Medicare for 50-to-64-Year-Olds

Assessing the Effects of Allowing Older Adults to Buy Into the Medicare Program

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Preface

In this report, we analyze how allowing adults ages 50 and older to buy into the Medicare program could affect health insurance coverage, individual market premiums, and federal health care spending. We consider a typical buy-in scenario in which 50-to-64-year-olds would be eligible to participate, cost-sharing reductions are available on the buy-in, and the buy-in has no out-of-pocket maximum (like traditional Medicare). We also analyze several variations of this base buy-in scenario to understand the effect of key buy-in design parameters (such as whether the buy-in plan has an out-of-pocket maximum) and underlying assumptions (such as whether individual market health plans use targeted marketing materials to attract healthier enrollees). For each buy-in scenario, we estimate enrollment, premiums, and the net effect on the federal deficit. Although there are many examples of legislation that would create a Medicare buy-in, we do not model any specific legislative proposal or proposals.

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Summary

Policymakers have long discussed allowing people under the age of 65 to buy into the Medicare program.¹ Prior to the Affordable Care Act (ACA), Medicare buy-in proposals focused on providing guaranteed access to insurance to older adults without fear of coverage denial or preexisting condition exclusions. Since 2014, the ACA has required insurers to offer coverage to all applicants regardless of age and health status,² a policy change that addressed challenges faced by some 50-to-64-year-olds in the pre-ACA era who might have had trouble getting access to private coverage if it was not offered through an employer. Instead, goals of recent buy-in proposals include creating an alternative coverage option with access to Medicare’s provider payment rates, reducing premiums on the ACA’s marketplaces by moving older individuals into a separate risk pool, and increasing insurance enrollment.

In this analysis, we use a microsimulation model to estimate the effects of allowing older adults to buy into the Medicare program. We estimate buy-in premiums independently of marketplace and other individual market premiums and assume that eligible individuals can apply their marketplace Advance Premium Tax Credits (APTCs) to the buy-in plan. The buy-in plan covers traditional Medicare benefits, including hospital insurance (Part A), medical insurance (Part B), and prescription drugs (Part D). Buy-in premiums are community rated, meaning that all enrollees pay the same premium regardless of age, gender, or health status. We assume that Medicare payment rates, which are lower than commercial payment rates, can be extended to buy-in enrollees with no adverse consequences for patient access or provider participation in the Medicare program.

Buy-In Scenarios

Because there is uncertainty regarding how a Medicare buy-in might be designed, we model a variety of scenarios that vary design assumptions. In our base buy-in scenario, we assume that the buy-in is available to individuals ages 50 to 64, that premiums can vary across geographic regions, and that administrative costs represent 7.5 percent of total expenditures (the current average across Medicare Fee-for-Service and Medicare Advantage plans; Medicare Advantage plans, which are run by private insurers, have higher administrative costs than traditional Medicare). We assume the buy-in plan, like traditional Medicare, does not have an out-of-pocket...

¹ See, for example, the Medicare Early Access Act of 2005 (H.R. 2072), the Medicare Early Access Act of 2009 (S. 960), the Medicare at 55 Act (S. 1742, 2017), and the Medicare Buy-In and Health Care Stabilization Act of 2017 (H.R. 3748).
² The ACA also precludes insurers from charging differential premiums based on health status and restricts insurers from charging older adults more than three times as much as younger adults for equivalent coverage.
maximum that limits enrollees’ total annual spending on health care. The lack of an out-of-pocket limit is a key difference between the buy-in plan and ACA-compliant individual market plans, which are subject to such maximums. We assume that cost-sharing reductions (ACA subsidies that help low-income enrollees with out-of-pocket cost sharing, such as copays and deductibles) are available to buy-in enrollees and funded by federal expenditures, and that the buy-in enrollees are part of a single risk pool separate from the ACA’s marketplaces and the current Medicare program. In sensitivity analyses aimed at understanding the effect of our assumptions about how the buy-in is designed, we consider scenarios in which

- the buy-in plan has an out-of-pocket maximum
- insurers selectively market to healthier enrollees, causing greater numbers of healthy individuals to gravitate to the individual market and away from the buy-in
- the buy-in has an out-of-pocket maximum and insurers selectively market to healthier individuals (this combines the first two scenarios)
- the buy-in has an administrative rate of 2.8 percent (the current rate in traditional Medicare)
- cost-sharing reductions (CSRs) are not available to buy-in enrollees
- there is a single, national buy-in premium with no geographic variation
- buy-in eligibility is limited to individuals ages 55–64
- buy-in eligibility is limited to individuals ages 60–64.

Our analysis uses the COMPARE microsimulation model, which is based on data from the Survey of Income and Program Participation, the Medical Expenditure Panel Survey, and the Kaiser Family Foundation and Health Research and Educational Trust Employer Health Benefits Survey. We adapted the model to allow older adults to enroll in the Medicare buy-in if this choice made sense for them from an economic perspective.

We estimated total health insurance enrollment, buy-in enrollment, buy-in premiums, ACA-compliant individual market premiums, the net change in the federal deficit, and the net effect of the buy-in on Medicare spending.

Findings

Buy-In Enrollment

In our base buy-in scenario, 6.0 million people would enroll in the buy-in. We estimated that, across all scenarios considered, between 2.8 million and 7.0 million people would choose to enroll. Enrollment was highest when we assumed that administrative costs would fall to the level of fee-for-service Medicare and lowest when we limited eligibility to people ages 60 and over.

Premiums and Spending Among Buy-In Enrollees

Because it pays providers Medicare rates, and because of our assumptions about administrative costs, the buy-in is less expensive for most enrollees than a traditional individual
market plan. Figure S.1 shows average premiums for a 50-year-old and a 60-year-old in the buy-in versus the ACA-compliant individual market (which includes the marketplaces) in our base buy-in scenario. For a 60-year-old, the buy-in is less expensive than any of the ACA-compliant individual market options. For a 50-year-old, the bronze plan premium is marginally lower than the buy-in premium; however, bronze plans cover (on average) fewer benefits than Medicare. The premium for the gold plan, which has an actuarial value that is comparable with Medicare’s, exceeds the buy-in premium.

**Figure S.1. Average Premiums for Individual Market Enrollees, Base Buy-In Scenario, 2022**

In all scenarios, lower buy-in premiums are associated with reduced spending, on average, among people who are eligible for the buy-in. We estimate that total out-of-pocket health spending (premium contributions plus cost-sharing at the point of service) will fall, on average, by 16 percent to 35 percent for those who move from ACA-compliant individual market coverage to the buy-in. The lower spending reflects that buy-in enrollees have access to Medicare payment rates, which are substantially lower than private rates, and lower administrative costs.
Although out-of-pocket spending among those who choose to enroll in the buy-in goes down, spending increases for those who remain on the ACA-compliant individual market in many of our scenarios. Contrary to expectations, we find that when 50-to-64-year-olds move out of the individual market, premiums for individual market plans increase. For example, we estimate that the bronze premium would increase by 9 percent in our base buy-in scenario, with increases ranging from 2 percent to 10 percent across the scenarios considered. The explanation for this finding is that, in the model, a broad variety of older adults, including both healthy and unhealthy people, tends to enroll in the individual market. Younger adults who enroll in the individual market, in contrast, tend to be relatively unhealthy and expensive. When older adults leave the market, insurers are left with a smaller pool of younger, less healthy, and relatively expensive people given their age, leading to higher premiums. Although unexpected, particularly because one of the goals of the buy-in is to reduce marketplace premiums, these results are consistent with other recent findings. For example, Kotecki and Westrom, 2019, estimates that removing all older adults from the individual market would increase premiums by 7.5 percent. Blue Cross Blue Shield Association, 2019, similarly estimates that a Medicare buy-in could increase individual market premiums by 10 percent.

**Total Health Insurance Enrollment**

The buy-in has little to no effect on total health insurance enrollment; roughly 246 million people under the age of 65 would be enrolled in insurance in all scenarios, including the scenario without the buy-in. The stable overall enrollment levels mask slight changes in the age distribution of insurance enrollment. Across the scenarios considered, the availability of the buy-in increases enrollment by 400,000 to 1.6 million for those over age 50, while decreasing enrollment by 100,000 to 800,000 for those under age 50 (because of the increases in premiums on the individual market). Overall, these two opposing factors lead to minimal change in total insurance coverage, with net increases in insurance coverage ranging from no change to 1 million across the scenarios considered. Among older adults who remain uninsured despite reduced premiums on the buy-in, about three-fourths are not eligible for subsidies (and therefore remain deterred by the buy-in’s cost even though buy-in premiums are lower than individual market premiums).

**Effect on Federal Subsidy Spending**

We found that the buy-in leads to a reduction in federal health insurance subsidy spending. We estimate that, without the buy-in, total federal spending on APTCs (including the implicit cost of CSRs, which are loaded onto the silver plan) would be roughly $75 billion in 2022. With the buy-in, spending decreases by $4 billion in the base scenario and ranges from a $1 billion increase to a $6 billion decrease in the other scenarios. These savings occur even though the buy-in increases individual market premiums, which increases per capita APTC spending for those who remain enrolled on the marketplaces. The net reduction in federal spending is driven at least
in part by the fact that, in most scenarios, we assume that CSRs on the buy-in are federally funded. Prior work from the Congressional Budget Office (2017) indicates that federal nonpayment of CSRs increases the deficit by driving up the price of silver plans on the marketplaces. In the Appendix B scenarios, in which we assume that the federal government fully funds CSRs both in the buy-in and the marketplace, the buy-in results in a slight increase in spending.

**Effects on Current Medicare Enrollees**

We assume that the Medicare buy-in is paid for through enrollee out-of-pocket premium contributions and subsidies (APTCs and CSRs) available through the ACA. By assumption, a Medicare buy-in such as the one we modeled would have no effect on the Medicare Trust Fund or on outcomes for current Medicare beneficiaries.

In a sensitivity analysis reported in Appendix D, we considered a scenario in which the Medicare buy-in risk pool was merged with the current Medicare population (including people ages 65 and older, dual-eligible beneficiaries, and disabled enrollees). Even under this scenario, there was no effect on the Medicare Trust Fund or negative impact for current Medicare beneficiaries. Only 1.4 million people enrolled in the buy-in in this scenario because it was expensive relative to the individual market, reflecting the higher costs of the older and disabled population. Although spending on APTCs and CSRs in the merged buy-in scenario exceeded APTC spending in the no buy-in case, premiums charged to buy-in enrollees exceeded the cost of insuring this population. Overall, these two effects led to $4 billion in savings for the federal government.

**Discussion**

A Medicare buy-in could be an attractive option for adults in the age-eligible range because buy-in premiums are lower than individual market premiums for most age groups. These lower premiums are driven by the assumption that the buy-in pays Medicare rates and has lower administrative costs than a private individual market plan, factors that outweigh the cost associated with creating an insurance risk pool composed entirely of older adults (ages 50 to 64 in most scenarios). Per beneficiary average costs in the current Medicare program—which covers an even older population and individuals with disabilities—were $13,665 in 2018 (Centers for Medicare and Medicaid Services, 2019), lower than the cost of a bare-bones marketplace plan for older adults in some states (Fehr et al., 2019). Our estimated premium for the buy-in plan is around $10,000 in most scenarios, a relatively good deal compared with the ACA-compliant individual market, in which older adults are charged up to three times as much as younger adults.

However, our analysis finds that enabling older adults to move to Medicare could affect premiums for people who remain in the individual market. We estimate individual market
premiums would increase because of this change, rising by almost 9 percent in the base buy-in scenario. This finding runs counter to the conventional wisdom, which holds that older adults drive up individual market premiums. Our model accounts for the fact that low-cost older adults are more likely to enroll in insurance than low-cost young adults, and these healthy older people (who pay higher individual market premiums than younger people) act as a stabilizing force in the individual market. Removing older adults from the individual market leaves a pool of relatively expensive young people, leading to premium increases. This finding is for a national-level analysis, is based on a simulation model rather than insurers’ actual experience, and might not generalize to all states and rating areas. However, the Blue Cross Blue Shield Association found a similar result in an analysis of its internal data (Blue Cross Blue Shield Association, 2019).

