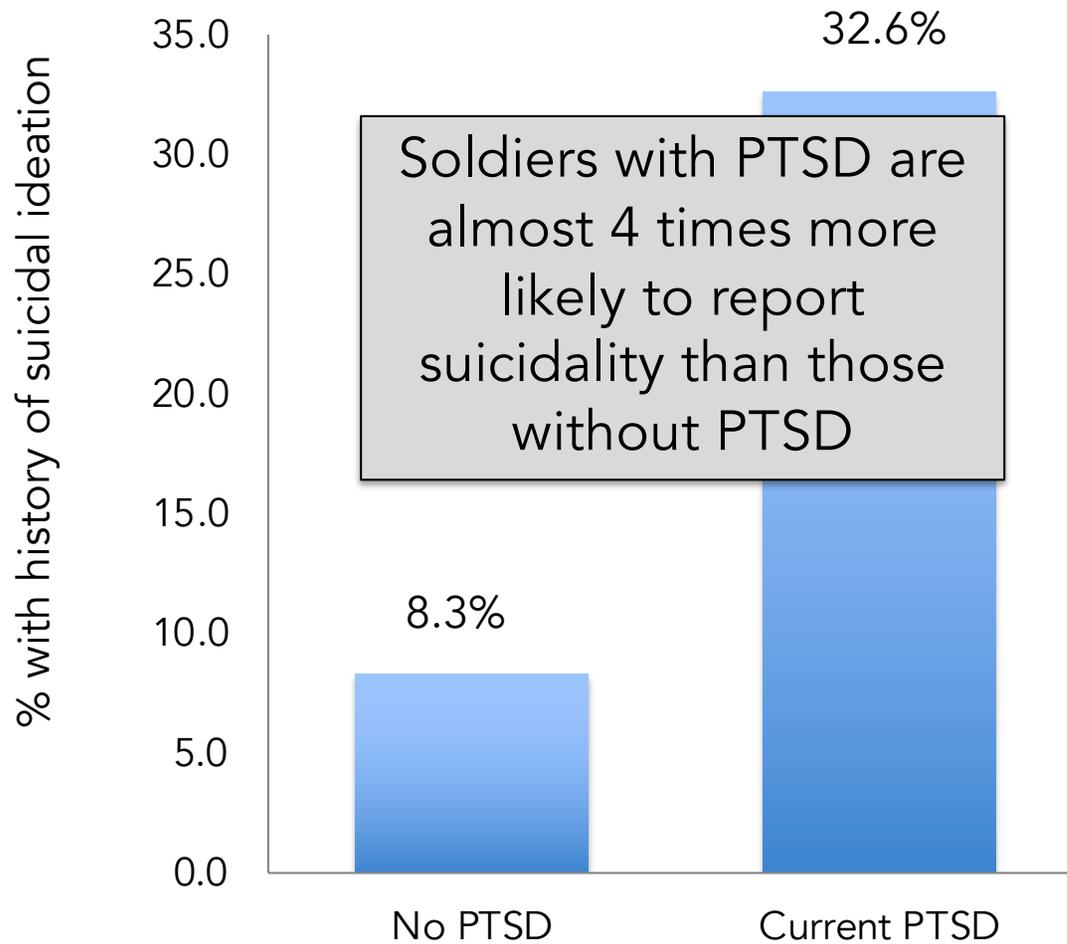


Wang J, Ursano RJ, Gifford RK, Dinh HM, Winberg A, Cohen GH, Sampson L, Galea S, Fullerton CS. Suicide ideation and social support trajectories in National Guard and Reserve service members. *Psychiatry: Interpersonal and biological process. Psychiatry.* 2022;1-13. PMID: 35139000.

