The Costs of a National Single-Payer Healthcare System

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Charles Blahous. "The Costs of a National Single-Payer Healthcare System." Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, July 2018.

Abstract

The leading current bill to establish single-payer health insurance, the Medicare for All Act (M4A), would, under conservative estimates, increase federal budget commitments by approximately $32.6 trillion during its first 10 years of full implementation (2022–2031), assuming enactment in 2018. This projected increase in federal healthcare commitments would equal approximately 10.7 percent of GDP in 2022, rising to nearly 12.7 percent of GDP in 2031 and further thereafter. Doubling all currently projected federal individual and corporate income tax collections would be insufficient to finance the added federal costs of the plan. It is likely that the actual cost of M4A would be substantially greater than these estimates, which assume significant administrative and drug cost savings under the plan, and also assume that healthcare providers operating under M4A will be reimbursed at rates more than 40 percent lower than those currently paid by private health insurance.

JEL codes: I13, I18

Keywords: healthcare, health care, single-payer, single payer, Medicare for all, health, health costs, health expenditures, health spending, federal budget

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Acknowledgments

Helpful edits and comments on the text were provided by Robert Graboyes, Richard Foster, Keith Hennessey, Jason Fichtner, Doug Badger, James Capretta, Mark Warshawsky, Marc Goldwein, Jonathan Keisling, and Jessica Paska. Useful consultations with respect to methodology were provided by Katherine Baicker, Douglas Holtz-Eakin, Melissa Favreault, Chris Holt, and Tara O'Neill Hayes.

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The Costs of a National Single-Payer Healthcare System

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The cost of adopting a national single-payer healthcare system is a critical factor in assessing whether such a system is desirable or practicable. The leading current bill to establish single-payer health insurance, Senator Bernie Sanders's (I-VT) Medicare for All Act (M4A), would under conservative estimates increase federal budget commitments by approximately $32.6 trillion during its first 10 years of full implementation (2022–2031), assuming enactment in 2018.[1] This projected increase in federal healthcare commitments would equal approximately 10.7 percent of GDP in 2022, rising to nearly 12.7 percent of GDP in 2031 and further thereafter. For perspective on these figures, consider that doubling all currently projected federal individual and corporate income tax collections would be insufficient to finance the added federal costs of the plan.[2] The federal cost increase would by itself be more than two times all currently projected federal discretionary appropriations, including all defense as well as domestic discretionary spending.[3]

It is likely that the actual cost of M4A would be substantially greater than has been estimated from its legislative text. That text specifies that healthcare providers including hospitals, physicians, and others will be reimbursed for all patients at Medicare payment rates, which are projected to be roughly 40 percent lower than those paid by private insurers during the first 10 years of M4A's proposed implementation.[4] By assuming these payment reductions

[1] For a summary of the provisions of the Medicare for All Act, see Katie Keith and Timothy Jost, "Unpacking the Sanders Medicare-for-All Bill," *Health Affairs*, September 14, 2017.
[2] This statement refers to income tax collections only, not to Social Security or Medicare payroll taxes.
[3] Congressional Budget Office (CBO), *The Budget and Economic Outlook: 2018 to 2028*, April 2018, table 4-1. In other words, it would be less expensive to the federal government to triple all projected appropriations than to enact M4A.
[4] Medicare for All Act of 2017, S. 1804, 115th Cong. (2017); and Centers for Medicare and Medicaid Services (CMS), Office of the Actuary, *Projected Medicare Expenditures under an Illustrative Scenario with Alternative Payment Updates to Medicare Providers,* June 5, 2018.

will be implemented and sustained, these cost estimates essentially represent a lower bound. To ease the interpretation of these estimates, the following simplification of the calculations is provided in table 1, using the year 2022 as an example. Table 2 (page 7) provides further details of the 10-year estimates.

Table 1. Effects of M4A in 2022

Individual effect of M4A	Cost of individual effect
2022 currently projected personal healthcare spending	$3.859 trillion
+ healthcare utilization increase	+ $435 billion
– provider payment cuts	– $384 billion
– lower prescription drug costs	– $61 billion
= 2022 personal healthcare spending under M4A	= $3.849 trillion
2022 currently projected national health expenditures (NHE)	$4.562 trillion
– decreased personal health spending ($3.859T – $3.849T, per above)	– 10 billion
– administrative cost savings	– $83 billion
= 2022 NHE under M4A	$4.469 trillion
2022 federal share of NHE under M4A	$4.244 trillion
– currently projected federal health subsidies	– $1.709 trillion
= net addition to 2022 federal costs under M4A	= $2.535 trillion

As shown in table 1, US personal healthcare spending is currently projected to be $3.859 trillion in 2022. Enacting M4A would increase healthcare utilization by covering the previously uninsured, by eliminating cost-sharing for those already insured, and by increasing the range of health services covered. These effects are estimated to add $435 billion to national healthcare spending. The plan would sharply cut payments to providers, subtracting $384 billion, and has also been credited with $61 billion in lowered prescription drug costs. Combining these effects results in projected personal health spending in 2022 of $3.849 trillion, a slight net decrease of $10 billion.

National health expenditures (NHE) are currently projected to be $4.562 trillion in 2022.[5] Subtracting the $10 billion decrease in personal health spending, as calculated in the previous paragraph, and crediting the plan with $83 billion in administrative cost savings results in an NHE projection under M4A of $4.469 trillion. Of this, $4.244 trillion in costs would be borne by the federal government. Compared with the current projection of $1.709 trillion of federal healthcare subsidy costs, this would be a net increase of $2.535 trillion in annual costs, or roughly 10.7 percent of GDP.

Performing similar calculations for each year results in an estimate that M4A would add approximately $32.6 trillion to federal budget commitments during the period from 2022 through 2031, with the annual cost increase reaching nearly 12.7 percent of GDP by 2031 and continuing to rise afterward.

Large though these dollar figures are, they are broadly consistent with those estimated by other experts in advance of the M4A bill's introduction in September 2017.[6] In 2016, an Urban Institute (UI) team projected that Senator Sanders's proposal as described during his presidential campaign would add $32 trillion to federal spending in the years spanning 2017 through 2026, a projection that included a $2.94 trillion federal cost estimate of the plan's provisions for covering long-term supports and services (LTSS).[7] Also in 2016, the Center for Health and Economy (CHE) projected that from 2017 through 2026, the Sanders proposal would increase federal budget deficits by $27.3 trillion.[8] The CHE score did not include an estimate of increased LTSS

[5] NHE differs from personal health spending in that NHE also includes expenditures for research, structures and equipment, and administrative costs.
[6] Medicare for All Act of 2017, S. 1804, 115th Cong. (2017).
[7] John Holahan et al., *The Sanders Single-Payer Healthcare Plan: The Effect on National Health Expenditures and Federal and Private Spending* (Washington, DC: Urban Institute, 2016), tables 1 and 9.
[8] Center for Health and Economy, "Medicare for All: Leaving No One Behind," *HealthAndEconomy.org*, May 1, 2016, table 6. The $27.3 trillion estimate arises from the difference between the two subtotals provided on table 6 for costs and savings, respectively, under the Sanders plan, excluding the deficit effects embedded in the current-law baseline. CHE authors confirmed this interpretation when reviewing a draft of this paper and in a separate email exchange.

costs. Emory University professor Kenneth Thorpe estimated the federal financing required for the proposal at $24.7 trillion from 2017 through 2026, also not including LTSS.[9] When considering the same years and the same benefit provisions, these other independent estimates are quite close to those presented in this paper.

