

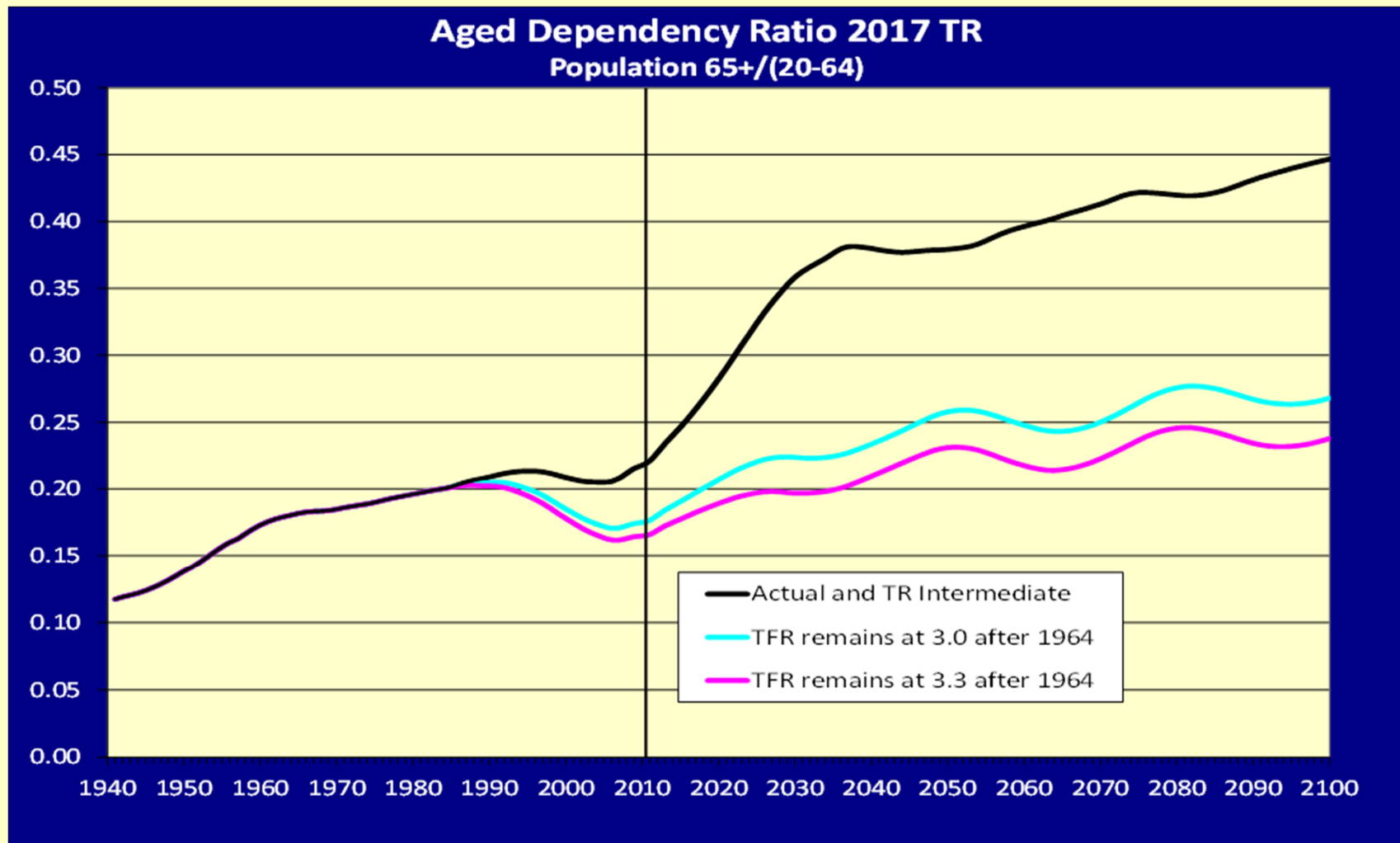
Declining Mortality (Increasing Longevity): At What Rate?

**Steve Goss Office of the Chief Actuary
Social Security Administration**

AAA meeting
November 15, 2017

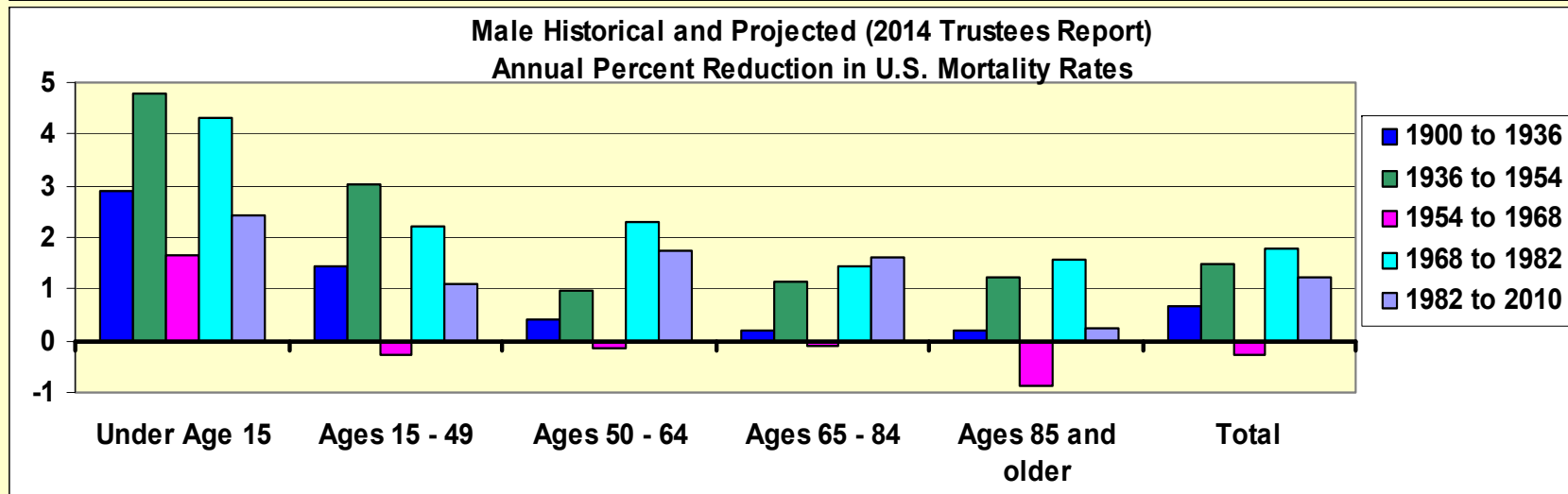
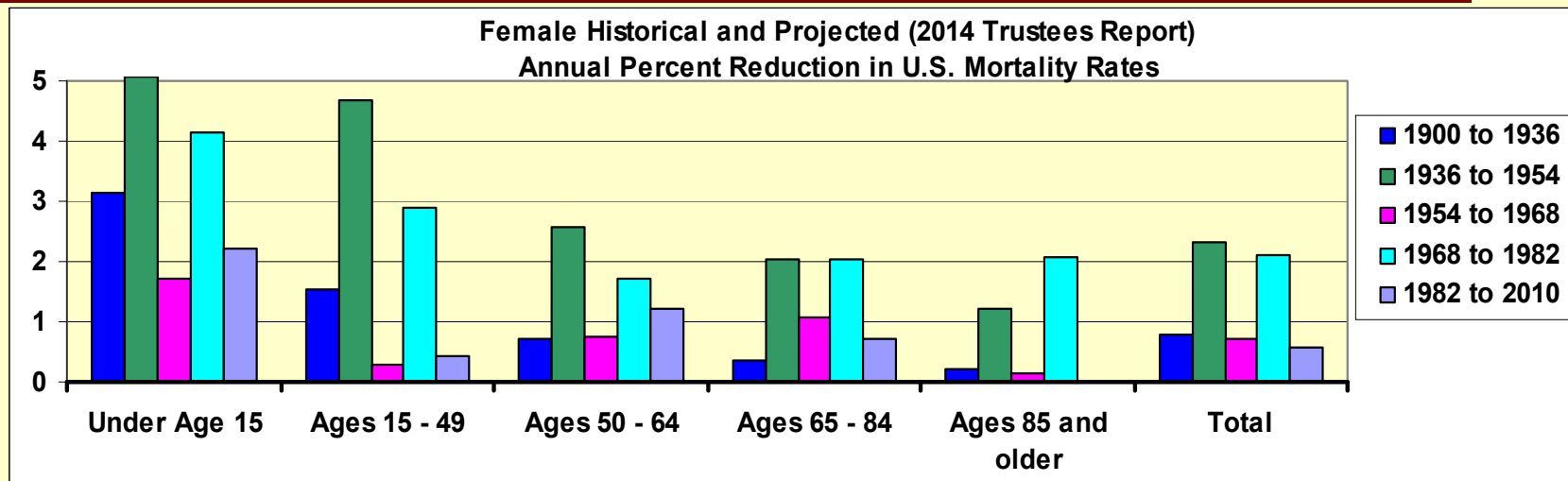
Perspective: “Aging” Not Mainly from Mortality

