Measuring Changes in Household Spending Burden Under Health Reform Proposals

A Standardized Approach for Microsimulation Analyses

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TOPLINES

Policymakers usually fail to account for how individual household spending would change under proposed health reforms — information that is critical to fully assessing the merits of policy changes

New measures of household financial burden could help policymakers and the public better assess how proposed health reforms would increase or decrease the affordability of health care and the use of health services

ABSTRACT

Issue: The potential impact of health reforms is usually measured by aggregate costs and effects on coverage, especially the number of uninsured. However, the estimated changes in federal costs could also potentially reflect large changes in household spending. Important impacts on financial burdens are not measured by modeling teams consistently and often get lost in debates over merits of proposals. Frequently, failing to measure the distributional impacts of policy changes on household health care financing burdens leaves critical benefits of new spending unknown.

Goal: Delineate measures of change in the distribution of household health care financial burdens that sophisticated microsimulation modeling teams, such as those of CBO, the Urban Institute, and RAND, could straightforwardly incorporate into their analyses of reform proposals.

Methods: Develop metrics to measure financial burden using the Urban Institute's Health Insurance Policy Simulation Model and its underlying data. Display and test each metric using an illustrative reform.

Key Findings and Conclusions: We propose two standard objective measures of health care financial burdens that microsimulation modelers can regularly produce. We also contend that it is critical to accompany these measures with a third metric that estimates the change in total health care services under reform.

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INTRODUCTION

The potential impact of health reform proposals is usually measured by the aggregate costs of the proposal and its effects on insurance coverage, especially its effects on the number of uninsured. The Congressional Budget Office (CBO) produces a cost estimate that measures the impact of the proposed reform relative to current law, in terms of changes in federal spending, revenues, net effects on the deficit, and changes in health insurance coverage.

However, behind the estimated changes in federal costs are potentially large changes in household spending. For example, a substantial share of costs of certain reforms that aim to expand coverage can frequently be attributable to projected reductions in households' financial burden of paying for medical care (premiums plus out-of-pocket costs including deductibles, coinsurance, and copayments) relative to the current baseline. Other reforms that aim to reduce household spending on premiums may increase household spending on out-of-pocket costs.

These important impacts on household financial burdens are not measured in a consistent manner and, as a result, get lost in debates over the merits of various proposals. For many proposals, failing to measure the distributional impacts of a policy change on the health care financing burdens of households leaves a critical benefit of new spending unknown. Moreover, commonly computed measures, such as the federal cost per newly insured person, could appear misleadingly high without taking into account that a proposal is not just increasing coverage but is also reducing financial burdens for those already insured.

Health Reform Microsimulation Modeling Often Overlooks How Reforms Would Change Household Financial Burdens

Microsimulation modeling of the effect of health care reform proposals is a critical tool for estimating the costs and trade-offs inherent in different policy approaches. The most prominent models are the CBO's Health Insurance Simulation Model 2 (HISIM2), the Urban Institute's Health Insurance Policy Simulation Model (HIPSM), and the RAND Corporation's Compare model. These three models typically produce estimates of the aggregate federal cost and changes in coverage resulting from various health insurance reforms. However, each has demonstrated capacity to also produce distributional analyses of reform

implications on household spending, although this has been done less frequently and with less detail than aggregate cost and coverage estimates. Yet, while the capacity for producing analyses of household financial burdens exists, there are no standard accepted approaches for producing such estimates.

Our objective is to delineate a set of measures of the change in the distribution of household health care financial burdens that sophisticated microsimulation modeling teams, such as those of CBO, the Urban Institute, and RAND, could incorporate in a straightforward manner in their analyses. We focus on measures of "financial burden" as opposed to "affordability," as the latter is a normative concept. There are many definitions of affordability from which to choose, thrusting policymakers and analysts into the role of assessing what level of household spending is or is not affordable. In contrast, measures of the effects of policy changes on financial burdens is objective, and the distribution of these measures can be displayed in a straightforward manner. People wishing to make normative definitions of what is affordable can impose that standard on the objectively measured data, should they wish to do so for their own purposes.

Consistent Measurement of Financial Burdens Can Clarify Understanding of a Reform Proposal's Value

Lowering health care financial burdens remains one of the driving forces behind many policy proposals currently under discussion. Reducing the cost of coverage was identified as a key national policy objective with the passage of the Affordable Care Act (ACA) in 2010. While the ACA has reduced health care financial burdens for many people, affordability of coverage remains a concern to policymakers due to the number of uninsured and insured people who still report cost as the central barrier to their accessing necessary care.[1] For example, premium tax credits have reduced household premium contributions for many with nongroup insurance, but subsidies for out-of-pockets costs are more limited. Therefore, some who are able to enroll in health insurance still face financial barriers to accessing medical services when they need them. These policy concerns are unlikely to abate in the near future as health care costs continue to outpace wage and salary growth and the resulting financial burdens become a potential issue for a growing number of U.S. households.

Measures Must Include Premiums and Out-of-Pocket Costs But Not Define "Affordable"

In our proposed measures of financial burden, we avoid defining what "affordable" means. Still, it's useful to understand how affordable financial burden is defined under current law. The ACA set a single affordability standard for health insurance premiums into law, originally exempting people from individual mandate penalties if they were unable to obtain premiums for less than 9.5 percent of family income.[2] Yet the law implicitly recognizes that lower-income people require more assistance and provides more generous marketplace subsidies for lower-income families.

In 2020, premium subsidies for ACA marketplace plans limited expected household premium contributions to a share of income that ranged from 2.06 percent for households earning up to 138 percent of the federal poverty level (FPL) to 9.78 percent for households earning from 300 percent to 400 percent of FPL. In the face of the ongoing public health emergency, the American Rescue Plan Act temporarily increases those premium subsidies for 2021 and 2022 and extends them to higher-income people as well, limiting expected contributions to 0 percent of income for households up to 138 percent of FPL to 8.5 percent of income for households at or above 400 percent of FPL. Without further legislative action, 2023 marketplace premium subsidies will revert to the standard calculation and income limits used in 2020, under which some people continued to report nongroup coverage financially burdensome, including some who were eligible for subsidized marketplace coverage.

Our proposed measures of financial burden combine household spending on premiums and out-of-pocket spending on health care services because both contribute to financial burdens. Unlike with premiums, however, the ACA does not set an explicit affordability standard that includes out-of-pocket costs. The law recognizes the importance of protecting households against very high or catastrophic out-of-pocket costs by setting limits on the minimum actuarial value of policies sold in the nongroup and employer markets.[3] The law also recognizes that low-income people have lower affordability thresholds and requires insurers to reduce cost-sharing requirements

for such groups in the marketplace. Even so, many workers with employer-sponsored coverage find that their plans require high levels of out-of-pocket spending on health care services relative to their incomes because of high deductibles and other cost-sharing requirements.[4]

Using our financial burden measures, we assess how premiums and out-of-pocket costs combined are distributed across the nonelderly population.[5] We also highlight population subgroups with different financial burdens, which could be useful to policymakers. The goal is to provide measures that modelers can consistently produce and that provide policymakers and stakeholders with an understanding of the full implications of policy changes that are straightforward to comprehend. These types of measures have broad relevance for different types of health reforms but may be particularly important in understanding the consequences of incremental reforms that may have small effects on the number of people with coverage but large implications for the financial costs of coverage for people already insured.