The estimates in this study focus primarily on the 10-year window of 2022 through 2031 because the M4A bill provides for a four-year phase-in period during which increasing numbers of individuals (phased in by age) would be permitted to buy into a transitional public health plan. Estimating a voluntary take-up rate during this transition period is inherently speculative, and even if that rate could be projected with precise accuracy, the projections would not fully reflect the eventual costs of a national single-payer system. Alternatively, if the single-payer system in the M4A bill were fully effective beginning in 2019, the net additional federal cost would be approximately $27.7 trillion (conservatively estimated) during the 10-year window (2019–2028) shown in table 3 (page 22). The details of these and other key assumptions are discussed in the following sections of this paper.[10]

[9] Kenneth E. Thorpe, "An Analysis of Senator Sanders Single Payer Plan," *Healthcare-Now.org*, January 27, 2016.
[10] Shifting from private to public financing of medical care would have potentially significant but unforeseeable effects on the allocation of medical goods and services, which this study does not attempt to model.

Table 2. Financial Effects of Medicare for All Act, in Billions of Dollars

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2022–2031
Currently projected personal healthcare spending[a]	3,859	4,077	4,309	4,546	4,824	5,120	5,433	5,766	6,120	6,494	
+ Added induced demand from increased coverage[b]	+435	+459	+485	+511	+542	+574	+609	+645	+684	+725	+5,671
– Applying Medicare payment rates	–384	–411	–441	–473	–505	–540	–577	–616	–658	–702	–5,307
– Drug cost savings	–61	–66	–70	–75	–80	–86	–92	–98	–105	–113	–846
= Healthcare spending under M4A	3,849	4,060	4,283	4,509	4,780	5,068	5,373	5,697	6,041	6,406	
Currently projected national health expenditures (NHE)[c]	4,562	4,819	5,091	5,370	5,696	6,042	6,410	6,799	7,213	7,651	
– Change in healthcare spending	–10	–18	–26	–36	–44	–52	–60	–69	–79	–89	–482
– Admin. cost savings	–83	–88	–142	–149	–158	–168	–179	–190	–201	–214	–1,572
= NHE under M4A	4,469	4,713	4,923	5,184	5,494	5,823	6,171	6,541	6,933	7,348	
Federal gov't share of NHE under M4A[d]	4,244	4,475	4,670	4,915	5,207	5,516	5,844	6,191	6,559	6,950	
– Currently projected net federal health subsidies[e]	–1,709	–1,770	–1,833	–1,984	–2,130	–2,262	–2,465	–2,476	–2,590	–2,708	
= Added federal budget cost under M4A	2,535	2,705	2,837	2,931	3,077	3,254	3,379	3,715	3,970	4,241	32,644
Added federal cost as a percentage of GDP[f]	10.7%	11.0%	11.1%	11.0%	11.1%	11.3%	11.3%	12.0%	12.3%	12.7%	

[a] CMS, *NHE Projections 2017–2026*, February 2018, table 2, extrapolated. The totals calculated here differ slightly from those in the NHE tables (e.g., 3,859 vs. 3,869) because of reconciliation with MEPS data as explained in footnote 19. In the MEPS data, some small category totals are rounded to 0, causing national aggregates to add inexactly.

[b] This includes effects of covering the uninsured, increasing the actuarial value of insurance by eliminating deductibles and copayments and by expanding coverage categories to include dental, vision, and hearing.

[c] CMS, *NHE Projections 2017–2026*, table 1, extrapolated.

[d] This subtracts state "maintenance of effort" payments and continued out-of-pocket payments for LTSS, continued private or state funding of research, and capital expenditures from NHE. Holahan et al., *Sanders Single-Payer Healthcare Plan*; and Medicare for All Act of 2017, S. 1804, 115th Cong. (2017).

[e] This includes federal Medicaid payments, Medicare outlays net of receipts, tax subsidies for employer-provided and ACA marketplace coverage, CHIP, other ACA subsidies and research funding, net of revenues from employer-mandate penalties and taxes on health insurance plans and providers. See CBO, *Federal Subsidies for Health Insurance Coverage for People under Age 65: 2018–2028*, May 23, 2018; CBO, *Medicaid Spending and Enrollment—CBO's April 2018 Baseline*, April 2018; and CBO, *Medicare—CBO's April 2018 Baseline*, April 9, 2018. CBO estimates were extrapolated beyond 2028, with adjustments for the additional Medicare payments projected to occur within 2028 because October 1 (the start of the next fiscal year) occurs on a weekend.

[f] CBO, *The Budget and Economic Outlook: 2018–2028*, April 9, 2018.

Increased Demand and Utilization

M4A would increase healthcare demand and utilization in at least three important ways. First, the plan would provide health insurance coverage to all Americans who are currently uninsured, greatly increasing their utilization of healthcare services.[11] Coverage of the currently uninsured is estimated to increase their health service costs by roughly 89 percent.[12]

Second, the plan would expand the range of services covered by existing insurance, explicitly covering dental, vision, and hearing care for all participants.[13] This, too, would increase utilization of such services in addition to shifting their financing from private to public spending, especially for those now reliant on traditional Medicare. Currently, only 12 percent of all personal healthcare expenses in the United States are paid out of pocket, while 22 percent are paid by Medicare. By contrast, 40 percent of national dental care expenses are paid out of pocket, while the national share financed by traditional Medicare rounds to 0 percent.[14] This indicates that the addition of dental, vision, and hearing benefits will substantially increase total projected health service utilization and costs.[15]

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[11] There remain approximately 30 million uninsured Americans in 2018. See Centers for Medicare and Medicaid Services (CMS), *NHE Projections 2017–2026*, February 2018, table 17.