Aging (change in age distribution) mainly due to drop in birth rates



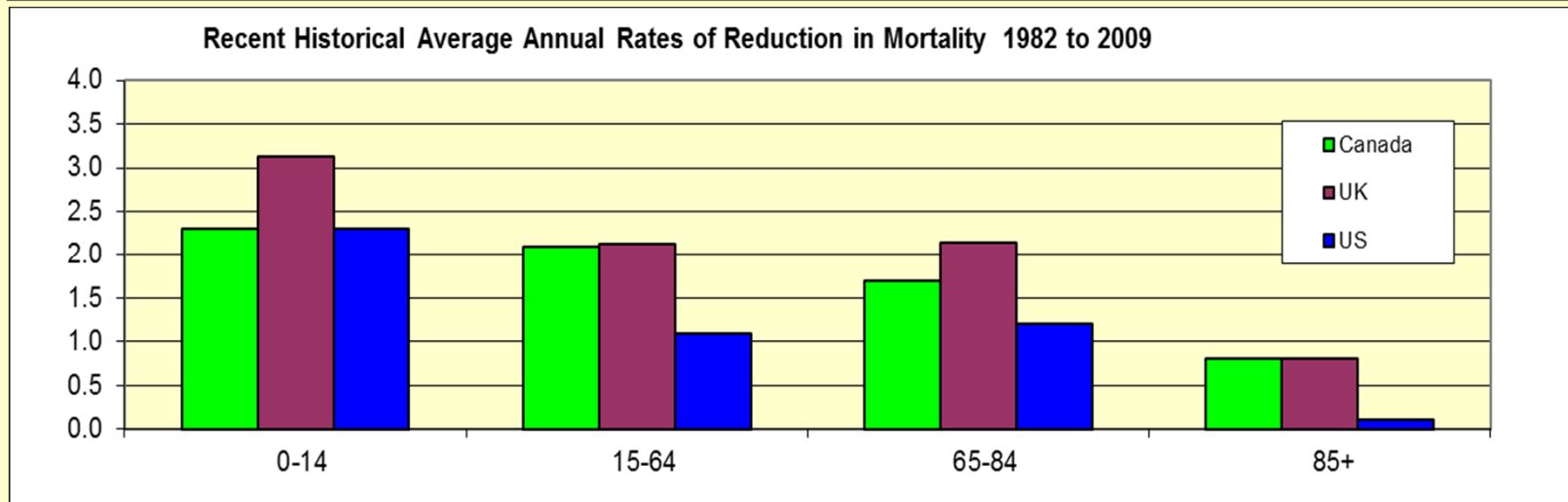
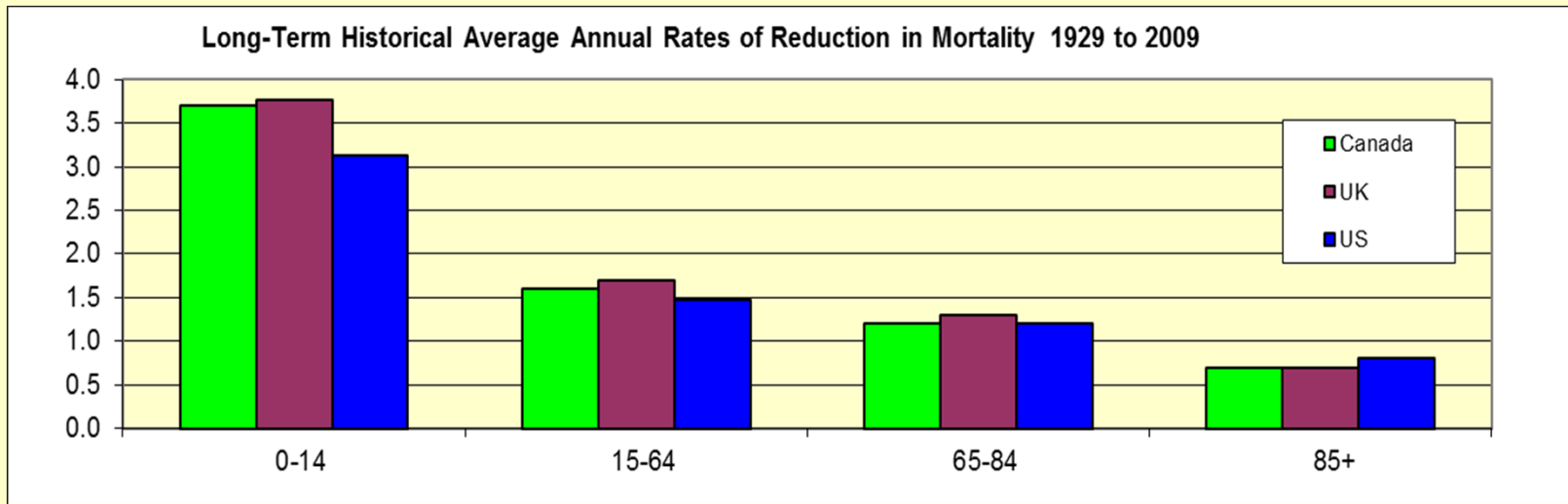
Mortality Decline *Varies* Over Time

