

Health, Health Improvement, and Public Health Funding

David M. Cutler
Harvard University

Conflicts

- Research support from the NIA
- Affiliations: Harvard, NBER, former senior health care advisor Obama Presidential campaign
- Conflicts: I give talks to various groups, including medical care providers. A full list for the past five years is on my website, <http://www.economics.harvard.edu/faculty/cutler/Outside%20Activities>.

Disclaimers

- I am not a public health expert
 - I work more on medical systems
 - I am an economist, not an epidemiologist
- Confucian advice: Listen carefully to me, and do the opposite.

Outline

- How an economist thinks about the value of health improvement
- Sources of health improvement and regression
- Implications for public health

The economic case for public health funding

COSTS

- Direct public health funding
- Indirect funding associated with people living longer

BENEFITS

- Value of living longer

Public health (biomedical research) funding is an *option*.

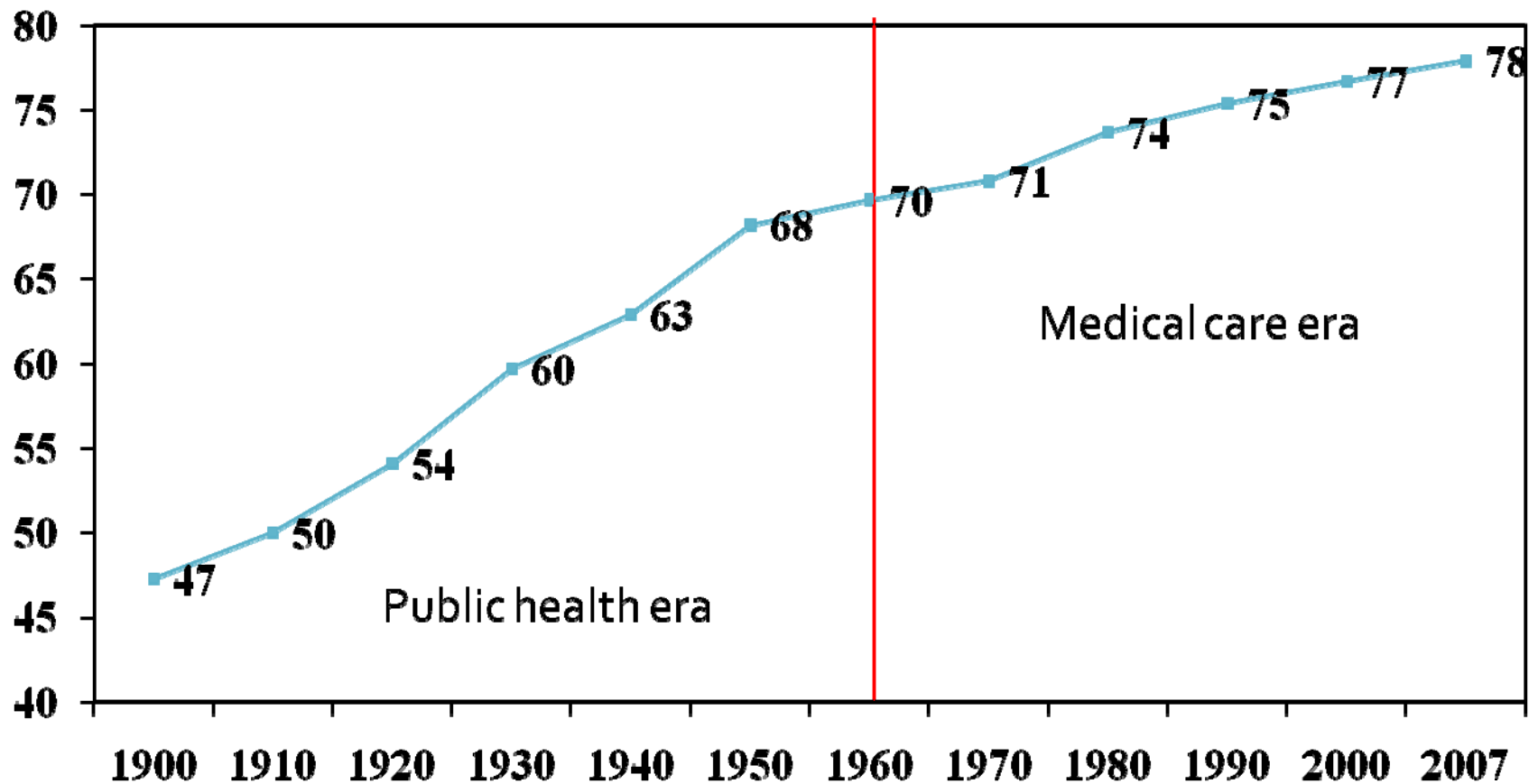
Good options don't cost much, but they can be worth a lot.