[12] Kenneth Thorpe estimates that covering the uninsured would increase total spending per person by 70 percent, citing research by Jack Hadley and coauthors. Kenneth Thorpe, "Why Sanders's Single-Payer Plan Would Cost More Than His Campaign Says," *American Prospect,* February 29, 2016; and Jack Hadley et al., *Covering the Uninsured in 2008: A Detailed Examination of Current Costs and Sources of Payment, and Incremental Costs of Expanding Coverage* (Washington, DC: Henry J. Kaiser Family Foundation, August 2008). Hadley and his coauthors "assume that the coverage offered to uninsured people would be broadly similar to the range of coverage currently held by low- and lower-middle-income people," rather than the first dollar coverage the M4A bill would provide. Adjusting for increased utilization patterns associated with higher-value insurance in recent research literature produces an estimated utilization increase of 89 percent. Thorpe agrees that 70 percent is "likely low" using the same reasoning. The 89 percent assumption occupies a middle ground between Thorpe's assumption and the UI team's projections. The UI team estimated that spending "for the otherwise uninsured would increase 169.5 percent" after all relevant cost-affecting factors, including utilization increases, were incorporated. See Holahan et al., *Sanders Plan*.

[13] Medicare for All Act of 2017, § 1013. Dental, vision, and hearing services encompassed roughly 5 percent of all US personal health expenses in 2017. See CMS, *NHE Projections 2017–2026*, table 2.

[14] CMS, *NHE Projections 2017–2026*, tables 5 and 8.

[15] The demand increase for these services is estimated at 15 percent, employing the methodology described in the footnotes for the subsequent paragraph. Estimates for vision and hearing services were made with assistance of supplemental data from Berhanu Alemayehu and Kenneth Warner, "The Lifetime Distribution of Healthcare Costs," *Health Services Research* 39, no. 3 (2004): 627–42.

Finally, the plan's requirement that "no cost-sharing, including deductibles, coinsurance, copayments, or similar charges, be imposed on an individual" would also significantly increase healthcare utilization.[16] As a general rule, the greater the percentage of an individual's healthcare that is paid by insurance (i.e., the insurance's actuarial value, or AV), the more healthcare services an individual tends to buy. There is an extensive literature devoted to estimating how much individuals increase their use of healthcare as the AV of their insurance increases—which, in the case of M4A, would be to an AV of essentially 100 percent.[17] Providing this first-dollar coverage is estimated to induce 11 percent additional demand for those currently covered by private insurance and 16 percent for those now in traditional Medicare without supplemental coverage.[18]

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[16] Medicare for All Act of 2017, § 202. Minor exceptions are included in the text, including cost-sharing designed to incent the use of generic drugs as well as cost-sharing for LTSS benefits.

[17] In addition to other references provided with this study, see Robert H. Brook et al., *The Health Insurance Experiment: A Classic RAND Study Speaks to the Current Healthcare Reform Debate* (Santa Monica, CA: RAND Corporation, 2006). As the reference notes, the Rand study was "one of the largest and most comprehensive social science experiments ever performed in the United States," and "led to over 300 publications, including journal articles, reports, and books."

[18] Estimates of average AV provided by employer-sponsored insurance (ESI) include Frank McArdle et al., "How Does the Benefit Value of Medicare Compare to the Benefit Value of Typical Large Employer Plans?: A 2012 Update" (Issue Brief, Kaiser Family Foundation, Menlo Park, CA, April 4, 2012) (86 percent); Thomas G. Moehrle, "Measure of Generosity of Employer Sponsored Health Plans: An Actuarial Value Approach" (Office of Survey Methods Research, Bureau of Labor Statistics, 2015) (88.9 percent); Jon R. Gabel et al., "Consumer Cost-Sharing in Marketplace vs. Employer Health Insurance Plans, 2015," *Commonwealth Fund*, December 21, 2015 (83 percent); Actuarial Research Corporation for the US Department of Labor, *Analysis of Actuarial Values and Plan Funding Using Plans from the National Compensation Survey*, May 12, 2017 (84.8 percent); and Linda J. Blumberg, John Holahan, and Erik Wengle, "Are Nongroup Marketplace Premiums Really High? Not in Comparison with Employer Insurance," *Urban Institute*, September 2016 (83 percent). Combining and proportionately weighting these estimates for ESI with those for ACA marketplace insurance (see Kaiser Family Foundation, "Marketplace Enrollment by Metal Level," *KFF State Health Facts*, June 30, 2016), cross-referenced with data on the numbers of those enrolled in silver plans receiving cost-sharing assistance, as well as other private insurance (see CMS, *NHE Projections 2017–2026*, table 17), produces an aggregate estimate for the AV of private insurance plans of between 82 and 83 percent. The estimate of the induced demand increase associated with replacing these insurance policies with single-payer insurance of AV 100 percent was derived on the basis of the HHS Notice of Benefit and Payment Parameters for 2014. See HHS Notice of Benefit and Payment Parameters for 2014, 78 Fed. Reg. 15,410 (March 11, 2013). Thorpe, in "Analysis of Senator Sanders Single Payer Plan," and McArdle et al. estimate the AV for traditional Medicare in the absence of supplemental coverage at 80 percent while Daniel W. Bailey, "Actuarial Value and the Actuarial Value of Original A/B Medicare," *In the Public Interest* 9, no. 1 (2014): 27–34, estimates it at 84 percent. The estimate of the additional demand from those previously enrolled only in traditional Medicare, induced by raising Medicare's AV to 100 percent, is a rough midpoint between the estimates that derive from applying the HHS Notice factors to these AVs, and Marika Cabral and Neale Mahoney's estimates of increased utilization observed in Medicare beneficiaries when they acquire Medigap insurance that covers most expenses. See Marika Cabral and Neale Mahoney, "Externalities and Taxation of Supplemental Insurance: A Study of Medicare and Medigap" (NBER Working Paper No. 19787, National Bureau of Economic Research, Cambridge, MA, October 2017).

Provider Payment Reductions

To offset the substantial cost increases created by stimulating additional consumer demand for and utilization of healthcare, the M4A bill would constrain expenditures by subjecting healthcare providers—including hospitals, physicians, and others—to Medicare payment rates.[19] Under current law, Medicare reimburses healthcare providers at much lower rates than private health insurance does. In 2014, Medicare hospital payment rates were 62 percent of private insurance payment rates and are currently projected to decline to below 60 percent by the time M4A would be implemented, and to decline further afterward. Medicare physician payment rates were 75 percent of private insurance rates in 2016 and, per the terms of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), are projected to decline sharply in relative terms in future years, also falling below 60 percent within the first full decade of M4A.[20]

The M4A Act as introduced specifies that provider payment amounts are to be consistent with those paid under current Medicare law.[21] The adoption of Medicare payment rates would represent a substantial reduction in provider reimbursements for care provided to everyone now covered by private insurance (though it would also be a temporary increase in physician payments for those now covered by Medicaid, which currently pays physicians at lower rates

