



July 9, 2013

## Estimating the Budgetary Implications of Prevention Policies

Presentation at a Congressional Lunch Briefing  
Organized by Representative Michael Burgess


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This presentation provides information published in *Raising the Excise Tax on Cigarettes: Effects on Health and the Federal Budget* (June 2012), [www.cbo.gov/publication/43319](http://www.cbo.gov/publication/43319), and *The Budgetary Effects of Expanding Governmental Support for Preventive Care and Wellness Services* (August 2009), [www.cbo.gov/publication/20967](http://www.cbo.gov/publication/20967).

# Assessing the Cost Impact of Health Interventions: Key Concepts

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- Costs of health care
  - Annual health care spending per capita
  - Lifetime health care spending per capita
- Cost effectiveness
  - Return on investment
- Budgetary impact 
  - Federal government's spending and revenues

# Considerations in Estimating the Budgetary Impact of a Proposed Health Policy

- Baselines for health care spending, health risks, and health outcomes
- Behavioral responses
  - By individuals, employers, state and local governments, health care providers and insurers, and others
- Effects of behavioral changes on people's health
- Effects of health changes on federal spending
  - Medicare, Medicaid, Social Security (OASI and DI), Supplemental Security Income, exchanges subsidies, other federal programs
- Other effects on federal spending
- Direct and indirect (health-related) revenue effects

# Health Promotion and Disease Prevention Interventions

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- Clinical preventive services
- Community-based health promotion
- Laws and regulations to limit risky behavior
- Personal financial incentives to modify risky behavior
- Excise taxes on products with health risks

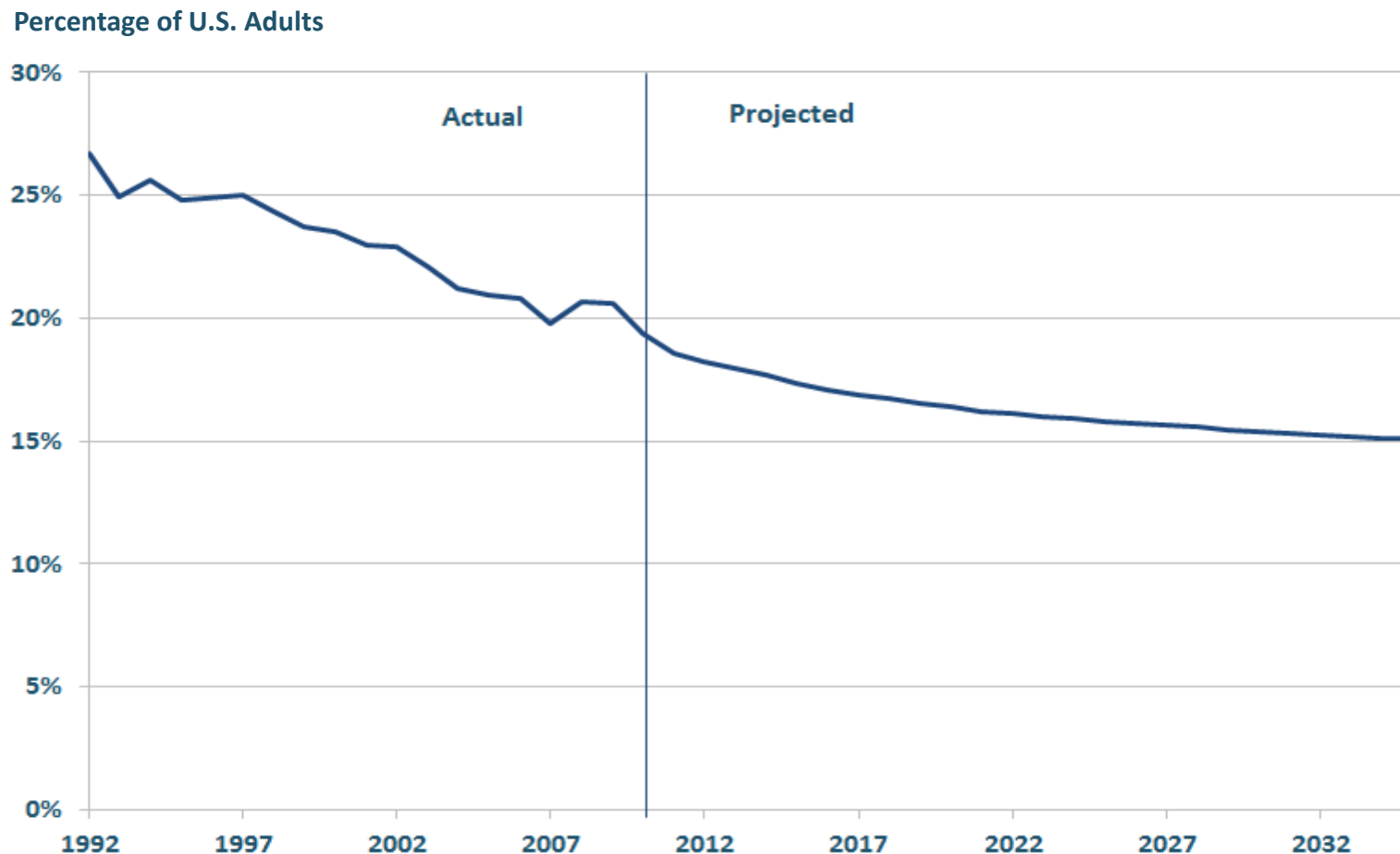
# Establishing the Baseline (Part 1)

