

Social Security Advisory Board Panels

The Future of Mortality, Disability, and Work: Helping to Inform the Social Security Trust Fund Projections

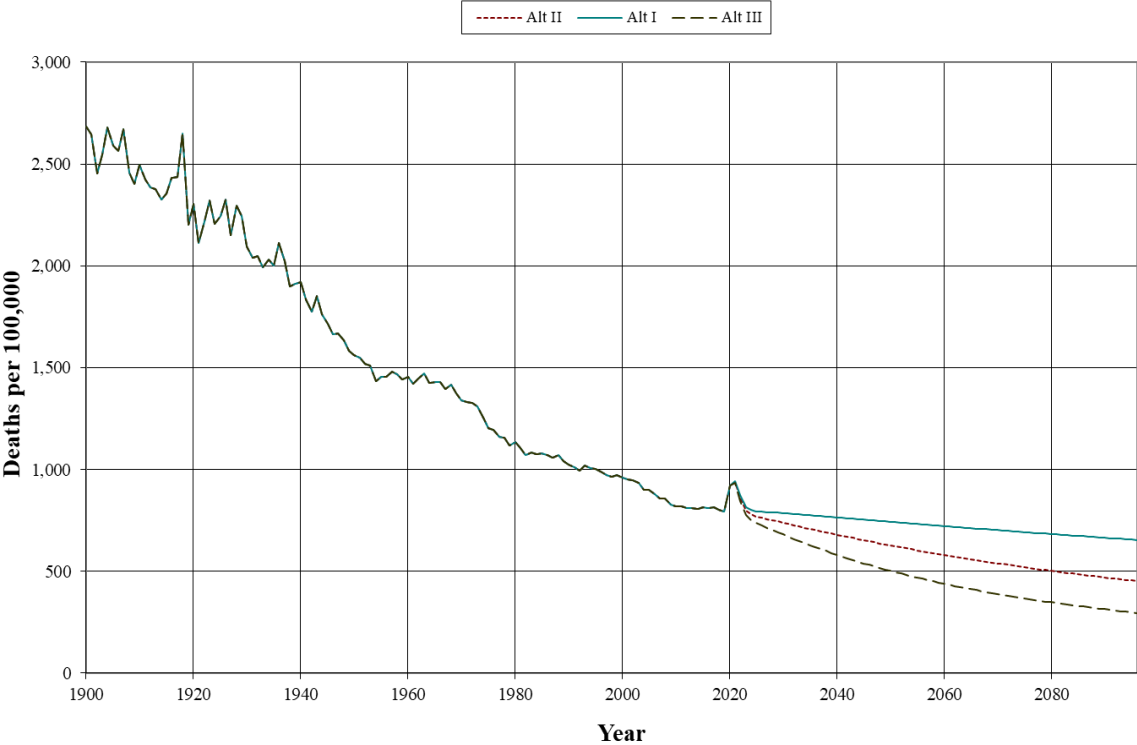
Office of the Chief Actuary
Social Security Administration

August 25, 2023

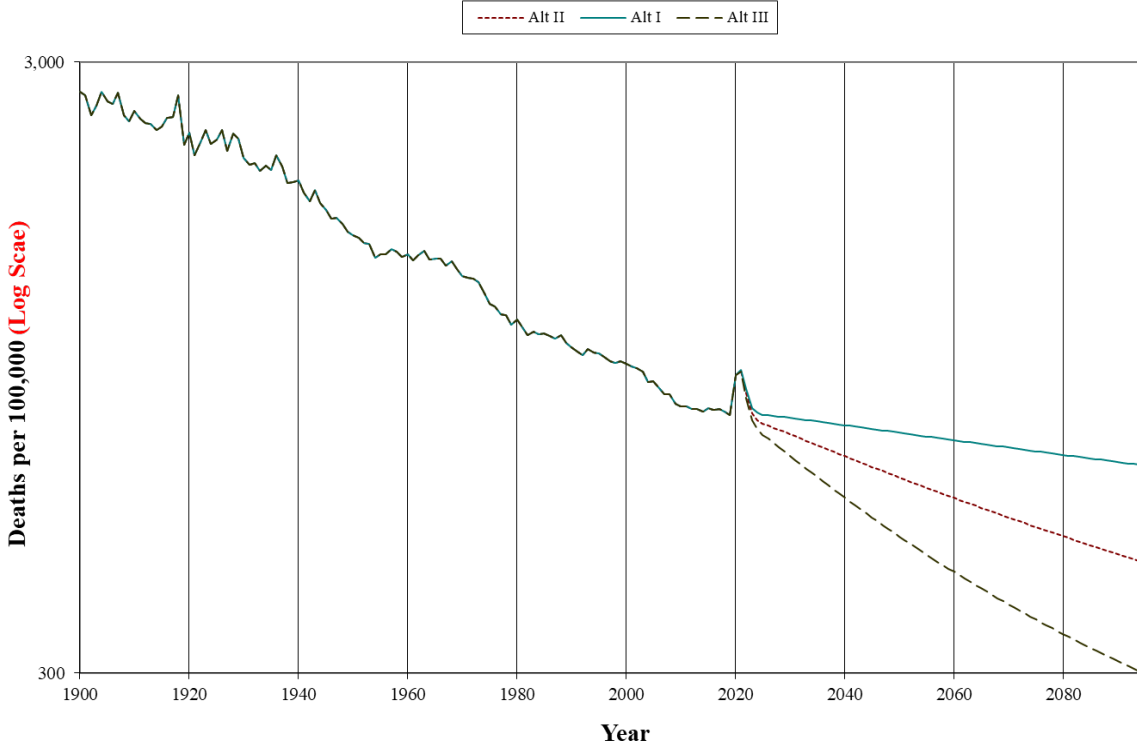
The Future of Mortality

Remarkable Reduction in Mortality in Latter Half of the 20th Century: Antibiotics After WWII and Later Cardiovascular

Total Age-Sex-Adjusted Death Rates for the 2023 TR



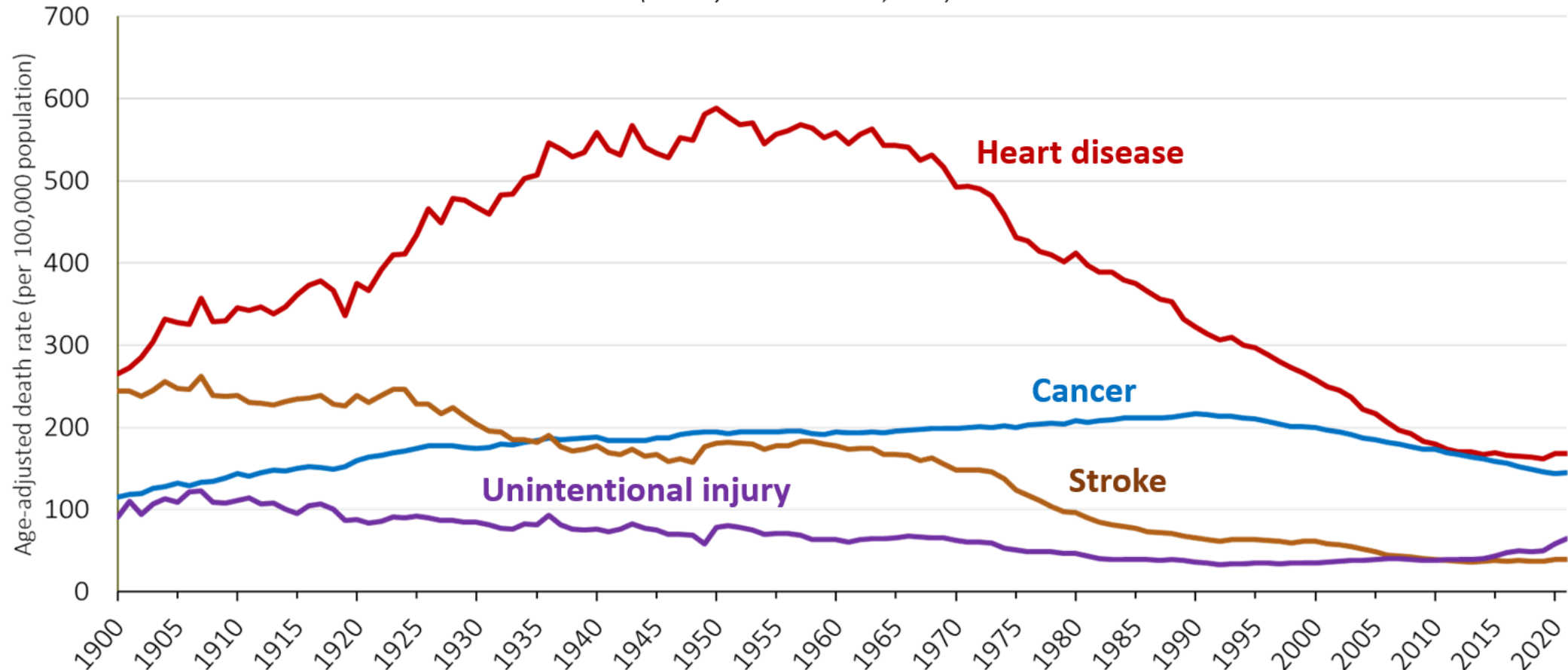
Total Age-Sex-Adjusted Death Rates for the 2023 TR



But Declines Have Been Slowing, With Remaining Causes Harder to Address: Cancer, Violence, Dementia

