

Effects of Alternative Insurer Responses to Discontinued Federal Cost-Sharing Reduction Payments

Broad Loading as an Alternative to Silver Loading

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Preface

This report addresses the effects of disallowing the current practice of increasing only the premiums of silver-tiered individual market plans in response to discontinued federal payments of cost-sharing reductions (silver loading). We consider a scenario in which the costs of cost-sharing reduction subsidies must be spread among all metal-tiered individual market plans, a practice known as broad loading. We compare the silver loading, or status quo, scenario with the broad loading scenario to estimate the impacts on insurance enrollment, individual market premiums, and federal spending. In addition, we examine a scenario in which federal cost-sharing reduction payments are restored.

The research described in this report was performed under a grant to Families USA from the California Endowment and carried out within the Payment, Cost, and Coverage Program in RAND Health Care.

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Contents

Preface	iii
Tables	v
Summary.....	vi
Acknowledgments	viii
Abbreviations	ix
1. Introduction	1
2. Methods	3
3. Results	4
Insurance Enrollment Falls Under Broad Loading.....	4
Premiums and Subsidies.....	5
Federal Spending on Advance Premium Tax Credits	11
4. Limitations.....	12
5. Conclusions	13
Appendix	15
Bibliography	21

Tables

Table 3.1. Health Insurance Enrollment for Individuals Under Age 65 in 2020 (in millions).....	4
Table 3.2. Health Insurance Transitions from Status Quo (Silver Loading) to Broad Loading and to Restored Cost-Sharing Reduction Payments in 2020 (in millions).....	5
Table 3.3. Individual Market Premiums for a 40-Year-Old Nonsmoker in 2020	6
Table 3.4. Out-of-Pocket Premiums for Individual Market Plans in 2020	7
Table 3.5. Percentage of Individual Market Enrollees with Access to No-Cost Premium Bronze Plans	8
Table 3.6. Out-of-Pocket Premium Changes to Maintain Coverage from Status Quo (Silver Loading) Under Broad Loading Scenario	9
Table 3.7. Out-of-Pocket Premium Changes to Maintain Coverage from Status Quo (Silver Loading) Under Cost-Sharing Reduction Payments Restored (No Loading) Scenario, 2020	10
Table 3.8. Federal Spending on Advance Premium Tax Credits	11
Table A.1. Comparison with the Congressional Budget Office, Enrollment in Millions	20

Summary

Under the Affordable Care Act (ACA), insurers are required to offer cost-sharing reductions (CSRs) to eligible exchange enrollees who have incomes below 250 percent of the federal poverty level and are enrolled in silver-tiered exchange plans. CSRs reduce consumers' out-of-pocket health care costs (premiums, deductibles, and coinsurance), thereby increasing the actuarial value of plans. Under the original implementation of the ACA, the federal government made payments to insurers to cover the costs of CSRs. In late 2017, the Trump administration decided that federal payment of CSRs was unlawful and halted federal payments for CSR subsidies. A new congressional appropriation would be needed to reinstate federal CSR funding under the current administration's policy. Despite the fact that the federal government is no longer making CSR payments to insurers, insurers are still required to provide CSR subsidies to qualifying enrollees. As a result, most states and insurers have adopted a practice known as silver loading to fund CSRs.

Silver loading is a way for states and insurers to try to finance the cost of providing legally required CSRs while limiting the degree to which the costs are passed on to individual market enrollees and consumers, and to pass most of the cost back to the federal government. With silver loading, insurers finance the increased claims costs that result from CSRs by raising premiums for the silver plans that provide CSRs. This has the effect of increasing advance premium tax credits (APTCs). APTCs offset premium costs for individual market enrollees and are benchmarked to the second-lowest-cost silver plan. Therefore, while the federal government no longer pays the cost of CSRs, most of those costs are covered by increased federal spending on APTCs. In the recently issued Notice of Benefit and Payment Parameters for 2020, which updates guidance related to implementation of the ACA, the U.S. Department of Health and Human Services does not take action on silver loading for the 2020 plan year; however, it suggests that changes in 2021 are possible, and there is speculation that silver loading could be disallowed in future years. Consistent with a recommendation in that guidance, the administration's budget proposes a restoration of CSR payments through an appropriation.

In this analysis, we use a microsimulation approach to estimate the effects of an alternative known as broad loading, which could be implemented by insurers and states if the Department of Health and Human Services ends silver loading without congressional restoration of CSR payment. In broad loading, insurers load the costs of CSRs onto all individual market plans, as opposed to silver plans only. We consider one scenario in which insurers engage in silver loading to fund CSRs, compared with a scenario in which insurers engage in broad loading and a scenario in which federal payment of CSRs is restored. We compare the estimated effects of broad loading or CSR restoration with the current silver loading policy. Those effects include health insurance enrollment, individual market premiums, and federal spending on APTCs. This

report is aimed at California and national policymakers, and we present results both nationally and in California.

Our analysis uses the COMPARE microsimulation model, which utilizes data from the Survey of Income and Program Participation, the Medical Expenditure Panel Survey, and the Kaiser Family Foundation/Health Research and Educational Trust Employer Health Benefits Survey. COMPARE is a national model, so to produce estimates specific to California, we used state-representative data from the American Community Survey Public Use Microdata Sample to reweight the national model to match California's population size and distribution of age, gender, income, health insurance coverage, and race/ethnicity.

Relative to silver loading, we find that broad loading and restoration of federal CSR payments result in lower individual market premiums for silver plans but higher premiums for bronze, gold, and platinum plans. Furthermore, because APTC amounts are benchmarked to the second-lowest-cost silver plan, we find that under broad loading, APTCs decline in value, APTC-eligible individuals have to pay more out of pocket for their premiums on the individual market, and fewer choose to enroll. As a result, while federal spending on APTCs is lower under broad loading or CSR payment restoration, insurance coverage also declines overall, driven by reductions in coverage in the individual market.

