

# Accounting for the Widening Mortality Gap between American Adults with and without a BA

Anne Case and Angus Deaton  
Brookings Papers on Economic Activity  
Fall 2023

## Growing outcome gaps in the US by college-degree (BA) status

- Health
- Wages, earnings, wealth
- Marriage, childbearing, child-rearing
- Voting patterns, incarceration

Two-thirds of American adults do not hold a four-year degree

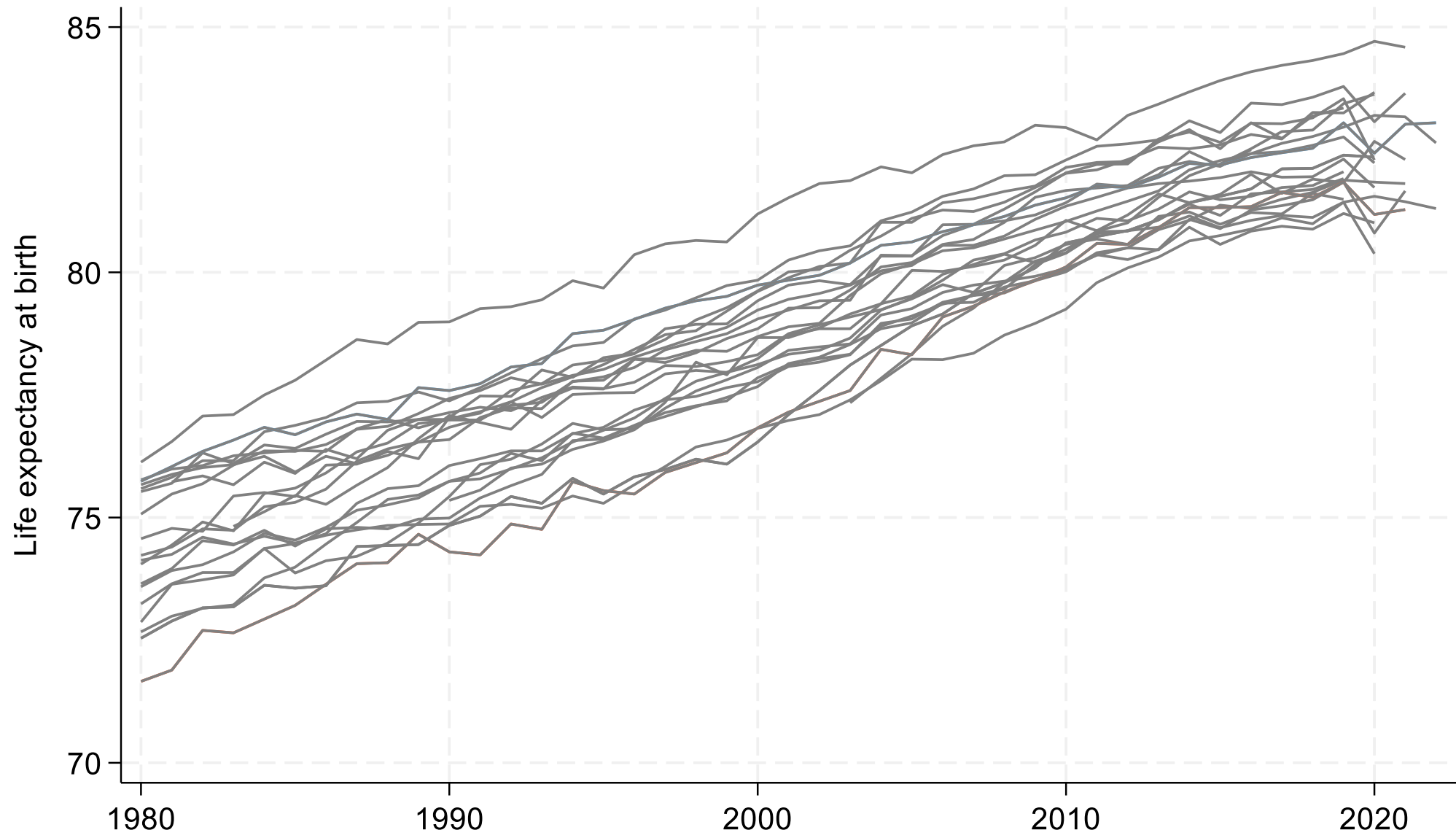
## Growing outcome gaps in the US by college-degree (BA) status

- Mortality
- Premature death is indicative of societal failure, particularly when it is due to self-inflicted causes like suicide, alcoholism or drug overdose (*deaths of despair*) or other behavior-related causes

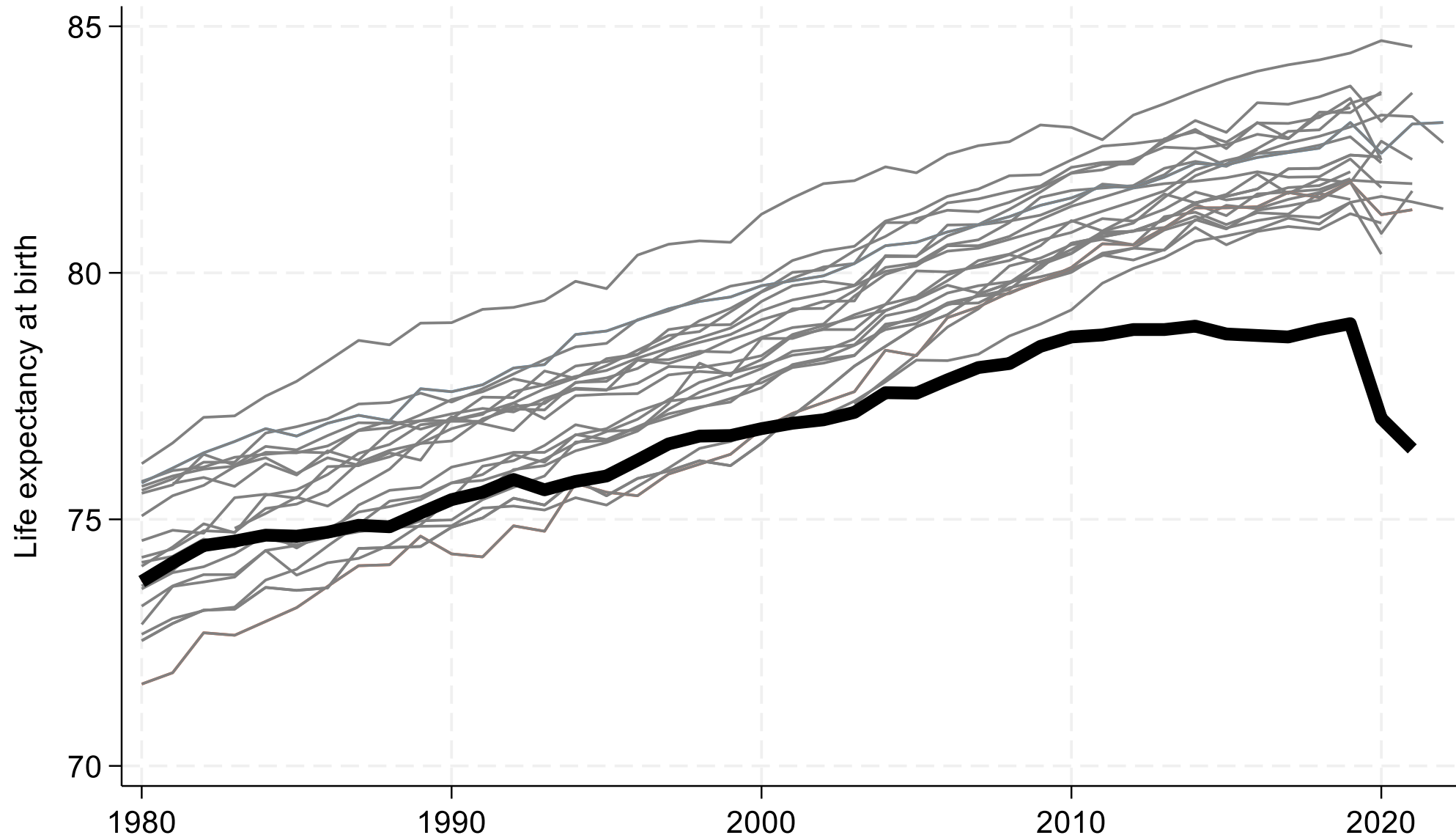
# Mortality and societal wellbeing

- Mortality is objective, and less subject to measurement error. Money-based measures depend on decisions made about what to include and how to convert them into real measures
- It can also tell us a great deal about how the economy is performing, not just on average, but for different groups
- Division by education is at least as salient as division by selected percentiles of the income distribution
- Recent comparisons with other wealthy countries applaud the *economic performance* of US, but *mortality comparisons* tell another story