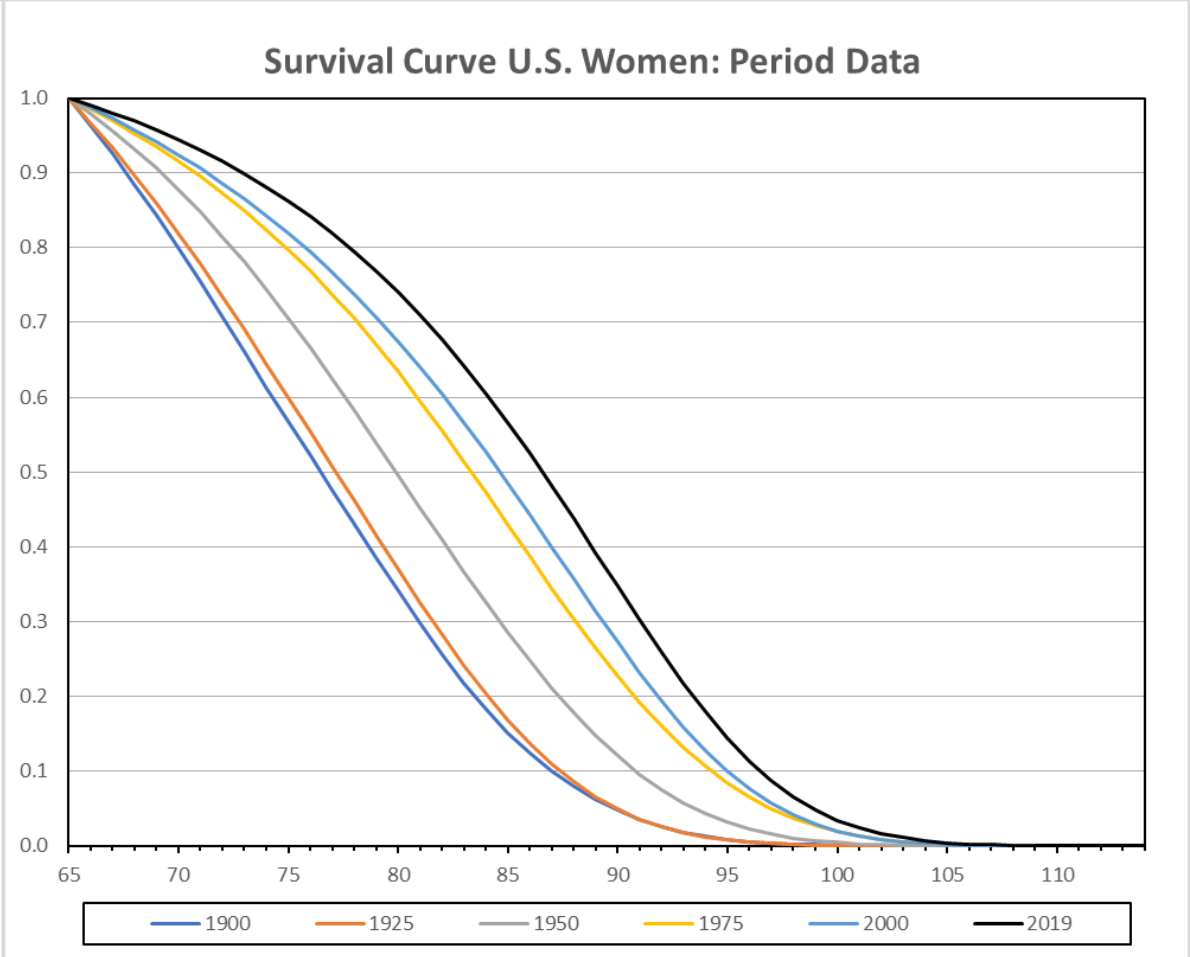
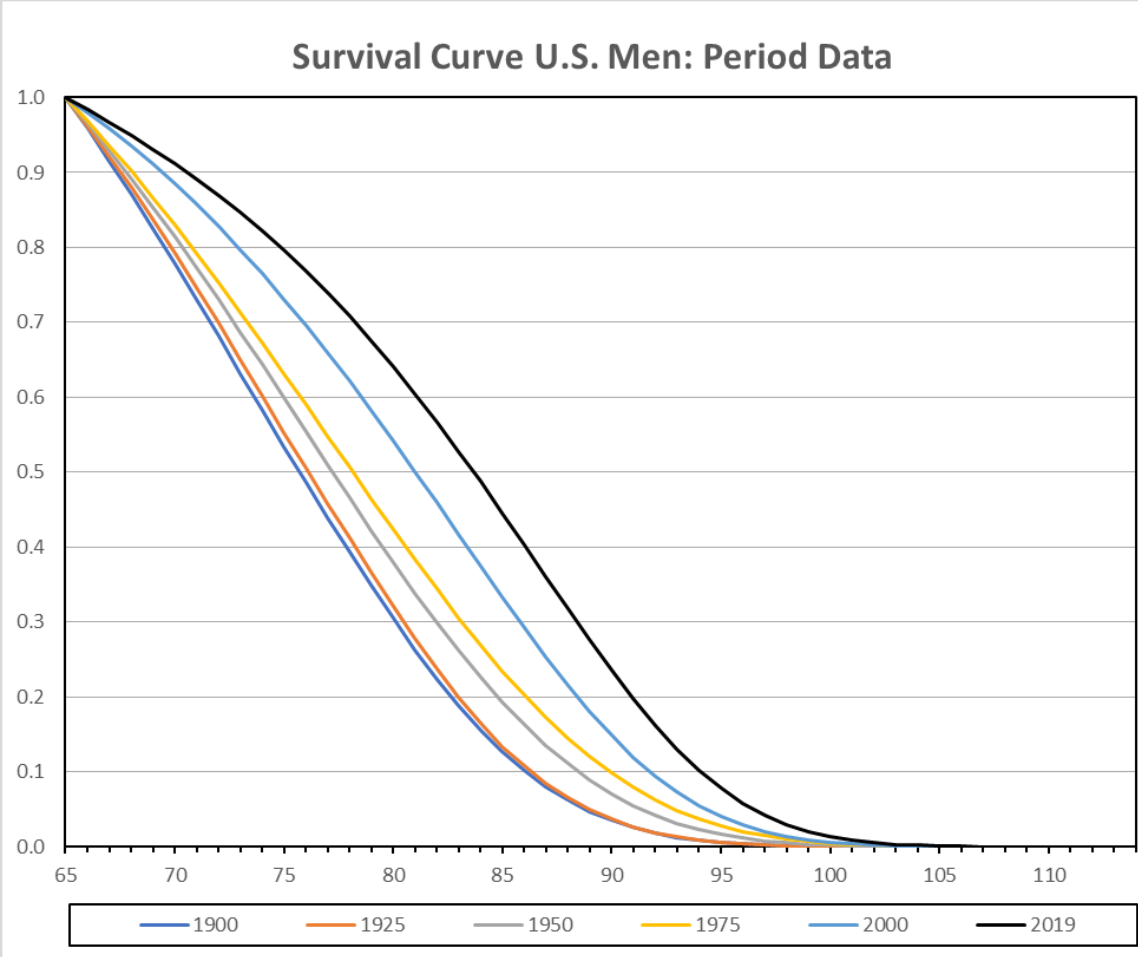
Age-Adjusted Death Rates for Heart Disease, Cancer, Stroke, and Unintentional Injuries: United States, 1900-2021

(courtesy Robert Anderson, NCHS)



Notes: Data are from the National Vital Statistics System. Prior to 1933, data are for death-registration States only. Data for 2021 are provisional.

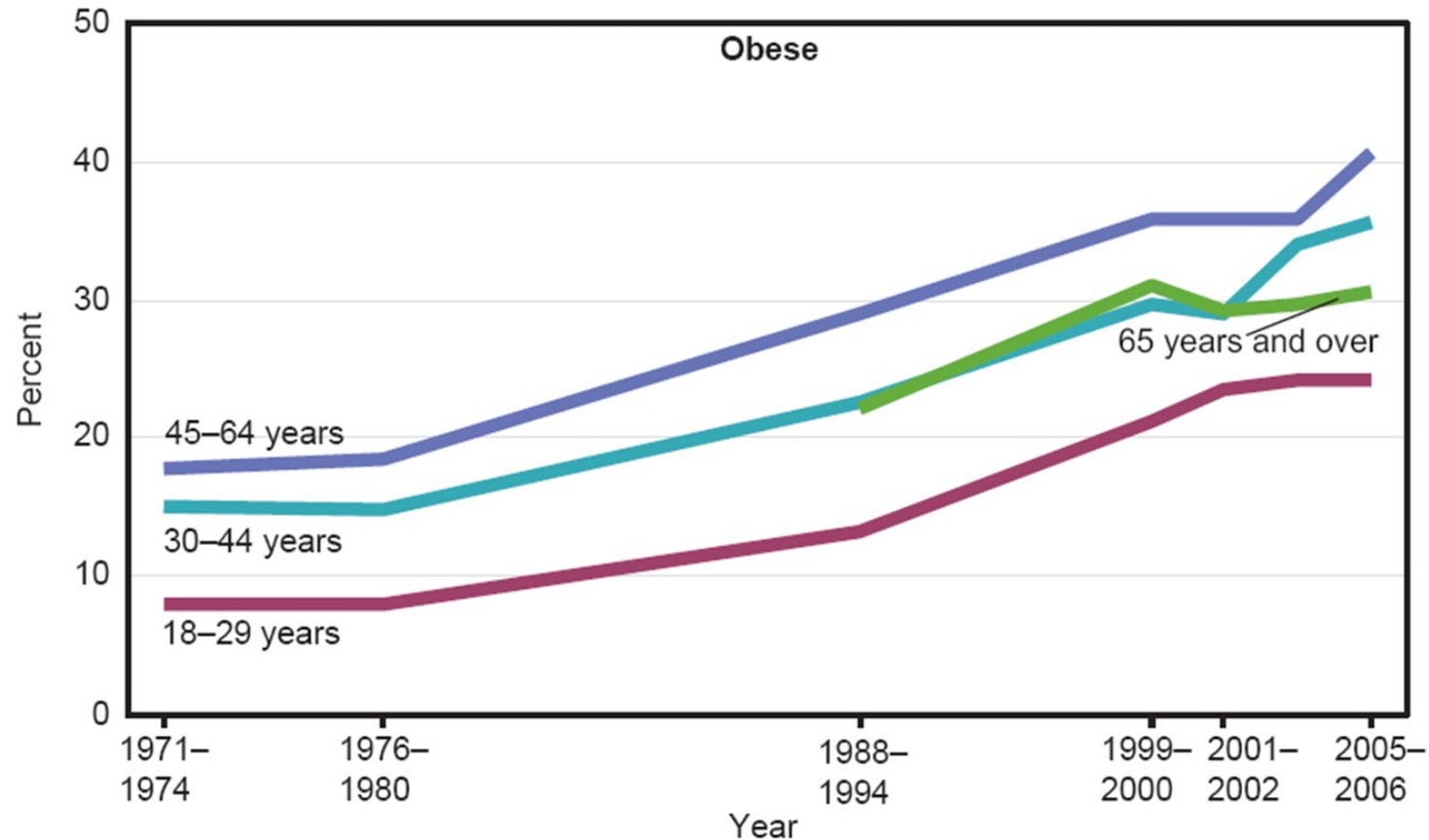
We Have Been “Rectangularizing” the Survival Curve, With Little Evidence of Advancing Maximum Lifespan