Overall, our results suggest that while broad loading or the restoration of CSR payments would lead to lower federal spending on APTCs, it would also lead to higher premium costs for many consumers and lower insurance enrollment. Policymakers may wish to consider options for addressing consumers' premium costs when considering changes to policies related to CSR payments and silver loading.

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Abbreviations

ACA	Affordable Care Act
APTC	advance premium tax credit
CBO	Congressional Budget Office
CSR	cost-sharing reduction
FPL	federal poverty level
HHS	Department of Health and Human Services
MEPS	Medical Expenditure Panel Survey

1. Introduction

Under the Affordable Care Act (ACA), insurers are required to offer cost-sharing reductions (CSRs) to eligible exchange enrollees who have incomes below 250 percent of the federal poverty level (FPL) and are enrolled in silver-tiered exchange plans. CSRs reduce consumers' out-of-pocket health care costs (premiums, deductibles, and coinsurance), thereby increasing the actuarial value of plans. Under the original implementation of the ACA, the federal government made payments to insurers to cover the costs of CSRs. In late 2017, the Trump administration decided that federal payment of CSRs was unlawful and halted federal payments for CSR subsidies. A new congressional appropriation would be needed to reinstate federal CSR funding under the current administration's policy. Despite the fact that the federal government is no longer making CSR payments to insurers, insurers are still required to provide CSR subsidies to qualifying enrollees. As a result, most states and insurers have adopted a practice known as silver loading to fund CSRs.

Silver loading is a way for states and insurers to try to limit the degree to which the costs of halted CSR payments are passed on to their individual market enrollees and consumers, and to pass most of the cost back to the federal government. Silver loading can accomplish this because advance premium tax credits (APTCs), which lower premium costs for eligible exchange enrollees, are linked to the cost of silver plans. APTCs are set by specifying an expected premium contribution for subsidy-eligible individuals and families with incomes between 100 and 400 percent of the FPL. Expected premium contributions increase with the FPL. APTC amounts are the difference between an individual's or family's expected premium contribution and a benchmark premium—the second-lowest-cost silver plan that an individual or family has access to.¹

Therefore, when insurers increase the costs of silver premiums in response to halted federal payments for CSRs, APTCs also increase. In fact, the Congressional Budget Office (CBO) has projected that halting CSR payments substantially increased net federal spending on subsidies as a result of higher APTC spending (CBO, 2018a). While APTC amounts are set based on the cost of a benchmark plan, an individual or family can apply their APTC to any exchange plan. For subsidized enrollees, increased silver premiums and APTCs do not change what enrollees pay for a silver plan, since their income-based premium contribution is the same. Subsidized enrollees who choose coverage outside the silver tier face lower net premium costs, as premiums for

¹ For individuals who are subject to increased premiums as a result of tobacco use, the benchmark premium is that for a non-tobacco user. Most states allow insurers to charge tobacco users up to 1.5 times the premiums faced by non-tobacco users. Because tobacco users can face significant surcharges but receive premium subsidies based on premiums without the surcharge, their out-of-pocket premium costs can be much higher than out-of-pocket costs for non-tobacco users with similar incomes.

bronze, gold, and platinum plans are unaffected by silver loading,² but APTCs increase. This can lead to some consumers becoming eligible for free bronze plans, which is the tier with the lowest actuarial value available, or being able to upgrade to a gold plan, which is more generous than a silver plan, for less than the net cost of their silver plan.

For the 2019 plan year, the Notice of Benefit and Payment Parameters, which provides revised regulations and updated guidance each year on the implementation of the ACA's individual market rules and is issued by the Department of Health and Human Services (HHS), made no mention of silver loading, but HHS may disallow such targeted increases in premiums going forward (HHS, 2018). In the recently issued Notice of Benefit and Payment Parameters for 2020, HHS seeks comment on ways in which HHS may address funding of CSR payments in the absence of congressional action to restore federal payment of CSRs, notes that the administration has asked Congress to appropriate such payments, and suggests that upcoming changes in 2021 are possible (HHS, 2019).

In this analysis, we use a microsimulation approach to estimate the effects of a policy change that would disallow silver loading, likely leading states and insurers to move toward “broad loading,” whereby the costs of CSRs are loaded onto *all* individual market plans as opposed to silver plans only.

This work was conducted under a grant to Families USA from the California Endowment. We estimated the effects of a broad loading policy at the national level and for California, using the COMPARE microsimulation model. COMPARE is a tool developed at RAND Corporation that uses economic theory and data to estimate how people will respond to health insurance policy changes.

We considered three policy scenarios:

1. **Status quo:** silver loading is permitted, costs of CSRs are loaded onto silver plans.
2. **Broad loading:** silver loading is not permitted, costs of CSRs are loaded onto all individual market plans.
3. **Restoration of CSR payments by the federal government:** CSR costs are not loaded on to premiums, as direct payments from the federal government to insurers cover these costs.

We estimated the effects of broad loading, as well as the effects of restored CSR payments, relative to the status quo on several outcomes, including health insurance enrollment, marketplace premiums, average out-of-pocket premiums, and federal spending on APTCs, projected to the year 2020.

Chapter 2 of this report describes the methods that we use to estimate the effects of broad loading, and Chapter 3 presents the results. Chapter 4 describes limitations of the analysis, and in the final chapter, we discuss the implications of our findings.

² Silver loading can have secondary effects on the bronze, gold, and platinum premiums if it changes the composition of individual market enrollees. For example, increased APTCs that result from silver loading could make younger or healthier individuals more likely to enroll in the individual market, which would lead to decreased premiums for nonsilver plans.

2. Methods

We used RAND’s COMPARE model to estimate the effects of a policy where silver loading is replaced by broad loading as a response to halted federal payments of CSRs and the effects of restored CSR payments by the federal government. COMPARE is a microsimulation model that uses nationally representative, publicly available data and economic theory to estimate changes in health insurance enrollment and health care spending in response to policy changes. The primary data sources are the Survey of Income and Program Participation, Medical Expenditure Panel Survey (MEPS), and Kaiser Family Foundation/Health Research and Educational Trust Employer Health Benefits Survey. In the model, individuals choose between insurance plans based on a utility maximization framework, and employers choose whether to offer insurance to their employees. We regularly update the model to reflect population growth, health care cost growth, and policy changes. See the Appendix for further details on the COMPARE model.

