



The Forgotten Middle: Exploring Life Expectancy Outcomes among the Lower-Middle Class

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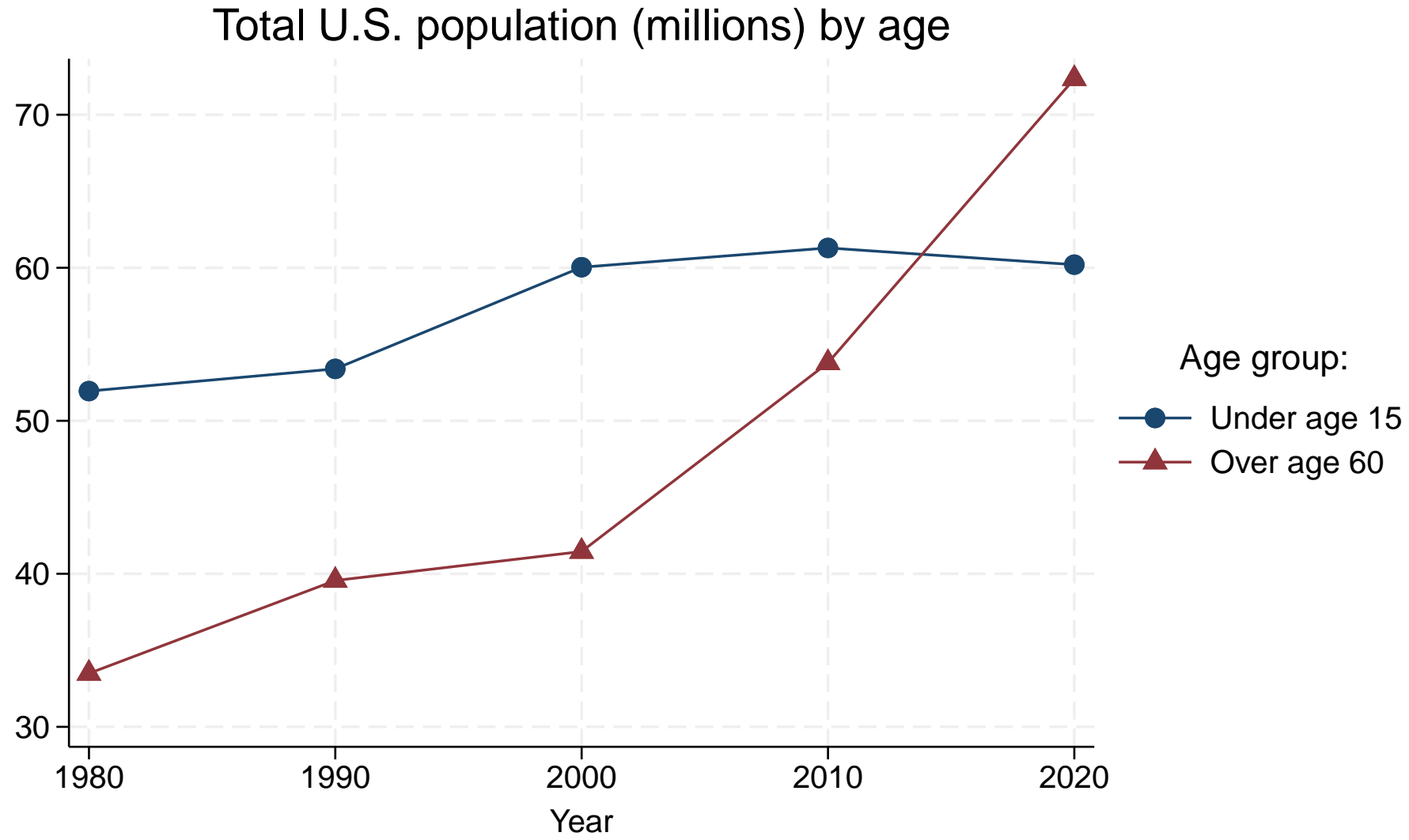
The Forgotten Middle:

Worsening Health and Economic Trends Extend to
Americans with Modest Resources Nearing Retirement

Jack Chapel, Bryan Tysinger, Dana Goldman, John Rowe, and
the Research Network on an Aging Society

The Urban Institute, Washington, DC – February 1, 2024

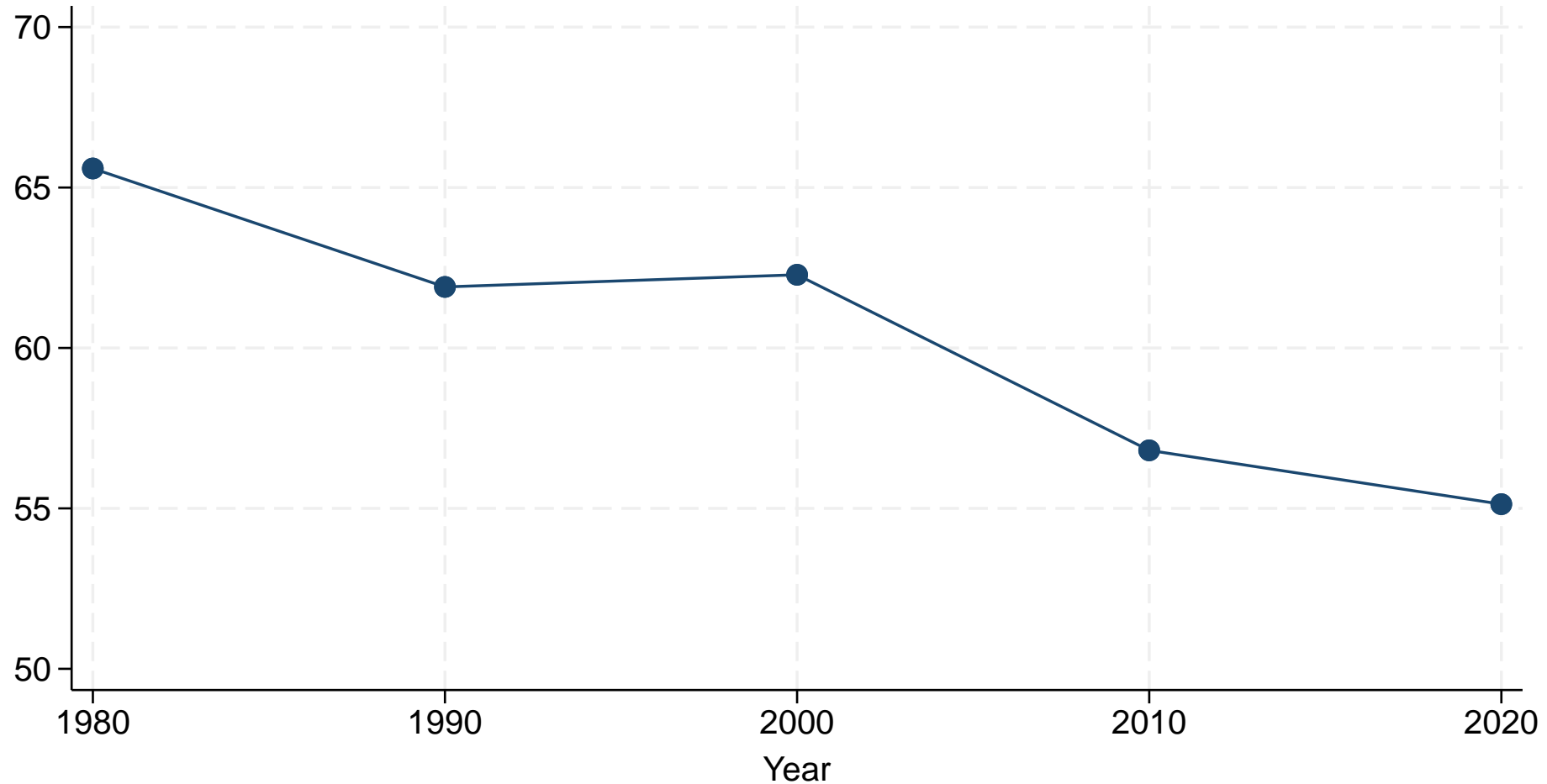
Background: An Aging Society



Notes: Data from decennial Censuses and the American Community Survey, accessed through IPUMS.

Background: A “Shrinking Middle Class”

Percent of Americans ages 45-64
with income between 50% and 200% of the median



Krueger (2012), [Pew Research](#) (2014), Rose (2020) [Squeezing the Middle Class](#), Wegner & Zaber (2021) [Who is Middle Class?](#)

Notes: Data from decennial Censuses and the American Community Survey, accessed through IPUMS. Family income adjusted to individual level.

This Study

- Examines the health and economic well-being of middle-income Americans nearing retirement
 - Much attention focused on top and bottom of the economic ladder
 - Many in the middle have modest incomes but don't qualify for assistance
 - Are there disparities within the middle of the economic distribution?
- How do we expect their future health and economic well-being will evolve over their later life?
- To what extent have outcomes and disparities changed over time?

Outline

Introduction

Methods: A Brief Overview

Health and Economic Well-Being at Midlife

Projected Future Life Course Outcomes

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Overview of Methods

- Define economic status groups for **five cohorts** of US adults in their mid-50s in the Health and Retirement Study

Cohort	Birth Years	Observation Year	Age at Observation Year
1994 Cohort	1936 – 1941	1994	53–58
2000 Cohort	1942 – 1947	2000	53–58
2006 Cohort	1948 – 1953	2006	53–58
2012 Cohort	1954 – 1959	2012	53–58
2018 Cohort	1960 – 1965	2018	53–58

- Describe health and economic outcomes for groups when observed at mid-life
- Project their future outcomes (morbidity, mortality, and economic resources) using a dynamic microsimulation model
- Compare outcomes between economic status groups and cohorts over time

- **Annual Resources** measure augmented income with annuitized wealth
 - Adapted from Poterba, Venti & Wise (2011) and Pearson et al. (2019)

$$\text{annual resources}_i = \text{income}_i + (a_i \cdot \text{wealth}_i)$$

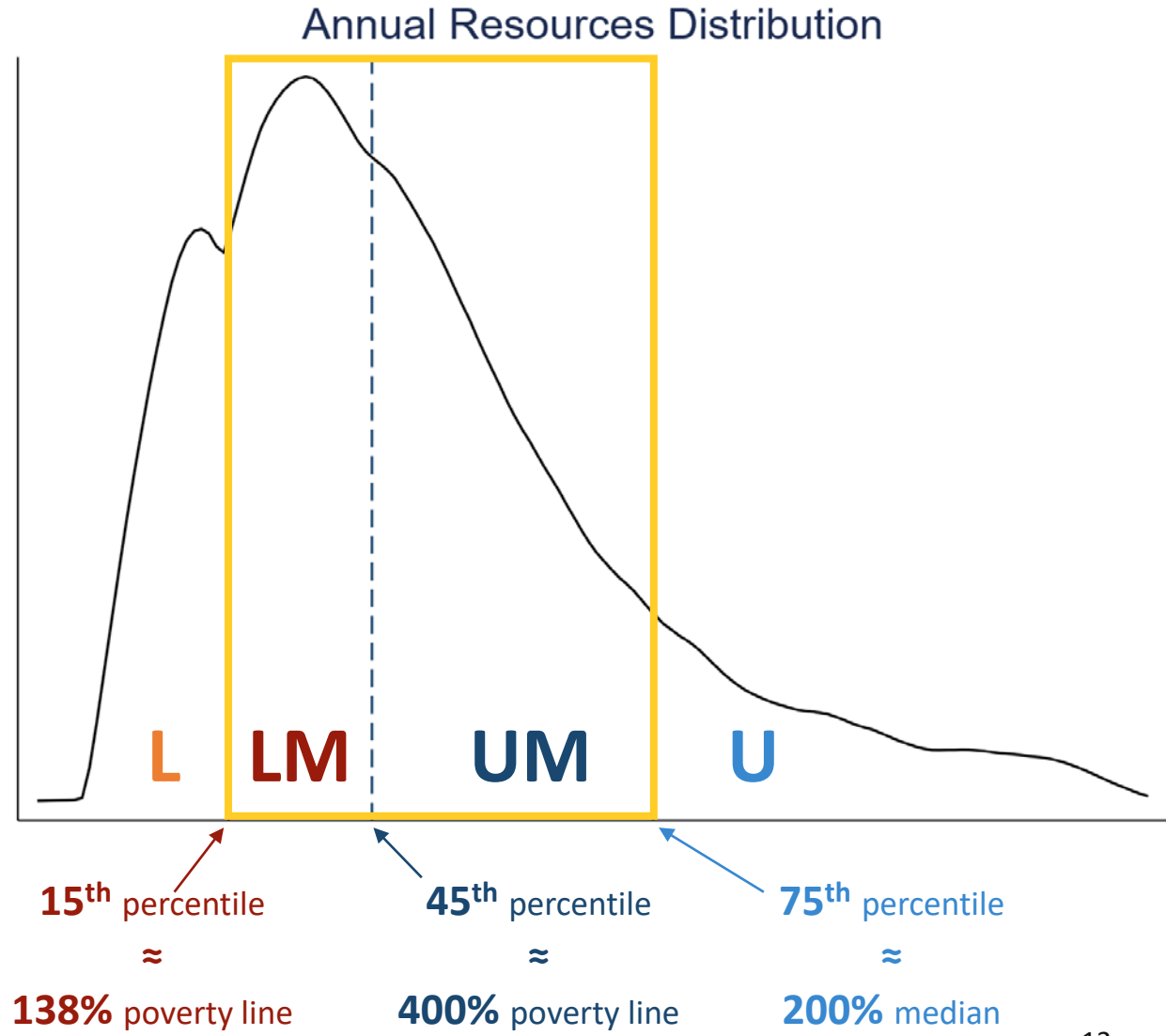
- income_i = household pre-tax/-transfer income, adjusted to individual level
- wealth_i = household net wealth
- a_i = annuity factor, converts wealth stock to annual flow
 - function of interest rate and household member survival probabilities by sex and age according to Social Security actuarial tables, and household size