- Biggest issue: do we discover something that we then use in the wrong way (e.g., how to implant stents in millions of people who don't need them).

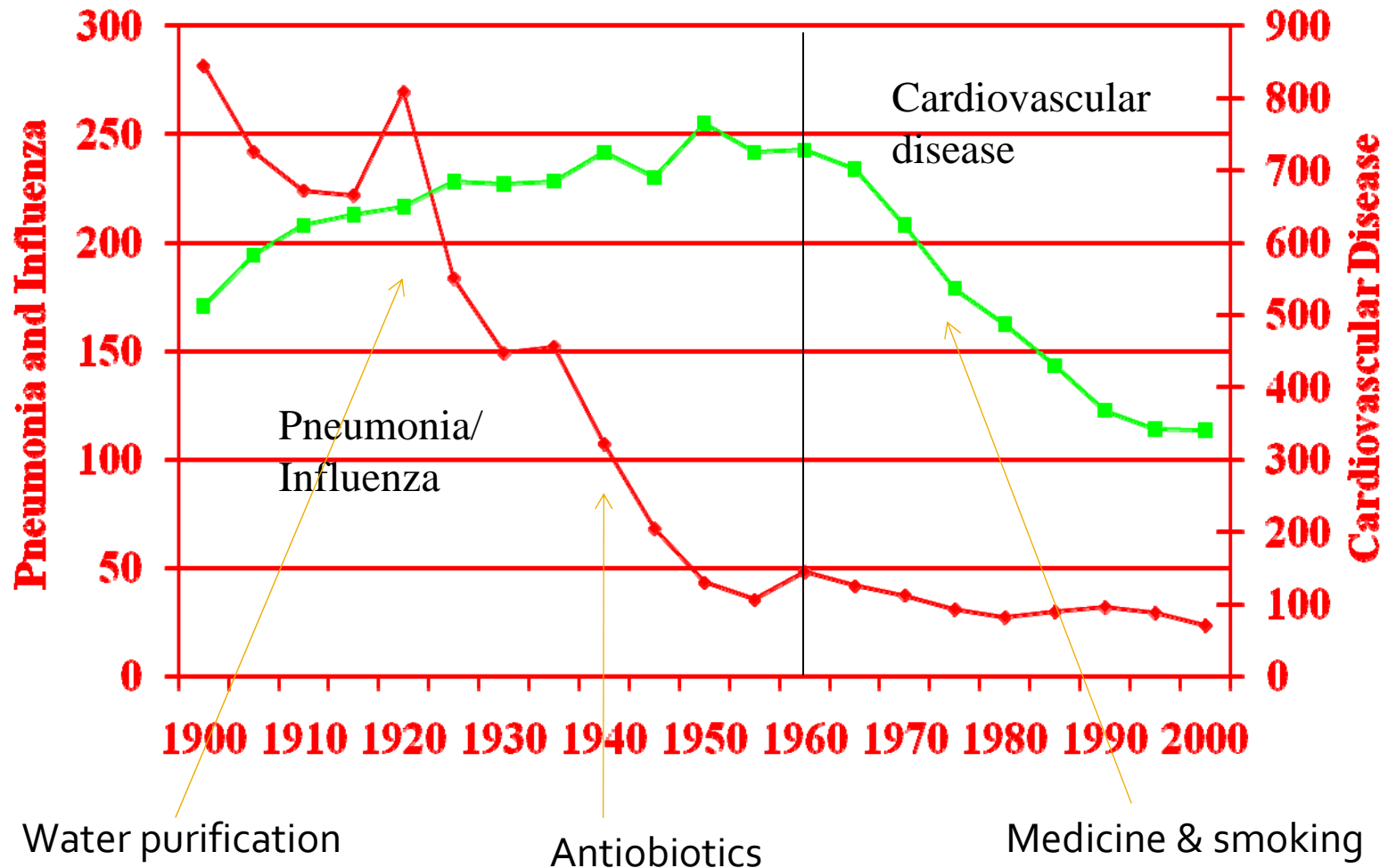
The (Net) Value of Health

- Trade off from labor market studies:
\$100,000 - \$200,000 per QALY
- NICE in the UK \approx £30,000
- US Congress \approx \$ ∞
- *Anything that improves health is worth a lot.*