For the California-specific analyses, we weighted the national-level COMPARE data to match the age, gender, race/ethnicity, poverty level, and health insurance composition of the California population using the public use microdata sample from the American Community Survey given 2017 market characteristics, a year in which CSR costs were paid by the federal government. That means, if we were to run the model assuming CSRs were paid (and the individual mandate penalty was in effect), we would reproduce insurance enrollment patterns observed in 2017. When we run the model under alternative assumptions—such as under silver or broad loading scenarios—individuals’ enrollment decisions adjust to reflect these factors. In addition, we adjusted individual market spending in California in the model so that we could reproduce differences between national and California individual market premiums. We derived our target from the 2017 benchmark premiums (Kaiser Family Foundation, 2018). In addition, we modeled California’s regulatory policy that allows insurers to charge exchange enrollees a silver premium that includes CSR loading and to charge off-exchange enrollees a lower silver premium without CSR loading. We do not explicitly model on- and off-exchange plans in COMPARE, so we applied silver loading to silver plans for subsidy-eligible individuals only as a proxy for exchange enrollment. We also modeled California’s prohibition on charging tobacco users and non-tobacco users different premiums.

We project the 2017 weights forward to 2020 using state-specific population projections from the University of Virginia Cooper Center’s Demographics Research Group (2018). We make further adjustments to the weights to ensure that subsidized marketplace enrollment, CSR enrollment, and the silver load amount match California’s 2017 experience, using detailed enrollment data from Covered California (n.d.), California’s insurance marketplace.

3. Results

Insurance Enrollment Falls Under Broad Loading

Table 3.1 shows estimated insurance enrollment under the status quo (silver loading), broad loading, and restored CSR payment scenarios nationally and for California. The total number of insured nonelderly individuals drops in the broad loading scenario relative to the status quo (silver loading) scenario in both the national model (a decrease of 1.5 million) and the California model (a decrease of 160,000). These decreases are largely driven by reductions in insurance coverage in the individual market, where total enrollment drops by 12.5 percent at the national level and by 10.5 percent in California. Enrollment decreases are larger among the population with incomes higher than 400 percent of the FPL who do not qualify for subsidies (23.5 percent at the national level and 20.0 percent in California). Under a scenario in which CSR payments are restored, we estimate that the total number of insured and the number of individual market enrollees would fall relative to the status quo, but that enrollment would be higher than under a broad loading scenario. Enrollment is higher under restored CSR payments than under broad loading because, as we will show in Table 3.3, individual market enrollees face higher premiums under broad loading than under restored CSR payments.

Table 3.1. Health Insurance Enrollment for Individuals Under Age 65 in 2020 (in millions)

	<i>National</i>			<i>California</i>		
	Status Quo (Silver Loading)	Broad Loading	CSR Payments Restored (No Loading)	Status Quo (Silver Loading)	Broad Loading	CSR Payments Restored (No Loading)
Total insured	242.6	241.1	241.8	30.28	30.12	30.16
Individual market	14.3	12.5	13.4	1.62	1.45	1.48
<139% FPL	2.5	2.5	2.6	0.03	0.03	0.03
139%–199% FPL	4.1	3.8	3.9	0.52	0.52	0.52
200%–299% FPL	3.7	3.1	3.3	0.45	0.41	0.40
300%–399% FPL	2.3	1.8	2.0	0.21	0.18	0.18
400%+ FPL	1.7	1.3	1.7	0.40	0.32	0.35
Employer	154.7	154.9	154.7	18.33	18.35	18.35
Medicaid	61.2	61.2	61.2	8.67	8.66	8.66
Other	12.5	12.5	12.5	1.67	1.67	1.67
Uninsured	35.4	37.0	36.2	3.79	3.94	3.91

Table 3.2 describes insurance transitions in two different scenarios: between the status quo and broad loading; and between the status quo and a scenario in which CSR payments are restored. Compared with the status quo, both broad loading and a restoration of CSR payments lead to more insured people becoming uninsured. The majority of those enrolled in individual market plans under both the status quo and our alternative scenarios stay on plans in the same tier. We also see enrollees transitioning to both higher and lower tiers under the broad loading and restoration of CSR payments scenarios. This is because silver loading makes silver plans expensive relative to plans on other tiers, causing enrollees to choose either lower-actuarial-value bronze plans or higher-actuarial-value gold or platinum plans. Broad loading and federal payment of CSRs make silver plans more attractive relative to the status quo, causing some bronze enrollees to upgrade to silver, and some gold and platinum enrollees to downgrade to silver.

Table 3.2. Health Insurance Transitions from Status Quo (Silver Loading) to Broad Loading and to Restored Cost-Sharing Reduction Payments in 2020 (in millions)

	<i>National</i>		<i>California</i>	
	Broad Loading	CSR Payments Restored (No Loading)	Broad Loading	CSR Payments Restored (No Loading)
Moved from insured to uninsured	1.8	1.2	0.17	0.14
Moved from uninsured to insured	0.3	0.4	0.02	0.02
Individual market plans				
Moved from higher to lower metal tier	2.6	2.6	0.10	0.07
Moved from lower to higher metal tier	1.4	1.8	0.10	0.10
Stayed on same metal tier	8.3	8.7	1.25	1.30

Premiums and Subsidies

Table 3.3 shows the premiums for individual market plans for a 40-year-old nonsmoker. First, we note that under the status quo, national premiums for silver plans are higher than premiums for gold. The premiums for gold plans are very close to premiums for silver premiums in the California model—less than 1 percent difference. This suggests that unless an individual qualifies for significant CSR subsidies on a silver plan, gold plans are almost certainly a better value than silver plans under the status quo. Predictably, broad loading leads to higher premiums for bronze, gold, and platinum plans and decreases premiums for silver plans relative to silver