# LIFE EXPECTANCY AT BIRTH: 22 OTHER RICH COUNTRIES

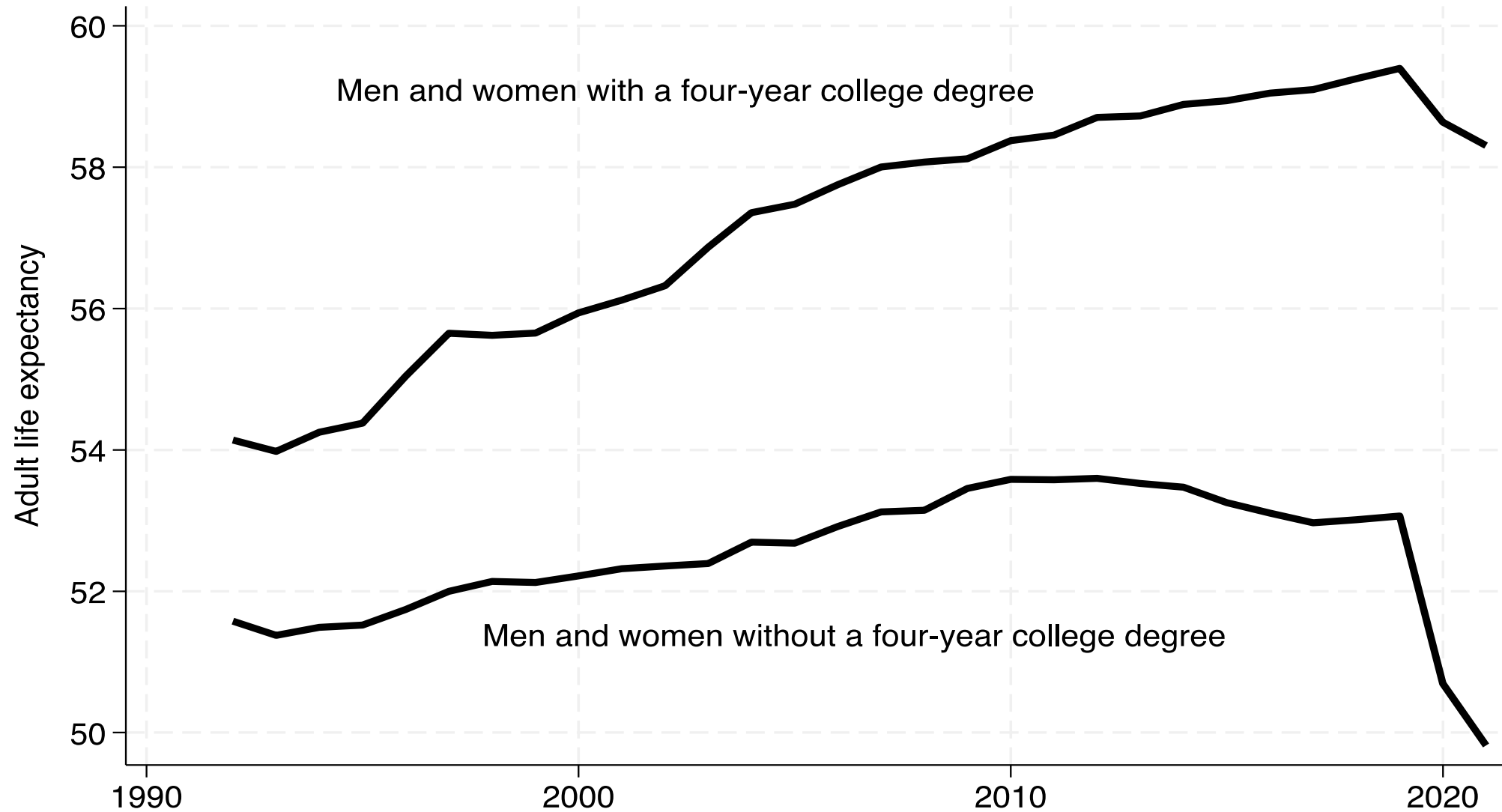


# LIFE EXPECTANCY AT BIRTH: US AND 22 OTHER RICH COUNTRIES



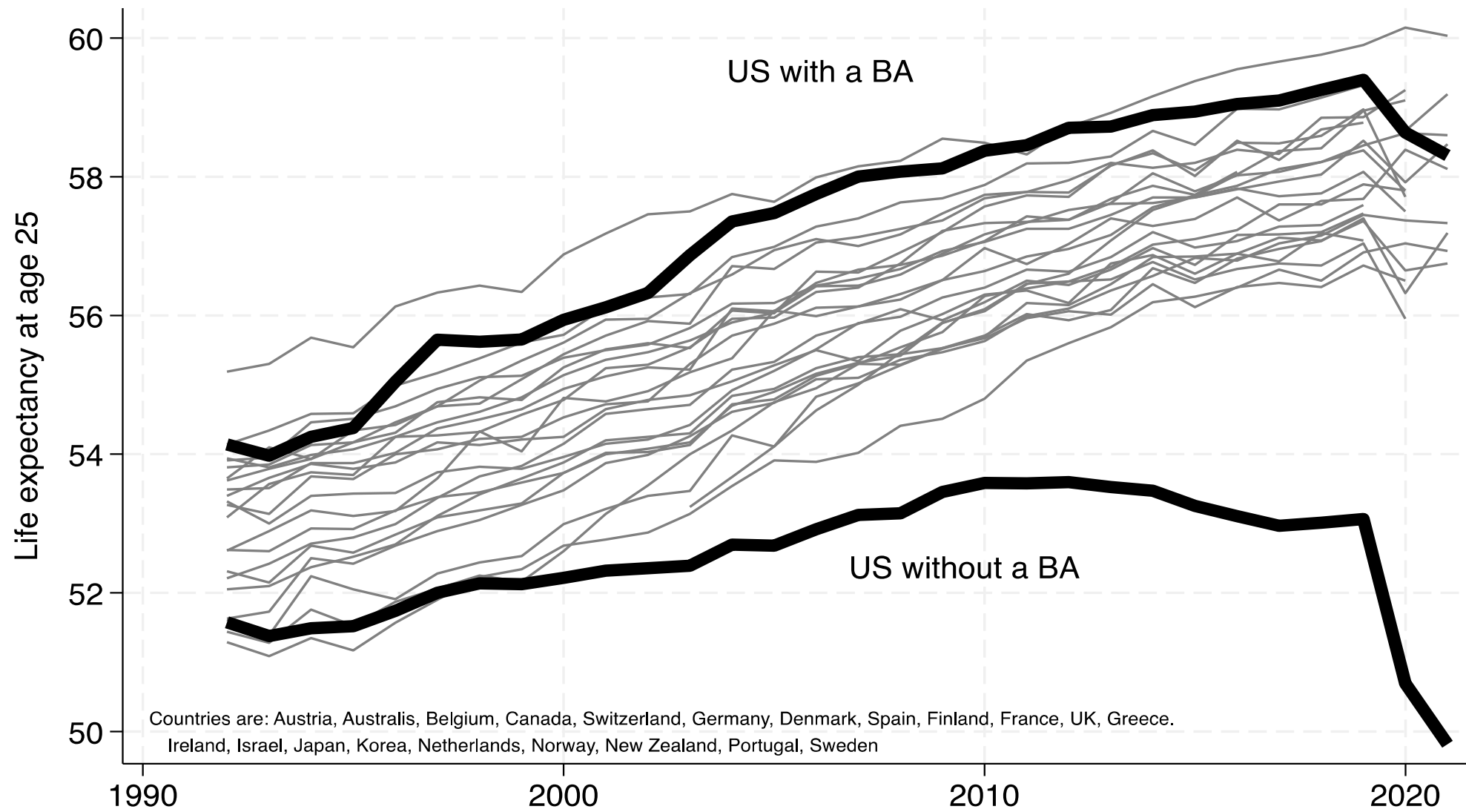
This has been the subject of three National Academy of Sciences reports