Using an Illustrative Reform Demonstrates How Our Proposed Measures Can Be Used

We will use the HIPSM model to demonstrate how each measure of financial burden could be developed in practice. For these illustrative examples, we compare health care financial burden under the standard application of the ACA (absent the temporarily enhanced and extended premium subsidies provided by the American Rescue Plan Act) and under a proposed reform package. The proposed reform is designed to address existing shortcomings in access and affordability while enhancing cost-containment strategies. The provisions include increasing the generosity of premium and cost-sharing subsidies available in the marketplaces, extending income eligibility for subsidies to more people, and introducing a public insurance option that pays providers at levels consistent with those in highly competitive markets. This set of reforms includes many of the components discussed by President Biden as well as some other Democratic candidates during the 2020 presidential campaign.[6] This reform package is discussed in greater depth in earlier Urban Institute work.[7]

THE PACKAGE OF PROVISIONS USED TO ILLUSTRATE OUR FINANCIAL BURDEN MEASURES

- Enhanced marketplace premium and cost-sharing subsidies (Exhibit 1):

  - Premium subsidies tied to 80 percent actuarial value (gold) coverage, instead of 70 percent (silver) coverage as under current law

  - Household premium contributions for benchmark coverage limited to no more than 8.5 percent of family income

  - Additional cost-sharing subsidies for enrollees with incomes up to 400 percent of the federal poverty level.

- Marketplace subsidies for low-income people who are ineligible for Medicaid because their state has not expanded the program, with the federal government picking up the full costs associated with covering the Medicaid expansion population in all states.

- A limited autoenrollment program for people in free coverage whose income eligibility can be identified based on their participation in the Supplemental Nutrition Assistance Program or Temporary Assistance for Needy Families programs.[8]

- Reversal of the Trump administration's expansion of short-term limited-duration plans, or ACA-noncompliant coverage.

- A federal public option introduced into the nongroup market.

- Lifting the firewall that prevents workers with offers of employer-sponsored insurance and their family members from accessing marketplace subsidies.[9]

Exhibit 1. Current-Law and Reform Marketplace Subsidy Schedule Modeled

Premium Tax Credit Percentage-of-Income Limits for Benchmark Coverage		
Benchmark plan	Silver	Gold
Income (% of poverty)	Current law	Reform
<138	2.07	0.0–1.0
138–150	3.10–4.14	1.0–2.0
150–200	4.14–6.52	2.0–4.0
200–250	6.52–8.33	4.0–6.0
250–300	8.33–9.83	6.0–7.0
300–400	9.83	7.0–8.5
400–500	n.a.	8.5
500–600	n.a.	8.5
600+	n.a.	8.5
Cost-Sharing Reductions: Actuarial Value of Plan Provided to Eligible Enrollees in Benchmark-Level Plans (%)		
Income (% of poverty)	Current law	Reform
<138	94	95
138–150	94	95
150–200	87	95
200–250	73	90
250–300	70	90
300–400	70	85
400–500	70	80
500–600	70	80
600+	70	80

Note: Current law refers to the rules in place in the absence of the temporary premium tax credit enhancements implemented under the American Rescue Plan Act.

PROPOSED STANDARDIZED MEASURES OF HOUSEHOLD HEALTH CARE FINANCIAL BURDEN

We propose that microsimulation modelers use three standardized metrics to inform policymakers and stakeholders of the implications of any health care reform approach for household spending:

1. *The distribution of household health care spending,* comparing the distribution under current law to the distribution that would occur under reform.

2. *The distribution of household health care spending relative to income,* comparing how people in each quintile of spending relative to income would fare under current law and under reform.

3. *The distribution of health care consumed,* comparing the distribution under current law to the distribution that would occur under reform.

Metric 1: The Distribution of Household Spending Under Current Law and Reform

The first metric is a distribution by quintiles of household health care spending under current law and reform, where household spending is defined as including premiums; out-of-pocket payments toward deductibles, coinsurance, and copayments; and other spending on health not covered by insurance.[10] Out-of-pocket spending by people who are uninsured is included as well. But uncompensated care provided to the uninsured is not included as part of financial burden since it is not paid by the households.

We adjust household contributions to premiums for employer-sponsored insurance to account for the fact that these contributions are generally made pretax; we define household income as modified adjusted gross income for purposes of computing these tax subsidies.[11] The highest quintile of household spending could be further broken out to highlight spending by the highest spending 5 percent.

We measure each person's spending as the average spending per person within the family unit.[12] In this way, we account for premium payments and cost-sharing requirements that cover more than one individual within a family, while allowing us to include single and multiperson family units in the same distribution.

The major reason we do not include employer contributions to premiums in the calculation of households' financial burden is that we are unable to determine the effect employer contributions have on each individual workers' compensation.[13] For example, employer contributions do not vary by the age of the employee, yet the true cost of insurance does vary by age, suggesting that the extent to which worker wages decrease in response to employer premium contributions may vary by groups of workers more than reported employer contributions do. Another reason for not including employer contributions in our calculation is that even when workers are aware of the amount of money contributed to their health insurance premiums by their employers, the true after-tax cost that results from the exclusion of employer contributions from income and payroll taxes is obscured by the complexity of its tax treatment. Further, employers, not workers, decide whether and how much to contribute to health insurance premiums. More work is necessary before these costs can be accurately incorporated into distributional analyses of household burdens.

Our proposed metric can be used to highlight the extent to which a policy change would lead to higher or lower levels of spending for people at different points in the spending distribution.[14] For example, a large decrease in spending for people who currently spend the most would likely be considered more valuable than a large decrease in spending for those who spend very little.

Exhibit 2 shows the household health care spending distribution of the nonelderly population under current law (more details in Appendix Table 1).[15] People in the lowest quintile of spenders average no health care spending in a year. Even those in the second-lowest quintile spend very little, with virtually all of that spending going to out-of-pocket costs since they use extremely little medical care. In contrast, average per-person spending for those in the top 5 percent of spenders averages over $8,400 in 2022, roughly evenly split between premiums and direct out-of-pocket spending on care received. This analysis illustrates the highly skewed distribution of health care spending in general; for example, in 2017, the top 5 percent of spenders accounted for 50 percent of total health care spending on services.[16]