Defining Economic Status Groups

Economic status groups are defined based on percentiles of the annual resource distribution for each cohort

Focus on:

- **Lower-middle (LM):** 15-45 percentile
 - Tend to be above eligibility for public benefits programs, but modest income
- **Upper-middle (UM):** 46-75 percentile



Outline

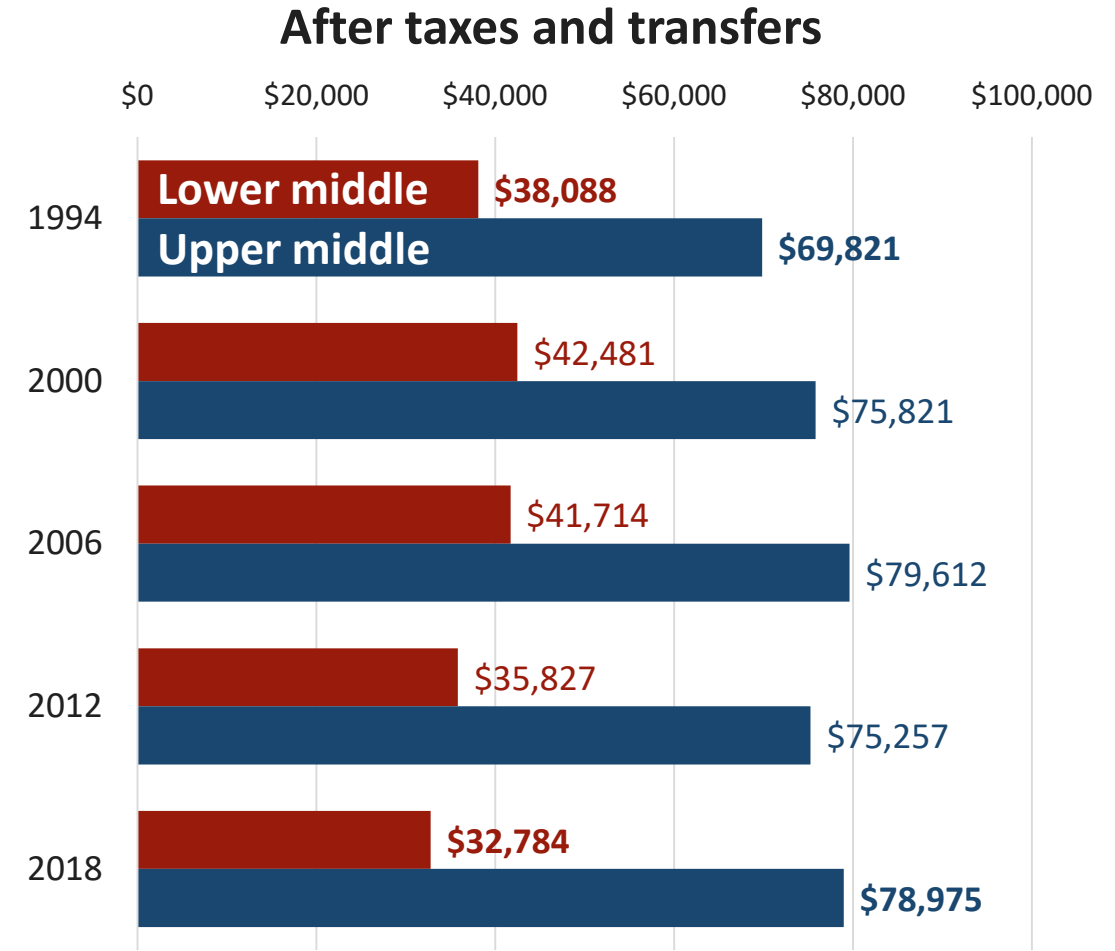
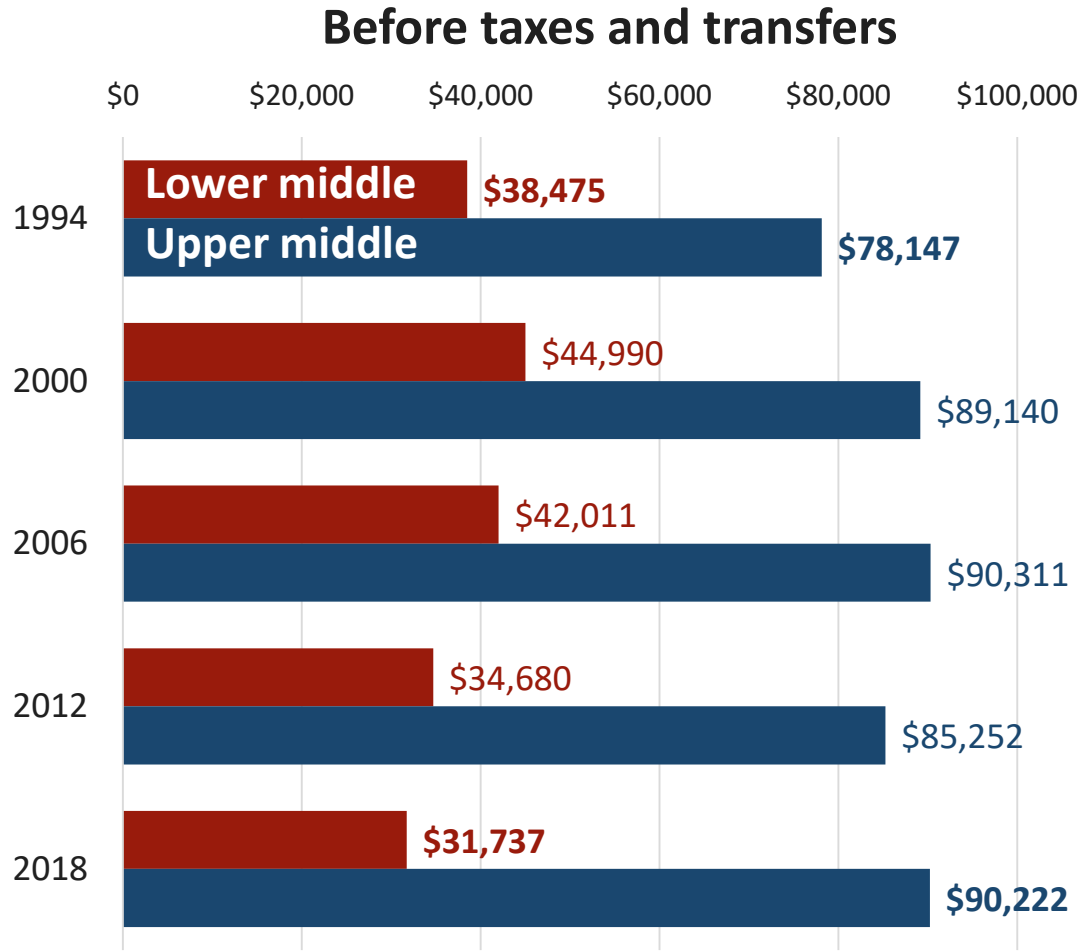
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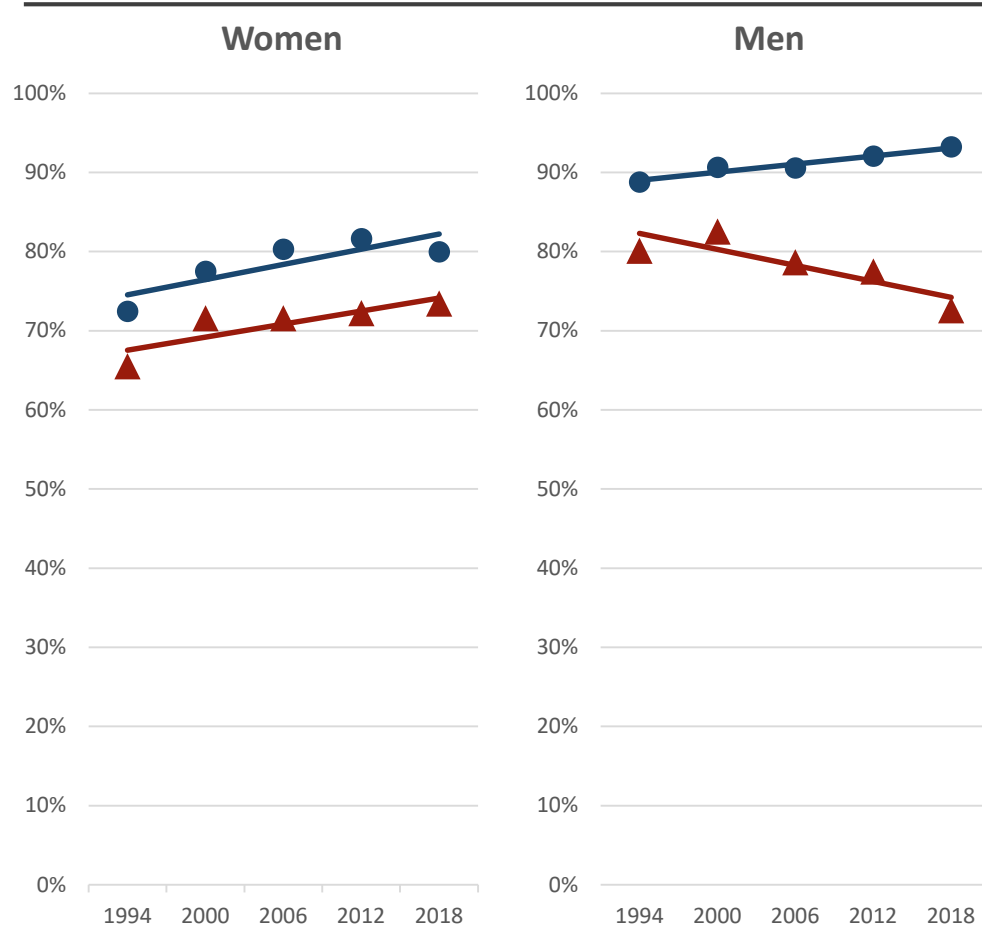
Annual Resources