Conditions: Antibiotics/economy 1936-54; Medicare/Medicaid 1968-82



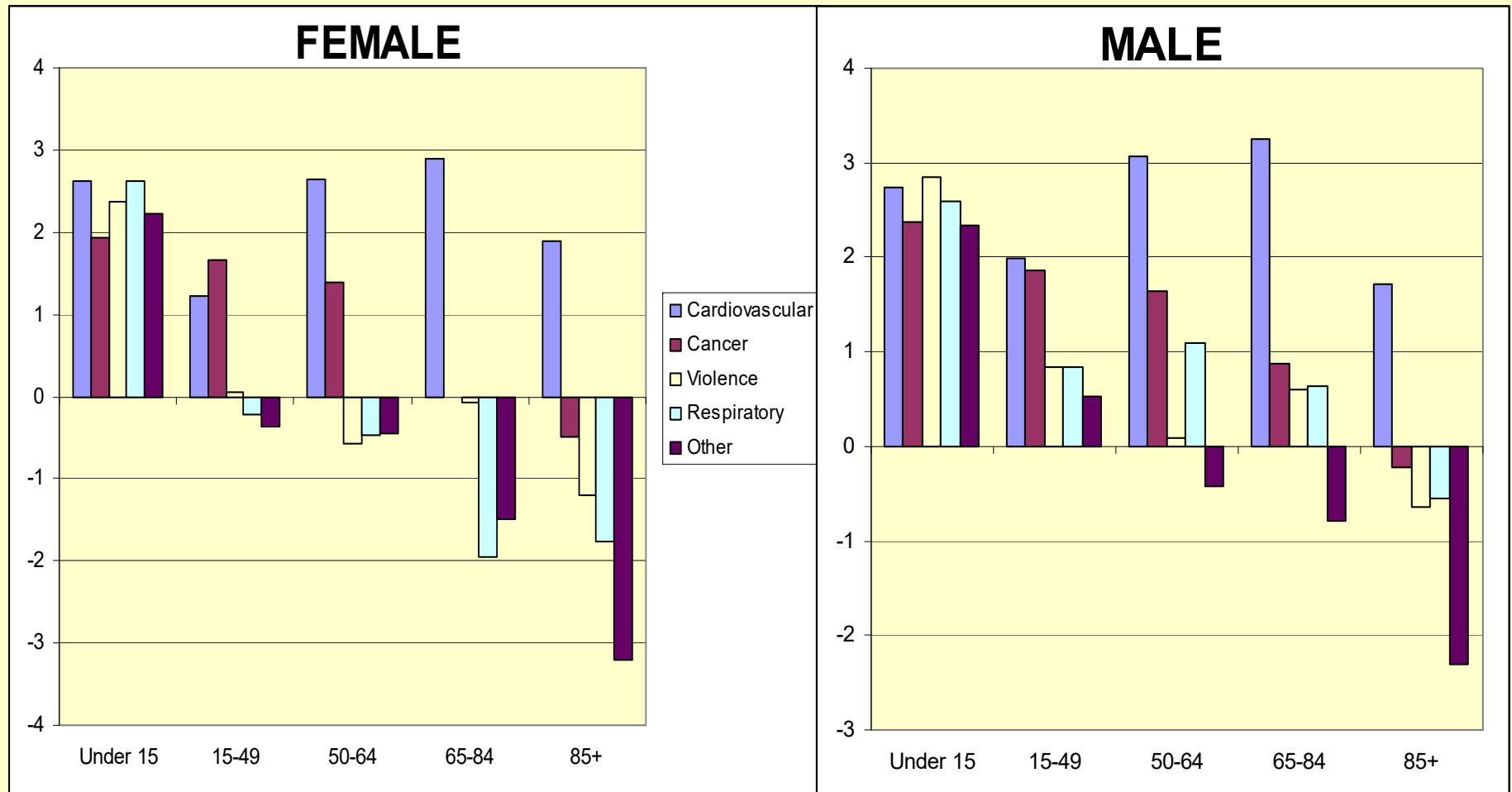
Appropriate Data: by Age Critical

Age-gradient in past reduction is clear



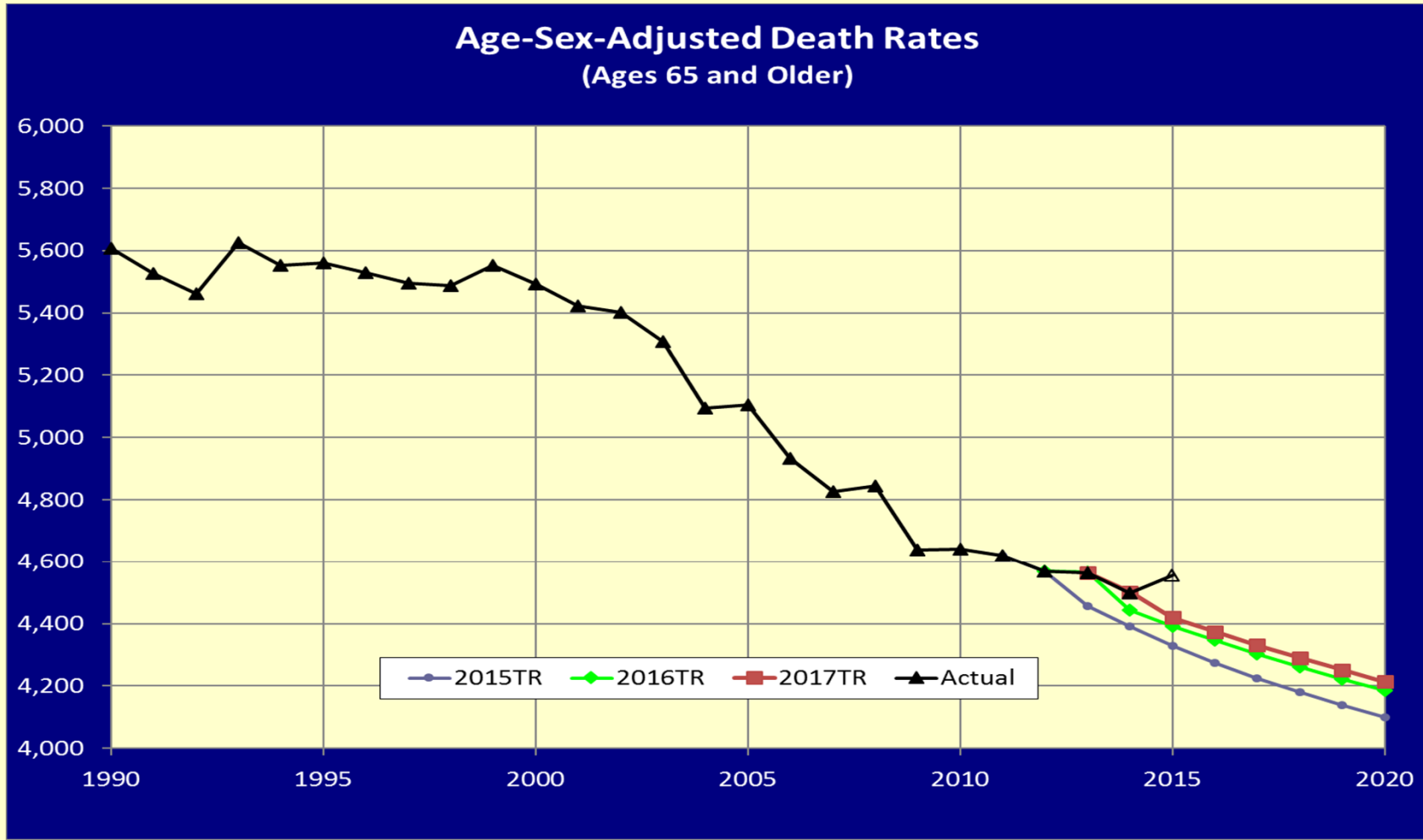
Mortality Decline by *Cause of Death*:

Rate of change from 1979 to 2013



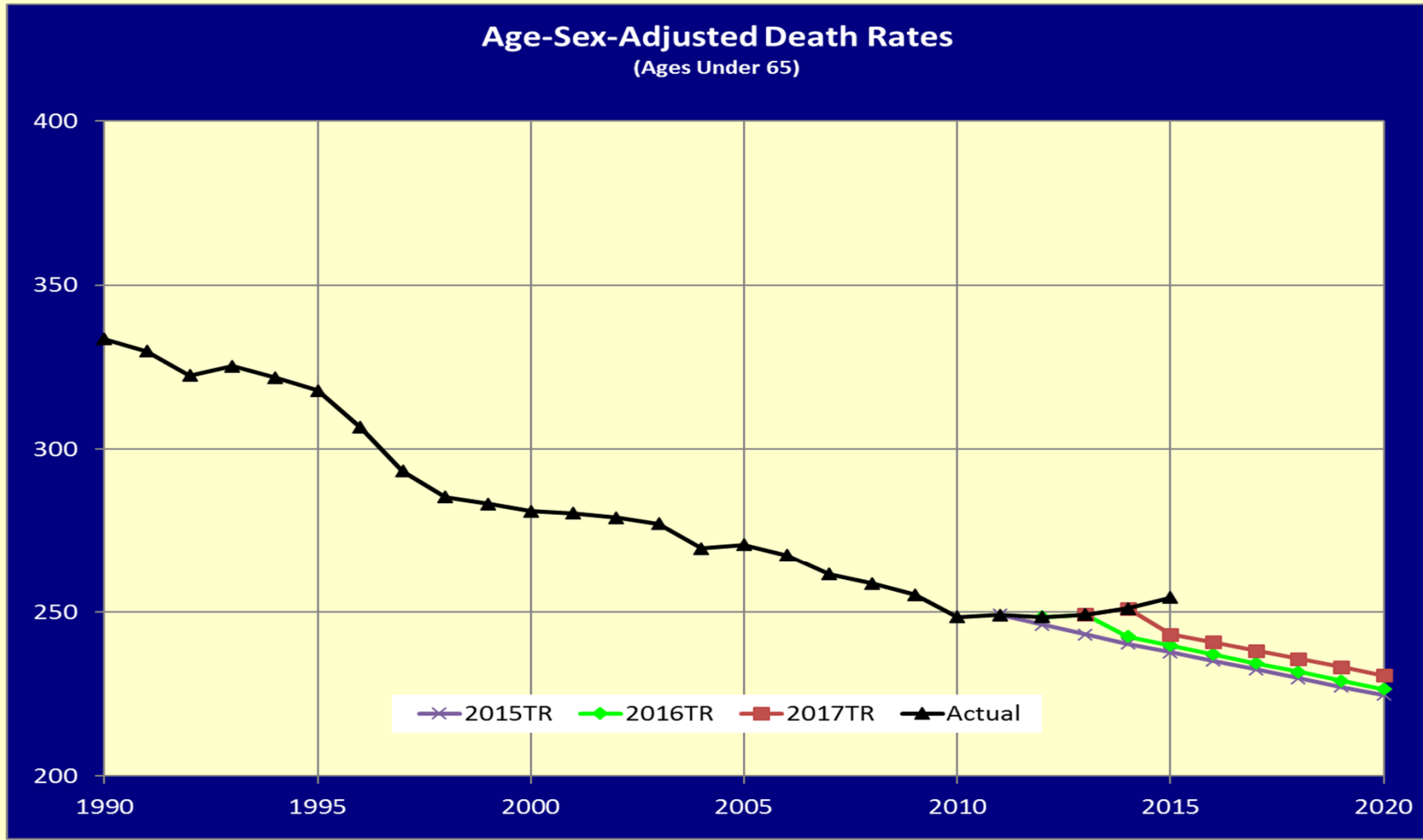
Mortality Experience: Ages 65 and Older

Reductions since 2009 continue to fall short of expectations



Mortality Experience: Ages Under 65

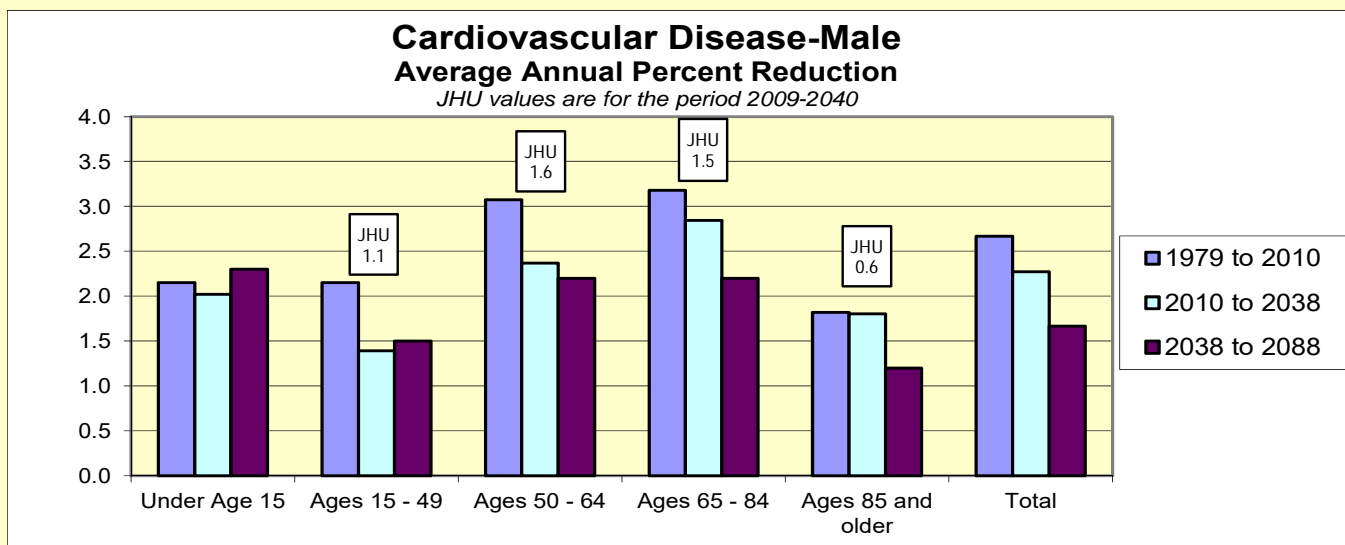
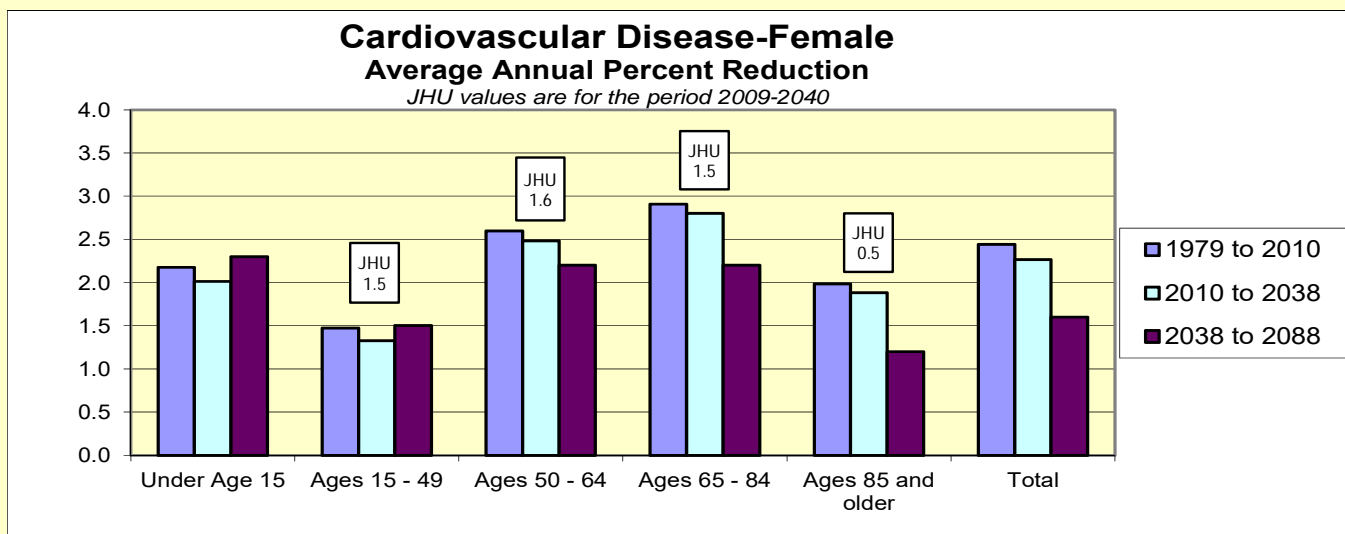
Actual increase since 2010



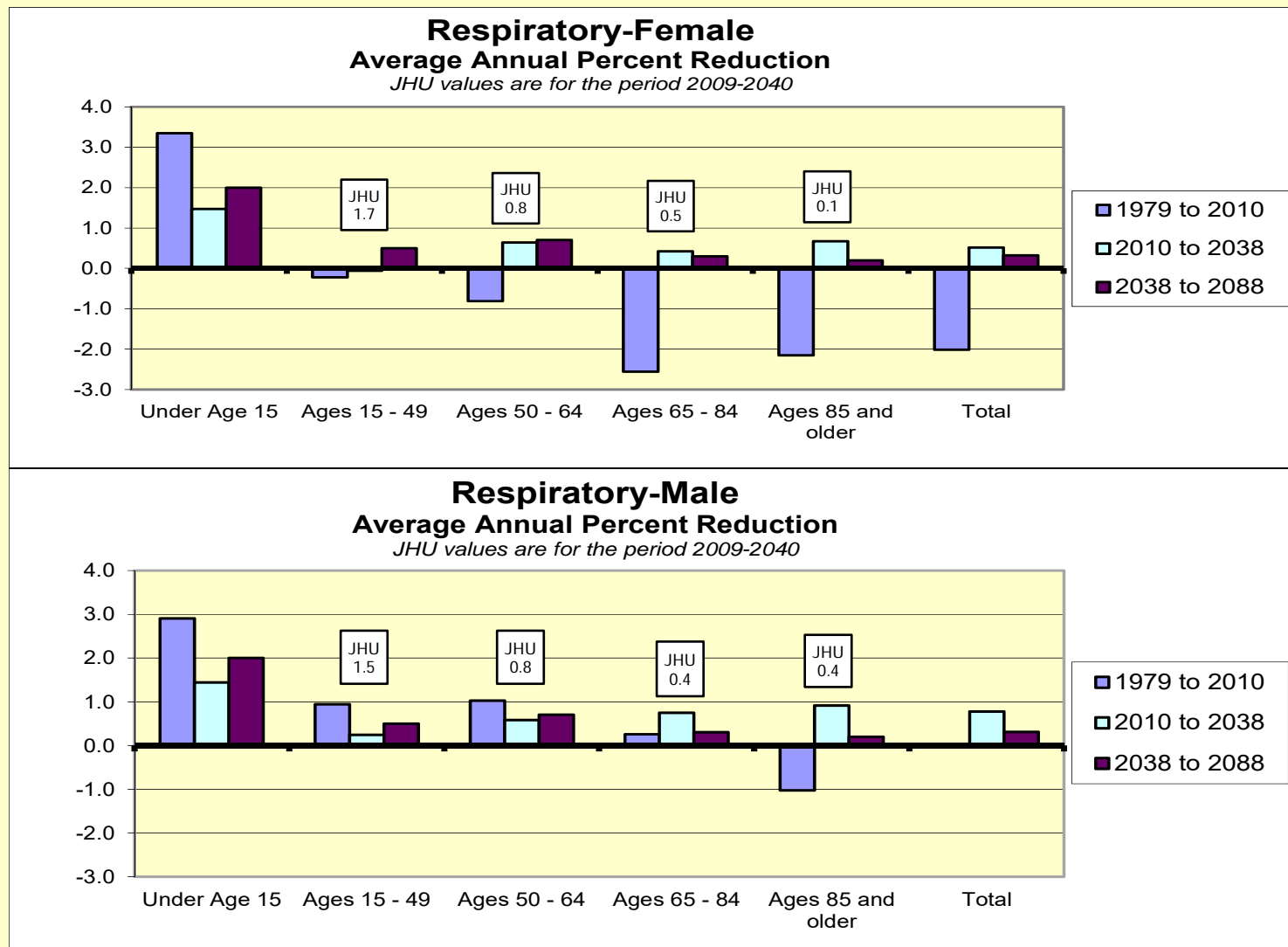
Developing Assumptions by Cause

- ◆ Scientific approach reflecting biology
- ◆ Trustees and SSA/OCACT develop in consultation with other experts
- ◆ Johns Hopkins recent survey of medical researchers and clinicians came to very similar medium term expectations—independently
 - Trustees’ medium-term rates by cause had not been published