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- What risk factor (or condition) does the policy target?
- How prevalent is the risk factor?
  - Variation among population subgroups
- What are the effects of the risk factor on health and mortality?
  - Associations with other risk factors
- What are the prevalence projections for 10 (25, 50) years for the risk factor and its health consequences?
  - State and local government policies
  - Employers' behavior
  - Health care system developments
  - Socioeconomic factors
  - Community norms

# Baseline Projection: Prevalence of Smoking Through 2035

(Based on National Health Interview Survey, multiple years)



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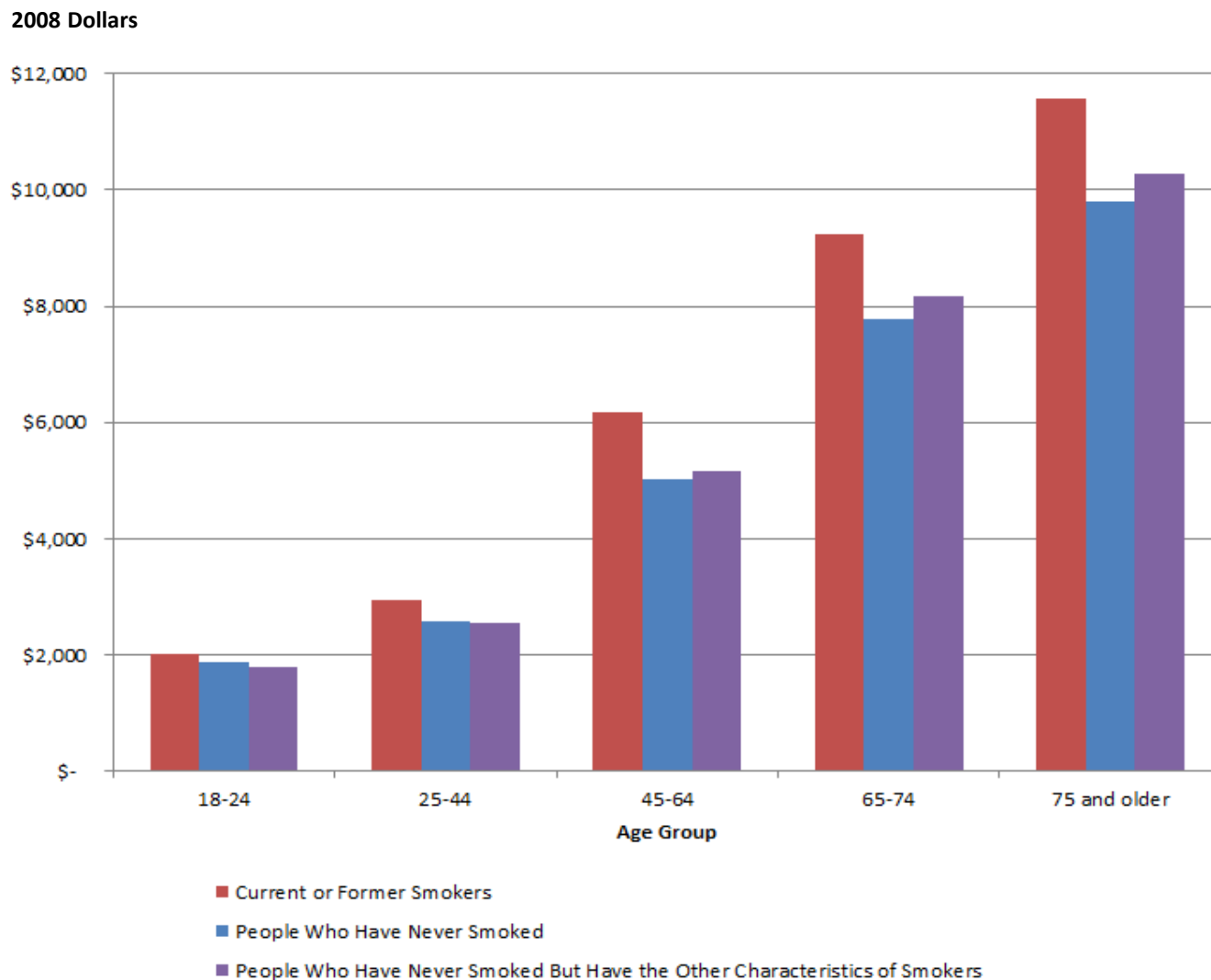
# Establishing the Baseline (Part 2)