Exhibit 2. Distribution of Health Care Spending Under Current Law

Dollars per person; average within family
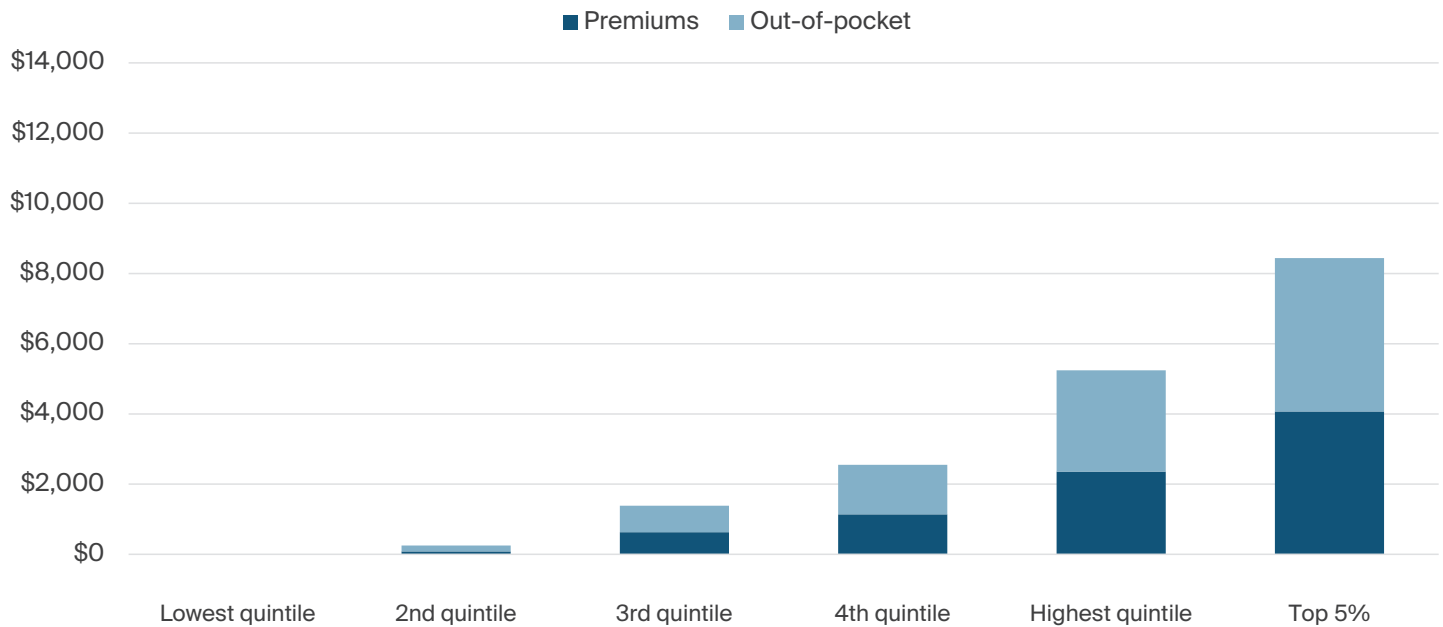
Data: The Urban Institute's Health Insurance Policy Simulation Model 2021. Estimates of current law and reform reflect 2022 projections absent the health insurance reforms included in the American Rescue Plan Act.

As shown in Exhibit 3 (additional detail in Appendix Table 1), average health care spending on premiums and out-of-pocket costs by quintile of spending would be lower under the illustrative reform than under current law for those in all but the lowest quintile of spending, which averages $0 of spending The differences in spending are largest in absolute and percentage terms for the highest spenders, and particularly for those in the top 5 percent of spenders. Average spending for the top 5 percent of spenders is more than $1,000 lower under reform than under current law, a difference of roughly 12 percent. It should be noted that an increase in spending in the lowest quintile can occur under some reforms and is associated with gains in coverage. When people gain health insurance, they often pay something towards the medical services they can access with coverage but from which they were previously shut out for financial reasons when uninsured.

Depending on the specifics of the reform and the model used, the population included in the distribution could vary. While a comprehensive definition is valuable, it would often make sense to exclude populations not affected by the proposed policy to better highlight the

implications for those affected. For example, if modeling a reform that would introduce health system changes only for people under age 65 not enrolled in Medicare, people enrolled in Medicare could be excluded from the financial burden analysis.

In addition, modeling specific subpopulations would expand understanding of a proposal's impact. Examples of important characteristics to consider when choosing subpopulations to analyze include:

- income, or income relative to poverty
- race/ethnicity
- age
- health insurance coverage by type
- geographic region of residence
- health status.

For example, this particular set of illustrative reforms would have the greatest effect on people below age 65 enrolled in private nongroup insurance. Exhibit 4 clearly shows the average effects for those most impacted by the reform (more details in Appendix Table 2). The average

Exhibit 3. Distribution of Health Care Spending Under Current Law and Reform
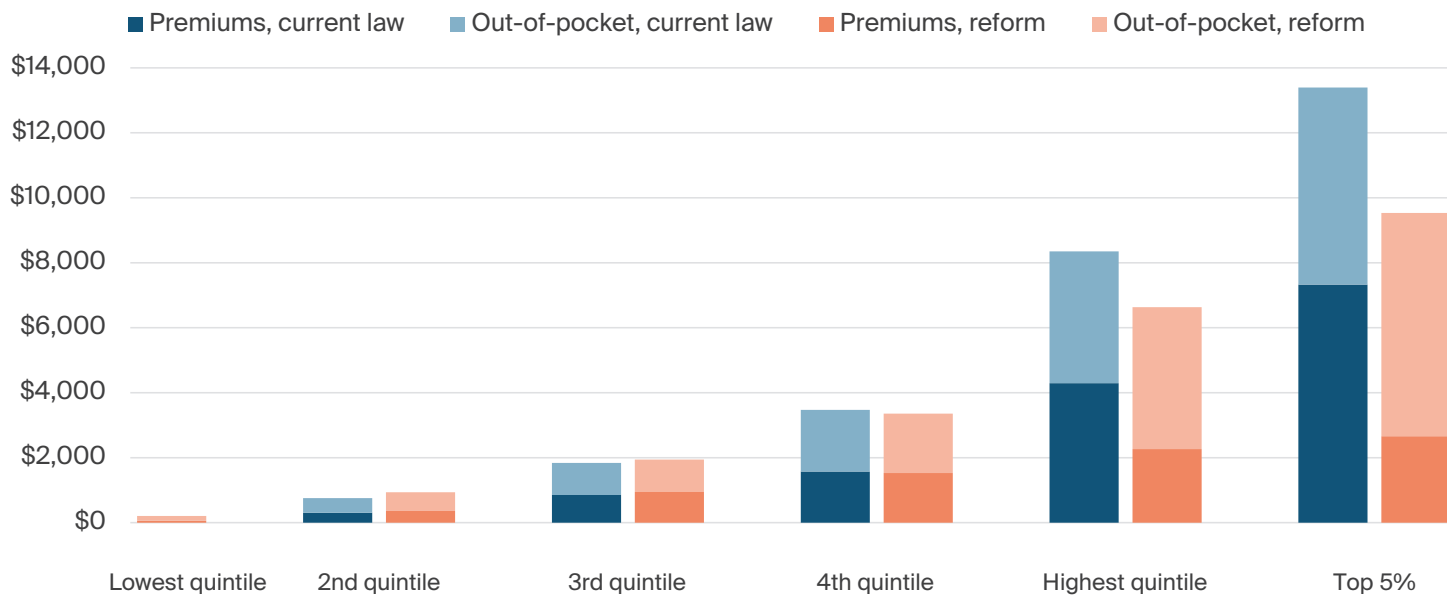
Dollars per person; average within family
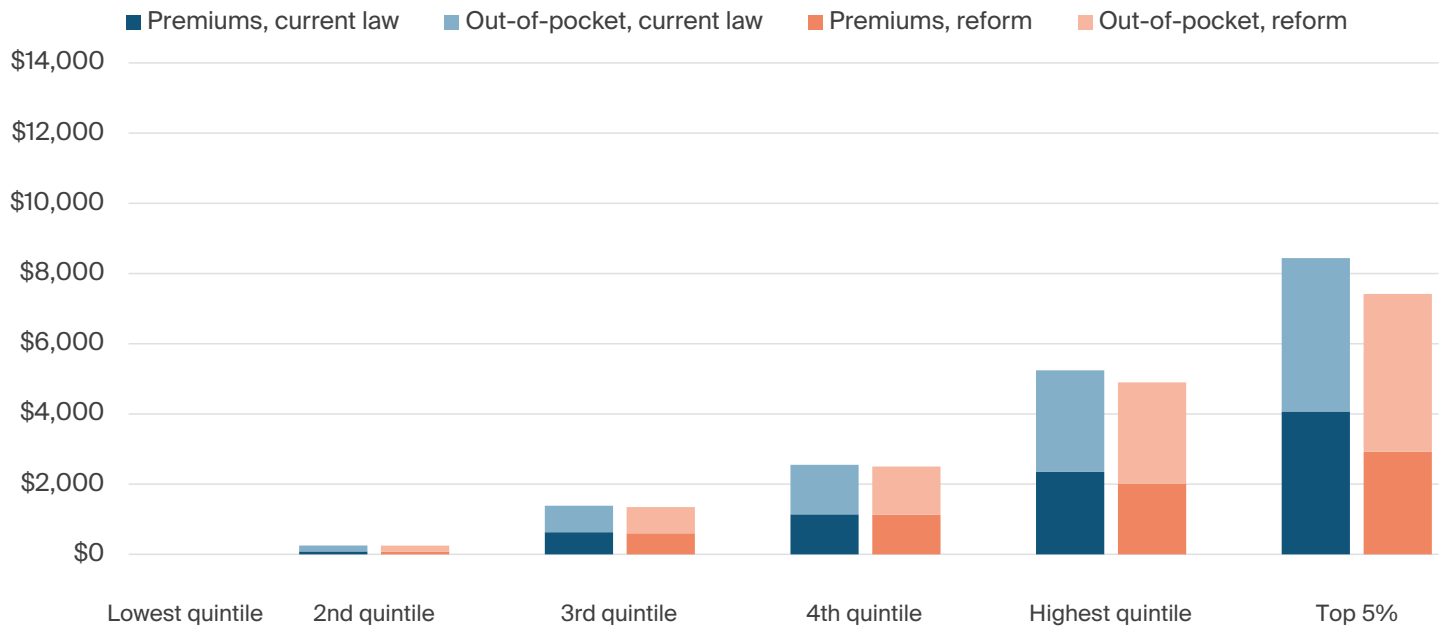
Data: The Urban Institute's Health Insurance Policy Simulation Model 2021. Estimates of current law and reform reflect 2022 projections absent the health insurance reforms included in the American Rescue Plan Act.

