

Cardio-metabolic risks and working-age disability: overview of relevant trends

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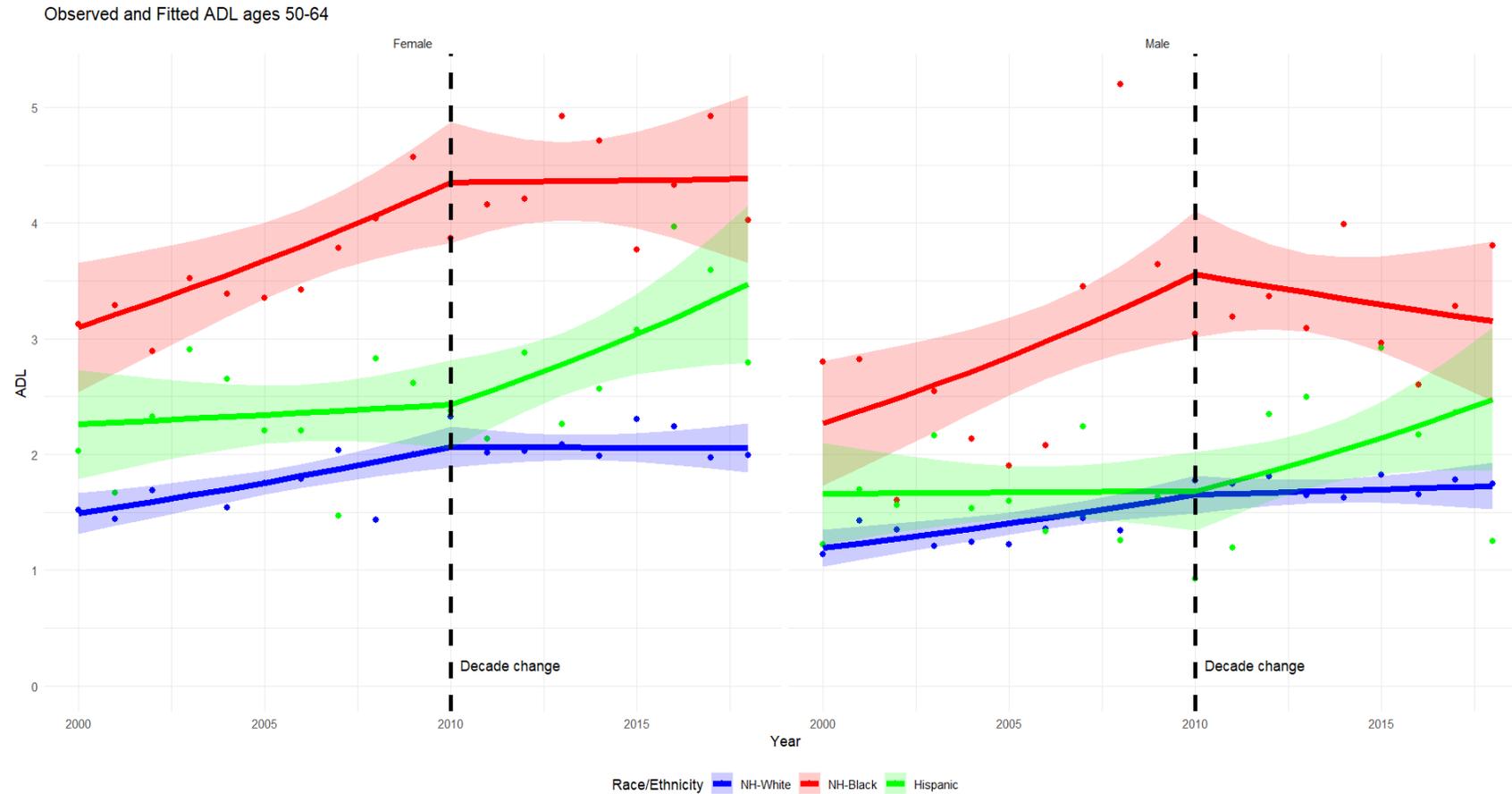
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Introduction

- Disability levels were improving in the 1980s and 1990s
- Reversal or stagnation in the decline in the early 2000s among the working-aged (e.g., Freedman et al. 2012; Martin et al. 2010)
- Surprisingly, little work on national trends after 2010