We find that overall enrollment in insurance remains roughly constant across scenarios; slight gains among older adults are counteracted by slight declines among younger people. These findings suggest that a Medicare buy-in could offer significantly more-affordable coverage to older adults while potentially leading to higher premiums for the pool of people remaining in the individual market.
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<td>ACA</td>
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<td>CBO</td>
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<td>CHIP</td>
<td>Children’s Health Insurance Program</td>
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<td>Centers for Medicare and Medicaid Services</td>
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1. Introduction

Policymakers have long discussed allowing people under the age of 65 to buy into the Medicare program (Smolka and Thomas, 2009; Rappeport and Sanger-Katz, 2016; Neuman, Pollitz, and Tolbert, 2018). Unlike health care proposals that seek to provide tax-financed health coverage to the entire population (often labeled “Medicare for All”), Medicare buy-in proposals would create a voluntary new option for eligible people to enroll in Medicare. Depending on whether Advance Premium Tax Credits (APTCs) were available to buy-in enrollees, they would be required to shoulder some or all of the premium costs associated with the Medicare plan. Some proposals, such as the Choose Medicare Act of 2018 (S. 2708), would allow anyone to buy into Medicare. However, many Medicare buy-in proposals focus on incrementally expanding access to individuals approaching the Medicare age limit. For example, in early 2019, Sens. Debbie Stabenow, Sherrod Brown, and Tammy Baldwin introduced a proposal to allow people ages 50 and older to buy into Medicare (Medicare at 50 Act, 2019, S. 470). In the House of Representatives, Rep. Brian Higgins and colleagues have introduced the Medicare Buy-In and Health Care Stabilization Act of 2019 (H.R. 1346). Age-based buy-ins have been previously proposed in legislation, including the Medicare Early Access Act of 2005 (H.R. 2072), the Medicare Early Access Act of 2009 (S. 960), the Medicare at 55 Act (2017, S. 1742), and the Medicare Buy-In and Health Care Stabilization Act of 2017 (H.R. 3748).

Prior to the Affordable Care Act (ACA), Medicare buy-in proposals focused on providing guaranteed access to insurance to older adults without fear of coverage denial or preexisting condition exclusions. In some cases, these proposals were designed to be deficit neutral. For example, a proposal by Sen. Max Baucus would have set buy-in premiums to cover the entire cost of the buy-in program (Baucus, 2008). Other proposals enabled buy-in enrollees to pay actuarially fair premiums in installments over an extended time horizon. For example, the Early Medicare Access and Affordability Act of 2003 (H.R. 3189) used a two-part premium structure, with a community-rated base premium based on all individuals who met the eligibility criteria for the buy-in, regardless of whether they enrolled, and a deferred premium based on estimated expenditures for buy-in enrollees (who might be more expensive than the pool of all eligible individuals because of adverse selection). Some early buy-in approaches included subsidies for low-income enrollees (see the Early Medicare Access and Affordability Act of 2003) or tax credits for all eligible enrollees (see the Medicare Early Access Act of 2009).

Since 2014, the ACA has required insurers to offer coverage to all applicants regardless of age and health status, making a Medicare buy-in unnecessary to ensure that older adults have access to insurance and alleviate concerns about coverage denial. Although the ACA also sought to improve affordability by providing APTCs for individuals with incomes of less than 400
percent of the federal poverty level (FPL) ($49,960 for a single individual in 2019), premiums might still be burdensome for those with incomes above the tax credit eligibility threshold, particularly for older adults, who can be charged up to three times as much as younger adults. Recent buy-in proposals have sought to create an alternative coverage option with access to Medicare’s provider payment rates and administrative costs, both of which are typically lower than those paid by private health plans (Beiner and Selden, 2017; Selden et al., 2015; White and Whaley, 2019). Most recent bills, including those introduced by Rep. Higgins and Sen. Stabenow, would allow enrollees to apply APTCs to the buy-in premium.

Some buy-in proposals also aim to reduce premiums on the ACA’s marketplaces by moving older individuals into a separate risk pool (see the Medicare Buy-In and Health Care Stabilization Act of 2017). Removing older adults from the ACA’s risk pool could result in lower premiums, particularly if the older adults who move to the buy-in have high health spending relative to the premiums they pay on the individual market. However, if the individual market attracts a mix of healthy and unhealthy older individuals while predominately enrolling unhealthy younger adults (e.g., because healthy younger adults remain uninsured), removing older adults from the individual market could increase premiums.

Other goals of post-ACA Medicare buy-in proposals include improving affordability for those who are not currently eligible for tax credits on the ACA’s marketplaces and expanding the set of insurance options for individuals in areas with few insurers (Bare County Buy-In Act of 2017, H.R. 4394). An overarching goal of most Medicare buy-in proposals is to reduce the number of people without insurance.

In this analysis, we use a microsimulation approach to estimate the effects of allowing older adults to buy into the Medicare program. We consider a case in which buy-in enrollees have access to a new plan that combines benefits associated with Medicare Part A (hospital insurance), Medicare Part B (medical insurance), and Medicare Part D (prescription drug coverage). We assume the plan has access to Medicare payment rates and is able to achieve Medicare’s low administrative cost levels. Although we reviewed legislative proposals when developing our assumptions, this report does not analyze the effects of any specific legislative proposal or proposals. The analysis relies on the COMPARE microsimulation model, a tool developed at RAND that uses economic theory and data from past experiences to estimate how people will respond to health insurance policy changes. We consider a base buy-in scenario that assumes 50-to-64-year-olds are eligible for the buy-in, cost-sharing reductions (CSRs; which are

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3 Under the ACA, individuals with incomes between 100 percent and 400 percent of the FPL who are not eligible for other coverage can receive APTCs if they purchase insurance through the health insurance marketplaces. The APTCs reflect the cost of the second-lowest-cost silver plan available to the individual, minus an income-based contribution. In 2019, the required contributions ranged from 2.08 percent of income for those with incomes below 133 percent of the FPL to 9.86 percent of income for those with incomes from 300 percent to 400 percent of the FPL (see Internal Revenue Service, 2018). If the required contribution exceeds the cost of the second-lowest-cost silver plan, the individual’s effective tax credit is zero.
ACA subsidies to help pay for cost-sharing at the point of service) are available on the buy-in, and—like traditional Medicare—the buy-in has no out-of-pocket maximum. We then estimate eight alternative scenarios that vary based on assumptions about the design of the buy-in and consumers’ response to the program. The specific scenarios that we model are as follows:

1. **No buy-in**: This is a status quo scenario without the buy-in.
2. **Base buy-in**: The buy-in is available to 50-to-64-year-olds; like traditional Medicare, the buy-in does not cap out-of-pocket expenditures. Federally funded CSRs are available on the buy-in, and buy-in premiums are adjusted to account for geographic variation in price levels. Administrative costs are based on an average of costs observed in traditional Medicare and Medicare Advantage.
3. **Out-of-pocket maximum**: We modify the base buy-in scenario to include an out-of-pocket maximum on the buy-in.
4. **Selective marketing on the individual market**: We modify the base buy-in scenario to reflect the possibility that individual market insurers might selectively market to healthier individuals, increasing their chance of enrolling in this market.
5. **Selective marketing on the individual market, out-of-pocket maximum**: We modify the base buy-in scenario to include an out-of-pocket maximum, and we assume that individual market insurers selectively target healthier enrollees.
6. **Low administrative costs**: We modify the base buy-in scenario to reflect administrative costs for traditional Medicare.
7. **No CSRs**: We modify the base buy-in scenario to make CSRs unavailable on the buy-in; CSRs continue to be available on health insurance marketplaces, funded through silver loading.
8. **No geographic adjustment**: We modify the base buy-in scenario by eliminating the geographic premium adjustment, so there is a single, national premium for the buy-in plan.
9. **Limit eligibility to 55–64**: We modify the base buy-in scenario to limit eligibility to adults ages 55–64.
10. **Limit eligibility to 60–64**: We modify the base buy-in scenario to limit eligibility to adults ages 60–64.

We estimated the effect of the Medicare buy-in on several outcomes, including health insurance enrollment, individual market premiums (which encompass premiums for ACA-compliant individual market plans sold on and off the ACA’s marketplaces), out-of-pocket costs (premium contributions plus cost-sharing at the point of service) for buy-in enrollees, and federal spending. We assume that the program would be implemented in 2020. It is likely that it would take a few years for program administrators to work through implementation challenges, such as lack of consumer awareness and insufficient experience to accurately set premiums. Although these implementation challenges are likely to occur, it is difficult to estimate their magnitude and effects because they are by nature idiosyncratic (e.g., the ACA was plagued by website failure in the first year, an outcome that caught modelers and policymakers off guard). To avoid making
assumptions about the buy-in during the first few years after implementation, we report results for 2022, which we assume is the first year in which the buy-in is operating at its full potential.\(^4\)

In the next chapter, we describe the methods that we use to estimate the effects of the buy-in. Chapter 3 presents the results of our analysis, and Chapter 4 describes limitations. In the final chapter, we discuss the implications of our findings.

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\(^4\) Because legislation authorizing a buy-in has not yet passed, it is unlikely that a buy-in could be implemented in 2020. Even if a buy-in were to pass in 2020, it might not be implemented immediately and might not stabilize until several years after implementation. We have focused our analysis on years in the near term to avoid forecasting factors, such as income growth and population change, over the long run. Qualitatively, the results of our model would be similar regardless of when the buy-in took effect, as long as no other major health policy changes were enacted between now and the projection year.
2. Methods

We use RAND’s COMPARE model to estimate the effects of the hypothetical Medicare buy-in proposals. 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 (SIPP), the Medical Expenditure Panel Survey (MEPS), and the Kaiser Family Foundation and Healthcare Research and Educational Trust Employer Health Benefits Survey. In the model, individuals choose between insurance plans by weighing the costs and benefits of available options, 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. We describe the details of the COMPARE model in Appendix A.

Key Modeling Assumptions

Next, we discuss several important modifications we made to COMPARE to enable us to estimate the effects of a Medicare buy-in.

Payment Rates

Payment rates affect total health care spending and thus ultimately affect the premiums faced by consumers. Medicare payment rates are typically lower than commercial payment rates, with the national average ratio of Medicare-to-commercial payment rates being about 80 percent for physician services (Centers for Medicare and Medicaid Services [CMS], 2012) and 60 percent for hospital services (Selden et al., 2015; American Hospital Association, 2016). For other services, such as prescription drugs, we assume that Medicare payment rates are equivalent to commercial rates. We calculate an overall average ratio, across all types of services, of about 86 percent based on a weighted average of physician services, hospital services, and all other services (assuming Medicare payment rates at 60 percent of commercial payment for hospital services, 80 percent of commercial payment for physician services, and 100 percent of commercial payment for everything else). When people in the simulation move into the Medicare buy-in, we adjust their expenditures to reflect reduced payment rates.

We assume that Medicare buy-in enrollees would have access to the same provider network as current Medicare enrollees. If some providers did not accept the buy-in plan because of lower payment or for other reasons, the buy-in could be less attractive than we have assumed. However, many individual market health plans have narrow networks, and it is possible that partial provider participation in the buy-in would still offer enrollees a broader network than
what is available on the individual market. Furthermore, it is unclear whether providers would be legally allowed to opt out of the buy-in plan while still accepting “regular” Medicare.

Although the national average ratio of Medicare rates to commercial rates is about 86 percent, there is geographic variation in these relative payment rates. To account for the relative payment rates geographically, we use Medicare and commercial relative price information for hospital referral regions (HRRs) and assign a distribution of these prices to individuals in COMPARE. The Medicare price information is from the Medicare Geographic Variation public use file (CMS, 2016a), and the commercial price information is from the Institute of Medicine (Institute of Medicine, 2013). We multiply the ratio of Medicare-to-commercial price indices for each HRR by the national average relative payment rate of 86 percent (described above) to normalize the relative prices to the national average. Across the HRRs, these relative payment rates range from 53 percent to 139 percent (in a minority of cases, Medicare payment is higher than commercial payment). Because individuals are identified by state of residence but not HRR in COMPARE, we randomly assigned the HRR indices to individuals within each state while matching the population distribution by HRR within each state. Although this approach preserves the national average ratio of payment rates, a limitation of not knowing the HRRs for individuals is that there is uncertainty in the estimates.

**Administrative Costs**

The Medicare administrative rate is also lower than that in commercial health plans. We used a Medicare administrative rate calculated from the National Health Expenditure Accounts (NHEA) government administrative costs and the net cost of health insurance for Medicare (which includes costs to administer traditional Medicare and Medicare Advantage plans) as a share of personal health care expenditures. The Medicare administrative rate was 7.5 percent in 2016.5 As a comparison, individual market plans in COMPARE have an administrative rate of about 20 percent. In sensitivity analyses, we used a Medicare administrative rate of 2.8 percent, which was the rate accounting only for the NHEA government administrative costs as a share of traditional Medicare expenditures, which we estimated as the share of Medicare personal health care expenditures for traditional Medicare benefits from expenditures reported by the Medicare Trustees (CMS, 2016b).