Table 3.3. Individual Market Premiums for a 40-Year-Old Nonsmoker in 2020

	<i>National</i>			<i>California</i>		
	Status Quo (Silver Loading)	Broad Loading	CSR Payments Restored (No Loading)	Status Quo (Silver Loading)	Broad Loading	CSR Payments Restored (No Loading)
Bronze	\$4,868	\$5,517	\$5,044	\$4,779	\$5,146	\$4,965
Silver	\$6,995	\$6,436	\$5,884	\$6,352	\$6,003	\$5,792
Gold	\$6,491	\$7,356	\$6,725	\$6,372	\$6,861	\$6,619
Platinum	\$7,302	\$8,275	\$7,566	\$7,168	\$7,719	\$7,447

NOTE: Premiums listed are for a 40-year-old nonsmoker.

loading. In particular, premiums increased by 13.3 percent for nonsilver plans and decreased by 8.0 percent for silver plans nationally; nonsilver plan premiums rose by 7.6 percent and silver plan premiums decreased by 5.5 percent in California.³ This pattern makes sense; the majority of individual market enrollees enroll in silver plans (Kaiser Family Foundation, 2019). With broad loading, nonsilver plans with relatively few enrollees must pay CSR costs formerly covered by silver plans with many more enrollees. That means the per capita cost increases for the former are relatively large, while the per capita savings of the latter are relatively small. If CSR payments were restored, silver premiums would be lower than under either the status quo or broad loading. Premiums for nonsilver plans would be higher than under the status quo but lower than under broad loading.

Table 3.4 shows the out-of-pocket premiums for enrollees in bronze, silver, and gold plans who remain enrolled in individual market plans on the same tier and maintain the same APTC subsidy status (i.e., subsidized or unsubsidized). The out-of-pocket premium is the full premium minus any APTCs the enrollee receives. Among subsidized enrollees, out-of-pocket premiums for bronze and gold plans increase substantially under broad loading both nationally and in California. This reflects the fact that under broad loading, APTCs, which are tied to the cost of a silver plan, decrease. At the same time, nonsilver premiums increase; the net result is an increase in out-of-pocket premiums paid for nonsilver plans. For example, the national out-of-pocket premium for subsidized enrollees in bronze plans more than doubled from \$772 under silver loading to \$1,820 under broad loading. Premiums for unsubsidized enrollees also increase as a result of higher age-specific premiums. For example, out-of-pocket premiums for bronze plans increased from \$8,497 to \$9,627 among unsubsidized enrollees at the national level.

³ Premium changes are uniform across bronze, gold, and premium plans because of rate banding.

Table 3.4. Out-of-Pocket Premiums for Individual Market Plans in 2020

	<i>National</i>			<i>California</i>		
	Status Quo (Silver Loading)	Broad Loading	CSR Payments Restored	Status Quo (Silver Loading)	Broad Loading	CSR Payments Restored
Bronze						
Subsidized enrollees	\$772	\$1,820	\$1,918	\$1,294	\$2,013	\$1,994
139%–199% FPL	\$670	\$1,006	\$1,076	\$520	\$714	\$903
200%–399% FPL	\$793	\$2,037	\$2,144	\$1,387	\$2,168	\$2,158
Unsubsidized enrollees	\$8,497	\$9,627	\$8,902	\$7,005	\$7,555	\$7,274
Silver						
Subsidized enrollees	\$633	\$631	\$629	\$1,067	\$1,067	\$1,067
139%–199% FPL	\$913	\$913	\$912	\$940	\$940	\$940
200%–399% FPL	\$1,736	\$1,721	\$1,689	\$1,443	\$1,443	\$1,443
Unsubsidized enrollees	\$5,676	\$5,221	\$4,770	\$7,803	\$8,279	\$8,214
Gold						
Subsidized enrollees	\$3,589	\$5,653	\$5,271	\$3,072	\$3,756	\$3,712
139%–199% FPL	\$2,491	\$3,410	\$2,958	\$1,714	\$2,553	\$2,520
200%–399% FPL	\$3,607	\$5,688	\$5,316	\$3,115	\$3,796	\$3,749
Unsubsidized enrollees	\$9,483	\$10,745	\$9,768	\$8,055	\$8,633	\$8,206

NOTES: Out-of-pocket premiums are calculated for those who stay on the same metal tier plan under both scenarios. Premium payments were calculated per capita. Out-of-pocket premiums are omitted for subsidized enrollees with incomes less than 139 percent of the FPL and for those in platinum plans because of low sample sizes.

Conversely, out-of-pocket premiums for silver plans fall slightly as a result of broad loading nationally but not in California. The modest average decrease at the national level results from the fact that while most subsidized silver enrollees experience no change in out-of-pocket premiums, subsidized tobacco users have lower out-of-pocket silver premiums under silver loading. This is because such enrollees can be charged up to 1.5 times more than non-tobacco users in most states, while subsidy levels are based on the cost of a plan for a non-tobacco user. California does not allow insurers to charge higher rates to tobacco users, and thus those enrollees see no difference in out-of-pocket costs for a silver plan under broad loading compared with the status quo.

Table 3.5 shows the proportion of individual market enrollees with access to a no-cost bronze plan under each scenario. The proportion of individual market enrollees with access to no-cost bronze plans falls for all income groups under the broad loading and restoration scenarios. Declines are particularly steep for individuals in higher income categories.