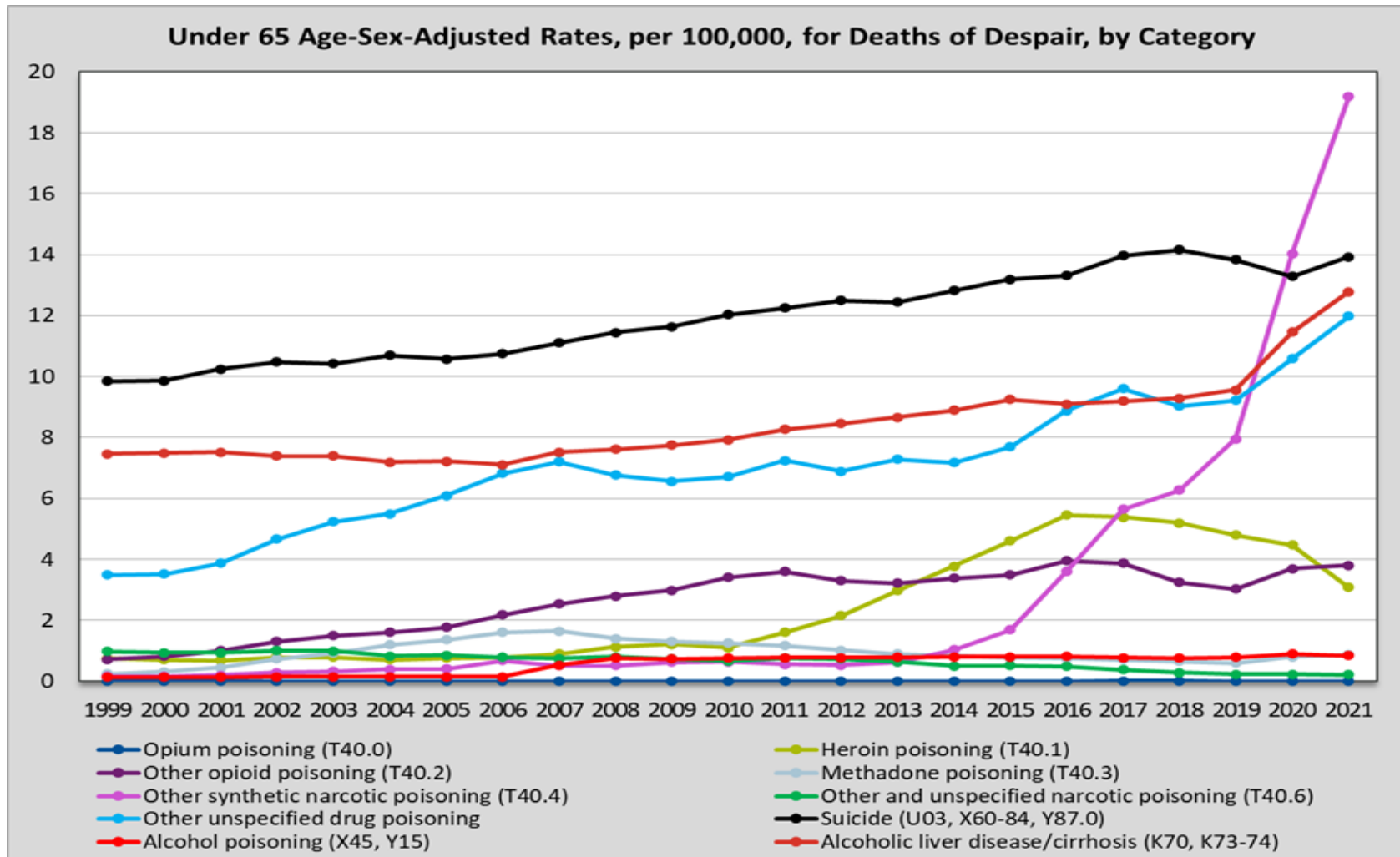
Obesity, Drug Abuse, and Even Climate Effects Seem Likely to Diminish Prospects for Mortality Improvement

Trends in Obesity: US 1971-2006

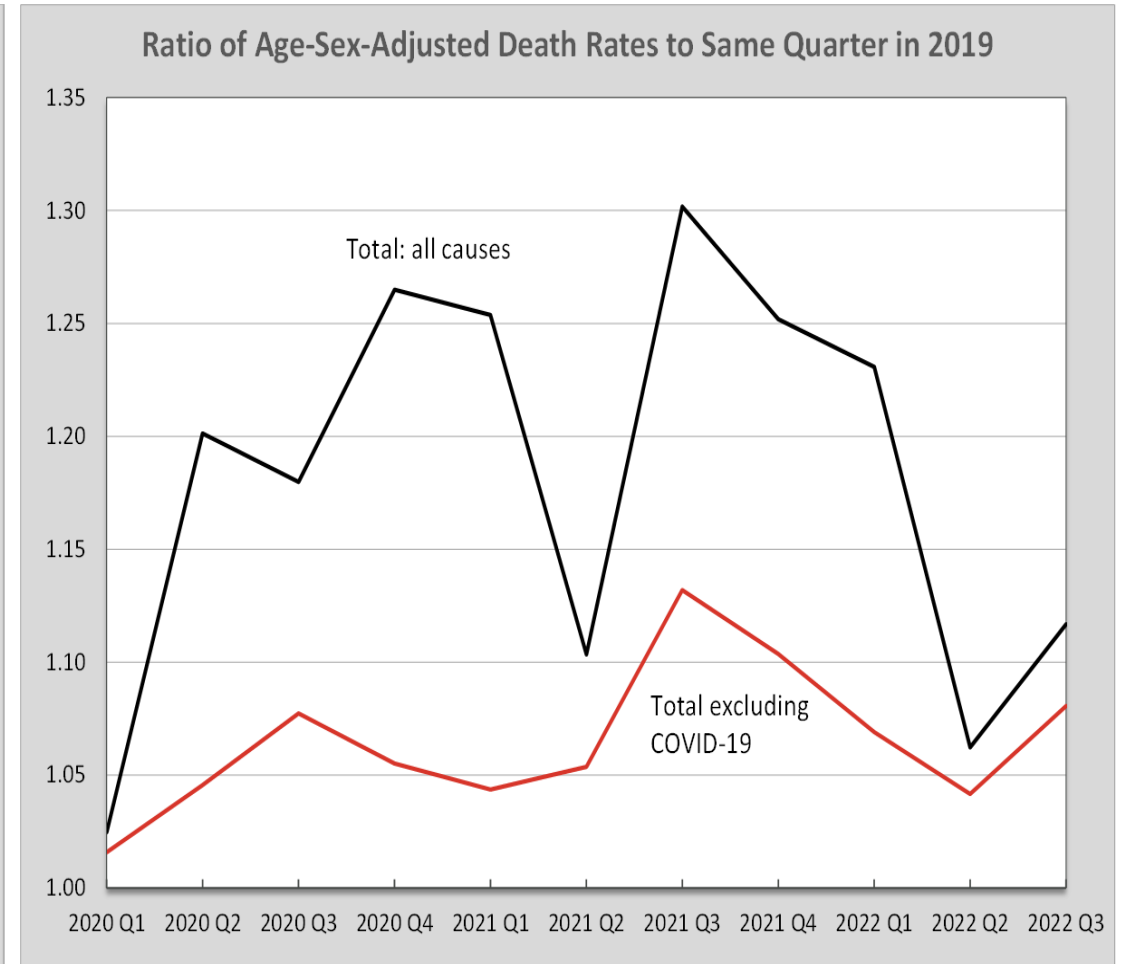
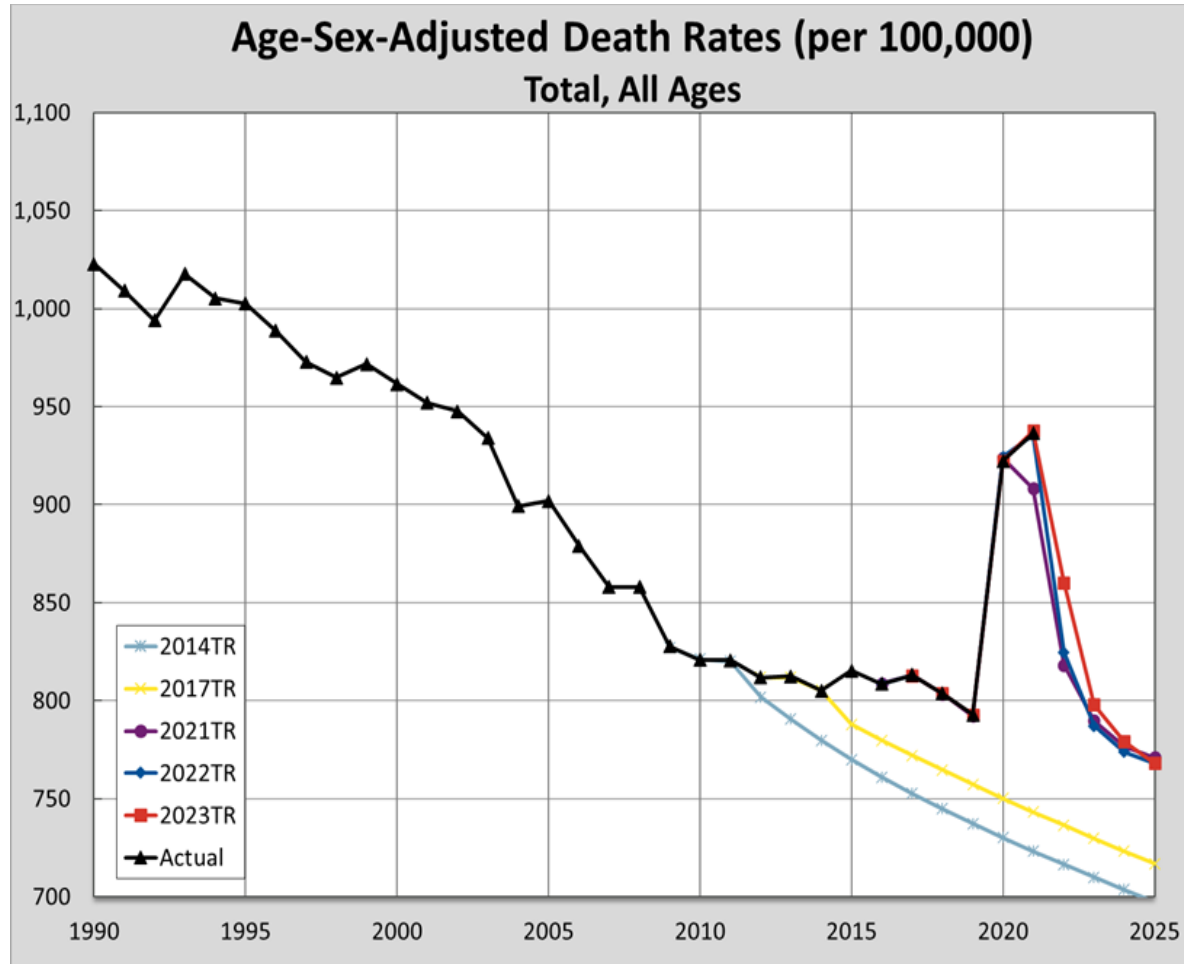
Must consider **cumulative** effects; increasing duration of obesity for aged in future (*courtesy Sam Preston, 2010*)



Obesity, Drug Abuse, and Even Climate Effects Seem Likely to Diminish Prospects for Mortality Improvement



COVID-19 a Major Distortion—Frequency of Future Pandemics in the “Shrinking World”?



Many Questions About the Future of Mortality...