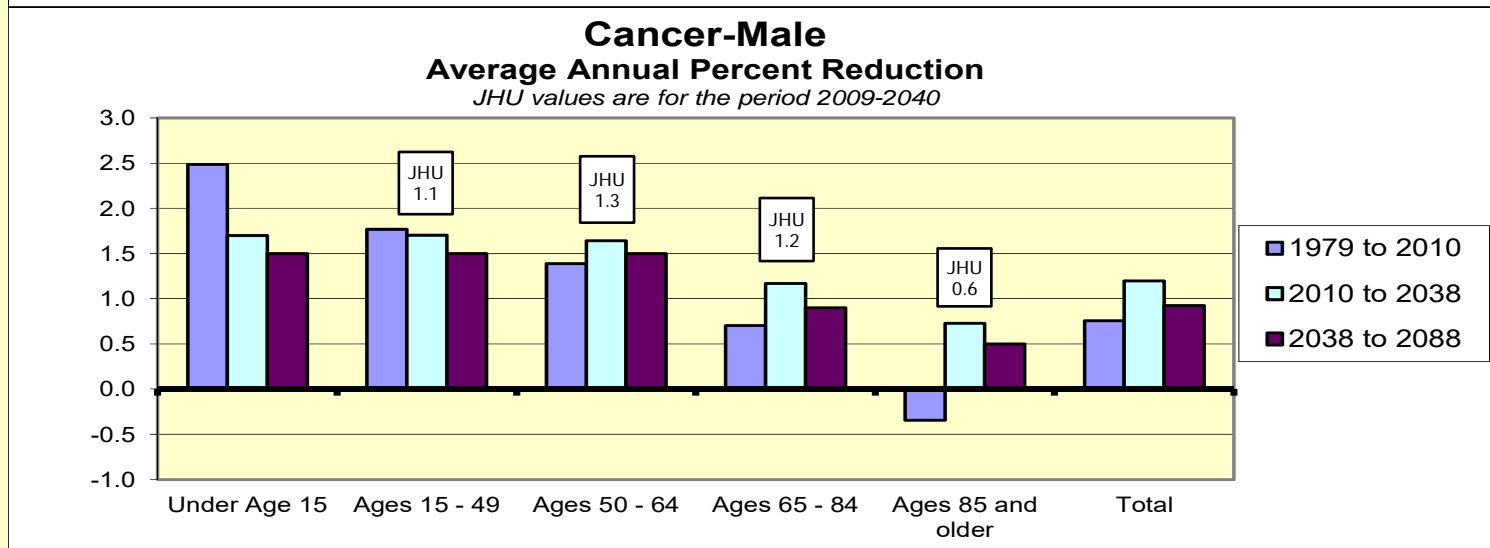
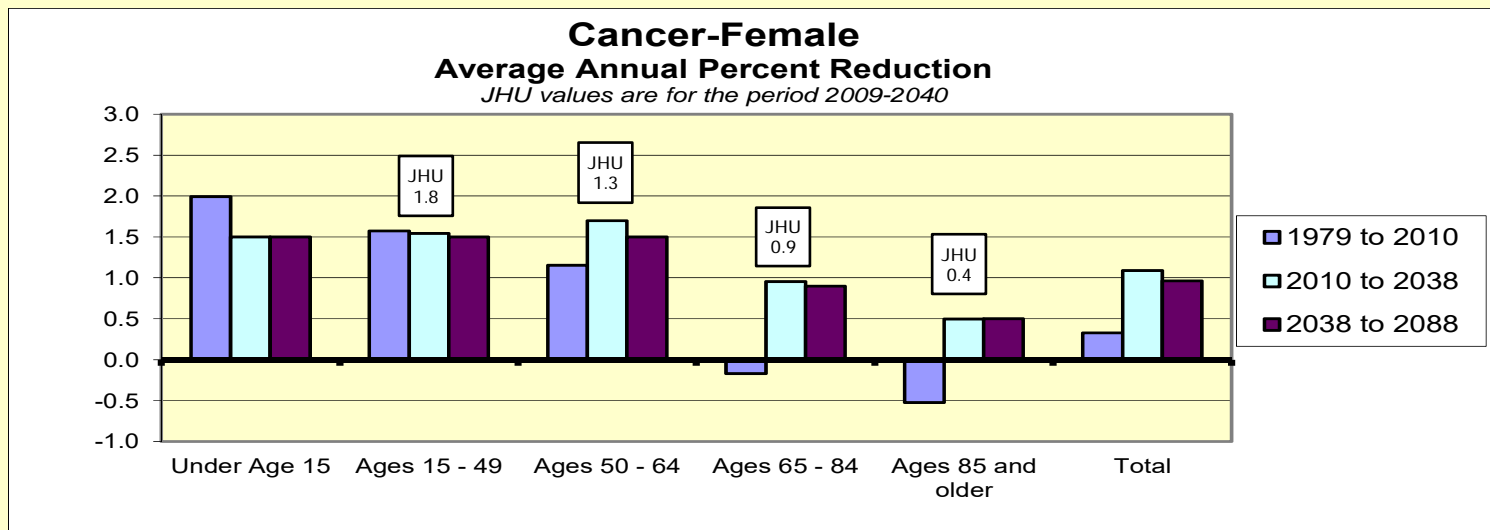
Cardiovascular: JHU Less Optimistic than Trustees over Age 50 for Next 30 Years



