



# Budget Model

**Summary:** We present the demographic and macroeconomic effects of the Medicare for All Act of 2019 (S.1129) introduced by Senator Sanders. We project that it would improve longevity, worker health, and population size, but under our base assumptions the long-run impact on GDP varies by as much as 24 percentage points depending on how the plan is financed.

## Key Points

- Under current law, we [recently projected](#) that the percent of the population without medical insurance will more than double over the next 40 years, growing from around 10 percent today to over 27 percent by 2060. Under Sanders' Medicare for All, the uninsured rate would essentially fall to zero by design.
- We project that the Sanders' Medicare for All would improve population health by 2060, reduce the share of the population that is seriously ill from 15 percent to 13 percent, increase life expectancy by 2 years, grow the population 3 percent, and increase worker productivity.
- Taken literally, Sanders' plan lacks a financing mechanism, which by long-standing CBO and PWBM convention implies deficit financing. Under deficit financing, we project that the Medicare for All Act would reduce GDP by 24 percent by 2060, despite large efficiency gains from lower overhead and reimbursement costs.
- As a presidential candidate, Senator Sanders, however, has stated his intent to also increase taxes, although he has not specified the actual tax changes tied to Medicare for All. Accordingly, we also analyze two alternative financing mechanisms that mostly finance benefits received by workers. With *premium financing*, where most workers pay the same insurance premium (subsidized for lower-income workers)—similar to private insurance with no risk adjustments—we project that GDP increases slightly by 0.2 percent by 2060. With *payroll tax* financing, where workers with higher wages pay more, GDP falls by 15 percent.
- We also provide various robustness checks to key model assumptions and plan design. For example, without the expansion of plan benefits to include long-term care or dental, but still including the elimination of most deductibles while covering all workers, GDP increases by 12 percent under premium financing. These results indicate that Medicare for All could be designed in a way that boosts economic growth.

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# Senator Sanders' Medicare for All (S.1129): An Integrated Analysis

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## Introduction

The [Medicare for All Act of 2019](#) introduced by Senator Sanders in April 2019 would create a single federal health insurance program, Medicare for All ("M4A"), to unconditionally cover all U.S. residents. This brief provides the first integrated analysis of the impact of the Act on numerous demographic variables (overall health, longevity, population size, worker productivity due to health improvements), interactions with other parts of government (changes to the income tax base and changes in revenue and costs of Social Security, SNAP and Medicaid) as well as key macroeconomic variables. We capture all of these interactions within an internally consistent framework. As discussed in our [companion brief](#) and [technical presentation](#) in much greater detail, capturing these interactions presents a very different understanding of M4A relative to conventional budgetary cost estimates alone.

## Overview of the Act

The Medicare for All Act would cover all medically necessary services in 13 benefit categories, including categories that are not currently covered by Medicare, such as dental, vision, hearing, and home and community-based (HCBS) long-term services and supports (LTSS). It would not cover institutional LTSS such as nursing homes.

The Act would provide universal coverage, eliminating all private and public health insurance programs, including Medicare Advantage, that duplicate benefits provided by Sanders' M4A. Medicaid would cover only institutional LTSS, though each state is required to maintain its funding of Medicaid at current levels.

The Medicare for All Act contains two main cost-control measures: lowering overhead costs and reducing reimbursement rates to healthcare providers.

First, the Act aims to take advantage of Medicare's lower overhead costs relative to private insurers. Currently, the overhead costs for private insurers are around 15 percent, which means that only 85 cents of each healthcare dollar is spent on actual medical care. Medicaid has an overhead of around 7 percent, but some of these costs involve negotiations and transactions with state governments. Medicare has an overhead rate of about 9 percent when including the Medicare Advantage program that the Act would replace. Taken by itself, Medicare's standard fee-for-service program has lower overhead costs (around 2 percent), though that estimate may be artificially low in part due to underinvestment in Medicare fraud and abuse prevention.

Second, payments to healthcare providers would immediately fall on average by 16 percent if reimbursements were reduced to current Medicare fee-for-service rates. One important caveat is that many providers are already operating at a loss for Medicare patients under the current reimbursement scheme, with an average hospital profit margin of -9.9 percent.<sup>1</sup>

Noticeably absent from the Act, however, is any source of funding or cost-sharing mechanism for M4A, which would operate without copayments or premiums.<sup>2</sup>

## Our Modeling

Some previous analysis has estimated the budgetary costs of the Medicare for All Act. But these conventional estimates generally mischaracterize numerous key interactions that are discussed in our [companion brief](#): (i) the current law baseline (e.g., the projected rise in the uncovered population when insurance premiums under current law are model consistent), (ii) the true costs of adding the uncovered population in the presence of adverse selection and “healthcare deserts,” (iii) the expansion of the income and payroll tax bases upon removing employer-based benefits in the presence of competitive labor markets; (iv) the impact on costs of other programs, including Social Security, SNAP and Medicaid; (v) the macroeconomic effects that feed back into all of these other elements.