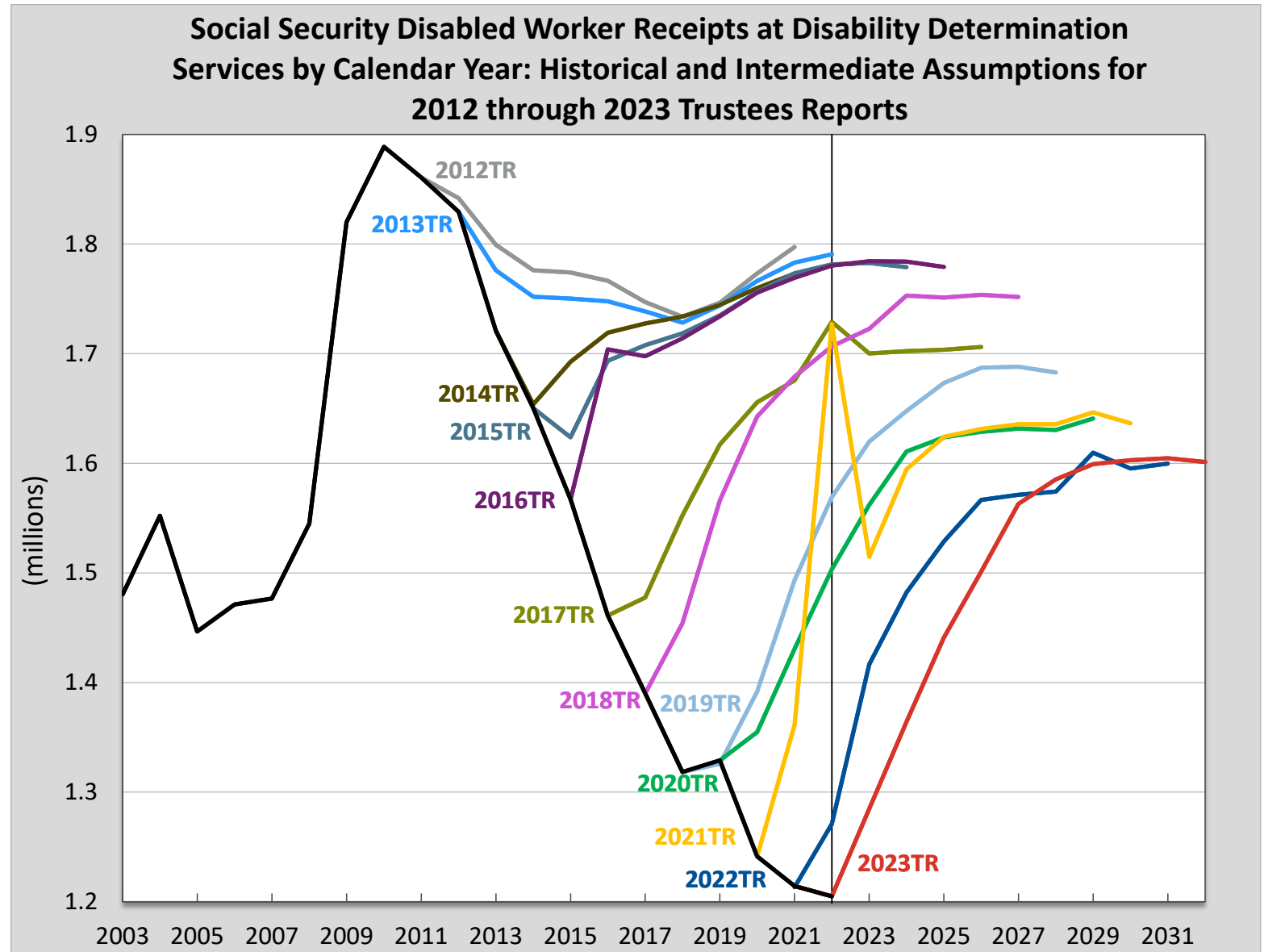
- Can we expect major breakthroughs in cancer and dementia, and a reduction in violence?
- What will the effects be of COVID, post-COVID conditions, and other future pandemics?
- What do we expect for obesity and “deaths of despair” in the future?
- Health spending cannot continue to rise at historical rates (and has slowed down recently); what are long-term effects of deceleration?
- Effects of an aging population and climate change, straining resources?

The Future of Disability

Applications for Disability Benefits Remain Historically Low

At the peak of the last economic cycle in 2007, applications were low, but they increased rapidly in the 2007-09 recession from 1.5 million in 2007 to 1.9 million in 2010.

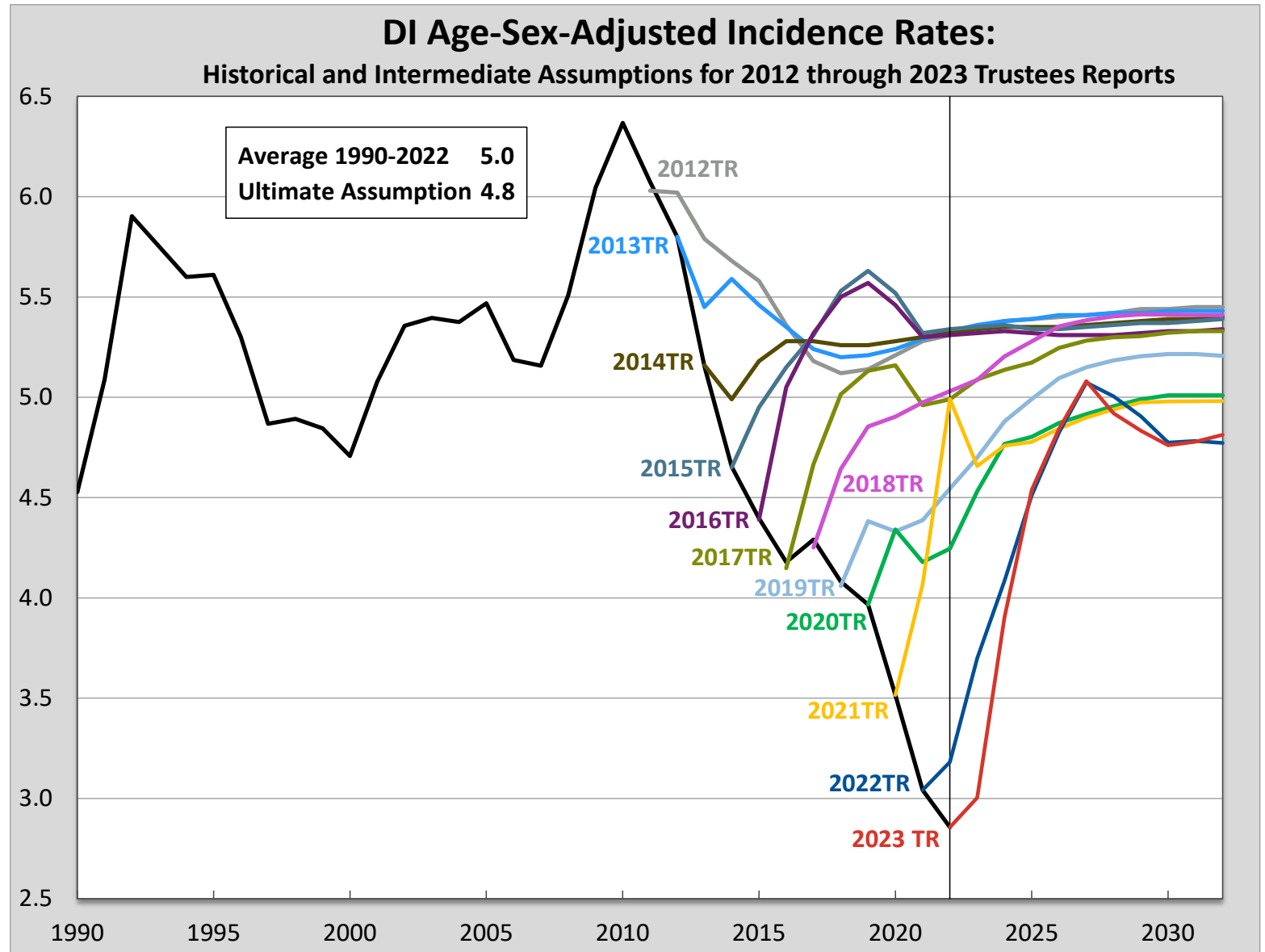
In 2017 through 2022, applications have dropped below the 2007 level.



Disability Incidence Rate Also Remains Historically Low

DI disabled worker incidence rate rose sharply in the 2007-09 recession and has declined since the peak in 2010 to extraordinarily low levels in 2016 through 2022.

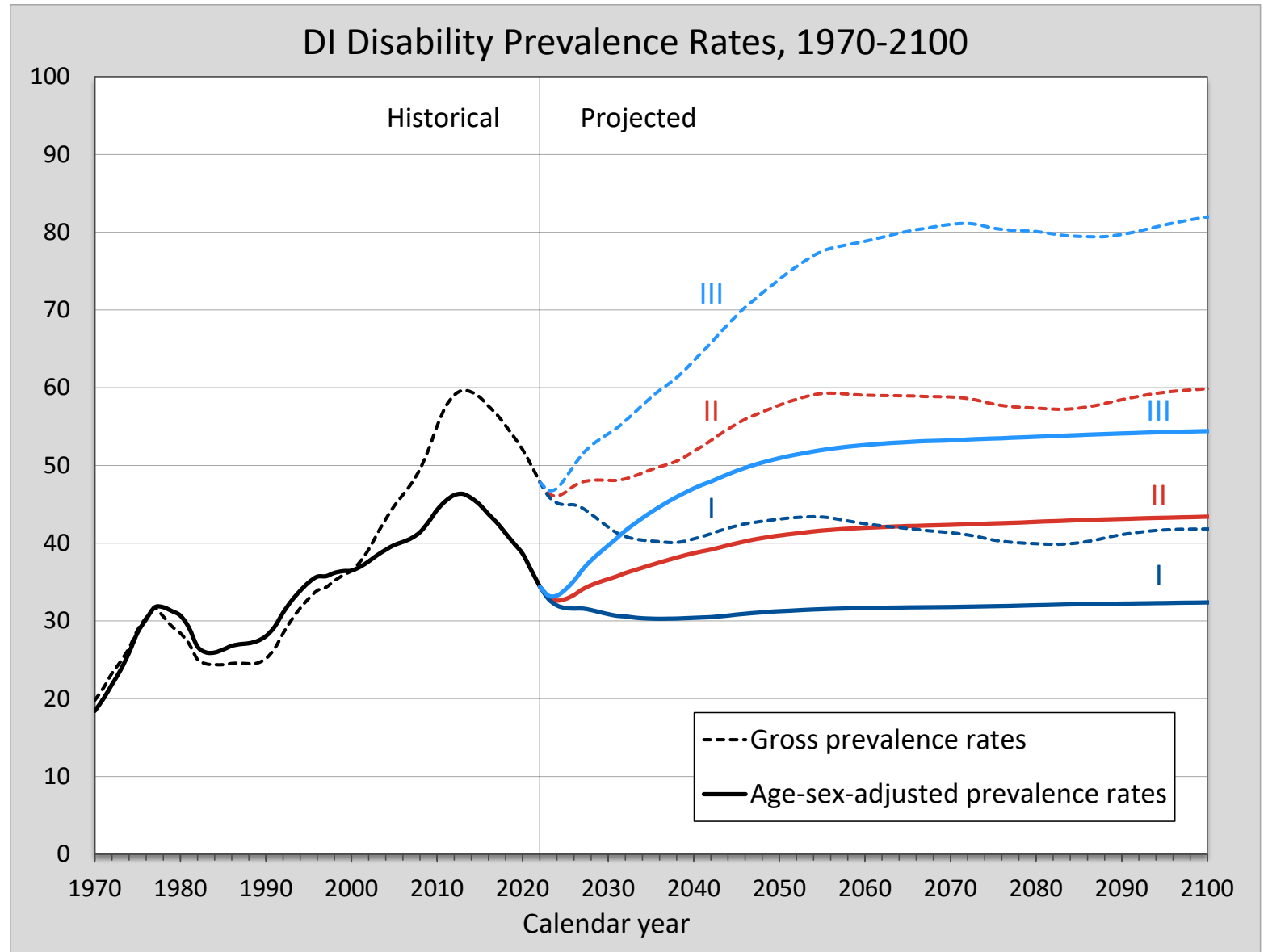
What will be the net effect of COVID and post-COVID conditions?