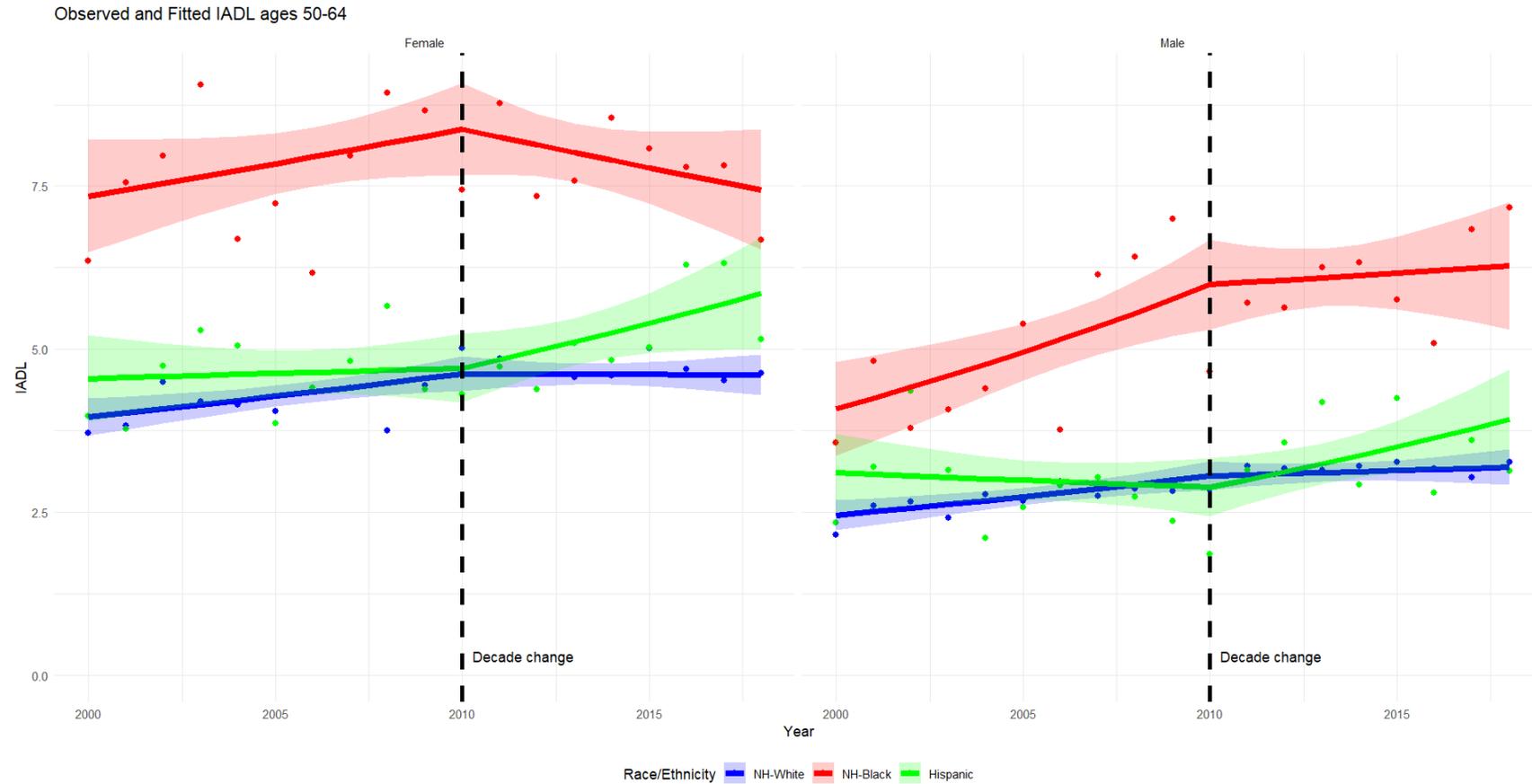
U.S. Disability Trends, ADLs ages 50-64



Source: Bramajo,
Chakraborty,
Mehta, Working
Paper

NHIS, 2000-2019

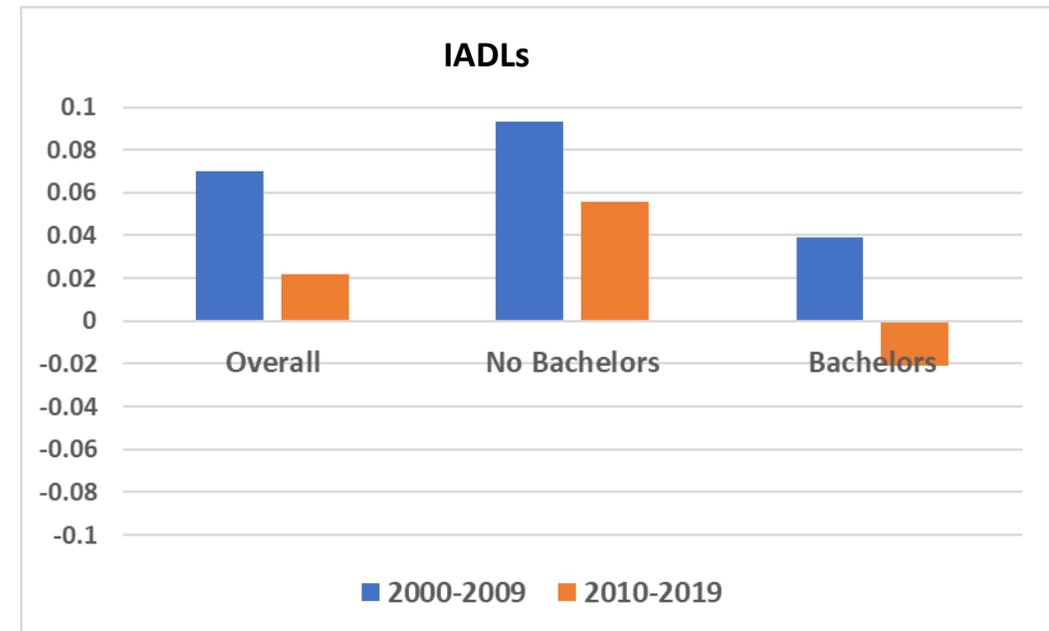
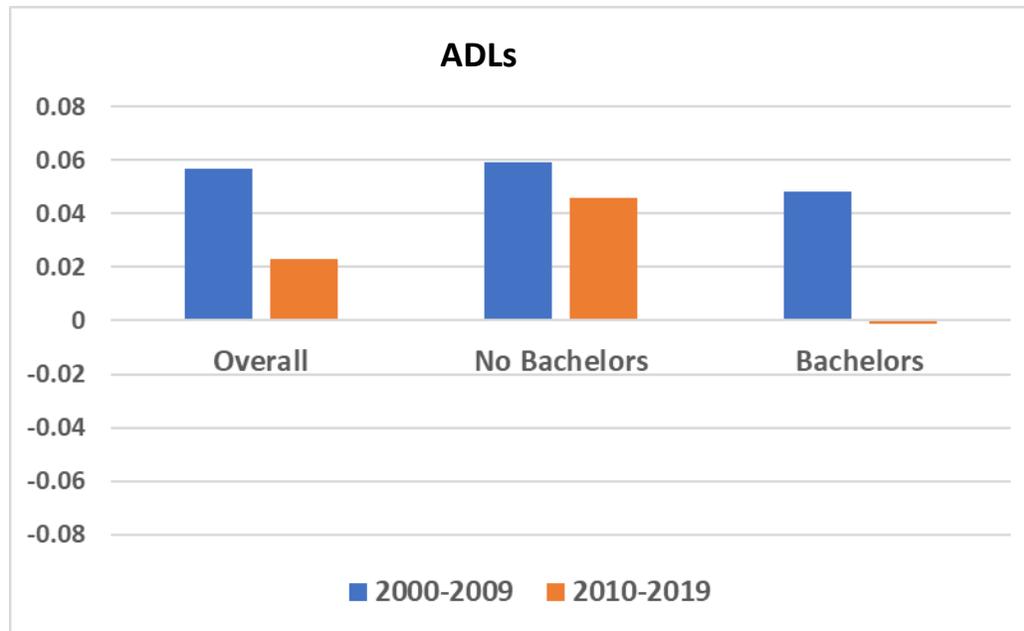
U.S. Disability Trends, IADLs ages 50-64