Exhibit 4. Distribution of Health Care Spending Under Current Law and Reform for People with Nongroup Coverage Under Reform

Dollars per person; average within family

Data: The Urban Institute's Health Insurance Policy Simulation Model 2021. Estimates of current law and reform reflect 2022 projections absent the health insurance reforms included in the American Rescue Plan Act.

Note: The people included in this measure had a mix of insurance coverage under current law.

spending in the lowest quintiles increases modestly, about an additional $180 per year. This increase is a function of a significant number of people gaining nongroup coverage under reform and obtaining more medical care. When people gain access to subsidized coverage and enroll, spending on premiums may increase. Having gained coverage, enrollees consume more health care services relative to uninsured people, and their out-of-pocket spending may also increase.

Conversely, average total spending falls substantially for those who spend more. For those in the highest quintile and the top 5 percent of spenders, health care spending is more than 20 percent lower under the reform, a net effect of much lower average premium spending and modestly higher out-of-pocket spending. Higher average out-of-pocket spending is the consequence of more care being provided, a change that is the focus of metric 3, described in a later section.

Metric 2: The Distribution of Household Spending Relative to Income Under Current Law and Reform

This metric can be used to highlight the implications of a reform on a family's health care spending as a share of their household income. People would each be assigned to a fixed quintile of spending as a percentage of family income based on their place in the distribution under current law. In this way, for example, one could get a clear sense of how a reform would affect people with high spending relative to income today compared to the effects of a reform on their counterparts currently with lower financial burdens.

This measure differs from the first in that the first metric uses absolute dollars instead of spending relative to income. In addition, the first metric allows people to move from one quintile to another when comparing a reform to current law, while this second metric fixes people in spending quintiles based on their situation under current law. The two measures are consistent in calculating out-of-pocket financial burdens at the family unit level. In this case, total family unit level spending (or more precisely, the health insurance unit spending) would then be divided by total family modified adjusted gross income. The resulting calculation would be assigned to every member of the family. In this way, individual and multi-person units can be included in the same distribution.

This metric would allow policymakers to differentiate between a proposed reform that would reduce health spending for those currently devoting a high percentage of their income to health care from one that would largely affect families currently devoting a small share of their total income for care. This metric could also be of strong interest to those with a normative perspective on the appropriate level of health care spending as a share of income. For example, some have suggested that people be considered underinsured if their spending exceeds 10 percent of income.[17]

Exhibit 5 provides an example of metric 2 used to compare the distribution of household health care spending as a percentage of income under current law versus our illustrative reform (more details in Appendix Table 3). Families in the highest quintile of spending relative to income under current law would see the largest average decrease in spending relative to income under the specified reform. Both average premiums and out-of-pocket spending would fall for those in the two highest quintiles, while there would be slight increases in out-of-pocket spending for those in the lower quintiles. For those spending the most relative to income under current law, or those in the top 5 percent of the distribution, the reform would lead to their spending falling to about 43 percent of family income from about 61 percent. However, even after a large reduction in relative financial burdens, spending as a percentage of income remains high for this group, largely due to their modest average income (approximately $32,500) and their relatively high out-of-pocket spending (approximately $2,300).

Again, additional analysis that shows the spending distribution for various subpopulations could add richness to the understanding of a policy's implications for households of different types. Exhibit 6 shows health care spending relative to income, consistent with the structure of Exhibit 5 but limited to those people who are enrolled in nongroup coverage under reform.

This subpopulation analysis shows that people who spend very little on medical care relative to their income under current law (many of whom are uninsured), would increase spending on premiums when they move into nongroup coverage. At the same time, they would use more medical care and spend more on out-of-pocket costs (more details in Appendix Table 4). At the top quintile of spending relative to income under current law, average spending