Disabled Worker Prevalence Rates

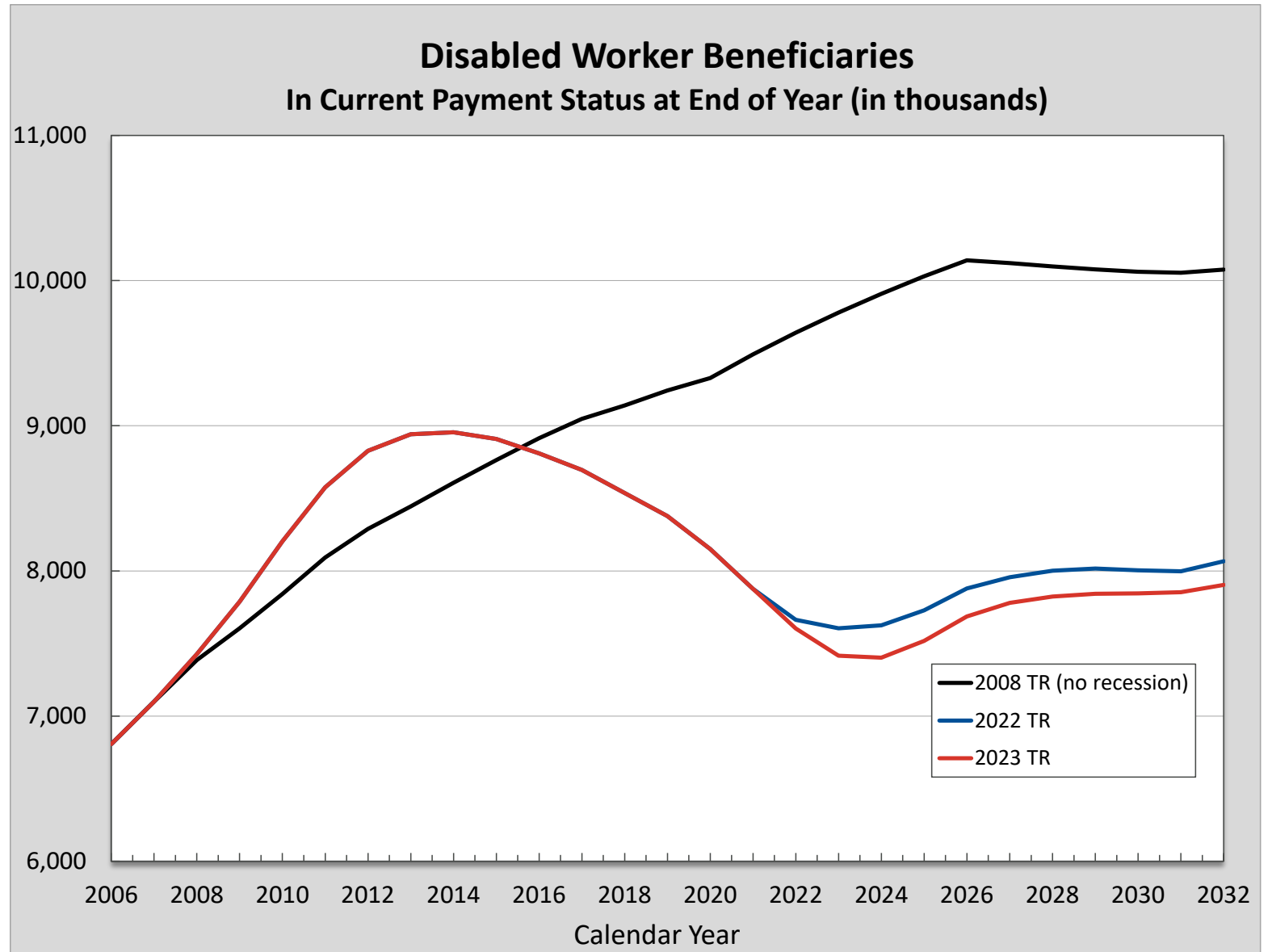
Will prevalence recover to a level above that seen before the 2007-09 recession?

The Trustees Report projections assume the incidence rate will ultimately rise to 4.8 per thousand, from the levels seen since 2016 of between 3 and 4.3.



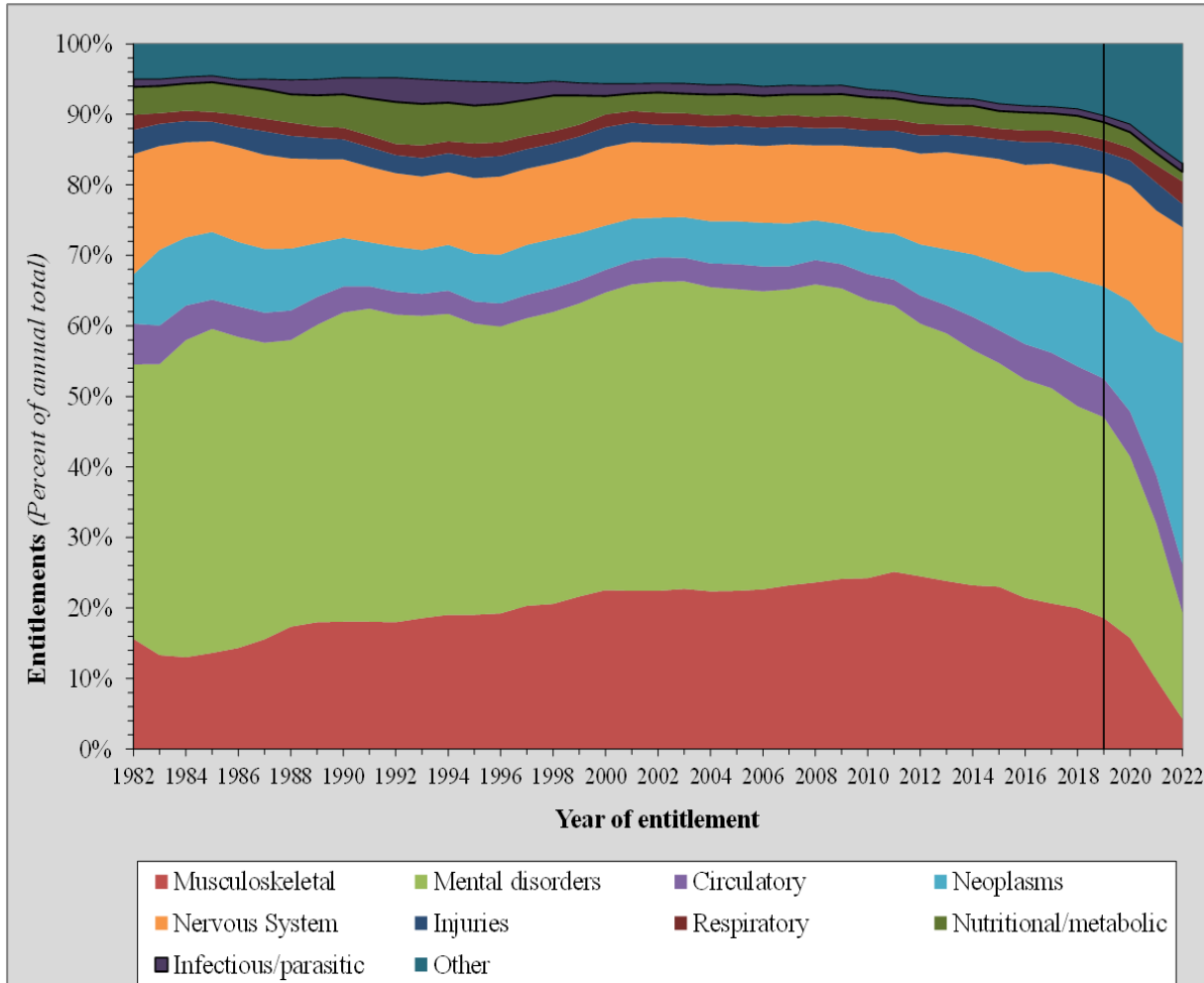
Fewer Disabled Worker Beneficiaries

Fewer now and in near term based on recent applications and incidence rates, with assumed increases deferred another year.

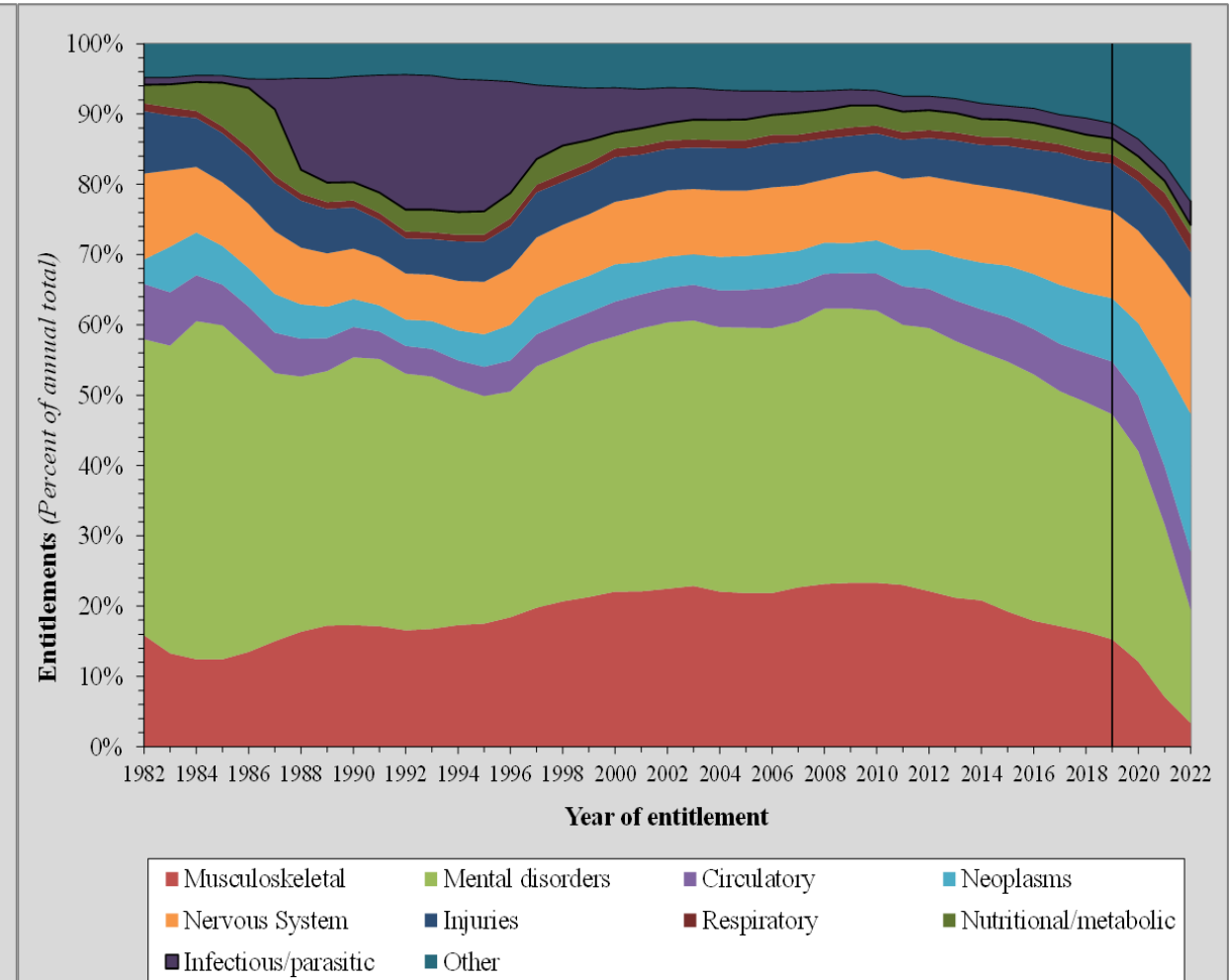


Primary Impairment for New Disabled Worker Entitlements at Ages 30-39 Has Been Consistent & Dominated by Mental Disorders