# Adult life expectancy – expected years beyond age 25



National Academy of Sciences reports – no analysis of education divides  
The only precedent for LE moving in opposite directions: eastern Europe post USSR

# ADULT LIFE EXPECTANCY: US AND 22 OTHER RICH COUNTRIES





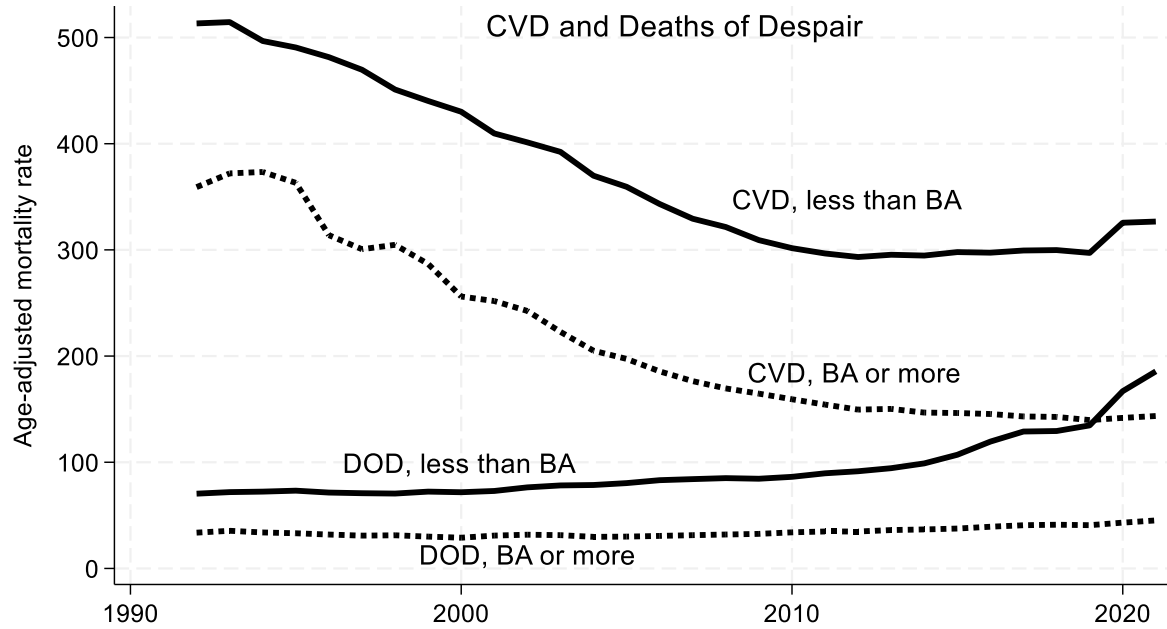
**Table 1. Age adjusted mortality per 100,000 people, ages 25–84**

	1992			2019			Change 1992 to 2019			Change 2019 to 2021		
	BA	No BA	Diff	BA	No BA	Diff	BA	No BA	Diff	BA	No BA	Diff
<b>Cause of Death:</b>												
<b>D of Despair</b>	26	43	17	29	95	66	3	52	<b>49</b>	3	37	<b>33</b>
<b>Cancer</b>	263	297	34	136	212	77	-127	-85	<b>43</b>	-5	-1	<b>4</b>
<b>CVD</b>	331	418	87	125	247	122	-206	-171	<b>35</b>	4	27	<b>22</b>
<b>COVID-19</b>	0	0	0	0	0	0	0	0	<b>0</b>	57	164	<b>107</b>

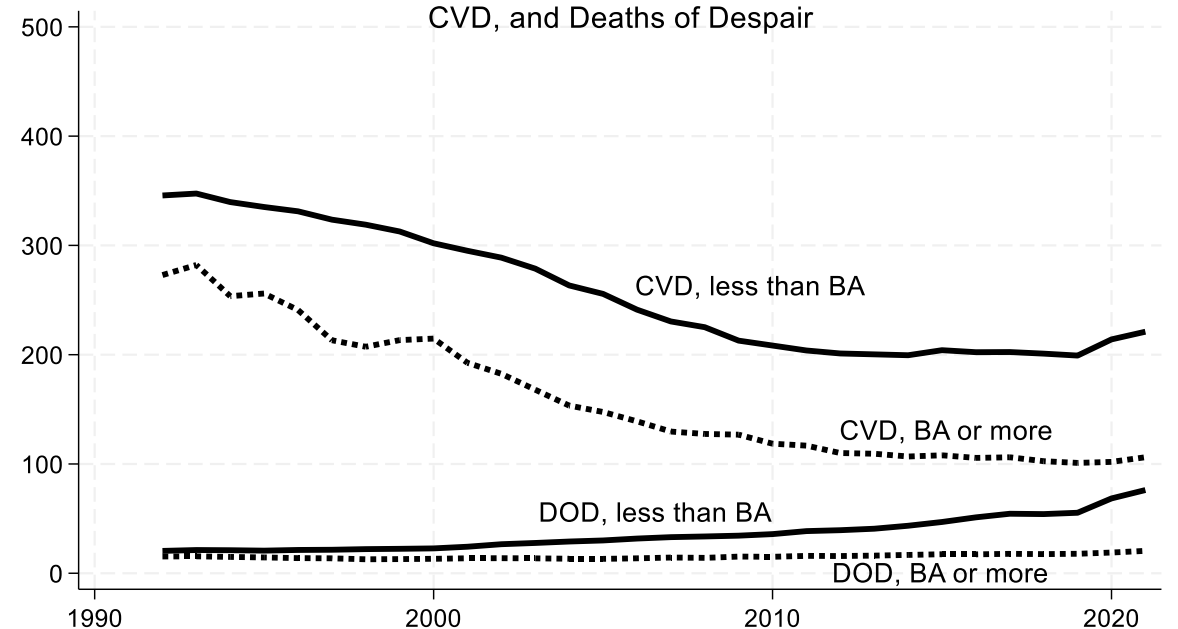
**Table 1. Age adjusted mortality per 100,000 people, ages 25–84**

	1992			2019			Change 1992 to 2019			Change 2019 to 2021		
Cause of Death:	BA	No BA	Diff	BA	No BA	Diff	BA	No BA	Diff	BA	No BA	Diff
<b>D of Despair**a</b>	26	43	17	29	95	66	3	52	<b>49</b>	3	37	<b>33</b>
<b>Cancer</b>	263	297	34	136	212	77	−127	−85	<b>43</b>	−5	−1	<b>4</b>
<b>CVD<sup>b</sup></b>	331	418	87	125	247	122	−206	−171	<b>35</b>	4	27	<b>22</b>
<b>Respiratory<sup>c</sup></b>	33	50	17	16	55	39	−17	5	<b>22</b>	−2	−4	<b>−2</b>
<b>Diabetes</b>	18	28	10	13	33	20	−4	5	<b>10</b>	3	9	<b>7</b>
<b>Transport</b>	13	20	6	6	20	13	−7	0	<b>7</b>	0	5	<b>5</b>
<b>Alzheimer<sup>d</sup></b>	11	8	−3	23	28	5	12	19	<b>7</b>	1	4	<b>2</b>
<b>Nephritis<sup>e</sup></b>	7	10	4	7	17	10	0	6	<b>6</b>	0	1	<b>1</b>
<b>Septicemia</b>	6	9	3	6	13	8	0	4	<b>4</b>	0	2	<b>1</b>
<b>Assault</b>	3	11	8	1	10	8	−2	−2	<b>0</b>	0	4	<b>4</b>
<b>COVID-19</b>	0	0	0	0	0	0	0	0	<b>0</b>	57	164	<b>107</b>
<b>Total above<sup>f</sup></b>	710	895	184	362	730	368	−348	−165	<b>184</b>	63	247	<b>184</b>
<b>Total mortality</b>	845	1056	211	462	908	445	−382	−149	<b>234</b>	66	265	<b>198</b>