[19] The methodology for estimating cost increases arising from greater utilization is as follows. Estimates of national personal healthcare spending, total healthcare consumption, and NHE were taken from CMS, *NHE Projections 2017–2026*. Estimates for years beyond 2026 were made by extrapolating the projected rates of growth for these aggregates at the end of the 2017–2026 period. The share of expenditures financed by different sources was determined by data from the US Department of Health and Human Services, "Medical Expenditure Panel Survey," *AHRQ: Agency for Healthcare Research and Quality*, accessed April 8, 2018. Discrepancies between NHE and MEPS aggregates were resolved with assistance of insights in Didem Bernard et al., "Reconciling Medical Expenditure Estimates from the MEPS and NHEA, 2007," *Medicare and Medicaid Research Review* 2, no. 4 (2012). Fortuitously, the ratios of the discrepancies analyzed in that article almost exactly matched those between the 2014 NHE and MEPS data, making it straightforward to scale the reported results in the MEPS to the NHE aggregates. This in turn enabled estimates of the shares of national health spending financed by different insurance sources as well as out of pocket. Utilization changes were calculated for different populations according to their current sources of health coverage, and the resulting spending projections for each population were assembled to create aggregate personal healthcare spending projections under M4A.

[20] CMS, Office of the Actuary, *Projected Medicare Expenditures under an Illustrative Scenario with Alternative Payment Updates to Medicare Providers,* June 5, 2018.

[21] Medicare for All Act of 2017, § 611.

than does Medicare).[22] For example, in 2014, hospitals were reimbursed just 89 percent of their costs of treating Medicare patients and 90 percent of their costs of treating Medicaid patients—losses that were offset by hospitals collecting private insurance reimbursement rates equaling 144 percent of their costs.[23]

It is unclear whether current-law Medicare provider and physician payment schedules would be upheld even in the absence of M4A's enactment. For example, the schedule for Medicare physician payment growth constraints recently enacted in MACRA replaced other constraints under the previous Sustainable Growth Rate (SGR) formula, which were repeatedly overridden in periodic legislation before more recently being eliminated.[24] It remains to be seen whether MACRA will effectively restrain Medicare physician payment levels where SGR did not, as well as whether Affordable Care Act (ACA) provisions will effectively restrain Medicare provider costs over the long term.

Furthermore, it is not precisely predictable how hospitals, physicians, and other healthcare providers would respond to a dramatic reduction in their reimbursements under M4A, well below their costs of care for all categories of patients combined. The Centers for Medicare and Medicaid Services (CMS) Office of the Actuary has projected that even upholding current-law reimbursement rates for treating Medicare beneficiaries alone would cause nearly half of all hospitals to have negative total facility margins by 2040.[25] The same study found that by 2019, over 80 percent of hospitals will lose money treating Medicare patients—a situation M4A would extend, to a first approximation, to all US patients. Perhaps some facilities and physicians would be

[22] CMS, *Projected Medicare Expenditures*.
[23] American Hospital Association, *TrendWatch Chartbook 2016: Trends Affecting Hospitals and Health Systems*, 2016, appendix 4, table 4.4.
[24] Stan Veuger and Jeffrey Clemens, "Repeal of the Medicare Sustainable Growth Rate: Direct and Indirect Consequences," *AMA Journal of Ethics* 17, no. 11 (2015): 1053–58.
[25] CMS, *Projected Medicare Expenditures*. Also see CMS, Office of the Actuary, *Simulations of Affordable Care Act Medicare Payment Update Provisions on Part A Provider Financial Margins*, June 5, 2018.

able to generate heretofore unachieved cost savings that would enable their continued functioning without significant disruptions. However, at least some undoubtedly would not, thereby reducing the supply of healthcare services at the same time M4A sharply increases healthcare demand. It is impossible to say precisely how much the confluence of these factors would reduce individuals' timely access to healthcare services, but some such access problems almost certainly must arise.

Anticipating these difficulties, some other studies have assumed that M4A payment rates must exceed current-law Medicare payment rates to avoid sending facilities into deficit on average or to avoid triggering unacceptable reductions in the provision and quality of healthcare services.[26] These alternative payment rate assumptions substantially increase the total projected costs of M4A. Specifically, they would mean payment rates being set higher than they are under current Medicare law and lower than those now paid by private insurance. Even with a higher payment rate assumption, the UI team determined that "not all increased demand could be met because provider capacity would be insufficient." This constraint is reflected in their final cost estimates.[27]

In contrast with Thorpe's and the UI team's earlier estimates, the estimates in this study are based instead on the language of the M4A bill as subsequently introduced, imposing Medicare payment rates on all providers and thereby substantially reducing national average provider payment rates relative to current law.[28] Had this study assumed instead that total provider payment rates under M4A would be set to remain equal on average to the current-law blend of higher

[26] Holahan et al., *Sanders Plan*. 8, 13, and 16; and Thorpe, "Analysis of Senator Sanders Single Payer Plan," 2 and 6.
[27] Holahan et al., *Sanders Plan*, 8.
[28] Medicare for All Act of 2017, § 611. Again, this also includes an offsetting increase for physicians currently treating Medicaid patients. First, NHE data were used to divide projected personal healthcare expenditures into shares for hospital care, professional or physician services, home healthcare, nursing care, and other healthcare. Then, NHE tables 6, 7, 10, 13, and 14 were used to determine the share of each of these expenditures paid by private insurance under current law. Provider payments for costs now incurred by private insurance in each of these areas were reduced according to the projected ratios of Medicare payment levels to private payment levels specified by John D. Shatto and M. Kent Clemens in CMS, Office of the Actuary, *Projected Medicare Expenditures under an Illustrative Scenario with Alternative Payment Updates to Medicare Providers,* June 5, 2018. Projected physician payments under Medicaid were increased to Medicare levels according to the percentages specified in CMS, *Projected Medicare Expenditures*. The resulting aggregate payment reductions were then reconciled with MEPS data.

private and lower public reimbursement rates, the resulting cost estimates would be substantially larger: $38.0 trillion from 2022 through 2031, or $32.1 trillion if M4A were fully implemented from 2019 through 2028.[29] The federal cost increase would approach 14.8 percent of GDP in 2031, the last of the initial 10 years of proposed full implementation. This altered assumption would result in these estimates, on an annual basis, being within the range of estimates spanned by Thorpe, CHE, and the UI team, all working in advance of specific legislative text.[30]

Drug Costs

This analysis credits the M4A proposal with approximately $846 billion in additional savings over the 2022–2031 period from negotiating lower prices for prescription drugs. This is an aggressive assumption reflecting the intent of the bill to empower the secretary of Health and Human Services (HHS) to negotiate lower drug prices on behalf of beneficiaries and specifically to "promote the use of generic medications to the greatest extent possible."[31] There are limits to the potential effectiveness of this approach to lowering healthcare costs. Generics have prices 75 to 90 percent lower than those of brand-name drugs, but they already make up roughly 85 percent of all prescription drugs sold.[32]

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[29] The average of current-law reimbursement rates is a function of a blend of private insurance rates (which are higher) and public sector rates (which are lower). In other words, the alternative assumption described in this paragraph specifies that M4A's universal payment rates would be set between current public and private rates so that national average reimbursement rates do not change relative to current law.