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- How do health outcomes associated with the risk factor (condition) affect:
  - Annual and lifetime per capita health care spending?
    - Overall and among population subgroups?
  - Health insurance premiums?
    - Taxed and untaxed shares of compensation?
  - Participation and spending in government health, disability, and retirement programs?
- And for estimates incorporating changes in GDP....
  - Labor force participation?
  - Productivity in the workplace?
- What are the projections of those metrics for 10 (20, 50) years?

# Smoking and Per Capita Health Care Spending

(Based on Medical Expenditure Panel Survey, 2000 to 2008, and National Health Interview Survey 1998 to 2007)



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# Behavioral Responses and Health Outcomes

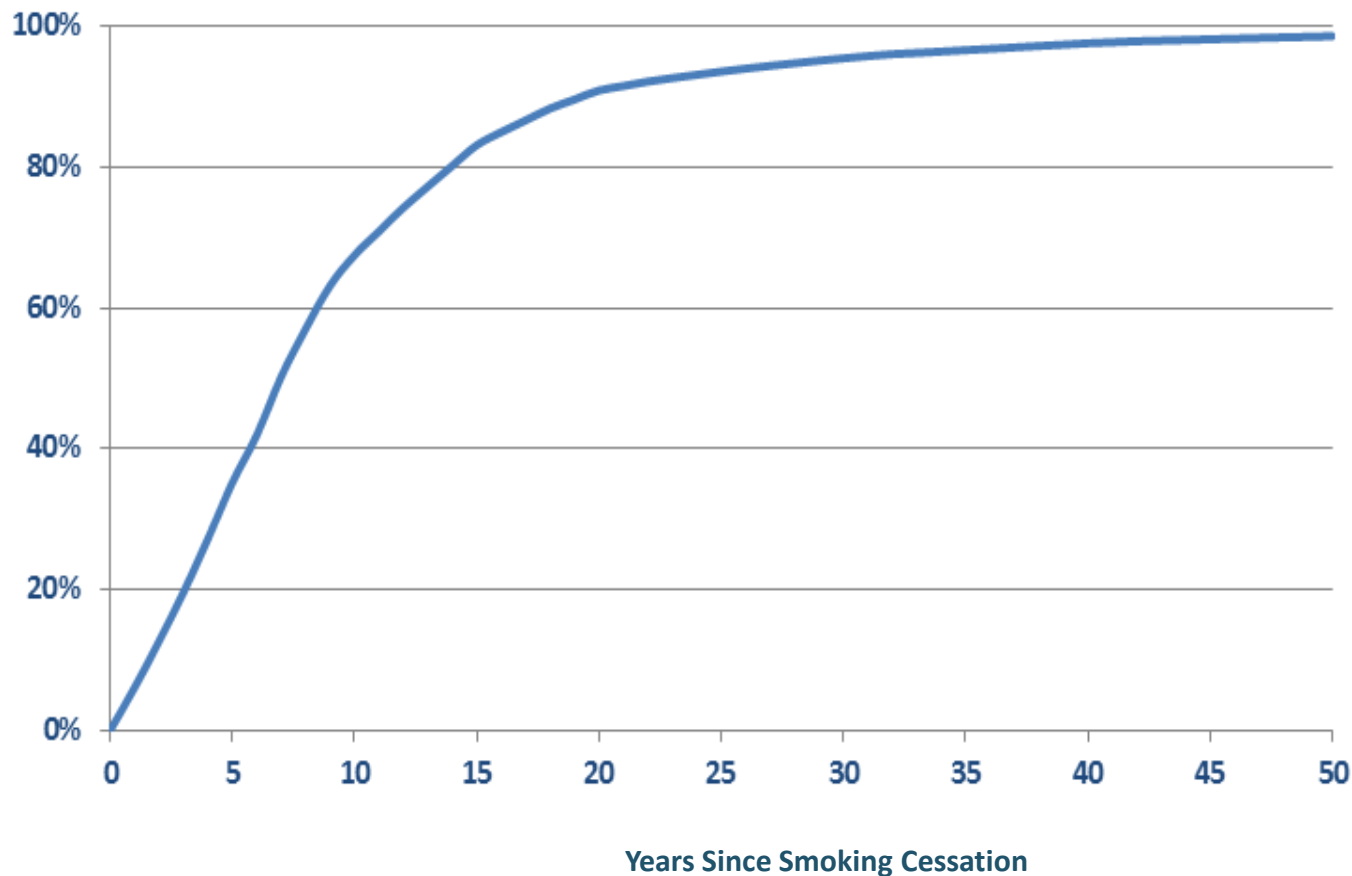
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- What responses would the policy induce from
  - Individuals?
    - Variation among population subgroups
  - State and local governments?
  - Employers?
  - Health care providers and insurers?
  
- How would those behavioral responses affect health and longevity
  - Initially and over time?
  - Taking behavioral substitutions into account?
  
- How sustainable would the responses and effects be?

# Rate of Improvement in Health for Smokers Who Quit

(Based on IARC's tobacco control report, Surgeon General's reports)

Percentage Recovery to Health Status of Nonsmokers with Similar Characteristics



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# Economic Outcomes

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- How would the health and longevity outcomes affect:
  - Annual and lifetime per capita health care spending?
    - Variation among population subgroups
  - Health insurance premiums?
  - Labor force participation and productivity (for estimates incorporating changes in GDP)

