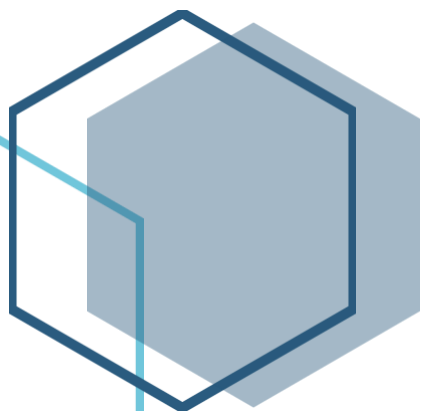




Uptake and Federal Budgetary Impact of Allowing Health Savings Account-Eligible High Deductible Health Plans to Cover Chronic Disease Drugs and Services Pre-Deductible



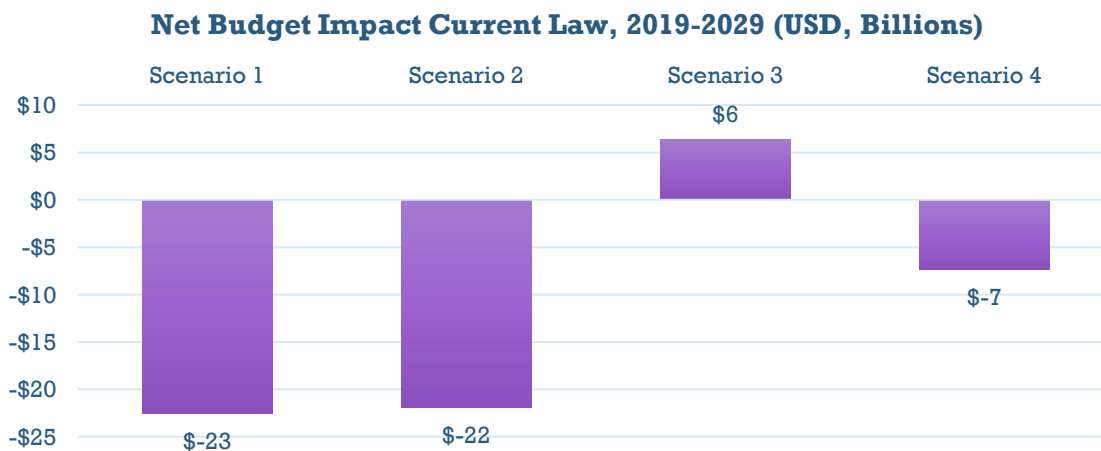
Executive Summary

High-deductible health plans (HDHPs) can be harmful for people with chronic conditions or low income. Evidence suggests that health plan flexibility to cover chronic disease prevention drugs and services pre-deductible in HDHPs would improve the health of those with chronic conditions and prevent downstream costs for services such as emergency department visits and hospitalizations. Reducing financial barriers to evidence-based care for chronic conditions therefore offers an opportunity to substantially enhance clinical outcomes and reduce the long-term rate of healthcare spending growth.¹ However, the net budgetary impact to the federal government of implementing a policy that permits Health Savings Account-eligible (HSA-eligible) HDHPs to expand secondary prevention coverage is unknown.

Accordingly, this paper aims to predict 1) how enrollees might switch plan types (i.e., “migrate”) following the introduction of a High-Deductible Health Plan + Secondary Prevention Coverage (“HDHP+”) in the employer and individual markets, and 2) the resulting implications for federal tax revenues and expenditures of this “migration”. The paper concludes that the net effect of migration across plan types results in significant HDHP+ uptake, leading to modest net savings to the federal government in three of four scenarios of employer behavior. The potential savings are largely driven by the reduction in tax expenditures as a result of people moving away from Preferred Provider Organization plans (PPOs) to the HDHP+ (“buy down”), which outweighs the tax revenue loss of migration to the more generous HDHP+ from traditional HDHPs (“buy up”). The important take-away is not the magnitude of savings for any one scenario, but the clustering of the different scenarios about budget neutrality.

Therefore, we can be relatively confident that flexibility to allow HSA-HDHPs to cover services or drugs intended to treat an existing illness, injury, or condition would likely save, if not be cost-neutral (Figure A).

Figure A. Net budget impact from 2019-2029 for each scenario.



Background

HSA-eligible HDHPs

High-deductible health plans (HDHPs) eligible for accompanying Health Savings Accounts (HSAs) were created in the Medicare Prescription Drug Improvement and Modernization Act (MMA) of 2003. HDHPs offer a tradeoff of lower monthly premiums, with higher cost-sharing for the individual or family. An individual must be enrolled in a qualifying HDHP to contribute to an HSA. HSA-eligible HDHPs have a defined minimum deductible and maximum out-of-pocket limits. In 2019, the minimum deductible is \$1,350 for an individual and \$2,700 for a family; maximum out-of-pocket limits are \$6,750 for an individual and \$13,500 for a family.² HSAs allow individuals to put money in a tax-advantaged account to be used for medical expenses. These Internal Revenue Service (IRS) regulated savings accounts do not expire, are attached to the account holder, and can accept contributions from both account holders and employers.

HSA-eligible plans are a growing proportion of the overall HDHP market. In 2018, approximately 21.8 million³ Americans were enrolled in HSA-eligible HDHPs, up from an estimated 15.5 million in 2013.⁴ In 2018, nearly 29 percent of all firms offered an HDHP with a savings option, such as an HSA. Among companies surveyed in 2018 by Towers Watson, nearly 30 percent only offered an HSA-type plan to employees.⁵ HSA market growth is expected to continue.⁶

Prevention and HSA-HDHPs

In general, to qualify as an HDHP, a plan may not cover medical services or products until the deductible is satisfied. The idea is that the enrollee will pay out-of-pocket for pre-deductible services using pre-tax HSA dollars. Some refer to this concept as a “Consumer-Driven Health Plan” because the consumer faces more risk and therefore should seek the lowest cost providers and services.

The statute, however, includes a preventive care “safe harbor” in Section 223 of the Internal Revenue Code that allows plans to cover preventive services prior to meeting the plan deductible. Section 223(c)(2)(C) states, “[a] plan shall not fail to be treated as a high deductible health plan by reason of failing to have a deductible for preventive care (within the meaning of section 1861 of the Social Security Act (SSA), except as otherwise provided by the Secretary).”⁷ Per Internal Revenue Service (IRS) notice 2004-23 (2004-15 I.R.B. 725), “a HDHP may therefore provide preventive care benefits without a deductible or with a deductible below the minimum annual deductible.”⁸

Updating the Definition of Prevention

Unfortunately, preventive care is not clearly defined by the law. Section 1861 of the SSA defines preventive services as an initial preventive physical examination for Medicare, a one-time service offered to newly enrolled Medicare beneficiaries.³ In this definition of prevention, section 1861 includes certain vaccinations; screenings for a



number of conditions including common cancers, cardiovascular problems, and diabetes; services with a grade A or B recommendation from the US Preventive Services Task Force (USPSTF); and other services “reasonable and necessary for the prevention or early detection of an illness or disability.” *Additionally, there is no explicit definition of prevention for non-Medicare populations in the MMA legislation.*

Regulatory guidance published in response to comments about the prevention safe harbor explicitly excludes the bulk of *secondary* preventive services and prohibits health plans from offering these benefits before enrollees meet their deductibles. Specifically, IRS notice 2004-50 states: “the preventive care safe harbor under section 223(c)(2)(C) *does not include any service or benefit intended to treat an existing illness, injury, or condition, including drugs or medications used to treat an existing illness, injury or condition*” (emphasis added). This exclusion precludes purchasers from pursuing many proven disease management strategies. For example, HSA-eligible HDHPs are technically prohibited from providing pre-deductible coverage of disease management services such as insulin, eye and foot exams, and glucose monitoring supplies for patients with diabetes until enrollees meet their deductibles.

