



Insight

Primer: CBO Scoring of Preventive Health Measures – Important Considerations

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Executive Summary

- The Congressional Budget Office (CBO) creates budget estimates of federal legislation, known as a “score,” over a defined period of time, usually 10 years; these scores take into account the potential population affected by a policy, its cost and savings, and its direct and indirect effects on federal revenues and outlays.
- CBO scores look only at a policy’s federal budgetary impact and do not judge its economic or societal value.
- Changes in preventive health policy are particularly difficult to fully assess based on CBO scores alone, since scores cannot give a broader view of policy effects such as impact on life-years, avoidance of pain and disability, or quality of life for those affected.

Introduction

Since its founding in 1975, the Congressional Budget Office (CBO) has routinely analyzed the budgetary effects of proposed and enacted legislation from Congress in a process known as budget scoring. Among the many policies CBO has analyzed, its work on health has been particularly important, given that health expenditures in the United States make up around one-fifth of the nation’s economy.

This primer reviews how CBO estimates the budget impact of preventive health policies, with a focus on the considerations and limitations that inform the agency’s budget scores on these matters. It should be noted that CBO’s scoring is purely a budget estimate and not a cost-benefit nor cost-effectiveness analysis. CBO only looks at the costs and savings to the federal government, usually (but not always) over a 10-year period and does not normally account for or pass judgment on economic impacts, non-budgetary benefits, or other expected impacts of a proposed policy. When it comes to preventive health policies, CBO will examine expected costs and budgetary savings arising from utilization, effectiveness, potential injury to patients, increased longevity, and other relevant variables to inform the federal budget impact of a given policy.

The Factors in a CBO Cost Estimate of Preventive Health Policies

This paper discusses how CBO scores preventive health services coverage by the federal government. Preventive services are a particularly illustrative example of the complexities involved in CBO scoring and also demonstrate the challenges for policymakers when pursuing legislation designed to improve health and conserve federal dollars.

Some of these challenges arise from the fact that preventive services often are not *cost savers*, though they can

be *cost effective*, a distinction that may complicate congressional considerations. Research generally supports the notion that timely access to preventive care can be life-saving.[1] Whether preventive interventions are both life-saving and cost-saving, however, is a trickier question, particularly with regard to whether the government saves money. A 2008 study on preventive services, for example, shows that the vast majority of preventive services do not reduce health care expenditures.[2] The study estimated that only around 20 percent of preventive medical services produce savings, while 60 percent increase expenditures but are generally viewed as cost-effective means toward improving health. The final 20 percent of preventive services were not cost-effective to the degree they improved an individual's health. So, while 80 percent of a broad collection of preventive services were generally cost-effective, only a quarter of these actually saved money, despite their health benefits for patients.

The notion that potentially life-saving preventive interventions rarely save money on the federal balance sheet is counterintuitive for many. Therefore, it is helpful to review the wide variety of factors CBO accounts for in its cost estimates. Among the factors CBO must consider when appraising costs of subsidizing a preventative health measure are the price of the service itself, how many people will utilize the newly subsidized service and the demographics of those individuals, the frequency with which the service needs to be performed, the effectiveness of the service, and the lifetime incidence of the condition the service is intended to prevent.

While a specific intervention may save both lives and federal dollars, not everyone in a given population is at risk for a specific condition nor will many who are at risk for said condition ever acquire it. As such, a federally subsidized preventive measure may not improve the health of many of the individuals who utilize it but still cost the federal government money. Alternatively, for those who do utilize and benefit from the preventive service, that benefit may not translate into savings for the federal government; in other words, federal dollars may not cover the condition the service is trying to prevent, so federal spending on prevention of the condition may not lead to federal savings on treatment of the condition. CBO also must factor in the number of people who will utilize a service without the new policy, meaning the impact of the proposed policy will not be as large despite the increased spending. Additionally, CBO must take into account potential adverse events – many preventive services, such as colonoscopies, have some risk of harm to the patient that create complications (and thus costs) that otherwise would have never occurred.[3] CBO must also account for studies that are specific to populations where the intervention would inherently be effective, since many preventive policies apply beyond those small populations to a much broader general public.

The CBO Scoring Process

Around the beginning of every year, CBO develops what is known as a baseline budget outlook. This baseline includes estimates of revenues, spending, the deficit, and the national debt and assumes that no further changes in law are made. The CBO baseline budget essentially provides the counterfactual that can be used to gauge how much a given policy change will cost the federal government.[4]

Once the baseline is developed, CBO can score a policy against it. To do this for preventive health policy, CBO follows three relatively straightforward steps: identify the population affected by the policy, estimate the change in national health spending (which includes both public and private spending) that would result from the policy, and then estimate what budgetary effects the change in national health spending would have. CBO then compares that spending estimate to the baseline.