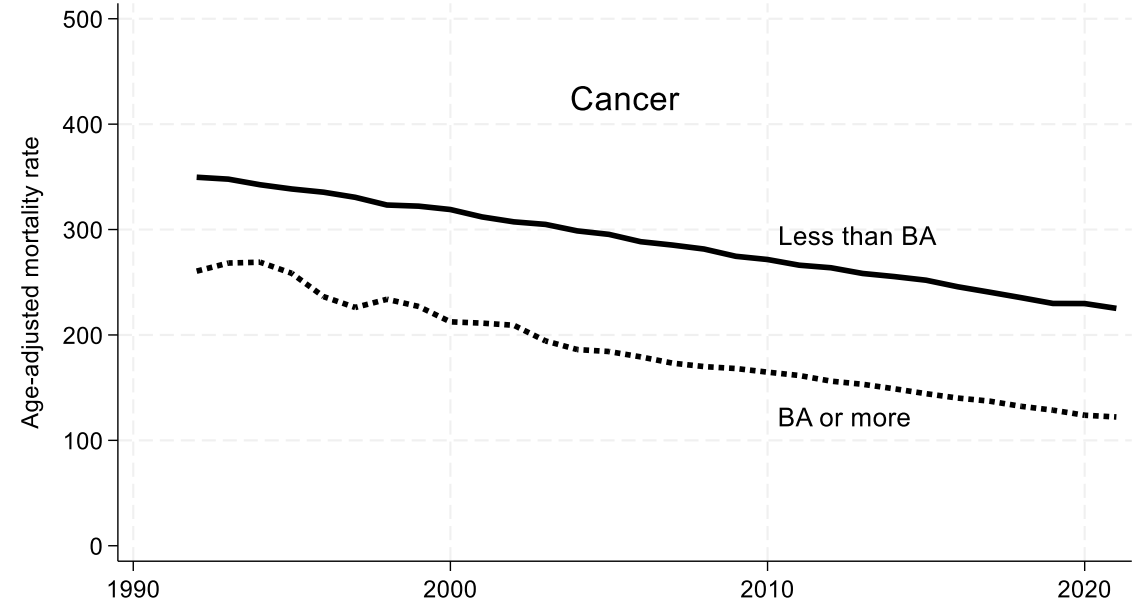
### MEN



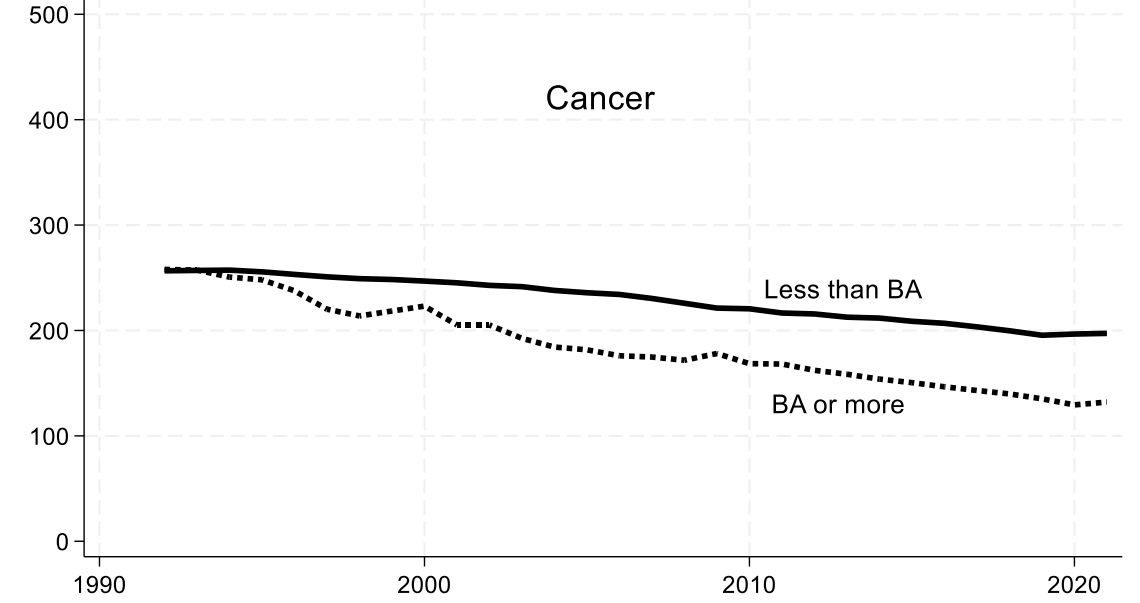
### WOMEN



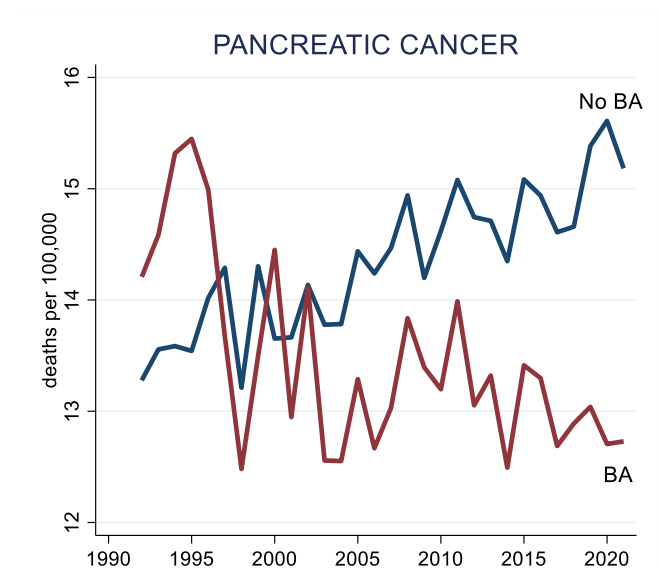
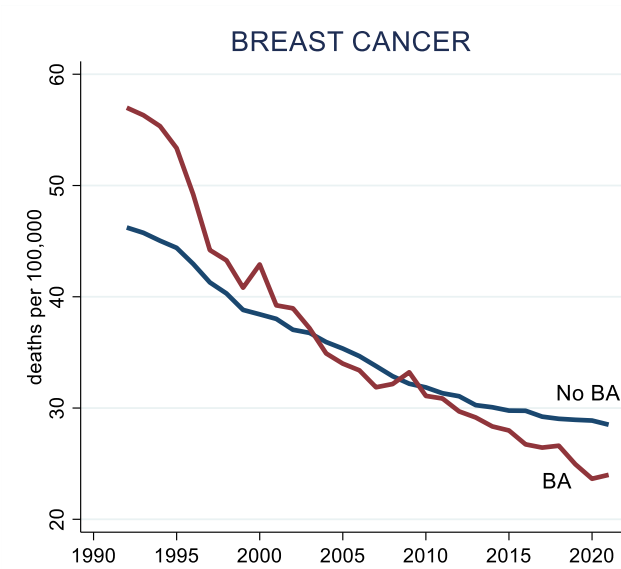
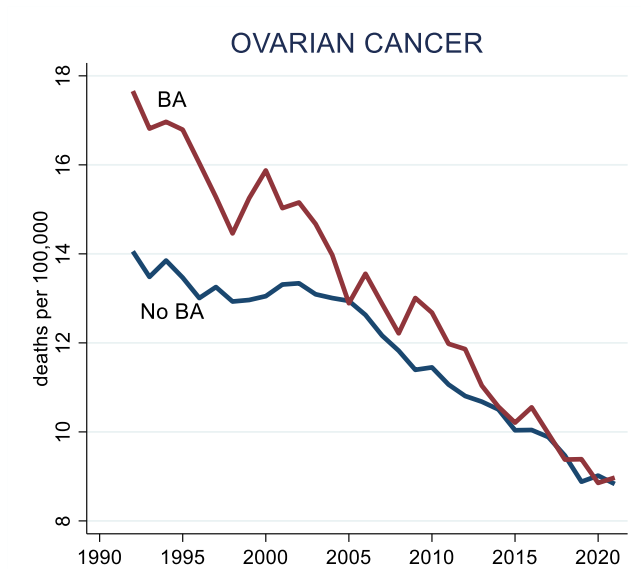
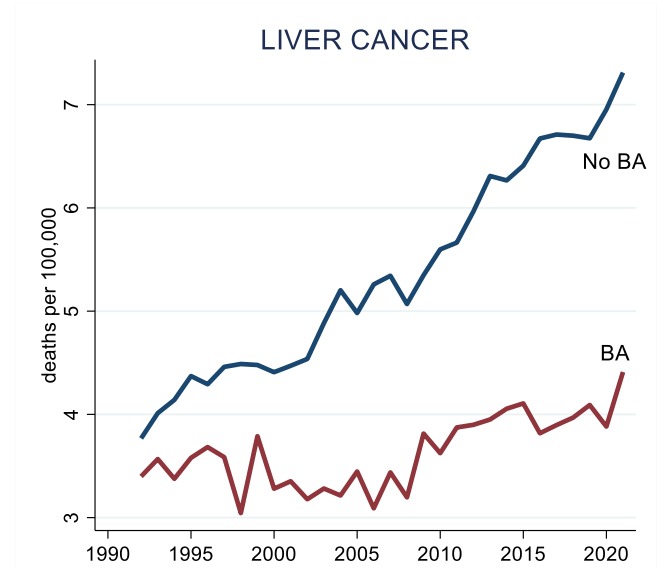
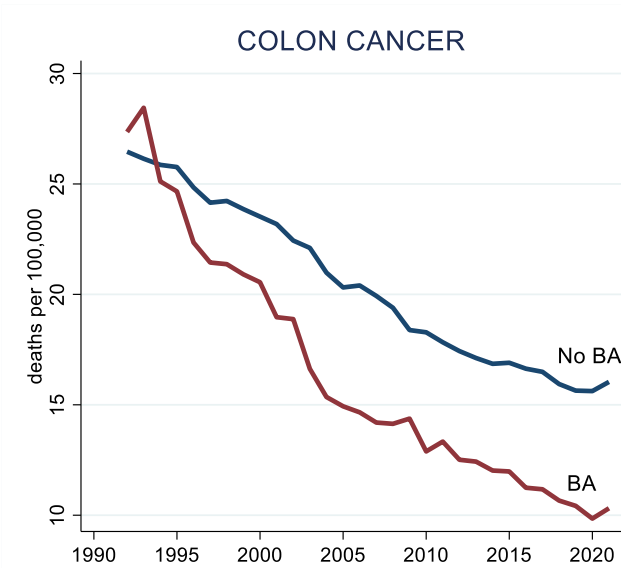
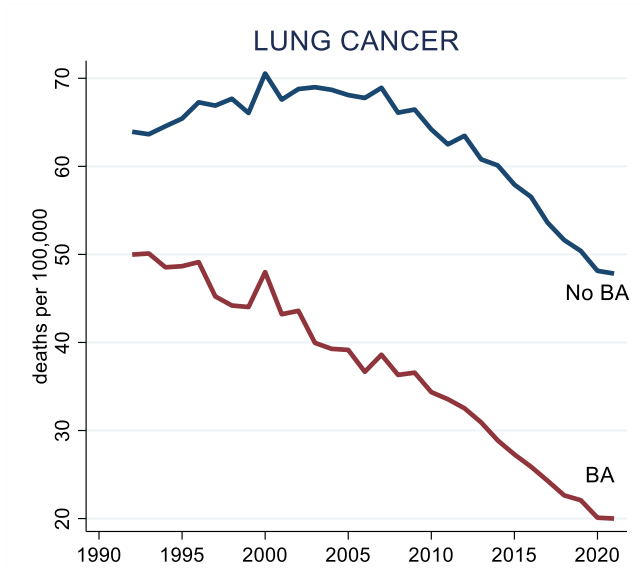
### Cancer