Our modeling of the Medicare for All Act is based on the model presented in our [companion brief](#) and [technical presentation](#), but with changes outlined in Table 1 and summarized below.

Table 1. Model Modifications

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Description of Change	Base Assumption	Sensitivity Analysis
Utilization other than for dental and LTSS	Determined by model as discussed in companion brief.	n/a
Growth of home and community based services (HCBS) spending	Increase of 200% in HCBS over five years	<ul style="list-style-type: none"> <li>• No HCBS covered</li> <li>• +50% in HCBS</li> <li>• +300% in HCBS</li> </ul>
Dental care utilization	Increases by 10%	n/a
Provider reimbursement levels	Immediate average decrease of 16% across spending categories	Immediate average decrease of 8%
Medicare overhead costs	Overhead is 3% of M4A spending	<ul style="list-style-type: none"> <li>• 1% of spending</li> <li>• 5% of spending</li> </ul>

First, as described in our [companion brief](#), the increased utilization of most benefits is determined “endogenously,” that is, consistent with our model. Because the Act would greatly expand benefits covered, however, we examine the growth of LTSS and dental spending separately:

**LTSS.** Currently, many informal caregivers—often family members, friends, or volunteers—provide unpaid long-term care. A 2019 [study by RAND](#) estimated that M4A would lead to an immediate 200 percent increase in HCBS spending (covered by M4A) and 10 percent increase in institutional spending (not covered by M4A). We use these estimates as our base assumption for LTSS cost growth. We also analyze the sensitivity of our results to a range of assumptions about LTSS cost growth, with HCBS spending growing by 50 percent or 300 percent and institutional spending growing, respectively, by 2.5 percent or 15 percent. To account for supply constraints, our model phases this growth in over the first five years after M4A is implemented. In all cases, the portion of LTSS covered by M4A or Medicaid is paid for through increased federal deficits, as these benefits are mostly received by retirees than workers. For illustrative purposes, we also consider a case with no M4A coverage of LTSS.

**Dental.** Additionally, we use historical medical expenditure data to estimate how utilization of dental services would change under M4A for those that have reported forgoing dental care due to costs. Due to limitations of the dataset, however, this estimate (about 6 percent) likely understates the true increase, and so we assume a slightly higher (10 percent) increase in utilization of dental services.

Second, as discussed above there is some uncertainty as to whether providers could operate at current Medicare reimbursement rates. Our base cases assumes the full 16 percent drop in provider payments, but we also model a less extreme 8 percent drop. These percentages represent the average drop across spending categories.

Third, as discussed above there is some uncertainty as to what overhead costs would look like under Sanders' M4A. Our base case assumes 3 percent of M4A spending goes to administration—slightly higher than current Medicare FFS. We also model cases for 1 percent and 5 percent overhead spending.

Finally, as noted above, because the Sanders' Act does not specify a source of financing for M4A. By long-standing CBO and PWBM convention, this additional spending would be analyzed assuming deficit financing.

As a presidential candidate, Senator Sanders, however, has stated his intent to also increase taxes, although he has not specified the actual tax changes tied to funding Medicare for All. Accordingly, we also analyze two alternative financing mechanisms that mostly finance benefits received by workers. Under premium financing, each worker pays the same insurance premium, similar to private insurance, which is not dependent on his or her health status, age or wage. For workers who cannot afford the premium, the costs are absorbed by a combination of Medicaid and SNAP.<sup>3</sup> Under payroll tax financing, the tax rate does not depend on age or health risk profile; however, a worker with higher labor income pays a larger absolute amount, making the financing more progressive. More information about these alternative financing methods can be found in our [companion brief](#).

The following sections report various health, budgetary, and economic outcomes under M4A. We first present results using the base assumptions described above and in Table 1. Drop-down menus above each table allow the reader to see the sensitivity of outcomes to different combinations of assumptions and financing options.

## **Projected Health Effects**

Under current law, we project that 11.6 percent of the population will forgo some medical treatment in 2060, and 14.5 percent will be seriously ill.

The lack of cost-sharing in M4A means that under any financing option, M4A reduces the percent forgoing some medical to zero for every year. Table 2 shows that this increase in care reduces the percentage in the sickest health states to about 13 percent in 2060. These health improvements lead to an increase in life expectancy of about 2 years and a population that is roughly 3 percent larger. These effects on health and demographic outcomes do not vary significantly with program financing assumptions or with other model assumptions described above.