# Fiscal Outcomes

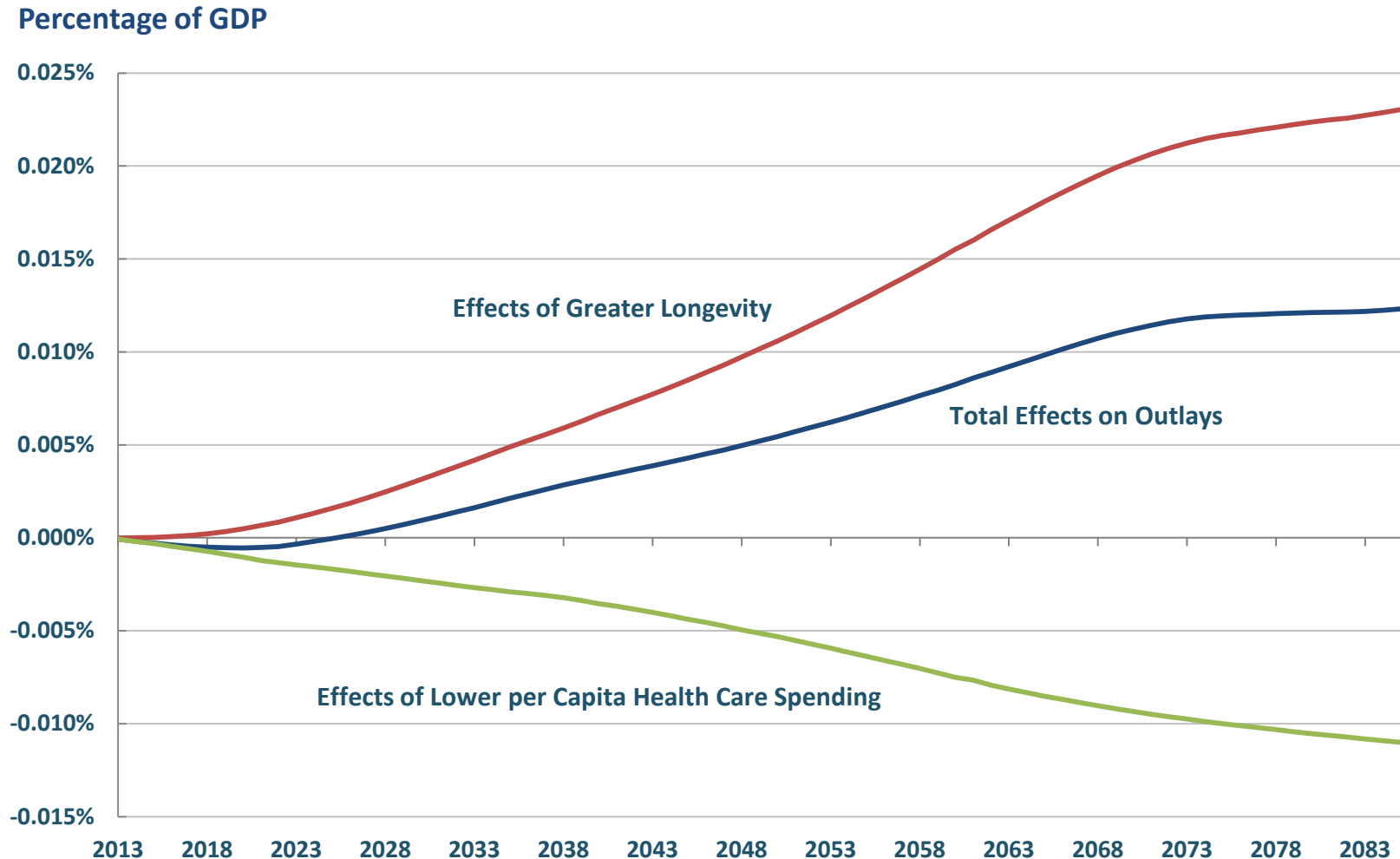
- How would health, longevity, and associated economic outcomes affect:
  - Federal outlays?
    - Medicare
    - Medicaid and exchange subsidies
    - Social Security (OASI and DI)
    - Other federal health and retirement programs
  - Federal revenues?
    - Changes in the mix of compensation
    - Changes in earnings (for estimates incorporating changes in GDP)
- How would other responses affect federal spending?
  - Shifts of existing spending by other stakeholders to the federal government

# Illustrative Findings

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From the CBO Study  
*Raising the Excise Tax on Cigarettes*