Source: Bramajo,
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Paper

NHIS, 2000-2019

Divergence by Educational Attainment, ages 50-64



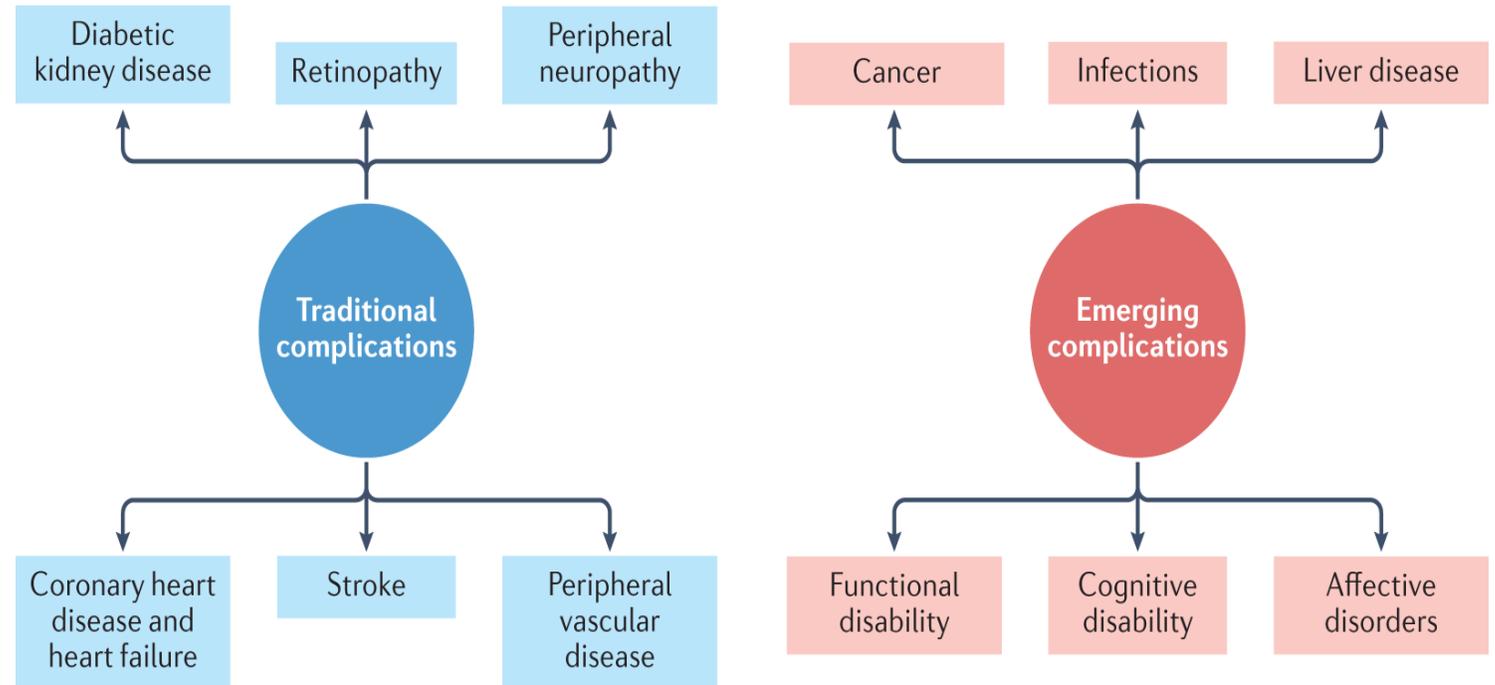
Average Annual Change
(percentage points)

Source: NHIS,
2000-2019

Cardio-metabolic (CM) Risk and Disability Trends

Bottom line: We don't know how trends in CM risks are affecting trends in disability

E.g., Multi-system effects of diabetes mellitus

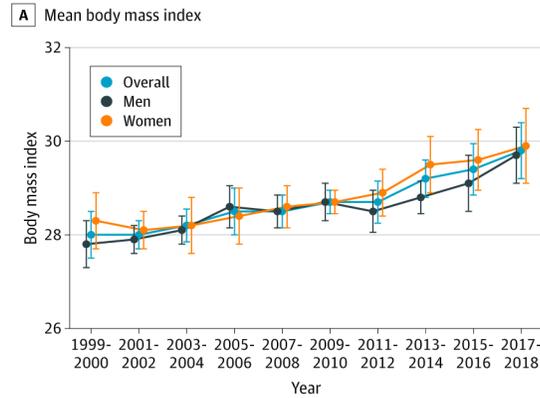


Source: Tomic et al., Nature Reviews Endocrinology (2022)