Table 3.5. Percentage of Individual Market Enrollees with Access to No-Cost Premium Bronze Plans

	<i>National</i>			<i>California</i>		
	Status Quo (Silver Loading)	Broad Loading	CSR Payments Restored (No Premium Loading)	Status Quo (Silver Loading)	Broad Loading	CSR Payments Restored (No Premium Loading)
Subsidized enrollees	63	35	33	49	28	27
<139% FPL	89	76	75	80	69	68
139%–199% FPL	81	40	36	65	33	31
200%–399% FPL	40	11	11	23	3	3
Unsubsidized enrollees	0	0	0	0	0	0

To further illustrate changes in premiums, Table 3.6 shows changes to out-of-pocket premium costs required to maintain the same individual market coverage under broad loading as under silver loading. Both nationally and in California, a larger proportion of subsidized enrollees face higher out-of-pocket premiums to maintain the same coverage under broad loading than under silver loading. In particular, 59 percent of subsidized enrollees nationally face premiums that average \$1,482 higher, while only 9 percent face lower premiums, with decreases that average \$249 (the remaining 32 percent of enrollees face no change in premiums). Most individuals who face no change in premium are enrolled in silver benchmark plans. We estimate that nearly all unsubsidized enrollees face higher premiums under broad loading compared with the status quo. While silver premiums decrease under broad loading, we estimate that few unsubsidized individuals choose to enroll in silver loaded plans. In California, unsubsidized individuals cannot pay more under broad loading than under silver loading, since they do not face silver loaded premiums (unless they decide to buy a plan subject to silver loading on the exchange instead of the same plan that is less expensive off-exchange). In addition, the subsidized individuals who pay less under broad loading compared with silver loading in the national model are tobacco users who face higher premiums in most states. Because tobacco rating is prohibited in California, no subsidized enrollees in the state pay less under broad loading compared with the status quo for the same coverage. Table 3.7 shows changes to out-of-pocket premium costs required to maintain the same individual market coverage under a scenario in which CSR payments are restored compared with silver loading. Overall, patterns are similar to out-of-pocket premium changes under broad loading.

**Table 3.6. Out-of-Pocket Premium Changes to Maintain Coverage from Status Quo
(Silver Loading) Under Broad Loading Scenario**

	<i>National</i>					<i>California</i>				
	Number of Enrollees in Status Quo (millions)	% Paying More	Average Change for Those Paying More	% Paying Less	Average Change for Those Paying Less	Number of Enrollees in Status Quo (millions)	% Paying More	Average Change for Those Paying More	% Paying Less	Average Change for Those Paying Less
Subsidized enrollees	11.0	59	\$1509	5	-\$245	1.19	45	\$887	0	n/a
<139% FPL	2.2	12	\$1,475	8	-\$269	0.03	14	\$254	0	n/a
139%–199% FPL	3.7	50	\$1,481	9	-\$233	0.51	18	\$482	0	n/a
200%–299% FPL	3.2	87	\$1,443	2	-\$153	0.44	60	\$865	0	n/a
300%–399% FPL	1.9	90	\$1,549	0	n/a	0.21	98	\$991	0	n/a
Unsubsidized enrollees	3.3	94	\$2,410	7	-\$514	0.43	100	\$1,919	0	n/a

Table 3.7. Out-of-Pocket Premium Changes to Maintain Coverage from Status Quo (Silver Loading) Under Cost-Sharing Reduction Payments Restored (No Loading) Scenario, 2020

	<i>National</i>					<i>California</i>				
	Number of Enrollees in Status Quo (millions)	% Paying More	Average Change for Those Paying More	% Paying Less	Average Change for Those Paying Less	Number of Enrollees in Status Quo (millions)	% Paying More	Average Change for Those Paying More	% Paying Less	Average Change for Those Paying Less
Subsidized enrollees	11.0	71	\$1,265	11	-\$307	1.19	44	\$884	0	n/a
<139% FPL	2.2	54	\$121	26	-\$398	0.03	13	\$220	0	n/a
139%–199% FPL	3.7	54	\$1,328	12	-\$283	0.51	17	\$450	0	n/a
200%–299% FPL	3.2	91	\$1,414	3	-\$194	0.44	58	\$866	0	n/a
300%–399% FPL	1.9	94	\$1,660	0	n/a	0.21	98	\$992	0	n/a
Unsubsidized enrollees	3.3	89	\$2,033	11	-\$146	0.43	100	\$1,612	0	n/a

Federal Spending on Advance Premium Tax Credits

Table 3.8 shows the number of enrollees receiving APTCs under silver loading and broad loading, per capita federal spending on APTCs among recipients, and total federal APTC spending. Both nationally and in California, the numbers of enrollees receiving APTC subsidies declines under broad loading and a restoration of CSR payments relative to the status quo. These decreases are driven largely by disenrollment of subsidy-eligible individuals with incomes between 200 percent and 400 percent of the FPL as a result of lower APTCs and higher out-of-pocket premium costs. Per capita spending on APTCs falls for nearly every income group both nationally and in California under the broad loading and restored CSR payment scenarios. Total federal spending on APTCs is lowest under the scenario in which CSR payments are restored, but combined federal spending on APTCs and CSRs is lowest under the broad loading scenario.

Table 3.8. Federal Spending on Advance Premium Tax Credits

	<i>National</i>			<i>California</i>		
	Status Quo (Silver Loading)	Broad Loading	CSR Payments Restored (No Loading)	Status Quo (Silver Loading)	Broad Loading	CSR Payments Restored (No Loading)
Number of enrollees receiving APTCs (in millions)	11.0	10.0	10.1	1.19	1.10	1.10
<139% FPL	2.2	2.2	2.2	0.03	0.03	0.03
139%–199% FPL	3.7	3.6	3.6	0.51	0.51	0.51
200%–299% FPL	3.2	2.7	2.7	0.44	0.39	0.39
300%–399% FPL	1.9	1.6	1.6	0.21	0.17	0.17
APTC spending per recipient	\$6,729	\$6,539	\$5,880	\$5,688	\$5,437	\$5,194
<139% FPL	\$6,962	\$6,404	\$5,869	\$5,932	\$5,594	\$5,386
139%–199% FPL	\$7,226	\$6,906	\$6,243	\$6,364	\$6,007	\$5,764
200%–299% FPL	\$6,490	\$6,575	\$5,883	\$5,358	\$5,158	\$4,910
300%–399% FPL	\$5,879	\$5,825	\$5,073	\$4,685	\$4,358	\$4,117
Federal APTC spending (in billions)	\$73.7	\$65.7	\$59.3	\$6.8	\$6.0	\$5.7
Federal spending on CSRs (in billions)	\$0	\$0	\$8.3	\$0.0	\$0.0	\$0.8
Total federal spending on APTCs and CSRs (in billions)	\$73.7	\$65.7	\$67.6	\$6.8	\$6.0	\$6.5