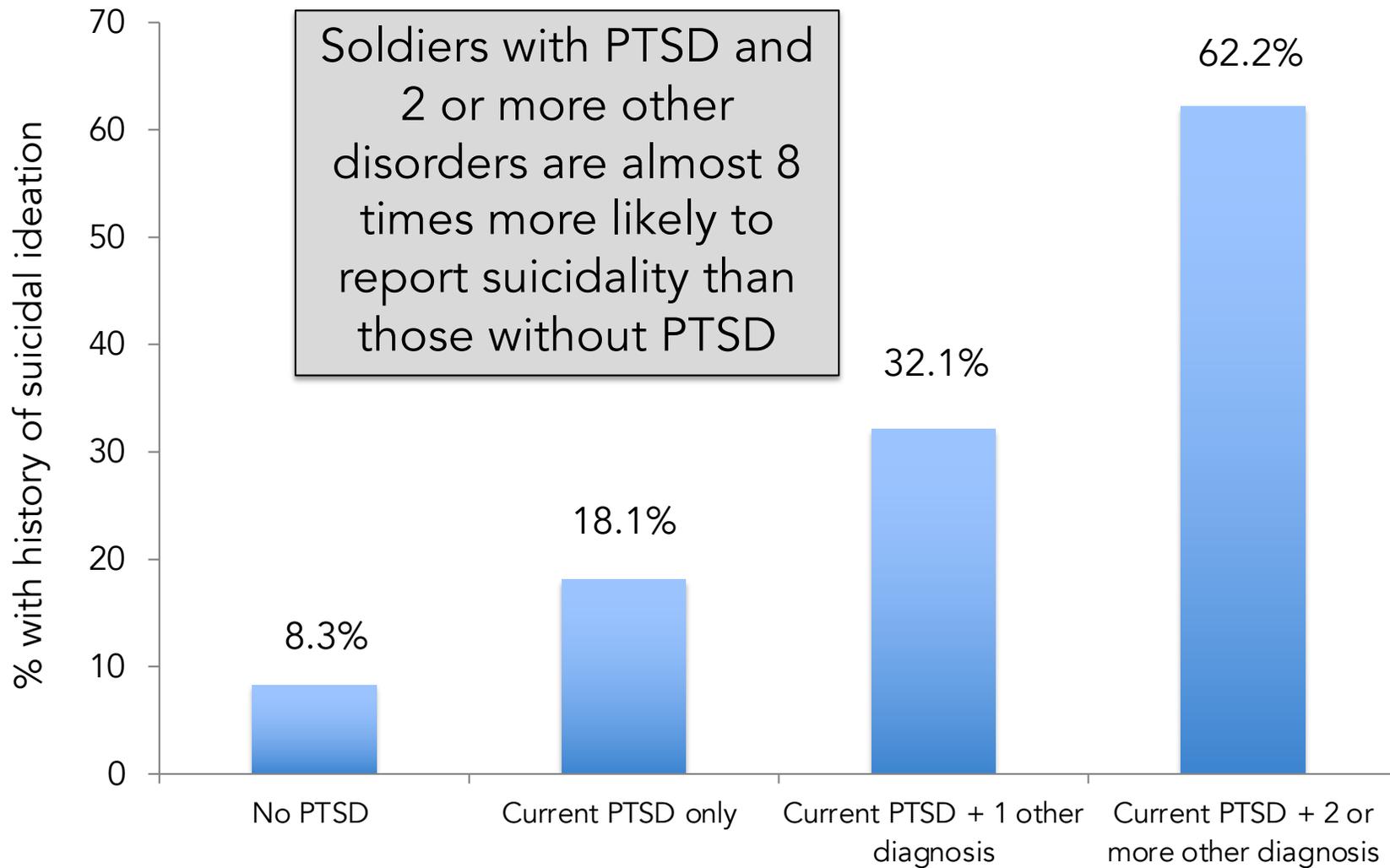
<https://doi.org/10.1080/00332747.2021.2004785>