Life Expectancy at Birth



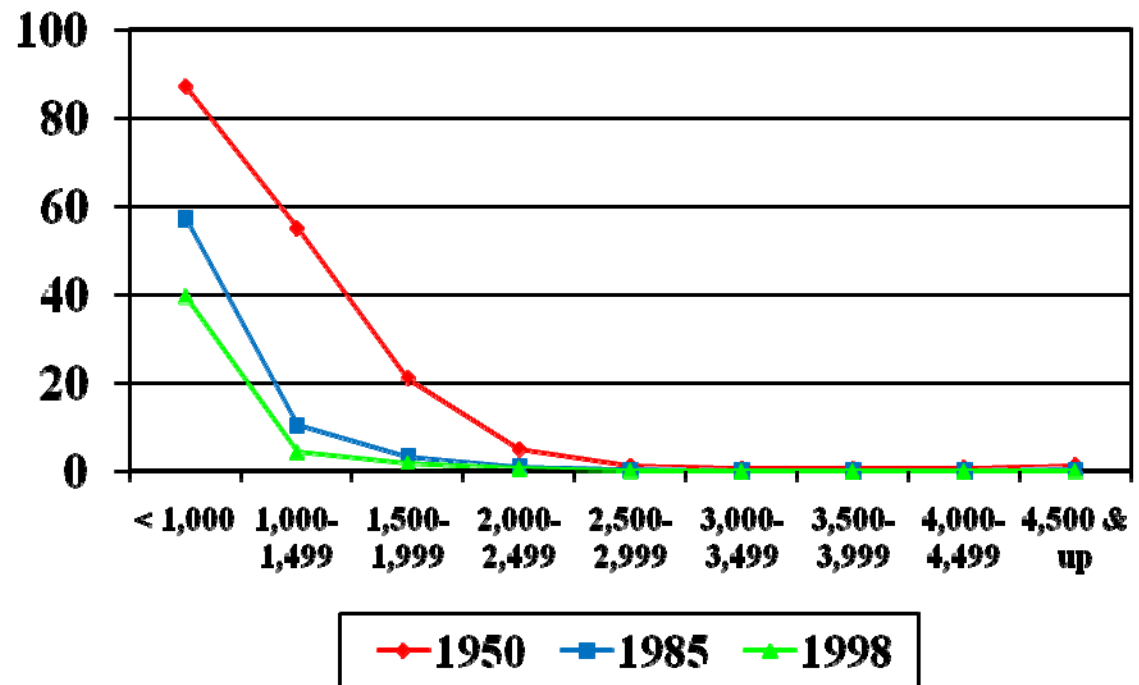
The Transition of Mortality [deaths per 100,000 people]