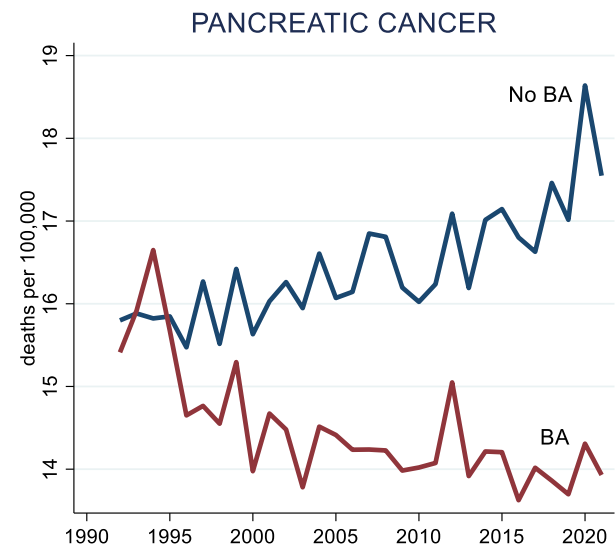
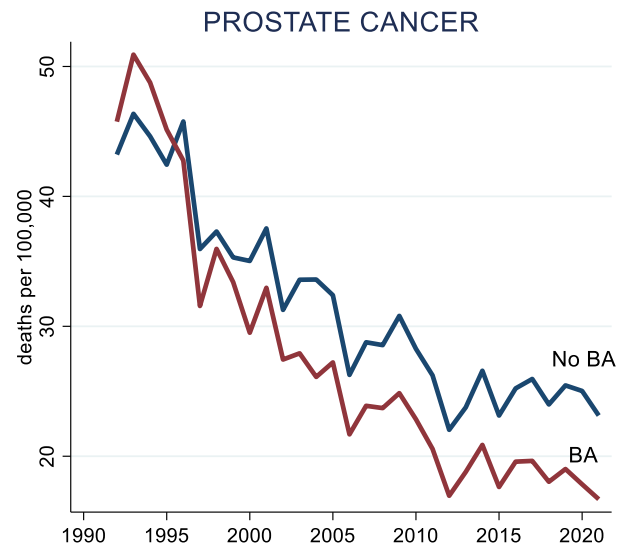
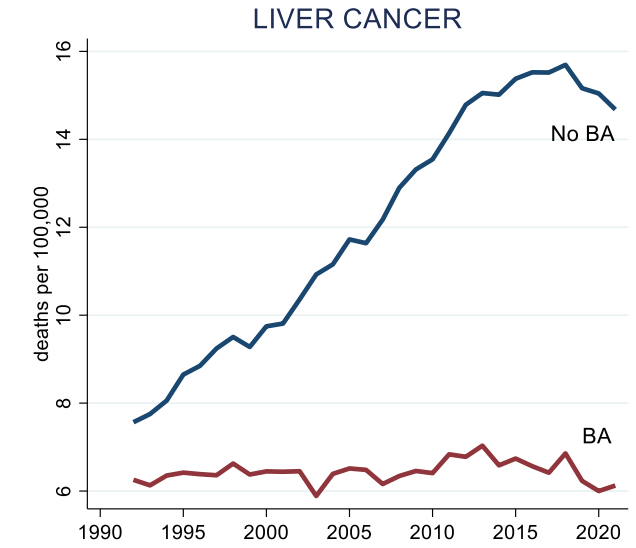
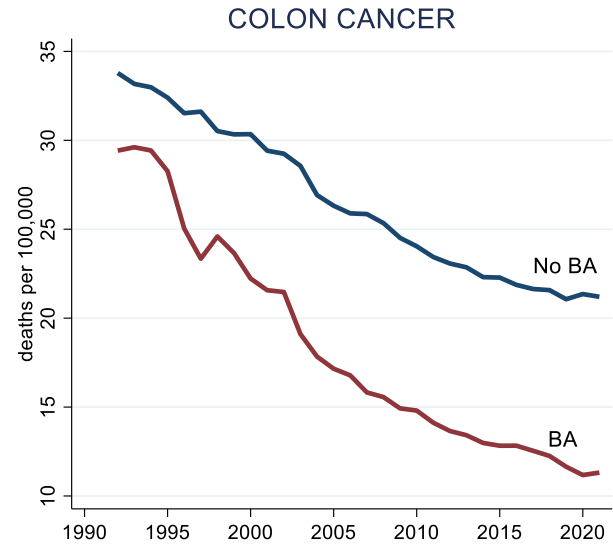
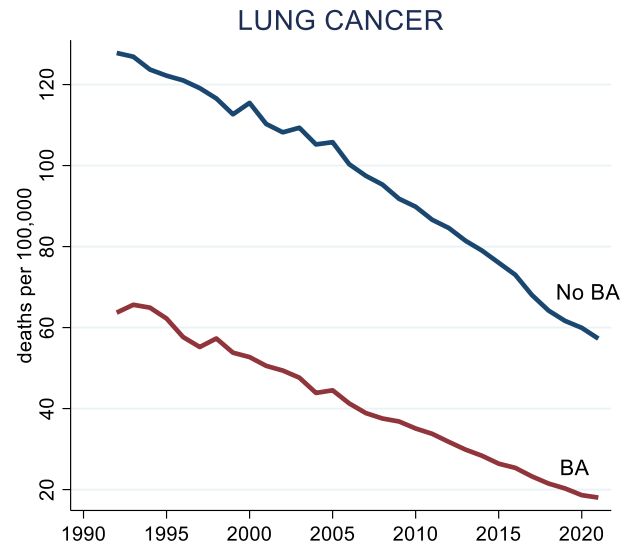
### Cancer