Chronic Disease Prevention Coverage is Important for Population Health and Cost Containment

According to the Centers for Disease Control and Prevention (CDC), 60 percent of Americans have a chronic disease such as heart disease or diabetes.⁹ The economic burden of these chronic diseases is about \$1 trillion per year.¹⁰ There is evidence that a focus on secondary prevention could be especially beneficial for HDHP enrollees. One study found that patients who have HDHPs and a chronic disease are more likely to go without care due to cost than those with a chronic disease who have traditional plans.¹¹ Another study found that among families in which at least one member had a chronic condition, 48 percent covered by an HDHP faced substantial financial burdens such as trouble paying bills, compared with 21 percent in traditional plans.¹² Other studies have examined the relationship between high-deductible plans and delayed care for specific conditions such as breast cancer. This work has shown that high deductibles are associated with delays in diagnosis and treatment.¹³

Reducing financial barriers to evidence-based care for chronic conditions offers an opportunity to substantially enhance clinical outcomes and reduce the long-term rate of healthcare spending growth.¹⁴ As chronic disease conditions currently make up 75 percent of total US health spending, appropriate chronic disease management is an important tool to lower long-term health care cost growth.¹⁵ As the market for HSA-HDHPs grows, it is critical to permit effective health management of all beneficiaries.

A potential solution – allowing HSA-eligible HDHPs to provide pre-deductible coverage for targeted, evidence-based, secondary preventive services that prevent chronic disease progression and related complications – can improve patient-centered outcomes, add efficiency to medical spending, and enhance HDHP attractiveness.



Notably, the types of secondary preventive services that would fall under these categories (e.g., eye exams for individuals with diabetes) are frequently used as quality metrics by health plans and used as metrics in pay-for-performance initiatives for providers. Flexibility to include secondary prevention pre-deductible in HSA-eligible HDHPs would help align patient and provider financial incentives to adequately manage chronic disease.

Barriers to Expanding the Safe Harbor to Allow Pre-Deductible Coverage of Chronic Disease Prevention

There are two hurdles to updating the HSA-qualified HDHP safe harbor definition of prevention to include drugs and services for chronic disease management. First, as described above, is the lack of a legal definition of secondary or chronic disease prevention to guide new legislation or regulations; many current definitions of “prevention” within existing laws or regulations encompass only primary prevention. Second, the uncertainty about the uptake and resulting financial impact of “enhanced HDHPs” represents a budgetary hurdle. *The current presumption is that the cost of expanding the preventive care safe harbor for HSA-HDHPs would be prohibitively high.*

The expected budgetary impact to the federal government of enhanced HDHP uptake through laws or regulations that offer plan sponsors that flexibility to bring the HDHP+ to market would be a function of HDHP+ uptake. Uptake, in turn, would be a function of the net impact of two factors (summarized in Table 1):

- 1) *HSA contributions* – a more generous HDHP plan could create incentives for (a) more people to open HSAs, or (b) existing enrollees to increase their HSA contributions. Both (a) and (b) would reduce tax revenue.
- 2) *Plan migration* – the availability of an HDHP+ would result in new choices among consumers in the employer and individual market:
 - a. *“Buy up” from leaner, traditional HDHP plans to the HDHP+.* A more generous HDHP will decrease federal revenues (i.e., HDHP+ premiums will be higher than traditional HDHP premiums and therefore the tax exclusion for employer-paid health premiums will be greater).
 - b. *“Buy down” from more generous Preferred Provider Organization (PPO) plans to the more generous HDHP+ plans.* Enrollees in the employer market choosing an HDHP+ over a PPO plan with higher premiums would result in increased federal revenues because less compensation would be used to buy pre-tax health benefits (i.e., smaller tax exclusion).

Importantly, the prevailing presumption that the cost of expanding the safe harbor would be prohibitively expensive to the federal government fails to capture the net effect of the “buy up” and “buy down” migration. *Our hypothesis is that the tax implications associated with enrollees migrating from PPO plans to HDHP+ (“buying down”) would outweigh the loss of tax revenue from enrollees migrating from cheaper*



HDHPs to HDHP+ (“buying up”), even with increases in tax-advantaged HSA contributions. This would result in net savings for the government.

Table 1. Budget impact by mechanism

HDHP+ introduction leads to...	Tax implications as a result	Relative direction and magnitude of tax impact
Increased HSA contributions	Revenue loss from reduced taxable income	Small spend
“Buy up” migration from traditional HDHP plans to HDHP+	Decrease in tax revenue collected because of a greater share of wages used to pay for health care premiums	Small spend
“Buy down” migration from PPO to HDHP+	Increase in tax revenue collected because of a lower share of wages used to pay for health care premiums	Large saver

Project aims and overview

Accordingly, this project seeks to estimate how the employer-sponsored health insurance market would react to the introduction of an enhanced HSA-eligible HDHP+, both in terms of uptake and federal budgetary impact. The paper models enhanced HDHPs that include first-dollar coverage of select high-value secondary prevention services and drugs, as if the preventive services safe harbor were expanded to allow such flexibility. See Appendix A for a list of common secondary preventive drugs and services used for modelling purposes in the analysis.

Using this prototypical HDHP+ plan, we first model the change in enrollment into various plan types over 10 years under various scenarios of employer behavior (defined in the Methods section below). Second, we model the budgetary impact of this enrollment “migration” over the same 10 years.

To summarize, the aims of this project were foremost to:

- 1) *Estimate the uptake of the HDHP+ in the employer-sponsored insurance market, and*
- 2) *Estimate the tax revenue and expenditure implications of that uptake.*

Premium Effect for HDHP+

We modeled two separate premium effects to represent the change in pre-deductible prevention coverage with varying generosity – a 7% premium effect and a 3% premium effect. This report details the results of the most conservative base premium increase (7%), but occasionally references the 3% premium



effect when notable. (Appendix E details how the 3% premium effect differs from the 7%).