**Plan Design and Out-of-Pocket Maximums**

We assume that, like traditional Medicare, the buy-in plan has an 80 percent actuarial value (McArdle et al., 2012; Bailey, 2014), which means that—on average—the plan pays for 80 percent of enrollees’ covered expenditures. However, the benefit structure that we model for the buy-in differs subtly from the benefit structure of plans offered in the individual market because

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5 The 7.5 percent figure reflects a weighted average of a 2.8 percent administrative rate for traditional Medicare and a 14.2 percent administrative rate for Medicare Advantage.
of differences in protections for people with high spending. Specifically, the ACA required health insurance plans to cap enrollees’ annual out-of-pocket spending. For 2019, out-of-pocket limits were $7,900 for individual plans and $15,800 for family plans (U.S. Department of Health and Human Services [HHS], undated). Once a consumer has paid the out-of-pocket maximum through cost-sharing for covered benefits (e.g., deductibles, copays), the plan is required to cover 100 percent of any additional covered expenditures. Unlike ACA-compliant plans, Medicare does not include such a limit. As a result, individuals with high health care expenditures may spend more out of pocket on Medicare than they would on an ACA-compliant plan, even if the plan’s actuarial values are similar.

Loewenstein et al., 2013, documented that only about half of consumers can correctly describe what an out-of-pocket limit is, and a smaller percentage (around 11 percent) accurately calculated expected spending given plan benefit design parameters. Other studies find that individual market enrollees and Medicare beneficiaries care substantially more about plan premiums than they do about other cost-sharing parameters (Hero et al., 2019, Abaluck and Gruber, 2011). Using this literature, we assume that the majority (75 percent) of consumers will view the buy-in as comparable to a marketplace gold plan, which—like the buy-in plan—has an actuarial value of 80 percent. We randomly assign the remaining 25 percent of consumers to respond to the fact that, because of the lack of out-of-pocket maximum, the buy-in provides less financial protection for those with very high medical spending. Sicker and more-expensive people who correctly perceive the lack of out-of-pocket maximum might be deterred from entering the buy-in plan because of potentially high out-of-pocket costs.

In some scenarios, we assume the buy-in has an out-of-pocket maximum. In these cases, we model the buy-in as an 80 percent actuarial plan with a benefit structure similar to the marketplace gold plan.

Risk-Pooling and Geographic Premium Adjustments

We assume the Medicare buy-in plan has full community rating; i.e., there is no variation in premiums by age or smoking status. In contrast, the individual market premiums in most states have a 3-to-1 age band (such that 64-year-olds face premiums up to three times as high as 21-year-olds) and a 1.5-to-1 smoking band. Although our buy-in premium does not vary by age or smoking status, in most scenarios we include geographic variation in premiums to reflect state market conditions. These geographic premium adjustments differ from the payment adjustments described earlier and mirror the geographic premium adjustments we use to model the health insurance exchanges, which account for state-level variation in average marketplace premiums (Gabel et al., 2016). In one scenario, we eliminate the geographic adjustments.6

6 Although we did not model a specific legislative proposal or proposals, we note that geographic adjustments to Medicare premiums are permitted in the Higgins bill but not the Stabenow bill.
Tax Credits and Cost-Sharing Reductions

We assume that eligible individuals can apply APTCs to buy-in coverage. APTCs are calculated identically for buy-in and marketplace enrollees and are based on the price of the second-lowest-cost silver marketplace plan. In most scenarios, we assume that CSRs, which limit out-of-pocket spending for APTC-eligible individuals with incomes below 250 percent of the FPL, are available to buy-in enrollees, as stipulated under recent Medicare buy-in legislation (Kaiser Family Foundation, 2019). CSRs are also available to marketplace enrollees; however, the Trump administration has halted federal payment of these subsidies (HHS, 2017). To fund these payments, insurers have increased premiums for silver plans on the marketplace, a practice known as silver-loading. Because APTCs are benchmarked to the cost of the second-lowest-cost silver plan available to the enrollee, silver-loading has the effect of increasing tax credit amounts for all APTC-eligible enrollees (see Appendix B for more details on silver-loading).

We assume that silver-loading continues to occur on the marketplaces but the CSRs on the buy-in are funded by the federal government. In a sensitivity analysis, we consider a scenario in which CSRs are not available on the buy-in but remain available on the marketplaces through silver-loading. In Appendix B, we show scenarios in which CSRs are fully funded by the federal government on both the marketplaces and the buy-in. When CSRs are fully funded by the federal government, silver-loading is no longer necessary.

Choice Among Plans

In general, individuals in our model make enrollment decisions by weighing the premium contribution against the benefits offered by each insurance product. These benefits include a reduction in out-of-pocket spending, risk protection that varies based on such factors as whether the plan has an out-of-pocket maximum, and increased health care consumption (people consume more health care when they are insured; we assume people view this increased health care consumption as a benefit of enrolling in insurance). The buy-in option is never equivalent to an individual market option, because premiums are set differently, payment rates differ, and—in most buy-in scenarios—we assume there is no out-of-pocket maximum. However, conceptually, these assumptions imply that consumers would be indifferent between an individual market plan and an equivalently priced buy-in option that offered the same level of benefits.

Because individual market plans are offered by private companies, it is possible that these plans would use marketing or other tools (e.g., network design, customer service) to attract healthier enrollees. There is evidence to suggest that Medicare Advantage plans, which are run by private insurers, tend to attract a healthier population than fee-for-service Medicare (Brown et al., 2014), although this risk selection has been to some degree mitigated by risk adjustment (Newhouse et al., 2015). To account for the possibility of favorable selection into private plans, we assume in some of our scenarios that insurers selectively market individual market plans to healthier people, increasing the probability that healthy people will enroll in this market.
Scenarios Modeled

Table 2.1 shows the ten scenarios that we modeled in this analysis. Scenario 1 represents the status quo without the buy-in. Scenario 2 is our base buy-in scenario, which assumes that a buy-in without an out-of-pocket maximum is available to all people ages 50–64. The administrative costs for the buy-in are 7.5 percent of total expenditures, CSRs are available on the buy-in, and the buy-in premium is geographically adjusted. Scenarios 3 through 10 vary these assumptions and also consider an assumption that individual market insurers selectively market their plans to healthier enrollees.
### Table 2.1. Buy-In Scenarios Considered

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>1. No buy-in</td>
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<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2. Base buy-in</td>
<td>Yes</td>
<td>50–64</td>
<td>No</td>
<td>No</td>
<td>7.5 percent</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>3. Out-of-pocket maximum</td>
<td>Yes</td>
<td>50–64</td>
<td>Yes</td>
<td>No</td>
<td>7.5 percent</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>4. Selective marketing</td>
<td>Yes</td>
<td>50–64</td>
<td>No</td>
<td>Yes</td>
<td>7.5 percent</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>5. Selective marketing, with an out-of-pocket maximum</td>
<td>Yes</td>
<td>50–64</td>
<td>Yes</td>
<td>Yes</td>
<td>7.5 percent</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>6. Low administrative costs</td>
<td>Yes</td>
<td>50–64</td>
<td>No</td>
<td>No</td>
<td>2.8 percent</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>7. No CSRs</td>
<td>Yes</td>
<td>50–64</td>
<td>No</td>
<td>No</td>
<td>7.5 percent</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>8. No geographic adjustment</td>
<td>Yes</td>
<td>50–64</td>
<td>No</td>
<td>No</td>
<td>7.5 percent</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>9. Ages 55–64</td>
<td>Yes</td>
<td>55–64</td>
<td>No</td>
<td>No</td>
<td>7.5 percent</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>10. Ages 60–64</td>
<td>Yes</td>
<td>60–64</td>
<td>No</td>
<td>No</td>
<td>7.5 percent</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

NOTE: NA = not applicable.
3. Results

The Effects of a Medicare Buy-In

In our base buy-in scenario, we estimate that 6 million people would enroll in the buy-in. Most of these individuals (4.3 million) would transition to the buy-in from the individual market. Figure 3.1 shows the change in enrollment overall and for the insurance categories most affected by the buy-in, for all ages combined and by age category (50–64, younger than 50).

**Figure 3.1. Change in Insurance Enrollment by Age Group with Base Buy-In Relative to No-Buy-In Scenario, 2022 (millions)**

Because of lower provider payment rates and lower administrative costs, buy-in premiums are significantly lower than individual market premiums for most enrollees ages 50 to 64. Figure 3.2 compares the buy-in premium to bronze, silver, and gold plan premiums for 50-year-olds and 60-year-olds. For a 50-year-old, the buy-in is somewhat more expensive than a bronze plan, although the buy-in, on average, covers more benefits than a bronze option. The buy-in is considerably less expensive than a silver or gold plan for a 50-year-old. For a 60-year-old, the buy-in is substantially less expensive than all three individual market plans (bronze, silver, and gold). Silver premiums are higher than gold premiums because of silver-loading.
One surprising finding shown in Figure 3.1 is that health insurance enrollment falls slightly for people under the age of 50 when the buy-in is available. The reduction in enrollment reflects the finding that premiums on the individual market increase a small amount when the buy-in is implemented. Figure 3.3 shows the percent change in individual market premiums for bronze, silver, and gold plans in the individual market. We estimate that bronze and gold premiums increase by 8.9 percent and silver premiums increase by 3.1 percent when the buy-in is implemented. Because of the ACA’s age-banding, which requires that premiums for older adults are no more than three times as expensive as those for younger adults, premium increases are identical (in percent terms) for all age groups. Appendix C reports individual market premiums for a range of age groups.

Bronze and gold (and, though not reported, platinum) premiums increase at identical rates because of risk adjustment. However, because of silver-loading, the price of the silver premium varies not only with the underlying expenditure of modeled enrollees but also with the share of CSR-eligible individuals who enroll on the silver tier. The implications of silver-loading for premiums are complicated. APTCs, tax credits available to reduce premiums, are based on the silver premium. As a result, silver-loading increases tax credit amounts, making it possible for some enrollees to get free bronze or relatively inexpensive gold plans. This leads to both positive and negative feedback loops that can affect silver premiums in unexpected ways. For example, when CSR-eligible people exit the silver tier, silver premiums may fall, reflecting the lower need
for loading. However, when enrollees who are not eligible for CSRs exit the silver tier, silver premiums can increase because the load is spread over a smaller base. In the base case, silver premiums increase as a result of making a Medicare buy-in option available, but this impact is small relative to what we found for gold and bronze plans.

**Figure 3.3. Change in Individual Market Premiums with Base Buy-In Relative to No–Buy-In Scenario, 2022**

![Bar chart showing the change in individual market premiums with base buy-in relative to no-buy-in scenario, 2022.](chart)

Figure 3.4 shows federal spending on APTCs and CSRs with and without the buy-in (federal CSR spending without the buy-in is zero because of the Trump administration’s decision not to pay for CSRs). We estimate that federal subsidy spending overall will decline by $4 billion with the buy-in, from $75 billion to $71 billion. This finding might be related to the dynamics of silver-loading, which the Congressional Budget Office (CBO) has scored as deficit-increasing (CBO, 2017). Because we assume CSRs on the buy-in are federally funded, the net impact of silver-loading on federal outlays is reduced in scenarios that include the buy-in relative to the no–buy-in scenario (Scenario 1). In our appendix tables, we find that if CSRs are funded for marketplace plans (that is, no silver-loading), then the buy-in leads to a slight increase in federal subsidy outlays relative to the scenario with no buy-in and no silver-loading (see Table B.3.).
We also estimated the change in out-of-pocket spending (premium contributions plus cost-sharing at the point of service) for three groups: older adults who transition to the buy-in, older adults who remain in the individual market, and people under age 50 who remain in the individual market (Figure 3.5).

Among those who choose individual market insurance under current law but switch to the buy-in once it becomes available, average out-of-pocket spending declines substantially—by about 30 percent—after the buy-in is introduced. The reduction in spending reflects both that the buy-in has lower premiums than individual market coverage and that the actuarial value of the buy-in plan is equivalent to or higher than most individual market plans. Lower premiums on the buy-in stem from the fact that the buy-in has access to Medicare payment rates, which are about 60 percent of private rates for hospital services and 80 percent of private rates for physician services (Beiner and Selden, 2017; Selden et al., 2015; American Hospital Association, 2016). We also assume that the buy-in achieves lower administrative costs than private plans, reflecting that the existing Medicare program has substantially lower administrative costs than private insurance. The combination of lower payment and lower administrative costs makes the buy-in a relatively better deal for enrollees.