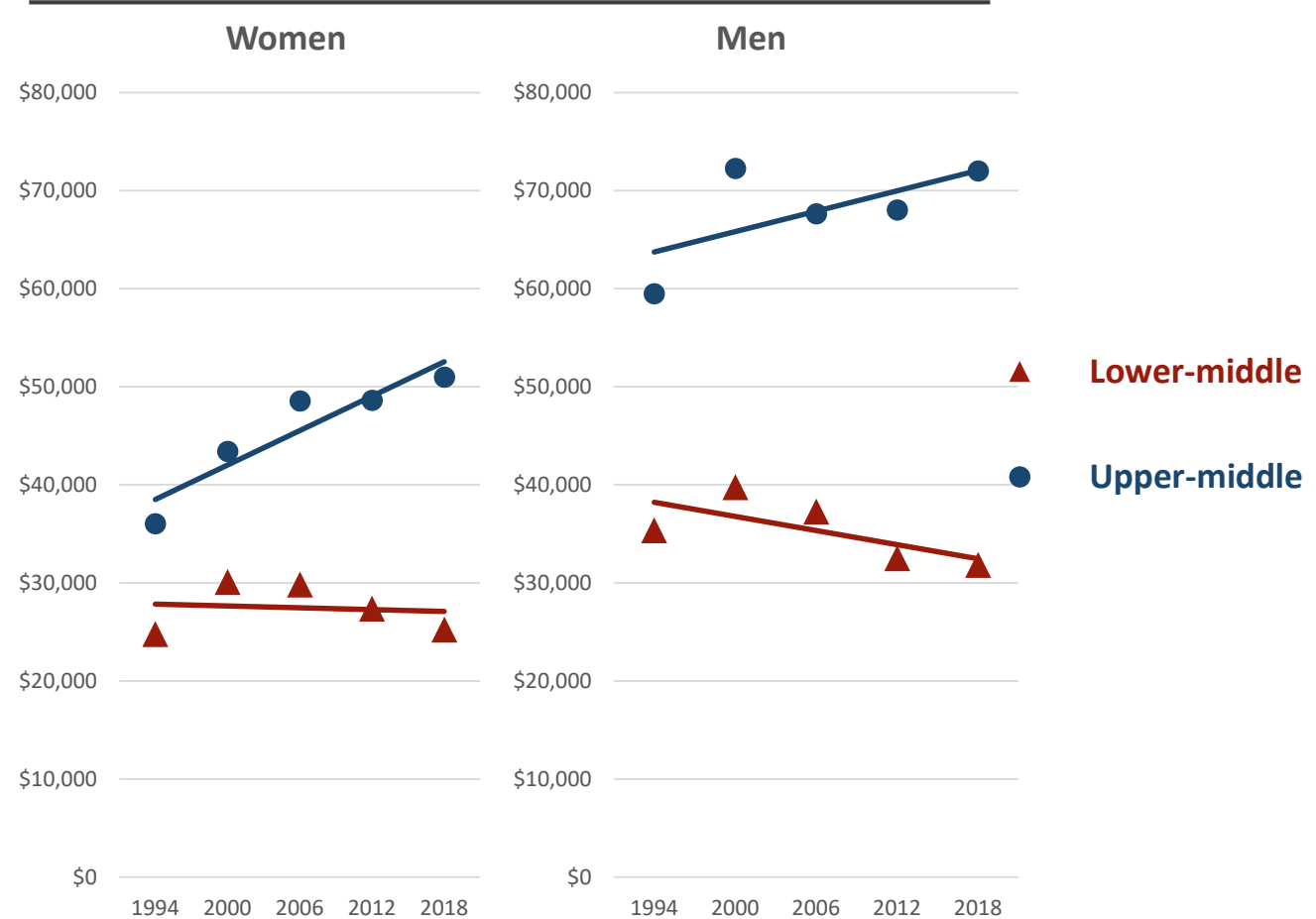
Notes: All monetary figures are converted to 2018 US dollars, using the Personal Consumption Expenditures Price Index. Annual resources measures combine household income, adjusted to the individual level, and annuitized wealth. Annuitized wealth converts the stock of current household net wealth to an annual individual income flow based on assumed interest rates and the survival probabilities of individuals (and their spouses). Estimates used HRS person-level weights. For each cohort, the economic status groups are defined on the basis of percentiles of the distribution of annual resources within that cohort; lower middle is 15th–45th percentiles, and upper middle is 46th–75th percentiles.

Work and Earnings

Working for pay



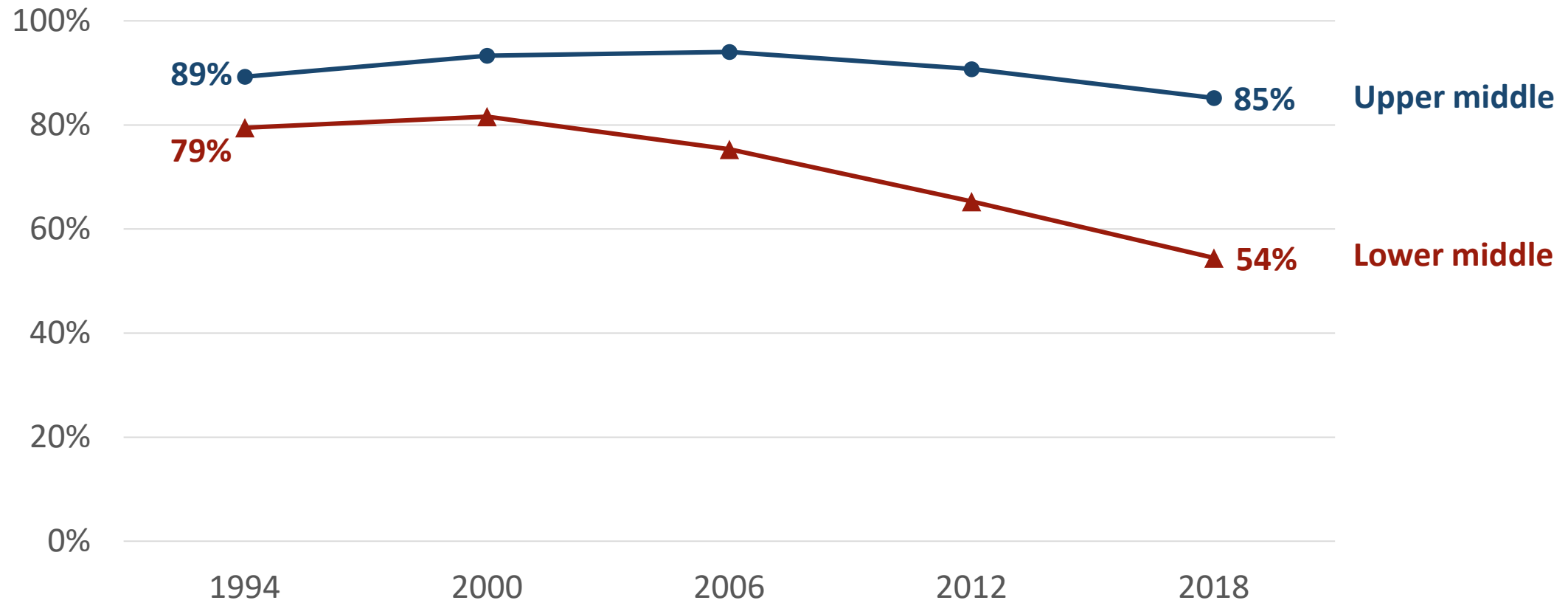
Annual earnings if working



Notes: All monetary figures are converted to 2018 US dollars, using the Personal Consumption Expenditures Price Index. Estimates used HRS person-level weights. For each cohort, the economic status groups are defined on the basis of percentiles of the distribution of annual resources within that cohort; lower middle is 15th–45th percentiles, and upper middle is 46th–75th percentiles.

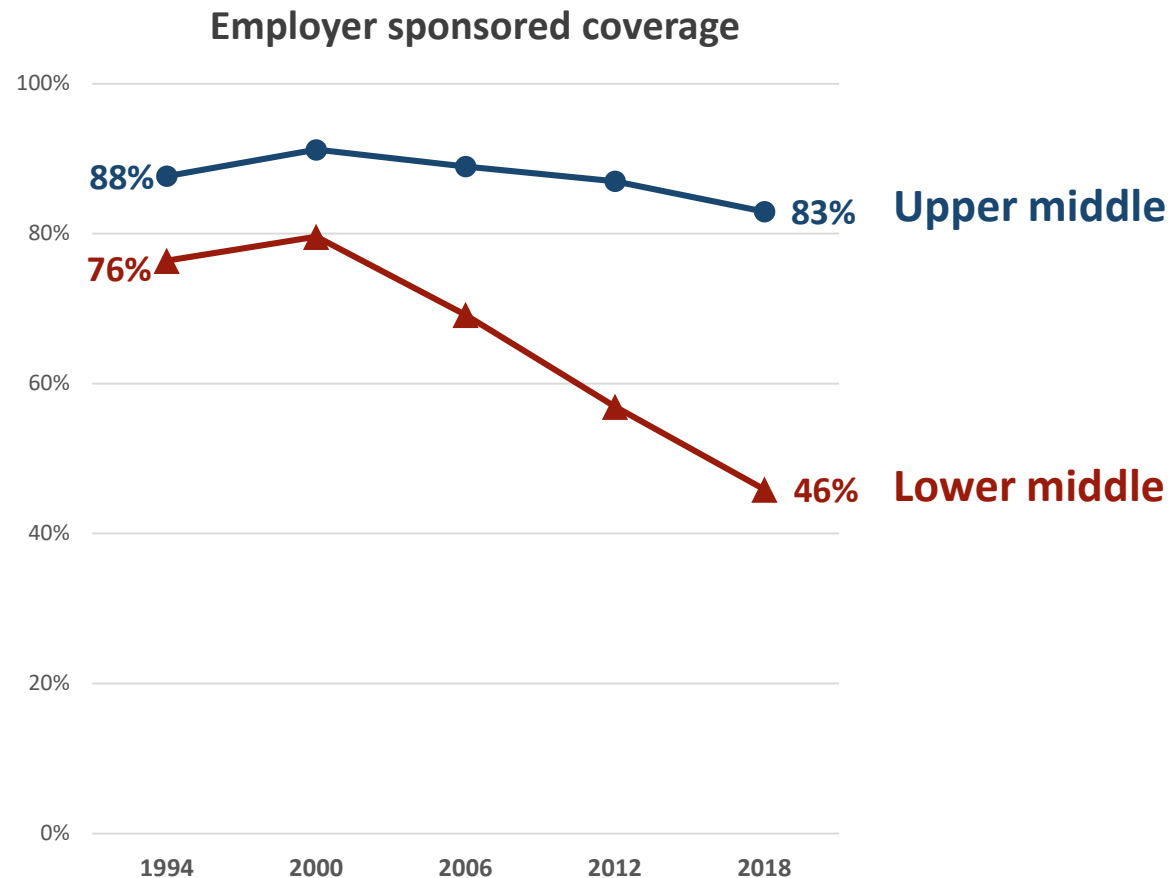
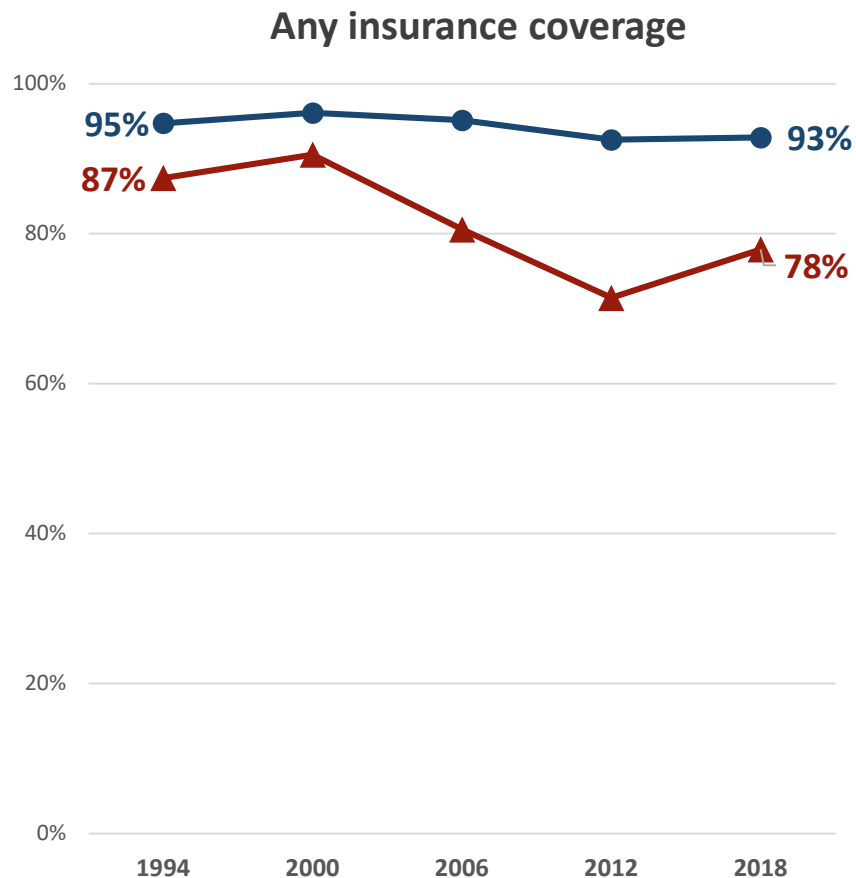
Homeownership