We modeled a conservative base premium increase of 7% between the traditional HDHP and HDHP+ – the more expensive the HDHP+ relative to the base HDHP, the less likely we would see savings. The 7% premium increase accounts for the additional costs of common secondary prevention services that are frequently used in health plan quality metrics and pay-for-performance programs. These services have been previously identified in the published literature.¹⁶ Appendix A identifies the drugs and services used to determine premium effect.

A full analysis of the impact of deductible changes on utilization and premium can be found in our previous modeling work, in which we estimated that the novel, enhanced HDHP plan would necessitate a 5-6% increase in premium.¹⁷ We chose to increase the premium further in order to present a conservative enrollment scenario, to show the “worst case” budget impact, and to account for inflation.

Methods

In this section, we describe our approach to gauge the impacts of the HDHP+ plan on the uptake of different plan types and tax revenue. We start by describing how we accounted for selection effects on the HDHP+ and the different employer uptake scenarios with varying assumptions on how the HDHP+ would enter the employer-sponsored insurance (ESI) market. Finally, we describe the Adjusted Risk Choice & Outcomes Legislative Assessment (ARCOLA) microsimulation model as well as important considerations for working with the model.

Accounting for Selection Effects on the HDHP+

In addition to increased utilization as a result of the expanded coverage, one of our concerns when modeling the impact of offering an HDHP+ alongside other HDHP and PPO plans is a selection effect. A selection effect could materialize if sicker individuals migrate to the HDHP+ and drive the premium higher. An internal analysis of ESI claims showing that chronically ill people spend approximately 2.3 times more than those without a chronic illness supported this concern. As a result, we increased the HDHP+ premium (for everyone) to reflect higher cost and smaller tax subsidy savings compared with a PPO.

In operation, accounting for selection yields different premiums in the “in addition” employer scenarios (Scenario 1 and 2 described below): the original HDHP+ is 7% more expensive from actuarial value and 6% more expensive from selection, for a net premium effect of 13% in these scenarios.

Employer Scenario Definitions

“In addition” scenarios:

- **Scenario 1:** All firms that currently offer an HSA-HDHP offer a new HDHP+ in addition.
- **Scenario 2:** Half of firms that currently offer an HSA-HDHP offer a new HDHP+ in addition.

“Replacement” scenarios:

- **Scenario 3:** All firms that currently offer an HSA-HDHP replace it with an HDHP+.
- **Scenario 4:** Half of firms that currently offer an HSA-HDHP replace it with an HDHP+.

The rationale for presenting different employer uptake scenarios is twofold. First, we could not formally model employer behavior using the ARCOLA model, but we wish to demonstrate how different assumptions about employer behavior affect the results of the microsimulation. Different scenarios represent how and to what extent employers will offer the HDHP+ to their employees. For example, Scenario 3 assumes all employers across the country completely replace their current HDHP plan with the new HDHP+. This is an extreme and unlikely market outcome but represents the maximal opportunity for people to switch from existing HDHPs to the more expensive HDHP+. It therefore approximates the “worst case” from a federal budget perspective.

Second, different scenarios help show the range of likely long-run impacts on insurance demand and the federal budget in response to the HDHP+. It is likely that the real response to the HDHP+ introduction would fall somewhere between any one scenario. We discuss the impact and reasonableness of the different scenarios in more detail later.

ARCOLA Microsimulation Model

ARCOLA is a microsimulation model of under-65 health plan choices, excluding the Medicare market. The model was originally developed in 2004 with funding from the Department of Health and Human Services (HHS) and continued as a private sector effort following cessation of HHS funding in 2007.¹⁸ Papers describing and applying the ARCOLA model have been published in peer-reviewed journals – most recently in 2017.¹⁹

The ARCOLA microsimulation model was used here to forecast the movement of individuals across different types of health plans (e.g., PPO, HDHP) and coverage status (i.e., insured or uninsured) as the premiums and generosity of plan options change. Holding a plan’s generosity constant, an increase in premium would



decrease the demand for a certain type of plan. Correspondingly, an increase in the generosity of a plan (*i.e.*, the actuarial value) will increase demand.

To create the expanded HDHP in the simulation model, we needed to account for the incremental generosity of the novel plan. Previously published studies that examined factors leading to plan choice (*e.g.*, PPOs and HDHP) selected by chronically ill individuals were used to estimate the incremental generosity of the expanded HDHP used in the microsimulation.²⁰

Once premium and plan generosity effects of expanded coverage of selected secondary preventive services were quantified, a novel HDHP plan was added to the plan choice mix in both the individual and the employer market. The simulation was able to identify the demand for the new expanded HDHP+ product as well as overall impact on the number of insured.

The predicted probabilities of health plan choice are based on a conditional logit model in which employees choose among plans offered by their employers or among plans offered in the individual health insurance market, if the individual does not have an offer of ESI. Key benefit design variables are out-of-pocket premiums, deductibles, the HSA account balance, and contract type (single or family). The ARCOLA model can project health plan enrollment by state using a synthetic variant of the Medical Expenditure Panel Survey (MEPS) data, informed by state attributes from the American Community Survey.

Plan offering decisions by firms are not formally modelled, but we detail the four scenarios above. The distribution of plan offerings is calibrated to match moments in the 2017 Kaiser Family Foundation (KFF) Employer Health Benefits Survey (EHBS).²¹ See Appendix B for more information on the distribution of plan offerings by employer used by the ARCOLA model.

HSA Contributions

Using information from the Employee Benefits Research Institute (EBRI)²² and the KFF EHBS, we estimate the average member and employer contributions to HSAs in employer-sponsored plans as follows:

- Single Coverage: \$1,000 / \$608 (Employee / Employer)
- Family Coverage: \$2,000 / \$1086 (Employee / Employer)

To calculate tax expenditures on health savings accounts as well as average contributions, we underestimate average HSA contributions in the employer market relative to KFF EHBS and the EBRI but overestimate the size of the tax expenditure relative to the Joint Committee on Taxation (JCT). The JCT (2018) estimates that the size of the HSA tax expenditure is approximately \$4 billion per year. Our model estimates approximately \$12 billion per year.²³



The estimate of the size of the tax expenditure is a function of the average HSA contribution (taken from EHBS and EBRI), marginal tax rates, and enrollment in employer-sponsored HSA plans. Differing estimates may be attributable to the use of different data sources and/or different definitions. We believe our model captures a realistic estimate of HSA tax expenditures that is sufficient to score the effect of policy changes. To the extent that our model overestimates HSA tax expenditures, it will be conservative in predicting budgetary savings from policy changes that increase HSA enrollment.

Tables detailing our HSA-contribution assumptions can be found in Appendix C.

HDHP+ Market Entry in ARCOLA

We assume bronze plans in health insurance exchanges migrate into the new HDHP+ design. We also assume that everyone in the individual market has the option of an out-of-exchange HSA plan that does not switch to the HDHP+ design.

Operating Details

Following assembly of the ARCOLA microsimulation with the range of modeling scenarios and assumptions accounted for, the remaining operating details were the length of the simulation and the identification of two different types of tax subsidy effects.