c. The determinants of the mental health determinants

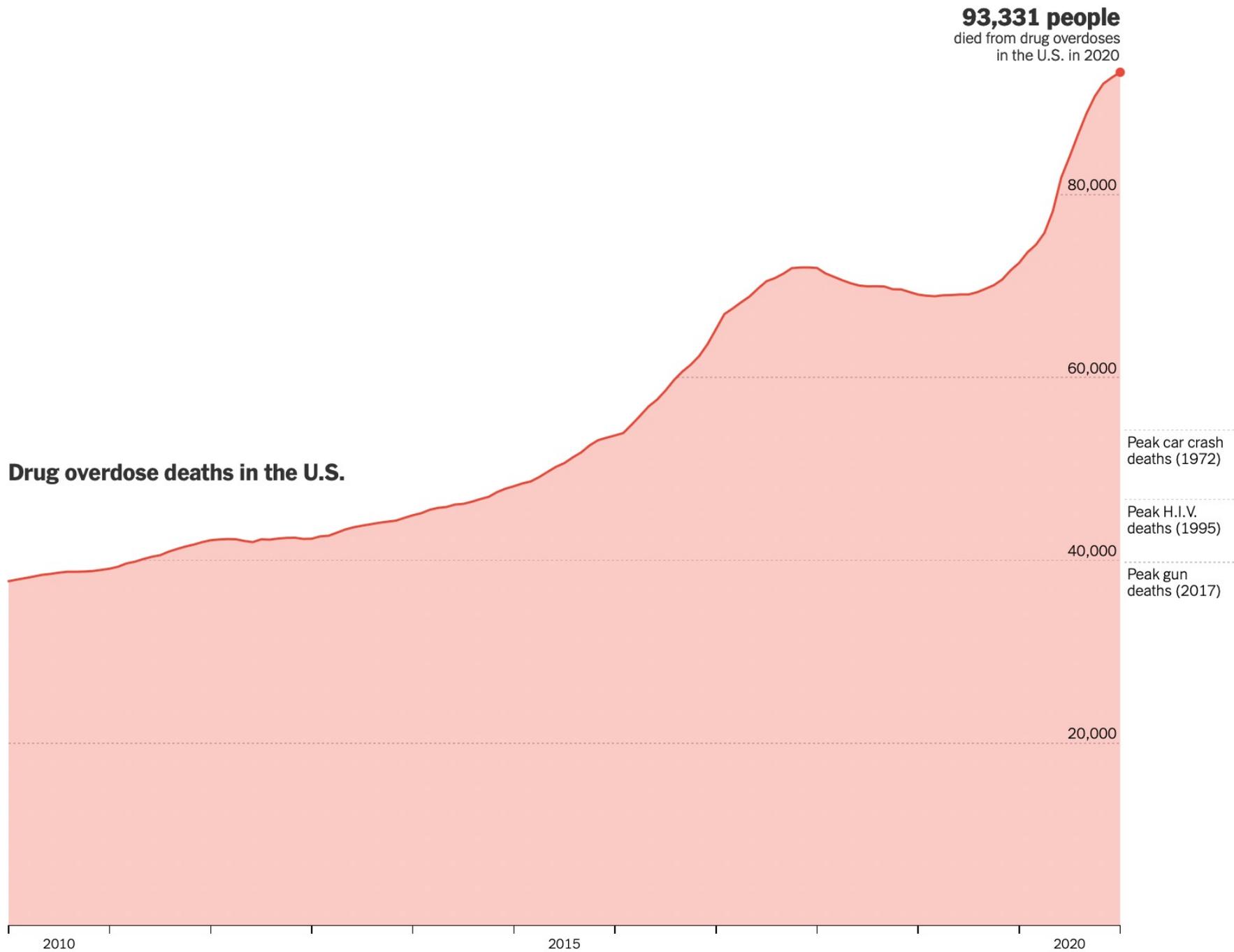
# PTSD and suicidality



# Comorbid PTSD and suicidality



d. Ubiquity

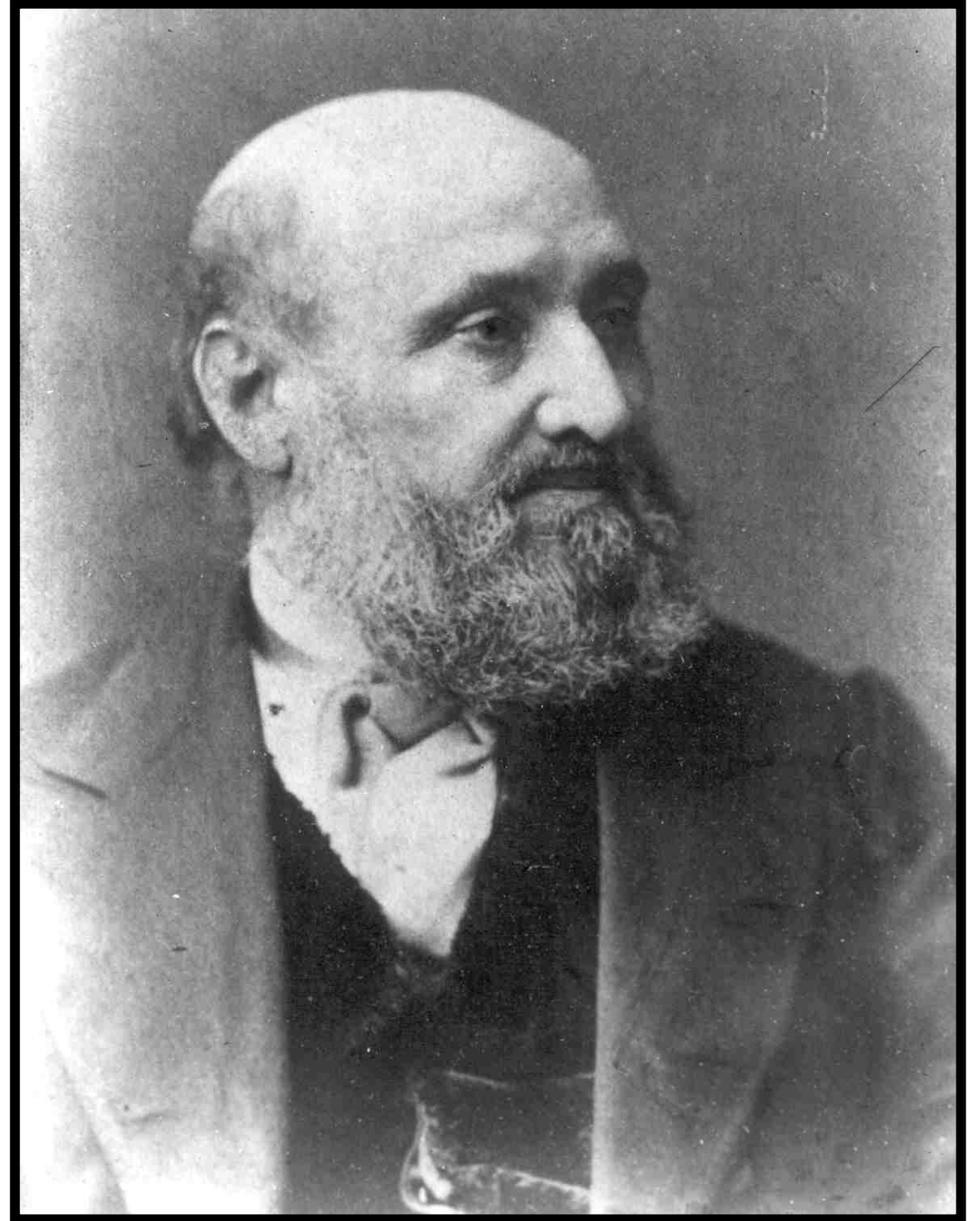


Source: Centers for Disease Control and Prevention

5. Concluding thought

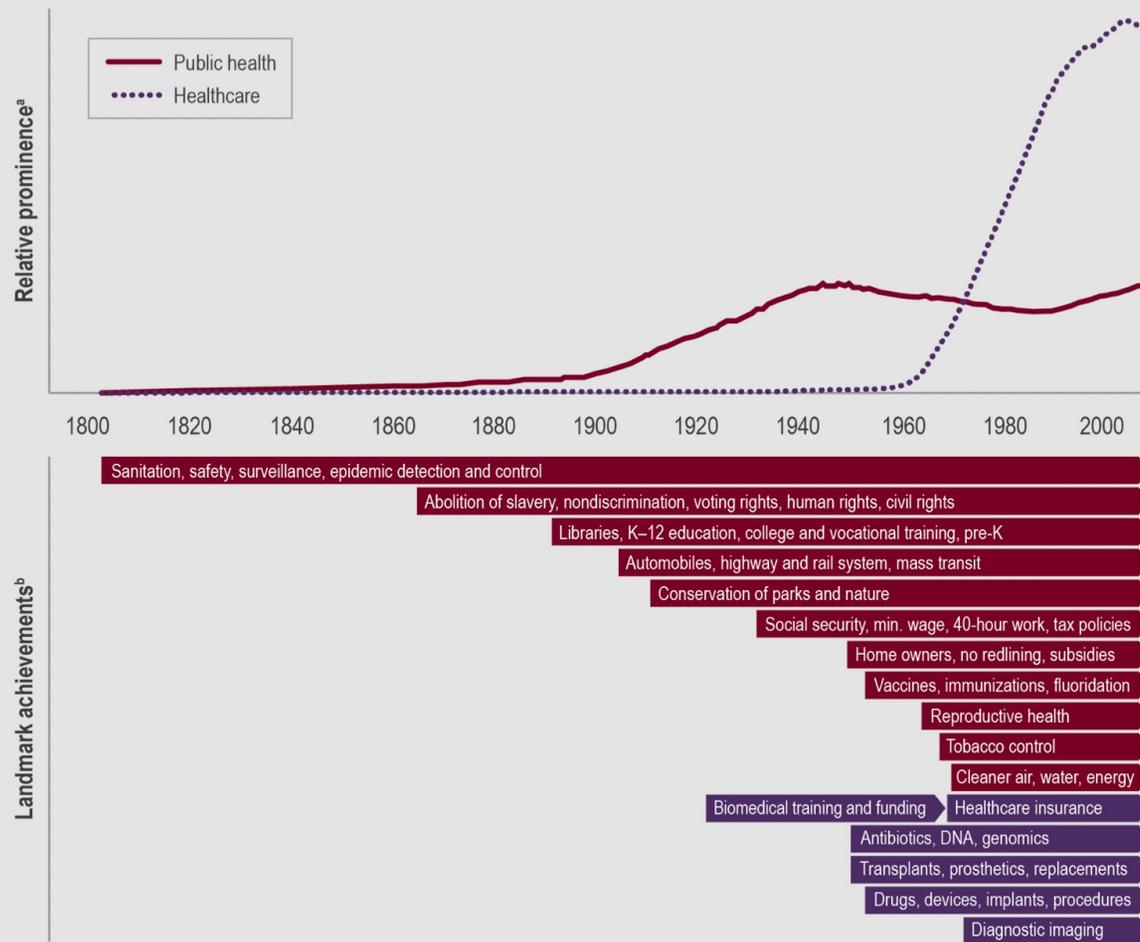


VS



Hamlin C. Could you starve to death in England in 1839? The Chadwick-Farr controversy and the loss of the "social" in public health. *American Journal of Public Health* 1995; 85:856-66

**Figure 7.1 Shifting prominence and landmark achievements in public health and healthcare, 1800–2008**



<sup>a</sup> Relative prominence reflects the frequency that each term appears in writing over time.