[30] A $32.1 trillion federal cost estimate over 2019–2028 would be approximately equivalent to a $28.9 trillion cost over 2017–2026 if fully effective during that time, a number within the range of estimates produced separately by the Center for Heath and Economy, Kenneth Thorpe, and the Urban Institute. Those estimates, like those in this study, project the effects of adopting public financing along the lines stipulated by the text of the M4A Act. It should be noted that fiscal outcomes could vary significantly if the private sector retains a substantial role in healthcare financing, as has remained the case in several European nations. See Sarah Thomson, Thomas Foubister, and Elias Mossialos, *Financing Healthcare in the European Union: Challenges and Policy Responses* (Copenhagen: World Health Organization, 2009).

[31] Medicare for All Act of 2017, § 614.

[32] Medicare Payment Advisory Commission, *Report to the Congress: Medicare Payment Policy*, March 2017, 409–10. Also see Statista, "Proportion of Branded Versus Generic Drug Prescriptions Dispensed in the United States from 2005 to 2016," *Statista*, May 2017. Other estimates of current generic drug penetration are higher. For example, see Association for Accessible Medicines, *2017 Generic Drug Access and Savings in the U.S.*, 2017.

Additionally, prescription drugs account for only 10 percent of total national health expenditures.[33] This analysis assumes virtually perfect success for M4A in replacing brand-name drugs with generics, both for those now on Medicare as well as for the population as a whole; therefore, actual savings are likely to be less than assumed under these projections.[34] It is a matter of wide speculation whether granting negotiating power to the HHS secretary could produce savings beyond these aggressive assumptions with respect to generic drug penetration.[35] Even if such a grant of power achieved greater savings, however, such additional savings are likely to be offset by imperfect success in eliminating brand-name drug purchases in favor of generics.[36] These cost estimates do not reflect other potential effects of the proposed policy, such as lessened pharmaceutical innovation.

Administrative Savings

This analysis assumes substantial administrative cost savings generated by replacing private insurance with national single-payer insurance, specifically a reduction of seven percentage points (from an estimated 13 percent to 6 percent) in the administrative cost of covering those now holding private insurance.[37] Again, this is an aggressive estimate of administrative savings that is more likely to lead to M4A costs being underestimated than overestimated.

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[33] CMS, *NHE Projections 2017–2026*, table 2. This figure does not include drugs dispensed in an inpatient setting.
[34] Specifically, the assumption is that the approximately 15 percent of prescription drugs that are now brand-name drugs will all be replaced by generics with an average cost savings of 80 percent per prescription, reducing total prescription drug costs by 12 percent.
[35] See Committee for a Responsible Federal Budget, "Fact Sheet: How Much Money Could Medicare Save by Negotiating Prescription Drug Prices?," *CRFB.org*, April 11, 2016.
[36] For example, the fact that prices are not now negotiated by the federal government may be a factor currently contributing to the already high levels of generic penetration of the drug market.
[37] See page 5 of the PDF version of Center for Health and Economy, "Medicare for All: Leaving No One Behind," *HealthAndEconomy.org*, May 1, 2016.

Current administrative cost rates for Medicare as a whole are cited as being roughly 4 percent, though closer to 6 percent for Medicare Advantage.[38] It is unlikely that the population now privately insured could be covered by M4A with administrative costs as low as 4 percent. Administrative cost rates are calculated as a percentage of total insurance costs, and these total costs per capita under private insurance are currently less than half of what they are in Medicare.[39] In other words, one reason Medicare's administrative cost rates appear to be so much lower than private insurance rates is that they are expressed as percentages of Medicare's overall per capita costs, which are much higher. These higher Medicare costs exist primarily because Medicare serves an older population that consumes more healthcare services than the generally younger population now served by private insurance.

Moreover, even if administrative cost rates could be lowered by more than seven percentage points, there would be offsetting cost increases. A further reason private insurance administrative costs are relatively higher is the necessity of policing fraudulent or other improper payments to ensure an insurer's continued solvency and to provide competitive value to its customers. Although government also polices fraud within its health insurance programs, financial survival and business competitiveness are concerns from which government-provided insurance is generally exempt. The Government Accountability Office found approximately

[38] For the 4 percent citation, see page 5 of the PDF version of Center for Health and Economy, "Medicare for All: Leaving No One Behind," *HealthAndEconomy.org*, May 1, 2016. For the 6 percent figure, see Kip Sullivan, "How to Think Clearly about Medicare Administrative Costs: Data Sources and Measurement," *Journal of Health Politics, Policy and Law* 38, no. 3 (2013): 479–504. Holahan and his coauthors conclude that 6 percent is "the appropriate figure for estimating proposals that build upon the entire Medicare program." Holahan et al., *Sanders Plan*, 9.
[39] US Department of Health and Human Services, "Medical Expenditure Panel Survey," *AHRQ: Agency for Healthcare Research and Quality*, accessed April 8, 2018. Also see Robert A. Book, "Medicare Administrative Costs Are Higher, Not Lower, Than for Private Insurance" *Heritage Foundation*, June 25, 2009. Book notes that Medicare's "administrative costs are spread over a larger base of actual healthcare costs." MEPS data substantiate Book's assertion. For example, the MEPS data show that in 2014, individuals younger than 65 making claims on private insurance had an average of $4,421 in expenses per person, whereas those over 65 making claims on Medicare alone had average expenses of $9,221 per person, with still higher expenses per person for those carrying Medicare in addition to other private or public insurance.

$96 billion in improper Medicare and Medicaid payments in 2016, by itself more than twice the total government expenditures on health insurance administration.[40]

One apparent consequence of government's lesser investment in insurance administration is a substantial additional cost associated with improper payments.[41] Considering the various factors acting in combination, it is unlikely that total savings arising from less expensive administration could exceed the seven percentage point reduction assumed here.

Beyond this, other policy and political dynamics of federally administered insurance should tend to increase total costs. This is evident in the text of the M4A bill, which, among its other provisions, includes a line item authorizing expenditures of up to 1 percent of the total national health budget during its first five years for "programs providing assistance to workers who perform functions in the administration of the health insurance system and who may experience economic dislocation as a result of the implementation of this Act."[42] The policy and political dynamics that gave rise to this proposed spending program would likely give rise to others in the course of enacting and implementing M4A, reducing net savings from lowered administrative costs.