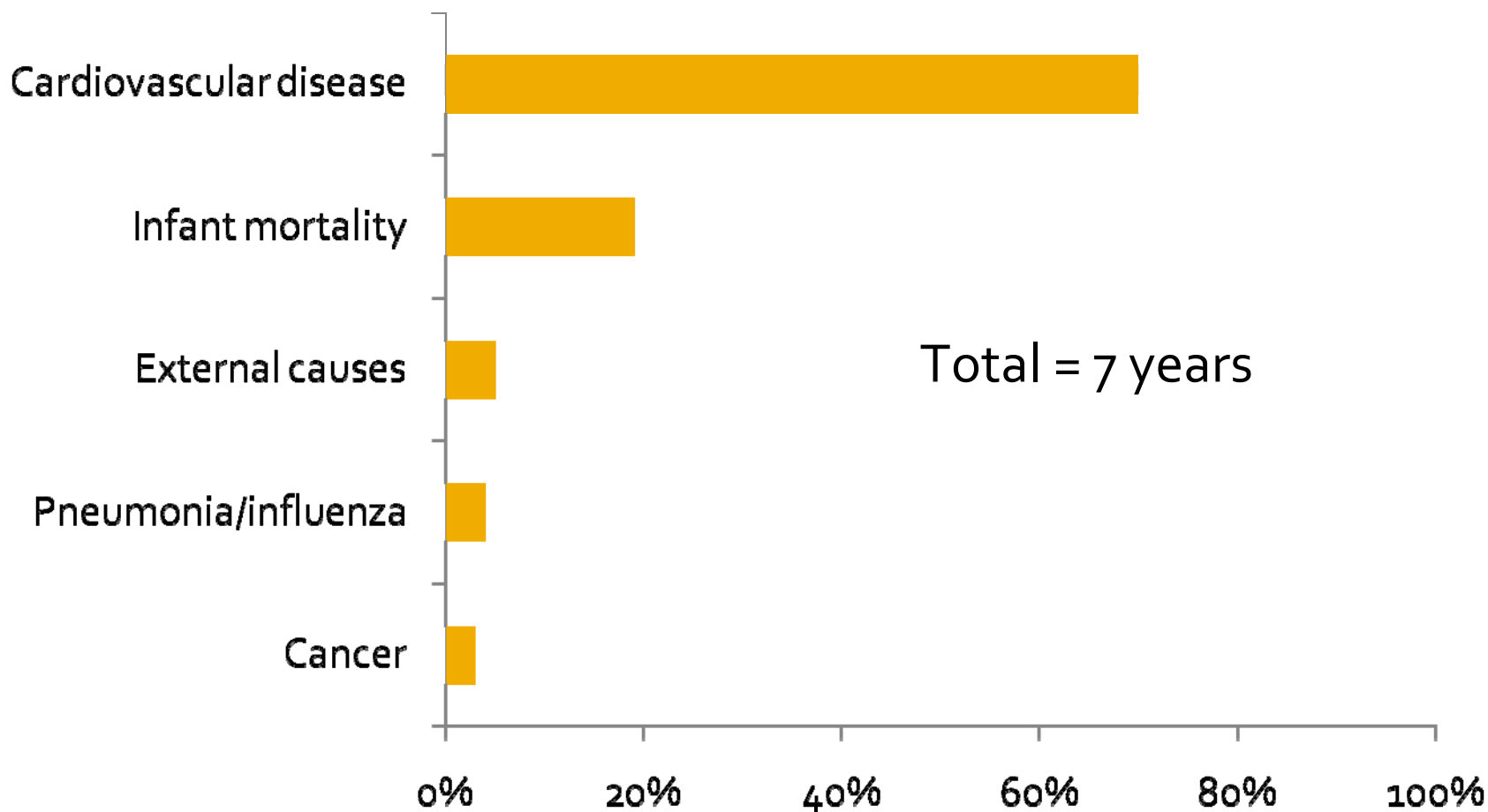
Mortality by birth weight

- Infant mortality for LBW infants has fallen substantially since 1950.
 - Share dying in first year went from 18 to 5 percent.