Rate of personal (self or spouse/partner) ownership of current residence



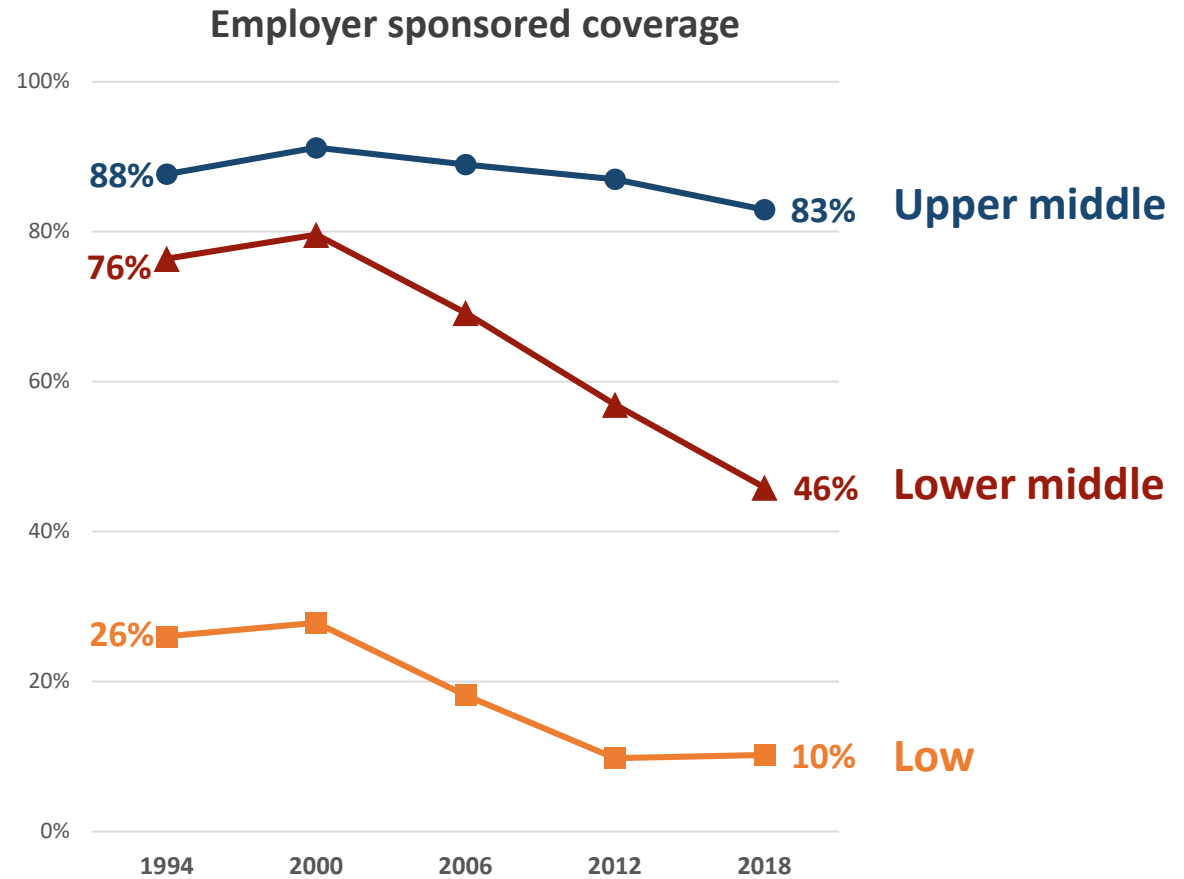
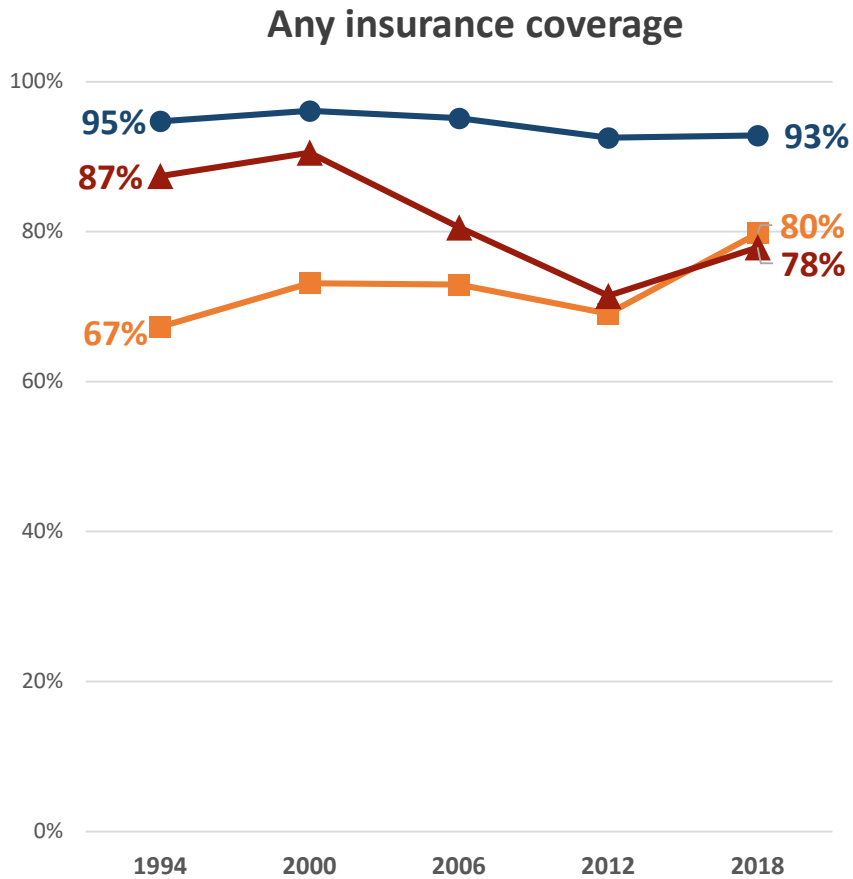
Notes: Estimates used HRS person-level weights. For each cohort, the economic status groups are defined on the basis of percentiles of the distribution of annual resources within that cohort; lower middle is 15th–45th percentiles, and upper middle is 46th–75th percentiles.

Health Insurance



Notes: Employer sponsored coverage includes coverage from own or spouse's employer. Estimates used HRS person-level weights. For each cohort, the economic status groups are defined on the basis of percentiles of the distribution of annual resources within that cohort; lower middle is 15th–45th percentiles, and upper middle is 46th–75th percentiles.

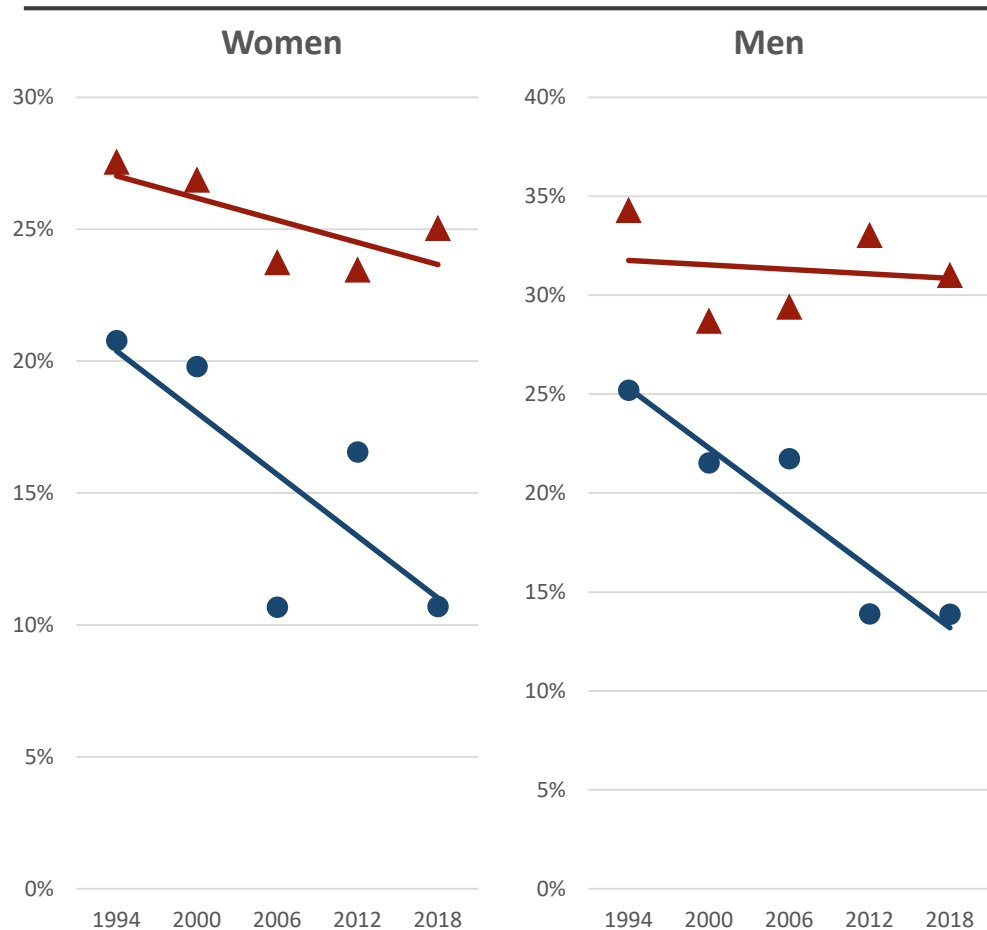
Health Insurance



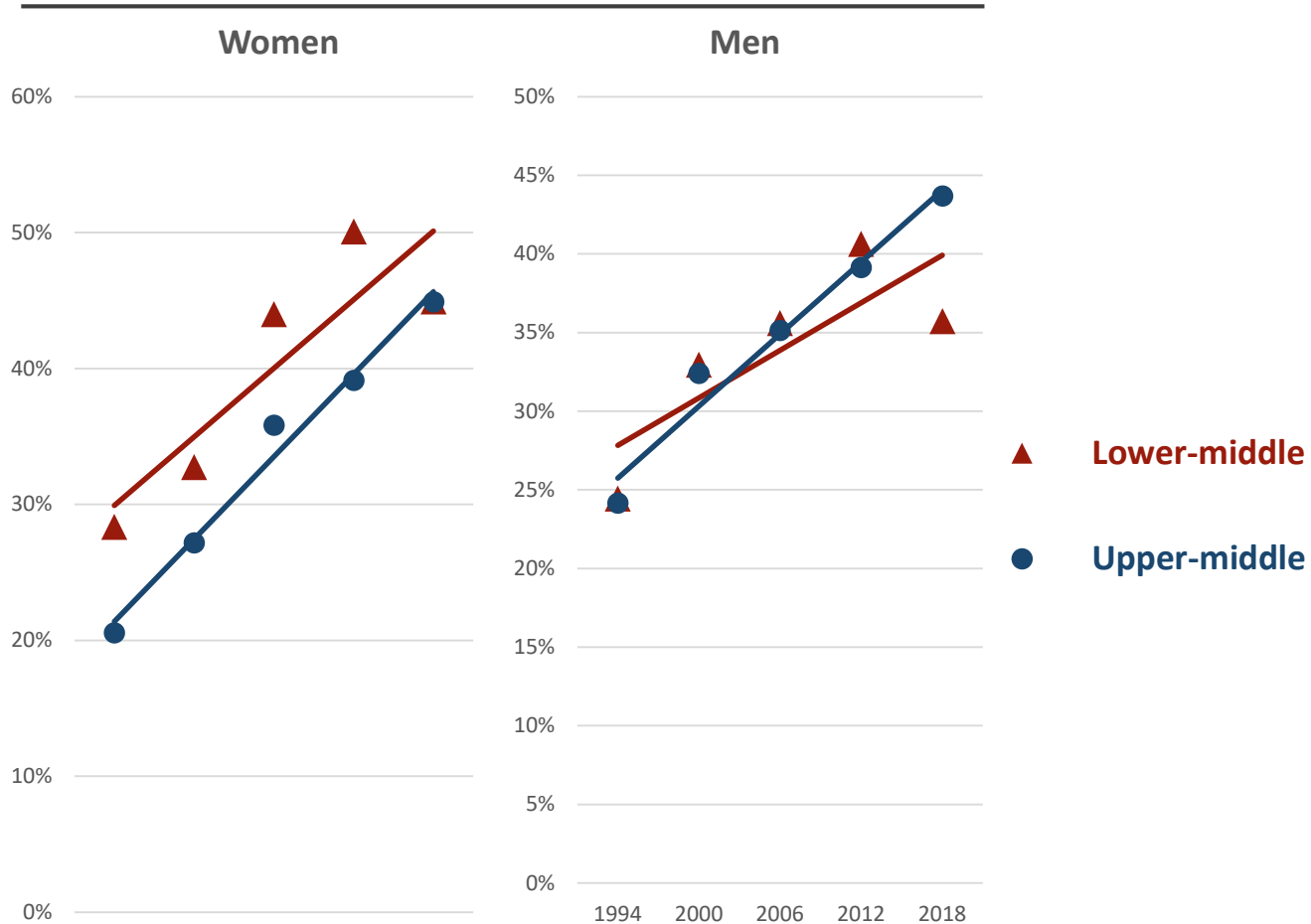
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Health Risk Factors

