

Mortality Inequality in the United States and Europe by Currie and Schwandt (2022)

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Inequalities in Mortality in the US and Beyond
March 4, 2022

Summary

- 1 Americans have a higher death rate than Europeans at all ages (and county income percentiles)
 - ▶ Steeper county-income gradients
- 2 Significant improvements in life expectancy for Blacks, from 1990-2018
 - ▶ Largely attributed to CVD, cancer, HIV, homicides, and infancy improvements
- 3 COVID-19: Large drop in life expectancy in the US (1.5 years vs 1 year in Europe)
 - ▶ County-income gradients steeper: 4 years ↓ for poorest counties vs <1 ↓ year for richest counties; POC hit hardest

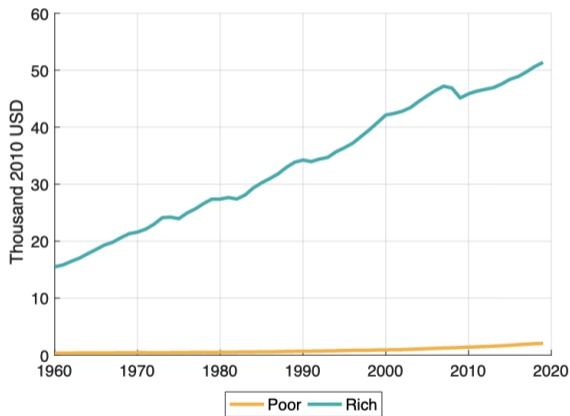
Discussion Roadmap

- ① Across Countries
- ② Within the US: Race and Income
- ③ Potential Channels

Cross Country

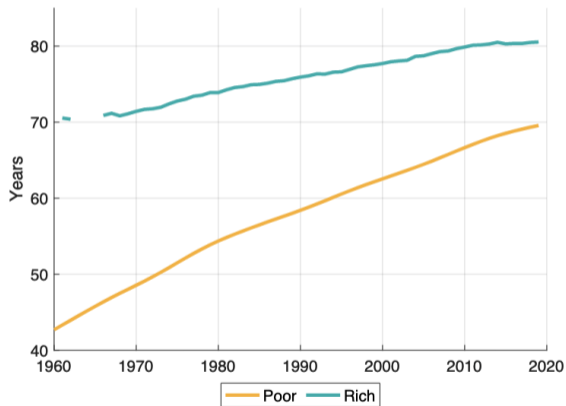
Cross Country: GDP vs LE

A – GDP



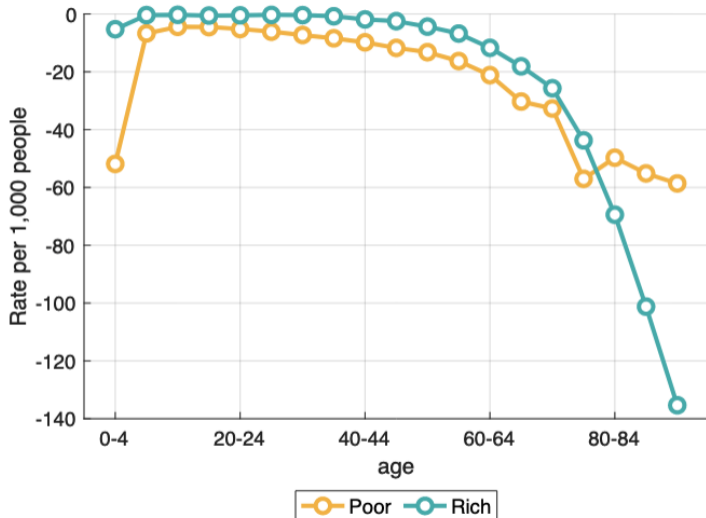
Source: Hejkal, Ravikumar, and Vandenbroucke (2021)

C – LEB



Source: Hejkal, Ravikumar, and Vandenbroucke (2021)