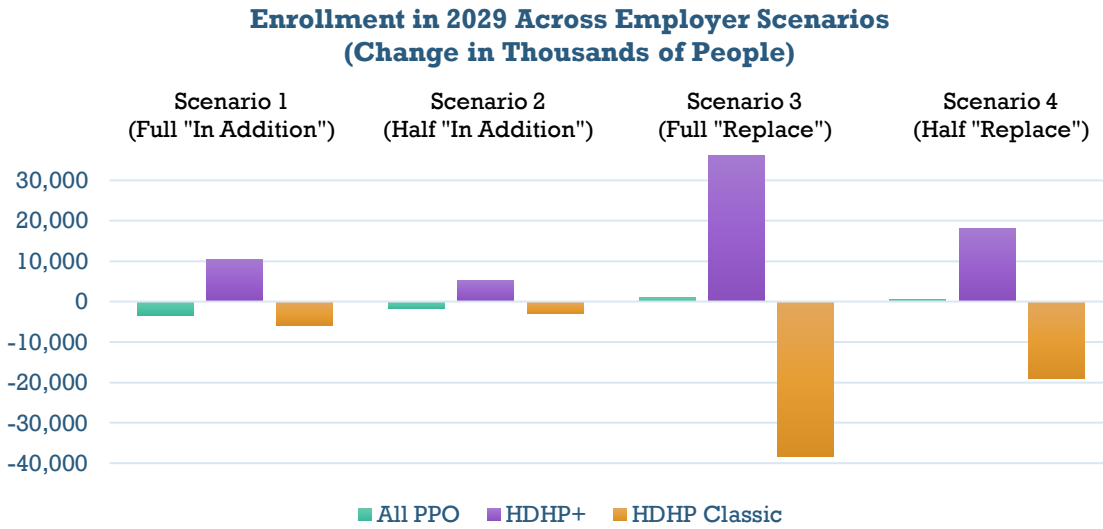
The results generated are for 2018 to 2029. This is longer than the 10-year window typically used for microsimulations of health policy, but it considers the likelihood that policy implementation may extend beyond 2019 if legislation is required. The effect of the policy is assumed to be immediate, in order to show the direct contrast with current law. In reality, it would take several years for employer and consumer responses to fully manifest following the introduction of regulations or legislation enabling the introduction of the HDHP+.

Results

Employer-Sponsored and Individual Market Uptake of New HDHP+

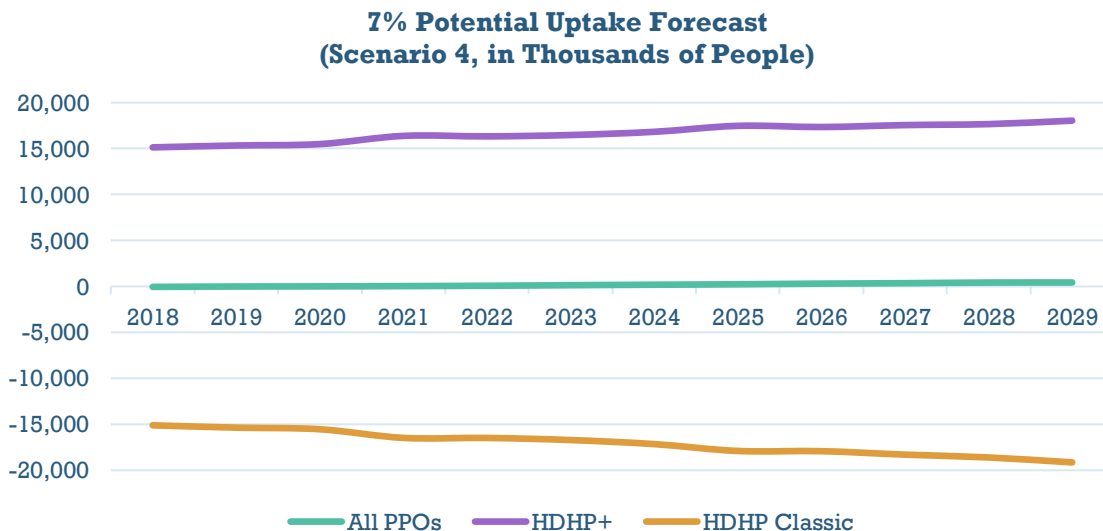
The initial uptake and forecasted growth of the novel HDHP+, as people switch plan types, are positive across all employer scenarios and both simulated HDHP+ premiums. The magnitude and growth of uptake over time, however, varies by employer scenario. Differences across employer scenarios illustrate a range of possibilities that may play out. In general, the HDHP+ has high initial uptake across employer scenarios. The lowest uptake is in the scenario where half of employers offer the HDHP+ in addition to other HDHP options. Especially because of the higher HDHP+ premiums, due to selection, in Scenario 1 and 2, this result is expected.

Figure 1. Predicted enrollment in 2029 across all employer scenarios



The classic HDHP and PPO markets are affected differently across scenarios as well. Scenario 4 has a relatively small effect on the PPO market (Figure 2), compared to other scenarios. In Scenario 4, half of employers replace their traditional HDHP plan offering with a new HDHP+ and the PPO market is relatively unaffected. PPO plans even see a small increase in growth over time in the “replace” scenarios, meaning that more people enrolled in PPO plans than would have otherwise in these years. Although the rates of change vary, fewer people join traditional HDHPs each year across all scenarios, presumably due to the increased attractiveness of the HDHP+. We assume that bronze plans on the individual market (on and off exchanges) will migrate to HDHP+.

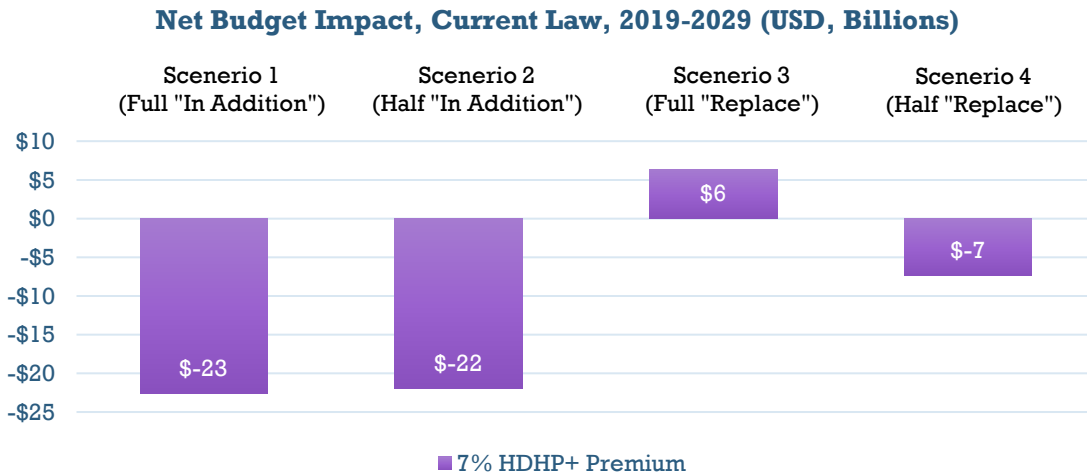
Figure 2. Change in enrollment for Scenario 4 from 2019-2029



Budgetary Impact of New HDHP+

The introduction of an HDHP+ to the employer and individual markets, and the subsequent migration of people across plan types, produces net savings in three out of four scenarios we model (Figure 3). The components that contribute to these net results can be found in Appendix D.