Current Smoker

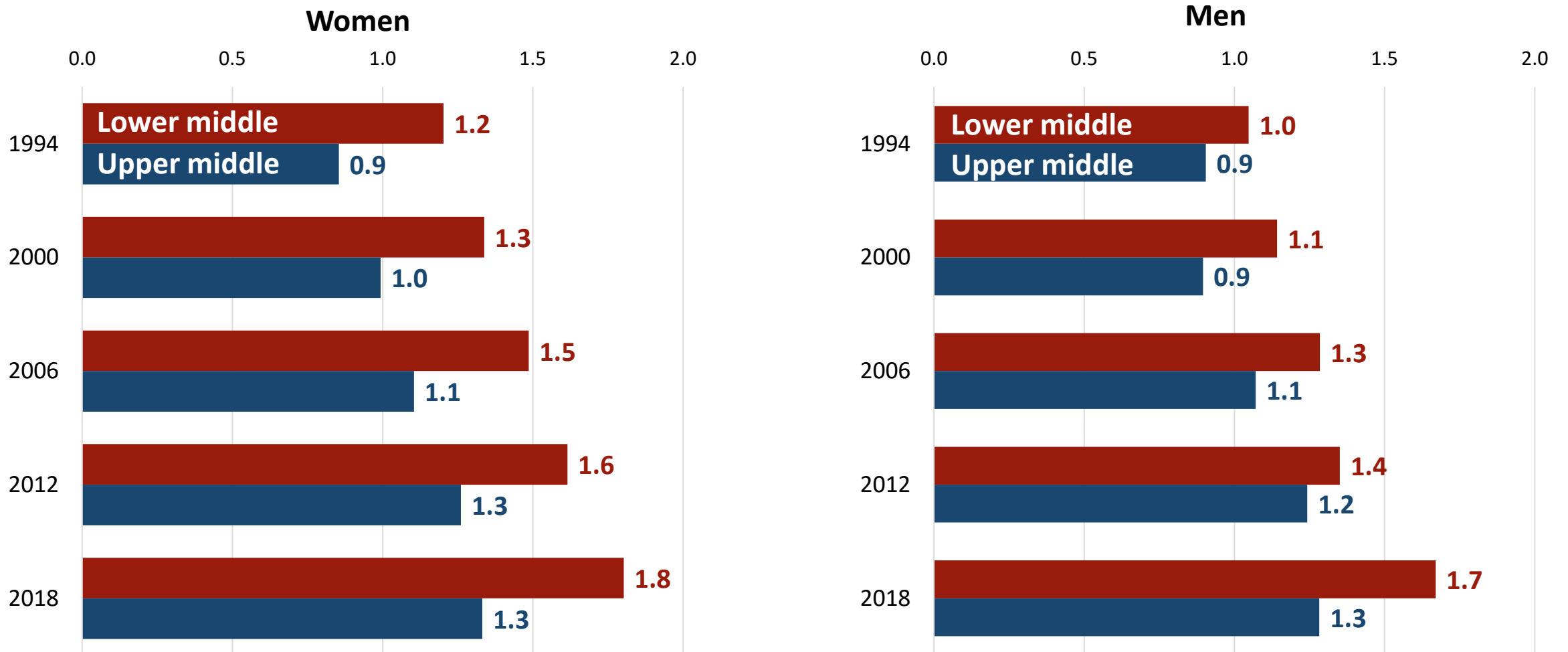


Obese



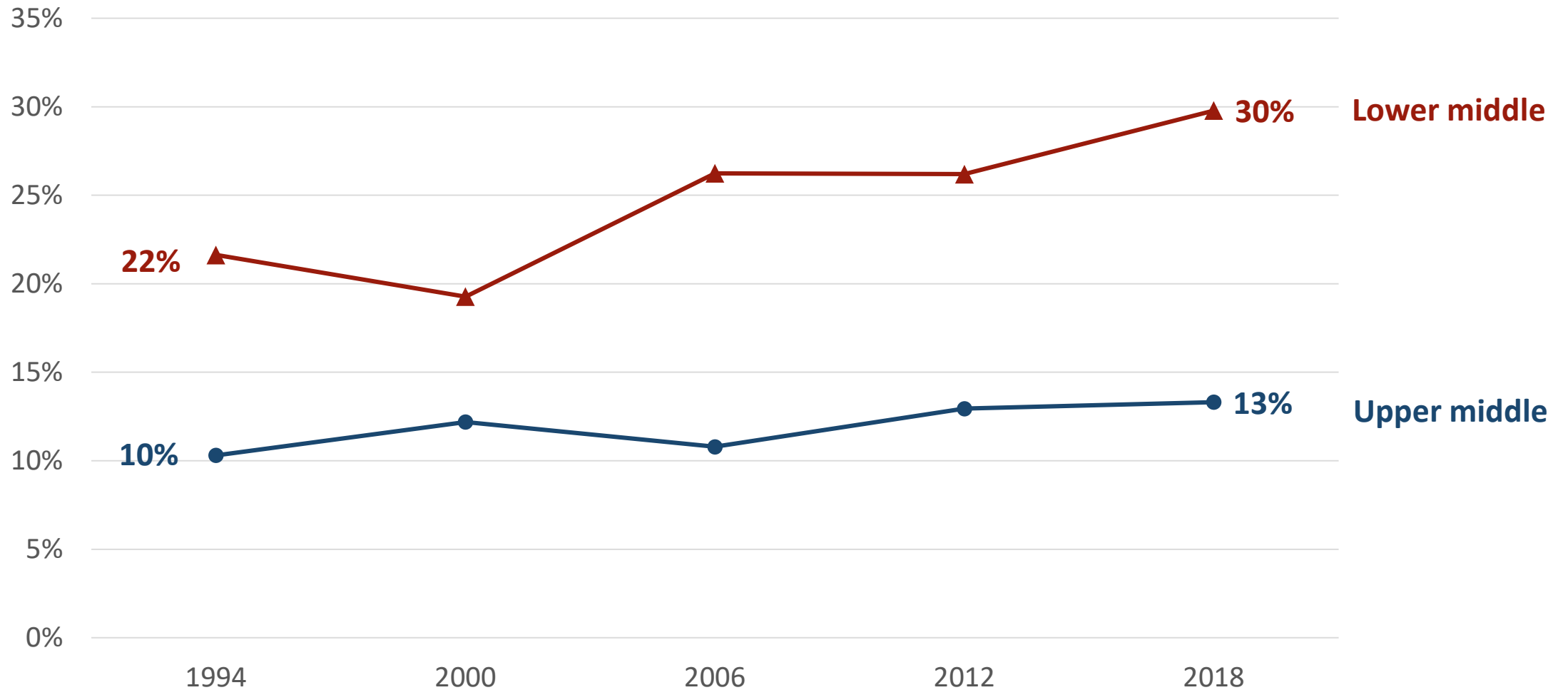
Notes: Estimates used HRS person-level analysis weights. For each cohort, the economic status groups are defined on the basis of percentiles of the distribution of annual resources within that cohort; lower middle is 15th–45th percentiles, and upper middle is 46th–75th percentiles.

Number of Diagnosed Chronic Conditions



Notes: Chronic conditions include diabetes, hypertension, heart disease, stroke, cancer, lung disease, arthritis, and psychiatric problems. Estimates used HRS person-level analysis weights. For each cohort, the economic status groups are defined on the basis of percentiles of the distribution of annual resources within that cohort; lower middle is 15th–45th percentiles, and upper middle is 46th–75th percentiles.

Self-Reported Health Status Fair/Poor



Notes: Estimates used HRS person-level analysis weights. For each cohort, the economic status groups are defined on the basis of percentiles of the distribution of annual resources within that cohort; lower middle is 15th–45th percentiles, and upper middle is 46th–75th percentiles.