Change in Age-specific CDR, 1960-2019

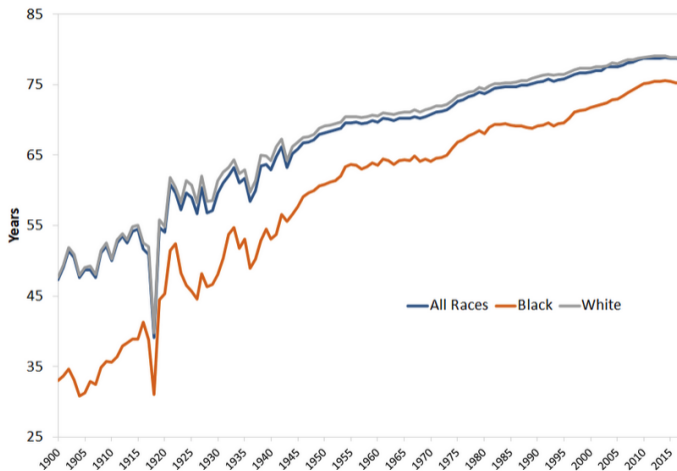


Source: Hejkal, Ravikumar, and Vandenbroucke (2021)

Health Inequality within the US: Race, and Income

Racial gap in LEB in the US, 1900-2017

Life Expectancy at Birth, by Race



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Source: NCHS, Sanghi and Smaldone (2022)

Gains in Life Expectancy by Family Income: 1980s to 2010s

	Q1 (Poor)	Q2	Q3	Q4 (Rich)
Life-expectancy 1980s	68.9	72.5	75.7	77.4
Total Change in Years	2.9	3.7	3.9	5.4
By cause of death:				
Heart	4.1	4.3	4.4	4.3
Cancer	0.3	0.5	0.7	1.1
Diabetes	-0.2	-0.1	0.0	0.0
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Note: Life expectancy conditional on surviving until age 20. Family income group.

Source: US Census Bureau, Sanghi (2021)

Full Decomposition

Controlling for Education

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Note: Life expectancy conditional on surviving until age 20. Family income group.

Source: US Census Bureau, Sanghi (2021)

Full Decomposition

Controlling for Education

Gains in Life Expectancy, by Race

Table: Gains in life expectancy, by Race: 1980s to 2000s

	Whites	Blacks
Total Change (1980s - 2000s)	3.2	4.9
By cause of death:		
Heart	3.3	3.2
Cancer	0.5	1.0
Diabetes	-0.1	-0.2
Respiratory	0.0	-0.1
Cerebrovascular	0.4	0.5
Accidents	0.0	0.6
Alzheimer's	-0.3	-0.2
Suicide	0.0	0.0
Kidney Disease	-0.1	0.1
All Other	-0.6	-0.2

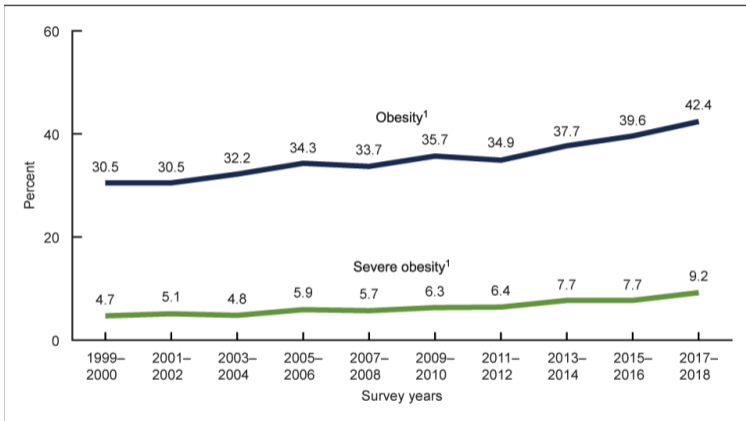
Notes: Life expectancy conditional on surviving until age 20. 1980s is computed by NLMS 6a wave 6-year average mortality rates; 2000s is computed by NLMS 6c wave 6-year average mortality rates.