Exhibit 5. Distribution of Health Care Spending, Current Law and Reform

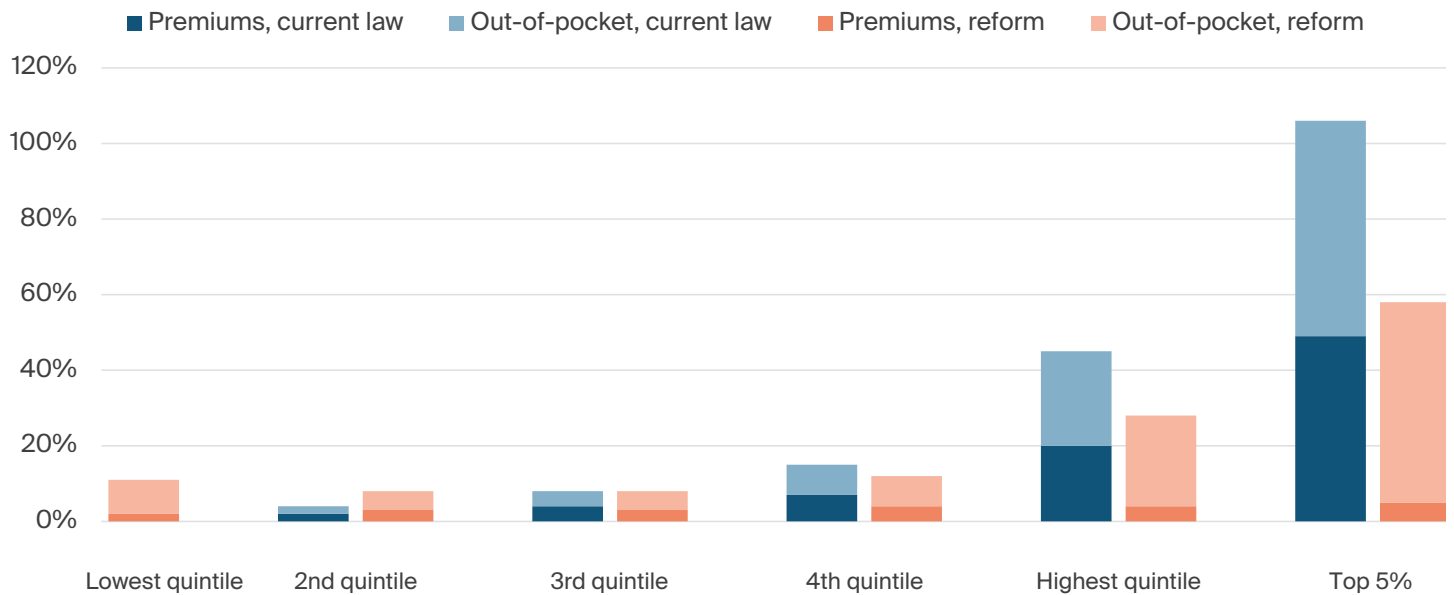*Percentage of household incomes; average within family*
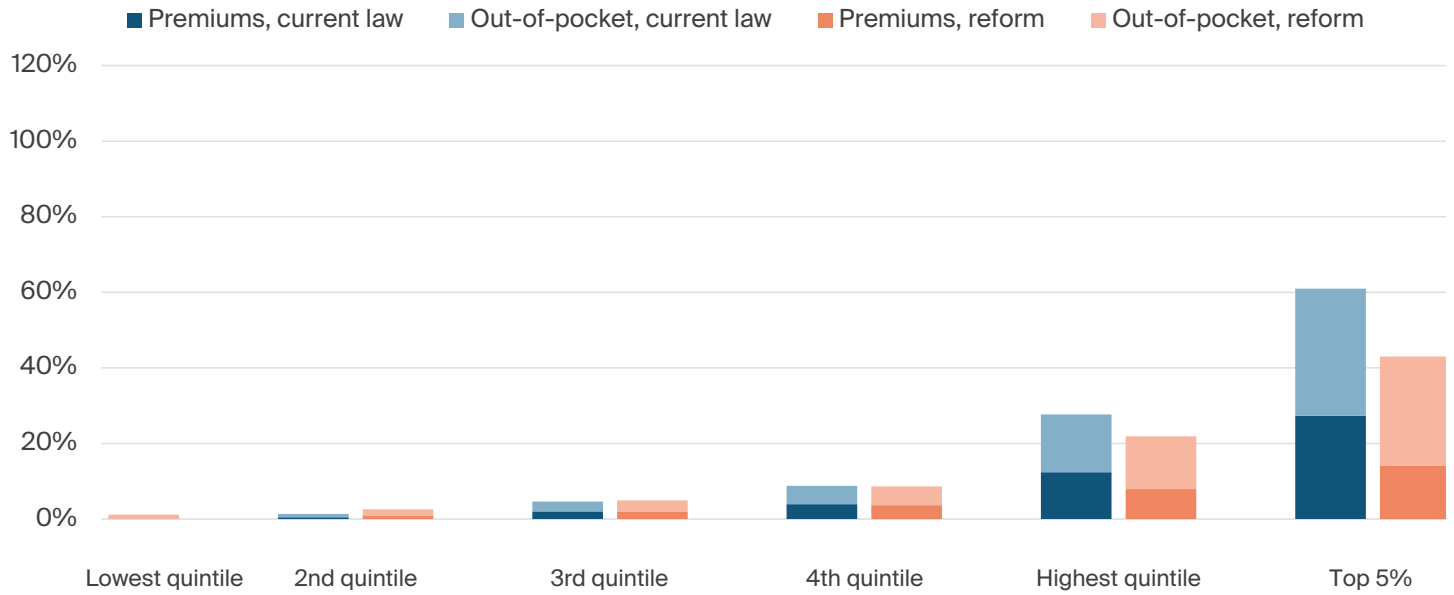
Data: The Urban Institute's Health Insurance Policy Simulation Model 2021. Estimates of current law and reform reflect 2022 projections absent the health insurance reforms included in the American Rescue Plan Act.

Note: The people included in this measure had a mix of insurance coverage under current law.

Exhibit 6. Distribution of Health Care Spending Under Current Law and Reform for People with Nongroup Coverage Under Reform

Percentage of household incomes; average within family

Data: The Urban Institute's Health Insurance Policy Simulation Model 2021. Estimates of current law and reform reflect 2022 projections absent the health insurance reforms included in the American Rescue Plan Act.

Note: The people included in this measure had a mix of insurance coverage under current law.

on premiums would drop dramatically, yet out-of-pocket spending would fall only modestly relative to income. Again, this finding is the consequence of the category being dominated by people with low incomes (average income of approximately $21,300) who have significant medical needs evidenced by high levels of out-of-pocket spending. It could be useful to show versions of metric 2 with and without the lowest-income population included.

Metric 3: The Distribution of Total Health Care Consumed Under Current Law and Reform

One of the central challenges of measuring changes in household health care financial burdens is that changes in burdens may result from changes in coverage status as well as from changes in the generosity of subsidies for coverage. Lower spending by households may be the result of being uninsured or underinsured and using less health care due to cost. For example, a person purchasing coverage in the nongroup market under current law could become uninsured due to a policy change, such as repeal of the ACA. Those people may spend less on health care because they can no longer afford to get the care they would receive when insured. A similar issue arises if a reform reduces the value of coverage for which people are subsidized — for example, moving from a premium tax credit benchmark of a 70 percent actuarial value (silver) plan to a 50 percent actuarial value (sometimes called copper) plan.

Therefore, simply identifying this group of people as having lower financial burdens under repeal could mislead policymakers and stakeholders into thinking these individuals would be unambiguously better off if the ACA was repealed, an erroneous conclusion in this circumstance. Similarly, as suggested above, a reform could expand coverage to uninsured people, leading them to spend more on premium and out-of-pocket payments when obtaining medical services, while simultaneously receiving more care. In this case, it might appear they are worse off because of increased financial burdens when, in fact, their access to health care has improved.

Our third metric is designed to display changes in the total consumption of medical services under each policy scenario relative to current law without making assumptions about the appropriate level of care.[18] In combination with the other two metrics, the third metric is necessary to prevent misleading conclusions about changes in household health care spending. As with the other two metrics, it would include all members of the relevant population regardless of insurance status. All three metrics are designed to include insured and uninsured together.