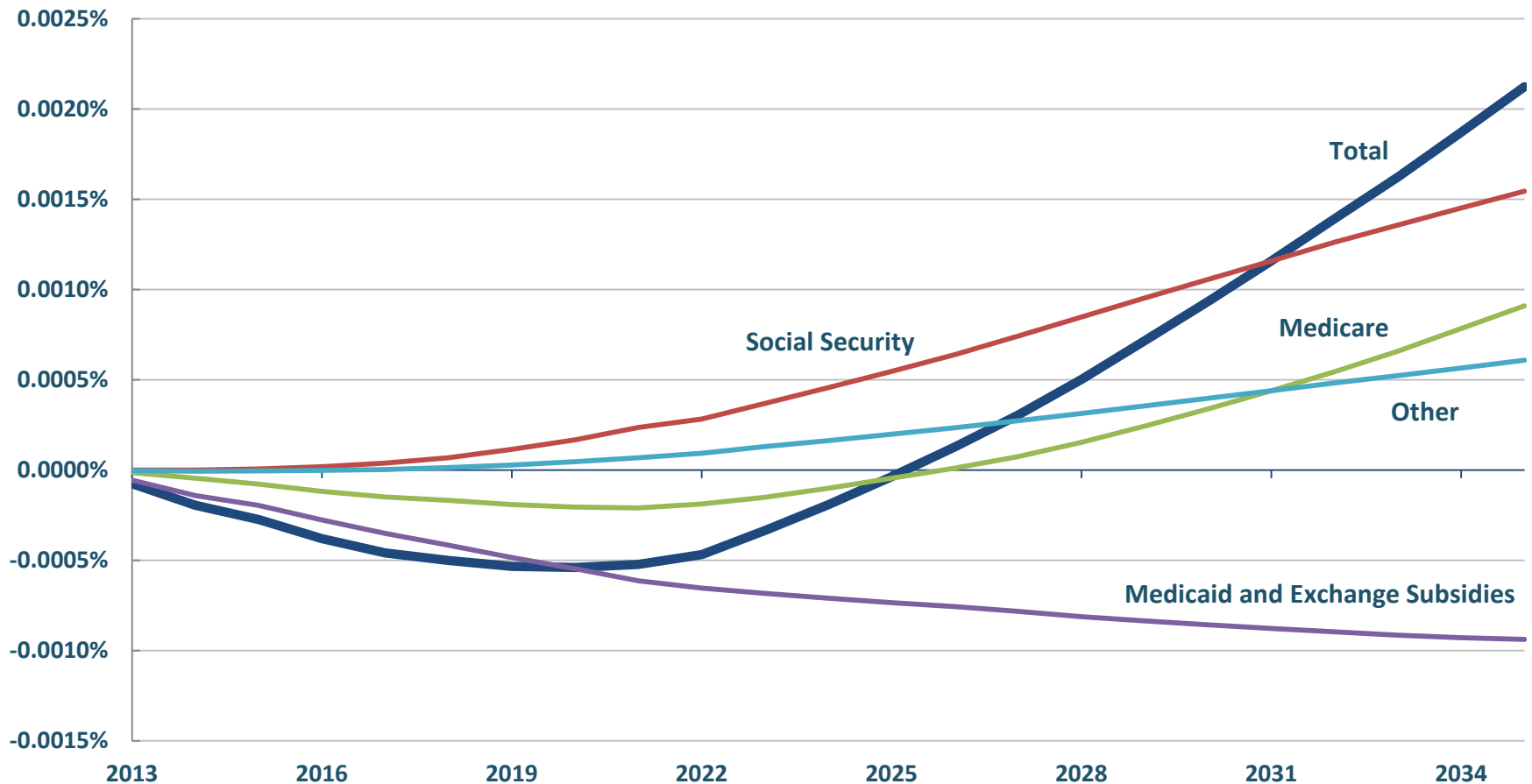
# Effects on Federal Outlays of Increased Longevity and Lower per Capita Health Care Spending



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# Effects on Federal Outlays, by Program