Among people who remain enrolled in the individual market, out-of-pocket spending increases—by an average of 7.1 percent for 50-to-64-year-olds and 9.5 percent for individuals under age 50. These changes reflect the effects of increased premiums and consumer responses
to those premium increases, such as switching to a less-generous plan. Additionally, because the increase in bronze and gold premiums is larger than the increase in the silver premium, the relative value of the APTC (which is based on the silver premium) declines by more than 9 percent for some individuals.

**Figure 3.5. Percentage Change in Out-of-Pocket Spending (Premium Contributions Plus Cost-Sharing at the Point of Service), Base Buy-In Relative to No–Buy-In Scenario, 2022**

![Bar chart showing percentage change in out-of-pocket spending](chart)

NOTE: Premium contributions are net of APTCs, and cost-sharing amounts take into account CSR eligibility.

We assume that the Medicare buy-in is paid for through enrollee out-of-pocket premium contributions and subsidies (APTCs and CSRs) available through the ACA. By assumption, there is no effect on the Medicare Trust Fund or on outcomes for current Medicare beneficiaries.

**Detailed Results and Variation Across Scenarios**

**Insurance Enrollment**

Table 3.1 shows estimated insurance enrollment under current law and the change under each of the buy-in scenarios described earlier, for all individuals under the age of 65. Buy-in enrollment ranges from a low of 2.8 million in the scenario that limits eligibility to 60-to-64-year-olds to a high of 7.0 million in the scenario with low administrative costs on the buy-in. Adding an out-of-pocket maximum reduces enrollment in the buy-in relative to the case with no out-of-pocket maximum; as we show later, this finding relates to the fact that premiums are higher when the out-of-pocket maximum is added. Individual market enrollment falls by roughly
3 million to 5 million (22 percent to 36 percent) depending on the scenario. Total insurance enrollment increases marginally in most scenarios, although these changes are very small.

Table 3.2 shows estimated insurance enrollment specifically among the population of individuals ages 50–64 in each of the scenarios of interest. The table shows that, in all scenarios, a large share of 50-to-64-year-olds in the individual market (38 percent to 90 percent) opt to move to the buy-in. As we show in the section labeled “Premiums” later in this chapter, the changes in enrollment among the older population are highly correlated with premiums. For example, premiums increase when the buy-in includes an out-of-pocket maximum (Scenario 3), which results in lower buy-in enrollment compared with the base buy-in scenario. In the base scenario, about 5 million people ages 50 to 64 remain uninsured; we estimate that roughly three-fourths of this group is ineligible for APTCs.

Figure 3.6 shows the current-law coverage source of people who enroll in the buy-in. The majority of buy-in enrollees would have otherwise been insured in the individual market, with a smaller number coming from uninsured status and from employer-sponsored coverage.

**Figure 3.6. Current-Law Insurance Status of Those Who Enroll in the Buy-In, 2022**

![Figure 3.6](image)
Table 3.1. Health Insurance Enrollment for Population Under Age 65, Alternative Medicare Buy-In Scenarios, 2022 (millions)

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Total insured</td>
<td>245.7</td>
<td>0.5</td>
<td>0.3</td>
<td>0.1</td>
<td>0.3</td>
<td>0.7</td>
<td>1.0</td>
<td>0.3</td>
<td>0.1</td>
</tr>
<tr>
<td>Medicare buy-in</td>
<td>0.0</td>
<td>6.0</td>
<td>5.6</td>
<td>5.2</td>
<td>3.4</td>
<td>7.0</td>
<td>6.3</td>
<td>5.6</td>
<td>4.8</td>
</tr>
<tr>
<td>Individual market</td>
<td>13.9</td>
<td>−5.0</td>
<td>−5.0</td>
<td>−4.9</td>
<td>−3.1</td>
<td>−5.6</td>
<td>−4.4</td>
<td>−4.9</td>
<td>−4.4</td>
</tr>
<tr>
<td>Employer insurance</td>
<td>159.7</td>
<td>−0.4</td>
<td>−0.1</td>
<td>0.0</td>
<td>0.1</td>
<td>−0.5</td>
<td>−0.8</td>
<td>−0.2</td>
<td>−0.2</td>
</tr>
<tr>
<td>Medicaid</td>
<td>59.6</td>
<td>−0.2</td>
<td>−0.2</td>
<td>−0.2</td>
<td>−0.2</td>
<td>−0.2</td>
<td>−0.2</td>
<td>−0.2</td>
<td>−0.2</td>
</tr>
<tr>
<td>Other a</td>
<td>12.5</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
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</tr>
<tr>
<td>Uninsured</td>
<td>33.8</td>
<td>−0.5</td>
<td>−0.4</td>
<td>−0.1</td>
<td>−0.3</td>
<td>−0.7</td>
<td>−1.1</td>
<td>−0.4</td>
<td>−0.1</td>
</tr>
</tbody>
</table>

NOTE: Numbers for Scenarios 2 through 10 indicate change relative to Scenario 1 (no buy-in).

Other insurance includes military health insurance and Medicare enrollees under the age of 65.

Table 3.2. Health Insurance Enrollment for Population Ages 50–64, Alternative Medicare Buy-In Scenarios, 2022 (millions)

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Total insured</td>
<td>57.2</td>
<td>1.1</td>
<td>0.8</td>
<td>0.7</td>
<td>0.4</td>
<td>1.5</td>
<td>1.6</td>
<td>1.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Medicare buy-in</td>
<td>0.0</td>
<td>6.0</td>
<td>5.6</td>
<td>5.2</td>
<td>3.4</td>
<td>7.0</td>
<td>6.3</td>
<td>5.6</td>
<td>4.8</td>
</tr>
<tr>
<td>Individual market</td>
<td>5.2</td>
<td>−4.3</td>
<td>−4.4</td>
<td>−4.1</td>
<td>−2.9</td>
<td>−4.7</td>
<td>−3.9</td>
<td>−4.1</td>
<td>−3.5</td>
</tr>
<tr>
<td>Employer insurance</td>
<td>38.6</td>
<td>−0.6</td>
<td>−0.3</td>
<td>−0.4</td>
<td>−0.1</td>
<td>−0.8</td>
<td>−0.8</td>
<td>−0.5</td>
<td>−0.4</td>
</tr>
<tr>
<td>Medicaid</td>
<td>6.5</td>
<td>0.0</td>
<td>0.0</td>
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<td>0.0</td>
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<tr>
<td>Other a</td>
<td>6.9</td>
<td>0.0</td>
<td>0.0</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Uninsured</td>
<td>6.1</td>
<td>−1.1</td>
<td>−0.8</td>
<td>−0.7</td>
<td>−0.3</td>
<td>−1.5</td>
<td>−1.6</td>
<td>−1.0</td>
<td>−0.8</td>
</tr>
</tbody>
</table>

NOTE: Numbers for Scenarios 2 through 10 indicate change relative to Scenario 1 (no buy-in).

Other insurance includes military health insurance and Medicare enrollees under the age of 65.
Figure 3.7 shows changes in insurance enrollment by age group (younger than 50, 50–64) for each scenario. We find slight declines in enrollment for the population under age 50 in all scenarios, although these reductions are small. The reduction in insurance among younger individuals is due to higher premiums on the individual market, which occurs in all scenarios with the buy-in.

**Figure 3.7. Net Change in Insurance Enrollment, by Age, 2022**

![Net Change in Insurance Enrollment, by Age, 2022](image)

NOTE: OOP = out-of-pocket.

**Premiums**

Figures 3.8 and 3.9 compare the buy-in premium with individual market premiums for 50-year-olds and 60-year-olds, respectively. The buy-in premium ranges from approximately $8,700 in the scenario in which CSRs are not available on the buy-in (Scenario 7) to $12,000 in the scenario in which insurers selectively market to healthy enrollees and the buy-in includes an out-of-pocket maximum (Scenario 5). Buy-in premiums are more expensive when we add an out-of-pocket maximum to the buy-in, reflecting that the plan attracts a relatively sicker pool of individuals when it offers this protection. When CSRs are not available on the buy-in, it is
attractive mainly to people with incomes over 250 percent of the FPL, who tend to be healthier on average than the lower-income population. Furthermore, CSRs, which increase the effective actuarial value of the buy-in plan, lead to higher utilization. Notably, buy-in enrollment in the scenario without CSRs is higher than buy-in enrollment in the base buy-in scenario. This finding indicates that the reduction in buy-in premiums in the no-CSRs scenario attracts enough unsubsidized individuals to counteract lower-income 50-to-64-year-olds tending to remain on the individual market.

**Figure 3.8. Premiums for 50-Year-Olds, 2022**

**NOTE:** OOP = out-of-pocket.
Figure 3.9. Premiums for 60-Year-Olds, 2022

We compare the buy-in premium with an individual market bronze plan, which is the cheapest individual market plan available to enrollees and has an actuarial value of 60 percent, and with an individual market gold plan, which has an actuarial value of 80 percent (comparable to Medicare). For a 50-year-old, the buy-in is more expensive than a bronze plan in all scenarios except Scenario 6, in which the buy-in has low administrative costs, and Scenario 7, in which CSRs are not available on the buy-in. However, the buy-in is less expensive than the gold plan in all cases. For a 60-year-old, the buy-in is less expensive than both the bronze and the gold plan in all scenarios. In many cases, the gold plan is close to twice as expensive as the buy-in plan for a 60-year-old. The relatively low cost of the buy-in plan reflects that it pays Medicare rates, which are lower than commercial rates, and that we assume that the buy-in achieves reduced administrative costs.

Figure 3.10 illustrates how individual market premiums change across the scenarios. Relative to current law (Scenario 1), premiums for all metal tiers except silver increase by nearly 2 percent to just over 10 percent across all scenarios considered. The premium increase for non-silver plans is lowest in Scenario 5, in which selective insurer marketing inclines healthier people
to enroll in the individual market and there is an out-of-pocket maximum on the buy-in. Non-silver premium increases are highest when the buy-in has lower administrative costs (and therefore the buy-in is attractive even to healthy 50-year-olds).

As described earlier, silver premiums trend differently than other premiums because of silver-loading. In Scenarios 9 and 10, which restrict the buy-in to older age groups, the silver premium falls slightly because of the buy-in.

**Figure 3.10. Percentage Changes in Individual Market Premiums, Buy-In Scenarios, 2022**

![Figure 3.10](image)

**Impact on Federal Subsidy Spending**

Table 3.3 shows how federal spending on APTCs and CSRs varies across the scenarios considered. In all but one case (Scenario 5), the buy-in leads to reductions in spending.
### Table 3.3. Federal Spending, 2022 (billions)

<table>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>APTCs, marketplaces</td>
<td>$75</td>
<td>$38</td>
<td>$40</td>
<td>$41</td>
<td>$49</td>
<td>$38</td>
<td>$48</td>
<td>$40</td>
<td>$40</td>
<td>$43</td>
</tr>
<tr>
<td>APTCs, buy-in</td>
<td>$0</td>
<td>$30</td>
<td>$32</td>
<td>$30</td>
<td>$25</td>
<td>$30</td>
<td>$30</td>
<td>$23</td>
<td>$30</td>
<td>$24</td>
</tr>
<tr>
<td>CSRs, buy-in</td>
<td>$0</td>
<td>$3</td>
<td>$2</td>
<td>$3</td>
<td>$2</td>
<td>$3</td>
<td>$0</td>
<td>$3</td>
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</tr>
<tr>
<td>Total</td>
<td>$75</td>
<td>$71</td>
<td>$74</td>
<td>$74</td>
<td>$76</td>
<td>$71</td>
<td>$71</td>
<td>$72</td>
<td>$69</td>
<td>$69</td>
</tr>
<tr>
<td>Change relative to Scenario 1</td>
<td>NA</td>
<td>−$4</td>
<td>−$1</td>
<td>−$1</td>
<td>$1</td>
<td>−$4</td>
<td>−$4</td>
<td>−$3</td>
<td>−$6</td>
<td>−$6</td>
</tr>
</tbody>
</table>

NOTE: NA = not applicable.
Table 3.4 summarizes total consumer out-of-pocket spending (premium contributions plus cost-sharing at the point of service) under the current-law scenario and each of the buy-in scenarios for three populations of interest: those who switch from individual market coverage under current law to the buy-in, 50-to-64-year-olds who remain on individual market insurance after the buy-in is introduced, and people under age 50 who remain on individual market insurance after the buy-in is introduced. Among those who choose individual market insurance under current law but switch to the buy-in once it becomes available, average out-of-pocket spending declines substantially—by about 22 percent to 33 percent across scenarios—after the buy-in is introduced. The reduction in spending reflects both that the buy-in has lower premiums than individual market coverage and that the actuarial value of the buy-in plan is equivalent to or higher than most individual market plans.