Depending on the capacity of the microsimulation model, estimates of the consumption of medical care under current law and reform could be measured directly in terms of utilization of services (e.g., hospital days, physician visits, prescriptions filled). Alternatively, consumption could be measured as the "total value of health care services consumed" under each policy scenario, standardizing the prices used to value the services across the different scenarios.

Without standardizing the provider prices across scenarios, a reform that would pay providers at different payment rates could produce misleading results. For example, introducing a public option that paid providers at Medicare payment rates would have a large cost-containment effect, which could appear as if the population was receiving less care than under current law while in actuality the government is paying lower prices for the same care.[19]

The particular standardized prices chosen would not matter, as long as the value of the care received was computed assuming the same level of prices for each scenario (e.g., current law and reform). Using the proxy measure of the "total value of health care services received" provides a comprehensive picture of medical care obtained in one metric, avoiding the need to track changes in multiple measures of utilization. In addition, it is a measure more easily computed by the Urban Institute's microsimulation model and likely by others as well. Consequently, we focus on such a measure here.

Out-of-pocket spending for the full population, including amounts spent by the uninsured, is included. We also include uncompensated care delivered to the uninsured, so that all care provided to people is included in the metric. There is reason to believe that health care providers inflate the reported value of that care to more easily meet philanthropic targets. However, there is no data that allow for an accurate adjustment of the reported value of uncompensated care at standardized prices. Consequently, we include the value of uncompensated care here without adjusting it, acknowledging that its value is likely inflated as a measure of service utilization.

Exhibit 7 shows two lines representing the standardized value of health care received under current law (blue) and under the illustrative reform (orange). Under each scenario, individuals' consumption of health care services (standardized values measured in dollars) is ordered from lowest to highest. The standardized value of care received for the person is plotted at each decile of the distribution, connecting the points with a line (see Appendix Table 5 for data points). The orange line lies above the blue line for the spending distribution below the top deciles, indicating that larger shares of the population would receive greater amounts of health care under the illustrative reform than under current law. There is very little change in the standardized value of care received for those at the top deciles of the spending distribution.[20] A reform that tended to reduce the amount of care received would display a curve below the blue line.

Again, evaluating the implications of a reform for the amount of care received across the population would be valuable not just for the country as a whole, but also for the types of subpopulations described earlier.

For further clarity, a chart such as Exhibit 8 could be included, which summarizes the relative difference in the standardized value of health care received between current law and reform along the distribution of spenders. This chart builds off of the same data as shown in Exhibit 7 but facilitates understanding that people at the lowest end of the spending distribution under the reform would receive substantially more care in relative terms while those at the highest level of spending would receive just about the same amount of care under reform as under current law. The first decile is excluded in the chart since this group receives no care under current law or reform. Those people with no spending come from a variety of situations, including some uninsured and some insured.

Exhibit 7. Distribution of Health Care Consumed at Standardized Cost Under Current Law and Reform
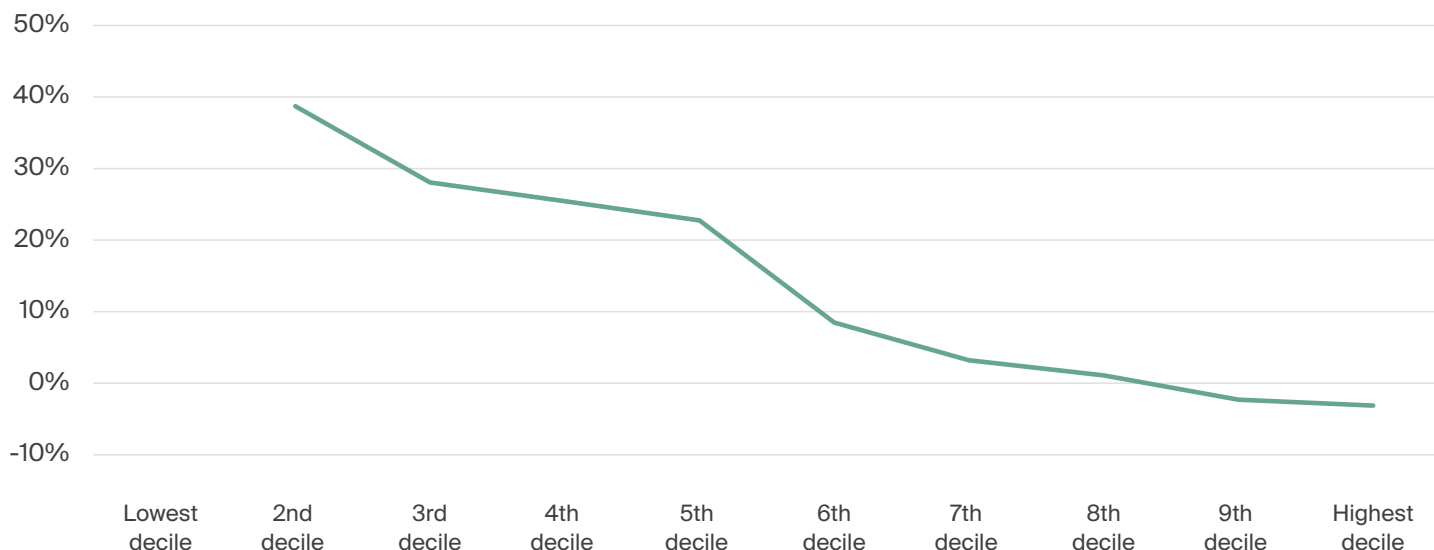
Standardized dollars per person
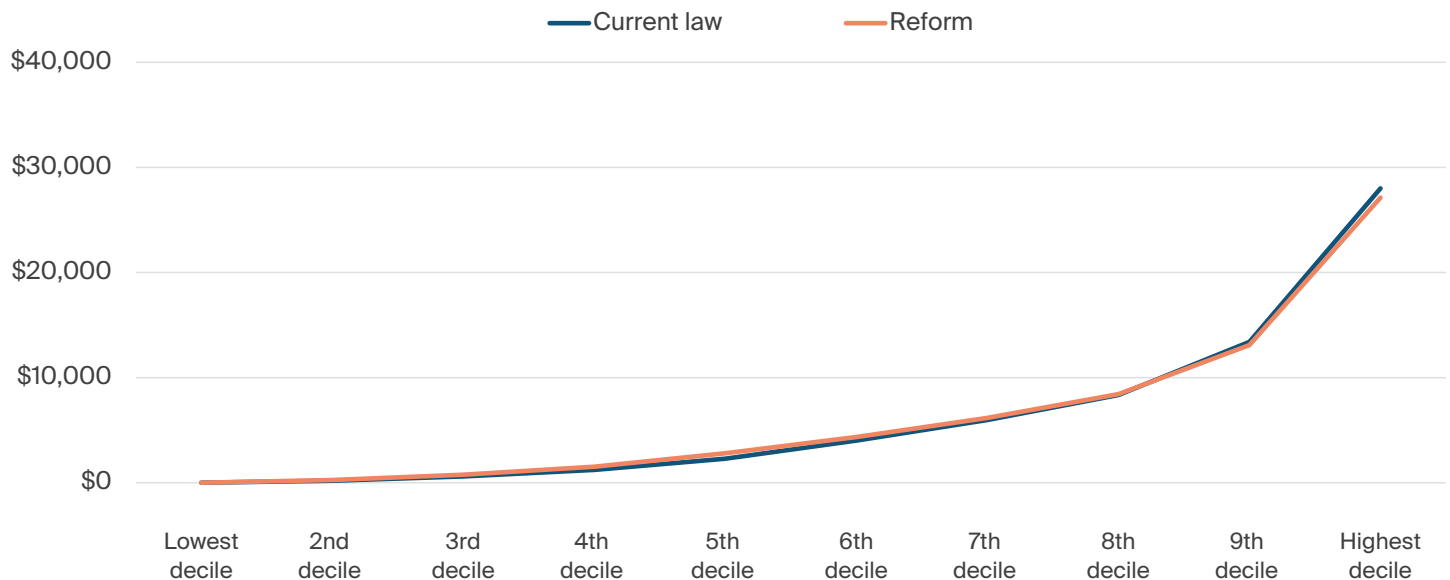
Data: The Urban Institute's Health Insurance Policy Simulation Model 2021. Estimates of current law and reform reflect 2022 projections absent the health insurance reforms included in the American Rescue Plan Act.