## Table 2. Effects of Medicare for All on Health Outcomes

[DOWNLOAD DATA](#)

### Financing Mechanism

Deficit ▼

### Initial Drop in Total Health Expenditures

16% ▼

### Increase in Home and Community-Based Services

200% ▼

### Overhead Costs

3% ▼

Please view online or download the data to view additional scenarios.

### Financing Mechanism: Deficit

Initial Drop in Total Health Expenditures: 16%

Increase in Home and Community-Based Services: 200%

Overhead Costs: 3%

Year	Longevity*	Population Size	Percent in Worst Health State**	Percent Forgoing Care**
2030	0.3	0.5	-0.8	-8.0
2040	0.8	1.4	-1.1	-10.4
2050	1.3	2.2	-1.2	-11.7
2060	1.8	3.0	-1.2	-12.0

Except where indicated, numbers represent a percent change relative to current law.

\* The change in longevity is measured in years.

\*\* Percentage point difference from current law.

### Projected Health Coverage Effects

Under Sanders' M4A, coverage is universal and so the uninsurance rate drops from our current law projection of 26.2 percent in 2060 down to zero for every year. The expansion of coverage and increase in wages, described in our [companion brief](#), reduce Medicaid enrollment by between 11 and 17 percent in 2060, depending on the financing assumption.

Under each financing option, total health spending drops immediately by about 20 percent, as cost-control measures take hold, but rises in the long run. As shown in Table 3, total health spending in 2060 is 0.4 percent higher with deficit financing, 3 percent higher with payroll tax financing, and 6.7 percent higher with premium financing. These differences also reflect changes to the size of the economy, as discussed below.

Under payroll tax financing and deficit financing, premiums paid in 2060 fall by 82 percent. Even in the premium financing case, however, premiums paid in 2060 fall by 22 percent, due to cost containment measures and a larger, healthier population.

The fall of the uninsurance rate to zero is consistent across assumptions and financing options, but other health coverage effects vary. Total health spending is especially sensitive to assumptions about LTSS cost growth and cuts to reimbursement rates. Under premium financing and the “no HCBS coverage” assumption, total health spending in 2060 *drops* by 10 percent, while under the 300 percent HCBS growth assumption total health spending *increases* by 12 percent. Similarly, under premium financing and the 8 percent reduction to provider payments, total health spending in 2060 grows by 11.8 percent—about double its growth under the 16 percent assumption.

Table 3. Effects of Medicare for All on Health Coverage

[DOWNLOAD DATA](#)

**Financing Mechanism**

Deficit ▼

**Initial Drop in Total Health Expenditures**

16% ▼

**Increase in Home and Community-Based Services**

200% ▼

**Overhead Costs**

3% ▼

*Please view online or download the data to view additional scenarios.*

**Financing Mechanism: Deficit**

**Initial Drop in Total Health Expenditures: 16%**

**Increase in Home and Community-Based Services: 200%**

**Overhead Costs: 3%**

Year	Percent Uninsured*	Medicaid Enrollment	Premiums	Health Spending	
				covered by Insurance	Total Health Spending
2030	-14.7	-7.3	-72.7	-8.0	-5.7
2040	-20.0	-12.2	-77.3	-5.6	-4.0
2050	-23.2	-16.6	-80.0	-1.9	-1.3
2060	-26.2	-17.0	-81.9	0.6	0.4

Except where indicated, numbers represent a percent change relative to current law.

\* Percentage point difference from current law.

## Projected Budgetary Effects

As described in our [companion brief](#), M4A creates an immediate boost to wages and a broadening of the federal income tax base, resulting in higher federal tax revenues. In the long run, however, this effect can be overtaken by economic effects of different financing options. With deficit financing, income tax and payroll tax revenues in 2060 shrink by 14 percent and 2 percent, respectively. With payroll tax financing, although payroll tax revenues in 2060 grow by 160 percent, income tax revenues shrink by 6 percent. Under premium financing, income tax and payroll tax revenues in 2060 increase by 16 percent and 26 percent, respectively.

These revenue effects lead to different long run effects on federal debt, shown in Table 4. Under deficit financing, we project that M4A would increase the federal debt by 92 percent in 2060. This increase is much smaller under payroll tax financing, which would increase federal debt by 4 percent in 2060 as income tax revenues fall and deficit-financed spending on LTSS rises. Under premium financing, however, federal debt in 2060 shrinks by 13 percent despite LTSS cost growth.

As discussed in our [companion brief](#), broader income and payroll tax bases increase Social Security tax collection, starting in the short run, as well benefits paid in the long run, by between 5 and 9 percent by 2060.