Changes in out-of-pocket spending are more complicated for people who remain in the individual market and reflect several competing factors. Although premiums increase for this group, some people respond by moving to less expensive coverage or dropping out of the market entirely.

The number of people ages 50 and over who remain in the individual market is small and varies widely across scenarios—from 500,000 in the scenario with lower administrative costs to 2.2 million in Scenario 5 (selective marketing, with an out-of-pocket maximum). This group experiences an increase in out-of-pocket spending, ranging from a negligible increase in the selective marketing scenario with an out-of-pocket maximum to a 9.5 percent increase when the buy-in is limited to 55-to-64-year-olds.

Spending changes among people under age 50 are also positive and vary widely, ranging from a 1.6 percent increase in the scenario with selective marketing and an out-of-pocket maximum to a 13.7 percent increase in the scenario in which the buy-in is limited to 55-to-64-year-olds. Increases are smallest in Scenario 5, which has the smallest increase in premiums on the individual market among the scenarios considered. The relatively large increase when the buy-in is limited to 55-to-64-year-olds reflects the fact that, in this scenario, the silver premium falls while the bronze premium goes up. As a result, APTCs decline, and some consumers must pay more out of pocket to enroll in equivalent coverage.
<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Individual market to buy-in, ages 50–64</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>N (millions)</td>
<td>4.3</td>
<td>4.4</td>
<td>4.1</td>
<td>2.9</td>
<td>4.7</td>
<td>3.9</td>
<td>4.1</td>
<td>3.4</td>
<td>2.0</td>
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<tr>
<td>Out-of-pocket spending, current law</td>
<td>$5,576</td>
<td>$5,756</td>
<td>$5,607</td>
<td>$6,353</td>
<td>$5,547</td>
<td>$6,189</td>
<td>$5,629</td>
<td>$5,771</td>
<td>$6,341</td>
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<tr>
<td>Out-of-pocket spending, buy-in</td>
<td>$4,017</td>
<td>$4,224</td>
<td>$4,169</td>
<td>$4,941</td>
<td>$3,740</td>
<td>$4,147</td>
<td>$3,815</td>
<td>$4,036</td>
<td>$4,444</td>
</tr>
<tr>
<td>Percentage change</td>
<td>−28.0%</td>
<td>−26.6%</td>
<td>−25.7%</td>
<td>−22.2%</td>
<td>−32.6%</td>
<td>−33.0%</td>
<td>−32.2%</td>
<td>−30.1%</td>
<td>−29.9%</td>
</tr>
<tr>
<td><strong>Remain on individual market, ages 50–64</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N (millions)</td>
<td>0.9</td>
<td>0.8</td>
<td>1.1</td>
<td>2.2</td>
<td>0.5</td>
<td>1.3</td>
<td>1.0</td>
<td>1.6</td>
<td>3.1</td>
</tr>
<tr>
<td>Out-of-pocket spending, current law</td>
<td>$7,078</td>
<td>$6,050</td>
<td>$6,244</td>
<td>$5,027</td>
<td>$8,150</td>
<td>$4,572</td>
<td>$6,417</td>
<td>$5,540</td>
<td>$5,360</td>
</tr>
<tr>
<td>Out-of-pocket spending, buy-in</td>
<td>$7,583</td>
<td>$6,476</td>
<td>$6,715</td>
<td>$5,062</td>
<td>$8,745</td>
<td>$4,859</td>
<td>$6,903</td>
<td>$6,068</td>
<td>$5,716</td>
</tr>
<tr>
<td>Percentage change</td>
<td>7.1%</td>
<td>7.0%</td>
<td>7.5%</td>
<td>0.7%</td>
<td>7.3%</td>
<td>6.3%</td>
<td>7.6%</td>
<td>9.5%</td>
<td>6.7%</td>
</tr>
<tr>
<td><strong>Remain on individual market, younger than 50</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N (millions)</td>
<td>7.8</td>
<td>8.0</td>
<td>7.8</td>
<td>8.2</td>
<td>7.7</td>
<td>8.1</td>
<td>7.8</td>
<td>7.7</td>
<td>8.1</td>
</tr>
<tr>
<td>Out-of-pocket spending, current law</td>
<td>$2,463</td>
<td>$2,439</td>
<td>$2,430</td>
<td>$2,544</td>
<td>$2,398</td>
<td>$2,444</td>
<td>$2,445</td>
<td>$2,439</td>
<td>$2,545</td>
</tr>
<tr>
<td>Out-of-pocket spending, buy-in</td>
<td>$2,698</td>
<td>$2,605</td>
<td>$2,652</td>
<td>$2,585</td>
<td>$2,637</td>
<td>$2,574</td>
<td>$2,685</td>
<td>$2,774</td>
<td>$2,797</td>
</tr>
<tr>
<td>Percentage change</td>
<td>9.5%</td>
<td>6.8%</td>
<td>9.1%</td>
<td>1.6%</td>
<td>10.0%</td>
<td>5.3%</td>
<td>9.8%</td>
<td>13.7%</td>
<td>9.9%</td>
</tr>
</tbody>
</table>
Effects of Merging the Risk Pool with the Currently Medicare-Eligible Population

In a sensitivity analysis reported in Appendix D, we considered a scenario in which the Medicare buy-in risk pool was merged with the current Medicare population (including people ages 65 and older and enrollees under age 65 with disabilities). We considered this option, although it is not part of the current policy discussion, because a merged risk pool would enable buy-in enrollees to be pooled with a larger, more stable market and because pooling mechanisms for Medicare buy-in proposals have not been fully explored.

Only 1.4 million people enrolled in the buy-in in this scenario because it was expensive relative to the individual market, reflecting the higher costs of the current Medicare population. Although spending on APTCs and CSRs in the merged buy-in scenario exceeded APTC spending in the no-buy-in case, premiums charged to buy-in enrollees exceeded the cost of insuring this population. Overall, these two effects led to $4 billion in savings for the federal government.
4. Limitations and Uncertainty

Our analysis has several important limitations. First, we do not account for how the buy-in might affect providers and hospitals, nor do we account for the effect of network breadth on consumers’ enrollment decisions. On the one hand, with lower payment rates, some providers and hospitals might refuse to participate in the buy-in or supply fewer services to buy-in enrollees, making the buy-in a less attractive option than we have modeled. On the other hand, even if some providers decided not to participate in the buy-in, the buy-in might offer enrollees a broader network than what is available on the individual market. Furthermore, it is not clear that providers would be legally allowed to opt out of the buy-in while still accepting payment for current Medicare beneficiaries.

There is also significant uncertainty regarding the level of administrative savings that the buy-in option would be able to achieve; in most scenarios, we have assumed that administrative rates for the buy-in are a weighted average of current Medicare Advantage and traditional Medicare administrative rates. However, it is possible that the savings would be higher or lower than we have estimated. We considered a scenario in which buy-in administrative rates reflect fee-for-service levels, shedding light on how our results would change with a lower-bound assumption on administrative costs. Although we did not include a scenario with higher administrative costs, such an assumption would lead to higher buy-in premiums and lower buy-in enrollment.

We assume that the buy-in will have stabilized by 2022, meaning that potential enrollees are familiar with the buy-in by that time, operations are running smoothly, and regulators have sufficient information to price premiums accurately. However, it might take more time for the buy-in to fully stabilize. If actuaries do not have enough reliable claims experience to set premiums, or if the characteristics of enrollees are inherently difficult to predict from year to year, then premiums collected could be less or more than needed to cover the cost of buy-in enrollees.

We model some scenarios in which individual market insurers selectively market plans to healthy 50-to-64-year-olds, making individual market plans more attractive for healthy consumers. However, the buy-in is still cheap enough that many healthy people choose to enroll in the buy-in despite insurers’ attempts to steer them into the individual market. There are other types of preferences and perceptions that we do not consider, such as positive or negative perceptions about the Medicare program, political biases, and differences in provider networks.

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7 We model selective marketing by increasing the value of individual market plans for healthy enrollees by $2,000. However, because the buy-in is often more than $2,000 less expensive than a comparable individual market policy, healthy people frequently enroll in the buy-in despite this assumption.
available on and off the buy-in. It is possible that perceptions about the relative advantages and
disadvantages of the buy-in option—real or imagined—could affect enrollment.

There is also substantial uncertainty regarding whether a Medicare buy-in is politically
feasible, and—if so—how closely the policy that we modeled would resemble any legislation
that might ultimately pass. Alternative policy proposals could be different in many ways,
including handling APTCs differently, allowing employers to contribute to the program,
allowing wraparound (Medigap) coverage, or offering different benefits than we have modeled.
Any of these differences could have a bearing on the results.

Finally, results from COMPARE are uncertain because, like many simulation models, they
simplify complex interactions and do not fully account for human biases, unforeseen economic
and political factors, operational challenges that might inhibit policies from acting as intended,
and downstream effects, such as changes in labor market participation.
5. Discussion and Conclusion

In our base buy-in scenario, we found that a Medicare buy-in for 50-to-64-year-olds would attract 6 million enrollees, with few older adults (fewer than 1 million) remaining in the individual market. Across the nine scenarios we analyzed in sensitivity testing, we found that the buy-in could attract between 2.8 million and 7.0 million older adults. The popularity of the buy-in relative to the individual market is driven by its affordable premiums, which reflect Medicare payment rates to providers and low administrative costs. For a 60-year-old, the buy-in is cheaper than the average plan offered on the private individual market, including the bronze option, in all scenarios. Even for a 50-year-old, the buy-in is cheaper than most individual market plans and is always cheaper than the gold plan—which has an actuarial value comparable to Medicare. Most buy-in enrollees would otherwise have been insured in the individual market, with about 1 million people transitioning from uninsured status to the buy-in in our base scenario. Among older adults who remain uninsured, three-fourths are not eligible for APTCs.

Our analysis found that the buy-in did not result in lower premiums for those who remained enrolled in the ACA’s individual market. The finding that a buy-in for 50-to-64-year-olds increases individual market premiums runs counter to the conventional wisdom that older adults are, on average, detrimental to the individual market risk pool. We find that most older adults are beneficial to the risk pool, often spending less in claims than they pay in premiums. In prior work, we estimated that more than 80 percent of adults ages 55 to 64 simulated to be enrolled in the individual market spend less on health care than the age-rated premium amount, after adjusting for administrative costs and actuarial value (Eibner and Saltzman, 2014). Although removing unhealthy and high-cost older adults from the ACA’s risk pool would tend to reduce individual market premiums, removing healthy older adults has the opposite effect.

Almost all scenarios resulted in higher premiums on the individual market when the buy-in went into effect. The size of the individual market premium increase, however, varied across scenarios. The increase was highest in the case in which the buy-in had low administrative costs. In this scenario, the majority of healthy 50-to-64-year-olds, including people in their early 50s, prefer the buy-in to the individual market.

Premium increases also tended to be lower in the scenario in which individual market insurers selectively marketed to healthy enrollees and the buy-in had an out-of-pocket maximum. Although this scenario slightly dampens the exodus of healthy older people from the individual market, the effect of insurer marketing is not strong enough to outweigh the attraction of the buy-in’s lower administrative costs and lower payment rates for most people. However, the older adults who remain in the individual market are slightly less expensive in the selective marketing scenarios than in other scenarios.
Although our finding is surprising, other studies have reported a similar outcome. For example, the Blue Cross Blue Shield Association has estimated that a Medicare buy-in that removes a substantial number of 50-to-64-year-olds from the individual market could increase premiums by around 10 percent (Abelson, 2019). A related research brief describes how older individual market enrollees in their risk pool are characterized by a broad variety of risks—including both high and low spenders—while the younger enrollees tend to be sicker (Blue Cross Blue Shield Association, 2019). Kotecki and Westrom, 2019, reaches a similar conclusion, estimating that, if all 50-to-64-year-olds currently in the individual market moved to the buy-in, individual market premiums would increase by 7.5 percent.

Because of the increase in individual market premiums, some younger individuals drop coverage when the buy-in takes effect. As a result, the overall increase in insurance coverage is minimal, with declines in enrollment among the younger population offsetting most of the increase in enrollment among 50-to-64-year-olds.