Step 1: Identify Populations

CBO must first identify how many people will be affected by a given policy. In the case of a policy that federally subsidizes a preventive health service, CBO will use a variety of administrative or survey data, as well as scientific studies. If CBO was scoring the cost of covering breast cancer screenings for women, for example, it might use census data on the number of adult women in the United States, combined with published research on the appropriate ages to begin screening those women. If the score was for a policy to cover preventive services for people with a certain genetic mutation that puts them at higher risk for a condition, CBO might use published research about the population-level prevalence of such genetic mutations. After determining the size of the potential target population, CBO must estimate the number of individuals in that population that are likely to actually use the preventive service. CBO can do this by referring back to prior laws that also attempted to increase utilization for the same or similar services. It can also consider how utilization of these services changes depending on whether it is covered by insurance, among other methods. CBO also accounts for a gradual uptake in utilization of a new service.[5]

Step 2: Estimate Overall Spending

After estimating how many people in the target population will utilize the service, CBO multiplies that population by the cost of the service. The type of preventive service, such as primary preventive services (which aim to prevent the disease entirely, such as vaccines), secondary preventive services (which aim to detect and diagnose the disease early, such as screenings), and tertiary preventive services (services to enhance recovery or mitigate against recurrence or complications, such as medications to manage diabetes) will influence the cost.

For example, in the case of a primary preventive service such as vaccines, CBO must factor in the likelihood that an individual will acquire the condition under both current law and under the proposed policy, as well as the likelihood that the condition will require treatment. CBO also accounts for adverse reactions to the preventive service that require treatment (and thus increase costs).[6]

Step 3: Estimate Federal Spending

CBO must account for which government and private entities are paying what percentage of the cost of the service in order to understand how the service may impact federal spending. The type of insurance held by the target population will impact how much the federal government ultimately spends or saves. It is common for a service to have less of an effect on federal spending than overall spending. For example, policies targeting a population insured by Medicare, the Department of Veterans Affairs, or the Department of Defense would affect spending by both the federal government and beneficiaries (in the form of cost-sharing and premiums). If the policy affects Medicaid patients, that cost is shared by the federal and state governments. Policies affecting individuals with employer-sponsored insurance may increase or decrease federal revenues, as the policy may cause an insurance premium to go up (decreasing taxable income) or down (increasing taxable income). If the policy affects individuals who get insurance through the Affordable Care Act (ACA) exchanges, any resulting increase or decrease in premiums will respectively increase or decrease federal outlays that subsidize those premiums.

Another part of estimating the impact of preventive measures on the federal budget is measuring potential increases in longevity or lower rates of disability. Americans who live longer cost Social Security and Medicare more, increasing federal outlays, while lower rates of disability decrease federal outlays for programs such as Social Security Disability Income or Medicaid. It should be noted that CBO does not consider the economic impacts of these choices; it does not account for any increase (or decrease) in labor force participation. CBO typically assumes that overall economic output will not change as a result of a policy being implemented.[7]

Previous CBO Estimates

CBO cost estimates typically apply to a 10-year window. Below are two examples of scores CBO has issued for legislation, as well as topical health policy issues that are being considered by Congress and may need CBO scoring in the future. These examples were chosen to frame how CBO considers different types of services. Due to the factors listed earlier – Medicare doesn't cover everyone or everything, and longevity increases program costs – it should be noted that it is unlikely the federal government would share in all the potential savings of a given service.

Tobacco Cessation Services

As part of its analysis of the ACA, CBO estimated that providing coverage of tobacco cessation services in Medicaid for pregnant women would save Medicaid \$100 million over a 10-year period. CBO accounted for the number of pregnant women who might utilize the service, the cost of the service, the effectiveness of tobacco cessation programs for pregnant women, and the health effects of tobacco smoking on the babies. CBO determined the cost of covering these services was outweighed by the cost of treating the health problems that result in both mother and child when pregnant women smoke.[8] This service coverage provides a good example of primary preventive services saving money for the federal government.

Cancer Screening Tests

The Medicare Multi-Cancer Early Detection Screening Coverage Act, introduced in both the House (H.R. 1946) and Senate (S. 1873) in 2021, is an example of a secondary preventive service policy.[9] The legislation establishes the authority for Medicare to cover multi-cancer screening tests, which are designed to aid in the early detection and treatment of a wide variety of cancers, many of which do not currently have individual screening tests available.[10] Medicare only covers screening tests recommended by the U.S. Preventive Services Task Force (USPSTF): cervical, colorectal, breast, and prostate cancers.[11] At least one estimate puts the national (though not federal) cost-savings of earlier diagnosis of cancer at \$26 billion per year, while studies in industrialized nations find treatment costs for patients diagnosed early to be two to four times lower than those diagnosed later.[12]