Mortality Rate by Birth Weight



Sources of life expectancy improvement, 1960-2000



Explaining Mortality Reductions

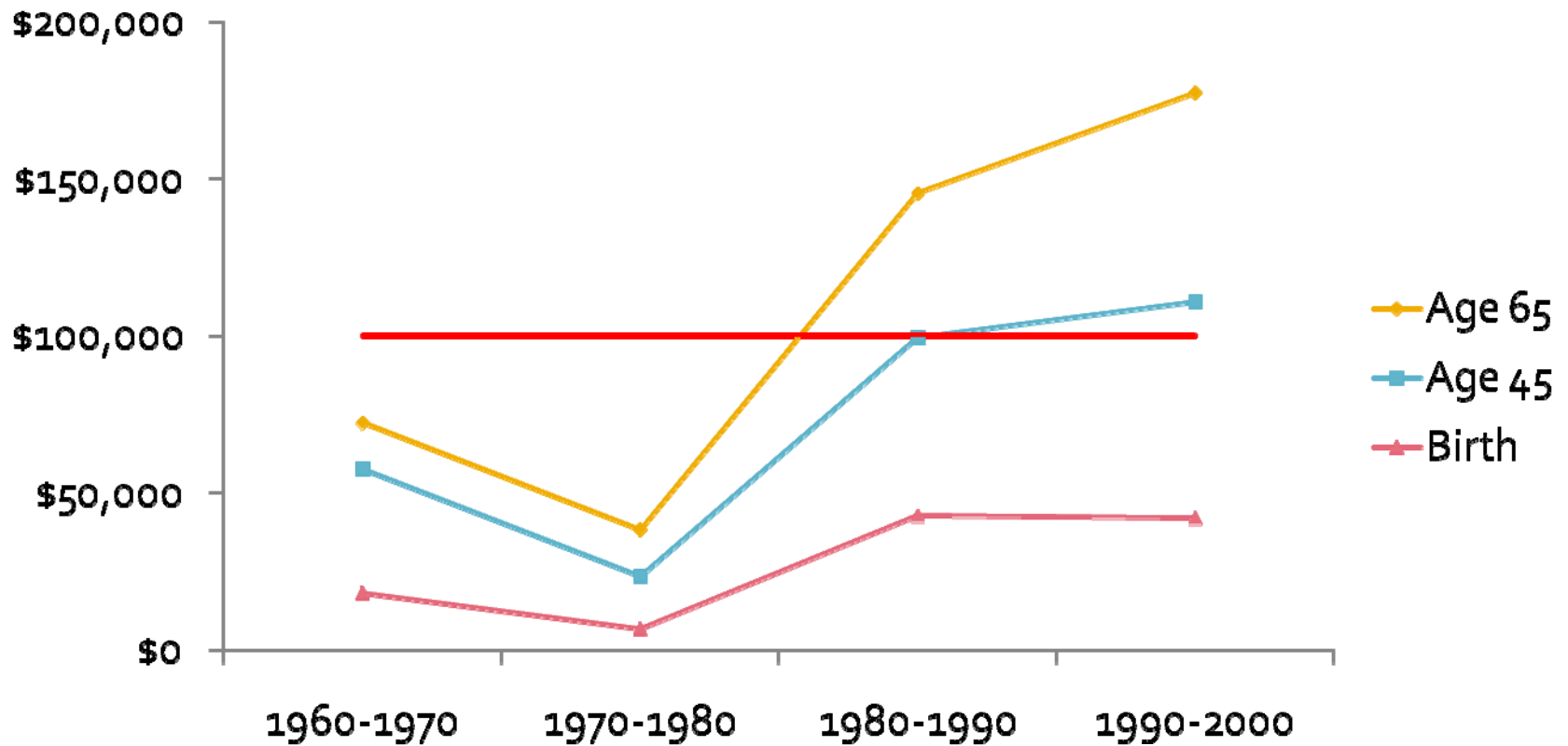
CVD

- 1/3 acute treatment of MI
- 1/3 clinical prevention
- 1/3 prevention

INFANT MORTALITY

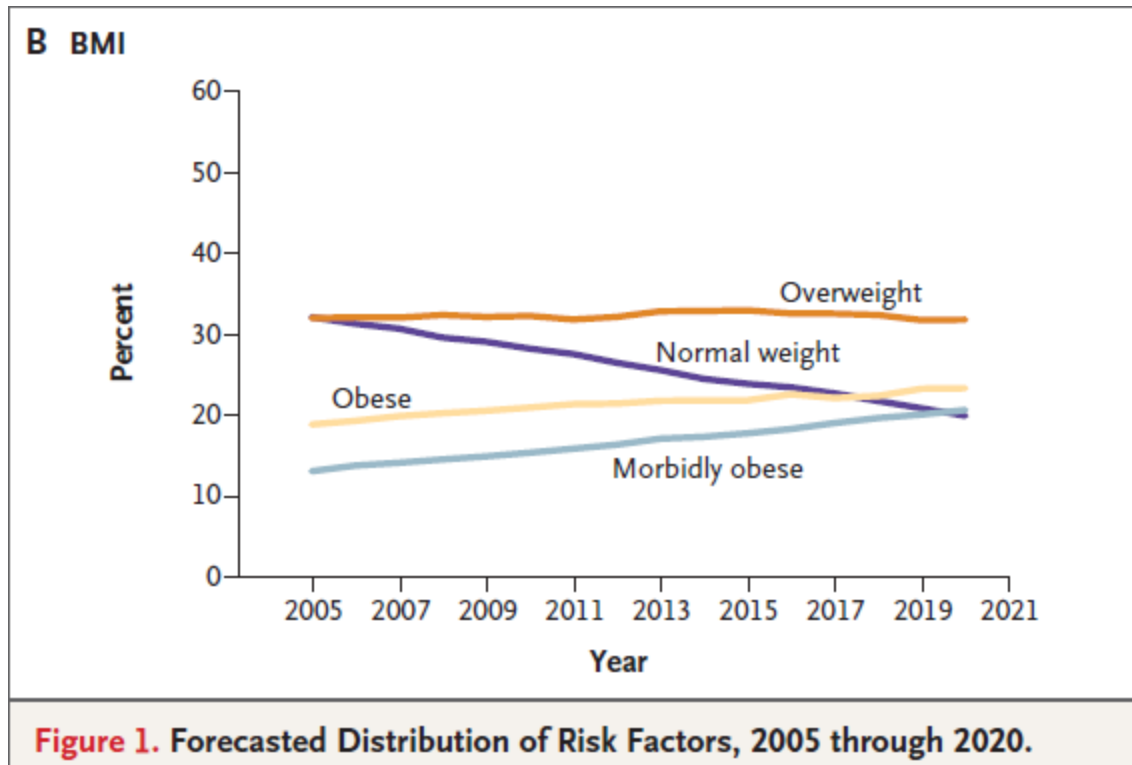
- Treatment of LBW

Longitudinal trends in cost per life year



Cutler, Rosen, and Vijan, *NEJM*, 2006.