In most scenarios, the Medicare buy-in reduced federal spending on subsidies, with a $4 billion decline in spending in our base buy-in scenario. However, this reduction in spending appears to be driven primarily by silver-loading on the individual market, which leads to higher federal costs. The cost impacts of silver-loading are reduced in the buy-in scenarios because we assume that CSRs are federally funded for buy-in enrollees. Although not the focus of this report, it is worth noting that the decision to halt CSR payments interacts with the policies that we have modeled.

The Medicare buy-in scenarios that we considered substantially reduced out-of-pocket spending (premium contributions plus cost-sharing at the point of service) for the subset of people who moved from traditional individual market coverage into the buy-in market. In most scenarios, out-of-pocket spending among people who transitioned from the individual market to the buy-in declined by around 30 percent. These changes are perhaps not surprising, given that the buy-in adds an option for older adults without changing the existing set of available options. As a result, those who opt to participate in the buy-in market do so because it works to their advantage. Although premiums increased for those who remained enrolled in the individual market, the effects on out-of-pocket spending were more complicated; in many cases, enrollees counteracted the effects of premium increases by switching to less-generous coverage.

Although we did not consider how the buy-in would affect providers and hospitals, it is possible that they would face somewhat lower revenues because payment rates for buy-in enrollees would be lower than commercial payment rates. Future work is needed to better understand how providers might respond to such a change.

Over the years, policymakers have offered many rationales for a Medicare buy-in, including ensuring access to coverage for older adults, stabilizing the ACA’s individual market risk pool, and providing older adults with additional, potentially lower-cost coverage options. With the ACA’s reforms, which required insurers to sell insurance to all applicants at modified community rates, the buy-in is no longer necessary to achieve the availability of stable coverage.
for older adults (although the law still allows older adults to be charged higher rates than younger adults). Furthermore, our analysis suggests that the buy-in is not a silver bullet to addressing the issue of high health care costs on the individual market because the buy-in can disproportionately remove healthy older people from the ACA’s risk pool. However, our analysis suggests that the buy-in can successfully achieve the goal of reducing out-of-pocket costs for those who opt to enroll. Follow-on work could consider alternative approaches to designing the buy-in, such as implementing different subsidy approaches or offering buy-in plans with alternative benefit structures.
Appendix A. COMPARE Overview

COMPARE is a microsimulation model that uses economic theory, nationally representative data, and evidence from past experience to estimate how consumers and businesses 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 SIPP, the 2010–2011 MEPS, and the 2009 Kaiser Family Foundation and Health Research and Educational Trust Employer Health Benefits Survey. Although 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 CMS’s NHEA. Our inflation factors vary by payer. We use NHEA per capita growth rates by payer type (Medicare, Medicaid, private), supplemented with marketplace premium growth in 2017 and 2018 (CMS, 2018b; HHS, Office of the Assistant Secretary for Planning and Evaluation, 2017; Kamal et al., 2018).

We assign each individual in the SIPP 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 NHEA 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 can 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.

Next, 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 post-ACA experiences (e.g., administrative reports on enrollment, subsidy payments, and tax collections). We then describe the adjustments made to model the Medicare buy-in scenarios. We also discuss how our results compare to 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.8 We further assume that individuals’ utilities are separable in consumption and health. The health-related component of the utility function is modeled in Equation A.1, as follows:

\[ U_{ijk} = u(H_{ij}) - E(OOP_{ij}) - P_{ij} - [0.5 \times r \times VAR(OOP_{ij})] + \text{Calibration}_{jk}, \]  

where

- \( u(H_{ij}) \) 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
- \( OOP_{ij} \) is the out-of-pocket spending expected
- \( P_{ij} \) is the individual’s premium contribution (after adjusting for tax credits)
- \( r \) is the coefficient of risk aversion.

Possible health insurance enrollment choices \( (j) \) under the ACA may include employer coverage, Medicaid or Children’s Health Insurance Program (CHIP) coverage, an ACA-compliant individual-market plan (including plans available on and off the marketplaces), or

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8 This approach follows Goldman, Buchanan, and Keeler, 2000.
another source of coverage. 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 using 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 using factors other than 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 one to 50 employees in perpetuity, unless states opt to extend the small-group market to firms with up to 100 workers.

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 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 using worker preferences and several other characteristics, including union status and industry. We allow large firms that offer coverage to choose among four plans, which are distinguished by plan generosity and rated based on enrollees’ expected health expenditures. We

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9 Other sources of coverage include Medicare for the nonelderly with qualifying conditions and military-related sources of coverage, such as TRICARE.
estimate premiums for the large-group market using a regression. The firm’s decision to offer is modeled using structural econometric techniques.

**Medicaid and CHIP.** We model Medicaid and CHIP as extremely generous health insurance policies (close to 100 percent actuarial value) with low provider reimbursement. Through our calibration process, the model accounts for the fact that not all Medicaid-eligible individuals chose 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 (Frean, 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 using 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 (HHS, 2013). We model three-to-one rate banding on age for adults ages 21 and older, with a separate age curve for children and young adults under age 21. The rating curve in the model is based on the CMS default age rating published in May 2017 (CMS, 2017). 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 the FPL 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 must 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 poverty, 87 percent if income is between 150 and 200 percent of poverty, and 73 percent if income is between 200 and 250 percent of poverty. Accordingly, out-of-pocket spending is adjusted downward to reflect the higher actuarial value of the plan.

Given the Trump administration’s decision to halt federal payments for CSRs, we assume in the model that insurers build the costs of the CSR payments into premiums for their silver plans. We take this into account in COMPARE by eliminating CSR payments from the federal government and loading the costs of CSRs onto the premiums of silver individual market plans. Individuals who would have previously been eligible to receive CSR subsidies continue to do so.

Finally, HHS reported that approximately 14 percent of individual market enrollees are eligible for tax credits but forgo those credits by purchasing coverage outside of the marketplaces (HHS, Office of the Assistant Secretary for Planning and Evaluation, 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 25 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 the Medicare Buy-In Proposals

Medicare Buy-In Plan Option

We model the Medicare buy-in as a plan with 80 percent actuarial value, similar to the actuarial value in the existing Medicare program (McArdle et al., 2012; Bailey, 2014)\(^{10}\) and the ACA’s gold plans. We add the Medicare buy-in as a possible choice for eligible individuals—those ages 50 to 64 in the scenarios modeled—following the utility-maximization function shown in Equation A.1.

In many scenarios, we assume the Medicare buy-in plan has no out-of-pocket maximum and that enrollees must pay 10 percent of health expenditures above the deductible. As a requirement, the actuarial value of the plan was the same as that specified for the individual market gold plan and equal to 80 percent. This required changing the individual-level total and out-of-pocket spending associated with the buy-in plan for our population ages 50 to 64, as well as enrollees’ utilities associated with selecting the plan. In COMPARE, the utilities (\(U_{ijk}\) from Equation A.1) of each plan that are found by analyzing the MEPS data set get modified by a calibration process before they are used in the simulation model to explore different policies and scenarios. Essentially, the calibration process linearly transforms the utilities found by analyzing the MEPS data. We assumed that the Medicare buy-in utilities transform in the same way as the individual market gold plan using the same multiplicative scaling factor and calibration constant. Individual-level total and out-of-pocket health spending were also modified based on the specifications of the plan and how people are predicted to change utilization behavior according to the findings of RAND’s Health Insurance Experiment. To ensure that the actuarial value of the buy-in plan was 80 percent, this spending was further transformed and scaled accordingly, using the spending patterns found for the individual market gold plan.

Medicare Buy-In Premiums

Like commercial plan premiums, the Medicare buy-in premium is calculated as the product of the plan’s actuarial value, average medical expenditures in the risk pool, and an administrative load. However, the buy-in plan differs from other insurance products because it has lower administrative costs and lower payment rates.

\(^{10}\) Medicare fee-for-service covered an average of 77 percent of total costs in 2007 and 80 percent of total costs in 2011 (McArdle et al., 2012). The estimated actuarial value of Medicare Parts A and B in 2014 was 84 percent (Bailey, 2014).
National average Medicare provider payment rates. We assume that the Medicare buy-in plan would reimburse providers at Medicare rates, an assumption that lowers the expenditures in the premium calculation. On average, Medicare pays physicians approximately 80 percent of the commercial rate and hospitals approximately 60 percent of the commercial rate (CMS, 2012; Selden et al., 2015; American Hospital Association, 2016). For all other services, we assume that the Medicare and commercial rates are approximately equivalent, i.e., Medicare pays 100 percent of the commercial rate for other services. After weighting these percentages by the share of spending on hospital, physician, and other services as reported in the 2010–2011 MEPS for individuals under age 65, we arrive at an average relative rate with Medicare payment as 86 percent of the commercial payment rate, across all services. This national average rate is the basis for the provider payment adjustments used in COMPARE. However, as described next, we make further adjustments to account for geographic variation in the strength of Medicare negotiating power relative to the negotiating power of commercial plans.

Accounting for geographic variation in Medicare provider payment rates. To account for geographic variation in commercial plans’ negotiating power, we estimate a ratio of Medicare-to-commercial prices for health care services. To estimate Medicare price levels, we use two total cost amounts calculated by CMS: actual total costs and total standardized costs at the HRR level (CMS, 2016a). Actual total costs reflect total Medicare spending. Total standardized costs reflect differences in costs caused by factors other than price, such as geographic variation in utilization and practice patterns. Because we want to estimate geographic variation in price while holding other factors—such as utilization and practice patterns—constant, we divide the actual total cost measure by the standardized total cost measure (Cubanski et al., 2015). The Medicare price index \(\text{MedPI}_h\) in Equation A.2 holds quantity and type of service consumed constant but reflects geographic variation in input prices (e.g., wages, capital costs, and overhead expenses), spending on graduate medical education, and disproportionate share hospital payments:

\[
\text{MedPI}_h = \left( \frac{\text{Actual}_h^M}{\text{Standardized}_h^M} \right),
\]

(A.2)

where

- \(\text{Actual}_h^M\) refers to actual Medicare \((M)\) costs for HRR \(h\)
- \(\text{Standardized}_h^M\) refers to standardized Medicare costs for the same HRR.

The population-weighted average of \(\text{MedPI}_h\) across all HRRs deviates slightly from 1 because of outlier adjustments incorporated into the underlying CMS measures. Therefore, in Equation A.3, we normalize \(\text{MedPI}_h\) by dividing by

\[
\frac{\text{Actual}_{1JS}^M}{\text{Standardized}_{1JS}^M},
\]

(A.3)
where the subscript \(US\) denotes actual and standardized costs nationally, and we refer to the normalized metric as \(\text{norm}(\text{MedPI}_h)\).

To estimate geographic variation in commercial prices levels, we use analogous information developed by Harvard University and the Lewin Group using MarketScan data and reported by the Institute of Medicine (Institute of Medicine, 2013). The Institute of Medicine files include actual spending for a market basket of services at the HRR level and standardized spending for the same set of services assuming constant prices. We calculate a commercial price index \(\text{(ComPI}_h\)) that reflects commercial price variation at the HRR level by dividing actual commercial costs \(\text{Actual}_h\) for the market basket of services by price-standardized costs \(\text{Standardized}_h\). The index controls for the quantity and type of services consumed and reflects differences stemming from input costs (e.g., labor, capital, overhead) and any additional margin that the provider is able to negotiate. As with the Medicare index, we use a normalized version of the commercial index with a mean equal to 1.

Taking into account the national average Medicare payment rate and the normalized price indices, we calculate in Equation A.4 the Medicare payment rate for each HRR \((h)\). The rate is as follows:

\[
\text{MedicarePaymentRate}_h = 0.86 \times \left(\frac{\text{norm}(\text{MedPI}_h)}{\text{norm}(\text{ComPI}_h)}\right).
\] (A.4)

With this measure, an HRR with average Medicare payment and average commercial payment is assigned a payment rate differential of 0.86. Medicare payment rates increase as Medicare actual-relative-to-standardized spending goes up and as commercial actual-relative-to-standardized spending goes down.