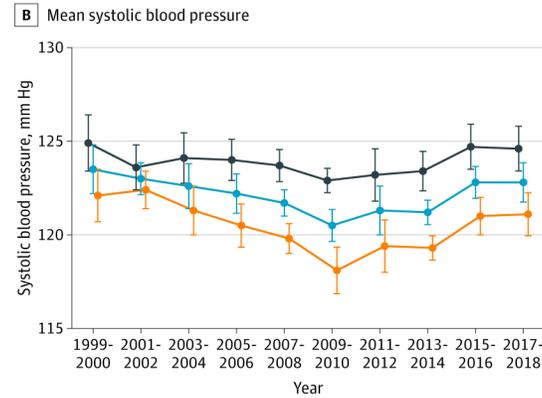
Countervailing Forces

- Multiple CM risks are increasing (obesity, diabetes, blood pressure) → across ages
- Detection/number/effectiveness of treatments has also increased (diabetes treatments, stroke management)
 - Evidence that control of risk factors has also increased

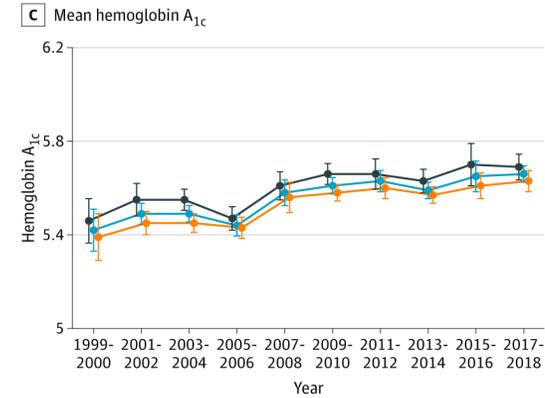
Trends in Key CVD Risk Factors, all adult ages



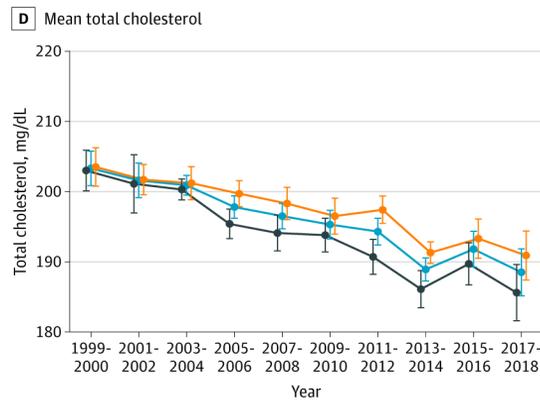
No. of participants
4089 4369 4394 4318 5519 5895 5158 5416 5293 5080



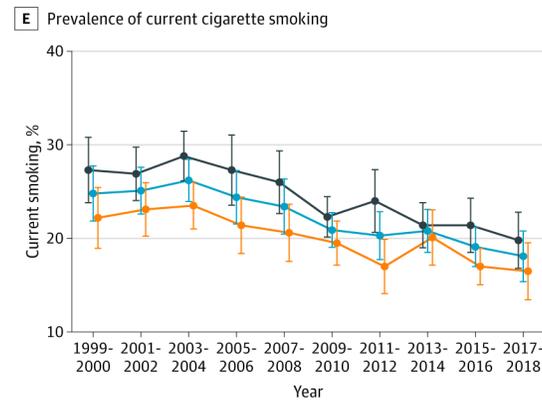
No. of participants
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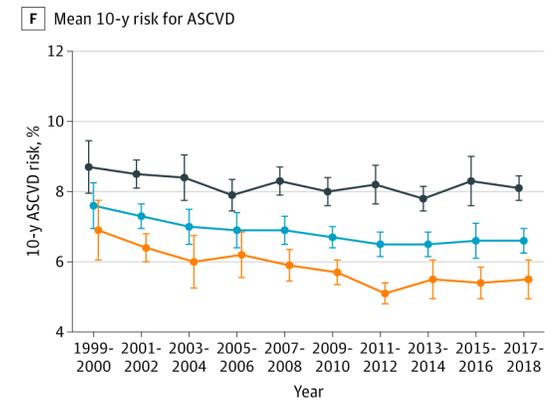
No. of participants
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No. of participants
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No. of participants
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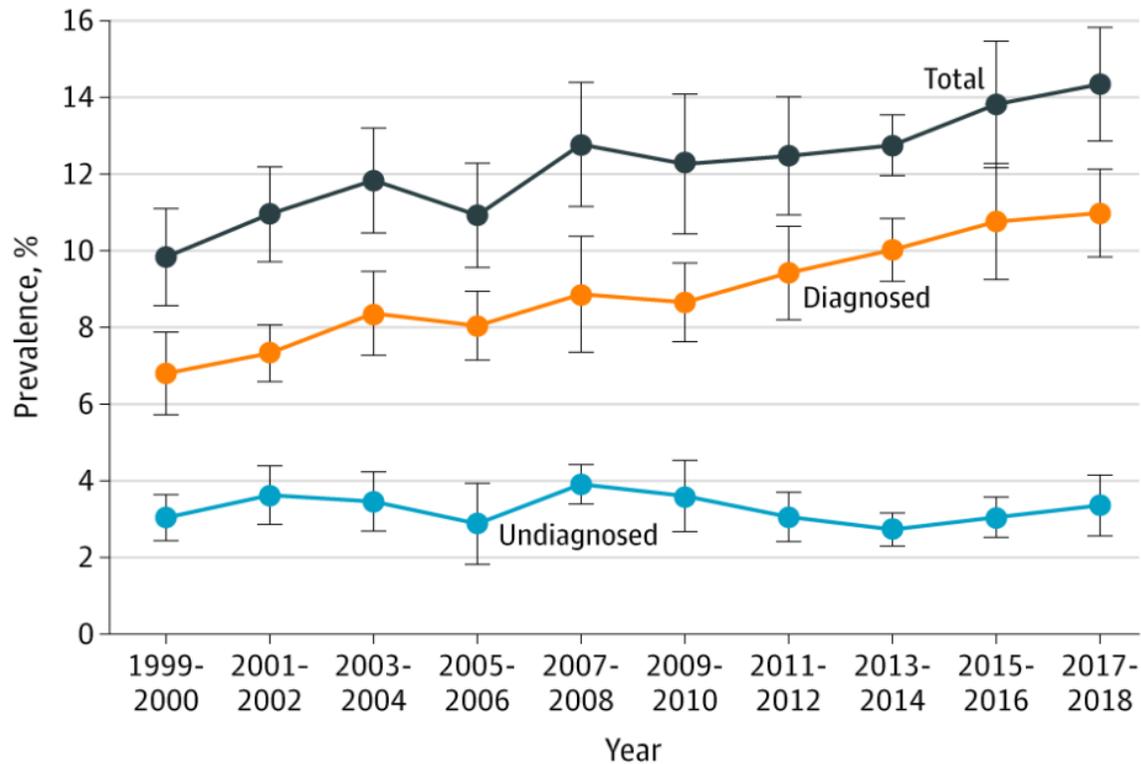