Exhibit 8. Distribution of Change in Health Care Consumed at Standardized Cost Under Reform

Percentage change

Data: The Urban Institute's Health Insurance Policy Simulation Model 2021. Estimates of current law and reform reflect 2022 projections absent the health insurance reforms included in the American Rescue Plan Act.

CONCLUSION

Affordability continues to be a central concern and can be a significant barrier for people obtaining health insurance coverage and meaningful access to care. Yet what is affordable is an inherently subjective matter. Here, we propose two standard objective measures of health care financial burdens that microsimulation modelers can regularly produce that would help policymakers and stakeholders better evaluate the implications of reforms for increasing or decreasing affordability. We also contend that it is critical to accompany measures of changing financial burdens with a third measure of how use of health care services changes under reform, so that affordability improvements cannot be attributed to reforms that simply decrease households' access to medical care. These three measures are:

1. The distribution of household spending, comparing the distribution under current law to the distribution that would occur under reform.

2. The distribution of household spending relative to income, comparing how people in each quintile of

spending relative to income under current law would fare under reform.

3. The distribution of health care consumed, comparing the distribution under current law to the distribution that would occur under reform.

We feel that our recommended standard set of measures, produced as a matter of course with reform coverage and government health care spending estimates, will expand and enrich the public's understanding of the consequences of various policy approaches and allow policymakers to make more informed decisions as to which changes should be supported.

Independent modeling teams, like those at the Urban Institute and RAND, can decide to incorporate these measures as routine practice when they estimate the cost and coverage implications of a reform proposal. CBO, the entity tasked as the official scoring entity for federal legislation, may not have the flexibility to decide to adopt these measures. However, CBO will incorporate such measures into their reports if members of Congress explicitly request that they do so.

NOTES

1. See, for example: Karen Pollitz et al., *Consumer Assistance in Health Insurance: Evidence of Impact and Unmet Need* (Henry J. Kaiser Family Foundation, Aug. 7, 2020).

2. This standard applied in 2014 but it was adjusted over time based on changes in health care spending and other factors. The penalties were permanently set to zero, making the affordability standard irrelevant, beginning with the 2019 plan year.

3. Actuarial value is a measure of the generosity of benefits included in the coverage and ranges from 0 (no coverage) to 100 (full coverage without any copays, coinsurance or deductibles).

4. Emily M. Johnston, Genevieve M. Kenney, and Dulce Gonzalez, *Many People with Employer-Sponsored Insurance Would Face High Out-of-Pocket Costs for COVID-19 Treatment* (Urban Institute, Mar. 23, 2020).

5. Throughout this analysis, we assume that nonelderly people with Medicare or public coverage outside of Medicaid or CHIP are unaffected by policy changes.

6. This extended and enhanced premium tax schedule included in this illustrative reform is similar to that in the temporary schedule included in the American Rescue Plan Act of 2021 (ARP), but it is not identical. Both schedules limit expected premium contributions to 8.5 percent of income for those with incomes of 400 percent of FPL and above, but the ARP's schedule is somewhat more generous for those with lower incomes. However, ARP premium subsidies are tied to premiums at the silver (70% actuarial value) level while our illustrative reform ties premium subsidies to the gold (80% actuarial value) level and also includes additional cost-sharing subsidy enhancements that are not included in the ARP's approach.

7. Linda J. Blumberg et al., *From Incremental to Comprehensive Health Insurance Reform: How Various Reform Options Compare on Coverage and Costs* (Urban Institute, Health Policy Center, Oct. 2019).

8. Strategies for implementing such limited autoenrollment are discussed separately in Blumberg, Holahan, and Levitis (forthcoming 2021).

9. The Affordable Care Act prohibits workers and the members of their families in the same tax unit from receiving marketplace subsidies if the worker is offered single coverage with a required worker contribution below 9.83 percent of family income if that coverage has an actuarial value of 60 percent or more. (The percentage of family income adjusts each year with the top cap in the premium tax credit schedule.) This prohibition has been interpreted to hold even in the cases where the household contribution required to purchase family coverage exceeds 9.83 percent of family income. The prohibition also holds even if, without an offer of employer-based coverage, workers and their families would be eligible for marketplace coverage at a lower percent of family income.

10. Other spending on health includes, for example, services received after quantity limits have been met. Ideally, we would also adjust for the tax subsidies associated with health savings accounts, health reimbursement arrangements, and flexible spending accounts in these measures of health care spending. However, data on these accounts, the amount spent through them, and the characteristics of the people using them are unavailable to us.

11. Tax Policy Center, Urban Institute and Brookings Institution, *Key Elements of the U.S. Tax System* (Tax Policy Center, accessed March 2021).

12. We define the family unit as the health insurance unit, the members of the family who are eligible to purchase health insurance through a family policy, or a single adult. In HIPSM, the health insurance unit is the same as the tax unit.

13. Following standard economic theory, we do assume that if an employer were to stop offering health insurance to its workers, those workers would be

compensated in some way for that reduction in the total compensation package.

14. We imagine displaying this measure as a horizontal or vertical bar chart. Since it is also useful to understand the relative size of premiums and out-of-pocket spending on services, each bar would be a stacked composition of premium and out-of-pocket spending.

15. All the estimates presented were computed prior to the enactment of the American Rescue Plan. As a consequence, we refer to "current law" in 2022 as the situation that we project would have occurred absent the temporarily enhanced subsidies provided under that act.

16. Emily M. Mitchell, "Concentration of Healthcare Expenditures and Selected Characteristics of High Spenders, U.S. Civilian Noninstitutionalized Population, 2017," Statistical Brief #528, (Agency for Healthcare Research and Quality, Feb. 2020). We do not recommend highlighting the top 1 percent of spenders, since most microsimulation models are based in imputed expenditure data collected as part of a household survey (Medical Expenditure Panel Survey), rather than medical claims data.

17. Pamela Farley Short and Jessica S. Banthin, "New Estimates of the Underinsured Younger than 65 Years," *JAMA* 274, no. 16 (Oct. 25, 1995): 1302–06.