Women



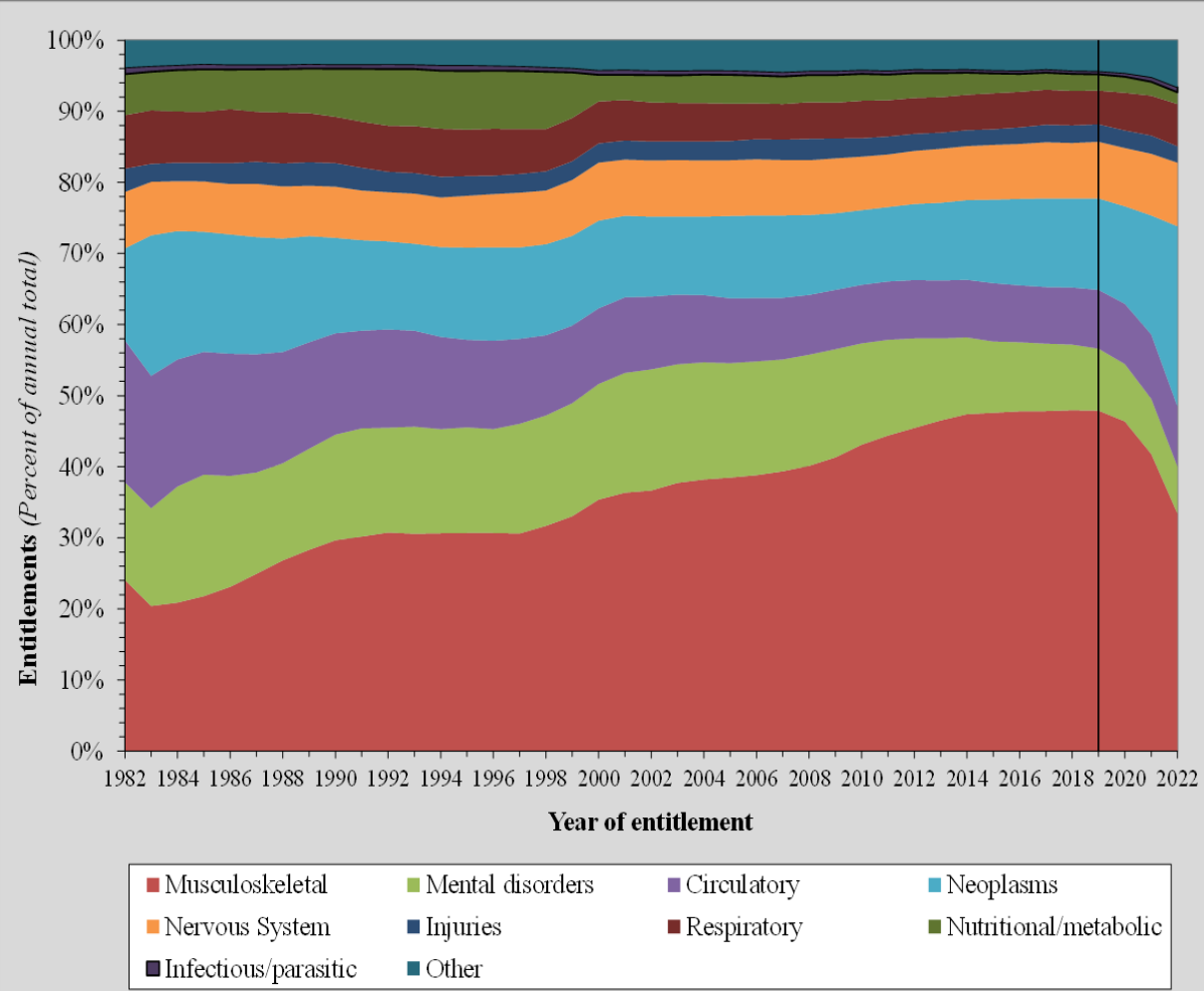
Men



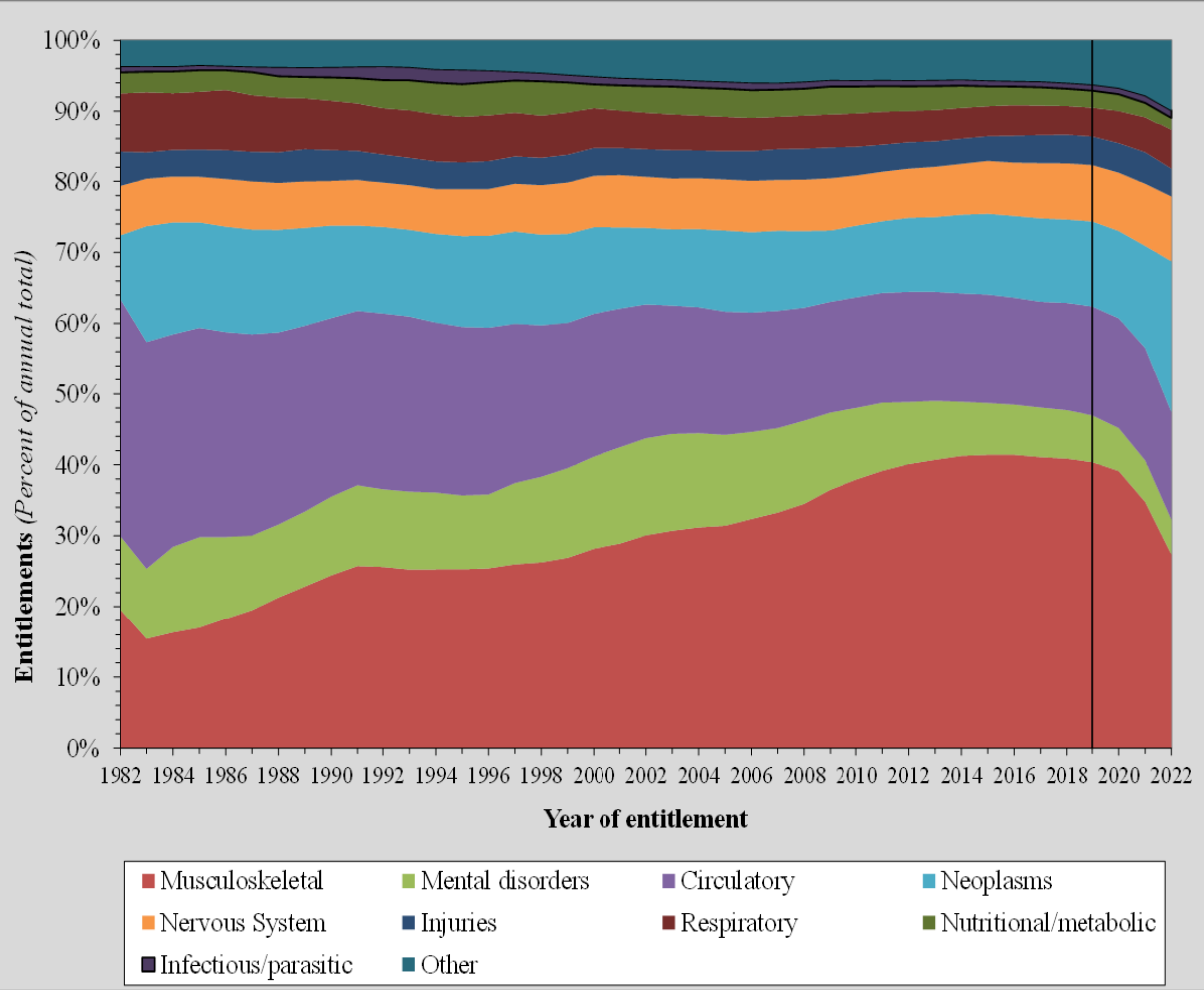
Note: Data for 2019 and later are incomplete.

Primary Impairment for New Disabled Worker Entitlements at Ages 50-59 Has Been Increasingly Musculoskeletal

Women



Men



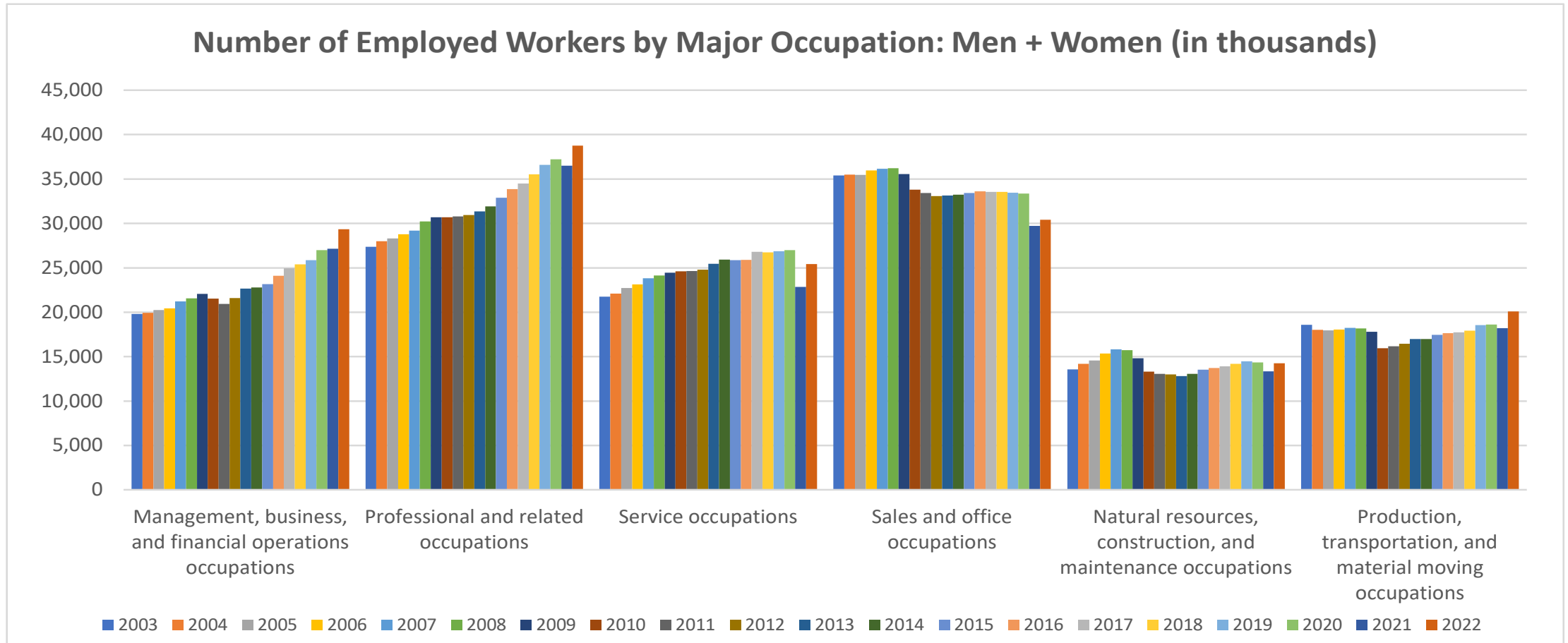
Note: Data for 2019 and later are incomplete.