Although COMPARE is a national-level model, we impute the distribution of Medicare payment rates across HRRs to individuals in the model. We assign a Medicare payment rate to each individual aged 50 to 64 in our model using their state of residence. Because we do not observe HRR in the SIPP data that underlie the COMPARE model, we assign payment rates within a state in proportion to the state’s commercially insured population in each HRR. For example, if a state has two HRRs, one that encompasses 75 percent of the commercial population and one that encompasses 25 percent of the commercial population, each SIPP record in that state would have a 75 percent chance of being assigned the payment rate for the first HRR and a 25 percent chance of being assigned the payment rate for the second HRR. A limitation is that the random assignment of HRRs within states does not account for households such that household members might be assigned to different HRRs. For household members making insurance decisions as a unit and who are randomly assigned to different HRRs, the variation in the payment rates is diminished because the expenditures and subsequent premiums reflect an average of the assigned rates.
Provider payment rates can affect provider participation in a plan as well as providers’ relative willingness to supply services to individuals with different insurance plans. We assume that providers participating in the current Medicare program would also participate in the buy-in plan such that there is no reduced access or utility for potential buy-in enrollees.

**Accounting for geographic variation in affordability.** We also account for geographic variation in buy-in premiums caused by regional effects on insurance affordability, similar to the effects experienced by marketplace premiums because the APTCs are not adjusted to account for local prices. For both the individual market and Medicare buy-in premiums, we capture geographic variation using a price index approach at the state level. We estimate state-specific premiums by adjusting the national premium predicted by the model by a geographic price index based on average 2016 premiums in the health insurance marketplaces for each state, weighted across rating areas (Gabel et al., 2016). The index ranges from 2.32 in Alaska to 0.79 in Washington, D.C., with a population-weighted national average of 1.

**Medicare administrative rates.** In COMPARE, we assume that individual market plans spend approximately 20 percent of premiums on administration. In contrast, Medicare spends much less on administration because of factors such as lower churn into and out of the program, economies of scale, and less marketing and profits. According to the 2016 NHEA, government administration and the net cost of health insurance for Medicare were about 7.5 percent of total expenditures (CMS, 2018b). This reflects the overall Medicare program, including traditional fee-for-service and Medicare Advantage. When only government administration is taken into account, the administrative load is 2.8 percent of total expenditures. We assume that providers who participate in the buy-in are paid fee-for-service rates.

**Implementing the Selective Marketing Scenarios**

In some scenarios, we assume that insurers selectively market individual market plans to healthier individuals, increasing healthy people’s chances of enrolling in these plans. To operationalize, we assume that if the buy-in plan and the individual market plan offered identical benefits, healthy people would pay up to $2,000 to remain in the individual market. To identify healthy people, we selected 50-to-64-year-olds using probabilities that were inversely proportional to the square root of their total health spending. Therefore, although the algorithm allowed for some randomness, those with lower health spending had a much higher probability of being selected as healthy. The number of people sampled to be healthy varied based on the stochastic draw but was roughly half of the total number of 50-to-64-year-olds.

**Comparison with Congressional Budget Office**

Table A.1 compares our insurance estimates from our baseline scenario (no buy-in) with those of CBO (CBO, 2019).
The analyses differ in the assignment of primary insurance category and estimated population size. We assign individuals to a primary insurance category, while CBO allows people to have more than one source of coverage. Therefore, CBO’s estimates do not sum to population totals. For the estimated population size, we match population estimates published by the U.S. Census Bureau, which estimates that there will be 279.5 million nonelderly U.S. residents by 2022 (U.S. Census Bureau, 2017).

Overall, our estimates are very similar to CBO’s estimates. The biggest difference is that we have fewer Medicaid enrollees than CBO. We believe this reflects the fact that CBO allows people to have multiple sources of coverage, and therefore their Medicaid total includes dual-eligibles. In COMPARE, enrollees under the age of 65 who have both Medicare and Medicaid are grouped in the “other” insurance category.

<table>
<thead>
<tr>
<th></th>
<th>COMPARE</th>
<th>CBO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer</td>
<td>159.7</td>
<td>159</td>
</tr>
<tr>
<td>Individual market(a)</td>
<td>13.9</td>
<td>13</td>
</tr>
<tr>
<td>Medicaid</td>
<td>59.6</td>
<td>69</td>
</tr>
<tr>
<td>Other(b)</td>
<td>12.5</td>
<td>11</td>
</tr>
<tr>
<td>Uninsured</td>
<td>33.8</td>
<td>33</td>
</tr>
<tr>
<td>Total population</td>
<td>279.5</td>
<td>273</td>
</tr>
<tr>
<td>Share uninsured</td>
<td>12.1%</td>
<td>12.1%</td>
</tr>
</tbody>
</table>

NOTES: CBO allows multiple sources of coverage, so estimates do not sum to population totals. These estimates reflect the elimination of the individual mandate and no federal payments to insurers for CSRs.

\(a\) We include the basic health plan (offered in New York and Minnesota) as part of individual market coverage.

\(b\) Other insurance includes military health insurance and Medicare enrollees under the age of 65.
Appendix B. Results with Cost-Sharing Reductions Funded

Background on the ACA’s Subsidies

The ACA offers two forms of health insurance subsidies to individual market enrollees who get coverage through the marketplaces. APTCs, which reduce enrollees’ premium contributions, are available to marketplace enrollees with incomes between 100 and 400 percent of the FPL and no affordable offer of coverage through another source, such as Medicaid or an employer. APTC-eligible individuals with incomes below 250 percent of the FPL are also eligible for CSRs, which reduce cost-sharing at the point of service (e.g., copays, deductibles).

Insurers operating on the marketplaces must provide CSRs to eligible low-income enrollees who select silver plans. The standard silver plan has an actuarial value of 70 percent, meaning that—on average—the plan pays for 70 percent of enrollees’ covered expenditures. CSR plans raise the effective actuarial value to 94 percent for eligible enrollees with incomes below 150 percent of the FPL, 87 percent for eligible enrollees with incomes between 150 and 200 percent of the FPL, and 73 percent for eligible enrollees with incomes between 200 and 250 percent of the FPL.

Under the Barack Obama administration, insurers’ CSR payments were reimbursed by the federal government. However, in late 2017, the Trump administration argued that federal payment for CSRs was unlawful and halted these payments through an executive order. Despite the policy change, insurers are still required to provide CSRs to eligible enrollees. To fund these payments, insurers in most states have increased the silver premium (Kamal et al., 2017), a practice known as silver-loading.

Because APTCs are benchmarked to the cost of the second-lowest-cost silver plan available to the enrollee, silver-loading has the effect of increasing tax credit amounts for all APTC-eligible enrollees, including those with incomes over 250 percent of the FPL. CBO estimated that silver-loading would increase silver premiums by roughly 25 percent, simultaneously increasing tax credit amounts and reducing the share of people without insurance (CBO, 2017). CBO also estimated that silver-loading would increase the federal deficit by roughly $6 billion in 2018, a number that will rise to $26 billion a year by 2026. Silver-loading affects silver but not bronze, gold, or platinum plans on the ACA’s marketplaces, so APTCs go further with silver-loading. For example, some people may be eligible for free bronze plans with CSR-loading, or for heavily discounted gold or even platinum plans.

Lawfully present immigrants with incomes below 100 percent of the FPL are also eligible for CSRs, if they do not have access to an alternative affordable coverage source.
How Does CSR-Loading Affect Our Results?

In our modeling, we assume that silver-loading continues to occur on the marketplaces but that CSRs on the buy-in are funded by the federal government. The modeling choice reflects that the two most prominent Medicare buy-in proposals (the Higgins and Stabenow bills) included federally funded CSRs for buy-in enrollees. In all scenarios, we assume that APTCs, which are pegged to the marketplace silver plan, can be used to purchase coverage on the buy-in. The result is that buy-in enrollees in most of the scenarios that we have modeled have access to CSR-loaded APTCs and can apply them to the buy-in plan.

In this appendix, we consider an alternative scenario in which CSRs are funded both on the buy-in and in the marketplaces. The scenario is similar to the “base buy-in” scenario described in the main text: We assume the buy-in has no out-of-pocket maximum, has administrative costs of 7.5 percent, and has geographically adjusted premiums. We compare this scenario with a “no buy-in” baseline in which CSRs are fully funded (and therefore there is no silver-loading). For clarity, we also include the original no-buy-in scenario (in which CSRs are loaded onto the silver plan) and the original base buy-in scenario. These two scenarios are identical to those considered in the main text.

Table B.1 shows total enrollment across the four scenarios considered. As expected, total enrollment falls when we assume CSRs are fully funded relative to the two scenarios with silver-loading because of the reduction in APTCs, from approximately 246 million individuals in Scenarios 1 and 2 to approximately 245 million in Scenarios 3 and 4.

Table B.1. Health Insurance Enrollment for Population Under Age 65, Alternative Medicare Buy-In Scenarios, 2022 (millions)

<table>
<thead>
<tr>
<th></th>
<th>1. No Buy-In</th>
<th>2. Base Buy-In</th>
<th>3. No Buy-In, CSRs Fully Funded</th>
<th>4. Base Buy-In, CSRs Fully Funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total insured</td>
<td>245.7</td>
<td>246.2</td>
<td>244.8</td>
<td>244.8</td>
</tr>
<tr>
<td>Employer insurance</td>
<td>159.7</td>
<td>159.3</td>
<td>159.9</td>
<td>159.7</td>
</tr>
<tr>
<td>Individual market</td>
<td>13.9</td>
<td>8.9</td>
<td>12.8</td>
<td>7.0</td>
</tr>
<tr>
<td>Medicaid</td>
<td>59.6</td>
<td>59.4</td>
<td>59.6</td>
<td>59.5</td>
</tr>
<tr>
<td>Medicare buy-in</td>
<td>0.0</td>
<td>6.0</td>
<td>0.0</td>
<td>6.1</td>
</tr>
<tr>
<td>Othera</td>
<td>12.5</td>
<td>12.5</td>
<td>12.5</td>
<td>12.5</td>
</tr>
<tr>
<td>Uninsured</td>
<td>33.8</td>
<td>33.3</td>
<td>34.6</td>
<td>34.7</td>
</tr>
</tbody>
</table>

*a Other insurance includes military health insurance and Medicare enrollees under the age of 65.

Table B.2 shows premiums across the four scenarios. Premiums for the bronze, gold, and platinum plans are higher when CSRs are funded relative to the scenarios with silver-loading; however, premiums for silver plans fall in the fully funded scenarios. Buy-in premiums are also higher in the fully funded scenario relative to the scenario with silver-loading ($9,944 when CSRs are funded versus $9,747 when they are not funded). We find that individual market
premiums increase when the buy-in is available regardless of whether CSRs are funded. For example, the bronze premium increases from $5,757 without the buy-in to $6,271 with the buy-in (9 percent) in the original scenarios, and from $5,978 without the buy-in to $6,664 with the buy-in (11 percent) in the scenarios in which CSRs are fully funded.

Table B.2. Premiums With and Without Silver-Loading, 2022

<table>
<thead>
<tr>
<th>Premium Type</th>
<th>1. No Buy-In</th>
<th>2. Base Buy-In</th>
<th>3. No Buy-In, CSRs Fully Funded</th>
<th>4. Base Buy-In, CSRs Fully Funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bronze 40-year-old premium</td>
<td>$5,757</td>
<td>$6,271</td>
<td>$5,978</td>
<td>$6,664</td>
</tr>
<tr>
<td>Silver 40-year-old premium</td>
<td>$8,472</td>
<td>$8,739</td>
<td>$6,974</td>
<td>$7,774</td>
</tr>
<tr>
<td>Gold 40-year-old premium</td>
<td>$7,676</td>
<td>$8,361</td>
<td>$7,970</td>
<td>$8,885</td>
</tr>
<tr>
<td>Platinum 40-year-old premium</td>
<td>$8,635</td>
<td>$9,406</td>
<td>$8,967</td>
<td>$9,995</td>
</tr>
<tr>
<td>Medicare buy-in premium</td>
<td>$9,747</td>
<td></td>
<td></td>
<td>$9,944</td>
</tr>
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</table>

Table B.3 shows the change in federal subsidy spending when the buy-in is added, both for the scenarios in which CSR costs are loaded onto the silver plan and the scenarios in which CSRs are fully funded. In the scenarios with silver-loading, the buy-in reduces federal subsidy spending by $4 billion. However, when CSRs are fully funded, adding the buy-in increases federal subsidy spending by $3 billion. This finding reflects the fact that silver-loading increases federal subsidy spending. In the scenarios without the buy-in, we estimate that the federal government will spend $14 billion more when CSRs are loaded onto the cost of the silver plan than when CSRs are funded directly through federal outlays. In the scenarios with silver-loading, the buy-in moves a portion of CSR-eligible people out of the individual market, reducing some of this cost. These savings are not available in the fully funded scenarios because silver-loading is eliminated.