18. Some researchers argue that the ACA defined a set of basic health insurance standards across a range of income classes that could be used to generate estimates of standard consumption, but we refrain from arguing what is the appropriate level of consumption. See Sanders Korneman and Dahlia K. Remler, *Including Health Insurance in Poverty Measurement: The Impact of Massachusetts Health Reform on Poverty* (National Bureau of Economic Research, Feb. 2016).

19. This assumes that quality of and access to care do not vary with provider payment rates.

20. The highest spenders in Exhibit 7 and Appendix Table 5 appear to consume less care under reform than under current law; this difference is due entirely to high spenders who are uninsured under current law who gain coverage under reform. The apparent drop in spending for this group is an artifact of a limitation of the data we use to proxy consumption of medical care. Under current law, the people in this group are counted as having very high levels of uncompensated care spending. Under reform, they continue to have high spending while gaining coverage.

We are able to adjust the value of health care spending for people with insurance coverage to consistent Medicare prices, but we have no data on which to base an accurate adjustment of the value of health care spending on uncompensated care. It is in the interest of health care providers to assign a value to uncompensated care provided at a high level per unit of service, but there is insufficient data on which to compare such assigned values to prices paid to providers for the same services through insurance programs like Medicare. All of the seeming decrease in consumption observed in Exhibit 7 and Appendix Table 5 is attributable to a limited number of uninsured people with high levels of uncompensated care under current law who are simulated to enroll in insurance coverage under reform. For the computation of metric 3, once they are insured, the care they receive is priced at standardized Medicare payment rate levels, well below what is implicit in the prereform valuation of uncompensated care. If this group of people is eliminated from the analysis, there is no difference between health care consumed at the top of the distribution.

Appendix Table 1. Distribution of Health Care Spending Under Current Law and Reform (dollars per person; average within family)

	Current law			Reform		
	Spending	Premiums	Out-of-pocket	Spending	Premiums	Out-of-pocket
Lowest decile of spenders	0	0	0	0	0	0
2nd decile of spenders	0	0	0	0	0	0
3rd decile of spenders	31	3	28	32	4	28
4th decile of spenders	476	165	311	465	144	321
5th decile of spenders	1,097	466	631	1,065	432	633
6th decile of spenders	1,672	801	872	1,631	767	864
7th decile of spenders	2,233	1,017	1,216	2,189	1,003	1,186
8th decile of spenders	2,866	1,267	1,600	2,812	1,254	1,558
9th decile of spenders	3,776	1,632	2,144	3,683	1,588	2,095
Highest decile of spenders	6,738	3,098	3,640	6,114	2,424	3,690
Highest 5% of spenders	8,438	4,071	4,367	7,419	2,924	4,494

Data: The Urban Institute's Health Insurance Policy Simulation Model 2021. Estimates of current law and reform reflect 2022 projections absent the health insurance reforms included in the American Rescue Plan Act.

Appendix Table 2. Distribution of Health Care Spending Under Current Law and Reform (dollars per person; average within family)

Limted to people with nongroup coverage under reform

	Current law			Reform		
	Spending	Premiums	Out-of-pocket	Spending	Premiums	Out-of-pocket
Lowest decile of spenders	1	0	1	57	11	46
2nd decile of spenders	146	27	119	356	101	255
3rd decile of spenders	521	194	327	724	264	460
4th decile of spenders	994	422	571	1,153	457	696
5th decile of spenders	1,528	705	823	1,648	775	872
6th decile of spenders	2,153	997	1,156	2,235	1,111	1,124
7th decile of spenders	2,940	1,300	1,641	2,924	1,418	1,506
8th decile of spenders	4,007	1,853	2,154	3,794	1,639	2,155
9th decile of spenders	5,808	2,909	2,900	5,052	2,049	3,003
Highest decile of spenders	10,893	5,676	5,217	8,211	2,479	5,732
Highest 5% of spenders	13,395	7,329	6,066	9,534	2,662	6,872

Data: The Urban Institute's Health Insurance Policy Simulation Model 2021. Estimates of current law and reform reflect 2022 projections absent the health insurance reforms included in the American Rescue Plan Act.

Appendix Table 3. Distribution of Health Care Spending, Current Law and Reform (percentage of household income; average within family)

	Current law			Reform		
	Spending	Premiums	Out-of-pocket	Spending	Premiums	Out-of-pocket
Lowest decile of spenders	0%	0%	0%	1%	0%	1%
2nd decile of spenders	0%	0%	0%	1%	0%	1%
3rd decile of spenders	1%	0%	0%	2%	1%	2%
4th decile of spenders	2%	1%	1%	3%	1%	2%
5th decile of spenders	4%	2%	2%	4%	2%	3%
6th decile of spenders	5%	2%	3%	6%	2%	3%
7th decile of spenders	7%	3%	4%	7%	3%	4%
8th decile of spenders	10%	5%	6%	10%	4%	6%
9th decile of spenders	14%	6%	8%	13%	5%	8%
Highest decile of spenders	41%	18%	23%	31%	10%	20%
Highest 5% of spenders	61%	27%	34%	43%	14%	29%

Data: The Urban Institute's Health Insurance Policy Simulation Model 2021. Estimates of current law and reform reflect 2022 projections absent the health insurance reforms included in the American Rescue Plan Act.

Appendix Table 4. Distribution of Health Care Spending, Current Law and Reform (percentage of household income; average within family)

Limted to people with nongroup coverage under reform

	Current law			Reform		
	Spending	Premiums	Out-of-pocket	Spending	Premiums	Out-of-pocket
Lowest decile of spenders	0%	0%	0%	15%	2%	13%
2nd decile of spenders	1%	0%	1%	9%	3%	6%
3rd decile of spenders	3%	1%	2%	7%	3%	5%
4th decile of spenders	5%	3%	3%	7%	3%	4%
5th decile of spenders	7%	4%	4%	8%	3%	5%
6th decile of spenders	10%	5%	5%	9%	4%	6%
7th decile of spenders	13%	6%	7%	11%	4%	7%
8th decile of spenders	16%	7%	9%	13%	4%	9%
9th decile of spenders	22%	9%	13%	16%	4%	12%
Highest decile of spenders	69%	32%	37%	39%	4%	36%
Highest 5% of spenders	106%	49%	57%	58%	5%	53%

Data: The Urban Institute's Health Insurance Policy Simulation Model 2021. Estimates of current law and reform reflect 2022 projections absent the health insurance reforms included in the American Rescue Plan Act.

Appendix Table 5. Distribution of Health Care Consumed at Standardized Cost Under Current Law and Reform (standardized dollars per person)

	Baseline	Reform	Change	Percentage change
Lowest decile	0	0	0	n.a.
2nd decile	186	258	72	39%
3rd decile	596	763	167	28%
4th decile	1,222	1,533	311	25%
5th decile	2,286	2,806	520	23%
6th decile	4,011	4,352	340	8%
7th decile	5,974	6,165	191	3%
8th decile	8,344	8,436	92	1%
9th decile	13,404	13,095	−309	−2%
Highest decile	28,003	27,126	−878	−3%
Highest 5%	36,817	35,411	−1,406	−4%

Data: The Urban Institute's Health Insurance Policy Simulation Model 2021. Estimates of current law and reform reflect 2022 projections absent the health insurance reforms included in the American Rescue Plan Act.

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