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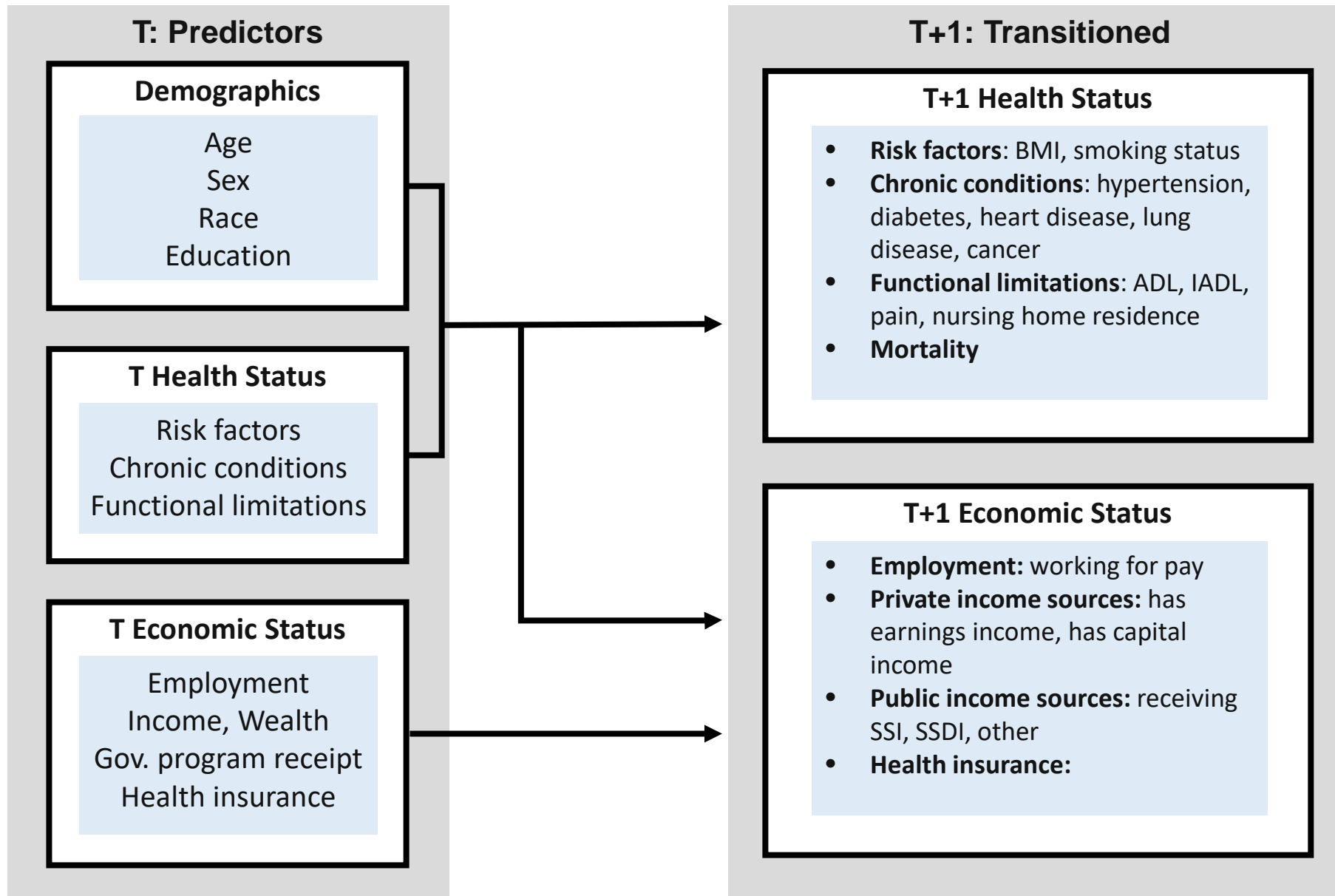
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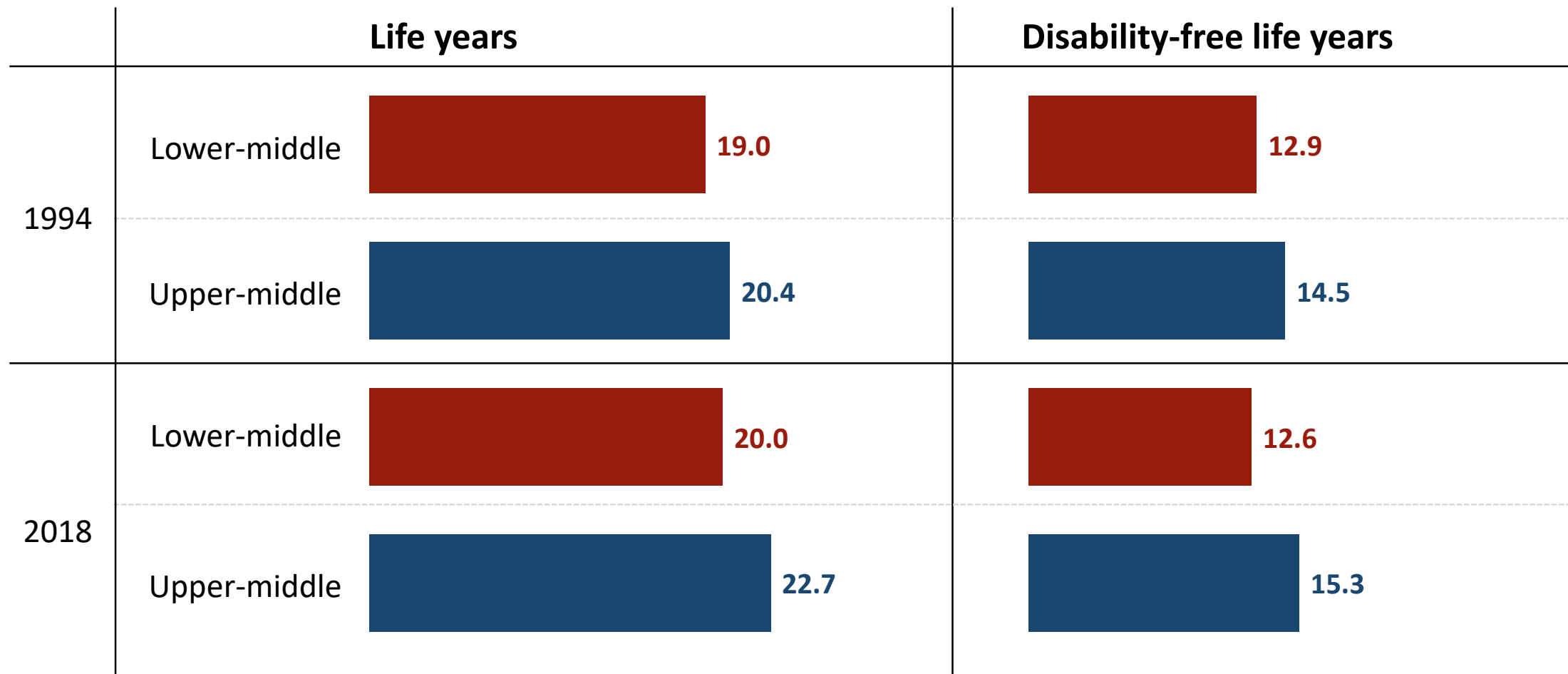
Health and Economic Well-Being at Midlife

Projected Future Life Course Outcomes

The Future Elderly Model

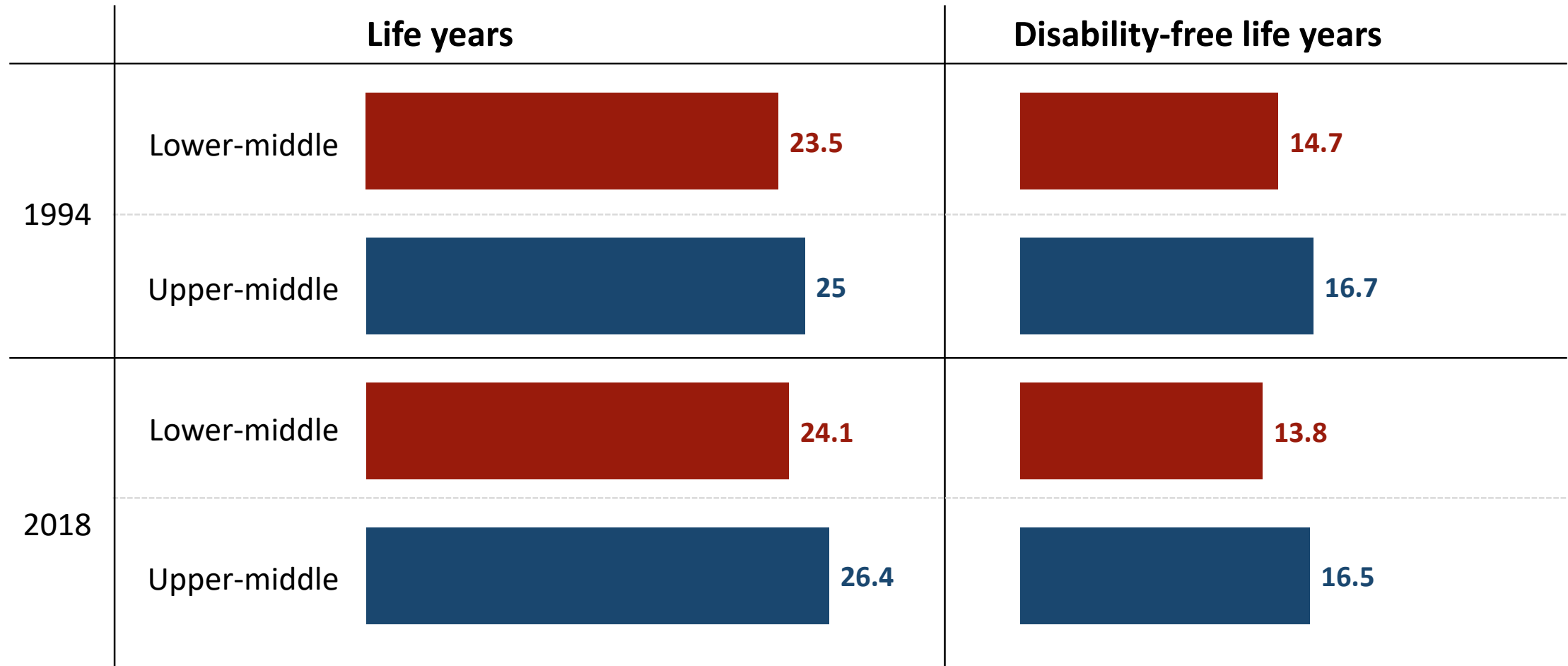


Projected Life Expectancies for Men at Age 60



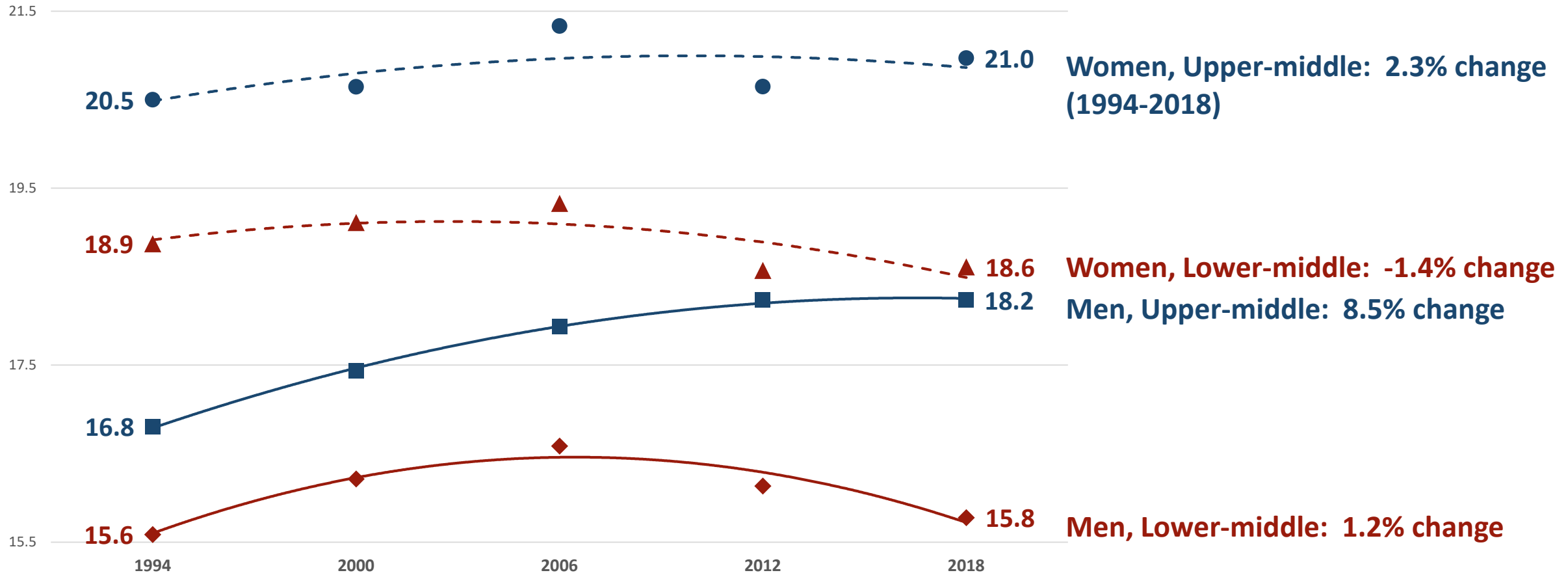
Notes: Cohort life-course projections using the Future Elderly Model. Disabled life year defined as one with any ADLs, IADLs, or living in a nursing home. Estimates used HRS person-level analysis weights. Economic status groups are defined on the basis of percentiles of the distribution of annual resources within that cohort; lower middle is 15th–45th percentiles, and upper middle is 46th–75th percentiles.