Source: US Census Bureau, Sanghi (2021)

Potential Channels

Obesity

Figure 4. Trends in age-adjusted obesity and severe obesity prevalence among adults aged 20 and over: United States, 1999–2000 through 2017–2018



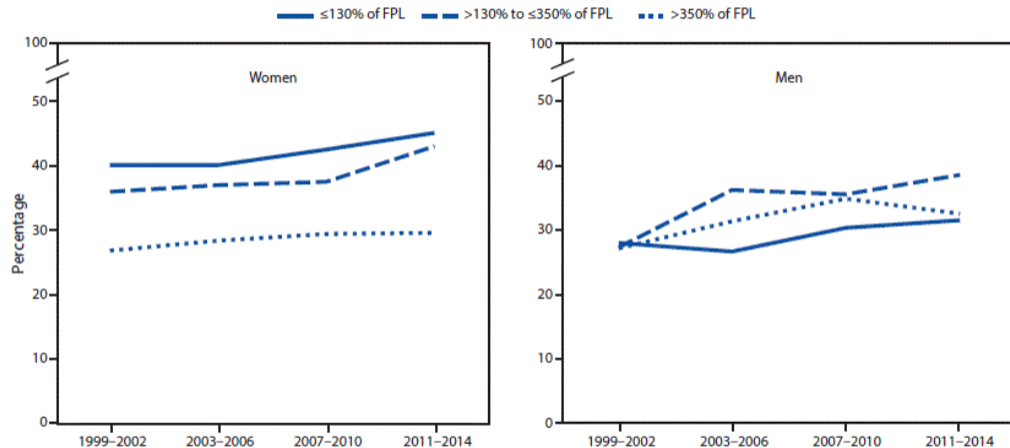
¹Significant linear trend.

NOTES: Estimates were age adjusted by the direct method to the 2000 U.S. Census population using the age groups 20–39, 40–59, and 60 and over. Access data table for Figure 4 at: https://www.cdc.gov/nchs/data/databriefs/db360_tables-508.pdf#4.

SOURCE: NCHS, National Health and Nutrition Examination Survey, 1999–2018.

Source: NCHS Data Brief, Hales et. al. (2021)

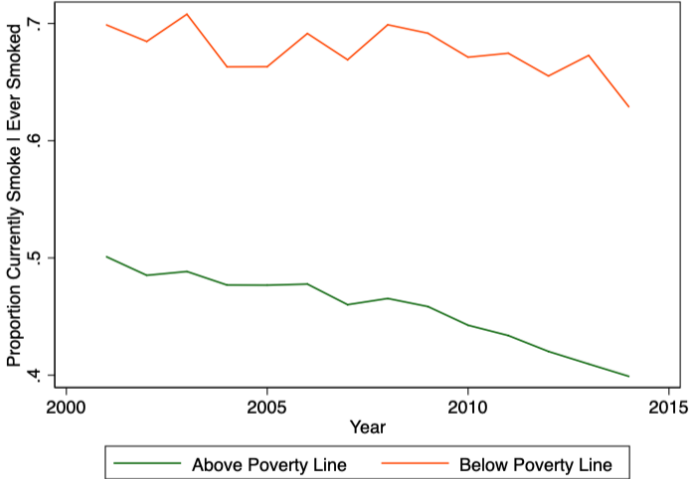
Obesity, by Income



Abbreviation: FPL = federal poverty level.

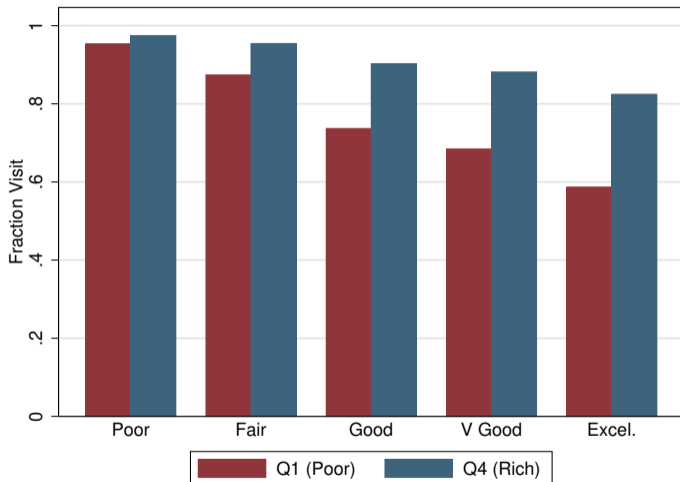
Source: CDC MMWR, Ogden et. al. (2017)