No. of participants
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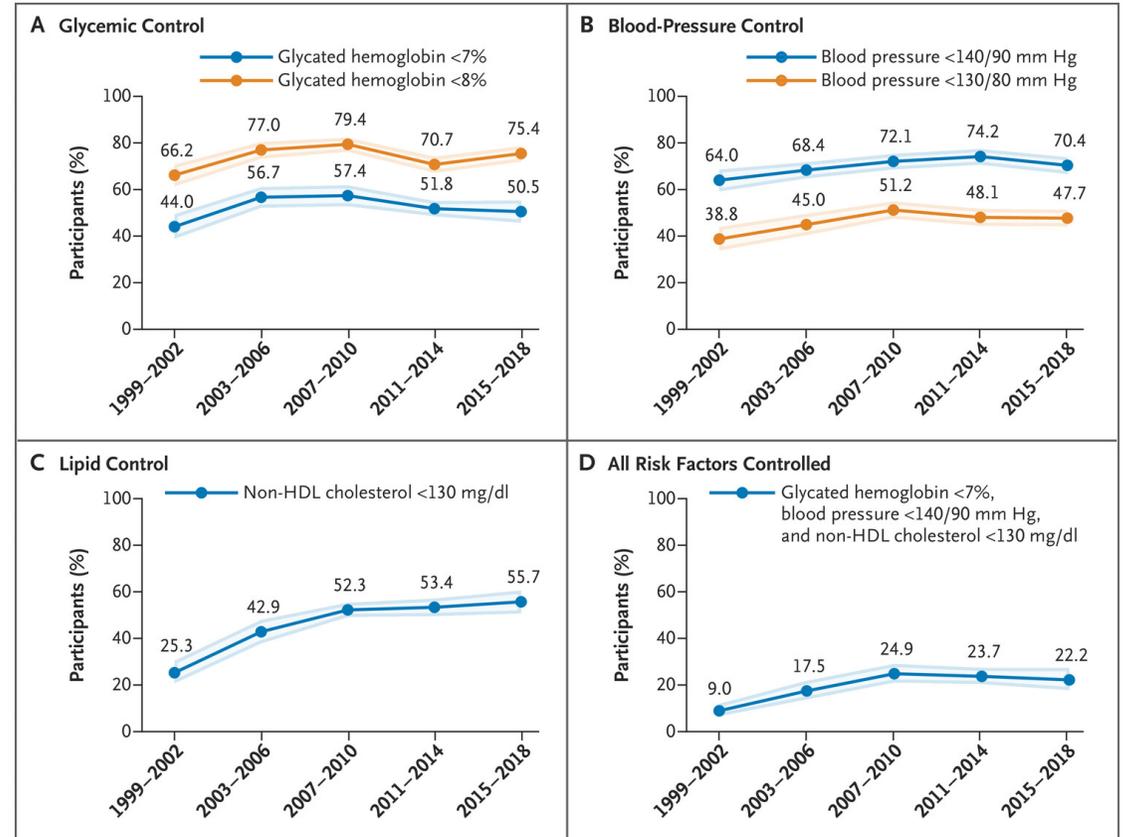
Source: He et al.,
JAMA (2020)
NHANES

Diabetes Detection and Management, all adult ages

A Diagnosed, undiagnosed, and total diabetes



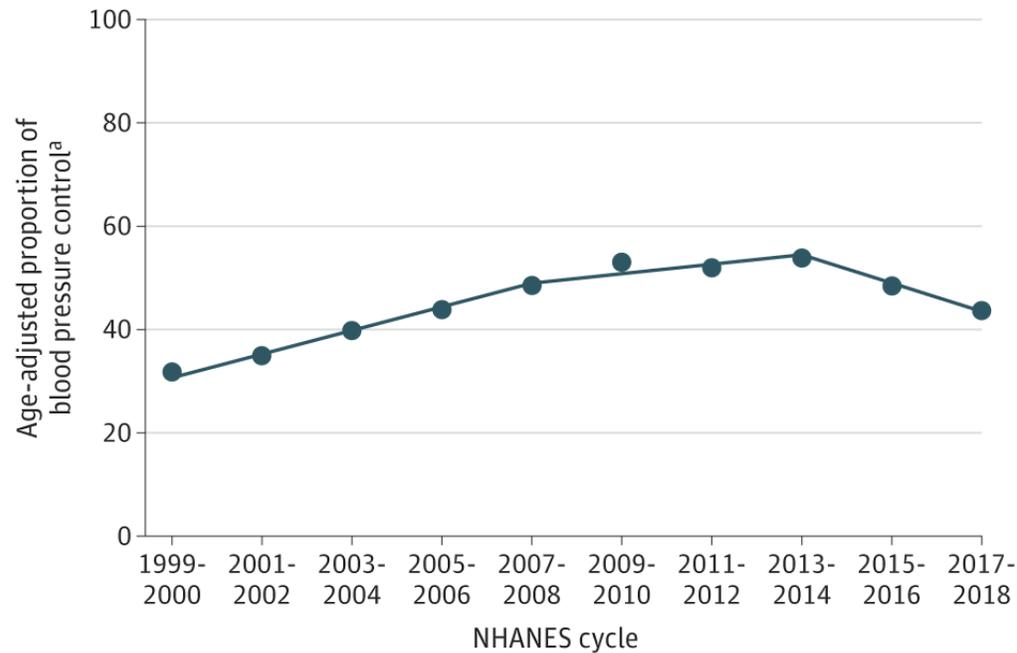
Source: Wang et al., JAMA (2021), NHANES