Although the buy-in increases federal spending in the scenarios without silver-loading, total federal spending with the buy-in the no–silver-loading scenario (Scenario 4) is lower than total federal spending in the no–buy-in scenario with silver-loading (Scenario 1).
## Table B.3. Federal Spending, 2022 (billions)

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>APTCs, marketplaces</td>
<td>$75</td>
<td>$38</td>
<td>$58</td>
<td>$30</td>
</tr>
<tr>
<td>APTCs, buy-in</td>
<td>$0</td>
<td>$30</td>
<td>$0</td>
<td>$31</td>
</tr>
<tr>
<td>CSRs, marketplaces</td>
<td>$0</td>
<td>$0</td>
<td>$4</td>
<td>$1</td>
</tr>
<tr>
<td>CSRs, buy-in</td>
<td>$0</td>
<td>$3</td>
<td>$0</td>
<td>$3</td>
</tr>
<tr>
<td>Total</td>
<td>$75</td>
<td>$71</td>
<td>$62</td>
<td>$65</td>
</tr>
<tr>
<td>Change relative to the corresponding no-buy-in scenario</td>
<td>−$4</td>
<td></td>
<td></td>
<td>$3</td>
</tr>
</tbody>
</table>
Appendix C. Individual Market Premiums

Table C.1 reports estimated individual market premiums for a range of age groups.
Table C.1. Individual Market and Buy-In Premiums, Alternative Scenarios, 2022

<table>
<thead>
<tr>
<th></th>
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</thead>
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<tr>
<td>30-year-olds</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bronze</td>
<td>$5,091</td>
<td>$5,546</td>
<td>$5,445</td>
<td>$5,510</td>
<td>$5,189</td>
<td>$5,620</td>
<td>$5,433</td>
<td>$5,562</td>
<td>$5,515</td>
<td>$5,272</td>
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<tr>
<td>Silver</td>
<td>$7,493</td>
<td>$7,728</td>
<td>$7,696</td>
<td>$7,678</td>
<td>$7,806</td>
<td>$7,738</td>
<td>$7,698</td>
<td>$7,407</td>
<td>$7,210</td>
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<tr>
<td>Gold</td>
<td>$6,788</td>
<td>$7,394</td>
<td>$7,260</td>
<td>$7,347</td>
<td>$6,919</td>
<td>$7,494</td>
<td>$7,244</td>
<td>$7,416</td>
<td>$7,354</td>
<td>$7,030</td>
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<tr>
<td>Platinum</td>
<td>$7,637</td>
<td>$8,318</td>
<td>$8,167</td>
<td>$8,266</td>
<td>$7,784</td>
<td>$8,430</td>
<td>$8,149</td>
<td>$8,344</td>
<td>$8,273</td>
<td>$7,908</td>
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<tr>
<td>40-year-olds</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bronze</td>
<td>$5,757</td>
<td>$6,271</td>
<td>$6,157</td>
<td>$6,231</td>
<td>$5,868</td>
<td>$6,355</td>
<td>$6,143</td>
<td>$6,290</td>
<td>$6,236</td>
<td>$5,962</td>
</tr>
<tr>
<td>Silver</td>
<td>$8,472</td>
<td>$8,739</td>
<td>$8,702</td>
<td>$8,693</td>
<td>$8,682</td>
<td>$8,826</td>
<td>$8,749</td>
<td>$8,705</td>
<td>$8,375</td>
<td>$8,153</td>
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<tr>
<td>Gold</td>
<td>$7,676</td>
<td>$8,361</td>
<td>$8,209</td>
<td>$8,308</td>
<td>$7,823</td>
<td>$8,474</td>
<td>$8,191</td>
<td>$8,386</td>
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<tr>
<td>Platinum</td>
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<td>$9,406</td>
<td>$9,235</td>
<td>$9,347</td>
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<td>$9,533</td>
<td>$9,215</td>
<td>$9,434</td>
<td>$9,355</td>
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<tr>
<td>50-year-olds</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bronze</td>
<td>$8,453</td>
<td>$9,208</td>
<td>$9,040</td>
<td>$9,150</td>
<td>$8,616</td>
<td>$9,332</td>
<td>$9,021</td>
<td>$9,236</td>
<td>$9,157</td>
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<td>$12,749</td>
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<td>$12,847</td>
<td>$12,782</td>
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<td>$11,972</td>
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<td>$11,271</td>
<td>$12,277</td>
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<td>$12,199</td>
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<td>$12,443</td>
<td>$12,028</td>
<td>$12,314</td>
<td>$12,210</td>
<td>$11,672</td>
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<tr>
<td>Platinum</td>
<td>$12,680</td>
<td>$13,812</td>
<td>$13,561</td>
<td>$13,724</td>
<td>$12,924</td>
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<td>$13,531</td>
<td>$13,854</td>
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<tr>
<td>60-year-olds</td>
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<td></td>
</tr>
<tr>
<td>Bronze</td>
<td>$12,405</td>
<td>$13,512</td>
<td>$13,267</td>
<td>$13,427</td>
<td>$12,644</td>
<td>$13,694</td>
<td>$13,238</td>
<td>$13,553</td>
<td>$13,438</td>
<td>$12,846</td>
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<tr>
<td>Silver</td>
<td>$18,257</td>
<td>$18,831</td>
<td>$18,752</td>
<td>$18,731</td>
<td>$18,709</td>
<td>$19,019</td>
<td>$18,853</td>
<td>$18,758</td>
<td>$18,048</td>
<td>$17,568</td>
</tr>
<tr>
<td>Gold</td>
<td>$16,540</td>
<td>$18,016</td>
<td>$17,689</td>
<td>$17,902</td>
<td>$16,858</td>
<td>$18,259</td>
<td>$17,650</td>
<td>$18,071</td>
<td>$17,918</td>
<td>$17,129</td>
</tr>
<tr>
<td>Platinum</td>
<td>$18,607</td>
<td>$20,268</td>
<td>$19,900</td>
<td>$20,140</td>
<td>$18,965</td>
<td>$20,541</td>
<td>$19,856</td>
<td>$20,330</td>
<td>$20,157</td>
<td>$19,270</td>
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<tr>
<td>Buy-in</td>
<td>$9,747</td>
<td>$10,363</td>
<td>$10,416</td>
<td>$12,004</td>
<td>$9,051</td>
<td>$8,758</td>
<td>$10,008</td>
<td>$9,918</td>
<td>$10,447</td>
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</tr>
</tbody>
</table>

NOTE: All scenarios assume CSRs are funded on the buy-in but silver-loading occurs in the individual market.
Appendix D. Merged Risk Pool

We analyzed a Medicare buy-in program, although it is not part of the current policy discussion, that merges buy-in enrollees and current Medicare enrollees into a single risk pool for the purposes of setting premiums. We considered the “Medicare Merged” scenarios to enable buy-in enrollees to be pooled with a larger, more stable market, and because pooling mechanisms for Medicare buy-in proposals have not been fully explored.

To accurately capture the spending and enrollment patterns of the current beneficiary population, we refined the model to ensure that we included the correct number of current Medicare beneficiaries in our analyses. The SIPP accurately reflects the U.S. noninstitutional population, allowing us to easily account for the population ages 65 and older and noninstitutionalized Medicare beneficiaries under age 65. We also used 2013 data from a January 2018 report on dual-eligible beneficiaries jointly produced by the Medicare Payment Advisory Commission and the Medicaid and CHIP Payment and Access Commission to ensure that we accurately accounted for dually eligible individuals and the institutionalized population (Medicare Payment Advisory Commission, 2018). We inflated the 2013 enrollment data according to U.S. Census projections for the population ages 65 and older. In total, the model estimates 68.7 million current Medicare beneficiaries in 2022: 12 57.4 million noninstitutionalized nonduals, 5.5 million noninstitutionalized duals, 2.9 million institutionalized nonduals, and 2.9 million institutionalized duals.

We then adjusted Medicare per capita spending to match benchmarks published by the Medicare Payment Advisory Commission (2017; 2018) for the following four enrollee groups: noninstitutionalized duals, noninstitutionalized Medicare (nondual), institutionalized duals, and institutionalized Medicare (nondual). For the merged risk pool scenarios, the buy-in premium is a weighted average of spending in these four groups plus the buy-in enrollee population, multiplied by an administrative loading factor and an 80 percent actuarial value. We focus on an 80 percent actuarial value plan because this is approximately equivalent to the actuarial value for traditional Medicare (McArdle et al., 2012; Bailey, 2014).

As in the scenarios reported in the main text, we assume that buy-in enrollees would be charged the full premium and could apply APTCs (if eligible) to reduce these costs.

Table D.1 shows the key findings from the merged risk pool analysis compared with the no-buy-in scenario. Buy-in enrollment is relatively low in this scenario, with only 1.4 million individuals opting to enroll. The low buy-in enrollment reflects that, at $15,924 per year, buy-in premiums are high when the buy-in population is pooled with the current Medicare population.

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12 Note that this estimate differs from the Medicare Trustees projected total enrollment of 66.9 million in 2022 (CMS, 2018a).
Because most 50-to-64-year-olds remain in the individual market, the effect on ACA premiums is less pronounced than those of the main-text scenarios—we estimate a 2.5 percent increase in bronze and gold premiums and a 2.0 percent increase in silver premiums.

### Table D.1. Enrollment and Premiums, No–Buy-In Scenario Compared with Buy-In with Merged Risk Pool, 2022

<table>
<thead>
<tr>
<th></th>
<th>No Buy-In</th>
<th>Buy-In, Merged Risk Pool</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Insurance enrollment (millions)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total insurance enrollment (younger than 65)</td>
<td>245.7</td>
<td>245.7</td>
</tr>
<tr>
<td>Buy-in enrollment</td>
<td>0.0</td>
<td>1.4</td>
</tr>
<tr>
<td>Individual market</td>
<td>13.9</td>
<td>12.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Premiums</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buy-in premium</td>
<td>NA</td>
<td>$15,924</td>
</tr>
<tr>
<td>Bronze premium (50-year-old)</td>
<td>$8,453</td>
<td>$8,665</td>
</tr>
<tr>
<td>Silver premium (50-year-old)</td>
<td>$12,441</td>
<td>$12,685</td>
</tr>
<tr>
<td>Gold premium (50-year-old)</td>
<td>$11,271</td>
<td>$11,554</td>
</tr>
<tr>
<td>Bronze premium (60-year-old)</td>
<td>$12,405</td>
<td>$12,716</td>
</tr>
<tr>
<td>Silver premium (60-year-old)</td>
<td>$18,257</td>
<td>$18,615</td>
</tr>
<tr>
<td>Gold premium (60-year-old)</td>
<td>$16,540</td>
<td>$16,955</td>
</tr>
</tbody>
</table>

With the merged risk pool, there are two potential effects on federal spending. First, as in the scenarios reported in the main text, the buy-in might have implications for federal APTC and CSR spending. Additionally, there may be gains or losses to the federal government because of the possibility that spending among buy-in enrollees exceeds or falls short of the merged premium amount (these gains and losses are not estimated in the main-text scenarios). Table D.2 shows the effects of these impacts. APTC and CSR spending with the buy-in is higher ($78 billion) in this scenario than in the no–buy-in scenario. However, buy-in enrollees spend less on health care than they pay in premiums ($13 billion spent versus $20 billion collected). The net result of these two effects is $4 billion in savings for the federal government.
### Table D.2. Effects on Federal Spending, No-Buy-In Scenario Compared with Buy-In with Merged Risk Pool, 2022 (billions)

<table>
<thead>
<tr>
<th></th>
<th>No Buy-In</th>
<th>Buy-In, Merged Risk Pool</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Federal outlays</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APTCs, marketplace</td>
<td>$75</td>
<td>$64</td>
</tr>
<tr>
<td>APTCs, buy-in</td>
<td>$0</td>
<td>$13</td>
</tr>
<tr>
<td>CSRs, buy-in</td>
<td>$0</td>
<td>$1</td>
</tr>
<tr>
<td>Covered spending for buy-in enrollees</td>
<td>$0</td>
<td>$13</td>
</tr>
<tr>
<td><strong>Federal revenue</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buy-in premiums collected</td>
<td>$0</td>
<td>$20</td>
</tr>
<tr>
<td>Net cost (outlays minus revenue)</td>
<td>$75</td>
<td>$71</td>
</tr>
</tbody>
</table>
References


CBO—See Congressional Budget Office.


CMS—See Centers for Medicare and Medicaid Services.


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