# CANCER mortality, women ages 25–84



# CANCER mortality, men ages 25–84



# Disaggregating all causes of death, by BA status

- A complete disaggregation by ICD-10 classifications shows that between 2000-2019 *all* causes of death, grouped by ICD-10 category, contribute to the growing gap in mortality between those with and without a BA.
- Whether mortality is falling for both groups (e.g., cancer), or rising for both groups (e.g., deaths of despair, Alzheimer's), or falling and then rising (CVD), the gap between those with and without a BA grew

**Table 3. College gaps in age adjusted mortality by age groups.**

<b>Age group:</b>	<b>Change in the gap 1992 to 2021</b>	<b>Change as a percent of 2000 rate</b>
<b>25-34</b>	135	132
<b>35-44</b>	198	99
<b>45-54</b>	289	68
<b>55-64</b>	472	48
<b>65-84</b>	1,301	35

# The effects of rising educational attainment

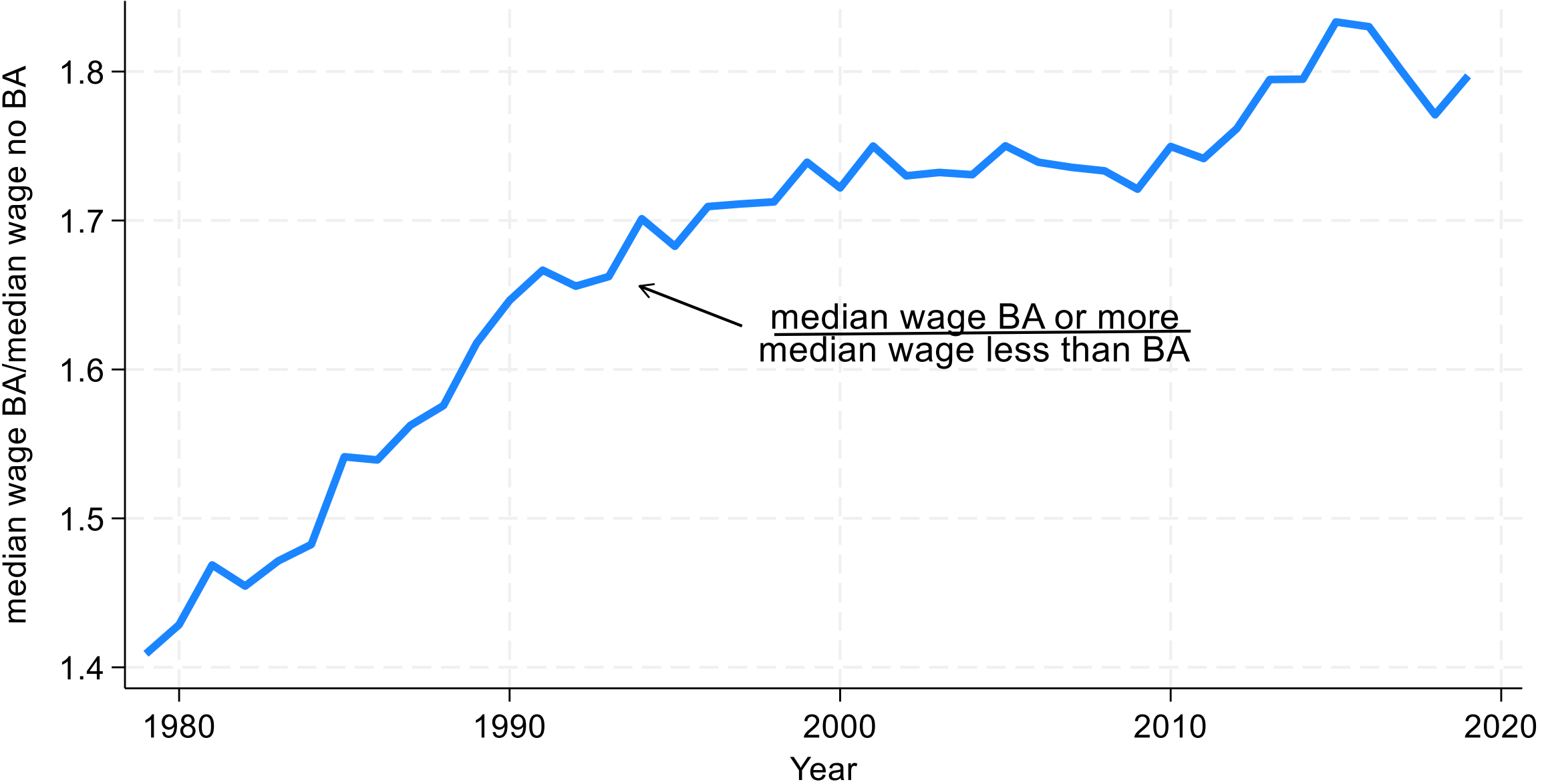
- The changing fraction of adults completing a four-year degree (22 to 36 percent) may affect the mortality gap—just as it may affect the wage premium—*and may certainly be one of causes of what we find.*
- We discuss this in the paper. Research to date has not found this to be a large effect (see Hayward and Farina 2023 and references there)



# Educational Gaps Among the Living

- College wage premia
- Physical and mental distress
- Collapse of institutions
- Household income disparities
- Wealth disparities

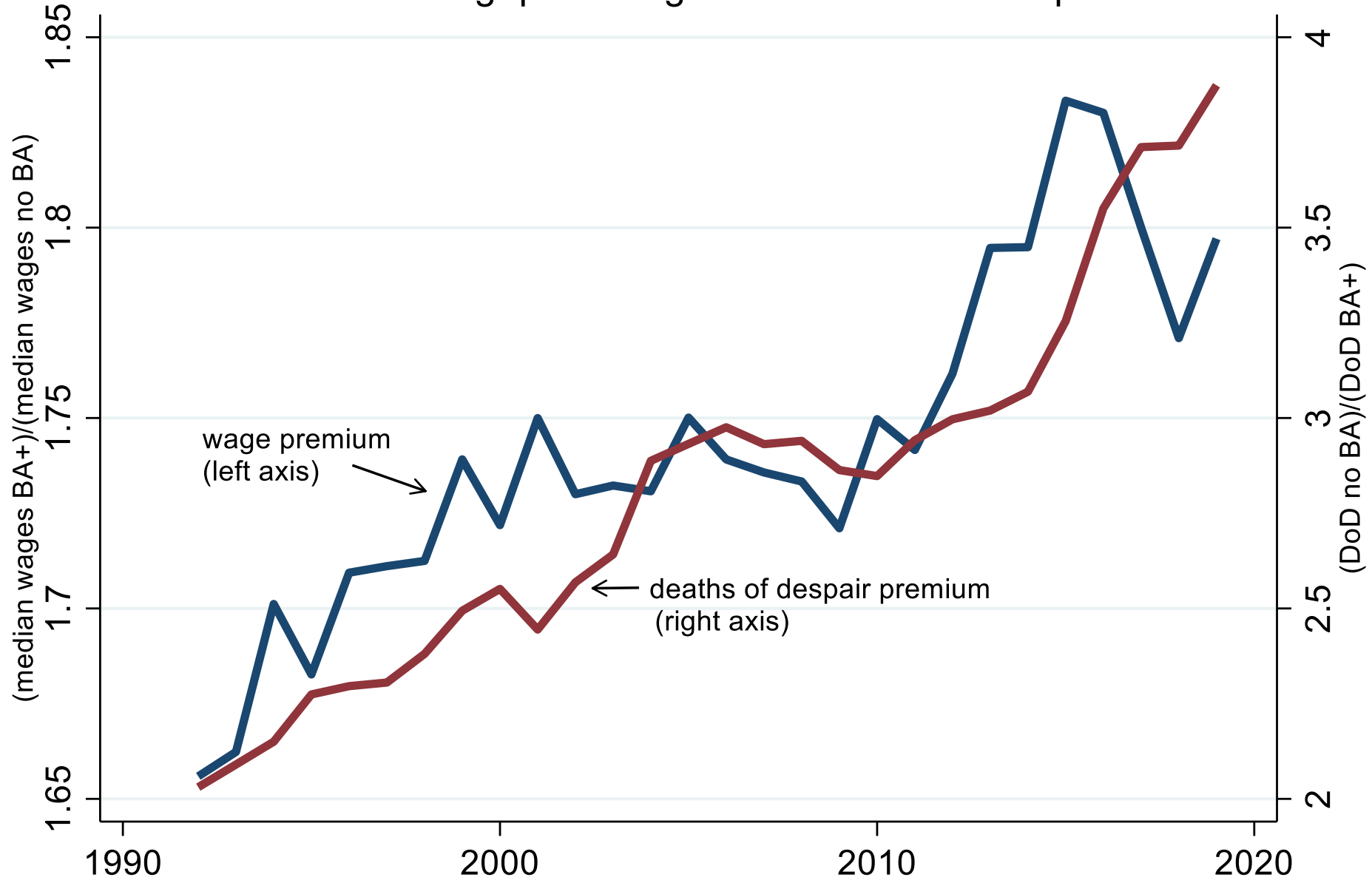
# Wage premium, men and women ages 25-64