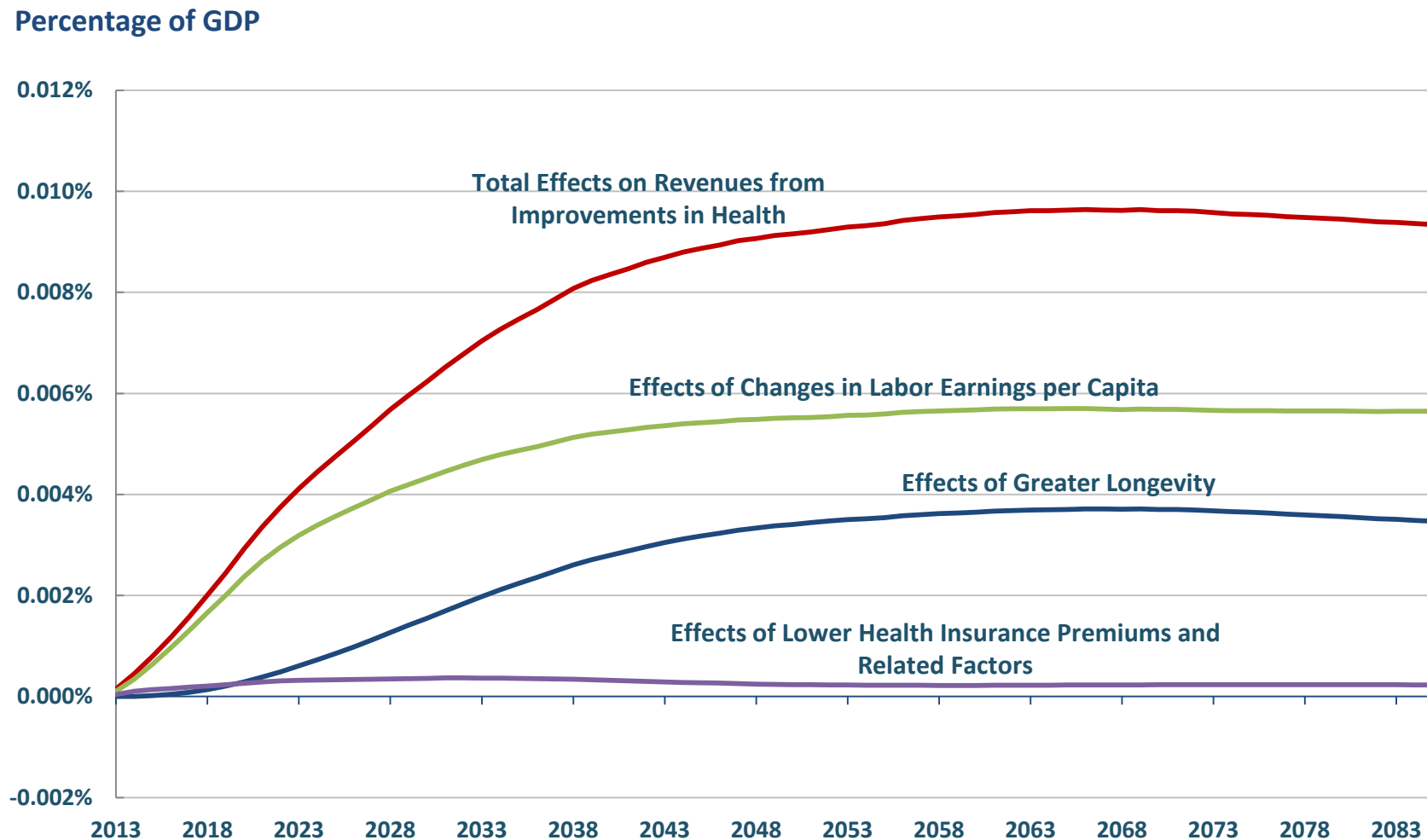
Percentage of GDP



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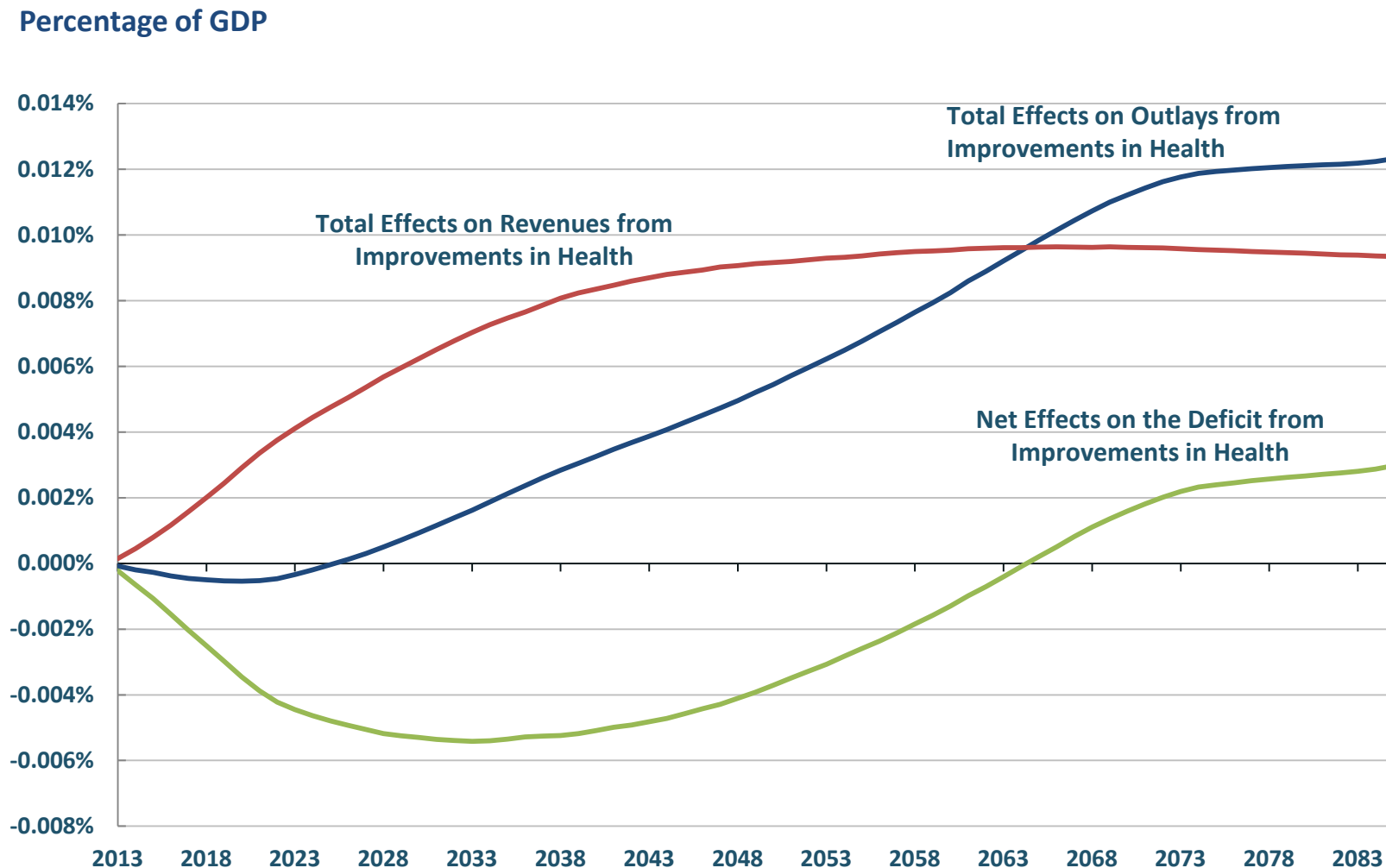
# Health-Related Effects on Federal Revenues



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# Health-Related Effects on Revenues, Outlays, and the Deficit



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# Challenges in Weighing the Strength of the Evidence

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- Sparse or conflicting evidence
- Lack of risk factor information in some household surveys
- Weak research designs
  - Cross-sectional studies, selection bias issues
- Publication bias
- Extrapolations from one subpopulation to another
- Extrapolations from clinical to community settings