Projected Life Expectancies for Women at Age 60



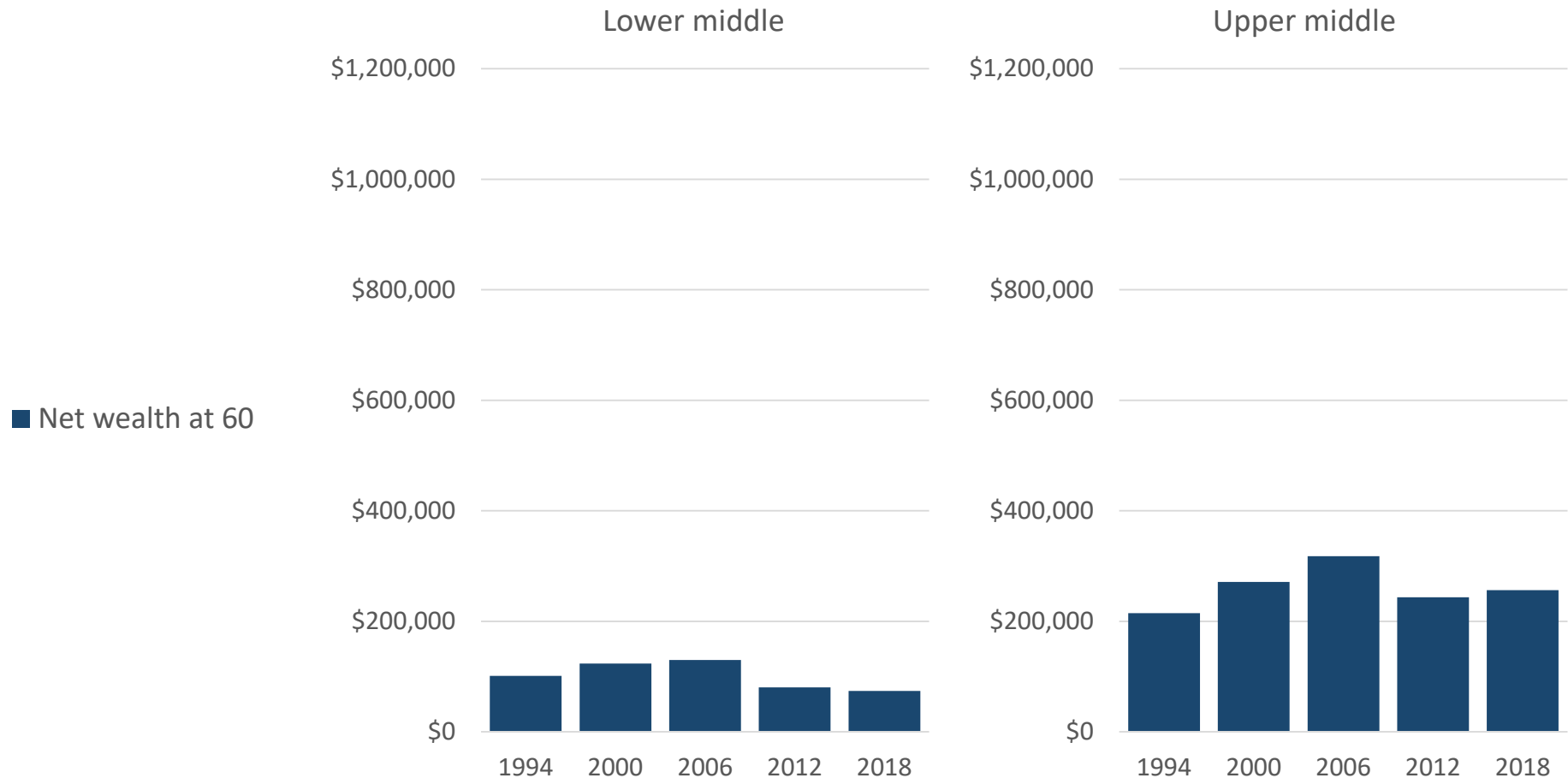
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Trend in Quality-Adjusted Life Expectancy at 60



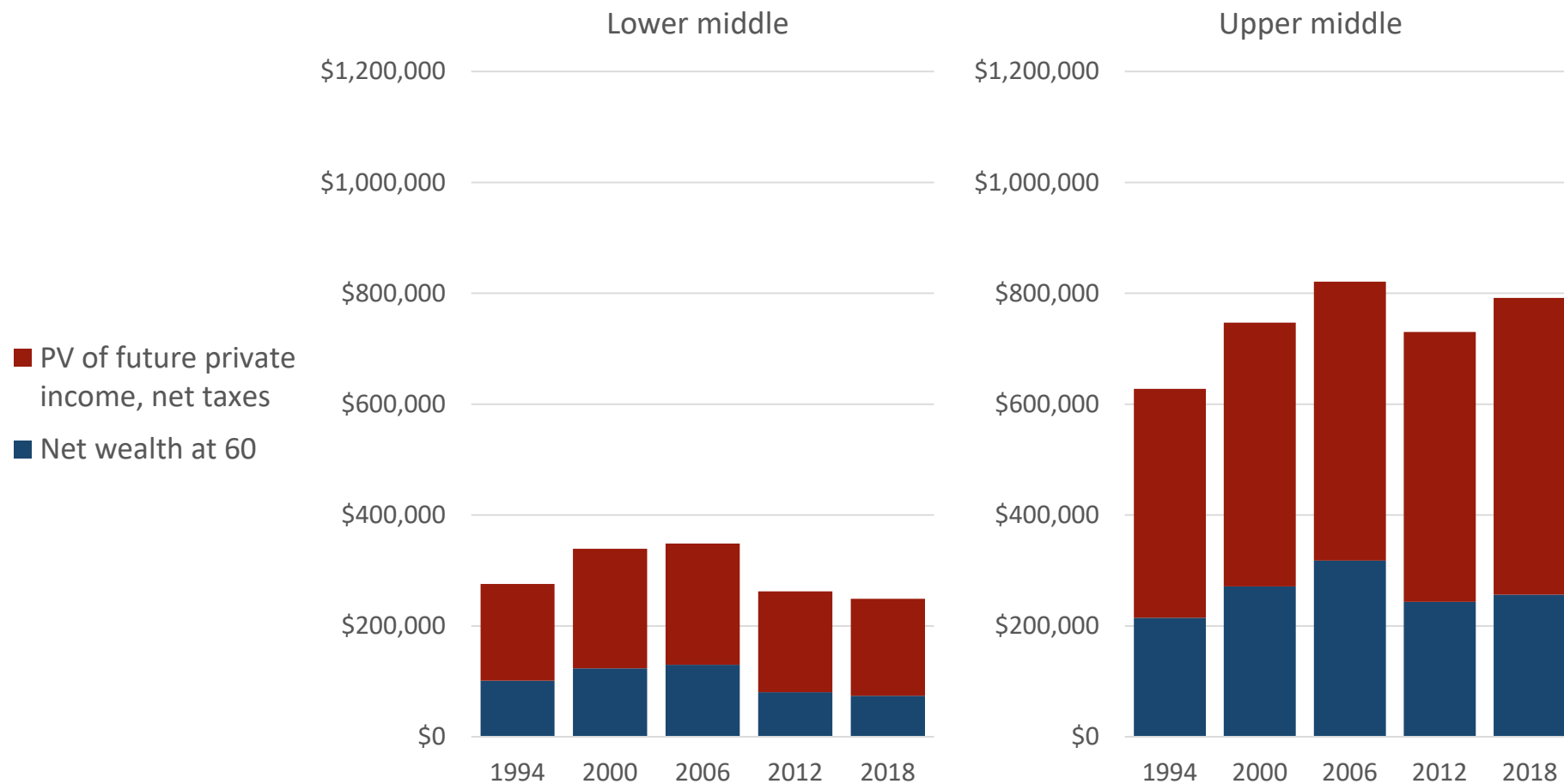
Notes: Cohort life-course projections using the Future Elderly Model. Quality adjusted life years based on EQ-5D. Estimates used HRS person-level analysis weights. Economic status groups are defined on the basis of percentiles of the distribution of annual resources within that cohort; lower middle is 15th–45th percentiles, and upper middle is 46th–75th percentiles.

Total Value of Later-Life Resources



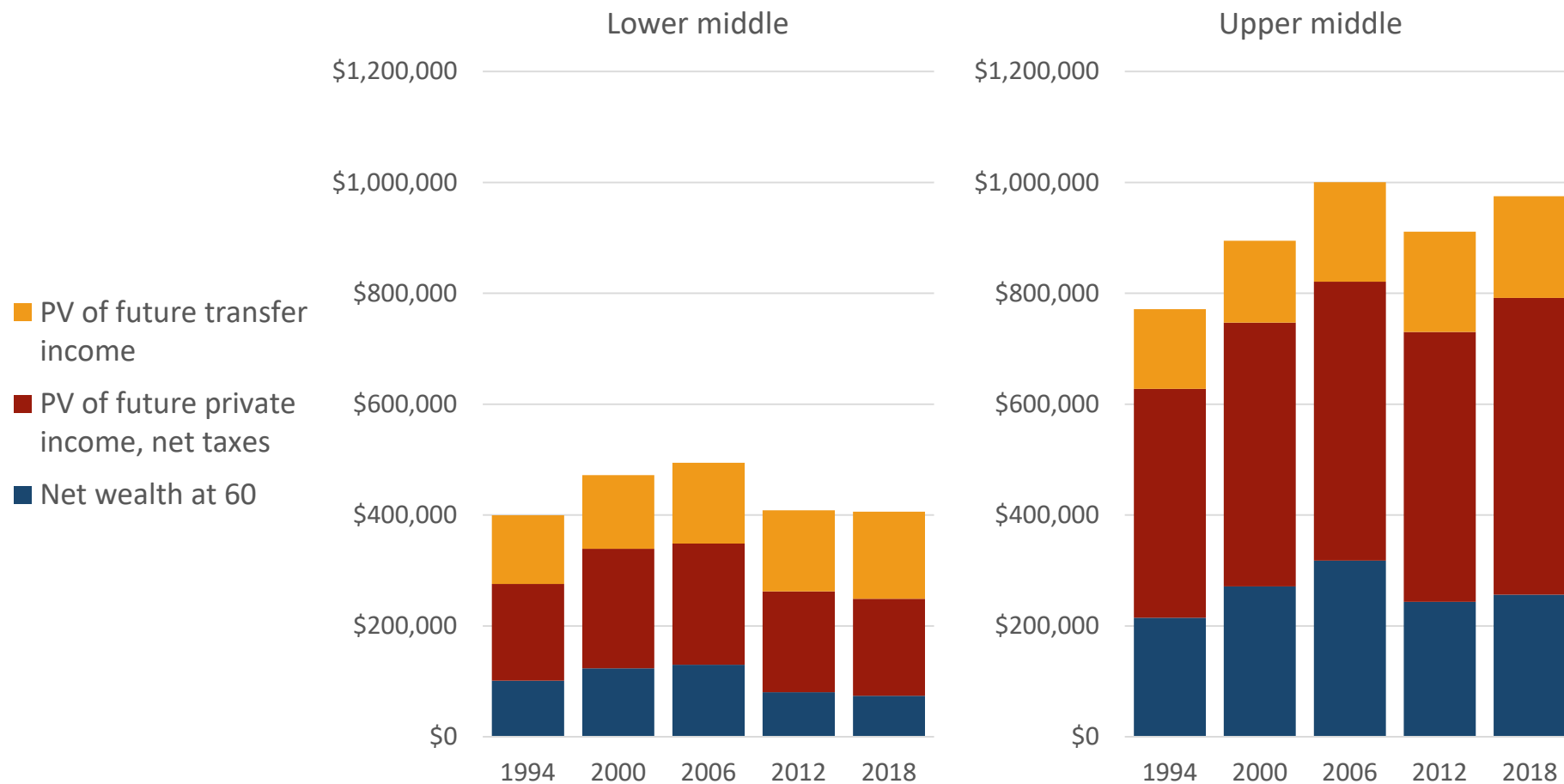
Notes: Cohort life-course projections using the Future Elderly Model. All figures are averages of monetary values, converted to 2018 US dollars using the Personal Consumption Expenditures Price Index. Wealth stock at the individual's observed age is adjusted to age 60, using an observed average annual growth rate of individuals' wealth between ages 53–60, calculated from the general HRS sample. For projected variables (that is, income, expenditures, and monetized quality-adjusted life-years [QALYs]), the present value of the total expected flow after age 60 is calculated; present values are discounted at 2.5 percent. QALYs are valued at \$150,000 per quality-adjusted life-year and discounted. Private income includes Earnings, defined-benefit pension, and capital income. Transfer income includes Social Security retirement, Supplemental Security Income, Social Security Disability Insurance, and other government program income (Supplemental Nutrition Assistance Program, veterans' benefits, and welfare). Medical benefits include Medicare and Medicaid benefits minus out-of-pocket medical expenditures. Estimates used HRS person-level analysis weights.

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Conclusions

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- Gap between lower- and upper-middle widened for most outcomes
 - Lower-middle econ. outcomes often stagnant/decline while upper-middle gain
 - Broadly rising chronic disease burden, faster among lower-middle
- Decompression of morbidity – longer life expectancies, but larger proportion with poor health/disability
 - Lower-middle face significant future care needs, but with no more economic resources to address them than past cohorts
- Study ends in 2018. Changes since then:
 - COVID-19 pandemic
 - Wage growth, but also inflation

Thank you!

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Relation of economic status to trends in well-being, 2003-2019

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The Urban Institute, Washington D.C.

February 1, 2024

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Study Goal

Examine wellbeing by economic status using data from the CDC Behavioral Risk Factor Surveillance System (BRFSS).