<sup>b</sup> Many of the landmark achievements are not unqualified goods but entail risks or tradeoffs of their own.

U.S. Department of Health and Human Services, Office of Surgeon General. (2021). Community Health and Economic Prosperity Engaging Businesses as Stewards and Stakeholders—A Report of the Surgeon General. Retrieved from <https://www.hhs.gov/sites/default/files/chep-sgr-full-report.pdf>

Relative prominence: Google Books Ngram Viewer. (2020). Health care, public health between 1800 and 2008 in English with smoothing of 10. Retrieved from <https://books.google.com/ngrams/>. Landmark achievements adapted from: Centers for Disease Control and Prevention. (1999). Ten great public health achievements—United States, 1900–1999. *Morbidity and Mortality Weekly Report*, 48(12), 241–243; Centers for Disease Control and Prevention. (2011). Ten Great Public Health Achievements—United States, 2001–2010. *Morbidity and Mortality Weekly Report*, 60(19), 619–623; Kristof, N. (2019). Why 2018 was the best year in human history! Retrieved from <https://www.nytimes.com/2019/01/05/opinion/sunday/2018-progress-poverty-health.html>; and Light, P. C. (2002). *Government's greatest achievements: From civil rights to homeland defense*. Washington, DC: Brookings Institution Press.

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