The (one) failure -- obesity



The Implication

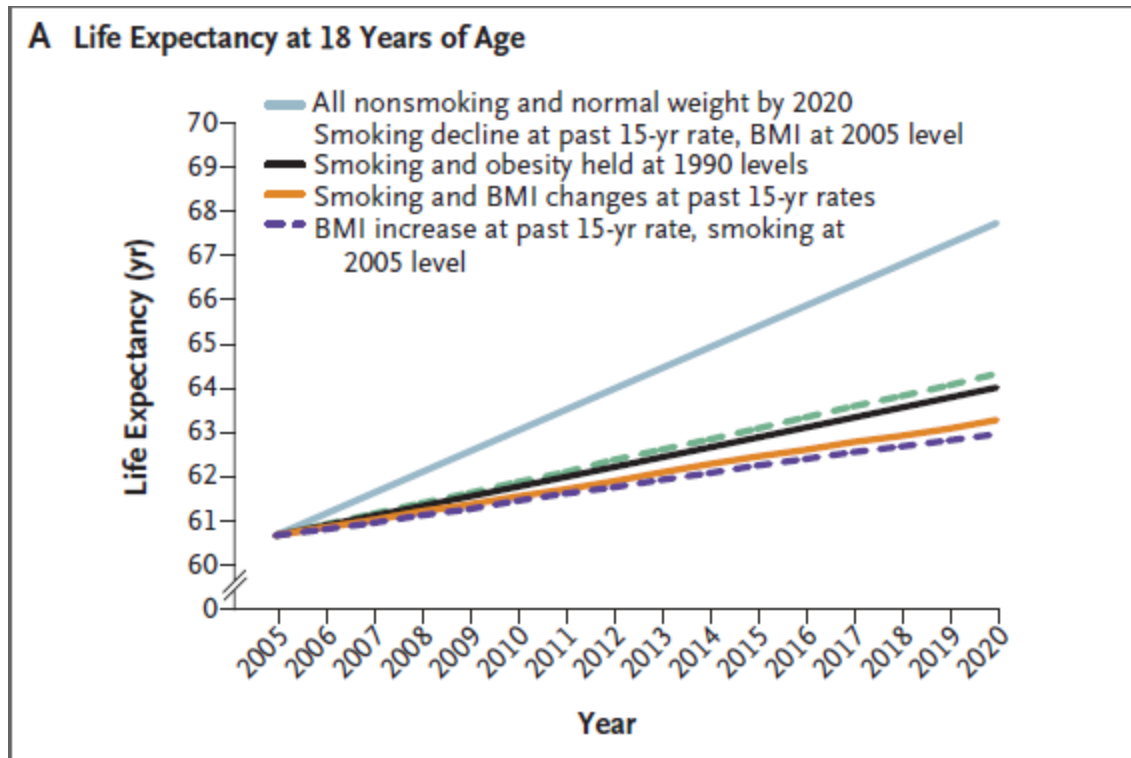


Figure 2. Forecasted Life Expectancy and Quality-Adjusted Life Expectancy at 18 Years of Age from 2005 through 2020, Considering Trends in Smoking Alone, Body-Mass Index Alone, and Smoking and Body-Mass Index Combined.

The Public Health Agenda*

- Big public works
 - Water – outside the US
 - Road safety
- Personal behaviors
 - Smoking cessation
 - Obesity reduction
 - Getting people to take their medications
- Safety and monitoring
 - Food and drug safety

* as seen by a health economist

My observation from politics

- There isn't an agreed-upon agenda
 - What would you do with \$3 billion / year?
- There isn't a systematic accounting of health and public health influences on that
 - How much would improving the water supply add to health?
- There isn't a cost-benefit number out there
 - What is the return to a dollar of public health investment?

Advice from Jerry Garcia

- “Somebody has to do something, and it's just incredibly pathetic that it has to be us.”