The M4A bill provides for a national health budget through which the federal government would finance additional health-related spending in a number of areas, including health professional education, innovation, and capital expenditures.[43] It is impossible to predict precisely the extent to which private-sector investments would be crowded out by increased

[40] Government Accountability Office, "Medicare—High Risk Issue," *GAO.gov*, accessed April 11, 2018; and Government Accountability Office, "Medicaid—High Risk Issue," accessed April 11, 2018. Government administration costs are from CMS, *NHE Projections 2017–2026*, table 2.
[41] As another example, see Office of Inspector General, Department of Health and Human Services, *California Made Medicaid Payments on Behalf of Newly Eligible Beneficiaries Who Did Not Meet Federal and State Requirements*, February 2018. The OIG found that in a sample of 150 beneficiaries, Medicaid payments were made on behalf of 38 individuals who were either ineligible or potentially ineligible for coverage under the program.
[42] Medicare for All Act of 2017, § 601.
[43] Medicare for All Act of 2017, § 601.

federal activity in these areas. These projections incorporate rough estimates of these movements, but because this subcategory of health spending constitutes less than 5 percent of all NHE, inevitable errors of estimation will not qualitatively affect the aggregate projections.[44]

Long-Term Services and Supports

The M4A bill contains a "maintenance of effort" provision requiring states to continue their LTSS expenditures under Medicaid at current-law levels, automatically indexing the growth of these commitments going forward.[45] Lacking a model that permits an independent estimate of this provision's effects, this study incorporates projections of state Medicaid spending on LTSS under current law published by the UI team, interpolating and extrapolating from the UI team's published figures to arrive at estimates of continuing state expenditures conforming to the effective dates in the M4A bill.

Consistent with the assumptions employed throughout this paper, the resulting implicit estimates of national and federal spending on LTSS should be regarded as conservative. Although the M4A bill does not explicitly provide for new LTSS coverage, its broader expansion of health insurance coverage would likely increase the numbers of individuals utilizing LTSS benefits authorized under current law. This study's assumption of no net increase in LTSS benefit utilization, in addition to the assumption that M4A's "maintenance of effort" provision successfully binds state governments, is an additional factor contributing to these projections' being more likely to underestimate costs than to overestimate them.

[44] CMS, *NHE Projections 2017–2026*, table 2. It is assumed that the federal share of healthcare research would remain essentially unchanged but that the federal government would finance a preponderance of new capital expenditures, based on a rough interpretation of the Medicare for All Act text. Alternative assumptions would cause only very minor changes to the aggregate cost projections.

[45] Medicare for All Act of 2017, § 204 and § 901. This "maintenance of effort" requirement does not apply to the rest of current-law state Medicaid spending.

Effects on National Health Expenditures and the Federal Budget

Table 2 summarizes the financial effects of the M4A bill over its first 10 years of full implementation, which would be 2022 through 2031 if enacted in 2018. One striking finding evident in the table is that, even under the assumption that provider payments for treating patients now covered by private insurance are reduced by over 40 percent, aggregate health expenditures remain virtually unchanged: national personal healthcare costs decrease by less than 2 percent, while total health expenditures decrease by only 4 percent, even after assuming substantial administrative cost savings. The additional healthcare demand that arises from eliminating copayments, providing additional categories of benefits, and covering the currently uninsured nearly offsets potential savings associated with cutting provider payments and achieving lower drug costs. Thus, the essential expenditure change wrought by movement to a single-payer system would be to replace private spending on healthcare with government spending financed by taxpayers.[46] At the same time, more generous healthcare insurance would be provided to everyone at the expense of healthcare providers, who would face reimbursements substantially below their service costs. As noted previously, whether providers could sustain such losses and remain in operation, and how those who continue operations would adapt to such dramatic payment reductions, are critically important questions.

While these estimates show little net change in NHE, the same cannot be said of the projected effects on the federal budget. Table 2 includes an estimate for the net increase in federal health budget commitments of $32.6 trillion from 2022 through 2031, which, by itself, is more than all federal individual and corporate income taxes projected to be collected during that

[46] Again, the assumption of public financing is retained throughout this study pursuant to the language of the M4A bill text. International experience has been that private financing often retains a substantial role. See Thomson, Foubister, and Mossialos, *Financing Healthcare in the European Union*.

time period.[47] This net increase in federal budget commitments was calculated by comparing projected federal obligations under M4A with Congressional Budget Office (CBO) estimates of current-law federal subsidies, including not only direct spending on Medicare, Medicaid, the Children's Health Insurance Program (CHIP), and ACA marketplaces, but also subsidies provided through the tax code, such as the tax exclusion for employer-provided coverage as well as ACA-related tax credits. Some of these current subsidies are scored under budgeting conventions as federal revenue losses rather than spending outlays, but they all contribute to federal commitments for healthcare under current law. Netted against the current federal subsidy totals are certain revenue collections that would presumably be obviated in the course of enacting single-payer healthcare, including penalties on employers for failing to provide health insurance, taxes on health insurance providers, and the so-called Cadillac plan tax on high-premium health insurance plans.[48]

It should be noted that M4A's elimination of employer-sponsored insurance, including the federal tax preferences now accorded to it, should increase worker wages net of employer-provided health benefits. These estimates incorporate the increased federal revenues CBO projects to arise from subjecting these higher expected wages to federal taxation. Thus, at the same time

[47] CBO, *Budget and Economic Outlook*, table 3-1. For purposes of this and other calculations, this study assumes full benefits will be paid without regard to the balance of funds in the M4A's Universal Medicare Trust Fund. M4A's legislative text provides that such a trust fund will be established and will receive funds that would otherwise be appropriated to finance payments for Medicare, Medicaid, and other federal health programs, as well as revenues arising from changing the tax treatment of private insurance. The trust fund revenue resources enumerated in the M4A text could fall well short of the amounts necessary to finance full promised benefits. For example, under current law the revenues allocated to the Medicare Hospital Insurance (HI) Trust Fund are insufficient to finance Medicare HI benefit payments, with the result that after HI Trust Fund depletion (now projected for 2026), "revenues would be inadequate to fully cover costs" and therefore "payments would be reduced." See Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds, *2018 Annual Report*, June 5, 2018, 2 and 26. Although M4A would establish a trust fund that is analogous to Medicare's HI trust fund in some respects, the legislative language has been interpreted herein as a federal commitment to pay full benefits irrespective of trust fund asset levels.