Reductions in Disability Applications and Number Receiving Benefits Have Been Similar by Age, Sex, Geography, Impairment, and Education; COVID Has Not Contributed Significantly

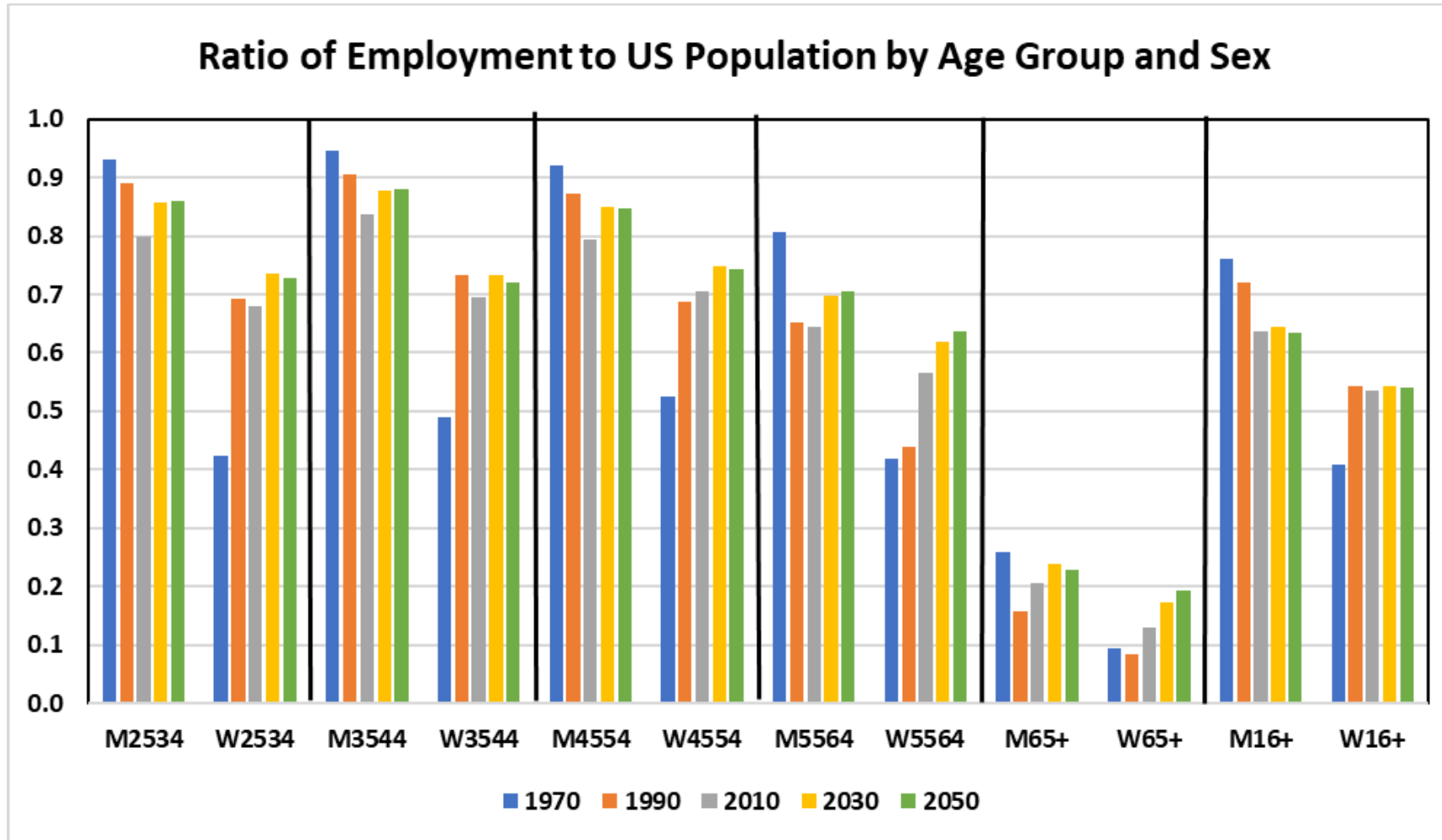
- Reasons for these reductions and future expectations?
 - Healthier population?
 - Greater demand for workers given the changing age distribution of the population?
 - Greater accommodation by employers?
 - More highly educated population; more automation of physical jobs?
 - Changing distribution of jobs/occupations in the economy?
 - Changing nature of work and jobs? (see next panel)

The Future of Work

Distribution of Workers by Occupation Has Been Changing



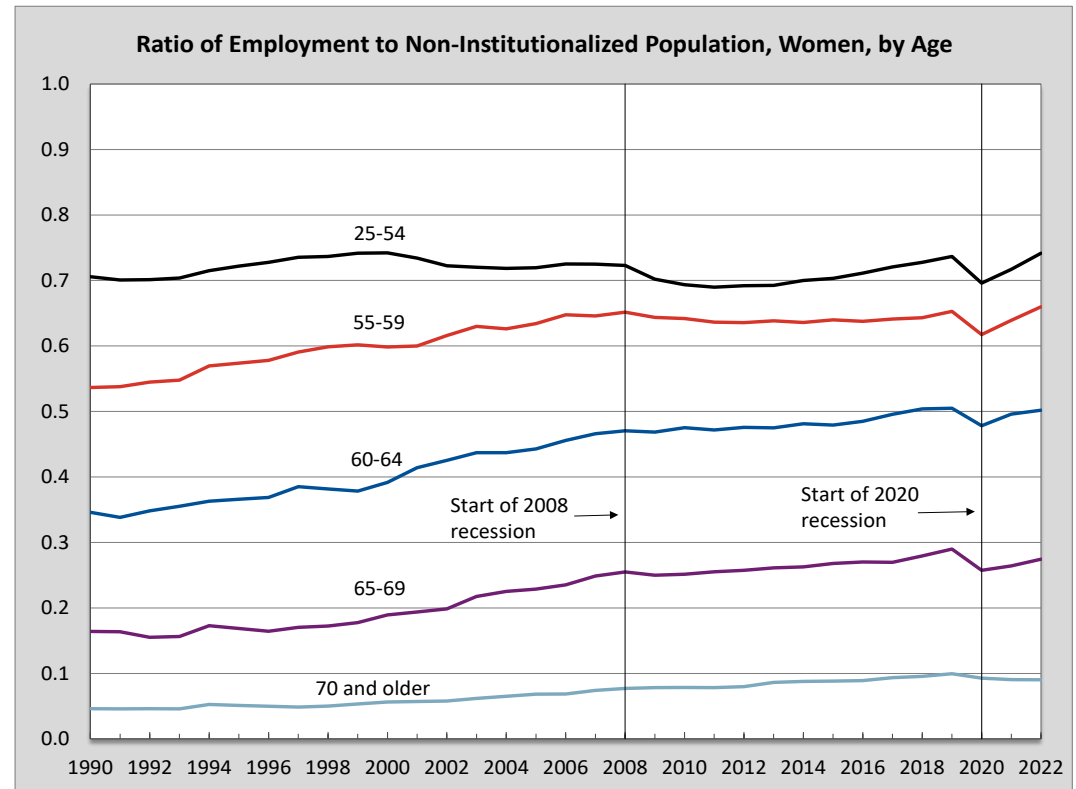
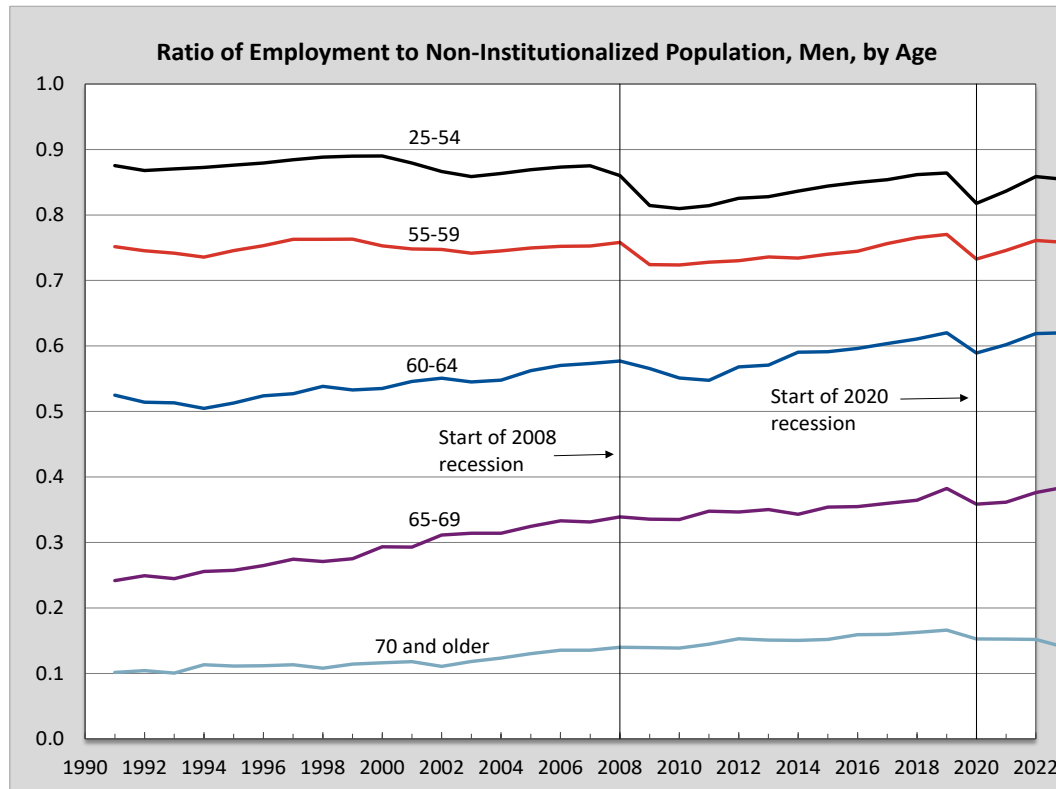
Since 1970, Employment Rates by Age Have Changed Substantially, and Very Differently for Men and Women



- Women have responded, increasing employment at all ages.
- But men have fallen from their employment rates in 1970.