4. Limitations

One important limitation of our analysis is that we do not consider that individuals may have access to a range of plans on the individual market. We assume each individual has access to a single plan on each metal tier, which assumes a single insurer or a perfectly competitive market. In reality, many consumers have access to a variety of plans at each metal tier offered by different insurers, with different benefit structures; our out-of-pocket spending estimates are based on a single benefit structure for each metal tier. In addition, we may not capture certain noncost aspects of decisionmaking, such as loyalty to a particular insurer. Our assumption of a perfectly competitive market also has important implications for individuals who enroll in silver plans other than the benchmark (second-lowest-cost) plan. We find that silver premiums would fall under both the broad loading and restoration of CSR payment scenarios. However, because our only silver plan is the benchmark plan, we find that subsidized enrollees on silver plans would see no change in their out-of-pocket premiums, with the exception of tobacco users in the national model, who face decreased out-of-pocket premiums relative to the status quo. However, with multiple insurance carriers, if all silver plans go down by a constant percentage under either the broad loading or restored CSR payment scenario, the spread between benchmark and nonbenchmark premiums shrinks. That means those who enroll in the lowest-cost silver plan pay more and those who enroll in higher-cost silver plans pay less. These out-of-pocket changes could induce silver enrollees to switch carriers under a broad loading or restored CSR payment scenario, as carriers that charge more than the benchmark premium would become more affordable. Finally, due to a policy in California that allows insurers to use silver loading in their marketplace plans but not in their off-exchange plans, we assume that all unsubsidized enrollees on silver plans in California are enrolled in off-exchange plans (Anderson et al., 2018)

5. Conclusions

In this report, we used the COMPARE microsimulation model to estimate the effects of broad loading and restored federal payments for CSRs on enrollment, premiums, and costs to individual market enrollees and to the federal government. Under both broad loading and a restoration of federal payments for CSRs, premiums for silver plans would fall, while the premiums for bronze, gold, and platinum plans would rise, both nationally and in California. Since APTCs are tied to the premium for the second-lowest-cost silver plan, APTC amounts would also fall. Changes to premiums and APTCs would not affect subsidy-eligible individuals who enroll in benchmark silver plans. However, those who purchase bronze, gold, or platinum plans would face higher premiums and lower subsidies simultaneously and would need to spend more to maintain enrollment in those plans.

We find that enrollment in individual market plans falls as a result of both broad loading and restoration of federal CSR payments. Under broad loading, national enrollment in individual market plans falls by 1.8 million individuals and individual market enrollment in California falls by 170,000. These findings are consistent with the experience of states that opted for broad loading rather than silver loading (Anderson et al., 2018). Individuals with incomes above 200 percent of the FPL are more likely to disenroll under broad loading than individuals with incomes below 200 percent of the FPL. Most of those who leave individual market plans become uninsured rather than switching to another insurance type. Under a restoration of federal payments for CSRs, at the national level, the number of insured individuals drops by 0.8 million and the number of individual market enrollees in California drops by 140,000. In its May 2018 baseline, the CBO estimated that at the national level, restoration of federal CSR payments would decrease enrollment by 2–3 million (CBO, 2018c). While our estimates of the impact of restored CSR payments on enrollment are lower than the most recent CBO estimates, they are consistent with an earlier estimate from the CBO that projected that enrollment would decrease by 0.5 to 1 million if CSR payments were restored (Hall, 2018). Total federal spending on APTCs decreases under both the broad loading and restoration of CSR payments scenarios, reflecting the lower silver premiums and APTC amounts, as well as a reduced number of APTC beneficiaries.

Our estimates on the effects of restoring CSR payments on premiums are broadly consistent with other estimates of the effects of silver loading relative to federal payment of CSRs. The CBO estimates that by 2021, silver loading will increase benchmark premiums on the individual market by 20 percent relative to a scenario in which the federal government continued to fund CSR payments directly (CBO, 2018b). We estimate that silver premiums will be 19 percent higher in 2020 under the status quo compared with a scenario in which CSRs are paid. Similarly, a Covered California report estimated that silver premiums would be about 17 percent higher

under silver loading in the 2018 plan year (Yin and Domurat, 2017). We estimate that in California, silver premiums would be 10 percent higher in 2020 under silver loading compared with a scenario in which CSRs are paid. We estimate that in 2020, silver premiums that include silver loading and are sold on-exchange will be 14 percent higher than silver premiums for plans sold off-exchange.

Our analyses suggest that while broad loading as an alternative to silver loading would lead to decreased federal spending on subsidies, it would also lead to decreased subsidy eligibility, higher total and out-of-pocket premiums on the individual market, and decreased insurance enrollment both in the individual market and overall. Restoring federal payment of CSRs would also decrease both federal spending and health insurance enrollment. Policymakers should consider these impacts when contemplating changes to CSR funding and rules related to silver loading.

Overview of the National Model

COMPARE is a microsimulation model that uses economic theory, nationally representative data, and evidence from past experience to estimate how consumers and business will respond to health policy changes (Cordova et al., 2013). The model creates a synthetic population of individuals, families, and firms and assigns health expenditures using data from the April 2010 wave of the 2008 Survey of Income and Program Participation, the 2010–2011 MEPS, and the 2009 Kaiser Family Foundation/Health Research and Educational Trust Employer Health Benefits Survey. While the data sources predate the implementation of the ACA, we update them to reflect population growth based on factors reported by the U.S. Census Bureau and to reflect health care cost growth using the Centers for Medicare and Medicaid Services National Health Expenditure Accounts.