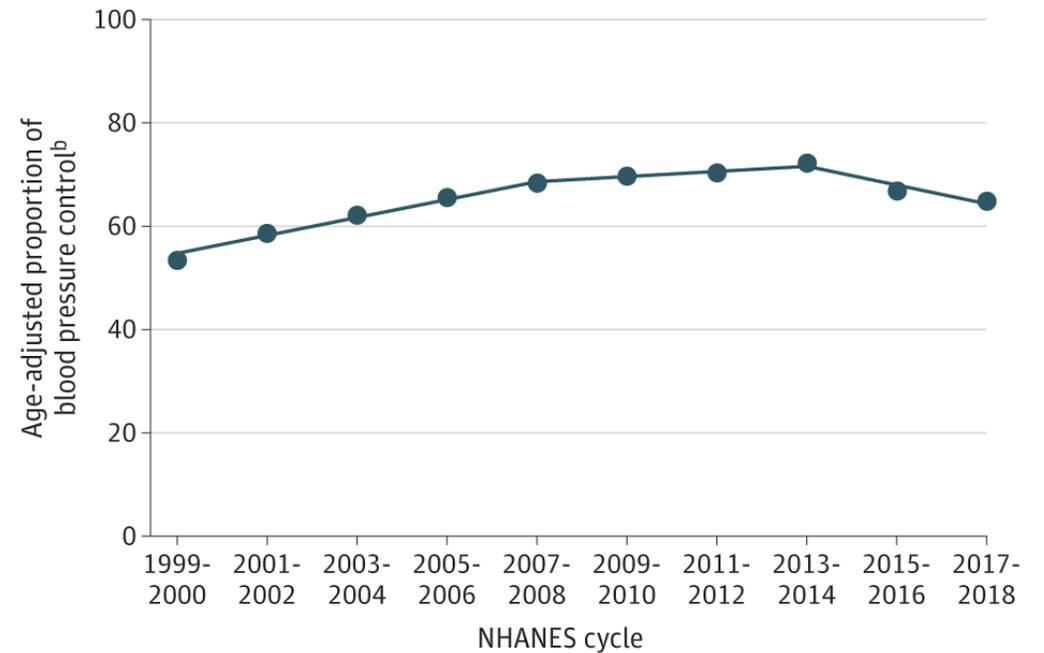
Source: Fang et al., NEJM (2021), NHANES

Hypertension Control and Management

A Blood pressure control among all adults with hypertension



B Blood pressure control among adults taking antihypertensive medication

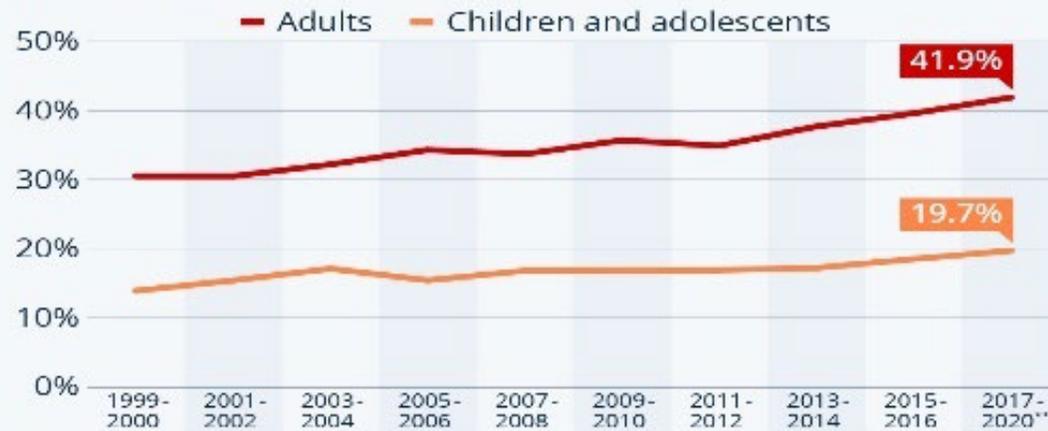


Source: Muntner et al., JAMA (2020), NHANES

Obesity

America's Rising Obesity Problem

Prevalence of obesity among adults and children/adolescents in the United States*