Proportion Currently Smoke | Ever Smoke, by Poverty Status



Source: NHIS

Timing of Visit, by Income



Source: NHIS-MEPS, Sanghi (2021)

Rich individuals go to the doctor in a much healthier state

By Insurance

Fixed Effect Regression

Conclusions

- Convergence in LEB across countries; rich countries have gained more in 80+ CDR vs poor have gained in early childhood CDR
- Americans have a higher death rate than Europeans at all ages
- Significant convergence across race in the US
- Worsening of health inequality by income in the US; cancer is one of the largest contributors
- Potential Channels: Obesity, Smoking, Timing of visits
- COVID-19: 4 years ↓ for poorest counties vs <1 year ↓ for richest counties; POC hit hardest

Thank you!

Gains in Life Expectancy: Fixing Education

Table: Gains in life expectancy (some college and above): 1980s to 2000s

	Q1 (Poor)	Q2	Q3	Q4 (Rich)
Total Change (1980s - 2000s)	-2.63	-2.99	1.23	2.99
By cause of death:				
Heart	1.69	0.90	1.48	2.09
Cancer	-1.14	-0.68	0.04	0.75
Diabetes	-0.39	-0.57	-0.09	-0.18
Respiratory	-0.62	-0.65	0.13	0.24
Cerebrovascular	0.58	0.45	0.01	0.44
Accidents	-0.48	-0.34	0.01	-0.09
Alzheimer's	-0.31	-0.35	-0.34	-0.14
Suicide	0.05	-0.11	0.02	0.06
Kidney Disease	-0.16	-0.10	-0.08	0.29
All Other	-1.59	-1.42	-0.16	-0.42

Notes: Life expectancy conditional on surviving until age 20.

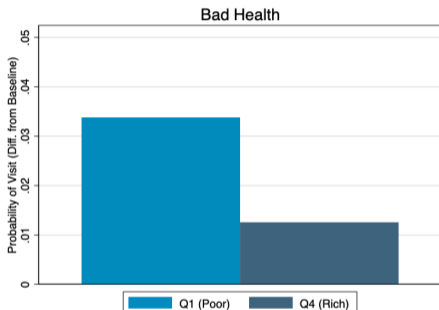
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Gains in Life Expectancy: 1980s to 2010s

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Respiratory	-0.1	0.1	0.0	0.3
Cerebrovascular	0.7	0.6	0.6	0.8
Accidents	0.0	0.0	0.0	0.1
Alzheimer's	-0.3	-0.3	-0.4	-0.4
Suicide	-0.0	-0.0	-0.0	-0.0
Kidney Disease	-0.1	-0.1	-0.0	-0.0
All Other	-0.9	-0.9	-0.8	-0.6

Note: Life expectancy conditional on surviving until age 20. Family income group.

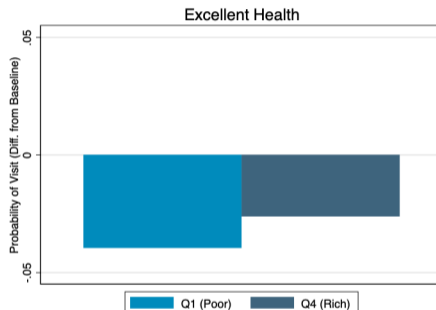
Figure: Responsiveness to bad health state



Source: NHIS-MEPS (2000-15).

Notes: Includes individual fixed effect regressions of doctor visit from t to $t + 1$ on health in time t , run separately by family income group. Base set to average health in each income-group regression.

Figure: Responsiveness to excellent health state



Source: NHIS-MEPS (2000-15).

Notes: Includes individual fixed effect regressions of doctor visit from t to $t + 1$ on health in time t , run separately by family income group. Base set to average health in each income-group regression.