Obesity Medications

In 2015, CBO conducted a preliminary analysis on hypothetical savings realized by the federal government resulting from federal government outlays to cover Food and Drug Administration approved anti-obesity medications and expanded access to behavioral counseling for Medicare beneficiaries who have obesity, both considered tertiary preventive services.[13] CBO considered beneficiary participation rates, how many and what types of providers would offer treatment, how many participants would complete a full course of treatment, the direct cost of the treatment, how much weight would be lost and how long that weight loss would be maintained, and how that weight loss would affect the health care spending on those participants. In estimating the cost of weight-loss drug coverage to Part D, CBO would consider drug prices, average number of refills, average cost sharing among beneficiaries, and the cost of any associated counseling. The studies CBO examined looking at weight loss and health spending found no significant reductions in spending net of intervention costs or lower rates of obesity-related health problems. In addition to other factors, CBO noted that there may be cumulative health effects of decades of obesity that cannot be fully reversible through weight loss. Consideration should also be given to the costs associated with increased longevity. Overall, CBO determined there was additional evidence needed to support the idea that covering anti-obesity medications and expanded

access to behavioral counseling would save the federal government money. (Note: CBO was asked to score the Treat and Reduce Obesity Act, S.596, in October of 2022.)^[14]

Medicare Part D

In 2004, CBO scored Medicare Part D, the prescription drug benefit created by the Medicare Prescription Drug, Improvement, and Modernization Act of 2003. While not explicitly a preventive health policy, this example is included to illustrate the limits of CBO's predictive abilities. CBO estimated that Part D would lead to \$400 billion in net federal spending for fiscal years 2006–2013.^[15] As part of CBO's consideration, factors considered included: participation rates among beneficiaries, per-beneficiary costs, a price effect (prices would rise if patients were more insulated from those prices), a use effect (drug use will increase if out-of-pocket costs decrease), subsidies from employers to their retirees, premiums paid by beneficiaries, subsidies for low-income individuals, and interactions with Medicaid, among other factors. At the time of the score, CBO did not factor in savings from seniors being healthier as a result of increased access to medication, as the available evidence at the time did not indicate that increased drug utilization would lead to a decreased use of medical services.^[16] Actual federal spending for 2006–2013 on Part D was \$353 billion – almost 13 percent less than originally estimated.^[17] This significantly lower cost was due primarily to two factors: slower-than-expected rates of growth in drug spending per person over the cost estimate period, and lower-than-expected participation.^[18],^[19]

Conclusion

Perhaps the most important thing to remember about a CBO score is that it is simply an estimate of a policy's cost to the federal government over a limited window of time, usually 10 years. It is not a cost-benefit analysis nor a cost-effectiveness analysis. It is not a statement about the economic or even societal value of a given policy proposal, nor is it a crystal ball that can perfectly predict outcomes. With the federal debt at \$31.5 trillion and growing, a CBO score is a valuable tool and important factor for policymakers to consider, but it is neither a sword to wield nor a shield to hide behind when debating the potential long-term merits or drawbacks of a policy change.

[1] <https://pubmed.ncbi.nlm.nih.gov/20820022/>

[2] https://www.nejm.org/doi/10.1056/NEJMp0708558?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%200www.ncbi.nlm.nih.gov

[3] <https://www.cbo.gov/system/files/2020-06/56345-CBO-disease-prevention.pdf>

[4] <https://www.americanactionforum.org/insight/when-current-law-and-current-policy-meet/>

[5] <https://www.cbo.gov/system/files/2020-06/56345-CBO-disease-prevention.pdf>

[6] <https://www.cbo.gov/system/files/2020-06/56345-CBO-disease-prevention.pdf>

[7] <https://www.cbo.gov/system/files/2020-06/56345-CBO-disease-prevention.pdf>

[8] <https://www.cbo.gov/sites/default/files/111th-congress-2009-2010/costestimate/amendreconprop.pdf>

- [9] <https://www.congress.gov/quick-search/legislation?wordsPhrases=Medicare+Multi-Cancer+Early+Detection+Screening+Coverage&wordVariants=on&congressGroups%5B%5D=0&congresses%5B%5D>
- [10] <https://www.norc.org/NewsEventsPublications/PressReleases/Pages/new-research-highlights-just-one-in-seven-diagnosed-cancers-found-by-a-recommended-screening-test.aspx#:~:text=According%20to%20NORC%20estimates%2C%2057,%25%20of%20cancer%2Drelated%20deaths>
- [11] <https://eshoo.house.gov/media/press-releases/eshoo-pallone-urge-hhs-reevaluate-uspstf-processes-better-serve-health-care>
- [12] <https://www.ajmc.com/view/screening-for-cancer-the-economic-medical-and-psychosocial-issues>
- [13] <https://www.cbo.gov/publication/50877>
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- [16] <https://www.cbo.gov/sites/default/files/cbofiles/attachments/43741-MedicalOffsets-11-29-12.pdf>
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- [19] <https://www.cbo.gov/sites/default/files/113th-congress-2013-2014/reports/45552-PartD.pdf>