Strengths of these data:

- Nationally representative yearly cross-sections of the U.S. population with ~ 6,000,000 people
- Permits comparison of ages across time
- BRFSS data used for Health Department health surveillance, prioritization and planning

Defining economic status

We define household income categories by yearly income percentiles (equivalized for household size) (consistent with Chapel et al.):

0 – 15%; 16 – 45%; 46– 75%; 76 – 100%

Age categories (shown as panels):

40 – 49; 50 – 59; 60 – 74

Outcomes

1. Physical health Number of days in past 30
physical health not good

2. Mental health Number of days in past 30
mental health not good

3. Functional Health Number of days in
past 30 poor physical or mental health
kept you from doing usual activities such
as self-care, work, recreation

Results

6 Models (shown as lines):

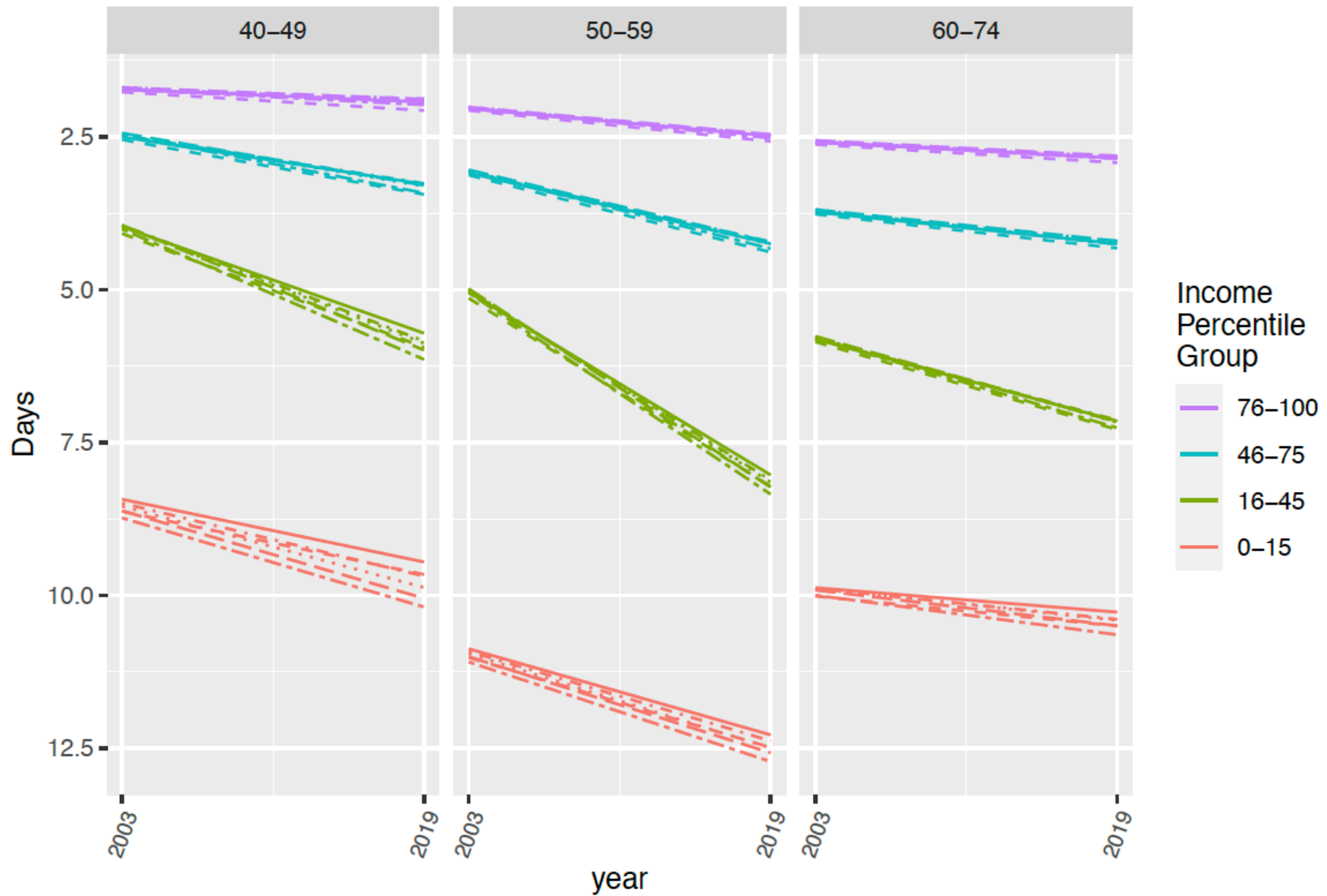
1. baseline = year * income category * age category
2. baseline + race
3. baseline + BMI
4. baseline + smoking
5. baseline + smoking + BMI
6. baseline + race + smoking + BMI

3 Outcomes (shown as separate plots):

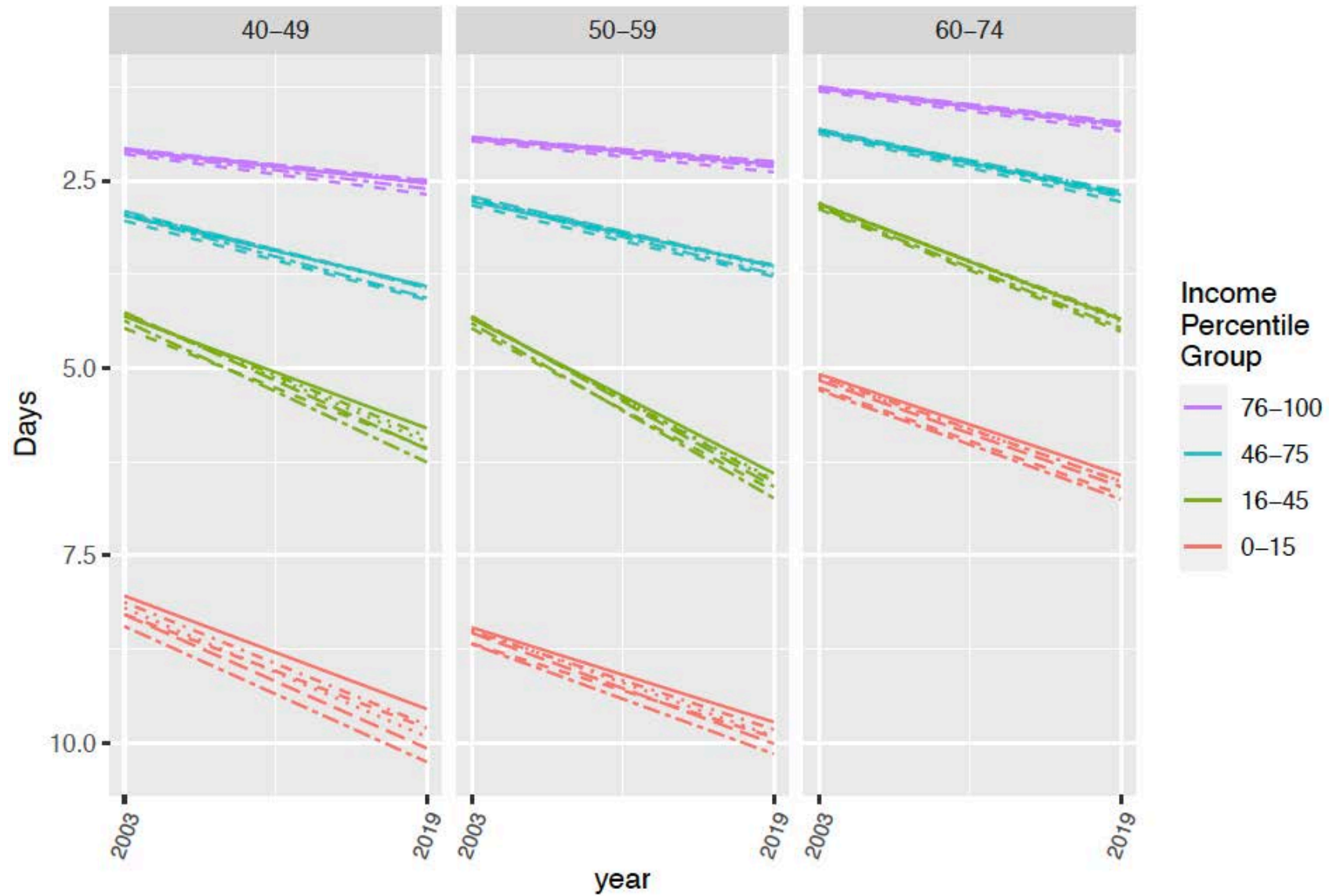
Physical Health, Mental Health, Functional Health

Sample Size 5,897,375

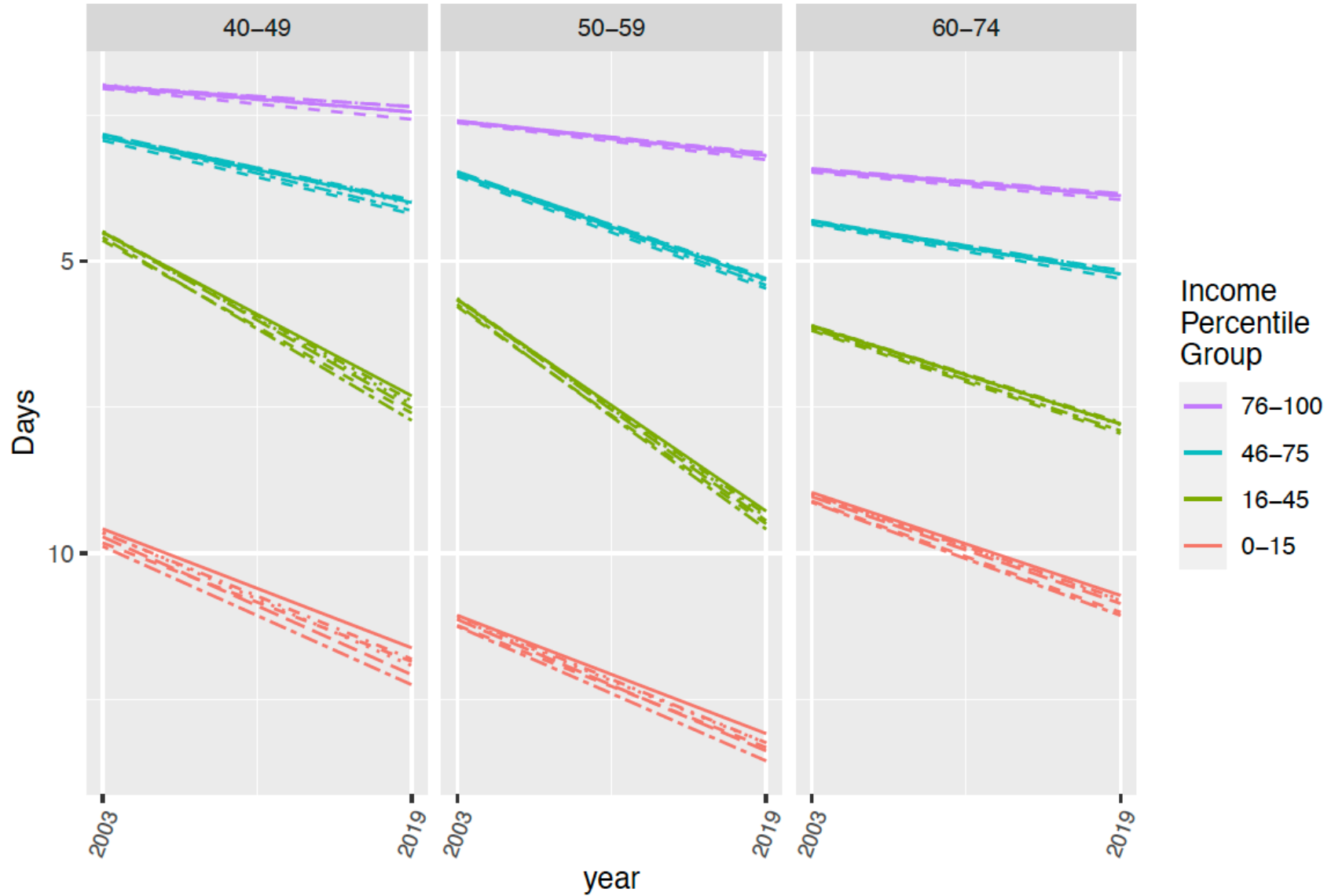
Physical Health



Mental Health



Functional Health



Findings

1. Dramatic (up to 10 days per month) and consistent differences in morbidity by income level.
2. No trends or levels explained by race, BMI or smoking.
3. Dramatic declines for poorest and lower-middle groups, with declining trends greatest for lower-middle income households.
4. There were declines for all outcomes for all ages

Policy Implications

If current trends persist, the current age 50-59 year old population will be entering retirement ages with substantially worse health than previous generations.

Thank you.

Any clarifying questions?



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