Figure 3. Net budget impact from 2019-2029 for each scenario.



The budgetary impact of a new HDHP+ works through three basic mechanisms (also described in Table 1):

- 1) The amount of tax-exempt savings via HSA contributions may change as a result of altered enrollment in HSA-eligible insurance plans. We find that enrollment in HSA-eligible plans is likely to increase in the employer market but decrease in the individual market as a result of introducing a HDHP+. The enrollment effects are different because enrollees in the individual market must pay the full value of the actuarial value increase while those with employer offerings only pay a portion.

We also find that the new HDHP+ might lead to reduced enrollment overall in the individual market. This could lead to budgetary savings attributable to reduced spending on premium tax credits. The departure from the individual market contributes, in part, to small net savings in Scenario 4 (Figure A-1 in Appendix D). Otherwise, the other scenarios with net savings would remain savers or budget neutral, even without changes in the individual market.

- 2) For those in HDHP+ plans, the average tax expenditure will increase as result of higher average total premiums for these plans.



- 3) There will be reduced tax revenue loss as a result of shifting plan choices toward relatively low-cost HDHP plans and away from higher cost PPO and broad-network plans.

In the scenarios modeled, the mechanisms affecting the tax expenditure on employer sponsored insurance roughly offset, and lead to budget neutral results. However, different employer decisions regarding plan offerings may lead to one mechanism having a slightly larger effect than the other. How the different tax revenue or expenditure implications described above lead to modest savings from the introduction of the HDHP+ is illustrated in Appendix D. Appendix D also provides further information on the forecasted net savings attributable to changes in the individual market relative to the employer-sponsored market.

Discussion

Impact of HDHP+ Uptake on Plan Enrollment

The growth in the HDHP+ market primarily results from two sources of migration: 1) people switching from PPO plans to HDHP+ and 2) people switching from traditional HDHPs to the HDHP+. The effect of HDHP+ uptake on other plan types varies by employer uptake scenario and premium level. In all cases, HDHP+ uptake is associated with decreased enrollment in traditional HDHPs over the next 10 years. Further, scenarios in which employers fully or partially *replace* their HDHP offerings with a HDHP+ have the smallest impact on the enrollment in PPO plans, suggesting that more of the uptake comes from enrollees moving out of traditional HDHP plans and people moving out of the individual market. In Scenarios 1 and 2 there is a decrease in PPO uptake ranging from about 1,250,000 fewer enrolled to nearly 4,000,000 fewer enrolled in PPO plans, whereas both “replacement” scenarios (Scenario 3 and 4) result in nearly negligible increases in PPO enrollment over time.

Budgetary Impact from Changes in Plan Enrollment

*We show savings to the federal government in three of four scenarios for the premium effect discussed in this report.*²⁴ The important take-away is not the magnitudes of the different net impacts, but the clustering of the different scenarios around budget neutrality. The one scenario that does not save only shows a very small net cost, and the scenario itself (Scenario 3) was modeled as an extreme case where all employers replace existing HDHPs with HDHP+. The total amount of savings (or costs in one scenario) are quite small relative to the entire employer-sponsored insurance market. **Therefore, we can be relatively confident that the cost to the federal government of expanding the secondary prevention safe harbor would be close to zero, if not a modest saver.**

The scenario in which all firms that currently offer an HSA-HDHP plan offer a new HDHP+ *in addition to* their current HSA-HDHP plan (Scenario 1) resulted in the greatest government savings. This offers employees the opportunity to switch from



more expensive PPO plans to a less expensive option, albeit more generous than a traditional HDHP. There are likely people enrolled in PPO plans who would otherwise prefer the advantages of an HSA and the cheaper premium, but are not able or willing to accept the risk of an HDHP due to chronic conditions or other factors.

The only scenario that does not create savings is when all employers fully replace their current HSA-HDHPs with HDHP+ plans (Scenario 3) and the premium effect is 7%. We find this scenario to be unlikely, because the employer uptake of any expanded flexibility would almost certainly be less than 100%. Even in this extreme case, it is worth noting that the net budgetary impact is only roughly \$6 billion in added costs over 10 years in a health care system that spends more than \$3.5 trillion annually.²⁵

We believe the most realistic, but still conservative, approximation of events is Scenario 4. Under this scenario half of firms replace existing HDHPs with HDHP+. We believe this is the most realistic option for several reasons. First, it's reasonable to assume that not all employers would be interested in extra premium costs. Second, expanding IRS secondary prevention safe harbor rules would not guarantee all insurance carriers would create an HDHP+ plan type for employers to choose even if granted the flexibility to do so. Third, firms that do take up the new plan would likely replace the traditional HDHP plan offering completely – this is reasonable because firms would be reluctant to administer two separate types of HDHPs (especially two different HSA-eligible HDHPs).

Given this reasoning, examining possible outcomes around Scenario 4 is particularly important. If uptake were less robust than Scenario 4, for example – and closer to 25% than 50% – we can infer indirectly from the change in savings from Scenario 3 (all replace) to Scenario 4 (half replace) that there would still be modest savings. The less robust replacement in Scenario 4 compared to Scenario 3 moved the needle from a small cost to a small save. The more modest uptake of HDHP+ would likely mean more savings to the federal government. Again, however, the main lesson from these results has less to do with the specific magnitudes than the clustering of our results around budget neutrality.

Policy Implications

“Buy Down” Outweighs “Buy Up”

The potential savings are primarily the result of the migration of enrollees from PPO plans to the HDHP+ product. Although moving from a traditional HDHP to an HDHP+ is more expensive (the tax subsidy is higher), it takes far fewer people to switch from a PPO plan to an HDHP+ to offset, on net, the increased premium associated with expanded secondary prevention benefits relative to the premium of a traditional HDHP.



Scenario 2 provides a clear example of this dynamic. In this scenario, the combined contribution of buy up from HDHPs and buy down from PPOs result in approximately the total uptake in HDHP+. Although the buy down from PPO plans only represents about a third of the total migration, it more than offsets the increase in costs of the buy up to produce net savings of \$22 billion.

For this study we also modeled the uptake and budgetary impact of a less conservative 3% premium effect. Adjusted for inflation, the 3% premium effect would more closely reflect previous studies that showed an approximate 2% increase in premium when HDHPs were permitted the flexibility to cover only drugs relevant to chronic disease management pre-deductible.²⁶ More information on the 3% premium effect can be found in Appendix E.