Respiratory: JHU More Optimistic under Age 50, Less Optimistic over Age 85



Cancer: JHU Very Similar to Trustees' Expectations



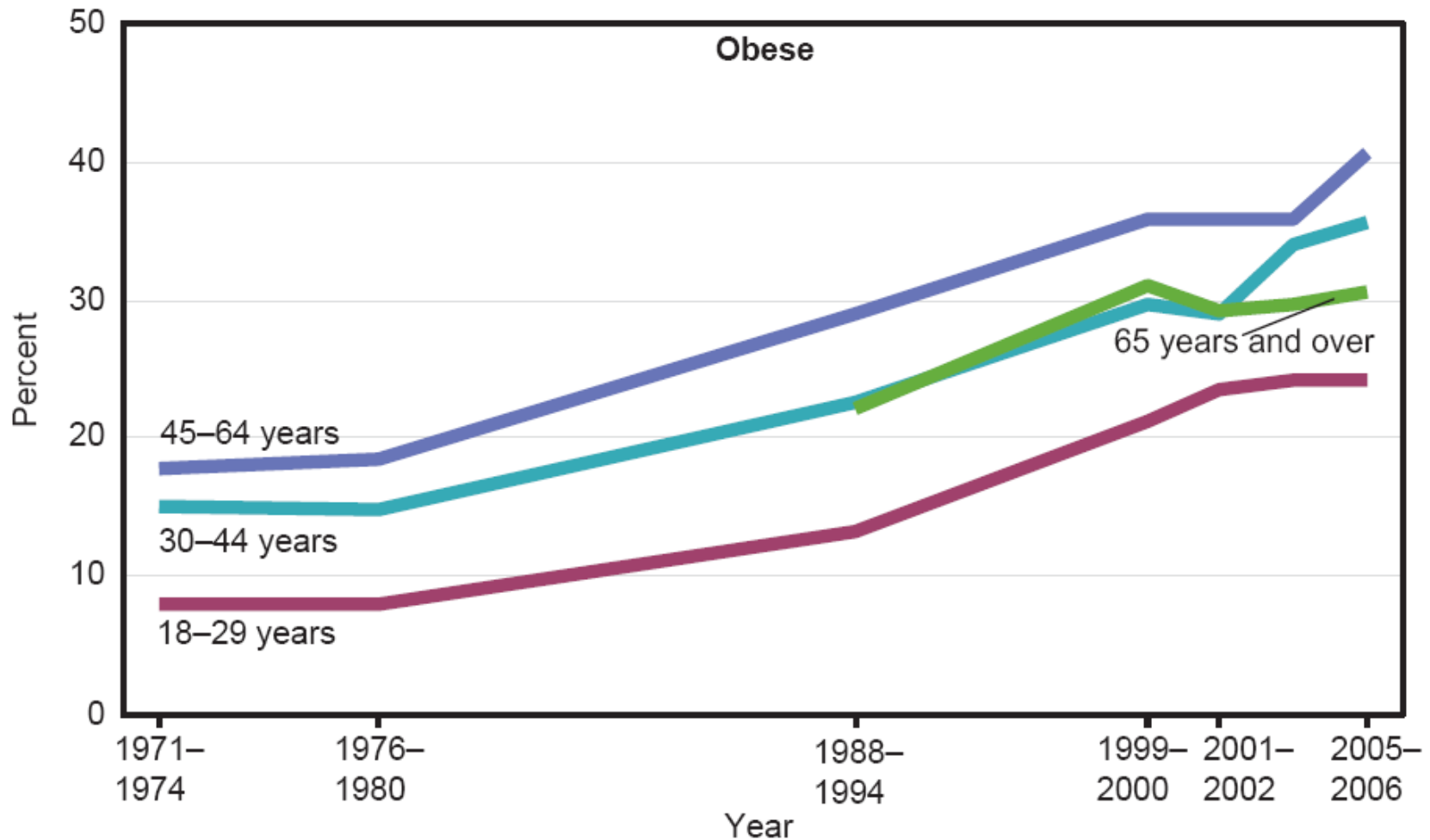
How Future Conditions Might Change

- ◆ Smoking decline for women
 - Started and stopped later than men
- ◆ Obesity—sedentary lifestyle
- ◆ Difference by income/earnings
- ◆ Health spending—must decelerate
 - Advances help only if apply to all
- ◆ Human limits
 - Increasing understanding of deceleration

Trends in Obesity: US 1971-2006

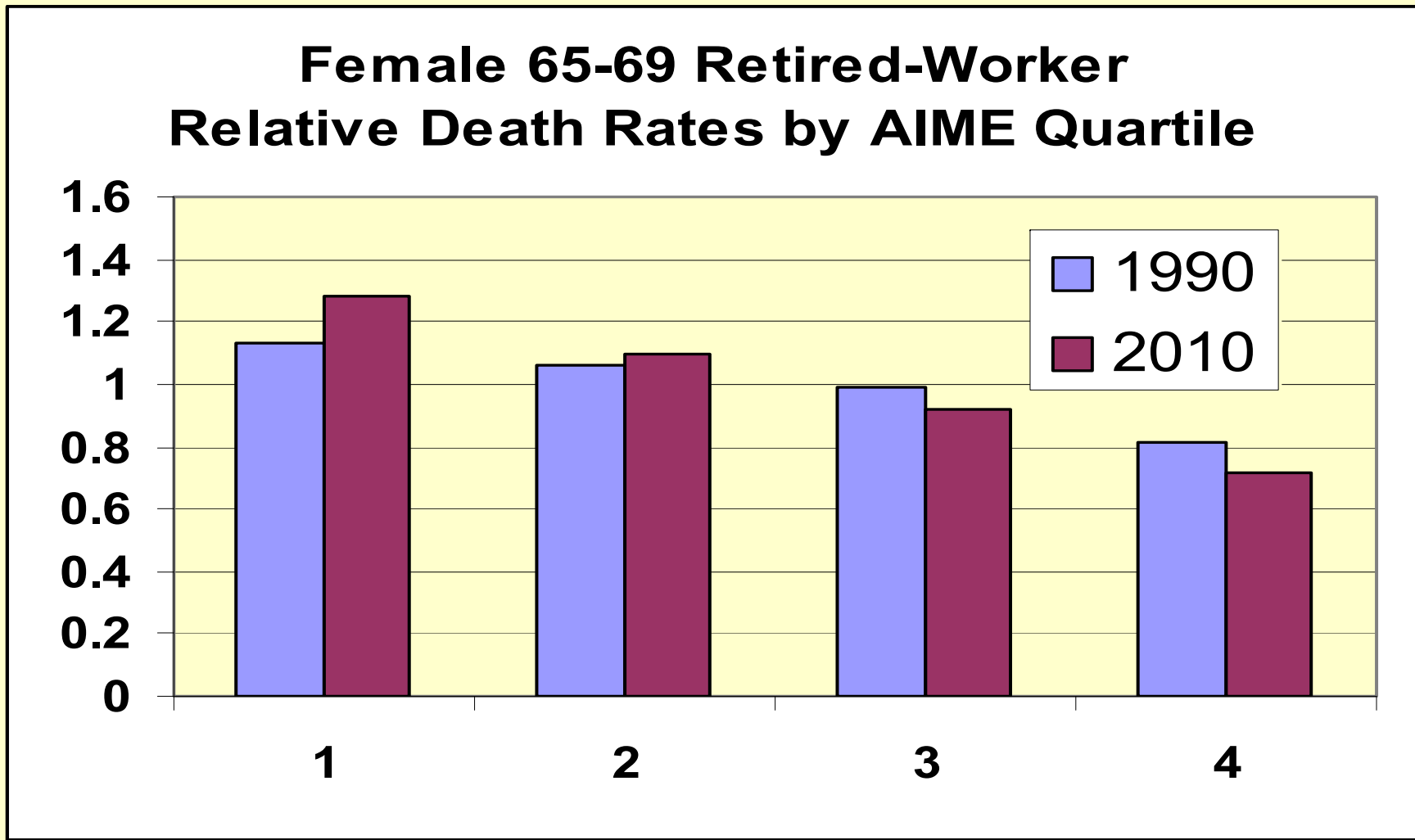
Sam Preston 2010—must consider cumulative effects