Employment Over Age 60 Has Been Rising as the Age Distribution of the Population Moves to Older Ages

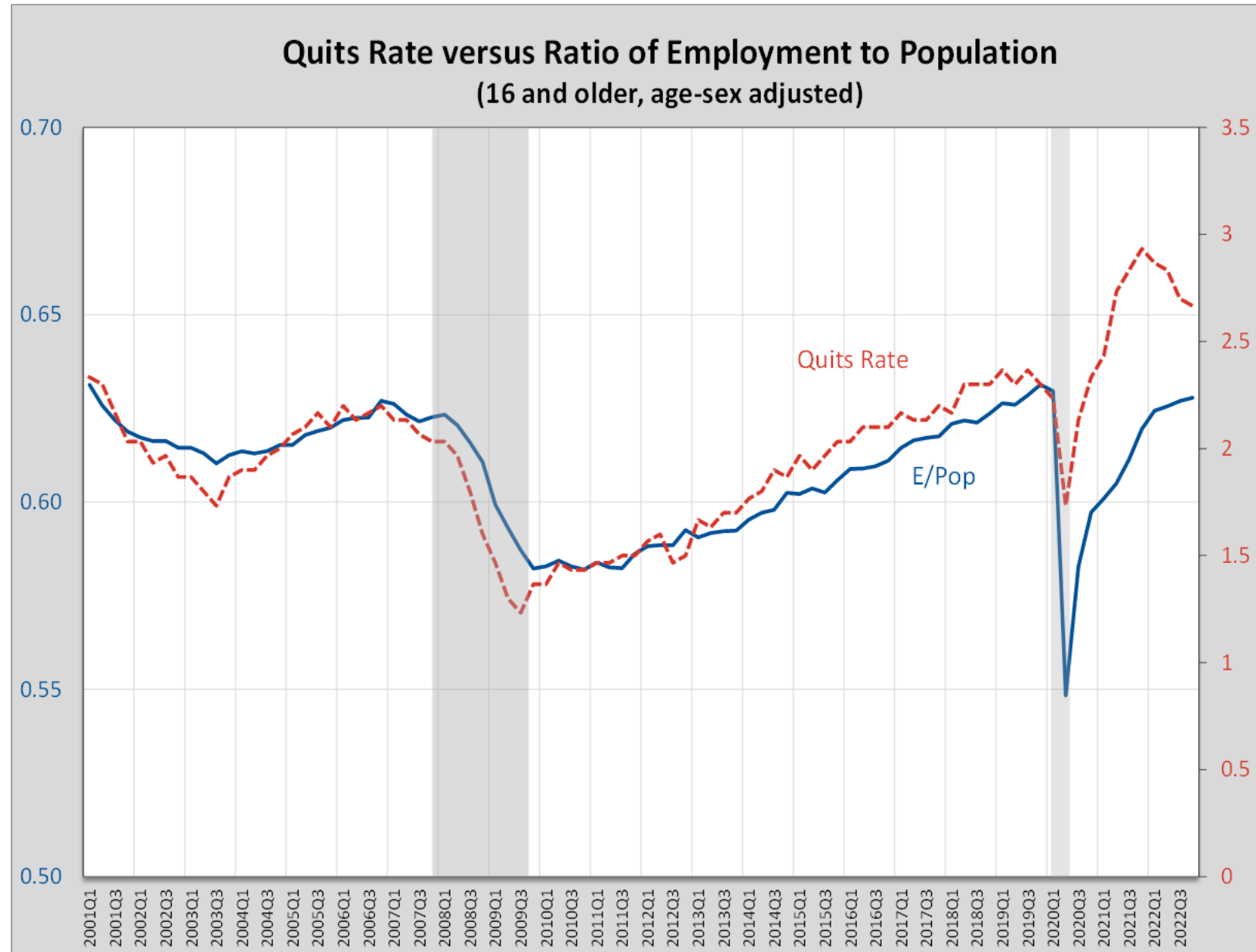
How much of this shift is from changing demands on workers and accommodation by employers?
Will this trend continue with further changes in the age distribution of the population?



Quits Rate vs. Ratio of Employment to Population

The elevated quits rate after 2020 indicated increased demand for workers.

Will this continue as the changing age distribution decreases the share of adults at traditional working ages?



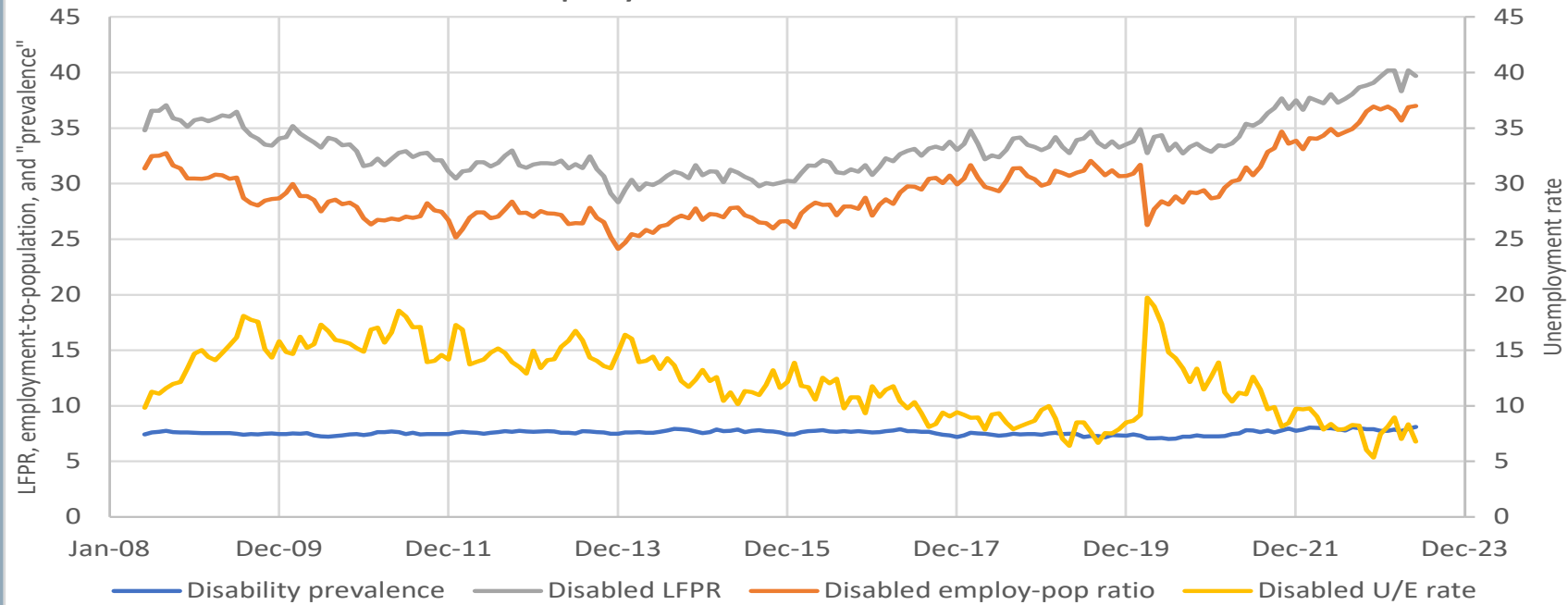
Employment of the Disabled

Employment of individuals self-identifying as disabled appears to be gradually rising from low rates experienced in 2013-15.

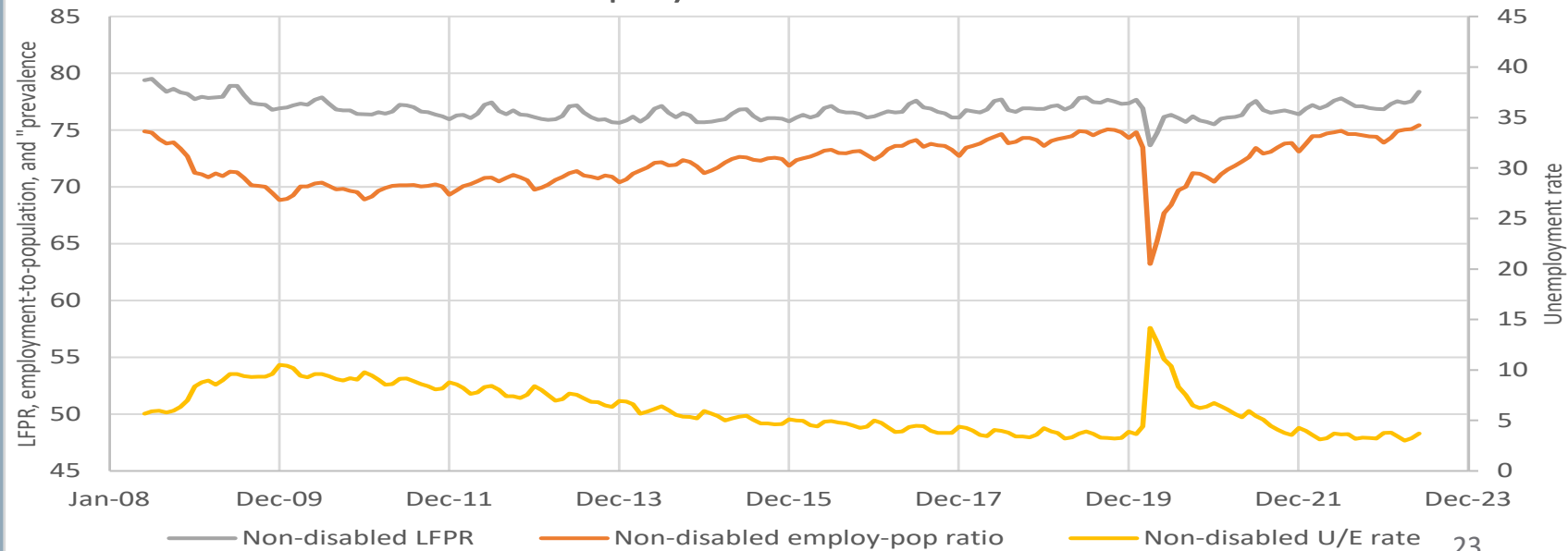
Current rates of employment are at the highest levels since the beginning of 2008. Will this continue to increase or level out?

Note that this is self-identification of disability by CPS survey respondents, so the definition of disability may greatly differ from what is used for the OASDI program.

Disabled Employment Data: Men+Women 18-64



Non-Disabled Employment Data: Men+Women 18-64



What Does the Future Hold for the Nature of Work?

- Will further automation and AI diminish the need and demand for people to be working?
 - Mechanization of farming and industrialization did not
- Will work continue to become less physically demanding and less dangerous, thus allowing workers to work longer and to older ages?
 - Effects of infrastructure, immigration, climate change?
- Even automation and AI will require human production, maintenance, and design for the foreseeable future
 - No matter how automated work becomes, will we continue to find ways people can contribute through services?
 - In the near term, there will certainly be a need for medical practitioners, given the aging population