median wage BA or more  
median wage less than BA

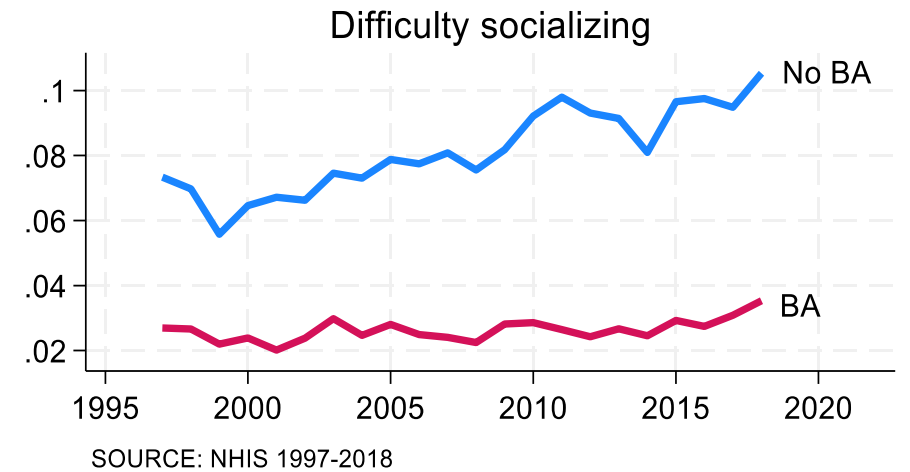
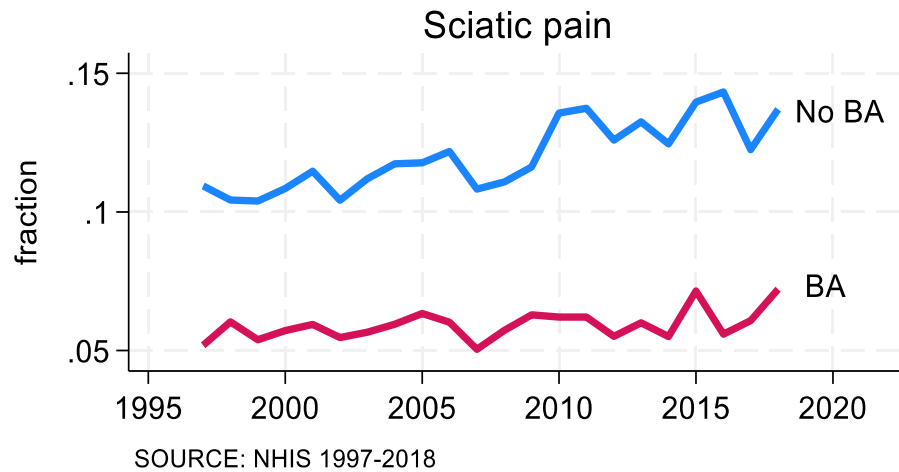
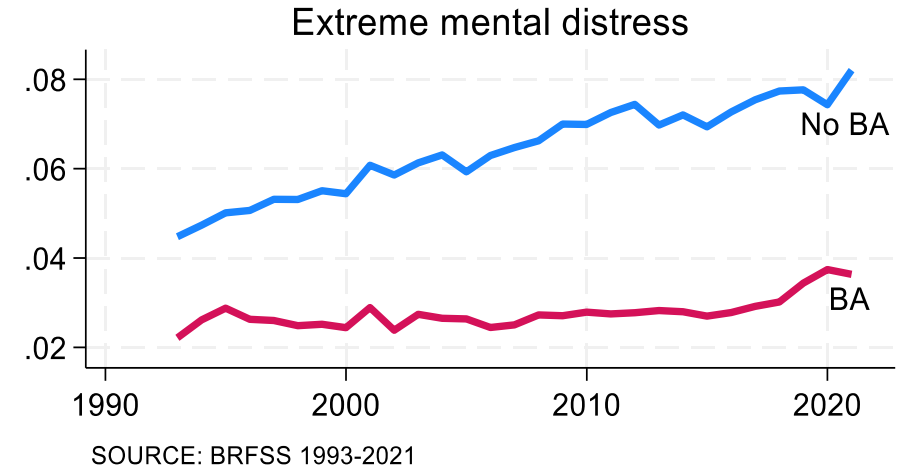
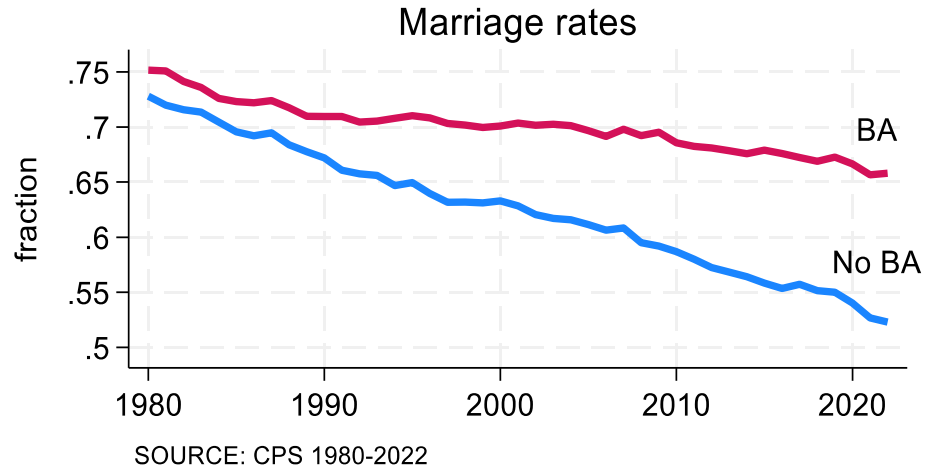
SOURCE: Current Population Survey, Outgoing Rotation Groups