[48] CBO, *Federal Subsidies for Health Insurance Coverage for People under Age 65: 2018–2028*, May 23, 2018; CBO, *Medicaid Spending and Enrollment—CBO's April 2018 Baseline*, April 2018; and CBO, *Medicare—CBO's April 2018 Baseline*, April 9, 2018.

that M4A would dramatically increase federal spending, it would increase taxable worker wages net of employer-provided benefits, while also relieving individuals, families, and employers of the substantial health expenditures they would experience under current law. It would also relieve states of such Medicaid expenditure obligations as are transferred to the federal government. These offsetting effects should be considered when weighing the implications of requiring federal taxpayers to finance the enormous federal expenditure increases under M4A.

These estimates should be understood as projecting the added federal cost commitments under M4A, as distinct from its net effect on the federal deficit. To the extent that the cost of M4A is financed by new payroll taxes, premium collections, or other revenue increases, the net effect on the federal budget deficit would be substantially less.[49]

Because the dollar figures presented in table 2 are enlarged by encompassing the 2022 through 2031 window for full implementation, table 3 presents a hypothetical alternative scenario in which all of the plan's benefit provisions are fully effective by 2019. In this hypothetical scenario, the 10-year (2019–2028) net federal budget cost would be $27.7 trillion, rising from roughly 10.4 percent of GDP annually in 2019 to 11.3 percent in 2028.

Tables 4 and 5 (pages 23 and 24, respectively) present alternative scenarios in which provider payment levels are not reduced to Medicare rates; instead, provider and physician reimbursement rates remain unchanged from current projections on national average. Under this scenario, the net added federal costs of M4A would be $38.0 trillion from 2022 through 2031, rising from approximately 12.3 percent of GDP in 2022 to nearly 14.8 percent of GDP in 2031 and continuing to rise afterward. If the benefit provisions of M4A under this higher payment scenario were fully effective by 2019 instead, then added federal costs would be $32.1 trillion by

[49] Beyond the transition period, the text of the Medicare for All Act does not specify what premiums might ultimately be assessed.

2028, rising from roughly 11.9 percent of GDP to 13.3 percent of GDP over that 10-year period. For perspective on these estimates, consider that all of the various current-law federal health subsidies tabulated earlier in this paper currently total approximately 6.6 percent of GDP, to which the costs above would be added.

As noted earlier, the federal cost of enacting the M4A Act would be such that doubling all federal individual and corporate income taxes going forward would be insufficient to fully finance the plan, even under the assumption that provider payment rates are reduced by over 40 percent for treatment of patients now covered by private insurance. Such an increase in the scope of federal government operations would precipitate a correspondingly large increase in federal taxation or debt and would be unprecedented if undertaken as an enduring federal commitment.[50] There should be a robust public discussion of whether these outcomes are desirable and practicable before M4A's enactment is seriously considered.

[50] Federal expenditures as a percentage of GDP rose dramatically but temporarily upon US entry into World War II, as distinct from the ongoing spending commitments associated with M4A.

Appendix: Additional Data Tables

Table 3. Financial Effects of Medicare for All Act if Benefits Were Fully Effective in 2019, in Billions of Dollars

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2019–2028
Currently projected personal healthcare spending[a]	3,276	3,458	3,655	3,859	4,077	4,309	4,546	4,824	5,120	5,433	
+ Added induced demand from increased coverage[b]	+370	+390	+412	+435	+459	+485	+511	+542	+574	+609	+4,787
– Applying Medicare payment rates	–314	–337	–360	–384	–411	–441	–473	–505	–540	–577	–4,342
– Drug cost savings	–50	–54	–57	–61	–66	–70	–75	–80	–86	–92	–692
= Healthcare spending under M4A	3,281	3,457	3,650	3,849	4,060	4,283	4,509	4,780	5,068	5,373	
Currently projected national health expenditures (NHE)[c]	3,868	4,091	4,322	4,562	4,819	5,091	5,370	5,696	6,042	6,410	
+/– Change in healthcare spending	+5	–0	–5	–10	–18	–26	–36	–44	–52	–60	–246
– Admin. cost savings	–70	–74	–78	–83	–88	–142	–149	–158	–168	–179	–1,190
= NHE under M4A	3,802	4,016	4,239	4,469	4,713	4,923	5,184	5,494	5,823	6,171	
Federal gov't share of NHE under M4A[d]	3,611	3,815	4,026	4,244	4,475	4,670	4,915	5,207	5,516	5,844	
– Currently projected net federal health subsidies[e]	–1,406	–1,475	–1,573	–1,709	–1,770	–1,833	–1,984	–2,130	–2,262	–2,465	
= Added federal budget cost under M4A	2,205	2,340	2,454	2,535	2,705	2,837	2,931	3,077	3,254	3,379	27,716
Added federal cost as a percentage of GDP[f]	10.4%	10.6%	10.7%	10.7%	11.0%	11.1%	11.0%	11.1%	11.3%	11.3%	

[a] CMS, *NHE Projections 2017–2026*, February 2018, table 2, extrapolated. The totals calculated here differ slightly from those in the NHE tables (e.g., 3,859 vs. 3,869) because of reconciliation with MEPS data as explained in footnote 19. In the MEPS data, some small category totals are rounded to 0, causing national aggregates to add inexactly.

[b] This includes effects of covering the uninsured, increasing the actuarial value of insurance by eliminating deductibles and copayments and by expanding coverage categories to include dental, vision, and hearing.

[c] CMS, *NHE Projections 2017–2026*, table 1, extrapolated.

[d] This subtracts state "maintenance of effort" payments and continued out-of-pocket payments for LTSS, continued private or state funding of research, and capital expenditures from NHE. Holahan et al., *Sanders Single-Payer Healthcare Plan*; and Medicare for All Act of 2017, S. 1804, 115th Cong. (2017).

[e] This includes federal Medicaid payments, Medicare outlays net of receipts, tax subsidies for employer-provided and ACA marketplace coverage, CHIP, other ACA subsidies and research funding, net of revenues from employer-mandate penalties and taxes on health insurance plans and providers. See CBO, *Federal Subsidies for Health Insurance Coverage for People under Age 65: 2018–2028*, May 23, 2018; CBO, *Medicaid Spending and Enrollment—CBO's April 2018 Baseline*, April 2018; and CBO, *Medicare—CBO's April 2018 Baseline*, April 9, 2018. CBO estimates were extrapolated beyond 2028, with adjustments for the additional Medicare payments projected to occur within 2028 because October 1 (the start of the next fiscal year) occurs on a weekend.

[f] CBO, *The Budget and Economic Outlook: 2018–2028*, April 9, 2018.