The 3% uptake predictions in Scenario 1 provide another clean example of how the “buy down” can easily outweigh the “buy up”. For the 3% premium HDHP+, we forecast approximately 5,315,000 new HDHP+ enrollees in the year after the HDHP+ is introduced (2019) in Scenario 1. Simultaneously, we predict reductions in enrollment in HSAs (and related health reimbursement accounts, HRAs) up to approximately 2,600,000 and a reduction in the PPO market of about 2,527,000. Although we do not know which specific people moved where (e.g., which of the 2.5 million enrollees that left the PPO market moved to HDHP+ or some other plan type), we can see approximately equal movement of people buying up to a more expensive HDHP+ matched with movement of people buying down from a PPO plan. The budgetary impact of this equal migration is notable: the federal government would save about \$33 billion in employer premium expenditures alone, with a net savings of over \$42 billion after accounting for the added cost of increased HSA contributions and the savings from reduced subsidies in the individual market (illustrated in Appendix D).

In short: the budgetary effect of “buy up” and “buy down” migration is not one for one. In a number of scenarios, a fraction of the people moving out of a PPO plan is needed to make up for the financial impact of more people enrolling in an HDHP+ from traditional HDHPs. Even in the scenarios we modeled where the PPO market changes only slightly, we see small savings (although in some cases this may also be due, in part, to enrollment changes in the individual market).

HDHP+ Would Benefit Population Health

Although the primary focus of this report is to demonstrate the enrollment and budgetary impacts of introducing the HDHP+ to the employer market, we should also consider what effect the HDHP+ would have on population health. Decades of research on HDHPs have demonstrated a number of health effects that are relevant to expanding pre-deductible coverage. Foremost, HDHPs tend to have no effect on key quality indicators and measurable health outcomes for many individuals. For



example, higher-income individuals do not delay care at significantly different rates than comparable individuals in more traditional plans, such as a broad-network PPO.²⁷

Other research finds, however, the opposite for people with low income or people with multiple chronic conditions. Out-of-pocket costs create a significant barrier for low-income people when it comes to making choices that will benefit their health, such as adherence to medication for chronic illness. Therefore, HDHPs disproportionately and uniquely tend to negatively impact low-income people and those with multiple chronic conditions. HDHP+ plans offer a unique solution to health care spending while at the same time benefiting those at the greatest risk of adverse health outcomes – with little effect on the health of others.

The increased enrollment in HDHPs (especially HSA-HDHPs) over the last 15 years demonstrates the popularity of HDHPs as a tool for controlling health spending. Unfortunately, however, HDHPs are a blunt instrument to reduce spending. With the inevitability of HDHPs in the health insurance market, we must ensure that we promote solutions that improve the efficiency of spending in the HDHP market and do not shift risk onto those who will be harmed the most.

Simultaneously, the HDHP+ would allow employers an option to reduce spending on health care without shifting risk onto – or otherwise penalizing – low income or sicker employees. The importance of this option will be even greater when the Cadillac Tax becomes active. As other reports on the benefits of pre-deductible coverage of medications for chronic disease management have emphasized: it is critical that regulations that prevent health plans from innovating be amended, such that plan designs that better meet the clinical and financial needs of millions of Americans may be made available.²⁸

Legislative Action to Update Prevention in HSA-HDHPs

There is bipartisan, bicameral interest in promoting pre-deductible flexibility for HSA-qualified HDHPs. The House passed one relevant bill in 2018; another piece of highly relevant legislation has been introduced in both chambers.

Promoting High-Value Health Care Through Flexibility for High Deductible Health Plans Act of 2018 (H.R. 6301) – the House approved a provision allowing limited pre-deductible coverage in HDHPs as part of a package of bills passed in 2018. This legislation takes an important initial step to ensure that individuals with an HSA-eligible HDHPs can access services and drugs prior to their deductible, but caps pre-deductible coverage at \$250 for individuals and \$500 for families. With many services and drugs that treat common chronic conditions costing hundreds if not thousands of dollars per month, those with chronic illnesses may need more relief to ensure access to critical treatments



Chronic Disease Management Act of 2018 (H.R. 4978 / S. 2410) – introduced in the 115th Congress, this bipartisan legislation goes further than H.R. 6301 and allows HSA-eligible HDHPs to cover health care services and medications that manage certain chronic conditions on a pre-deductible basis, ensuring greater employer and plan flexibility, consistent with the principles of value-based insurance design.

Administrative Action

The White House released a report on opportunities to reform the health care system in late 2018. The report described the possibility of expanding the HSA prevention safe harbor as a patient-centered policy.²⁹ The report included the following recommendation:

“The administration should explore ways to administratively expand consumers’ abilities to benefit from HSAs, including by interpreting preventive services to allow HSA-qualified plans greater ability to cover preventive low-cost treatments for chronic conditions.” (Page 82)

Conclusion

Given the growing nature of the HSA-HDHP market, improvements to law or regulation to allow pre-deductible coverage for chronic disease prevention could materially improve the lives of those living with chronic conditions. HDHP+ plans offer a unique solution to health care spending while simultaneously benefiting those at the greatest risk of adverse health outcomes – with no effect on the health of others. Based on our modeling, people would choose to purchase such a plan if it were available. We can be confident that the flexibility to expand secondary prevention would be, at worst, budget neutral for the federal government, and at best, result in savings.

Appendices

Appendix A

Secondary Preventive Services Evaluated to Determine Premium Effect

ACE Inhibitors	Medications that control blood pressure for patients with: congestive heart failure, coronary artery disease (after myocardial infarction), and diabetes
Anti-resorptive Therapy	Medications for patients with osteoporosis and osteopenia
Beta-Blockers	Medications for patients with: congestive heart failure and coronary artery disease (after myocardial infarction)
Blood Pressure Monitor	Equipment for patients with hypertension to monitor blood pressure
Inhaled Corticosteroids	Medications for patients with asthma
Glucose Lowering Agents	Medications for patients with diabetes
Retinopathy Screening	For patients with diabetes
Peak Flow Meter	Equipment for patients with asthma
Glucometer	Equipment that monitors blood sugar levels for patients with diabetes
Hemoglobin A1c Testing	Monitors blood sugar for patients with diabetes
INR testing	Measure blood coagulation for patients on certain drugs that thin blood
LDL testing	Measures blood cholesterol level for patients at risk for, or diagnosed with heart disease
SSRIs	Antidepressant medications for patients with major depression
Statins	Cholesterol-lowering medications for patients at risk for, or diagnosed with, heart disease and patients with diabetes

Source: http://vbidcenter.org/wp-content/uploads/2014/07/HDHP-white-paper_final.pdf

Appendix B

Distribution of Plan Offerings by Employer

For this analysis, ARCOLA operated with the following distribution of plan offerings:

- Every worker has a firm, which can be either a large firm (more than 200 employees) or a small firm (less than 200 employees). The distribution of firm sizes is given by the 2008 MEPS.
- We use the EHBS to match moments on the percentage of workers offered each plan type. We fit three moments:
 - 1) The percentage of firms, by size, that offer one plan type, two plan types, or three or more plan types (EHBS Figure 4.1)
 - 2) The plan type distribution among firms offering only a single plan type (EHBS Figure 4.5)
 - 3) The total percentage of workers that are offered an HDHP plan (EHBS Figure 4.4).
- Our model includes only 3 plan types: health maintenance organization (HMO), PPO, and HDHP. We model traditional and point of service (POS) offerings as a PPO plan type (15% of workers are offered these types of plans).