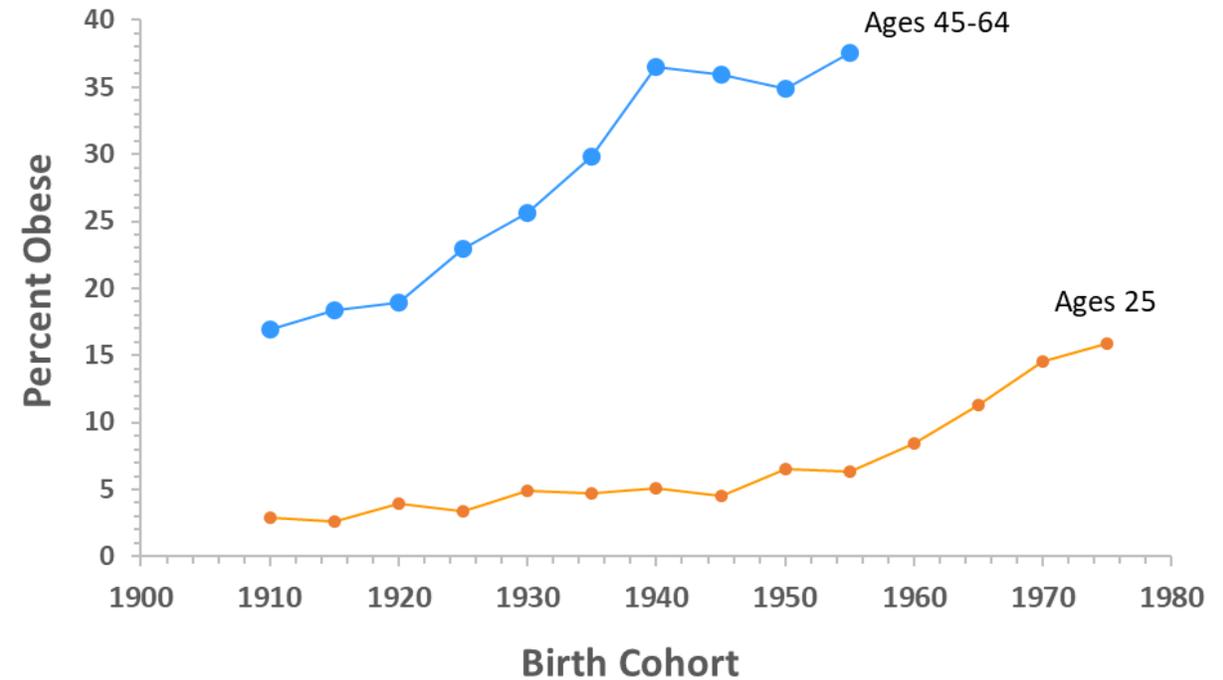
* Adults aged 20 and over, children and adolescents aged 2-19

** Partial data collection in 2019-2020 cycle combined with 2017-2018 data for nationally representative estimates

Source: Centers For Disease Control and Prevention

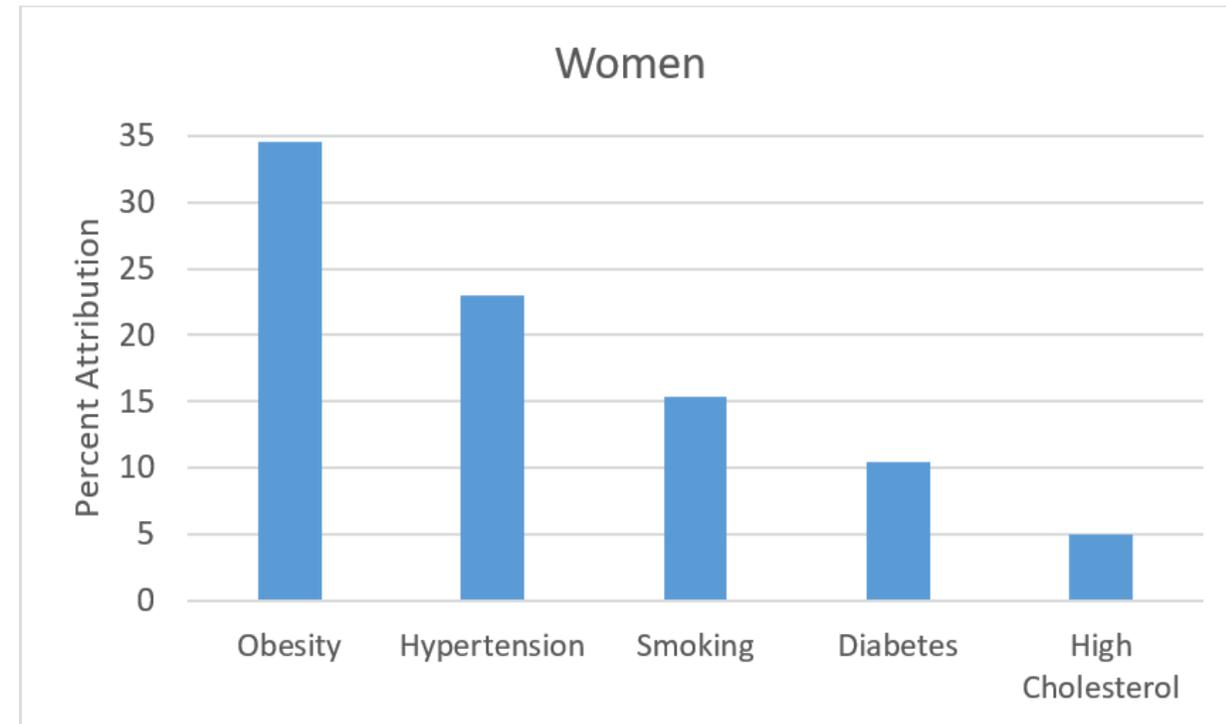
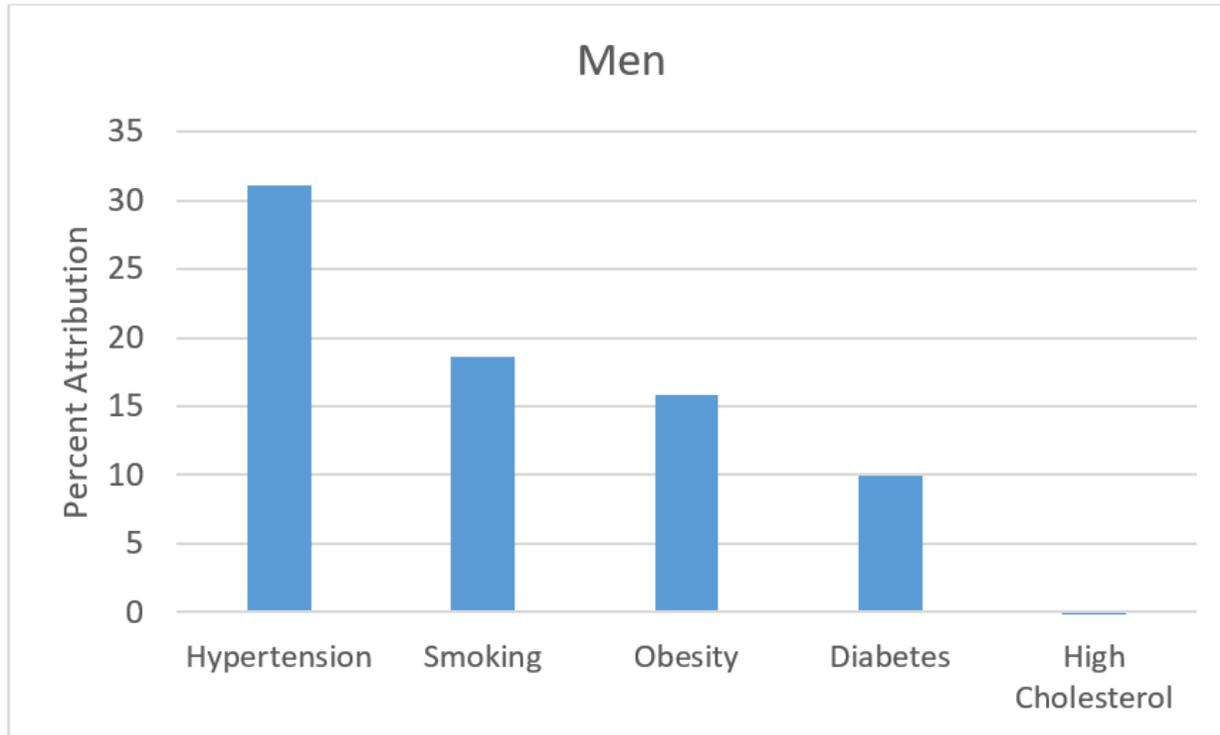