We assign each individual in the Survey of Income and Program Participation a spending amount using the spending of a similar individual from the MEPS. We then augment spending imputations with data on high-cost claims from the Society of Actuaries. These adjustments account for the fact that the MEPS underrepresents individuals with high spending. We also adjust the MEPS spending estimates to align with the National Health Expenditure Accounts estimates, according to the procedure developed by researchers from the Agency for Healthcare Research and Quality (Sing et. al., 2006; Bernard, Selden, and Pylypchuk, 2015).

Individuals in COMPARE make health insurance enrollment decisions by weighing the costs and benefits of available options, an approach that is referred to by economists as “utility maximization.” The utility-maximization framework accounts for the following:

- premium costs
- anticipated out-of-pocket health care spending
- the value of health care consumption
- the risk of incurring a financially devastating health care bill.

Premium costs are adjusted to account for tax credits, if such credits are available to the enrollee. All else being equal, higher premiums reduce an individual’s probability of enrolling in health insurance. In contrast, several factors encourage enrollment, such as a lower risk of catastrophic spending, reduced out-of-pocket spending, the avoidance of penalties (if they apply), and increases in health care utilization.

Businesses in the model make decisions by considering the value of health insurance to their workers. Tax credits for individual market coverage and Medicaid eligibility expansions may reduce the value of health insurance to workers, leading firms to drop insurance. However,

mandates requiring individuals to enroll in insurance, as well as mandates requiring firms to offer coverage, tend to increase the likelihood that a firm will offer insurance.

We calibrate the model to ensure that it accurately predicts outcomes for years in which complete data exist. As new data emerge, we update the model to reflect this information. For example, we added an adjustment to our Medicaid enrollment algorithm to account for the “welcome mat” effect, in which people who were previously eligible for Medicaid enrolled after the ACA’s Medicaid expansion.

In this chapter, we describe the health insurance enrollment algorithm used in COMPARE to model the current law scenario, as well as recent adjustments to the model that we have incorporated to better match the post-ACA experience (e.g., administrative reports on enrollment, subsidy payments, and tax collections). We then describe the adjustments made to model the broad loading scenario and to produce California-specific estimates. We also discuss how our results compare with those of the CBO.

Health Insurance Enrollment Decisions

To model individual and family health insurance enrollment decisions under the ACA, COMPARE uses a utility-maximization approach, in which decisionmakers weigh the costs and benefits of available options. The utility-maximization framework accounts for the value of health care consumption, premium costs, expected out-of-pocket health care spending, and financial risk associated with out-of-pocket spending.

We scale each of these components of utility to dollars and assume that they are additively separable.¹ We further assume that individuals’ utilities are separable in consumption and health. The health-related component of the utility function is modeled as follows:

$$U_{ijk} = u(H_{ij}) - E(OOP_{ij}) - P_{ij} - [0.5 * r * \text{VAR}(OOP_{ij})] + \text{Calibration}_{jk}. \quad (1)$$

Within this equation,

- $u(H_{ij})$ is the utility associated with consuming health care services for individual i under insurance option j
- k represents an individual’s demographic group based on age and income
- $E(OOP_{ij})$ is the expected out-of-pocket spending
- P_{ij} is the individual’s premium contribution (after adjusting for tax credits)
- r is the coefficient of risk aversion.

¹ This approach follows D. P. Goldman, J. L. Buchanan, and E. B. Keeler, “Simulating the Impact of Medical Savings Accounts on Small Business,” *Health Services Research*, Vol. 35, No. 1, Pt. 1, April 2000, pp. 53–75.

Possible health insurance enrollment choices (j) under the ACA may include employer coverage, Medicaid or Children's Health Insurance Program coverage, an ACA-compliant individual market plan (including plans available on and off the marketplaces), or another source of coverage.² Individuals can also choose to forgo insurance. Not all individuals will have access to all forms of coverage. For example, access to Medicaid is contingent on eligibility, and individuals will have access to employer coverage only if they (or their spouse or parent) work for a business that offers insurance.

The term $Calibration_{jk}$ is a factor that adjusts utilities to match enrollment patterns observed in pre-ACA data. The term accounts for nonpecuniary factors that may influence preferences for different types of insurance. Such factors include the convenience associated with enrolling in employer coverage and access constraints associated with Medicaid. Specific modeling strategies for each source of coverage (j) are described next.

Small-Group Employer Coverage

Small employers in the model choose whether to offer coverage based on worker preferences and a small set of other factors, including the employer's industry and whether workers are unionized. Under the ACA, all small firms are part of a single risk pool with guaranteed issue, three-to-one rate banding on age, and restrictions that preclude insurers from charging different premiums to different groups other than based on geography, family size, tobacco use, and plan generosity.

In the current version of the model, small-group market regulations apply to all firms with 50 or fewer employees, regardless of year. Earlier versions of the model expanded the small group market to include firms with 100 or fewer workers after 2015, as originally intended by the ACA. We revised the definition because the Protecting Affordable Coverage for Employees Act, signed into law in late 2015, amended the ACA's definition of *small employer* to include firms with 1 to 50 employees in perpetuity, unless states opt to extend the small-group market to firms with up to 100 workers; California is one state that opted to extend the small-group market in this way.

Small firms in the model are permitted to purchase a 60-percent, 70-percent, 80-percent, or 90-percent actuarial value plan on the ACA's regulated small-group market, which includes the Small Business Health Insurance Options marketplaces. Small firms in the model may retain grandfathered status, which exempts them from the ACA's rating regulations, although we assume that a certain percentage of small firms will lose grandfathered status each year.

The ACA also offers a small-business tax credit to small firms with low-wage workers who obtain coverage through the Small Business Health Insurance Options marketplaces. Because

² Other sources of coverage include Medicare for the nonelderly with qualifying conditions and military-related sources of coverage, such as TRICARE.

firms can take advantage of these credits for only two years, we assume that all small firms will have exhausted their tax credit eligibility by 2020.