Table 4. Financial Effects of Medicare for All Act without Provider Payment Cuts, in Billions of Dollars

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2022–2031
Currently projected personal healthcare spending[a]	3,859	4,077	4,309	4,546	4,824	5,120	5,433	5,766	6,120	6,494	
+ Added induced demand from increased coverage[b]	+435	+459	+485	+511	+542	+574	+609	+645	+684	+725	+5,671
Provider payment changes	0	0	0	0	0	0	0	0	0	0	0
– Drug cost savings	–61	–66	–70	–75	–80	–86	–92	–98	–105	–113	–846
= Healthcare spending under M4A	4,233	4,471	4,724	4,982	5,286	5,608	5,950	6,313	6,699	7,107	
Currently projected national health expenditures (NHE)[c]	4,562	4,819	5,091	5,370	5,696	6,042	6,410	6,799	7,213	7,651	
+ Change in healthcare spending	+374	+394	+415	+436	+462	+489	+517	+547	+579	+613	+4,824
– Admin. cost savings	–83	–88	–142	–149	–158	–168	–179	–190	–201	–214	–1,572
= NHE under M4A	4,852	5,125	5,364	5,657	5,999	6,363	6,748	7,157	7,590	8,050	
Federal gov't share of NHE under M4A[d]	4,628	4,886	5,111	5,388	5,712	6,056	6,421	6,807	7,217	7,651	
– Currently projected net federal health subsidies[e]	–1,709	–1,770	–1,833	–1,984	–2,130	–2,262	–2,465	–2,476	–2,590	–2,708	
= Added federal budget cost under M4A	2,919	3,117	3,278	3,404	3,582	3,794	3,956	4,331	4,627	4,943	37,950
Added federal cost as a percentage of GDP[f]	12.3%	12.7%	12.8%	12.8%	13.0%	13.2%	13.3%	14.0%	14.4%	14.8%	

[a] CMS, *NHE Projections 2017–2026*, February 2018, table 2, extrapolated. The totals calculated here differ slightly from those in the NHE tables (e.g., 3,859 vs. 3,869) because of reconciliation with MEPS data as explained in footnote 19. In the MEPS data, some small category totals are rounded to 0, causing national aggregates to add inexactly.

[b] This includes effects of covering the uninsured, increasing the actuarial value of insurance by eliminating deductibles and copayments and by expanding coverage categories to include dental, vision, and hearing.

[c] CMS, *NHE Projections 2017–2026*, table 1, extrapolated.

[d] This subtracts state "maintenance of effort" payments and continued out-of-pocket payments for LTSS, continued private or state funding of research, and capital expenditures from NHE. Holahan et al., *Sanders Single-Payer Healthcare Plan*; and Medicare for All Act of 2017, S. 1804, 115th Cong. (2017).

[e] This includes federal Medicaid payments, Medicare outlays net of receipts, tax subsidies for employer-provided and ACA marketplace coverage, CHIP, other ACA subsidies and research funding, net of revenues from employer-mandate penalties and taxes on health insurance plans and providers. See CBO, *Federal Subsidies for Health Insurance Coverage for People under Age 65: 2018–2028*, May 23, 2018; CBO, *Medicaid Spending and Enrollment—CBO's April 2018 Baseline*, April 2018; and CBO, *Medicare—CBO's April 2018 Baseline*, April 9, 2018. CBO estimates were extrapolated beyond 2028, with adjustments for the additional Medicare payments projected to occur within 2028 because October 1 (the start of the next fiscal year) occurs on a weekend.

[f] CBO, *The Budget and Economic Outlook: 2018–2028*, April 9, 2018.

Table 5. Financial Effects of Medicare for All Act without Provider Payment Cuts if Benefits Were Fully Effective in 2019, in Billions of Dollars

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2019–2028
Currently projected personal healthcare spending[a]	3,276	3,458	3,655	3,859	4,077	4,309	4,546	4,824	5,120	5,433	
+ Added induced demand from increased coverage[b]	+370	+390	+412	+435	+459	+485	+511	+542	+574	+609	+4,787
Provider payment changes	0	0	0	0	0	0	0	0	0	0	0
– Drug cost savings	–50	–54	–57	–61	–66	–70	–75	–80	–86	–92	–692
= Healthcare spending under M4A	3,595	3,794	4,010	4,233	4,471	4,724	4,982	5,286	5,608	5,950	
Currently projected national health expenditures (NHE)[c]	3,868	4,091	4,322	4,562	4,819	5,091	5,370	5,696	6,042	6,410	
+ Change in healthcare spending	+319	+336	+355	+374	+394	+415	+436	+462	+489	+517	+4,096
– Admin. cost savings	–70	–74	–78	–83	–88	–142	–149	–158	–168	–179	–1,190
= NHE under M4A	4,117	4,353	4,598	4,852	5,125	5,364	5,657	5,999	6,363	6,748	
Federal gov't share of NHE under M4A[d]	3,925	4,152	4,386	4,628	4,886	5,111	5,388	5,712	6,056	6,421	
– Currently projected net federal health subsidies[e]	–1,406	–1,475	–1,573	–1,709	–1,770	–1,833	–1,984	–2,130	–2,262	–2,465	
= Added federal budget cost under M4A	2,519	2,677	2,813	2,919	3,117	3,278	3,404	3,582	3,794	3,956	32,059
Added federal cost as a percentage of GDP[f]	11.9%	12.1%	12.3%	12.3%	12.7%	12.8%	12.8%	13.0%	13.2%	13.3%	

[a] CMS, *NHE Projections 2017–2026*, February 2018, table 2, extrapolated. The totals calculated here differ slightly from those in the NHE tables (e.g., 3,859 vs. 3,869) because of reconciliation with MEPS data as explained in footnote 19. In the MEPS data, some small category totals are rounded to 0, causing national aggregates to add inexactly.

[b] This includes effects of covering the uninsured, increasing the actuarial value of insurance by eliminating deductibles and copayments and by expanding coverage categories to include dental, vision, and hearing.

[c] CMS, *NHE Projections 2017–2026*, table 1, extrapolated.

[d] This subtracts state "maintenance of effort" payments and continued out-of-pocket payments for LTSS, continued private or state funding of research, and capital expenditures from NHE. Holahan et al., *Sanders Single-Payer Healthcare Plan*; and Medicare for All Act of 2017, S. 1804, 115th Cong. (2017).

[e] This includes federal Medicaid payments, Medicare outlays net of receipts, tax subsidies for employer-provided and ACA marketplace coverage, CHIP, other ACA subsidies and research funding, net of revenues from employer-mandate penalties and taxes on health insurance plans and providers. See CBO, *Federal Subsidies for Health Insurance Coverage for People under Age 65: 2018–2028*, May 23, 2018; CBO, *Medicaid Spending and Enrollment—CBO's April 2018 Baseline*, April 2018; and CBO, *Medicare—CBO's April 2018 Baseline*, April 9, 2018. CBO estimates were extrapolated beyond 2028, with adjustments for the additional Medicare payments projected to occur within 2028 because October 1 (the start of the next fiscal year) occurs on a weekend.

[f] CBO, *The Budget and Economic Outlook: 2018–2028*, April 9, 2018.