statista



Source: NHANES

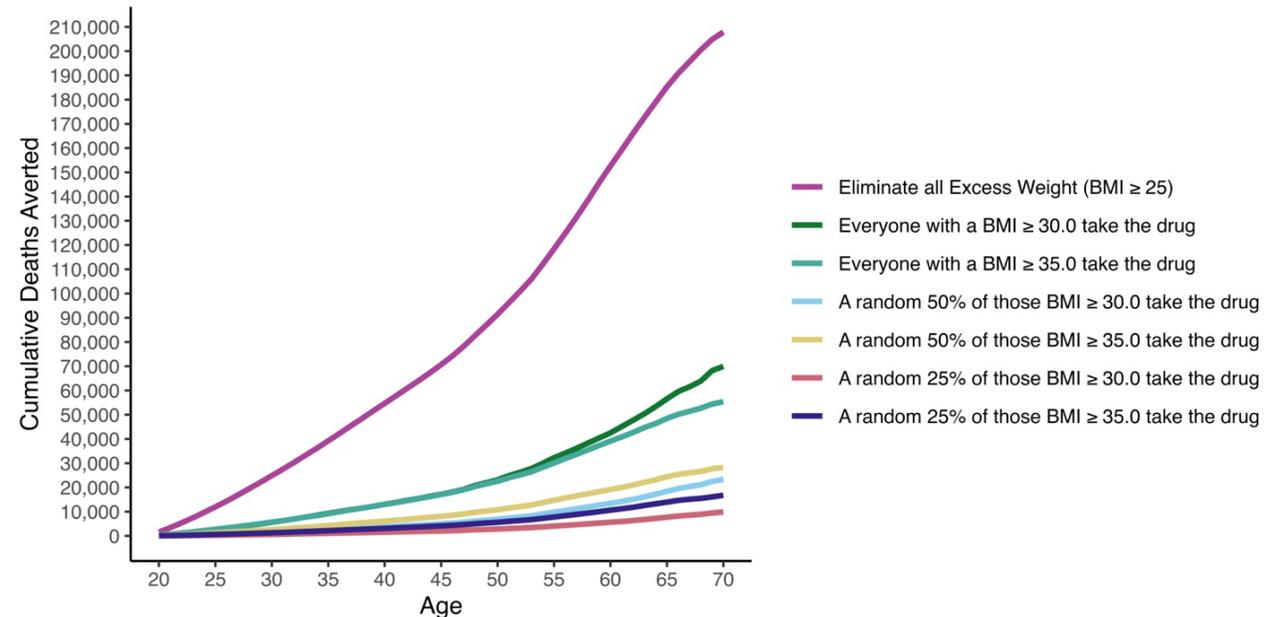
CM Risks and Disability Highly Correlate, ages 55-74



Source: Patel and Mehta, Unpublished, NHANES, 2013-14

Novel Weight Loss Medications: GLP-1 and GLP-1/GIP agonists

- Much promise in policy to control obesity levels → no evidence of success, especially for adults
- Emerging evidence on multifaceted benefits beyond weight loss (blood sugars, mortality, inflammation, cancers)
- Potential to influence national-level trends in health



Source: Simulation of deaths averted with reference to US population in 2019. Underlying data from NHANES, NHIS, 2019 US life table, 2019 U.S. Census Population
Chakraborty, Dowd, Mehta, Working Paper

Priority Areas for Research

- Update disability trends studies → building on earlier work in demography from the early 2000s
- Identifying why disability is rising in the dynamic Hispanic population → early diabetes/obesity, labor force exposures, socio-demographic changes, U.S. context
- How are changing CM risk factor levels influencing national working-aged disability patterns?
- Proximal causes of disability among the working aged → CM disease (early stroke/MI), musculoskeletal/arthritis, kidney disease, liver disease, sensory (vision)
- Some cancers are rising among working-aged adults → how is that influencing disability trends?
- Implications of rising disability for retirement policies, SSDI, and related policies