Budgetary effects depend critically on assumptions about HCBS cost growth and cuts to provider payments. For example, under premium financing and no HCBS coverage, federal debt in 2060 *shrinks* by 77.6 percent. Under premium financing and 300 percent HCBS cost growth, federal debt in 2060 *grows* by 7.6 percent. Varying our assumptions has smaller effects on budgetary outcomes.

### Table 4. Effects of Medicare for All on the Federal Budget

[DOWNLOAD DATA](#)

**Financing Mechanism**

Deficit ▼

**Initial Drop in Total Health Expenditures**

16% ▼

**Increase in Home and Community-Based Services**

200% ▼

**Overhead Costs**

3% ▼

Please view online or download the data to view additional scenarios.

**Financing Mechanism: Deficit**

**Initial Drop in Total Health Expenditures: 16%**

**Increase in Home and Community-Based Services: 200%**

**Overhead Costs: 3%**

Year	Federal Debt	Income Tax Revenue	Payroll Tax Revenue	Social Security (OASI)	
				Spending	
2030	22.2	4.4	8.9	0.5	
2040	46.7	2.5	9.1	1.9	
2050	69.1	-2.4	6.8	3.6	
2060	91.6	-13.8	-1.6	5.3	

Except where indicated, numbers represent a percent change relative to current law.

**Projected Economic Effects**

As detailed in our [companion brief](#), our model captures many economic benefits of M4A including improvements in worker productivity and increased population size, weighing these against increased debt and potential disincentives to work and save.

Under deficit financing, Sanders’ M4A would shrink GDP by 24 percent by 2060, as the large increase in federal debt crowds out productive investment and reduces the capital stock by 43 percent. Output per hour worked decreases by 14 percent in 2060.

Under payroll financing, M4A would shrink GDP by 15 percent in 2060, as a much smaller increase to federal debt combines with the strong work incentive of the payroll tax to reduce the capital stock by 21 percent and hours worked by 16 percent. Output per hour worked, however, actually increases by 1 percent in 2060.



Under premium financing, these effects along with the decrease in federal debt lead to a slight 0.2 percent boost to output in 2060. Output per hour worked increases by 5 percent in 2060, as hours worked decrease by 5 percent.

As with budgetary effects, economic effects are sensitive to varying assumptions. For example, under premium financing and no HCBS coverage, output in 2060 grows by 11.8 percent. Under premium financing and 300 percent HCBS cost growth, output in 2060 instead shrinks by 3.5 percent. In these cases, increasing overhead costs by 2 percentage points decreases GDP by about 0.4 percentage points in 2060.

Table 5. Effects of Medicare for All on the Economy

[DOWNLOAD DATA](#)

**Financing Mechanism**

Deficit ▼

**Initial Drop in Total Health Expenditures**

16% ▼

**Increase in Home and Community-Based Services**

200% ▼

**Overhead Costs**

3% ▼

Please view online or download the data to view additional scenarios.

**Financing Mechanism: Deficit**

**Initial Drop in Total Health Expenditures: 16%**

**Increase in Home and Community-Based Services: 200%**

**Overhead Costs: 3%**

Year	GDP	Capital Stock	Hours Worked	Output per Hour	
				Worked	Consumption
2030	-5.9	-7.1	-9.9	4.4	6.7
2040	-9.2	-14.4	-10.2	1.1	6.2
2050	-14.3	-25.1	-10.4	-4.3	4.1
2060	-24.3	-42.5	-12.1	-13.8	-0.7

Except where indicated, numbers represent a percent change relative to current law.

*Felix Reichling and Kent Smetters produced the analysis of this report with research assistance from Minh Quach. Kody Carmody and Diane Lim contributed to the writing of this report. Sophia Seidenberg provided editorial*

assistance. [Mariko Paulson](#) prepared this report for the PWBM website. Additional technical support was provided by other PWBM team members.

## Related Reading at PWBM:

- [Medicare for All: Comparison of Financing Options](#) provides additional background on the model used in this report as well as analysis of health, budgetary, and economic outcomes under a universal version of the current Medicare program.

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1. See "[Report to the Congress: Medicare Payment Policy.](#)" March 2019. As noted in the report, some efficient hospitals report a margin closer to -2.0 percent. Hospitals vary significantly in overhead due to a host of factors, including differences in administration due to non-patient care such as teaching. ↩
  2. The Act does include limited copayments on prescription drugs. ↩
  3. Specifically, we calculate a household's resources equal to assets + asset income + labor income + transfer income - tax payments - insurance premium - out-of-pocket (OOP) medical expenses. If resources fall below \$5,000, the model checks whether the shortfall is due to medical expenses. The shortfall not due to medical expenses are picked up by SNAP and the shortfall due to medical expenses (OOP or premium) is picked up by Medicaid. ↩