Next, we estimate the plan offerings associated with an individual's employment at a small or large firm. Our assumptions are:

Plan Offerings in Small Firms

- Small firms that offer a single plan type offer only one plan:
 - 1) HDHP/HSA (23% of small firms offering one plan type)
 - 2) HMO (8% of small firms offering one plan type)
 - 3) Medium PPO (69% of small firms offering one plan type)
- Small firms that offer two plan types offer one of the following two-plan menus:
 - 1) HDHP/HSA and Medium PPO (76% of small firms offering two plan types)
 - 2) HMO and Medium PPO (24% of small firms offering two plan types)
- Small firms that offer three plan types offer a three-plan menu: HDHP/HSA, Medium PPO, and an HMO.

Plan Offerings in Large Firms

- Large firms that offer a single plan type offer one of the following three menus:
 - 1) HDHP/HSA and HDHP/HRA (36% of large firms offering one plan type)
 - 2) HMO (5% of large firms offering one plan type)
 - 3) Medium PPO and Low PPO (59% of large firms offering one plan type)
- Large firms that offer two plan types offer one of the following three-plan menus:
 - 1) HDHP/HSA, HDHP/HRA and Medium PPO (68% of large firms offering two plan types)
 - 2) HMO, Medium PPO and Low PPO (32% of small firms offering two plan type)
- Large firms that offer three plan types offer a six-plan menu: High, Medium, and Low PPO, HDHP/HSA, HDHP/HRA, and an HMO.

Appendix C

Detailed HSA Contribution Assumptions for ARCOLA Model

Table 1. Single, Non-Group HSA Contributions

Age/ Income	\$7K or Less	\$7K to \$20K	\$20K to \$36K	\$36K or More
0 to 25	\$0	\$100	\$500	\$1,000
25 to 35	\$0	\$200	\$800	\$1,500
35 to 46	\$50	\$400	\$1,500	\$2,500
Older than 46	\$100	\$500	\$2,000	\$3,760

Average Conditional on Purchasing Eligible Plan:
\$2,000

Table 2. Family, Non-Group HSA Contributions

Age/Income	\$14.5K or Less	\$14.5K to \$29K	\$29K to \$47.5K	\$47K or More
0 to 25	\$0	\$200	\$800	\$2,000
25 to 35	\$0	\$400	\$1,600	\$3,000
35 to 46	\$100	\$800	\$3,000	\$5,000
Older than 46	\$200	\$1,000	\$4,000	\$8,320

Average Conditional on Purchasing Eligible Plan:
\$5,000

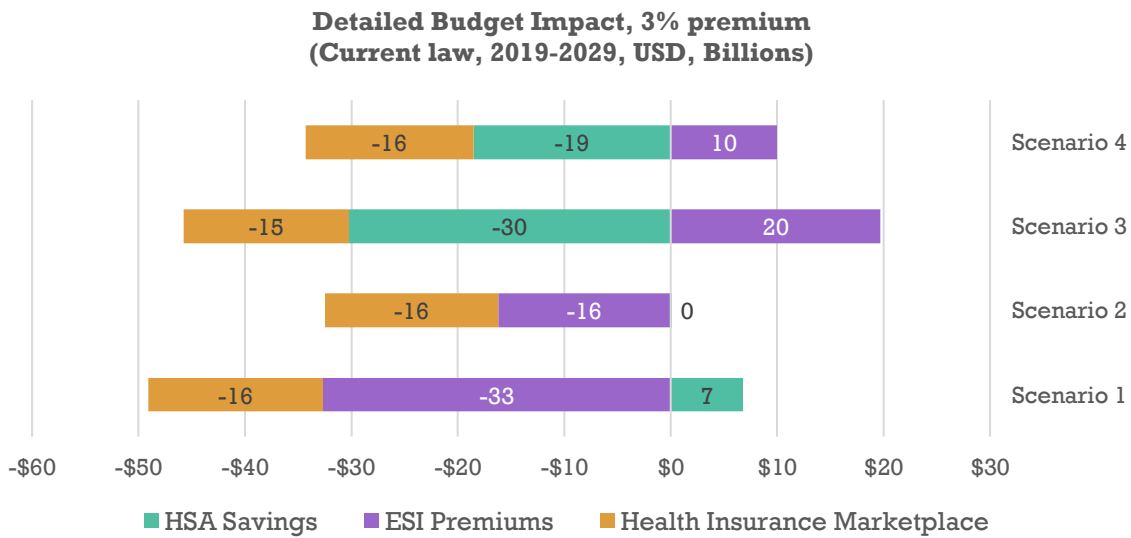
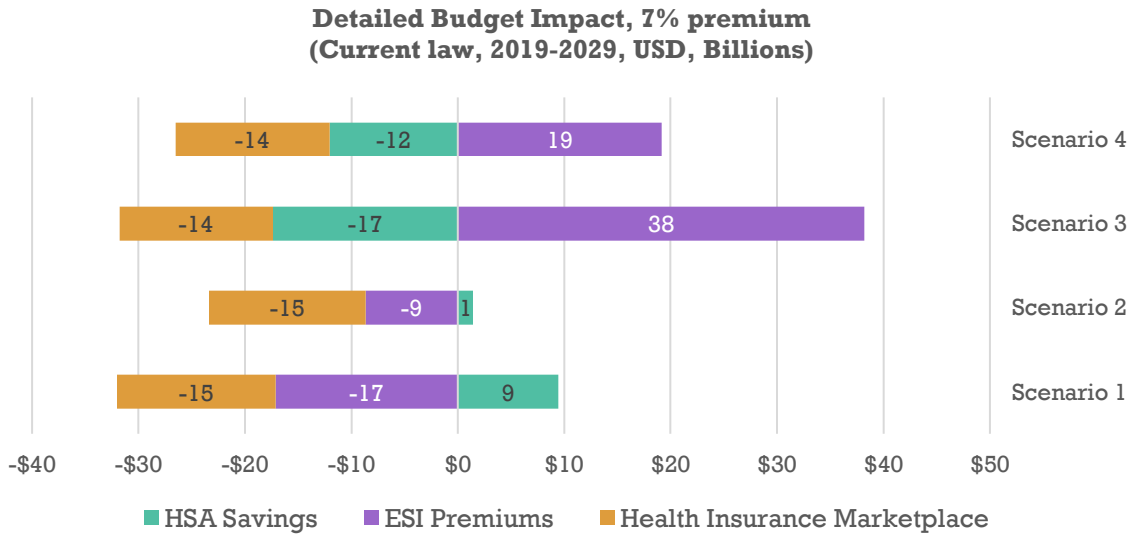
Table 3. Employer-Sponsored HSA Contributions

Single	\$500
Family	\$2,000

Appendix D

Components of Net Budget Impact Across Scenarios, Both Premium Effects

Figure A-1. Different tax implications lead to overall savings from the HDHP+ introduction.