# Educational gaps in wages and deaths of despair



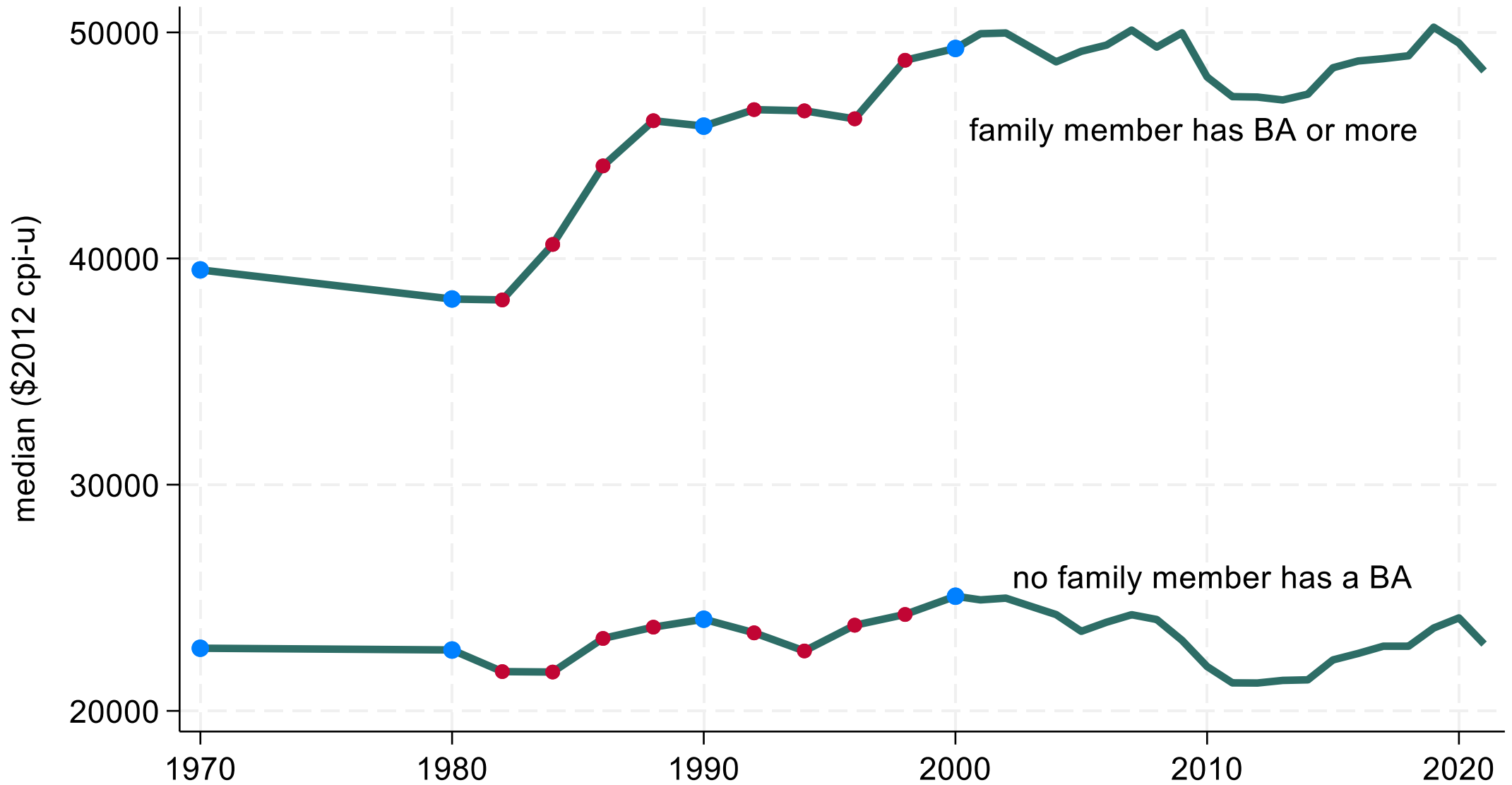
Median wages for workers ages 25-64 are drawn from CPS Outgoing Rotation Groups, Deaths of Despair (DoD) age-adjusted 25-64

# Marriage rates, and rates of physical and mental distress

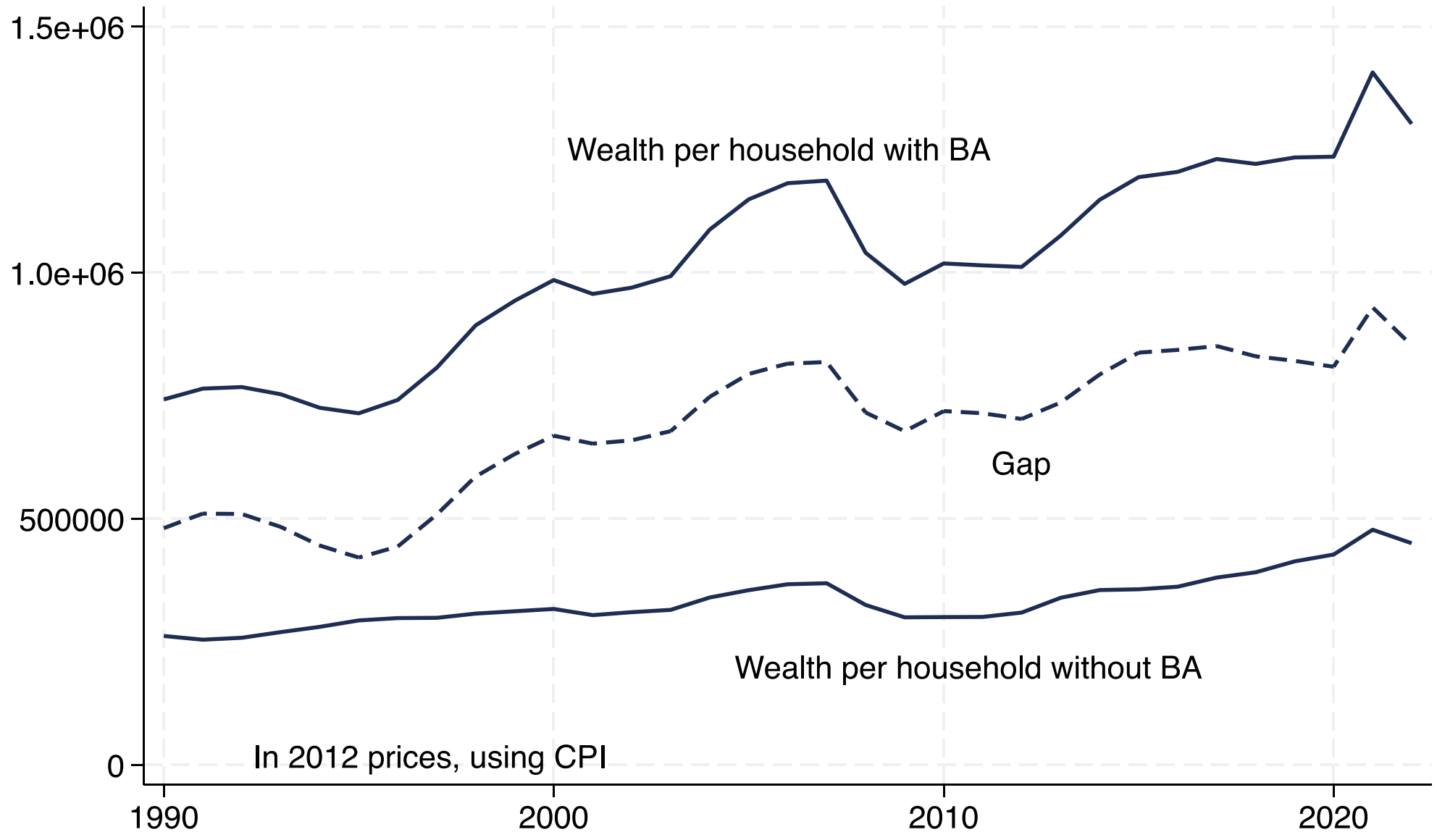


Rates for men and women ages 25 to 79, age-adjusted using 2000 US population

# Real family total income per equivalence unit (\$2012 cpi-u)



SOURCE: US Census (1970,1980,1990,2000), Current Population Survey(1982-88,1992-98), American Community Survey(2001-2021)



Wealth per household with BA

Gap

Wealth per household without BA

In 2012 prices, using CPI

# Policy options

- Encourage employers to hire based on skills, not on degrees
  - This is already beginning to happen (e.g. PA state government, some large employers – see also [paperceiling.org](https://www.tearthepaperceiling.org/) <https://www.tearthepaperceiling.org/>)
- State legislation – this would need to happen through the ballot box
- Maintain focus on healthcare costs, and funding through alternative mechanisms