Increasing duration of obesity for aged in future



Death Rates Vary by Career Earnings Ranking

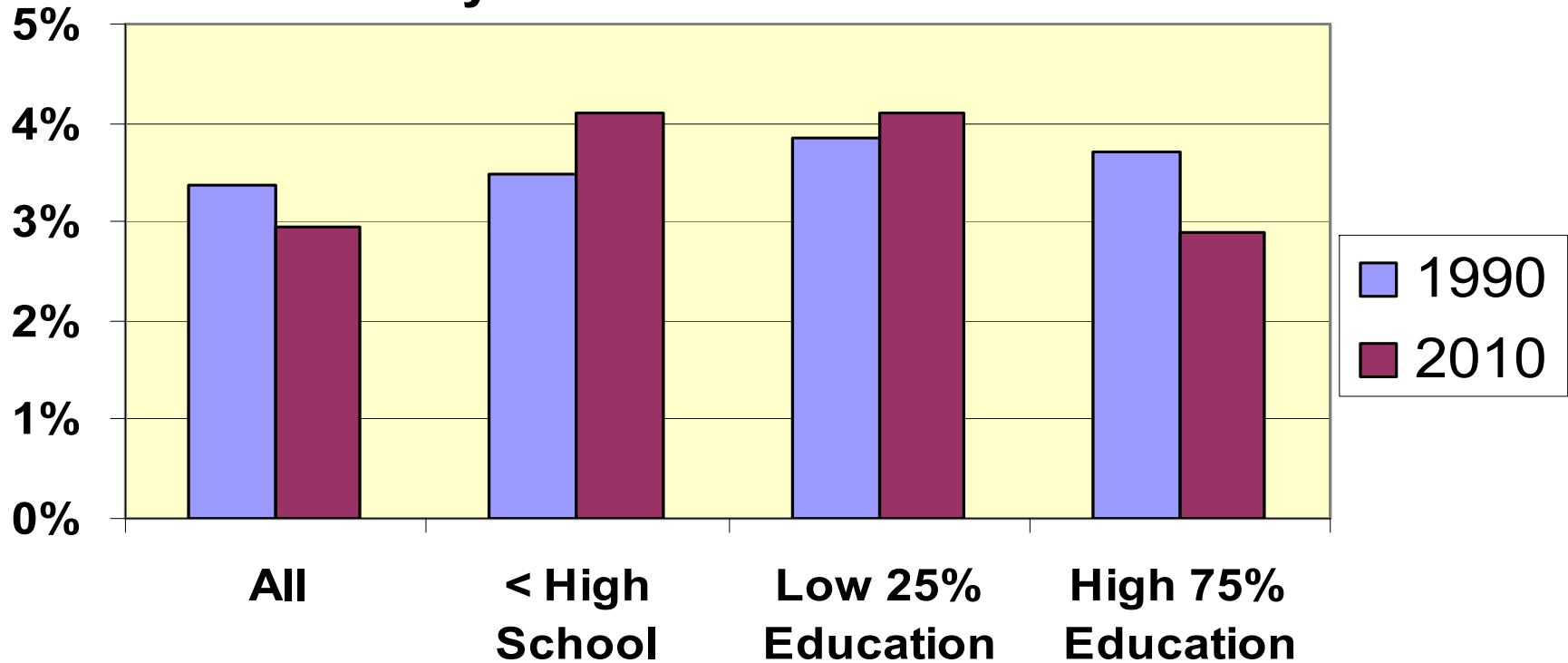
Difference has increased



Mortality Decline by Education

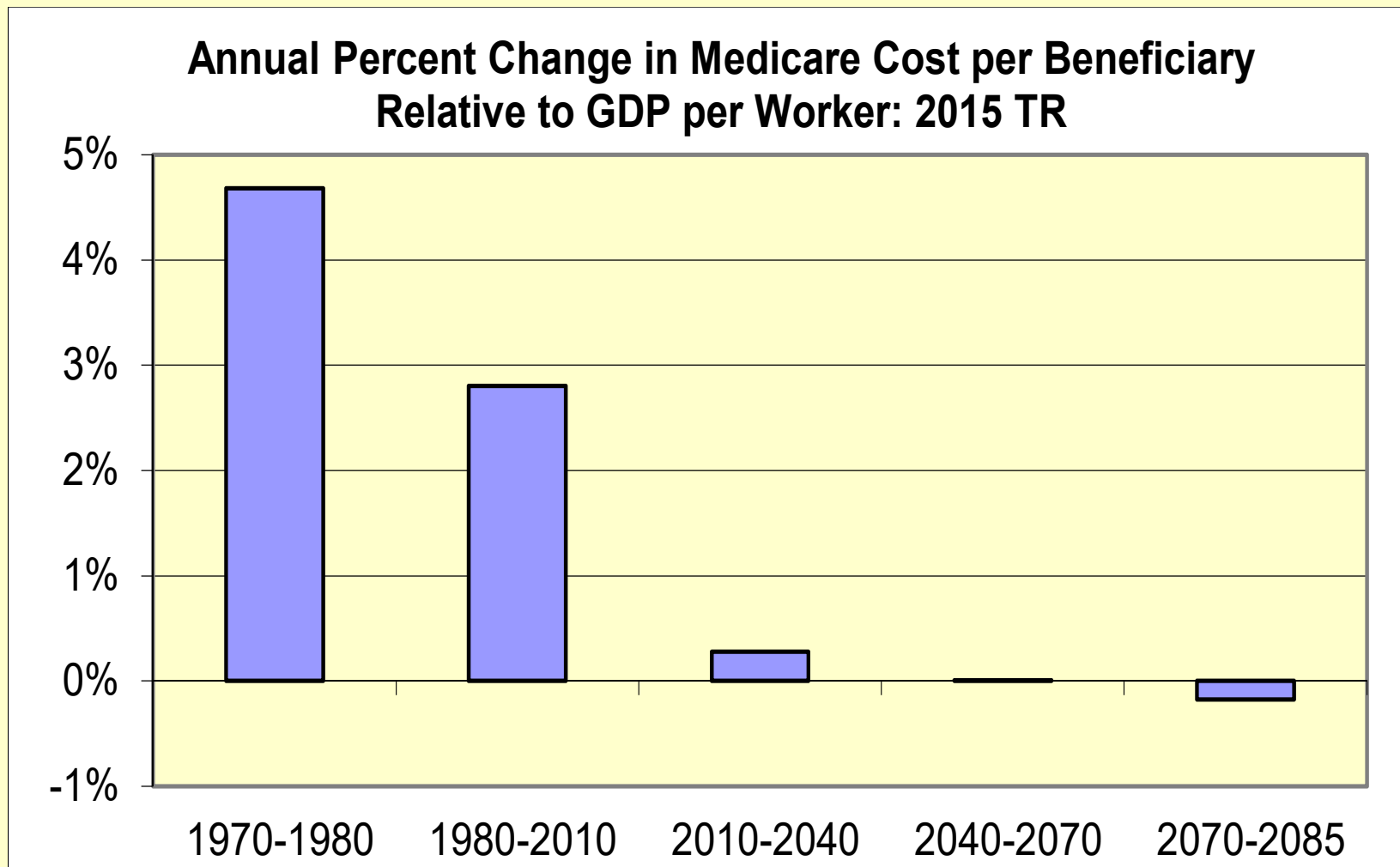
Must be careful on changing shares (Bound 2014)

**Female Non-Hispanic-White Population
Annualized Death Rates from Age 65 to 85
by Educational Attainment**



Health Spending Cannot Continue to Rise at Historical Rates

Note Trustees' deceleration



Is There an Omega?

It appears we are rectangularizing the survival curve?