Appendix E

The 3% Premium Effect

The second premium increase estimate is 3%, which is accomplished by a \$475 increase in the individual deductible (AV methodology described below). A 3% premium increase could also roughly represent a less generous HDHP+, rather than a plan with an increased deductible (*i.e.*, a carrier decides to cover a less generous bundle of secondary prevention services and prescription drugs). We found net savings across all scenarios associated with the 3% premium effect.

We used the AV calculator to estimate the rough cost-sharing changes necessary to reduce the premium effect from 7% to 3%. We model the actuarial value of the original HDHP+ as a silver plan with standard coverage: a \$1,350 deductible (to match the minimum HDHP deductible), \$6,600 maximum out-of-pocket expense, and 20 percent coinsurance. This plan has an actuarial value of about 74.75 percent. To hold the cost increase from the HDHP+ to 3%, the actuarial value must fall by 3.7 percent (1.03/1.07). If this is accomplished solely through increasing the deductible, the AV calculator reports that the deductible for single coverage must increase by \$475 (new deductible of \$1,825).

Appendix F

Microsimulation of Current Law Versus Alternatives

We modeled two different scenarios in the microsimulation. The first is current law with the Affordable Care Act (ACA) fully in effect through 2029. The second is an alternative where states are allocated block grants that can be used to finance a combination of tax credits for purchasing private insurance and Medicaid expansion, equaling in total the amount of spending under the ACA. This design most resembles the legislation proposed by Senators Lindsey Graham and Bill Cassidy in 2017.

The following changes to current law were assumed in the ARCOLA microsimulation to generate an estimate for the Graham-Cassidy scenario:

1. Pre-ACA age rating curves replace the current ACA rating curves.
2. All individuals have access to catastrophic coverage.
3. All states revert to pre-ACA Medicaid coverage levels.
4. Insurance premium subsidies are available to individuals earning up to 400 percent of the federal poverty level (FPL). Households that earn below 100 percent of FPL are expected to contribute the same portion of income as those earning 100 percent of FPL.
5. The percent of income that all subsidy eligible households are expected to contribute is 42 percent lower than under current law.

The increase in subsidy generosity is chosen so that ten-year spending on Medicaid and the Health Insurance Exchange is identical under current law and the Republican alternative.

References

- ¹ Chernew ME, Rosen AB, Fendrick AM. Value-Based Insurance Design. *Health Affairs*. 2007;26(2):w195–w203
- ² <https://www.irs.gov/pub/irs-drop/rp-18-30.pdf>
- ³ <https://www.ahip.org/2017-survey-of-health-savings-accounts/>
- ⁴ <https://www.towerswatson.com/en-US/Insights/IC-Types/Survey-Research-Results/2013/03/Towers-Watson-NBGH-Employer-Survey-on-Value-in-Purchasing-Health-Care>
- ⁵ <https://www.businessgrouphealth.org/news/nbgh-news/press-releases/press-release-details/?ID=348>
- ⁶ <https://www.benefitnews.com/news/number-of-hsa-expected-to-continue>
- ⁷ <http://www.law.cornell.edu/uscode/text/26/223>
- ⁸ http://www.irs.gov/irb/2004-15_IRB/ar10.html
- ⁹ <https://www.cdc.gov/chronicdisease/about/index.htm>
- ¹⁰ <https://www.beckershospitalreview.com/finance/fitch-solutions-us-economic-burden-of-chronic-disease-unparalleled.html>
- ¹¹ Galbraith, AA et al. Nearly half of families in high-deductible health plans whose members have chronic conditions face substantial financial burden. *Health Affairs*. 2011;30(2): 322-31.
- ¹² *Ibid.*
- ¹³ <https://www.healthaffairs.org/doi/10.1377/hlthaff.2018.05026>
- ¹⁴ Chernew ME, Rosen AB, Fendrick AM. Value-Based Insurance Design. *Health Affairs*. 2007;26(2):w195–w203
- ¹⁵ <http://www.cdc.gov/chronicdisease/index.htm>
- ¹⁶ Chernew M, Gibson TB, Fendrick AM. Trends in Patient Cost Sharing for Clinical Services Used as Quality Indicators. *J Gen Intern Med*. 2010; 25(3):243-8).
- ¹⁷ <http://vbidcenter.org/initiatives/hsa-high-deductible-health-plans-2/>
- ¹⁸ Parente, Stephen T., Roger Feldman, Jean Abraham, Jon B. Christianson, and Ruth Taylor, *Health Savings Accounts: Early Estimations on National Take-up from 2003 MMA and Future Policy Proposals*, Final Report on DHHS Contract HHSP233200400573P, June 7, 2005.
- ¹⁹ Parente, Stephen T., Roger Feldman, Bryan Dowd, Joanne Spetz, and Emily Egan, “Wage Growth for the Health Care Workforce: Projecting the Affordable Care Act Impact,” *Health Services Research*, 52:2 (April 2017), 741-762.
- ²⁰ Parente, S. Christianson, J., Feldman, R. Consumer Directed Health Plans and the Chronically Ill. *Disease Management & Health Outcomes*, 239-248(10), 2007.
- ²¹ Claxton, G. et al. (2017) *Employer Health Benefits Annual Survey*. Menlo Park, CA. Available at: <http://files.kff.org/attachment/Report-Employer-Health-Benefits-Annual-Survey-2017> (Accessed: 30 December 2018).
- ²² Fronstin, P. (2015) *Employer and Worker Contributions to Health Reimbursement Arrangements and Health Savings Accounts, 2006–2014*. Available at: https://www.ebri.org/docs/default-source/ebri-issue-brief/ebri_ib_409_jan15_cehcs.pdf?sfvrsn=35d6292f_0 (Accessed: 28 December 2018).
- ²³ Joint Committee on Taxation (2018) *Estimates of Federal Tax Expenditures for Fiscal Years 2017 - 2021*. Washington, DC.
- ²⁴ The less conservative premium effect we also modeled, 3% premium effect, showed savings in all scenarios.
- ²⁵ <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/highlights.pdf>
- ²⁶ <https://www.npcnow.org/publication/financial-impact-hsa-hdhp-reform-improve-access-chronic-disease-management-medications>
- ²⁷ <https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2596008>
- ²⁸ <https://www.npcnow.org/publication/financial-impact-hsa-hdhp-reform-improve-access-chronic-disease-management-medications>
- ²⁹ <https://www.hhs.gov/sites/default/files/Reforming-Americas-Healthcare-System-Through-Choice-and-Competition.pdf>

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