Large-Group Employer Coverage

Like small employers, large employers choose whether to offer coverage based on worker preferences and several other characteristics, including union status and industry. We allow large firms that offer coverage to choose between four different plans, which are distinguished by plan generosity and rated based on enrollees' expected health expenditures. We estimate premiums for the large-group market based on a regression. The firm's decision to offer is modeled using structural econometric techniques.

Medicaid

Through our calibration process, the model accounts for the fact that not all Medicaid-eligible individuals choose to enroll, perhaps because of stigma, lack of information, or transaction costs associated with enrolling. To account for the fact that the ACA increased Medicaid enrollment among the previously eligible population (Freaun, Gruber, and Sommers, 2017), we increase the calibration parameter by a factor of approximately \$200 in the post-2014 period.

Individual Market

ACA-compliant individual market premiums are calculated endogenously in the model based on the health expenditure profile of those who choose to enroll. The total, unsubsidized premium is based on enrollees' age, smoking status, and market-rating reforms implemented under the ACA (Patient Protection and Affordable Care Act, 2013). We model three-to-one rate banding on age for adults ages 21 and older, with a separate age band for children and young adults under age 21. We also account for the ACA's risk-adjustment requirements, which transfer funds from plans with lower-than-average actuarial risk to plans with higher-than-average actuarial risk.

Under the ACA, the actual premium an enrollee pays is adjusted to account for tax credits available to qualifying individuals with incomes between 100 percent and 400 percent of the FPL who do not have affordable offers of insurance from another source (e.g., employer coverage, Medicaid). We apply the ACA's subsidy formula using the benchmark silver premium and the individual's income. Eligible individuals who have incomes between 100 percent and 250 percent of poverty can also receive CSR subsidies that help to lower out-of-pocket spending. As required by the ACA, individuals who receive CSR subsidies in COMPARE must be tax credit eligible and purchase a silver plan (i.e., 70 percent actuarial value). With the CSR subsidies, the effective actuarial value of the plan is increased to 94 percent if income is below 150 percent of the FPL, 87 percent if income is between 150 and 200 percent of the FPL, and 73 percent if income is between 200 and 250 percent of the FPL. Accordingly, out-of-pocket spending is adjusted downward to reflect the higher actuarial value of the plan. Note that

out-of-pocket spending enters the individual's utility function; hence, individuals receiving CSR subsidies are more likely to purchase coverage. In May 2017, the Centers for Medicare and Medicaid Services updated the default age rating curve to adjust premium rating factors for children and young adults ages 20 and under (Center for Consumer Information and Insurance Oversight, 2017). We use the revised rating curve in this analysis.

HHS reported that approximately 14 percent of individual market enrollees are eligible for tax credits but forgo those credits by purchasing coverage outside the marketplaces (HHS, 2016). HHS further estimates that 9 million people are potentially eligible for tax credits but remain uninsured. Because these findings suggest that some people may be unaware of their tax credit eligibility, we assume that 30 percent of tax-credit-eligible individuals will not account for these credits in their health insurance enrollment decisions. With this assumption, we match HHS's estimate that approximately half of all individual market enrollees receive tax credits.

Adjustments to Model Broad Loading

As described earlier, we model silver loading by assuming that insurers build the costs of CSRs into premiums for silver individual market plans. Similarly, we model broad loading by assuming that insurers build the costs of CSRs into premiums for all individual market plans, regardless of metal tier.

Weighting the National Model to California

For the California-specific analyses, we weighted the national-level COMPARE data to match the age, gender, race/ethnicity, poverty level, and health insurance composition of the California population using the public use microdata sample from the American Community Survey given 2017 market characteristics, a year in which CSR costs were paid by the federal government. That means, if we were to run the model assuming CSRs were paid (and the individual mandate penalty was in effect), we would reproduce insurance enrollment patterns observed in 2017. When we run the model under alternative assumptions—such as under silver or broad loading scenarios—individuals' enrollment decisions adjust to reflect these factors.

We project the 2017 weights forward to 2020 using state-specific population projections from the University of Virginia Cooper Center's Demographics Research Group (2018). We make further adjustments to the weights to ensure that subsidized marketplace enrollment, CSR enrollment, and the silver load amount match California's 2017 experience, using detailed enrollment data from Covered California (n.d.). In addition, we adjusted individual market spending in California in the model so that we could reproduce differences between national and California individual market premiums. We derived our target from the 2017 benchmark premiums (Kaiser Family Foundation, 2018). Finally, based on the enrollment data from Covered California, California has a much higher proportion of individual market enrollees receiving subsidies than is the case nationally. Therefore, for California estimates, we assume all

tax-credit-eligible individuals are aware that tax credits are available to them, unlike in the national model, where we assume some lack awareness of tax credits.

Comparison with the Congressional Budget Office

Table A.1 compares our insurance estimates assuming CSRs are paid by the federal government without the individual mandate with those of the CBO (CBO, 2018c).

The analyses differ in the assignment of primary insurance category and estimated population size. RAND assigns individuals to a primary insurance category, while the CBO allows people to have more than one source of coverage. Hence, the CBO’s estimates do not sum to population totals. For the estimated population size, RAND matches population estimates published by the U.S. Census Bureau, which estimates that there will be 278 million nonelderly U.S. residents by 2020 (Vespa, Armstrong, and Medina, 2018).

RAND’s estimated number without insurance is slightly lower than the CBO’s. Further, compared with the CBO, we estimate that slightly fewer people will be enrolled in employer coverage and slightly fewer people will be insured in Medicaid. Estimates for individual market enrollment are similar across the two models.

Table A.1. Comparison with the Congressional Budget Office, Enrollment in Millions

	COMPARE, 2020 No Individual Mandate, CSRs Paid	CBO, 2020 No Individual Mandate, CSRs Paid
Total insured		
Employer	154.7	159
Individual market	14.3	12
Medicaid	61.2	66
Other	12.5	13
Uninsured	35.4	34
Total population	278	274
Percentage uninsured	12.7	12.4

NOTE: The CBO allows multiple sources of coverage, so estimates do not sum to population totals.

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